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# PRODUCTION SCIENTIFIQUE ANNEE 2011

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**Reference Type: Journal Article**

**Record Number: 1**

**Author:** Abaci, S. Nessark, B. Boukherroub, R. Lmimouni, K.

**Year:** 2011

**Title:** Electrosynthesis and analysis of the electrochemical properties of a composite material: Polyaniline plus titanium oxide

**Journal:** Thin Solid Films

**Volume:** 519

**Issue:** 11

**Pages:** 3596-3602

**Date:** Mar

**Short Title:** Electrosynthesis and analysis of the electrochemical properties of a composite material: Polyaniline plus titanium oxide

**ISSN:** 0040-6090

**DOI:** 10.1016/j.tsf.2011.01.277

**Accession Number:** WOS:000289333400026

**Abstract:** The analysis of the electrochemical and spectroscopic properties of a composite material obtained starting from the polyaniline and TiO<sub>2</sub> in H<sub>2</sub>SO<sub>4</sub> medium, using cyclic voltamperometry, shows three redox couples characteristic of the different oxidation and reduction states of produced polymer. The electroactivity of the composite in acid medium was better than that obtained in basic medium. The impedance spectroscopy study shows that the resistance of the film increases with the aniline concentration, but is not significantly affected by the amount of TiO<sub>2</sub> incorporated in polymer. The increase of pH decreases the resistance of the films and consequently increases its conductivity. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Abaci, Souhila Nessark, Belkacem Boukherroub, Rabah Lmimouni, Kamal

**URL:** <Go to ISI>://WOS:000289333400026

**Reference Type: Journal Article****Record Number: 2****Author:** Abbas, K. Madani, T. Laouar, M. Bouzina, M. M. Abdelguerfi, A. Makhlouf, M. Tedjari, N.**Year:** 2011**Title:** Behaviour of mixed grassland subjected to local practices in a semi-arid area of Algeria**Journal:** Fourrages**Issue:** 205**Pages:** 47-51**Date:** Mar**Short Title:** Behaviour of mixed grassland subjected to local practices in a semi-arid area of Algeria**ISSN:** 0429-2766**Accession Number:** WOS:000291300300005

**Abstract:** Behaviour of mixed grassland subjected to local practices in a semi-arid area of Algeria With an aim to preserve, restore and improve perennial pastures in an elevated semi-arid area of Algeria, 1 ha of grassland was rehabilitated by sowing multispecies grassland (PERMED Project). The performances (production and floristic composition) of this forage mixture and that of the pre-existing natural grassland were monitored for 4 years. The inter-annual variability of precipitations and production was significant. After 2 years, the production for grazing and mowing after grassland rehabilitation was significantly higher compared to the former grassland, as well as the amount grazed by animals. Forage grass gradually and proportionally reduced legumes. Flood irrigation and harsh winter and spring temperatures could be responsible for this floristic degradation and the significant annual fluctuations.

**Notes:** Abbas, K. Madani, T. Laouar, M. Bouzina, M. M'hammedi Abdelguerfi, A. Makhlouf, M. Tedjari, N.**URL:** <Go to ISI>://WOS:000291300300005

**Reference Type: Journal Article****Record Number:** 3**Author:** Abdelhalim, K. Lazhar, R. Gaubert, J. P. Mohammed, M.**Year:** 2011**Title:** Hysteresis-Band Current Control of PFC with Constant Switching Frequency**Journal:** International Review of Electrical Engineering-Iree**Volume:** 6**Issue:** 1**Pages:** 179-185**Date:** Jan-Feb**Short Title:** Hysteresis-Band Current Control of PFC with Constant Switching Frequency**ISSN:** 1827-6660**Accession Number:** WOS:000289220500021

**Abstract:** This paper presents a modeling approach to obtain a small-signal model and the digital implementation of a PI controller in the loop voltage and two controllers in the loop current based first on a standard fixed and sinusoidal band hysteresis control, followed by a variable band hysteresis control for a single-phase power factor corrector (PFC). All these controllers have been verified via simulation in Simulink using a continuous time plant model and a discrete time controller. Real-time implementation is performed on an experimental test bed using a rapid prototyping tool. All these controllers are experimentally compared for steady-state performance and transient response. It is shown that the PI controller gives a better steady-state performance under large load disturbance and plant uncertainties, whereas the variable band hysteresis control in the loop current gives a low THD of the input current compared to a standard classical fixed and sinusoidal band hysteresis control. Copyright (C) 2011 Praise Worthy Prize S.r.l. - All rights reserved.

**Notes:** Abdelhalim, Kessal Lazhar, Rahmani Gaubert, Jean-Paul Mohammed, Mostefai A**URL:** <Go to ISI>://WOS:000289220500021

**Reference Type: Journal Article**

**Record Number: 4**

**Author:** Achour, D. Belaib, M. T.

**Year:** 2011

**Title:** TENSOR NORMS RELATED TO THE SPACE OF COHEN  $p$ -NUCLEAR  
MULTILINEAR MAPPINGS

**Journal:** Annals of Functional Analysis

**Volume:** 2

**Issue:** 1

**Pages:** 128-138

**Short Title:** TENSOR NORMS RELATED TO THE SPACE OF COHEN  $p$ -NUCLEAR  
MULTILINEAR MAPPINGS

**ISSN:** 2008-8752

**Accession Number:** WOS:000208879900012

**Abstract:** In this paper we consider the ideal of Cohen  $p$ -nuclear multilinear mappings, which is a natural multilinear extension of the ideal of  $p$ -nuclear linear operators. The space of Cohen  $p$ -nuclear  $m$ -linear mappings is characterized by means of a suitable tensor norm up to an isometric isomorphism.

**Notes:** Achour, Dahmane Belaib, Mohamed Tahar

**URL:** <Go to ISI>://WOS:000208879900012

**Reference Type: Journal Article****Record Number: 5****Author:** Al-Douri, Y. Ahmed, N. M. Bouarissa, N. Bouhemadou, A.**Year:** 2011**Title:** Investigated optical and elastic properties of Porous silicon: Theoretical study**Journal:** Materials & Design**Volume:** 32**Issue:** 7**Pages:** 4088-4093**Date:** Aug**Short Title:** Investigated optical and elastic properties of Porous silicon: Theoretical study**ISSN:** 0261-3069**DOI:** 10.1016/j.matdes.2011.03.010**Accession Number:** WOS:000291125100053

**Abstract:** Compatibility between experimental and theoretical works is achieved. Empirical Pseudopotential Method (EPM) is used to calculate the energy gap of Si which is found to be indirect. Features such as refractive index, optical dielectric constant, bulk modulus, elastic constants and short-range force constants have been investigated. In addition to the shear modulus. Young's modulus. Poisson's ratio and Lamé's constants for both bulk Si ( $p = 0\%$ ) and Porous silicon (PS) are derived. The calculated results are found to be in good agreement with other experimental and theoretical ones. Also, the Debye temperature of PS is estimated from the average sound velocity. To our knowledge, the optical properties using specific models and elasticity of PS are reported for the first time. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Al-Douri, Y. Ahmed, N. M. Bouarissa, N. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000291125100053

**Reference Type: Journal Article****Record Number: 6****Author:** Aliouane, N. Helesbeux, J. J. Douadi, T. Khan, M. A. Bouet, G. Chafaa, S. Duval, O.**Year:** 2011**Title:** SYNTHESIS OF NEW BENZYLIC DI-, TRI-, AND TETRAPHOSPHONIC ACIDS AS POTENTIAL CHELATING AGENTS**Journal:** Phosphorus Sulfur and Silicon and the Related Elements**Volume:** 186**Issue:** 2**Pages:** 354-364**Short Title:** SYNTHESIS OF NEW BENZYLIC DI-, TRI-, AND TETRAPHOSPHONIC ACIDS AS POTENTIAL CHELATING AGENTS**ISSN:** 1042-6507**DOI:** 10.1080/10426507.2010.502161**Accession Number:** WOS:000288370900019**Abstract:** New di-, tri-, and tetraphosphonic acids were synthesized starting from four hydroxymethyl phenol derivatives and obtained in three steps in good overall yield. The phosphonic acids were isolated and purified using semi-preparative C(18) HPLC column. The new compounds were characterized using different spectroscopic methods ((1)H, (13)C, and (31)P NMR; ESI MS; and MS(n), IR).**Notes:** Aliouane, Nabila Helesbeux, Jean-Jacques Douadi, Tahar Khan, Mustayeen A. Bouet, Gilles Chafaa, Salah Duval, Olivier**URL:** <Go to ISI>://WOS:000288370900019

**Reference Type: Journal Article****Record Number:** 7**Author:** Ameer, H. Ghoul, M. Selvin, J.**Year:** 2011**Title:** THE OSMOPROTECTIVE EFFECT OF SOME ORGANIC SOLUTES ON STREPTOMYCES SP MADO2 AND NOCARDIOPSIS SP MADO3 GROWTH**Journal:** Brazilian Journal of Microbiology**Volume:** 42**Issue:** 2**Pages:** 543-553**Date:** Apr-Jun**Short Title:** THE OSMOPROTECTIVE EFFECT OF SOME ORGANIC SOLUTES ON STREPTOMYCES SP MADO2 AND NOCARDIOPSIS SP MADO3 GROWTH**ISSN:** 1517-8382**Accession Number:** WOS:000291614000019

**Abstract:** The response of two marine actinomycetes such as Streptomyces sp. MADO2 and Nocardiosis sp. MADO3 to osmotic stress in minimal medium M63 and in glycerol-asparagine medium (ISP5) was studied. The two strains were moderately halophilic and the behavior of the strain Streptomyces sp. MADO2 and Nocardiosis sp. MADO3 towards the salt stress was varied depends on the media composition and the salinity concentration. The strain Streptomyces sp. was more sensitive to salt stress than Nocardiosis sp. The growth of both Streptomyces sp. and Nocardiosis sp. were inhibited at 1 M NaCl irrespective of the medium used. The Nocardiosis sp. acquired osmoadaptation on ISP5 medium whereas the Streptomyces sp. showed poor growth on M63 medium. Glycine betaine (GB), proline and trehalose played a critical role in osmotic adaptation at high osmolarity whereas at low osmolarity they showed an inhibitory effect on the bacterial growth. The present findings confirmed that GB was the powerful osmoprotectant for Streptomyces sp. and Nocardiosis sp. grown at 1 M NaCl both in M63 and ISP5 media.

**Notes:** Ameer, Hanane Ghoul, Mostefa Selvin, Joseph**URL:** <Go to ISI>://WOS:000291614000019

**Reference Type: Journal Article****Record Number:** 8**Author:** Amrani, N. Boucenna, A.**Year:** 2011**Title:** Transmutation of the radiotoxic isotope Tc-99 under irradiation in the BR2 high flux reactor**Journal:** Annals of Nuclear Energy**Volume:** 38**Issue:** 6**Pages:** 1347-1350**Date:** Jun**Short Title:** Transmutation of the radiotoxic isotope Tc-99 under irradiation in the BR2 high flux reactor**ISSN:** 0306-4549**DOI:** 10.1016/j.anucene.2011.01.035**Accession Number:** WOS:000290194100015**Abstract:** In this study we present data on the transmutation of the long lived fission product Technetium to the stable Ruthenium under irradiation in the high flux reactor BR2. The Technetium transmutation rate and the evolution of Ruthenium mass under irradiation were numerically simulated using ChainSolver 2.34 code. (C) 2011 Elsevier Ltd. All rights reserved.**Notes:** Amrani, Naima Boucenna, Ahmed**URL:** <Go to ISI>://WOS:000290194100015

**Reference Type: Journal Article****Record Number:** 9**Author:** Annicchiarico, P. Pecetti, L. Bouzerzour, H. Kallida, R. Khedim, A. Porqueddu, C. Simoes, N. M. Volaire, F. Lelievre, F.**Year:** 2011**Title:** Adaptation of contrasting cocksfoot plant types to agricultural environments across the Mediterranean basin**Journal:** Environmental and Experimental Botany**Volume:** 74**Pages:** 82-89**Date:** Dec**Short Title:** Adaptation of contrasting cocksfoot plant types to agricultural environments across the Mediterranean basin**ISSN:** 0098-8472**DOI:** 10.1016/j.envexpbot.2011.05.002**Accession Number:** WOS:000297492700011

**Abstract:** Stress-tolerant forage resources are increasingly needed for the environmental and economic sustainability of extensive Mediterranean livestock systems. Perennial forages such as cocksfoot (*Dactylis glomerata* L) can be a valuable alternative to annuals, if they can survive across successive summer droughts. One Mediterranean cultivar of cocksfoot subsp. *hispanica* with complete summer dormancy (Kasbah), five non-dormant (Delta 1, Jana, Medly, Ottava) or incompletely dormant (Currie) Mediterranean cultivars of subsp. *glomerata*, and one Continental cultivar (Porto) of subsp. *glomerata*, were evaluated for dry matter yield over three years and persistence as final plant survival in six sites of Algeria, France, Italy, Morocco and Portugal, with the objectives of: (i) modeling adaptive responses and targeting cultivars as a function of environmental factors associated with genotype x location (GL) interaction; (ii) defining plant ideotypes. adaptive strategies and opportunities of international co-operation for regional breeding programmes. Adaptive responses were modeled by joint regression, additive main effects and multiplicative interaction (AMMI), and factorial regression. The most predictive models were: (i) factorial regression as a function of site spring-summer drought stress (as long-term potential evapotranspiration minus actual water available), for yield; (ii) AMMI including one GL interaction principal component related to site annual and spring-summer drought stress, for persistence. GL interaction of crossover type for yield and persistence was large and mainly associated with the summer dormancy trait. Completely dormant germplasm was specifically adapted to severe drought. Non-dormant Mediterranean cultivars tended to be specifically adapted to moderate drought stress, although they varied to some extent in adaptive response to drought-stress levels. The Continental cultivar was generally misadapted. The completely summer-dormant germplasm also tended to have greater general persistence across locations. Early flowering tended to correlate with higher yield and persistence of the cultivars across locations. Considerations on experimental conditions along with previous physiological studies from three sites suggested that water use efficiency of the cultivars tended to parallel their site-specific yield response. On the whole, the results suggest different adaptation targets, plant types, genetic resources and cultivar recommendation for northern Africa and southern Europe. Summer-dormant material of subsp. *hispanica* has prevalent interest for northern Africa. Breeding widely adapted, non-dormant or incompletely dormant Mediterranean cultivars of subsp. *glomerata* has prevalent interest for southern Europe, especially when targeted to moderate crop duration (3-4 years). However, completely summer-dormant germplasm could gain adaptive potential for Mediterranean-climate European regions in the future, to mitigate the effects of the predicted increasing drought due to climate change. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Annicchiarico, P. Pecetti, L. Bouzerzour, H. Kallida, R. Khedim, A. Porqueddu, C. Simoes, N. M. Volaire, F. Lelievre, F.**URL:** <Go to ISI>://WOS:000297492700011

**Reference Type: Journal Article****Record Number:** 10**Author:** Aouachria, K. Belhaneche-Bensemra, N. Massardier-Nageotte, V.**Year:** 2011**Title:** Viscoelastic Properties, Morphology, and Thermal Stability of Rigid and Plasticized Poly(vinyl chloride)/Poly(methyl methacrylate) Blends**Journal:** Journal of Vinyl & Additive Technology**Volume:** 17**Issue:** 3**Pages:** 156-163**Date:** Sep**Short Title:** Viscoelastic Properties, Morphology, and Thermal Stability of Rigid and Plasticized Poly(vinyl chloride)/Poly(methyl methacrylate) Blends**ISSN:** 1083-5601**DOI:** 10.1002/vnl.20267**Accession Number:** WOS:000294343900002

**Abstract:** Viscoelastic properties, morphology, and thermal stability of rigid and plasticized poly(vinyl chloride)/poly (methyl methacrylate) (PVC/PMMA) blends were studied. For that purpose, blends of variable composition from 0 to 100 wt% were prepared in the presence (15, 30, and 50 wt%) and in the absence of di(2-ethylhexyl) phthalate as plasticizer. Their miscibility was investigated by using dynamic mechanical thermal analysis (DMTA) and scanning electron microscopy (SEM). The DMTA and SEM results showed that the two polymers are miscible. Thermogravimetric studies on these blends were carried out in a flowing atmosphere of air from ambient temperature to 550 degrees C. The results showed that the thermal degradation of rigid and plasticized PVC/PMMA in this broad range of temperature is a three-step process and that PMMA exerted a stabilizing effect on the thermal degradation of PVC during the first step by reducing the rate of dehydrochlorination. J. VINYL ADDIT. TECHNOL., 17: 156163, 2011. (C) 2011 Society of Plastics Engineers

**Notes:** Aouachria, Kamira Belhaneche-Bensemra, Naima Massardier-Nageotte, V.**URL:** <Go to ISI>://WOS:000294343900002

**Reference Type: Journal Article****Record Number: 11****Author:** Arikan, A. Trabelsi, N.**Year:** 2011**Title:** ON MINIMAL NON-BAER-GROUPS**Journal:** Communications in Algebra**Volume:** 39**Issue:** 7**Pages:** 2489-2497**Short Title:** ON MINIMAL NON-BAER-GROUPS**ISSN:** 0092-7872**DOI:** 10.1080/00927872.2010.489533**Accession Number:** WOS:000297043700020

**Abstract:** In this note we extend some results obtained by Xu [20] on soluble minimal non-Baer-groups to locally graded minimal non-Baer-groups. In particular, we prove that if  $G$  is an infinite locally graded minimal non-Baer-group, then  $G$  is a countable non-perfect locally nilpotent  $p$ -group for some prime  $p$ . Moreover, if  $G'$ , the derived subgroup of  $G$ , is non-perfect, then for all integers  $n \geq 2$ ,  $G/\gamma(n)(G')$  is a minimal non-nilpotent-group having a maximal subgroup.

**Notes:** Arikan, Ahmet Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000297043700020

**Reference Type: Journal Article****Record Number:** 12**Author:** Aylikci, N. K. Aylikci, V. Kahoul, A. Tirasoglu, E. Karahan, I. H. Cengiz, E.**Year:** 2011**Title:** Effect of pH treatment on K-shell x-ray intensity ratios and K-shell x-ray-production cross sections in ZnCo alloys**Journal:** Physical Review A**Volume:** 84**Issue:** 4**Date:** Oct**Short Title:** Effect of pH treatment on K-shell x-ray intensity ratios and K-shell x-ray-production cross sections in ZnCo alloys**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.84.042509**Article Number:** 042509**Accession Number:** WOS:000296281000002

**Abstract:** In this study, empirical and semiempirical K-shell fluorescence yields ( $\omega(K)$ ) and K beta/K alpha intensity ratios from the available experimental data for elements with  $23 \leq Z \leq 30$  were calculated to compare them with elements in different alloys. The experimental data are fitted using the quantity  $[\omega(K)/(1 - \omega(K))]^{1/4}$  vs  $Z$  to deduce the empirical K-shell fluorescence yields and K beta/K alpha intensity ratios. The empirical and semiempirical K-shell fluorescence yield values were used to calculate the K x-ray-production cross-section values for pure Co and Zn elements. Also,  $\sigma(K \text{ alpha})$ ,  $\sigma(K \text{ beta})$  production cross sections and K beta/K alpha intensity ratios of Co and Zn have been measured in pure metals and in different alloy compositions which have different pH values. The samples were excited by 59.5-keV. rays from a Am-241 annular radioactive source. K x rays emitted by samples were counted by an Ultra-LEGe detector with a resolution of 150 eV at 5.9 keV. The effect of pH values on alloy compositions and the effect of alloying on the fluorescence parameters of Co and Zn were investigated. The x-ray fluorescence parameters of Co and Zn in the alloying system indicate significant differences with respect to the pure metals. These differences are attributed to the reorganization of valence shell electrons and/or charge transfer phenomena.

**Notes:** Aylikci, N. Kup Aylikci, V. Kahoul, A. Tirasoglu, E. Karahan, I. H. Cengiz, E.**URL:** <Go to ISI>://WOS:000296281000002

**Reference Type: Journal Article****Record Number:** 13**Author:** Azzouzi, G. Chegaar, M.**Year:** 2011**Title:** Impurity photovoltaic effect in silicon solar cell doped with sulphur: A numerical simulation**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 9**Pages:** 1773-1777**Date:** Apr**Short Title:** Impurity photovoltaic effect in silicon solar cell doped with sulphur: A numerical simulation**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.02.025**Accession Number:** WOS:000290106000025

**Abstract:** The impurity photovoltaic effect (IPV) has mostly been studied in various semiconductors such as silicon, silicon carbide and GaAs in order to increase infrared absorption and hence cell efficiency. In this work, sulphur is used as the IPV effect impurity incorporated in silicon solar cells. For our simulation we use the numerical device simulator (SCAPS). We calculate the solar cell performances (short circuit current density  $J(sc)$ , open circuit voltage  $V(oc)$ , conversion efficiency  $\eta$  and quantum efficiency QE). We study the influence of light trapping and certain impurity parameters like impurity concentration and position in the gap on the solar cell performances. Simulation results for IPV effect on silicon doped with sulphur show an improvement of the short circuit current and the efficiency for sulphur energy levels located far from the middle of the band gap especially at  $E(c)-E(t)=0.18$  eV. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Azzouzi, Ghania Chegaar, Mohamed**URL:** <Go to ISI>://WOS:000290106000025

**Reference Type: Journal Article****Record Number:** 14**Author:** Badis, A. Trabelsi, N.**Year:** 2011**Title:** Groups whose proper subgroups are Baer-by-Chernikov or Baer-by-(finite rank)**Journal:** Central European Journal of Mathematics**Volume:** 9**Issue:** 6**Pages:** 1344-1348**Date:** Dec**Short Title:** Groups whose proper subgroups are Baer-by-Chernikov or Baer-by-(finite rank)**ISSN:** 1895-1074**DOI:** 10.2478/s11533-011-0077-0**Accession Number:** WOS:000297868700013

**Abstract:** Our main result is that a locally graded group whose proper subgroups are Baer-by-Chernikov is itself Baer-by-Chernikov. We prove also that a locally (soluble-by-finite) group whose proper subgroups are Baer-by-(finite rank) is itself Baer-by-(finite rank) if either it is locally of finite rank but not locally finite or it has no infinite simple images.

**Notes:** Badis, Abdelhafid Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000297868700013

**Reference Type: Journal Article****Record Number:** 15**Author:** Baghiani, A. Charef, N. Djarmouni, M. Saadeh, H. A. Arrar, L. Mubarak, M. S.**Year:** 2011**Title:** Free Radical Scavenging and Antioxidant Effects of Some Anthraquinone Derivatives**Journal:** Medicinal Chemistry**Volume:** 7**Issue:** 6**Pages:** 639-644**Date:** Nov**Short Title:** Free Radical Scavenging and Antioxidant Effects of Some Anthraquinone Derivatives**ISSN:** 1573-4064**Accession Number:** WOS:000299577500013

**Abstract:** In this study, the screening of five anthraquinones (purpurin, xanthopurpurin, rubiadin, kermisic acid and flavokermisic acid), for their free radical scavenging and antioxidant effects was carried out, using three complementary methods. DPPH (2,2'-diphenyl-1-picrylhydrazyl) revealed that purpurin has a scavenging effect with  $IC_{50} = 3.491 \pm 0.014 \mu\text{g/ml}$ . Results of beta-carotene/linoleic acid assay showed that kermisic and flavokermisic acids have significant inhibition of lipid peroxidation with  $I\% = 76.1 \pm 1.5\%$  and  $68.6 \pm 2.5\%$ , respectively. In addition, the ferrous ion chelating test showed that only purpurin, with small concentrations, interferes in a dose dependant manner with the formation of  $Fe^{2+}$ -ferrozine complex. These results are promising for further studies of the biological and pathological effects of these natural products.

**Notes:** Baghiani, Abderrahmane Charef, Nouredine Djarmouni, Meriem Saadeh, Haythem A. Arrar, Lekhmici Mubarak, Mohammad S.

**URL:** <Go to ISI>://WOS:000299577500013

**Reference Type: Journal Article****Record Number:** 16**Author:** Bahloul, A. Nessark, B. Chelali, N. E. Groult, H. Mauger, A. Julien, C. M.**Year:** 2011**Title:** New composite cathode material for Zn//MnO<sub>2</sub> cells obtained by electro-deposition of polybithiophene on manganese dioxide particles**Journal:** Solid State Ionics**Volume:** 204**Pages:** 53-60**Date:** Dec**Short Title:** New composite cathode material for Zn//MnO<sub>2</sub> cells obtained by electro-deposition of polybithiophene on manganese dioxide particles**ISSN:** 0167-2738**DOI:** 10.1016/j.ssi.2011.10.010**Accession Number:** WOS:000299247900009

**Abstract:** We studied the blend formed by electrochemical polymerization of bithiophene monomer (BTh) on electrolytic manganese dioxide ( $\gamma$ -MnO<sub>2</sub>). The composite material (PBTh/ $\gamma$ -MnO<sub>2</sub>) has been synthesised in 0.01 M PBTh/0.1 M LiClO<sub>4</sub>/CH<sub>3</sub>CN by chronoamperometry test at oxidation potential 1.1 V vs. saturated calomel electrode during 20 min, and then characterized by different methods including cyclic voltammetry, impedance spectroscopy, FTIR spectroscopy, and magnetic measurements. These blends have been tested as positive electrode in Zn// $\gamma$ -MnO<sub>2</sub> cells. Good discharge performance was obtained with the modified MnO<sub>2</sub>, which exhibits better active material: increasing cell capacity is observed. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bahloul, A. Nessark, B. Chelali, N. -E. Groult, H. Mauger, A. Julien, C. M.**URL:** <Go to ISI>://WOS:000299247900009

**Reference Type: Journal Article****Record Number:** 17**Author:** Bahloul, A. Nessark, B. Habelhames, F. Julien, C. M.**Year:** 2011**Title:** Preparation and characterization of polybithiophene/beta-MnO<sub>2</sub> composite electrode for oxygen reduction**Journal:** Ionics**Volume:** 17**Issue:** 3**Pages:** 239-246**Date:** Apr**Short Title:** Preparation and characterization of polybithiophene/beta-MnO<sub>2</sub> composite electrode for oxygen reduction**ISSN:** 0947-7047**DOI:** 10.1007/s11581-010-0501-7**Accession Number:** WOS:000289526900007

**Abstract:** A composite material of polybithiophene (PBTh) and beta-MnO<sub>2</sub> was prepared by electrodeposition of organic conducting polymer on beta-MnO<sub>2</sub> surface in 0.1 M LiClO<sub>4</sub>/0.01 M BTh/CH<sub>3</sub>CN. Synthesized material was characterized by using various techniques, i.e., X-ray diffractometry (XRD), scanning electron microscopy (SEM), and magnetic measurements (SQUID). Electrochemical features of oxygen reduction reaction were investigated using cyclic voltammetry on beta-MnO<sub>2</sub> and PBTh/beta-MnO<sub>2</sub> electrode, and chronopotentiometry tests were carried out at different currents. The results show that peak current and potential of oxygen reduction are changed for beta-MnO<sub>2</sub> modified by polybithiophene.

**Notes:** Bahloul, Ahmed Nessark, Belkacem Habelhames, Farid Julien, Christian M.**URL:** <Go to ISI>://WOS:000289526900007

**Reference Type: Journal Article****Record Number:** 18**Author:** Belkhir, N. Bouzid, D. Lakhedari, F. Aliouane, T. Raedlein, E.**Year:** 2011**Title:** Characterization of glass surface damaged by alumina abrasive grains**Journal:** Journal of Non-Crystalline Solids**Volume:** 357**Issue:** 15**Pages:** 2882-2887**Date:** Jul**Short Title:** Characterization of glass surface damaged by alumina abrasive grains**ISSN:** 0022-3093**DOI:** 10.1016/j.jnoncrysol.2011.03.026**Accession Number:** WOS:000292947500017

**Abstract:** The quality of an optical glass component is influenced by the presence of surface and subsurface defects generated by machining processes, especially lapping. However, the damaged area is characterized by roughness and crack layers that contribute to reduce the component's mechanical and optical performances. Evaluation of these defects leads to the obtainment of the best finishing technique for optical glass components. In this work, the effect of the lapping technological parameters (lapping time and alumina abrasive grain size) on the glass surface roughness as well as the depth of the damaged layer were determined. Furthermore, a proportionality constant between the total height of the roughness profile ( $R_t$ ) and the subsurface damage layer was calculated. The damaged depth was characterized using mechanical techniques and microscopic analysis. The obtained results show an important damage of the glass surface, since the first few seconds of contact time between the surface and the grains. The increase of the lapping time gives rise to the propagation of this damage to reach its maximum and then a material removal rate is observed. At the end of the operation, a defined final surface roughness and a subsurface damaged layer are obtained. The proportionality constant between the subsurface damage layer and the total height of the roughness profile ( $R_t$ ) was found to be  $6.7 \pm 0.8$ . (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Belkhir, N. Bouzid, D. Lakhedari, F. Aliouane, T. Raedlein, E.**URL:** <Go to ISI>://WOS:000292947500017

**Reference Type: Journal Article****Record Number:** 19**Author:** Bencheikh, A. Bouafia, M. Ferria, K.**Year:** 2011**Title:** A new spherical aberration coefficient C-4 for the Gaussian laser beam**Journal:** Optica Applicata**Volume:** 41**Issue:** 4**Pages:** 855-861**Short Title:** A new spherical aberration coefficient C-4 for the Gaussian laser beam**ISSN:** 0078-5466**Accession Number:** WOS:000301702700007

**Abstract:** Laser beam quality is related to the aberration effect. Quartic phase aberration, more commonly known as spherical aberration, can result from aberrated optical components such as beam expanding telescopes, focusing or collimating lenses, or other conventional optical elements. In general, any kind of quartic aberration will lead to increased far field beam spread, degraded laser beam focusability and increased values of the beam quality. Currently, a well established quality parameter for laser beams is the M-2 factor which is proportional to the coefficient of quartic phase aberration denoted C-4. In many recent papers, authors used C-4 given in geometrical optics approach to evaluate the laser beam quality M-2 which belongs to the Gaussian beam optics and the two disciplines are not to be confused. In this paper, we present a new mathematical set for the spherical aberration coefficient C-4, especially for Gaussian beams in the context of Gaussian beam optics. A numerical analysis of a set of lenses is done to show the importance of the new C-4.

**Notes:** Bencheikh, Abdelhalim Bouafia, Mouhamed Ferria, Kouider**URL:** <Go to ISI>://WOS:000301702700007

**Reference Type: Journal Article****Record Number:** 20**Author:** Benderradji, L. Brini, F. Ben Amar, S. Kellou, K. Azaza, J. Masmoudi, K. Bouzerzour, H. Hanin, M.**Year:** 2011**Title:** Sodium transport in the seedlings of two bread wheat (*Triticum aestivum* L.) genotypes showing contrasting salt stress tolerance**Journal:** Australian Journal of Crop Science**Volume:** 5**Issue:** 3**Pages:** 233-238**Date:** Mar**Short Title:** Sodium transport in the seedlings of two bread wheat (*Triticum aestivum* L.) genotypes showing contrasting salt stress tolerance**ISSN:** 1835-2693**Accession Number:** WOS:000288913800002

**Abstract:** In many plant species, salt sensitivity is associated with the accumulation of sodium ( $\text{Na}^{(+)}$ ) in photosynthetic tissues.  $\text{Na}^{(+)}$  uptake to leaves involves a series of transport steps and for which only few candidates' genes have been so far characterized. In this study, we provide a physiological and molecular analysis of two Algerian bread wheat varieties (*Triticum aestivum* L.), Mahon-Demias (MD) a salt sensitive and Hidhab (HD) a salt tolerant varieties. The comparative analysis of  $\text{Na}^{(+)}$  transport revealed two major differences between the two genotype i) a lower rate of transfer from the root to the shoot (xylem loading) in the salt tolerant genotype, and ii) A higher capacity of the leaf sheath in the tolerant genotype to extract and sequester  $\text{Na}^{(+)}$  as it entered the leaf. In addition, an enhanced uptake of  $\text{K}^{(+)}$  in leaves of Hidhab compared to Mahon-Demias resulting in a higher  $\text{K}^{(+)}/\text{Na}^{(+)}$  ratio in leaf blades and hence improving cellular homeostasis in the tolerant variety. Moreover, correlation was observed between the expression patterns of the transcripts encoding the plasma membrane  $\text{Na}^{(+)}/\text{H}^{(+)}$  antiporter (TaSOS1), two members of the HKT transporters family (HKT1;5 and HKT2;2) and the  $\text{Na}^{(+)}$  fluxes from roots to leaves. All together, these results help to understand the differential salt stress tolerance between Hidhab and Mahon-Demias wheat varieties. More interestingly, our data may ultimately contribute to deciphering the physiological and molecular mechanisms of salt stress tolerance in bread wheat, and hence to assist breeders in selecting salt tolerant genotypes.

**Notes:** Benderradji, Laid Brini, Faical Ben Amar, Siwar Kellou, Kamel Azaza, Jalel Masmoudi, Khaled Bouzerzour, Hamenna Hanin, Moez**URL:** <Go to ISI>://WOS:000288913800002

**Reference Type: Journal Article**

**Record Number: 21**

**Author:** Bendjeddou, A. Cheurfa, R.

**Year:** 2011

**Title:** CUBIC AND QUARTIC PLANAR DIFFERENTIAL SYSTEMS WITH EXACT ALGEBRAIC LIMIT CYCLES

**Journal:** Electronic Journal of Differential Equations

**Date:** Jan

**Short Title:** CUBIC AND QUARTIC PLANAR DIFFERENTIAL SYSTEMS WITH EXACT ALGEBRAIC LIMIT CYCLES

**ISSN:** 1072-6691

**Article Number:** 15

**Accession Number:** WOS:000299629000003

**Abstract:** We construct cubic and quartic polynomial planar differential systems with exact limit cycles that are ovals of algebraic real curves of degree four. The result obtained for the cubic case generalizes a proposition of [9]. For the quartic case, we deduce for the first time a class of systems with four algebraic limit cycles and another for which nested configurations of limit cycles occur.

**Notes:** Bendjeddou, Ahmed Cheurfa, Rachid

**URL:** <Go to ISI>://WOS:000299629000003

**Reference Type: Journal Article****Record Number:** 22**Author:** Benguerba, Y. Djellouli, B.**Year:** 2011**Title:** Enhancement of the catalytic performances under non-steady state conditions**Journal:** Chemical Engineering Journal**Volume:** 166**Issue:** 3**Pages:** 1090-1094**Date:** Feb**Short Title:** Enhancement of the catalytic performances under non-steady state conditions**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2010.11.073**Accession Number:** WOS:000287901900036

**Abstract:** The problem of optimal activity distribution in a nonisothermal catalyst pellet with a consecutive-parallel reaction scheme proceeding in a created nonsteady state conditions already studied in our previous paper [1], is now extended to the case where the temperature and the concentrations of the reactants inside the grain vary according to time. The same activity distribution, i.e., a Dirac delta function, as in the case of quasi-steady state, is also found optimal in this case. The studied perturbed system gives better catalytic performances for large periods compared to time characteristic of the catalytic process. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Benguerba, Yacine Djellouli, Brahim**URL:** <Go to ISI>://WOS:000287901900036

**Reference Type: Journal Article****Record Number:** 23**Author:** Benseridi, H. Dilmi, M.**Year:** 2011**Title:** NONLINEAR AND OBLIQUE BOUNDARY VALUE PROBLEMS FOR THE STOKES EQUATIONS**Journal:** Electronic Journal of Qualitative Theory of Differential Equations**Issue:** 82**Pages:** 1-8**Short Title:** NONLINEAR AND OBLIQUE BOUNDARY VALUE PROBLEMS FOR THE STOKES EQUATIONS**ISSN:** 1417-3875**Accession Number:** WOS:000296886000001

**Abstract:** In this paper we consider the nonlinear boundary value problem governed by a stationary perturbed Stokes system with mixed boundary conditions (Dirichlet- maximal monotone graph), in a smooth domain. We first establish the existence result and some estimates for weak solutions of its approached problem. A specific regularity of the velocity and the pressure are obtained. The proof is based on the approach of maximal monotone graph by its Yosida regularization and the contraction method.

**Notes:** Benseridi, H. Dilmi, M.**URL:** <Go to ISI>://WOS:000296886000001

**Reference Type: Journal Article****Record Number:** 24**Author:** Benterki, D. Keraghel, A.**Year:** 2011**Title:** Finding a strict feasible solution of a linear semidefinite program**Journal:** Applied Mathematics and Computation**Volume:** 217**Issue:** 13**Pages:** 6437-6440**Date:** Mar**Short Title:** Finding a strict feasible solution of a linear semidefinite program**ISSN:** 0096-3003**DOI:** 10.1016/j.amc.2010.12.083**Accession Number:** WOS:000287690400047

**Abstract:** This study deals with the performance of projective interior point methods for linear semidefinite program. We propose a modification in the initialization phases of the method in order to reduce the computation time. This purpose is confirmed by numerical experiments showing the efficiency which are presented in the last section of the paper. (C) 2010 Elsevier Inc. All rights reserved.

**Notes:** Benterki, Djamel Keraghel, Abdelkrim**URL:** <Go to ISI>://WOS:000287690400047

**Reference Type: Journal Article****Record Number:** 25**Author:** Bouabdallah, L. Nani, A. Nani, N.**Year:** 2011**Title:** SYSTEMIC ENGINEER OF TRAINING PROGRAMS**Journal:** 2011 4th International Conference of Education, Research and Innovation (Iceri)**Pages:** 6970-6978**Short Title:** SYSTEMIC ENGINEER OF TRAINING PROGRAMS**Accession Number:** WOS:000317080006145

**Abstract:** In this paper we'll present our study result which is software that helps professionals on the engineering training programs systemically, it's the SETP "Systemic Engineer of Training Programs". This software is necessary in order to ensure an acceptable degree of internal and external consistency across all of the stages, from the planning to implementation and evaluation. This work is based on the following question: How to benefit from systemic modeling techniques to develop software that assists training programs engineering? To answer study question; the heuristic method was adopted in the implementation of systemic modeling required for the preparation of an explicit model of the relationships and entanglements of the training program engineering system in order to contribute in improving decisions about the conduct of the training programs. The current study result is the systemic engineer of training programs SETP, this software was developed to preserves the systemic nature of the information as much as possible across all of action stages.

**Notes:** Bouabdallah, Lahcene Nani, Ahmed Nani, Nabila Torres, IC Chova, LG Martinez, AL 4th International Conference of Education, Research and Innovation (ICERI) Nov 14-16, 2011 Madrid, SPAIN 978-84-615-3324-4

**URL:** <Go to ISI>://WOS:000317080006145

**Reference Type: Journal Article****Record Number:** 26**Author:** Bouabdallah, L. Nani, A. Nani, N.**Year:** 2011**Title:** SYSTEMIC MODELING AND SIMULATION FOR TRAINING PROGRAMS TREATMENT**Journal:** Inted2011: 5th International Technology, Education and Development Conference**Pages:** 3675-3680**Short Title:** SYSTEMIC MODELING AND SIMULATION FOR TRAINING PROGRAMS TREATMENT**Accession Number:** WOS:000326447703106

**Abstract:** This study aims to create a systemic tool for training programs treatment in the context of answering the principle question: How training program's identity is defined from systemic viewpoint? This question leads -systemically- to three sub-questions: 1- How training program's ontological dimension is defined from systemic viewpoint? 2- How training program's dynamical dimension is defined from systemic viewpoint? 3- How training program's evolutionary dimension is defined from systemic viewpoint? These questions are -systemically- discussed. We rely on the principles of Systemic, Chaos, and Complexity sciences. As results three systemic models emerged. By modelling and simulating methods we obtained Systemic Collection for Training Programs Treatment (SCTPT). Modelling process consisted of four steps: - Modelling project planning. - Systemic static modelling of training program. - Systemic dynamic modelling of training program. - Systemic Simulation of Training Program. Results were the (SCTPT) collection; Systemic Collection for Training Programs Treatment which consisted of the following three models: - SSMTTP: Systemic Static Model for Training Programs. - SDMTTP: Systemic Dynamic Model for Training Programs. - SSTP: Systemic Simulation for Training Programs.

**Notes:** Bouabdallah, Lahcene Nani, Ahmed Nani, Nabila Chova, LG Torres, IC Martinez, AL 5th International Technology, Education and Development Conference (INTED) Mar 07-09, 2011 Valencia, SPAIN 978-84-614-7423-3

**URL:** <Go to ISI>://WOS:000326447703106

**Reference Type: Journal Article****Record Number:** 27**Author:** Bouabdellah, L. Kherbache, H.**Year:** 2011**Title:** A PROPOSED PROTOCOL FOR THE DEVELOPMENT OF SOME CONCEPTS RELATED TO THE DAILY LIVES OF MENTALLY DISABLED CHILDREN USING THE EDUCATIONAL THEATRE**Journal:** 2011 4th International Conference of Education, Research and Innovation (Iceri)**Pages:** 4244-4249**Short Title:** A PROPOSED PROTOCOL FOR THE DEVELOPMENT OF SOME CONCEPTS RELATED TO THE DAILY LIVES OF MENTALLY DISABLED CHILDREN USING THE EDUCATIONAL THEATRE**Accession Number:** WOS:000317080004035**Abstract:** The study aims to develop a protocol for the development of some concepts related to the daily lives of mentally disabled children using Educational Theatre. The study sample consisted of (40) of mentally handicapped children, aged between (9-12) years, with an IQ ratios ranged between (50-75), using the experimental design of two unequal, experimental and control groups. The study used the following tools: 1 - A questionnaire to determine the concepts related to daily life. 2 - A questionnaire of activities to determine the play. 3 - Test of concepts related to daily life. 4 - The theater protocol under consideration. Study results showed the effectiveness of the protocol, "Educational Theatre" proposed in this study. In addition, it showed its ability to give many of the concepts of everyday life for children with intellectual disabilities.**Notes:** Bouabdellah, L. Kherbache, H. Torres, IC Chova, LG Martinez, AL 4th International Conference of Education, Research and Innovation (ICERI) Nov 14-16, 2011 Madrid, SPAIN 978-84-615-3324-4**URL:** <Go to ISI>://WOS:000317080004035

**Reference Type: Journal Article****Record Number:** 28**Author:** Bouabdellah, L. Kherbache, H.**Year:** 2011**Title:** THE EFFICACY OF A COMPUTER TEACHING LANGUAGE PROGRAMME FOR TEACHING DOWN SYNDROME CHILDREN LANGUAGE SKILLS**Journal:** Inted2011: 5th International Technology, Education and Development Conference**Pages:** 3666-3674**Short Title:** THE EFFICACY OF A COMPUTER TEACHING LANGUAGE PROGRAMME FOR TEACHING DOWN SYNDROME CHILDREN LANGUAGE SKILLS**Accession Number:** WOS:000326447703105

**Abstract:** The present study aimed at checking the efficiency of a training programme that deals with language skills development for children who are affected by Down syndrome disease. The sample of the study was composed of 40 children affected by this disease, aged between 6 and 9, with an intelligence quotient (I. Q.) from 50 to 60, divided into two groups of a same size (control group and experimental group), and homogeneity between the two groups was taken into consideration. The study has used the following instruments: 1- A questionnaire for child primary data collection (designed by the researcher). 2- The man drawing test. 3- The test of language skills for children affected by Down syndrome (designed by the researcher). 4- A learning programme for language skills development for children affected by Down syndrome (designed by the researcher). The results showed the efficiency of the learning programme aimed at by the present study and its ability to achieve its objective, that is the acquisition of several language skills for children affected by Down syndrome.

**Notes:** Bouabdellah, Lahcene Kherbache, Houda Chova, LG Torres, IC Martinez, AL 5th International Technology, Education and Development Conference (INTED) Mar 07-09, 2011 Valencia, SPAIN 978-84-614-7423-3

**URL:** <Go to ISI>://WOS:000326447703105

**Reference Type: Journal Article****Record Number:** 29**Author:** Boubatra, M. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2011**Title:** Morphology, structure, and magnetic properties of electrodeposited Ni films obtained from different pH solutions**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 22**Issue:** 12**Pages:** 1804-1809**Date:** Dec**Short Title:** Morphology, structure, and magnetic properties of electrodeposited Ni films obtained from different pH solutions**ISSN:** 0957-4522**DOI:** 10.1007/s10854-011-0366-1**Accession Number:** WOS:000296519500011

**Abstract:** Nanocrystalline nickel (Ni) films were obtained by electrodeposition from chloride aqueous solution with different pH values. The influence of electrolyte pH on the morphological, structural, and magnetic properties is studied, using scanning electron microscopy (SEM), X-ray diffraction (XRD), and alternating gradient force magnetometry (AGFM) techniques. SEM studies revealed a granular and compact structure of the surface of the electrodeposited Ni layers, and the variation of film roughness with bath pH is established. XRD analysis gives evidence of strongly textured Ni films along the (111) direction, with the face-centered cubic (fcc) structure for all baths pH. Magnetic properties such as coercivity, remanence, saturation magnetization, and squareness showed strong dependence on the baths pH and crystallite size. High coercivity was attributed to the presence of the small crystallite size of deposits. The properties of the deposit are greatly influenced by the solution pH.

**Notes:** Boubatra, M. Azizi, A. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000296519500011

**Reference Type: Journal Article****Record Number:** 30**Author:** Bouchama, I. Djessas, K. Djahli, F. Bouloufa, A.**Year:** 2011**Title:** Simulation approach for studying the performances of original superstrate CIGS thin films solar cells**Journal:** Thin Solid Films**Volume:** 519**Issue:** 21**Pages:** 7280-7283**Date:** Aug**Short Title:** Simulation approach for studying the performances of original superstrate CIGS thin films solar cells**ISSN:** 0040-6090**DOI:** 10.1016/j.tsf.2011.01.182**Accession Number:** WOS:000295347700037

**Abstract:** In this work, we report on the performances of superstrate Cu(In,Ga)Se<sub>2</sub> (CIGS) thin film solar cells with an alternative SLG/SnO(2):F/CIGS/In(2)Se(3)/Zn structure using AMPS-1D (Analysis of Microelectronic and Photonic structures) device simulator. An inverted surface layer, n-type CIGS layer, is inserted between the In(2)Se(3) buffer and CIGS absorber layers and the SnO(2):F layer is just a transparent conducting oxide (TCO). The simulation has been carried out by lighting through SnO(2):F. The obtained results show that the existence of so-called 'ordered defect compound' (ODC) layer in such a structure is the critical factor responsible for the optimization of the performances. Photovoltaic parameters were determined using the current density-voltage (J-V) curve. An optimal absorber and ODC layer thickness has been estimated, that improve significantly the devices efficiency exceeding 15% AM1.5 G. The variation of carrier density in In(2)Se(3) layer has an influence on the superstrate CIGS cells performances. Moreover, the quantum efficiency (Q.E.) characteristics display a maximum value of about 80% in the visible range. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bouchama, I. Djessas, K. Djahli, F. Bouloufa, A. Si**URL:** <Go to ISI>://WOS:000295347700037

**Reference Type: Journal Article****Record Number:** 31**Author:** Boudjemline, A. Islam, M. M. Louail, L. Diawara, B.**Year:** 2011**Title:** Electronic and optical properties of BAs under pressure**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 22**Pages:** 4272-4277**Date:** Nov**Short Title:** Electronic and optical properties of BAs under pressure**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.08.043**Accession Number:** WOS:000296019800020

**Abstract:** The electronic and optical properties of boron arsenide (BAs) in the zinc-blende (ZB) and rock-salt (RS) phases have been studied by the density functional theory (DFT) method based on the generalized gradient approximation (GGA). Using the enthalpy-pressure data, the structural phase transition from ZB to RS is observed at 141 GPa. Our calculated electronic properties show that ZB-BAs is a semiconductor, whereas RS-BAs is a semi-metal. Calculations of the dielectric function and absorption coefficient have been performed for the energy range 0-30 eV. The dependence of pressure on band structure and optical spectra is also investigated. The results are compared with available theoretical and experimental data. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Boudjemline, A. Islam, Mazharul M. Louail, L. Diawara, B.**URL:** <Go to ISI>://WOS:000296019800020

**Reference Type: Journal Article****Record Number:** 32**Author:** Boudjemline, A. Louail, L. Islam, M. M. Diawara, B.**Year:** 2011**Title:** Dependence of pressure on elastic, electronic and optical properties of CeO<sub>2</sub> and ThO<sub>2</sub>: A first principles study**Journal:** Computational Materials Science**Volume:** 50**Issue:** 7**Pages:** 2280-2286**Date:** May**Short Title:** Dependence of pressure on elastic, electronic and optical properties of CeO<sub>2</sub> and ThO<sub>2</sub>: A first principles study**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2011.03.006**Accession Number:** WOS:000290650200040

**Abstract:** The phase transformation of CeO<sub>2</sub> and ThO<sub>2</sub> from fluorite to cotunnite-type structure under pressure is predicted within the density functional theory implemented with the GGA-PW91 method, the pressure induced structural phase transition occurs at 28.9 GPa for CeO<sub>2</sub> and 29.8 GPa for ThO<sub>2</sub>. These values are in excellent agreement with the experimentally measured data. The elastic, electronic and optical properties at normal as well as for high-pressure phase have been calculated, particular attention is devoted to the cotunnite phase. Further, the dependence of the elastic constants, the bulk modulus B, the energy band gaps and the dielectric function on the applied pressure are presented. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Boudjemline, A. Louail, L. Islam, Mazharul M. Diawara, B.**URL:** <Go to ISI>://WOS:000290650200040

**Reference Type: Journal Article****Record Number:** 33**Author:** Bouguettoucha, A. Balannec, B. Amrane, A.**Year:** 2011**Title:** Unstructured Models for Lactic Acid Fermentation - A Review**Journal:** Food Technology and Biotechnology**Volume:** 49**Issue:** 1**Pages:** 3-12**Date:** Jan-Mar**Short Title:** Unstructured Models for Lactic Acid Fermentation - A Review**ISSN:** 1330-9862**Accession Number:** WOS:000289052500001

**Abstract:** To describe a microbial process, two kinds of models can be developed, structured and unstructured models. Contrary to structured models, which take into account some basic aspects of cell structure, their function and composition, no physiological characterization of cells is considered in unstructured models, which only consider total cellular concentration. However, in spite of their simplicity, unstructured models have proven to accurately describe lactic acid fermentation in a wide range of experimental conditions and media. A partial link between cell growth and production, namely the Luedeking and Piret model, is mostly considered by the authors. Culture pH is the main parameter to be considered for model development. Acidic pH leads to inhibitory concentrations of undissociated lactic acid, the main inhibitory component, which causes cessation of growth and then production. On the other hand, pH control at optimal value for LAB growth allows to overcome product inhibition (by the total lactic acid produced or its undissociated part); hence nutritional limitations have to be considered for model development. Nitrogen is mainly involved in cessation of growth, owing to the fastidious nutritional requirements of LAB, while lactic acid production ceased when carbon was exhausted from the medium. The lack of substrate inhibition when usual concentrations of carbon substrate are used should be noted.

**Notes:** Bouguettoucha, Abdallah Balannec, Beatrice Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000289052500001

**Reference Type: Journal Article****Record Number:** 34**Author:** Bouguezel, S. Ahmad, M. O. Swamy, M. N. S.**Year:** 2011**Title:** New Parametric Discrete Fourier and Hartley Transforms, and Algorithms for Fast Computation**Journal:** Ieee Transactions on Circuits and Systems I-Regular Papers**Volume:** 58**Issue:** 3**Pages:** 562-575**Date:** Mar**Short Title:** New Parametric Discrete Fourier and Hartley Transforms, and Algorithms for Fast Computation**ISSN:** 1549-8328**DOI:** 10.1109/tcsi.2010.2072151**Accession Number:** WOS:000287660000012

**Abstract:** In this paper, we propose a new reciprocal-orthogonal parametric discrete Fourier transform (DFT) by appropriately replacing some specific twiddle factors in the kernel of the classical DFT by independent parameters that can be chosen arbitrarily from the complex plane. A new class of parametric unitary transforms can be obtained from the proposed transform by choosing all its independent parameters from the unit circle. One of the special cases of this class is then exploited for developing a new one-parameter involutory discrete Hartley transform (DHT). The proposed parametric DFT and DHT can be computed using the existing fast algorithms of the DFT and DHT, respectively, with computational complexities similar to those of the latter. Indeed, for some special cases, the proposed transforms require less number of operations. In view of the fact that the transforms of small sizes are used in some image and video compression techniques and employed as building blocks for larger size transform algorithms, we develop new algorithms for the proposed small-size transforms. The proposed parametric DFT and DHT, in view of the introduction of the independent parameters, offer more flexibility in achieving better performance compared to the classical DFT and DHT. As examples of possible applications of the proposed transforms, image compression, Wiener filtering, and spectral analysis are considered.

**Notes:** Bouguezel, Saad Ahmad, M. Omair Swamy, M. N. S.**URL:** <Go to ISI>://WOS:000287660000012

**Reference Type: Journal Article****Record Number:** 35**Author:** Bouhemadou, A. Khenata, R. Binomran, S.**Year:** 2011**Title:** Structural parameters, electronic structures, elastic stiffness and thermal properties of M2PC (M=V, Nb, Ta)**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 14**Pages:** 2851-2857**Date:** Jul**Short Title:** Structural parameters, electronic structures, elastic stiffness and thermal properties of M2PC (M=V, Nb, Ta)**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.04.047**Accession Number:** WOS:000292302400028

**Abstract:** Using pseudo-potential plane-wave method based on the density functional theory in conjunction with the generalized gradient approximation, structural parameters, electronic structures, elastic stiffness and thermal properties of M2PC, with M=V, Nb, Ta, were studied. The optimized zero pressure geometrical parameters are in good agreement with the available results. Pressure effect, up to 20 GPa, on the lattice parameters was investigated. Electronic properties are studied throughout the calculation of densities of states and band structures. The elastic constants and their pressure dependence were predicted using the static finite strain technique. We performed numerical estimations of the bulk modulus, shear modulus, Young's modulus, Poisson's ratio and average sound velocity for ideal polycrystalline M2PC aggregates in framework of the Voigt-Reuss-Hill approximation. We estimated the Debye temperature and the theoretical minimum thermal conductivity of M2PC. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Khenata, R. Binomran, S.**URL:** <Go to ISI>://WOS:000292302400028

**Reference Type: Journal Article****Record Number:** 36**Author:** Bouhemadou, A. Zerarga, F. Almuhayya, A. Bin-Omran, S.**Year:** 2011**Title:** FP-LAPW study of the fundamental properties of the cubic spinel CdAl<sub>2</sub>O<sub>4</sub>**Journal:** Materials Research Bulletin**Volume:** 46**Issue:** 12**Pages:** 2252-2260**Date:** Dec**Short Title:** FP-LAPW study of the fundamental properties of the cubic spinel CdAl<sub>2</sub>O<sub>4</sub>**ISSN:** 0025-5408**DOI:** 10.1016/j.materresbull.2011.09.002**Accession Number:** WOS:000298130000011

**Abstract:** We have investigated the structural, elastic, electronic, optical and thermodynamic properties of the cubic spinel CdAl<sub>2</sub>O<sub>4</sub> using accurate ab initio calculations. Computed equilibrium structural parameters are in good agreement with the available experimental data. Single-crystals elastic parameters are calculated for pressure up to 30 GPa using a conserving-volume total energy-strain method. Isotropic elastic parameters for ideal polycrystalline CdAl<sub>2</sub>O<sub>4</sub> aggregates are computed in the framework of the Voigt-Reuss-Hill approximation. Result for band structure using the Engel-Vosko scheme of the GGA shows a significant improvement over the common GGA functionals. Optical spectra have been calculated for the energy range 0-30 eV. The peaks and structures in the optical spectra are assigned to interband transitions. Pressure dependence of the band gaps, static dielectric constant and static refractive index are also investigated. Pressure and thermal effects on some macroscopic properties are predicted using the quasi-harmonic Debye model. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Bouhemadou, A. Zerarga, F. Almuhayya, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000298130000011

**Reference Type: Journal Article****Record Number:** 37**Author:** Boukelkoul, M. Haroun, A.**Year:** 2011**Title:** Structural, magnetic and magneto-optical properties of ultrathin films of nickel on iridium (001)**Journal:** Thin Solid Films**Volume:** 520**Issue:** 3**Pages:** 1109-1114**Date:** Nov**Short Title:** Structural, magnetic and magneto-optical properties of ultrathin films of nickel on iridium (001)**ISSN:** 0040-6090**DOI:** 10.1016/j.tsf.2011.09.061**Accession Number:** WOS:000298486600038

**Abstract:** A detailed theoretical study of the structural, magnetic and magneto-optical behaviours of ultrathin films of nickel grown by pseudomorphic epitaxy on semi-infinite Ir(001) is given. The crystalline structure is found to be body centered tetragonal. The total energies are calculated by Spin-Polarized Relativistic Linear Muffin-Tin Orbitals with Atomic Sphere Approximation method. The calculation of the magnetic properties shows a ferromagnetic inter-layer coupling. The polar magneto-optical Kerr effect spectra are calculated over a photon energy range extended to 9 eV. The microscopic origin of the most interesting features is explained by the interband transitions between the localized spin projected states. These transitions are characterized by a spin-flip. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Boukelkoul, M. Haroun, A. 7th International Workshop on Semiconductor Gas Sensors (SGS) Sep 12-16, 2010 Krakow, POLAND Silesian Univ Technol, Inst Elect, CESIS Ctr Excellence, Polish Vacuum Soc (PVS), Uni-Export Instruments, Project InTechFun, Operat Programme Innovat Econ

**URL:** <Go to ISI>://WOS:000298486600038

**Reference Type: Journal Article****Record Number:** 38**Author:** Boukerroum, F. Djahli, F.**Year:** 2011**Title:** Simple and Accurate Method for Microwave Noise Parameters Calculation**Journal:** Radioengineering**Volume:** 20**Issue:** 3**Pages:** 587-593**Date:** Sep**Short Title:** Simple and Accurate Method for Microwave Noise Parameters Calculation**ISSN:** 1210-2512**Accession Number:** WOS:000295103500005

**Abstract:** This paper proposes a new method for microwave two-port noise parameters values extraction. The method is based on a set of simple and accurate formulas which allows the noise characterization without any optimization procedure. The measurements were performed using a system based on a short cascaded with a long transmission line and a passive two-port designed to exhibit versus frequency a behavior close to a transistor. The results presented for a measurement example show good agreement with those obtained using an optimization procedure. The new extraction method based on the frequency variation noise measurement principle and used with a simple hardware can be a practical tool for workers in the field.

**Notes:** Boukerroum, Faycal Djahli, Farid**URL:** <Go to ISI>://WOS:000295103500005

**Reference Type: Journal Article****Record Number:** 39**Author:** Boukhenfouf, W. Boucenna, A.**Year:** 2011**Title:** The radioactivity measurements in soils and fertilizers using gamma spectrometry technique**Journal:** Journal of Environmental Radioactivity**Volume:** 102**Issue:** 4**Pages:** 336-339**Date:** Apr**Short Title:** The radioactivity measurements in soils and fertilizers using gamma spectrometry technique**ISSN:** 0265-931X**DOI:** 10.1016/j.jenvrad.2011.01.006**Accession Number:** WOS:000289596600004

**Abstract:** Because of their mineral content, soils are naturally radioactive and one of the sources of radioactivity other than those of natural origin is mainly due to the extensive use of fertilizers. The main aim of this paper is to evaluate the fluxes of natural radionuclides in local production of phosphate fertilizers to determine the content of radioactivity in several commercial fertilizers produced in Algeria and to estimate their radiological impact in a cultivated soil even for the long-term exposure due to their application. For these purposes, virgin and fertilized soils were collected from outlying Setif region in Algeria and from phosphate fertilizers used in this area. Gamma spectrometry was exploited to determine activity concentration due to naturally occurring Ra-226, Th-232 and K-40 in five types of samples (two different sorts of fertilizers, virgin and fertilized soils and well water used for irrigation) taken from Setif's areas. The results show that these radionuclides were present in an average concentration of 134.7 +/- 24.1, 131.8 +/- 16.7, 11644 +/- 550 Bq/kg for the first fertilizer NPK and 190.3 +/- 30, 117.2 +/- 103, 5312 +/- 249 Bq/kg for the second fertilizer (NPKs). For the virgin and the fertilized soils, the corresponding values were respectively 47.01 +/- 7.3, 33 +/- 7, 329.4 +/- 19.7 Bq/kg and 53.2 +/- 10.6, 50.0 +/- 7, 311.4 +/- 18.7 Bq/kg. For well water, the values were 1.93 and 0.12 Bq/kg; however the third value was below the Minimum Detectable Activity (MDA). The radium equivalent activity (Raeq) and the representative level index I-gamma r for all samples were also calculated. The data were discussed and compared with those given in the literature. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Boukhenfouf, Wassila Boucenna, Ahmed**URL:** <Go to ISI>://WOS:000289596600004

**Reference Type: Journal Article****Record Number:** 40**Author:** Boulaacheb, N. Clement, B. Gharzouli, R.**Year:** 2011**Title:** Plant communities belonging to the temporary ponds of the High Plateaus within the Setif Province (Djebel Megriss, Northern Tell Atlas, Algeria)**Journal:** Bulletin Mensuel De La Societe Linneenne De Lyon**Volume:** 80**Issue:** 7-8**Pages:** 149-169**Date:** Sep-Oct**Short Title:** Plant communities belonging to the temporary ponds of the High Plateaus within the Setif Province (Djebel Megriss, Northern Tell Atlas, Algeria)**ISSN:** 0366-1326**Accession Number:** WOS:000294748000001

**Abstract:** Djebel Megriss is a mountain range in the Tell Atlas, situated in the vicinity of Constantine. Its ecosystem is extremely heterogeneous in terms of environment, with characteristic grassland, meadows, low shrubland consisting of *Quercus ilex* and low shrubland consisting of *Calicotome* and *Ampelodesmos* ("diss grass"); a peculiarity is the presence of temporary ponds. The ponds are host to extremely diverse vegetation, the majority of which is helophyte. Of the 110 species typical of Mediterranean temporary ponds 13 species, 5 of which are extremely rare (*Cardamine parviflora* L., *Oldenlandia capensis* L. F., *Pulicaria sicula* (L.) Moris, *Myosotis sicula* (Guss.) Batt. and *Solenopsis laurentia* (L.) C. Presl.), are found in the site we studied. Species considered as rare, with a range confined to Numidia (*Butomus umbellatus* L. and *Oldenlandia capensis* L. F.) and the area around Algiers (*Butomus umbellatus* L.), are found in the ponds. 90 phytosociological plots were made in the ponds, from which 129 species were identified. Using the technique of correspondence analysis, the plots were able to be divided into six groups. The plots may be defined as class *Agrostietea stoloniferae* Th. Mull. et Gors 1969, order *Eleocharalia palustris* de Fouc. 1984 and alliance *Oenanthion fistulosae* de Fouc. 1984. They contain a single association, *Eleocharo-Oenanthetum vitgatae* nov. ass. which is a vicariant of the French association *Eleocharo-Oenanthelum fistulosae*. Such mesoeutrophic small-helophyte formations yield numerous sub-associations on Djebel Megriss. The formations are trampled down by the repeated passage of herds and are affected by cultivation and pollution.

**Notes:** Boulaacheb, Nacira Clement, Bernard Gharzouli, Rachid**URL:** <Go to ISI>://WOS:000294748000001

**Reference Type: Journal Article****Record Number:** 41**Author:** Bouriche, H. Meziti, H. Senator, A. Arnhold, J.**Year:** 2011**Title:** Anti-inflammatory, free radical-scavenging, and metal-chelating activities of *Malva parviflora***Journal:** Pharmaceutical Biology**Volume:** 49**Issue:** 9**Pages:** 942-946**Date:** Sep**Short Title:** Anti-inflammatory, free radical-scavenging, and metal-chelating activities of *Malva parviflora***ISSN:** 1388-0209**DOI:** 10.3109/13880209.2011.558102**Accession Number:** WOS:000293600900008

**Abstract:** Context: *Malva parviflora* L. (Malvaceae) is widely distributed throughout Africa. It has several uses in traditional medicinal practice. Leaves of this plant are used in the treatment of some inflammatory disorders. Objective: The anti-inflammatory and the antioxidant activities of the methanol extract (Met. E) and aqueous extract (Aq. E) of *M. parviflora* leaves were investigated. Materials and methods: Croton oil-induced ear edema and acetic acid-induced vascular permeability were applied as acute inflammatory models to evaluate the anti-inflammatory activity of the extracts. The antioxidant effects were evaluated using the 1,1-diphenyl-2-picryl-hydrazyl (DPPH) radical assay and the measurement of the metal-chelating activity. Results: Results demonstrated that Met. E inhibited the croton oil-induced ear edema by 57%. In contrast, the Aq. E did not show any activity. Furthermore, Met. E and Aq. E inhibited significantly the acetic acid-induced vascular permeability by 36 and 40%, respectively. However, Met. E and Aq. E exerted a strong scavenging activity with IC(50) values of 89.03 +/- 2.65 and 76.67 +/- 0.29  $\mu$ g/mL, respectively. Moreover, Met. E and Aq. E were able to chelate ferrous ions in a concentration-dependent manner. Discussion and conclusion: These findings demonstrate that *M. parviflora* leaf extracts possess anti-inflammatory and antioxidant activities and thus have great potential as an interesting source for natural health products.

**Notes:** Bouriche, Hamama Meziti, Hichem Senator, Abderrahmane Arnhold, Jurgen**URL:** <Go to ISI>://WOS:000293600900008

**Reference Type: Journal Article****Record Number:** 42**Author:** Boussouar, L. Ouennoughi, Z. Rouag, N. Sellai, A. Weiss, R. Ryssel, H.**Year:** 2011**Title:** Investigation of barrier inhomogeneities in Mo/4H-SiC Schottky diodes**Journal:** Microelectronic Engineering**Volume:** 88**Issue:** 6**Pages:** 969-975**Date:** Jun**Short Title:** Investigation of barrier inhomogeneities in Mo/4H-SiC Schottky diodes**ISSN:** 0167-9317**DOI:** 10.1016/j.mee.2010.12.070**Accession Number:** WOS:000289186500020

**Abstract:** Using current-voltage measurements, we have investigated the electrical behavior of molybdenum on 4H-SiC Schottky diodes of various areas and having different edge terminations consisting of high resistivity guard rings manufactured by carbon ion-implantation. Both forward and reverse electrical characteristics of Schottky contacts indicated a presence of inhomogeneities. The forward I-V characteristics have been primarily analyzed within the framework of a standard thermionic emission theory. Schottky-barrier heights and ideality factors are found to appreciably vary from diode to diode. A more general model which takes into account the inhomogeneity of the Schottky barrier has been then used to extract the parameters pertinent to the barrier height distribution. The description of the experimental results using Tung's model allowed us to determine the value of the average laterally homogeneous SBH barrier height between 1.2 and 1.39 eV for Mo/4H-SiC Schottky diodes. The patch's properties (the number of patches, the patch strength and the local series resistance) were also obtained from the fit to the experimental I-V characteristics of the current through "patchy" diodes. The obtained results are best described with this extended "pinch off" model. With respect to the reverse characteristics, the remarked absence of a non-saturating behavior as a function of bias in the experimental reverse-bias branch may well be attributed to the presence of defects and/or inhomogeneous Schottky barrier heights, associated with the non-ideal contacts.

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**Notes:** Boussouar, L. Ouennoughi, Z. Rouag, N. Sellai, A. Weiss, R. Ryssel, H.**URL:** <Go to ISI>://WOS:000289186500020

**Reference Type: Journal Article****Record Number:** 43**Author:** Bouzidi, A. Mahdeb, N. Kara, N.**Year:** 2011**Title:** Toxicity studies of alkaloids of seeds of *Datura stramonium* and synthesis alkaloids in male rats**Journal:** Journal of Medicinal Plants Research**Volume:** 5**Issue:** 15**Pages:** 3421-3431**Date:** Aug**Short Title:** Toxicity studies of alkaloids of seeds of *Datura stramonium* and synthesis alkaloids in male rats**ISSN:** 1996-0875**Accession Number:** WOS:000297462800012

**Abstract:** The effects of acute, subacute and chronic administration of alkaloids atropine and scopolamine, the main constituents of the active principle of *Datura stramonium*, with toxic properties, were studied in male Albino-Wistar rats. After acute i.p administration of dose 100 mg/kg (1/4 DL(50)) of total alkaloids to the seeds of *D. stramonium*, there were no remarkable changes in general appearance and no deaths occurred in any experimental group. 24 h after total alkaloids of seeds, a significant reduction in tissues (liver, spleen and brain) was observed. The red blood cells (RBC), Hematocrit (HCT), Hemoglobin (HGB) and white blood cells (WBC) were significantly higher in the treated groups than the control group. There were no statistical differences in Glutamic-oxaloacetic transaminase (GOT), Glutamic-Pyruvic Transaminase (GPT) and alkaline phosphatase (ALP) observed between groups. Histological examination of liver showed no histopathological changes. Subacute study for four weeks showed no resulting mortality or signs of toxicity. The relative weight of kidneys showed a significant decrease, however, these doses of synthetic alkaloids (5.2 mg/kg of atropine and 2.6 mg/kg of scopolamine) produced significant increase of lungs in comparison with the control group. RBC, HBG, HCT and PLT values of control group were significantly higher than those of the treated group. The enzyme activities of GOT, GPT and ALP were significantly increased. The microscopic examination of liver showed normal conservative lobular architecture and necrotic areas. In chronic study, the synthetic alkaloids administered i.p at daily doses 4.2 mg/kg of atropine and 1.6 mg/kg of scopolamine, did not produce death, However the diarrhoea and hypoactivity were observed. The relative weight of liver was significantly less than that of the control group. The haematological analysis revealed a significant decrease in RBC, HCT, HBG and WBC and we observed manifold centrolobular necrotic areas, and blood congestion and dilated central veins in treated groups.

**Notes:** Bouzidi, Abdelouahab Mahdeb, Nadia Kara, Nabila**URL:** <Go to ISI>://WOS:000297462800012

**Reference Type: Journal Article****Record Number:** 44**Author:** Chebli, D. Fourcade, F. Brosillon, S. Nacef, S. Amrane, A.**Year:** 2011**Title:** Integration of photocatalysis and biological treatment for azo dye removal - application to AR183**Journal:** Environmental Technology**Volume:** 32**Issue:** 5**Pages:** 507-514**Short Title:** Integration of photocatalysis and biological treatment for azo dye removal - application to AR183**ISSN:** 0959-3330**DOI:** 10.1080/09593330.2010.504236**Article Number:** Pii 937180264**Accession Number:** WOS:000290406200004

**Abstract:** The feasibility of coupling photocatalysis with biological treatment to treat effluents containing azo dyes was examined in this work. With this aim, the degradation of Acid Red 183 was investigated. The very low biodegradability of AR183 was confirmed beforehand by measuring the biological oxygen demand (BOD5). Photocatalysis experiments were carried out in a closed-loop step photoreactor. The reactor walls were covered by TiO<sub>2</sub> catalyst coated on non-woven paper, and the effluent flowed over the photocatalyst as a thin falling film. The removal of the dye was 82.7% after 4 h, and a quasi-complete decolorization (98.5%) was obtained for 10 h of irradiation (initial concentration 100 mg L<sup>-1</sup>). The decrease in concentration followed pseudo-first-order kinetics, with a constant k of 0.47 h<sup>-1</sup>. Mineralization and oxidation yields were 80% and 75%, respectively, after 10 h of pretreatment. Therefore, even if target compound oxidation occurs (COD removal), indicating a modification to the chemical structure, the concomitant high mineralization was not in favour of subsequent microbial growth. The BOD5 measurement confirmed the non-biodegradability of the irradiated solution, which remained toxic since the EC50 decreased from 35 to 3 mg L<sup>-1</sup>. The proposed integrated process appeared, therefore, to be not relevant for the treatment of AR183. However, this result should be confirmed for other azo dyes.

**Notes:** Chebli, Derradji Fourcade, Florence Brosillon, Stephan Nacef, Saci Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000290406200004

**Reference Type: Journal Article****Record Number:** 45**Author:** Cherrad, D. Maouche, M. Maamache, M. Krache, L.**Year:** 2011**Title:** Influence of valence electron concentration on elastic, electronic and optical properties of the alkaline-earth tin oxides  $A(3)SnO$  ( $A=Ca, Sr$  and  $Ba$ ): A comparative study with  $ASnO(3)$  compounds**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 14**Pages:** 2714-2722**Date:** Jul**Short Title:** Influence of valence electron concentration on elastic, electronic and optical properties of the alkaline-earth tin oxides  $A(3)SnO$  ( $A=Ca, Sr$  and  $Ba$ ): A comparative study with  $ASnO(3)$  compounds**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.04.014**Accession Number:** WOS:000292302400002

**Abstract:** By employing first principles method of the plane wave pseudo potential calculations (PP-PW), based on the density functional theory (DFT), within the local density approximation (LDA), the correlation between valence electron concentration and structural, elastic, electronic as well as optical properties of  $A(3)SnO$  and  $ASnO(3)$  compounds where  $A=Ca, Sr$  and  $Ba$  are investigated. The elastic constants and their pressure dependence are calculated using the static finite strain technique. We derived the bulk, shear and Young's moduli for ideal monocrystalline and for polycrystalline  $A(3)SnO$  and  $ASnO(3)$  aggregates. Band structures reveal that alkaline-earth tin oxides  $A(3)SnO$  are direct energy band gap (G-G) materials. The hardness of these compounds was explained using chemical bonding properties and Milliken charges transfer. The optical constants, including the dielectric function, optical reflectivity, refractive index and electron energy loss, are calculated for radiation up to 20 eV. We have found that the static dielectric constants of all these compounds are in good agreement with Penn model. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Cherrad, Djellal Maouche, M. Maamache, M. Krache, L.**URL:** <Go to ISI>://WOS:000292302400002

**Reference Type: Journal Article****Record Number:** 46**Author:** Cherrad, D. Selmani, L. Maouche, D. Maamache, M.**Year:** 2011**Title:** First principles calculations on elasticity, electronic structure and bonding properties of antiperovskites ANTi(3) (A = Al, In and Tl)**Journal:** Journal of Alloys and Compounds**Volume:** 509**Issue:** 12**Pages:** 4357-4362**Date:** Mar**Short Title:** First principles calculations on elasticity, electronic structure and bonding properties of antiperovskites ANTi(3) (A = Al, In and Tl)**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2011.01.042**Accession Number:** WOS:000288772300001

**Abstract:** We use an ab initio pseudopotential plane wave (PP-PW) method within the generalized gradient approximation (GGA) and the local density approximation (LDA) to study the structural, elastic and electronic properties of the unexplored antiperovskite ANTi(3) compounds. The elastic constants C-11, C-12, C-44 and their pressure dependence are calculated. We derived the bulk, shear and Young's moduli for ideal monocrystalline and for polycrystalline ANTi(3) aggregates which we have classified as ductile in nature. Band structures reveal that these compounds are conductors. The covalent ionic bands nature is due to the strong hybridization between Ti 3d and N 2p states. The Ti 3d states play dominant roles near the Fermi levels for all these compounds. The energy difference between spin polarized calculations and the nonspin polarized calculations indicate that ANTi(3) compounds exhibit magnetism at their equilibrium lattice constants. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Cherrad, Djellal Selmani, L. Maouche, D. Maamache, M.**URL:** <Go to ISI>://WOS:000288772300001

**Reference Type: Journal Article****Record Number:** 47**Author:** Chibane, L. Djellouli, B.**Year:** 2011**Title:** On The Behavior of Partial Oxidation of Methane in a Pd-Membrane Reactor under Periodic Operation Conditions**Journal:** International Journal of Chemical Reactor Engineering**Volume:** 9**Short Title:** On The Behavior of Partial Oxidation of Methane in a Pd-Membrane Reactor under Periodic Operation Conditions**ISSN:** 1542-6580**Article Number:** A76**Accession Number:** WOS:000294467500003

**Abstract:** In the current study, a theoretical analysis of the behavior of the reaction of partial oxidation of methane performed in a palladium membrane reactor, operating under periodic conditions was carried out. The periodic operations in the pd-membrane reactor are supposed to be created by forcing some inputs cyclically using a sinusoidal function. The concerned inputs are the composition and mainly the steam and oxygen in the reactor inlet and the sweeping gas in the permeation side. It was found that the periodic operations applied to these inputs are beneficial since the predicted performance is improved. When the steam to methane ratio and the sweeping gas are running periodically both in phase, the conversion of methane and the pure hydrogen recovery can exceed the steady state levels and the H<sub>2</sub>/CO ratio is significantly reduced compared to the steady state operation.

**Notes:** Chibane, Lemnouer Djellouli, Brahim**URL:** <Go to ISI>://WOS:000294467500003

**Reference Type: Journal Article****Record Number:** 48**Author:** Chibane, L. Djellouli, B. Benguerba, Y.**Year:** 2011**Title:** Forced composition cycling of a Pd-membrane reactor for pure hydrogen production from the reaction of partial oxidation of methane**Journal:** Chemical Engineering Journal**Volume:** 178**Pages:** 398-406**Date:** Dec**Short Title:** Forced composition cycling of a Pd-membrane reactor for pure hydrogen production from the reaction of partial oxidation of methane**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2011.10.042**Accession Number:** WOS:000299025500050

**Abstract:** The performance of a Pd-membrane reactor under periodic inlet composition and sweeping gas is theoretically analyzed in order to improve the pure hydrogen production from the reaction of partial oxidation of methane. This reaction was conducted under low steam to methane ratio and at moderate temperature and pressure. The results obtained show that to achieve process intensification is to operate the process in a periodic way. Therefore, it was found that when the reactor feed is forced by cycling of the feed composition and sweeping gas via a square wave symmetric, the level of methane conversion and hydrogen recovery is significantly superior to that which was found in the case of steady state conditions. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Chibane, Lemnouer Djellouli, Brahim Benguerba, Yacine**URL:** <Go to ISI>://WOS:000299025500050

**Reference Type: Journal Article****Record Number:** 49**Author:** Chihi, T. Fatmi, M. Ghebouli, B.**Year:** 2011**Title:** Structural stability and electronic properties of  $XyTa_{1-y}Ta_2N_3$ ,  $y=1$  ( $X = B, C, N, O, F$ ) compounds**Journal:** Solid State Communications**Volume:** 151**Issue:** 22**Pages:** 1672-1676**Date:** Nov**Short Title:** Structural stability and electronic properties of  $XyTa_{1-y}Ta_2N_3$ ,  $y=1$  ( $X = B, C, N, O, F$ ) compounds**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2011.08.006**Accession Number:** WOS:000296176700008

**Abstract:** Using the plane-wave pseudopotential method, the total energy and electronic structure calculations of  $XyTa_{1-y}Ta_2N_3$ ,  $y = 1$  ( $X = B, C, N, O, F$ ) alloys have been performed to understand the structural stability and electronic properties. The exchange-correlation has been treated using the generalized gradient approximation (GGA). The virtual crystal approximation (VCA) was used to study the order/disorder to examine the effect of the substitution of B, N, C, O and F for Ta in the cell corner on the structural stability. The results show that the substitution of B, C, N, O and F for Ta at the corner sites slightly changes the lattice constant. We have evaluated the ground state quantities such as lattice constant, bulk modulus and elastic constants. We derived the bulk and shear moduli, Young's modulus and Poisson's ratio for an ideal polycrystalline (c)(X)(Ta<sub>2</sub>N<sub>3</sub>)(X = B, C, N, O, F) aggregate. Also, the results of densities of states are presented. The elastic, mechanical and electronic properties of (c)(X)(Ta<sub>2</sub>N<sub>3</sub>)(X = B, C, N, O, F) alloys are predicted. Also, the Debye temperature ( $\theta_D$ ), TDOS at the Fermi level  $n(E-f)$ , the X-p ( $X = B, C, N, O$ ) states and the enthalpies of formation of the  $XTa_2N_3$  compounds are investigated. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Chihi, T. Fatmi, M. Ghebouli, B.**URL:** <Go to ISI>://WOS:000296176700008

**Reference Type: Journal Article****Record Number:** 50**Author:** Chihi, T. Fatmi, M. Ghebouli, B. Guemmaz, M.**Year:** 2011**Title:** Theoretical prediction of the structural, elastic, electronic and optical properties of Zr<sub>3</sub>N<sub>4</sub> and Hf<sub>3</sub>N<sub>4</sub> compounds**Journal:** Solid State Sciences**Volume:** 13**Issue:** 7**Pages:** 1414-1419**Date:** Jul**Short Title:** Theoretical prediction of the structural, elastic, electronic and optical properties of Zr<sub>3</sub>N<sub>4</sub> and Hf<sub>3</sub>N<sub>4</sub> compounds**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2011.04.014**Accession Number:** WOS:000293425000009

**Abstract:** The structural, elastic, electronic and optical properties of the cubic M<sub>3</sub>N<sub>4</sub> (M = Zr, and Hf) have been studied for different pressure. The computational method is based on the Pseudo-Potential Plane-Wave method (PP-PW). The exchange correlation has been treated using the Generalized Gradient Approximation (GGA). We have evaluated the ground-state quantities such as lattice parameter, bulk modulus and its pressure derivative as well as the elastic constants. The elastic constants and their pressure dependence are calculated using the static finite strain technique. We derived the bulk and shear moduli, Young's modulus and Poisson's ratio for ideal polycrystalline Zr<sub>3</sub>N<sub>4</sub> and Hf<sub>3</sub>N<sub>4</sub> aggregate. Also, we have presented the results of the band structure and densities of states. Furthermore, in order to understand the optical properties, the dielectric function, optical reflectivity, refractive index, extinction coefficient, and absorption coefficient are calculated for radiation up to 20 eV. We predicted the elastic, electronic and optical properties of Zr<sub>3</sub>N<sub>4</sub> and Hf<sub>3</sub>N<sub>4</sub> compounds. (C) 2011 Elsevier Masson SAS. All rights reserved.

**Notes:** Chihi, T. Fatmi, M. Ghebouli, B. Guemmaz, M.**URL:** <Go to ISI>://WOS:000293425000009

**Reference Type: Journal Article****Record Number:** 51**Author:** Chihi, T. Fatmi, M. Parlebas, J. C. Guemmaz, M.**Year:** 2011**Title:** Structural stability and electronic properties of  $M_2TaN_3$ , epsilon-TaN and  $MTa_2N_3$  (M = Ti, Zr, Hf) compounds**Journal:** European Physical Journal-Applied Physics**Volume:** 55**Issue:** 2**Date:** Aug**Short Title:** Structural stability and electronic properties of  $M_2TaN_3$ , epsilon-TaN and  $MTa_2N_3$  (M = Ti, Zr, Hf) compounds**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2011100479**Article Number:** 20101**Accession Number:** WOS:000293786600001

**Abstract:** Using a Plane-Wave Pseudo-Potential (PWPP) method, total energy and band structure calculations for  $M_2TaN_3$ , epsilon-TaN and  $MTa_2N_3$  (M = a transition metal, TM) compounds have been performed in order to understand their structural stability and electronic properties. To do that, we first focus on epsilon-TaN compounds. The exchange correlation is treated using the Generalized Gradient Approximation (GGA). The Virtual Crystal Approximation (VCA) is then used to examine the structural stability when substituting Ti, Zr or Hf to a Ta atom either in a cell corner [(c)(M)(Ta<sub>2</sub>N<sub>3</sub>)] or inside the cell [(in)(M-2)(Ta<sub>2</sub>N<sub>3</sub>)]. Actually, substitution of Ta by a Ti, Zr or Hf atom at a corner site does slightly change the corresponding lattice constant. Also we calculate ground-state quantities such as elastic constants, shear moduli, Young's modulus and bulk modulus as well as Poisson's ratio. The corresponding results for band structures and densities of states are shown as well. As far as we know our work is a pioneer attempt to determine elastic, mechanic and electronic properties for  $M_2TaN_3$  and  $MTa_2N_3$  (M = TM) compounds.

**Notes:** Chihi, T. Fatmi, M. Parlebas, J. C. Guemmaz, M.**URL:** <Go to ISI>://WOS:000293786600001

**Reference Type: Journal Article****Record Number:** 52**Author:** Chihi, T. Parlebas, J. C. Guemmaz, M.**Year:** 2011**Title:** First principles study of structural, elastic, electronic and optical properties of Nb<sub>2</sub>N and Ta<sub>2</sub>N compounds**Journal:** Physica Status Solidi B-Basic Solid State Physics**Volume:** 248**Issue:** 12**Pages:** 2787-2792**Date:** Dec**Short Title:** First principles study of structural, elastic, electronic and optical properties of Nb<sub>2</sub>N and Ta<sub>2</sub>N compounds**ISSN:** 0370-1972**DOI:** 10.1002/pssb.201147033**Accession Number:** WOS:000298263400005

**Abstract:** Structural, elastic, electronic and optical properties of hexagonal beta-Nb<sub>2</sub>N and beta-Ta<sub>2</sub>N compounds are studied for different pressures. The computational technique is based on a plane wave pseudo potential (PWPP) method. The exchange correlation is treated using a generalized gradient approximation (GGA). We evaluate ground state quantities such as lattice parameter, bulk modulus and its pressure derivative, as well as elastic constants. The calculated equilibrium lattice is in rather good agreement with experimental data. Elastic constants and their pressure dependence are calculated using a static finite strain technique. We derive bulk and shear moduli, Young's modulus and Poisson's ratio for ideal polycrystalline beta-Nb<sub>2</sub>N and beta-Ta<sub>2</sub>N aggregates. Also, we present results of densities of states. Furthermore, starting from dynamical optical properties, the static dielectric constant  $\epsilon(\omega=0)$  is calculated for both compounds, along with the corresponding static refractive index  $n(0)$ . The present results are a pioneer quantitative theoretical prediction of elastic, electronic and optical properties in the case of beta-Nb<sub>2</sub>N and beta-Ta<sub>2</sub>N compounds. (C) 2011 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Chihi, T. Parlebas, J. C. Guemmaz, M.**URL:** <Go to ISI>://WOS:000298263400005

**Reference Type: Journal Article****Record Number:** 53**Author:** Choi, J. R. Kim, M. S. Kim, D. Maamache, M. Menouar, S. Nahm, I. H.**Year:** 2011**Title:** Information theories for time-dependent harmonic oscillator**Journal:** Annals of Physics**Volume:** 326**Issue:** 6**Pages:** 1381-1393**Date:** Jun**Short Title:** Information theories for time-dependent harmonic oscillator**ISSN:** 0003-4916**DOI:** 10.1016/j.aop.2011.02.006**Accession Number:** WOS:000291295000001

**Abstract:** Information theories for the general time-dependent harmonic oscillator are described on the basis of invariant operator method. We obtained entropic uncertainty relation of the system and discussed whether it is always larger than or equal to the physically allowed minimum value. Shannon information and Fisher information are derived by means of density operator that satisfies Liouville-von Neumann equation and their characteristics are investigated. Shannon information is independent of time, but Fisher information is explicitly dependent on time as the time functions of the Hamiltonian vary. We can regard that the Fisher information is a local measure since its time behavior is largely affected by local arrangements of the density, whilst the Shannon information plays the role of a global measure of the spreading of density. To promote the understanding, our theory is applied to special systems, the so-called quantum oscillator with time-dependent frequency and strongly pulsating mass system. (C) 2011 Elsevier Inc. All rights reserved.

**Notes:** Choi, Jeong Ryeol Kim, Min-Soo Kim, Daeyeoul Maamache, Mustapha Menouar, Salah Nahm, In Hyun

**URL:** <Go to ISI>://WOS:000291295000001

**Reference Type: Journal Article****Record Number:** 54**Author:** Crouzeix, J. P. Keraghel, A. Rahmani, N.**Year:** 2011**Title:** Integration of pseudomonotone maps and the revealed preference problem**Journal:** Optimization**Volume:** 60**Issue:** 7**Pages:** 783-800**Short Title:** Integration of pseudomonotone maps and the revealed preference problem**ISSN:** 0233-1934**DOI:** 10.1080/02331934.2010.531135**Accession Number:** WOS:000299694900002

**Abstract:** When the behaviour of a consumer can be described via a utility function, the consumption, called the demand, is the result of the maximization of the utility function under a constraint budget. The revealed preference problem consists in recovering one utility function (it is not unique) from the demand: it corresponds to the integration of a multi-valued pseudomonotone map.

**Notes:** Crouzeix, Jean-Pierre Keraghel, Abdelkrim Rahmani, Nadia Si**URL:** <Go to ISI>://WOS:000299694900002

**Reference Type: Journal Article****Record Number:** 55**Author:** Dal Cappello, C. Champion, C. Kada, I. Mansouri, A.**Year:** 2011**Title:** Double ionization of single oriented water molecules by electron impact: Second-order Born description**Journal:** Physical Review A**Volume:** 83**Issue:** 6**Date:** Jun**Short Title:** Double ionization of single oriented water molecules by electron impact: Second-order Born description**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.83.062716**Article Number:** 062716**Accession Number:** WOS:000292251800010

**Abstract:** The double ionization of isolated water molecules fixed in space is investigated within a theoretical approach based on the second-order Born approximation. Electron angular distributions have been studied for specific kinematical conditions. The three usual mechanisms, the shake-off and the two two-step mechanisms, have been identified. A significant contribution of the two-step mechanism is clearly visible for some particular kinematics.

**Notes:** Dal Cappello, C. Champion, C. Kada, I. Mansouri, A.**URL:** <Go to ISI>://WOS:000292251800010

**Reference Type: Journal Article****Record Number:** 56**Author:** Dal Cappello, C. Rezkallah, Z. Houamer, S. Charpentier, I. Hervieux, P. A. Ruiz-Lopez, M. F. Dey, R. Roy, A. C.**Year:** 2011**Title:** Second-order Born approximation for the ionization of molecules by electron and positron impact**Journal:** Physical Review A**Volume:** 84**Issue:** 3**Date:** Sep**Short Title:** Second-order Born approximation for the ionization of molecules by electron and positron impact**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.84.032711**Article Number:** 032711**Accession Number:** WOS:000295044600008**Abstract:** Second-order Born approximation is applied to study the ionization of molecules. The initial and final states are described by single-center wave functions. For the initial state a Gaussian wave function is used while for the ejected electron it is a distorted wave. Results of the present model are compared with recent (e, 2e) experiments on the water molecule.

Preliminary results are also presented for the ionization of the thymine molecule by electrons and positrons.

**Notes:** Dal Cappello, C. Rezkallah, Z. Houamer, S. Charpentier, I. Hervieux, P. A. Ruiz-Lopez, M. F. Dey, R. Roy, A. C.**URL:** <Go to ISI>://WOS:000295044600008

**Reference Type: Journal Article****Record Number:** 57**Author:** Daoud, K. Bouamama, K. Djemia, P. Cherif, S. M.**Year:** 2011**Title:** Ab initio calculation of the elastic properties and the lattice dynamics of the AlAs<sub>x</sub>Sb<sub>1-x</sub> alloy under pressure**Journal:** High Pressure Research**Volume:** 31**Issue:** 2**Pages:** 310-324**Short Title:** Ab initio calculation of the elastic properties and the lattice dynamics of the AlAs<sub>x</sub>Sb<sub>1-x</sub> alloy under pressure**ISSN:** 0895-7959**DOI:** 10.1080/08957959.2010.545406**Article Number:** Pii 934644346**Accession Number:** WOS:000290988200006

**Abstract:** The lattice dynamics and the elastic properties of the ternary AlAs<sub>x</sub>Sb<sub>1-x</sub> alloy have been studied using the density-functional perturbation theory within the local density approximation and employing the virtual-crystal approximation. We study the variation of the optical phonon frequencies (TO and LO), the high-frequency ( $\epsilon$ ) and static ( $\epsilon_0$ ) dielectric coefficients, the dynamic effective charge ( $Z^*$ ) and the elastic constants ( $C_{11}$ ,  $C_{12}$ ,  $C_{44}$ ) as a function of the composition ( $x$ ) and the pressure. We have also predicted the behavior of the optical and acoustical phonons with composition  $x$  at the X and L high symmetry points under pressure and determined the Gruneisen parameter. We have found that no mechanical instabilities are associated with the structural transition at high pressures for all compositions.

**Notes:** Daoud, K. Bouamama, Kh. Djemia, P. Cherif, S. M.**URL:** <Go to ISI>://WOS:000290988200006

**Reference Type: Journal Article****Record Number:** 58**Author:** Deghnouche, K. Tlidjane, M. Meziane, T. Touabti, A.**Year:** 2011**Title:** Effects of the physiological stage on some blood biochemical parameters in Ouled Djellal ewes from arid South East Algeria**Journal:** Revue De Medecine Veterinaire**Volume:** 162**Issue:** 1**Pages:** 3-7**Date:** Jan**Short Title:** Effects of the physiological stage on some blood biochemical parameters in Ouled Djellal ewes from arid South East Algeria**ISSN:** 0035-1555**Accession Number:** WOS:000288880800002

**Abstract:** The purpose of this study was to determine the influence of physiological stage on some blood metabolites in Ouled Djellal ewes. The study was conducted on 100 ewes. 2-5 years old, clinically healthy. multiparous, from the arid south east of Algeria. allotted in 3 groups according to the physiological stage [G: pregnant ewes (n = 35), L: lactating ewes (n = 35). and C: control (not pregnant, not lactating) ewes (n = 30)]. Circulating concentrations of glucose. cholesterol, triglycerides, total proteins, albumin, urea. creatinine and total bilirubin were determined using specific commercial kits. Glycaemia were significantly lowered in pregnant or lactating ewes compared to the controls whereas the triglyceride, urea, creatinine and total bilirubin concentrations were significantly increased. Similarly. the proteinemia was also elevated but, because of the great value dispersion. difference with controls was not significant. The values of these biochemical parameters recorded in tiled Djellal ewes from arid zones were closely related to those from the literature except for the cholesterolemia. which was lower, and for the bilirubinemia, particularly elevated in the reproductive ewes. Consequently, it was necessary to consider the reproductive stage which significantly affects some blood biochemical parameters in ewes from arid areas.

**Notes:** Deghnouche, K. Tlidjane, M. Meziane, T. Touabti, A.**URL:** <Go to ISI>://WOS:000288880800002

**Reference Type: Journal Article****Record Number:** 59**Author:** Demagh, N. E. Guessoum, A. Zegari, R. Gharbi, T.**Year:** 2011**Title:** Self-centring technique for fibre optic microlens mounting using a concave cone-etched fibre**Journal:** Measurement Science and Technology**Volume:** 22**Issue:** 11**Date:** Nov**Short Title:** Self-centring technique for fibre optic microlens mounting using a concave cone-etched fibre**ISSN:** 0957-0233**DOI:** 10.1088/0957-0233/22/11/115302**Article Number:** 115302**Accession Number:** WOS:000296563500043

**Abstract:** Several techniques of centring a microlens onto the fibre optic end face are studied. In most of them, microsphere lenses are centred with the aid of high-accuracy micro-positioners. This process is complicated with regard to the difficulty in manipulating microsphere lenses. In this paper, a simple and accurate self-centring method for mounting microsphere lenses using a concave cone etched fibre (Demagh et al 2006 Meas. Sci. Technol. 17 119-22) is described. This technique allows the centring of a wide variety of microlens radii, typically 7  $\mu\text{m}$  to over 24  $\mu\text{m}$ . The proposed process, however, is not affected by any spatial positioning control of microspheres. In over 85% of the attempts, the microsphere lenses were centred on the fibre axis to within 0.12  $\mu\text{m}$ .

**Notes:** Demagh, Nacer-Eddine Guessoum, Assia Zegari, Rabah Gharbi, Tijani**URL:** <Go to ISI>://WOS:000296563500043

**Reference Type: Journal Article****Record Number:** 60**Author:** Derafa, A. Record, M. C. Mangelinck, D. Halimi, R. Bouabellou, A.**Year:** 2011**Title:** Reactive diffusion in W-Mo-Si thin films**Journal:** Journal of Thermal Analysis and Calorimetry**Volume:** 103**Issue:** 1**Pages:** 111-116**Date:** Jan**Short Title:** Reactive diffusion in W-Mo-Si thin films**ISSN:** 1388-6150**DOI:** 10.1007/s10973-010-1136-7**Accession Number:** WOS:000287714400021

**Abstract:** This study reports the phase formation in the ternary thin films system Mo-W-Si. The metallic films were deposited onto Si (100) substrate by sputtering. Two kinds of samples were prepared, either by sequential deposition or by co-deposition. The phase formation was investigated by In situ X-ray diffraction measurements from 300 to 900 degrees C. The influence of the sample preparation, namely sequential deposition and co-deposition, on the mechanism of phase formation has been evidenced.

**Notes:** Derafa, A. Record, M. -C. Mangelinck, D. Halimi, R. Bouabellou, A.**URL:** <Go to ISI>://WOS:000287714400021

**Reference Type: Journal Article****Record Number:** 61**Author:** Djabi, S. Boudoukha, H. Meguellati, S.**Year:** 2011**Title:** ANALYTICAL MODEL FOR OPTICAL BISTABILITY IN LASER WITH SATURABLE ABSORBER**Journal:** Journal of Nonlinear Optical Physics & Materials**Volume:** 20**Issue:** 3**Pages:** 389-395**Date:** Sep**Short Title:** ANALYTICAL MODEL FOR OPTICAL BISTABILITY IN LASER WITH SATURABLE ABSORBER**ISSN:** 0218-8635**DOI:** 10.1142/s0218863511006194**Accession Number:** WOS:000296641300013

**Abstract:** In this paper, we develop a theoretical model that accurately describes the nonlinear phenomenon of optical bistability in Fabry-Perot laser containing a saturable absorber "LSA". We present an analytical model for optical bistability in a LSA. The physics of optical bistability in a classical optical resonant system such as Fabry-Perot etalon has been well-established, and can be described by simple analytical models. The photon intensities were determined as a function of the pumping rate of the active medium, and we analyzed the linear stability of the stationary solutions obtained.

**Notes:** Djabi, S. Boudoukha, H. Meguellati, S.**URL:** <Go to ISI>://WOS:000296641300013

**Reference Type: Journal Article****Record Number:** 62**Author:** Djamel, D. Tahar, D. Djahida, H. Hanane, H. Salah, C.**Year:** 2011**Title:** 4,4'-Methylenebis{N- (E)-quinolin-2-ylmethylidene aniline}**Journal:** Acta Crystallographica Section E-Structure Reports Online**Volume:** 67**Pages:** O1318-U1959**Date:** Jun**Short Title:** 4,4'-Methylenebis{N- (E)-quinolin-2-ylmethylidene aniline}**ISSN:** 1600-5368**DOI:** 10.1107/s1600536811016011**Accession Number:** WOS:000291215800152

**Abstract:** The title compound, C(33)H(24)N(4), was prepared by the reaction of a bifunctional aromatic diamine (4,4'-diaminodiphenylmethane) and an aldehyde (quinoline-2-carboxaldehyde). The molecule consists of two nearly planar (or r.m.s. deviation = 0.017 Å) 4-methyl-N-[(E)-quinolin-2-ylmethylidene]aniline moieties, which are linked by the methylene group. The angle between the mean planes of the two benzene rings connected to the methylene group is 77.86 (11)degrees.

**Notes:** Djamel, Daoud Tahar, Douadi Djahida, Haffar Hanane, Hammani Salah, Chafaa 6**URL:** <Go to ISI>://WOS:000291215800152

**Reference Type: Journal Article****Record Number:** 63**Author:** Djamel, D. Tahar, D. Djahida, H. Hanane, H. Salah, C.**Year:** 2011**Title:** 4,4'-Oxybis{N-(E)-quinolin-2-ylmethylidene aniline}**Journal:** Acta Crystallographica Section E-Structure Reports Online**Volume:** 67**Pages:** O1119-U377**Date:** May**Short Title:** 4,4'-Oxybis{N-(E)-quinolin-2-ylmethylidene aniline}**ISSN:** 1600-5368**DOI:** 10.1107/s1600536811012955**Accession Number:** WOS:000291308500026

**Abstract:** The title Schiff base compound, C(32)H(22)N(4)O, was prepared by a reaction of 4,4'-diaminodiphenyl ether and 2-quinoline-carboxaldehyde. The molecule consists of two 4-{N-[(E)-quinolin-2-ylmethylidene]amino}phenyl units linked by an oxygen bridge. The dihedral angles between two benzene rings and between the two quinoline ring systems are 53.81 (7) and 42.56 (4)degrees, respectively. Intermolecular C-H center dot center dot center dot N hydrogen bonding is present in the crystal structure.

**Notes:** Djamel, Daoud Tahar, Douadi Djahida, Haffar Hanane, Hammani Salah, Chafaa 5**URL:** <Go to ISI>://WOS:000291308500026

**Reference Type: Journal Article****Record Number:** 64**Author:** Djerfaf, F. Vincent, D. Robert, S. Merzouki, A.**Year:** 2011**Title:** Application of multilayer perceptron neural networks for predicting the permeability tensor components of thin ferrite films**Journal:** European Physical Journal-Applied Physics**Volume:** 56**Issue:** 3**Date:** Dec**Short Title:** Application of multilayer perceptron neural networks for predicting the permeability tensor components of thin ferrite films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2011100488**Article Number:** 30601**Accession Number:** WOS:000296985700006

**Abstract:** A novel characterization method using artificial neural networks is presented. This method allows one to determine the intrinsic permeability tensor of ferrite thin-films from S-parameters measurements. Neural networks, efficient to solve inverse problems, are used to compute the permeability tensor components  $\mu$  and  $\kappa$ . This optimization technique is used to find extremely complex functions between inputs and outputs and can be successfully applied on our magnetic thin-film characterization problem. Results of our networks are compared to a theoretical model. A great number of both simulated and measured tests have been performed on many magnetic thin-films. Neural network processing leads to a rapid and robust method for predicting the magnetic characterization of thin-films in microwave range.

**Notes:** Djerfaf, F. Vincent, D. Robert, S. Merzouki, A.**URL:** <Go to ISI>://WOS:000296985700006

**Reference Type: Journal Article****Record Number:** 65**Author:** Drabla, S. Zellagui, Z.**Year:** 2011**Title:** Variational Analysis and the Convergence of the Finite Element Approximation of an Electro-Elastic Contact Problem with Adhesion**Journal:** Arabian Journal for Science and Engineering**Volume:** 36**Issue:** 8**Pages:** 1501-1515**Date:** Dec**Short Title:** Variational Analysis and the Convergence of the Finite Element Approximation of an Electro-Elastic Contact Problem with Adhesion**ISSN:** 1319-8025**DOI:** 10.1007/s13369-011-0131-z**Accession Number:** WOS:000298294200003

**Abstract:** A model for the adhesive, quasi-static and frictionless contact between an electro-elastic body and a rigid foundation is studied in this paper. The contact is modelled with Signorini's conditions with adhesion. We provide variational formulation for the problem and prove the existence of a unique weak solution to the model. The proofs are based on arguments of time-dependent variational inequalities, differential equations and Banach fixed point. Then, a fully discrete scheme is introduced based on the finite element method to approximate the spatial variable and the backward Euler scheme to discretize the time derivatives. Error estimates are derived on the approximative solutions from which the linear convergence of the algorithm is deduced under suitable regularity conditions.

**Notes:** Drabla, Salah Zellagui, Ziloukha**URL:** <Go to ISI>://WOS:000298294200003

**Reference Type: Journal Article****Record Number:** 66**Author:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Chihi, T. Hafiz, M. A.**Year:** 2011**Title:** The kinetics of precipitation in Al-2.4 wt% Cu alloy by Kissinger, Ozawa, Bosswel and Matusita methods**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 11**Pages:** 2277-2280**Date:** May**Short Title:** The kinetics of precipitation in Al-2.4 wt% Cu alloy by Kissinger, Ozawa, Bosswel and Matusita methods**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.03.053**Accession Number:** WOS:000290951200040

**Abstract:** The isothermal and non-isothermal ageing of an Al-2.4 wt% Cu alloy have been studied using X-ray diffraction analysis and differential scanning calorimetry (DSC) at different heating rates. Quantitative metallography methods have been applied to measure the corresponding transformed volume fractions at various temperatures and times of precipitation. The variation of the heating rate using DSC technique has allowed us to calculate two kinetics parameters of precipitation which are the Avrami exponent and the activation energy of the process using Kissinger, Ozawa and Bosswell methods. These parameters are similar to those found for the precipitation reaction of theta' and theta (Al<sub>2</sub>Cu) phases. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Chihi, T. Hafiz, M. Abdul**URL:** <Go to ISI>://WOS:000290951200040

**Reference Type: Journal Article****Record Number:** 67**Author:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Hieba, Z. K.**Year:** 2011**Title:** First-principles study of structural, elastic, electronic, lattice dynamic and optical properties of XN (X = Ga, Al and B) compounds under pressure**Journal:** Physica Scripta**Volume:** 83**Issue:** 6**Date:** Jun**Short Title:** First-principles study of structural, elastic, electronic, lattice dynamic and optical properties of XN (X = Ga, Al and B) compounds under pressure**ISSN:** 0031-8949**DOI:** 10.1088/0031-8949/83/06/065702**Article Number:** 065702**Accession Number:** WOS:000291153700026

**Abstract:** We have applied the pseudo-potential plane wave method to study the structural, elastic, electronic, lattice dynamic and optical properties of GaN and AlN in the wurtzite lattice and BN with zinc-blende structure. We have found that all elastic constants depend strongly on hydrostatic pressure, except for C-44 in wurtzite AlN and GaN that shows a weaker dependence. AlN and GaN present a direct band gap  $\Gamma$ - $\Gamma$ , whereas BN has an indirect band gap  $\Gamma$ -X. The indirect  $\Gamma$ -K band gap in AlN occurs at about 35 GPa. The top of the valence bands reflects the p electronic character for all structures. There is a gap between optical and acoustic modes only for wurtzite phases AlN and GaN. All peaks in the imaginary part of the dielectric function for the wurtzite lattice GaN and AlN move towards lower energies, while those in the zinc-blende BN structure shift towards higher energies with increasing pressure. The decrease of the static dielectric constant and static refractive index in zinc-blende BN is weaker and it can be explained by its higher elastic constants.

**Notes:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Hieba, Z. K.**URL:** <Go to ISI>://WOS:000291153700026

**Reference Type: Journal Article****Record Number:** 68**Author:** Fatmi, M. Ghebouli, M. A. Ghebouli, B. Chihi, T. Boucetta, S. Heiba, Z. K.**Year:** 2011**Title:** STUDY OF STRUCTURAL, ELASTIC, ELECTRONIC, OPTICAL AND THERMAL PROPERTIES OF Ni<sub>3</sub>Al**Journal:** Romanian Journal of Physics**Volume:** 56**Issue:** 7-8**Pages:** 935-951**Short Title:** STUDY OF STRUCTURAL, ELASTIC, ELECTRONIC, OPTICAL AND THERMAL PROPERTIES OF Ni<sub>3</sub>Al**ISSN:** 1221-146X**Accession Number:** WOS:000295495400010

**Abstract:** We present structural, elastic, electronic, optical and thermal properties of the cubic structure Ni<sub>3</sub>Al for various pressures. The computational method is based on the pseudo-potential plane wave (PP-PW). The exchange-correlation energy is described in both generalized gradient approximation (GGA) and the local-density approximation (LDA). The calculated equilibrium lattice parameter is in a reasonable agreement with the available experimental data. The value of Debye temperature obtained using elastic constants is about 466.49 K. Applied pressure does not change the shape of the total valence electronic charge density. The Fermi level is located in the part where the nickel contribution is very strong. Most of the electronic charge density is shifted toward Ni atoms. The coefficients of electronic and lattice heat capacities were calculated. Furthermore, in order to understand the optical properties of Ni<sub>3</sub>Al, the dielectric function, absorption coefficient, refractive index and extinction coefficient are calculated for radiation up to 80 eV.

**Notes:** Fatmi, M. Ghebouli, M. A. Ghebouli, B. Chihi, T. Boucetta, S. Heiba, Z. K.**URL:** <Go to ISI>://WOS:000295495400010

**Reference Type: Journal Article****Record Number:** 69**Author:** Fellahi, O. Das, M. R. Coffinier, Y. Szunerits, S. Hadjersi, T. Maamache, M. Boukherroub, R.**Year:** 2011**Title:** Silicon nanowire arrays-induced graphene oxide reduction under UV irradiation**Journal:** Nanoscale**Volume:** 3**Issue:** 11**Pages:** 4662-4669**Short Title:** Silicon nanowire arrays-induced graphene oxide reduction under UV irradiation**ISSN:** 2040-3364**DOI:** 10.1039/c1nr10970g**Accession Number:** WOS:000296659000027

**Abstract:** This paper reports on efficient UV irradiation-induced reduction of exfoliated graphene oxide. Direct illumination of an aqueous solution of graphene oxide at  $\lambda = 312$  nm for 6 h resulted in the formation of graphene nanosheets dispersible in water. X-Ray photoelectron spectroscopy (XPS), UV-vis spectroscopy, atomic force microscopy (AFM) and electrochemical measurements (cyclic voltammetry and electrochemical impedance spectroscopy) suggest a restoration of the sp(2) carbon network. The results were compared with graphene nanosheets prepared by photochemical irradiation of a GO aqueous solution in the presence of hydrogenated silicon nanowire (SiNW) arrays or silicon nanowire arrays decorated with silver (SiNW/Ag NPs) or copper nanoparticles (SiNW/Cu NPs). Graphene nanosheets obtained by illumination of the GO aqueous solution at 312 nm for 6 h in the presence of SiNW/Cu NPs exhibited superior electrochemical charge transfer characteristics. This is mainly due to the higher amount of sp(2)-hybridized carbon in these graphene sheets found by XPS analysis. The high level of extended conjugated carbon network was also evident by the water insoluble nature of the resulting graphene nanosheets, which precipitated upon photochemical reduction.

**Notes:** Fellahi, Ouarda Das, Manash R. Coffinier, Yannick Szunerits, Sabine Hadjersi, Toufik Maamache, Mustapha Boukherroub, Rabah

**URL:** <Go to ISI>://WOS:000296659000027

**Reference Type: Journal Article****Record Number:** 70**Author:** Ferria, K. Laouar, N. Bouaouadja, N.**Year:** 2011**Title:** Acousto-optic method for liquids refractometry**Journal:** Optica Applicata**Volume:** 41**Issue:** 1**Pages:** 109-119**Short Title:** Acousto-optic method for liquids refractometry**ISSN:** 0078-5466**Accession Number:** WOS:000290980100010

**Abstract:** Various methods of liquids refractive index measurements were previously developed by others. They differ however in the measurement accuracy, the used light wavelength, the measurement range and the sensitivity to the temperature and pressure. In this work, we present and discuss an acousto-optic technique for measuring the index of refraction of transparent liquid materials. In the proposed technique, a diffraction pattern produced by an acousto-optic interaction is imaged by a liquid lens placed between an optical flat glass and a convergent glass lens. The diffraction pattern consists of two symmetrical dots that are digitized by a CCD camera. The focal shift, which is induced by the liquid sample, produces changes in the position of the diffracted orders. The spatial frequency measurement of the diffractive pattern leads to determine the sample refractive index. The current method presents the advantage to have an adjustable measurement range and can be easily interpreted geometrically.

**Notes:** Ferria, Kouider Laouar, Naamane Bouaouadja, Noureddine**URL:** <Go to ISI>://WOS:000290980100010

**Reference Type: Journal Article****Record Number:** 71**Author:** Fetah, S. Chikouche, A. Dkhissi, A. Landa, G. Pochet, P.**Year:** 2011**Title:** Stability of Frenkel pairs in Si(100) surface in the presence of germanium and oxygen atoms**Journal:** Microelectronic Engineering**Volume:** 88**Issue:** 4**Pages:** 503-505**Date:** Apr**Short Title:** Stability of Frenkel pairs in Si(100) surface in the presence of germanium and oxygen atoms**ISSN:** 0167-9317**DOI:** 10.1016/j.mee.2010.11.044**Accession Number:** WOS:000288524100045

**Abstract:** A first-principles pseudo-potential study of Frenkel pair generation close to the Si(1 0 0) surface in the presence of germanium and oxygen atoms is reported. The energies and structures of the defect structures (i.e. vacancy and relaxed tetrahedral Si interstitial) are calculated using supercell with up to 88 atoms. We present results obtained using the generalized gradient approximation (GGA) for the exchange-correlation energy. We examine the effect of the presence of germanium and oxygen atoms on the stability of Frenkel pairs generated near the Si(1 0 0) surface by comparing a number of individual cases, starting from vacancy interstitial pairs situated at various positions. The general tendency of the created interstitials is to climb towards the surface, but they generally remain in subsurface layers, ready to migrate into the layer. This tendency is enhanced by the presence of the Ge and/or O atoms. We show that the formation energy is lower and Si interstitials can be created with energies as low as 1.5 eV. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Fetah, S. Chikouche, A. Dkhissi, A. Landa, G. Pochet, P. EMRS 2010 Spring Meeting on Post-Si-CMOS Electronic Devices - The Role of Ge and III-V Materials Jun 07-11, 2010 Strasbourg, FRANCE SAFC, Aixtron, IBM

**URL:** <Go to ISI>://WOS:000288524100045

**Reference Type: Journal Article****Record Number:** 72**Author:** Ghebouli, B. Ghebouli, M. A. Bouarissa, N. Fatmi, M.**Year:** 2011**Title:** Band parameters of alpha-LiBeN semiconductor from density functional calculations**Journal:** Superlattices and Microstructures**Volume:** 50**Issue:** 4**Pages:** 319-330**Date:** Oct**Short Title:** Band parameters of alpha-LiBeN semiconductor from density functional calculations**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2011.07.010**Accession Number:** WOS:000296002200006

**Abstract:** The structural, elastic, electronic, optical and thermal properties of alpha phase in LiBeN semiconductor have been studied using pseudopotential plane wave method based on the density functional theory. The computed lattice parameter agrees well with previous theoretical work. The elastic constants and their pressure dependence are predicted using the static finite strain technique. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio, average sound velocity and Debye temperature are numerically estimated in the frame work of the Voigt-Reuss-Hill approximation for alpha-LiBeN polycrystalline aggregate. The assignments of the structures in the optical spectra and band structure transitions have been examined and discussed. The thermal effect on heat capacities is investigated by the quasi-harmonic Debye model. To the best of our knowledge, most of the studied properties of the material of interest are reported for the first time. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Ghebouli, B. Ghebouli, M. A. Bouarissa, N. Fatmi, M.**URL:** <Go to ISI>://WOS:000296002200006

**Reference Type: Journal Article****Record Number:** 73**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M.**Year:** 2011**Title:** Theoretical studies of structural, elastic, electronic and lattice dynamic properties of Al<sub>x</sub>Y<sub>y</sub>B<sub>1-x-y</sub>N quaternary alloys**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 13**Pages:** 2521-2527**Date:** Jul**Short Title:** Theoretical studies of structural, elastic, electronic and lattice dynamic properties of Al<sub>x</sub>Y<sub>y</sub>B<sub>1-x-y</sub>N quaternary alloys**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.03.047**Accession Number:** WOS:000291973000007

**Abstract:** A theoretical study on the structural, elastic, electronic and lattice dynamic properties of Al<sub>x</sub>Y<sub>y</sub>B<sub>1-x-y</sub>N quaternary alloys in zinc-blend phase has been carried out with first-principles methods. Information on the lattice parameter, the lattice matching to available substrates and energy band-gaps is a prerequisite for many practical applications. The dependence of the lattice parameter *a*, bulk modulus *B*, elastic constants *C*-11, *C*-12 and *C*-44, band-gaps, optical phonon frequencies ( $\omega(\text{TO})$  and  $\omega(\text{LO})$ ), the static and high-frequency dielectric coefficients  $\epsilon(0)$  and  $\epsilon(\infty)$  and the dynamic effective charge  $Z^*$  were analyzed for *y*=0, 0.121, 0.241, 0.362 and 0.483. A significant deviation of the bulk modulus from linear concentration dependence was observed. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio are numerically estimated in the frame work of the Voigt-Reuss-Hill approximation. The resistance to changes in bond length and lateral expansion in Al<sub>x</sub>Y<sub>y</sub>B<sub>1-x-y</sub>N increase with increasing *y* concentration. We observe that at *y* concentration about 0.035 and 0.063, Al<sub>x</sub>Y<sub>y</sub>B<sub>1-x-y</sub>N changes from brittle to ductile and  $\Gamma$ -X indirect fundamental gap becomes  $\Gamma$ - $\Gamma$  direct fundamental gap. There is good agreement between our results and the available experimental data for the binary compound AlN, which is a support for those of the quaternary alloys that we report for the first time. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M.**URL:** <Go to ISI>://WOS:000291973000007

**Reference Type: Journal Article****Record Number:** 74**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M.**Year:** 2011**Title:** Structural, elastic, electronic, optical and thermal properties of cubic perovskite CsCdF<sub>3</sub> under pressure effect**Journal:** European Physical Journal-Applied Physics**Volume:** 53**Issue:** 3**Date:** Mar**Short Title:** Structural, elastic, electronic, optical and thermal properties of cubic perovskite CsCdF<sub>3</sub> under pressure effect**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2010100318**Article Number:** 30101**Accession Number:** WOS:000289623300001

**Abstract:** We have investigated the structural, elastic, electronic, optical and thermal properties of an insulator perovskite CsCdF<sub>3</sub> using the pseudo-potential plane wave (PP-PW) scheme in the frame of generalized gradient approximation (GGA) and local density approximation (LDA). The computed lattice parameter and bulk modulus agree reasonably with experimental and previous theoretical works. We find that the cubic Pm-3m crystal symmetry persists throughout the pressure range studied. The anisotropy in CsCdF<sub>3</sub> crystal is strong, while, by analyzing the ratio between the bulk and shear moduli, we conclude that CsCdF<sub>3</sub> is ductile material. The calculations reveal that CsCdF<sub>3</sub> is an indirect-gap insulator under ambient conditions, with the gap increasing under pressure. Also, we present the results of the densities of states and charge densities. The static dielectric constant and static refractive index are proportional to the fundamental indirect band gap G-R. The thermal effect on the volume, bulk modulus, heat capacities C-V and C-P and Debye temperature was predicted using the quasi-harmonic Debye model. To the author's knowledge, most of the studied properties are reported for the first time.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M.**URL:** <Go to ISI>://WOS:000289623300001

**Reference Type: Journal Article****Record Number:** 75**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Bouarissa, N. Benkerri, M. Ibrahim, I. A.**Year:** 2011**Title:** Structural, elastic and electronic properties for M<sub>2</sub>XC (M=Ti and Cr, X=Ga and Al) phases from ab initio calculations**Journal:** Acta Metallurgica Sinica-English Letters**Volume:** 24**Issue:** 4**Pages:** 255-270**Date:** Aug**Short Title:** Structural, elastic and electronic properties for M<sub>2</sub>XC (M=Ti and Cr, X=Ga and Al) phases from ab initio calculations**ISSN:** 1006-7191**DOI:** 10.11890/1006-7191-114-255**Accession Number:** WOS:000294836500001

**Abstract:** The first-principles study of the structural, elastic and electronic properties of the M<sub>2</sub>XC phases depending on the type of M transition metal (M are Ti and Cr) and on X (X are Ga and Al) was reported. The calculations are performed using the pseudo-potential plane-wave approach in both the local density and generalized gradient approximations. The elastic constants are calculated using the static finite strain technique. Features such as structural and elastic parameters, Debye temperature, sound velocities and their pressure dependence have been investigated. In agreement with experimental and previous theoretical findings, it is found that the compressibility along a and c axis depends on the valence electron concentration (VEC). Correlations revealing the governing role of the X and M elements on the machinability indices of the material have been examined. The electronic properties have been discussed in terms of chemical bonding showing that bonding is due to M<sub>d</sub>-C<sub>p</sub> and M<sub>d</sub>-X<sub>p</sub> hybridizations. M-C bonds are stiffer than M-X ones and Al-Ti (Cr-C) bonds are stiffer than those corresponding to Ti-C (Al-Cr). It is shown that the stiffness of the M-X and M-C bonds increases with increasing the number of VEC.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Bouarissa, N. Benkerri, M. Ibrahim, I. A.**URL:** <Go to ISI>://WOS:000294836500001

**Reference Type: Journal Article****Record Number:** 76**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Lebgaa, N.**Year:** 2011**Title:** Theoretical investigations of physical properties**Journal:** Materials Chemistry and Physics**Volume:** 128**Issue:** 1-2**Pages:** 195-201**Date:** Jul**Short Title:** Theoretical investigations of physical properties**ISSN:** 0254-0584**DOI:** 10.1016/j.matchemphys.2011.02.058**Accession Number:** WOS:000291525400035

**Abstract:** A computed investigation on the structural, elastic, electronic, phonon frequencies and thermal properties of  $\text{Al}_x\text{ScyB}_{1-x-y}\text{N}$  quaternary alloys in the zinc-blend phase has been made with first-principles methods. The information on the lattice constant, lattice matching to AlN substrate and energy band gaps is indispensable for various practical applications. We have studied the effect of Sc concentration  $y = 0, 0.152, 0.303, 0.455$  and  $0.607$ ) on the lattice constant, bulk modulus, elastic constants C-11, C-12 and C-44, band gaps, optical phonon frequencies ( $\omega_{ro}$  and  $\omega_{lo}$ ), static and high-frequency dielectric coefficient  $\epsilon(0)$  and  $\epsilon(\infty)$  and dynamic effective charge  $Z^*$ . We remark an important deviation from the linear concentration dependence of the lattice constant and bulk modulus. The shear moduli, Young's modulus, Poisson's ratio were estimated in the frame work of the Voigt-Reuss-Hill approximation. The resistance to changes in bond length and lateral expansion in  $\text{Al}_x\text{ScyB}_{1-x-y}\text{N}$  increase with increasing concentration. We observe that at  $y$  concentration about 0.11, the F-X indirect fundamental gap becomes F-F direct fundamental gap in  $\text{Al}_x\text{ScyB}_{1-x-y}\text{N}$ . There is well agreement between our results and the experiment data for AlN binary compound which is a support for those of the quaternary alloys that we report for the first time. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Lebgaa, N.**URL:** <Go to ISI>://WOS:000291525400035

**Reference Type: Journal Article****Record Number:** 77**Author:** Ghebouli, M. A. Bouhemadou, A. Ghebouli, B. Fatmi, M. Bin-Omran, S.**Year:** 2011**Title:** Prediction study of the elastic and thermodynamic properties of the newly discovered tetragonal SrPd<sub>2</sub>Ge<sub>2</sub> phase**Journal:** Solid State Communications**Volume:** 151**Issue:** 14-15**Pages:** 976-981**Date:** Jul-Aug**Short Title:** Prediction study of the elastic and thermodynamic properties of the newly discovered tetragonal SrPd<sub>2</sub>Ge<sub>2</sub> phase**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2011.05.007**Accession Number:** WOS:000292444300003

**Abstract:** Density functional theory pseudo-potential plane-wave calculations are performed in order to predict the structural, elastic and thermodynamic properties of the newly discovered tetragonal intermetallic SrPd<sub>2</sub>Ge<sub>2</sub>. The computed equilibrium lattice constants and the internal parameter are in good agreement with the experimental findings. The effect of high pressure, up to 40 GPa, on the lattice constants shows that the contraction along the c axis is higher than along the a axis. The single-crystal elastic constants and related properties are calculated using the static finite strain technique. We predicted the bulk modulus, shear modulus, Young's modulus and Poisson's ratio for ideal polycrystalline SrPd<sub>2</sub>Ge<sub>2</sub> aggregates, using the Voigt-Reuss-Hill approximations. We estimated the Debye temperature and minimum thermal conductivity of SrPd<sub>2</sub>Ge<sub>2</sub> from the average sound velocity. Through the quasi-harmonic Debye model, in which the phononic effects are considered, the temperature and pressure effects on the primitive cell volume, bulk modulus, thermal expansion coefficient, heat capacity and Debye temperature are investigated. This is the first quantitative theoretical prediction of the elastic and thermodynamic properties of the SrPd<sub>2</sub>Ge<sub>2</sub> compound, and it still awaits experimental confirmation. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Ghebouli, M. A. Bouhemadou, A. Ghebouli, B. Fatmi, M. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000292444300003

**Reference Type: Journal Article****Record Number:** 78**Author:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M.**Year:** 2011**Title:** Theoretical study of the structural, elastic, electronic and thermal properties of the MAX phase Nb<sub>2</sub>SiC**Journal:** Solid State Communications**Volume:** 151**Issue:** 5**Pages:** 382-387**Date:** Mar**Short Title:** Theoretical study of the structural, elastic, electronic and thermal properties of the MAX phase Nb<sub>2</sub>SiC**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2010.12.014**Accession Number:** WOS:000287559600011

**Abstract:** Structural, elastic, electronic and thermal properties of the MAX phase Nb<sub>2</sub>SiC are studied by means of a pseudo-potential plane-wave method based on the density functional theory. The optimized zero pressure geometrical parameters are in good agreement with the available theoretical data. The effect of high pressure, up to 40 GPa, on the lattice constants shows that the contractions along the c-axis were higher than those along the a-axis. The elastic constants C<sub>ij</sub> and elastic wave velocities are calculated for monocrystal Nb<sub>2</sub>SiC. Numerical estimations of the bulk modulus, shear modulus, Young's modulus, Poisson's ratio, average sound velocity and Debye temperature for ideal polycrystalline Nb<sub>2</sub>SiC aggregates are performed in the framework of the Voigt-Reuss-Hill approximation. The band structure shows that Nb<sub>2</sub>SiC is an electrical conductor. The analysis of the atomic site projected densities and the charge density distribution shows that the bonding is of covalent-ionic nature with the presence of metallic character. The density of states at Fermi level is dictated by the niobium d states; Si element has a little effect. Thermal effects on some macroscopic properties of Nb<sub>2</sub>SiC are predicted using the quasi-harmonic Debye model, in which the lattice vibrations are taken into account. The variations of the primitive cell volume, volume expansion coefficient, bulk modulus, heat capacity and Debye temperature with pressure and temperature in the ranges of 0-40 GPa and 0-2000 K are obtained successfully. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M.**URL:** <Go to ISI>://WOS:000287559600011

**Reference Type: Journal Article****Record Number:** 79**Author:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bin-Omran, S.**Year:** 2011**Title:** Structural, elastic, electronic, optical and thermodynamic properties of KMgH<sub>3</sub>**Journal:** Solid State Sciences**Volume:** 13**Issue:** 3**Pages:** 647-652**Date:** Mar**Short Title:** Structural, elastic, electronic, optical and thermodynamic properties of KMgH<sub>3</sub>**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2010.11.046**Accession Number:** WOS:000288929300025

**Abstract:** The structural, elastic, electronic, optical and thermodynamic properties of the cubic perovskite-type hydride KMgH<sub>3</sub> have been investigated using pseudo-potential plane-wave method based on the density functional theory. Computed equilibrium lattice constant agrees well with the available experimental and theoretical data. The elastic constants and their pressure dependence are predicted using the static finite strain technique. A linear pressure dependence of the elastic stiffnesses is found. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio, average sound velocity and Debye temperature are numerically estimated in the frame work of the Voigt-Reuss-Hill approximation for KMgH<sub>3</sub> polycrystalline aggregate. The analysis of the site-projected l-decomposed density of states and charge density shows that the bonding is predominantly of ionic nature. Through the quasi-harmonic Debye model, in which the phononic effects are considered, the temperature effect on the lattice constant, bulk modulus, heat capacity and Debye temperature is calculated. (C) 2010 Elsevier Masson SAS. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000288929300025

**Reference Type: Journal Article****Record Number:** 80**Author:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bouamama, K.**Year:** 2011**Title:** Structural, electronic, optical and thermodynamic properties of  $\text{Sr}_x\text{Ca}_{1-x}\text{O}$ ,  $\text{Ba}_x\text{Sr}_{1-x}\text{O}$  and  $\text{Ba}_x\text{Ca}_{1-x}\text{O}$  alloys**Journal:** Journal of Alloys and Compounds**Volume:** 509**Issue:** 5**Pages:** 1440-1447**Date:** Feb**Short Title:** Structural, electronic, optical and thermodynamic properties of  $\text{Sr}_x\text{Ca}_{1-x}\text{O}$ ,  $\text{Ba}_x\text{Sr}_{1-x}\text{O}$  and  $\text{Ba}_x\text{Ca}_{1-x}\text{O}$  alloys**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2010.11.097**Accession Number:** WOS:000287167700031

**Abstract:** The structural, electronic, optical and thermodynamic properties of  $\text{Sr}_x\text{Ca}_{1-x}\text{O}$ ,  $\text{Ba}_x\text{Sr}_{1-x}\text{O}$  and  $\text{Ba}_x\text{Ca}_{1-x}\text{O}$  ternary alloys in NaCl phase were studied using pseudo-potential plane-wave method within the density functional theory. We modeled the alloys at some selected compositions with ordered structures described in terms of periodically repeated supercells. The dependence of the lattice parameters, band gaps, dielectric constants, refractive indices, Debye temperatures, mixing entropies and heat capacities on the composition  $x$  were analyzed for  $x = 0, 0.25, 0.50, 0.75$  and  $1$ . The lattice constant for  $\text{Sr}_x\text{Ca}_{1-x}\text{O}$  and  $\text{Ba}_x\text{Sr}_{1-x}\text{O}$  exhibits a marginal deviation from the Vegard's law, while the  $\text{Ba}_x\text{Ca}_{1-x}\text{O}$  lattice constant exhibits an appreciable upward bowing. A strong deviation of the bulk modulus from linear concentration dependence was observed for the three alloys. The microscopic origins of the gap bowing were detailed and explained. The composition dependence of the dielectric constant and refractive index was studied using different models. The thermodynamic stability of these alloys was investigated by calculating the phase diagram. The thermal effect on some macroscopic properties was investigated using the quasi-harmonic Debye model. There is a good agreement between our results and the available experimental data for the binary compounds which may be a support for the results of the ternary alloys reported here for the first time. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bouamama, K.**URL:** <Go to ISI>://WOS:000287167700031

**Reference Type: Journal Article****Record Number:** 81**Author:** Ghebouli, M. A. Ghebouli, B. Fatmi, M.**Year:** 2011**Title:** First-principles calculations on structural, elastic, electronic, optical and thermal properties of CsPbCl<sub>3</sub> perovskite**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 9**Pages:** 1837-1843**Date:** Apr**Short Title:** First-principles calculations on structural, elastic, electronic, optical and thermal properties of CsPbCl<sub>3</sub> perovskite**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.02.040**Accession Number:** WOS:000290106000038

**Abstract:** The structural, elastic, electronic, optical and thermal properties of the semiconductor perovskite CsPbCl<sub>3</sub> were investigated using the pseudo-potential plane wave (PP-PW) scheme in the frame of generalized gradient approximation (GGA) and local density approximation (LDA). The computed lattice constant agrees reasonably with experimental and theoretical ones. The CsPbCl<sub>3</sub> crystal behaves as ductile material. The valence bands are separated from the conduction bands by a direct band gap R-R. We distinguished hybridization between Pb-p states and Cl-p states in the valence bonding region. Under compression at P=30 GPa, this material will have a metallic character. The thermal effect on the lattice constant, bulk modulus, Debye temperature and heat capacity C-v was predicted using the quasi-harmonic Debye model. To the author's knowledge, most of the studied properties are reported for the first time. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Fatmi, M.**URL:** <Go to ISI>://WOS:000290106000038

**Reference Type: Journal Article****Record Number:** 82**Author:** Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bouhemadou, A.**Year:** 2011**Title:** Theoretical prediction of the structural, elastic, electronic and thermal properties of the MAX phases  $X_2SiC$  ( $X = Ti$  and  $Cr$ )**Journal:** Intermetallics**Volume:** 19**Issue:** 12**Pages:** 1936-1942**Date:** Dec**Short Title:** Theoretical prediction of the structural, elastic, electronic and thermal properties of the MAX phases  $X_2SiC$  ( $X = Ti$  and  $Cr$ )**ISSN:** 0966-9795**DOI:** 10.1016/j.intermet.2011.05.014**Accession Number:** WOS:000296548500024

**Abstract:** The structural, elastic, electronic and thermal properties of the MAX phases  $Ti_2SiC$  and  $Cr_2SiC$  are studied by means of the pseudo-potential plane wave method within GGA and LDA. The effect of pressure on the normalized lattice constants  $a/a(0)$  and  $c/c(0)$  and the internal parameter  $z$  is investigated. Our results of elastic constants, sound velocities and Debye temperature are predictions. The  $Ti_2SiC$  and  $Cr_2SiC$  compounds behave as ductile material and show a stronger anisotropy. The analysis of the band structure and density of states show that these compounds are electrical conductors, having a strong directional bonding between Ti and C and Cr and C atoms assured by the hybridization of Ti-d and Cr-d atom states with C-p atom states. The thermal effect on the primitive cell volume, bulk modulus, heat capacities  $C_v$  and  $C_p$  were predicted using the quasi-harmonic Debye model. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000296548500024

**Reference Type: Journal Article****Record Number:** 83**Author:** Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bouhemadou, A.**Year:** 2011**Title:** Calculation of physical properties of the cubic perovskite-type oxide BiScO<sub>3</sub> using the PP-PW method based on the DFT theory**Journal:** Solid State Communications**Volume:** 151**Issue:** 12**Pages:** 908-915**Date:** Jun**Short Title:** Calculation of physical properties of the cubic perovskite-type oxide BiScO<sub>3</sub> using the PP-PW method based on the DFT theory**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2011.03.023**Accession Number:** WOS:000291375400011

**Abstract:** Various physical properties of the cubic perovskite-type oxide BiScO<sub>3</sub> have been investigated using the pseudo-potential plane-wave (PP-PW) method based on the density functional theory (DFT). The computed equilibrium lattice parameters agree well with the available theoretical data. The elastic constants and their pressure dependence are predicted using the static finite strain technique. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio, average sound velocity and Debye temperature are numerically estimated in the framework of the Voigt-Reuss-Hill approximation for BiScO<sub>3</sub> polycrystalline aggregate. The analysis of the site-projected l-decomposed density of states, charge transfer and charge density shows that bonding is predominantly of ionic nature. We distinguish hybridization between Sc-d states and O-p states in the valence bonding region. Through the quasi-harmonic Debye model, in which the phononic effects are considered, the thermal effect on the lattice constant, bulk modulus, heat capacities and thermal expansion coefficient is calculated. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000291375400011

**Reference Type: Journal Article****Record Number:** 84**Author:** Guechi, A. Chegaar, M. Merabet, A.**Year:** 2011**Title:** Effect of Spectral Irradiance Distribution on the Performance of Solar Cells**Journal:** Acta Physica Polonica A**Volume:** 120**Issue:** 6A**Pages:** A43-A46**Date:** Dec**Short Title:** Effect of Spectral Irradiance Distribution on the Performance of Solar Cells**ISSN:** 0587-4246**Accession Number:** WOS:000301171100013

**Abstract:** In this paper, the global and diffuse solar radiation incident on solar cells is simulated using a spectral model SMARTS2, for varying atmospheric conditions on the site of Setif. The effect of changes in total intensity and spectral distribution on the short circuit current and efficiency of different kinds of thin film solar cells (CdTe, nc-Si:H and copper indium gallium selenide, CIGS) is examined. The results show a reduction in the short circuit current due to increasing turbidity. It is 18.82%, 27.06% and 26.80% under global radiation and for CdTe, nanocrystalline silicon (nc-Si:H), and CIGS solar cells, respectively. However it increases under diffuse radiation. Increasing water vapor in the atmosphere leads to a reduction in the short circuit current of 3.15%, 2.38%, and 2.45%, respectively, for CdTe, nc-Si:H, and CIGS cells under global radiation and it is not influenced under diffuse radiation. The performance of the solar cells is notably reduced, both in terms of efficiency and open circuit voltage, with increasing air mass.

**Notes:** Guechi, A. Chegaar, M. Merabet, A. Fall Meeting of the European-Materials-Research-Society (E-MRS)/Symposium H - Novel Materials for Electronics, Optoelectronics, Photovoltaics and Energy Saving Applications Sep 19-23, 2011 Warsaw, POLAND European Mat Res Soc (E-MRS) Si

**URL:** <Go to ISI>://WOS:000301171100013

**Reference Type: Journal Article****Record Number:** 85**Author:** Gueribiz, D. Jacquemin, F. Rahmani, M. Freour, S. Loucif, K.**Year:** 2011**Title:** Modeling of the mechanical loading effects on the effective diffusive behavior of polymer matrix composites**Journal:** Journal of Reinforced Plastics and Composites**Volume:** 30**Issue:** 4**Pages:** 337-346**Date:** Feb**Short Title:** Modeling of the mechanical loading effects on the effective diffusive behavior of polymer matrix composites**ISSN:** 0731-6844**DOI:** 10.1177/0731684410396600**Accession Number:** WOS:000288434500006

**Abstract:** In this study, the effect of a mechanical loading on the diffusion process in a polymer matrix composite is discussed. The application of an external loading is expected to modify the microstructure of the material and cause change in effective diffusive behavior as the diffusion in the polymer matrix is dependent on the free volume. On the basis of the free volume theory, the mechanical problem imposed on the representative volume element (RVE) is solved and then the volume fraction of free volume is determined. The effect of external mechanical loading on the moisture content and diffusion coefficient was first examined and finally the corresponding local stresses in the RVE are calculated.

**Notes:** Gueribiz, D. Jacquemin, F. Rahmani, M. Freour, S. Loucif, K.**URL:** <Go to ISI>://WOS:000288434500006

**Reference Type: Journal Article****Record Number:** 86**Author:** Guessas, L. Benmahammed, K.**Year:** 2011**Title:** ADAPTIVE BACKSTEPPING AND PID OPTIMIZED BY GENETIC ALGORITHM IN CONTROL OF CHAOTIC**Journal:** International Journal of Innovative Computing Information and Control**Volume:** 7**Issue:** 9**Pages:** 5299-5312**Date:** Sep**Short Title:** ADAPTIVE BACKSTEPPING AND PID OPTIMIZED BY GENETIC ALGORITHM IN CONTROL OF CHAOTIC**ISSN:** 1349-4198**Accession Number:** WOS:000294797500014

**Abstract:** In this paper, the robust adaptive control scheme based on adaptive backstepping design is used to control the autonomous second order strict feedback form such as the Lorenz Chaotic system. The design procedure is recursive; at the  $i$ (th) step, the  $i$ (th) subsystem is stabilized with respect to a Lyapunov function  $V(i)$  by the design of a stabilizing function  $\alpha(i)$ , tuning function  $T(i)$ , and the update law  $(\theta)$  over  $\hat{\theta}(i)$  for the unknowns' adaptive parameters estimates  $(\theta)$  over  $\hat{\theta}(i)$ , the feedback control  $u$  is designed at the final step. This procedure possesses strong properties of global stability and tracking which are built into the nonlinear system in a number of steps, which is never higher than the system order, without any growth restrictions on nonlinearities. The results show the guarantee of all the parameter estimates to converge to their true values. Some simulation results for the chaotic system cited above are shown to illustrate the parameter convergence with adaptive backstepping design.

**Notes:** Guessas, Laarem Benmahammed, Khier**URL:** <Go to ISI>://WOS:000294797500014

**Reference Type: Journal Article****Record Number:** 87**Author:** Haddadi, K. Bouhemadou, A. Louail, L. Maamache, M.**Year:** 2011**Title:** Density functional study of the structural, electronic, elastic and thermodynamic properties of  $ACRu(3)$  ( $A = V, Nb$  and  $Ta$ ) compounds**Journal:** Intermetallics**Volume:** 19**Issue:** 4**Pages:** 476-485**Date:** Apr**Short Title:** Density functional study of the structural, electronic, elastic and thermodynamic properties of  $ACRu(3)$  ( $A = V, Nb$  and  $Ta$ ) compounds**ISSN:** 0966-9795**DOI:** 10.1016/j.intermet.2010.11.002**Accession Number:** WOS:000287341400006

**Abstract:** Using a density functional scheme, we have investigated for the first time the structural, electronic, elastic and thermal properties of the ideal cubic antiperovskite carbides  $ACRu(3)$  ( $A = V, Nb, Ta$ ). The computed equilibrium lattice constants are in excellent agreement with the experimental data. The electronic band structures and densities of states profiles show that the studied compounds are conductors. Analysis of atomic site projected local density of states reveals that the bonding character may be described as a mixture of covalent ionic and, due to the d states in the vicinity of the Fermi level, metallic. Pressure dependence up to 50 GPa of the single crystal and polycrystalline elastic constants has been investigated in details. Analysis of the BIG ratios shows that  $VCrRu_3$  is slightly brittle while  $NbCrRu_3$  and  $TaCrRu_3$  are slightly ductile. We have estimated, the sound velocities in the principal directions. Through the quasi-harmonic Debye model, in which the phononic effects are taken into account, the temperature and pressure effects on the lattice constant, bulk modulus, heat capacity and Debye temperature are performed. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Haddadi, K. Bouhemadou, A. Louail, L. Maamache, M.**URL:** <Go to ISI>://WOS:000287341400006

**Reference Type: Journal Article****Record Number:** 88**Author:** Halis, A. Pateyron, B. El Ganaoui, M.**Year:** 2011**Title:** Dimensioning and realization of a low power air plasma arc generator (2 kW)**Journal:** Mecanique & Industries**Volume:** 12**Issue:** 4**Pages:** 325-330**Short Title:** Dimensioning and realization of a low power air plasma arc generator (2 kW)**ISSN:** 1296-2139**DOI:** 10.1051/meca/2011100**Accession Number:** WOS:000296934200008

**Abstract:** Dimensioning and realization of a low power air plasma arc generator (2 kW). An air plasma arc torch less than 2 kW was designed and constructed in the research laboratory QUERE of Setif University (Algeria) to meet all the needs that require the use of a plasma torch: welding, cutting, reloading metal surface treatment, pilot incineration burner, heating gas, etc. It is also a model of torches with the same concept but higher powers. It will also allow studying concentric electrodes plasma torches and hollow electrodes in many original configurations. A description of this generator plasma is presented with the results of the first experimental tests at reduced power. Heat and mass transfer are also identified to be quantified by using a numerical simulation approach.

**Notes:** Halis, Abderrahmane Pateyron, Bernard El Ganaoui, Mohammed**URL:** <Go to ISI>://WOS:000296934200008

**Reference Type: Journal Article****Record Number:** 89**Author:** Hallal, A. Berdot, T. Dey, P. Bismaths, L. T. Joly, L. Bourzami, A. Scheurer, F. Bulou, H. Henk, J. Alouani, M. Weber, W.**Year:** 2011**Title:** Ultimate Limit of Electron-Spin Precession upon Reflection in Ferromagnetic Films**Journal:** Physical Review Letters**Volume:** 107**Issue:** 8**Date:** Aug**Short Title:** Ultimate Limit of Electron-Spin Precession upon Reflection in Ferromagnetic Films**ISSN:** 0031-9007**DOI:** 10.1103/PhysRevLett.107.087203**Article Number:** 087203**Accession Number:** WOS:000293921000024

**Abstract:** We report the discovery of 180 degrees electron-spin precession in spin-polarized electron-reflection experiments on Fe films on Ag(001), the largest possible precession angle in a single electron reflection. Both experiments as a function of Fe film thickness and ab initio calculations show that the appearance of this ultimate spin precession depends with utmost sensitivity on the relaxation of the Fe surface layers during growth. Similar spin precession is also predicted for other ferromagnetic films.

**Notes:** Hallal, A. Berdot, T. Dey, P. Bismaths, L. Tati Joly, L. Bourzami, A. Scheurer, F. Bulou, H. Henk, J. Alouani, M. Weber, W.

**URL:** <Go to ISI>://WOS:000293921000024

**Reference Type: Journal Article****Record Number:** 90**Author:** Hamouda, A. Zehar, K.**Year:** 2011**Title:** Stability-index based method for optimal Var planning in distribution feeders**Journal:** Energy Conversion and Management**Volume:** 52**Issue:** 5**Pages:** 2072-2080**Date:** May**Short Title:** Stability-index based method for optimal Var planning in distribution feeders**ISSN:** 0196-8904**DOI:** 10.1016/j.enconman.2010.12.002**Accession Number:** WOS:000288976000008

**Abstract:** The problem of the reactive energy optimal planning can be solved in a fast and efficient way using heuristic techniques. The latter reduce the number of the control variables to be determined and lead to a near global optimal solution. The capacitor appropriate locations are firstly determined by decisive indices then, their optimal sizes are calculated. In this paper a stability-index based method is presented. The nodes stability-indices are calculated for identifying the most sensitive nodes to be candidate for receiving near optimal standard capacitors that, reduce the feeder power losses, improve the voltage profile and maximise the economic saving (objective function). In this multi-objective optimisation problem, the commonly used voltage constraint is substituted by a new constraint on the branch reactive currents. This new constraint, allows overcoming the over compensation phenomenon by setting positive branch reactive currents. The solution is further improved by regulating the source node voltage. The proposed approach has been tested on several feeder examples and its effectiveness has been demonstrated through comparative studies. The obtained results have shown that the proposed approach leads to a promising and feasible solution. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Hamouda, Abdellatif Zehar, Khaled**URL:** <Go to ISI>://WOS:000288976000008

**Reference Type: Journal Article****Record Number:** 91**Author:** Hamouda, A. Zehar, K.**Year:** 2011**Title:** Improved algorithm for radial distribution networks load flow solution**Journal:** International Journal of Electrical Power & Energy Systems**Volume:** 33**Issue:** 3**Pages:** 508-514**Date:** Mar**Short Title:** Improved algorithm for radial distribution networks load flow solution**ISSN:** 0142-0615**DOI:** 10.1016/j.ijepes.2010.11.004**Accession Number:** WOS:000288842800019

**Abstract:** The main aim of this paper is to present an improved method to solve load flow problem in balanced radial distribution systems with laterals. The method is efficient and easy to implement. Based on electric circuit laws, this method is iterative and allows the evaluation of both, voltage (rms) values and phase-angles. The phase-angles although of small values become necessary in the reactive energy optimisation problem. To solve the load flow in lines with laterals, a simple technique of determining nodes beyond each branch is given. Speed convergence was increased by an appropriate choice of initial voltages. The method requires a small number of iterations and less computational time. It has been used successfully in several line examples. The obtained results for voltage magnitudes and deviation-angles are found to be very close to those of previous works. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Hamouda, Abdellatif Zehar, Khaled**URL:** <Go to ISI>://WOS:000288842800019

**Reference Type: Journal Article****Record Number:** 92**Author:** Harrag, F. Hamdi-Cherif, A. Al-Salman, A. M. S. El-Qawasmeh, E.**Year:** 2011**Title:** Evaluating the effectiveness of VSM model and topic segmentation in retrieving arabic documents**Journal:** Computer Systems Science and Engineering**Volume:** 26**Issue:** 1**Pages:** 59-71**Date:** Jan**Short Title:** Evaluating the effectiveness of VSM model and topic segmentation in retrieving arabic documents**ISSN:** 0267-6192**Accession Number:** WOS:000288722300007

**Abstract:** Information retrieval needs to match relevant texts with a given query. Selecting appropriate parts is useful when documents are long, and only portions are interesting to the user. In this paper, a set of IR experiments was carried out to study the impact of topic segmentation and its effect on Arabic information retrieval (IR). The system evaluation was conducted in two cases based on precision/recall criteria. Evaluate the system without using Arabic text segmentation and evaluate the system with Arabic text segmentation. Some famous information retrieval models, i.e., Vector Space Model, Relevance feedback Model were also adopted in our study for ranking relevant documents. Traditional data recall, precision and F1 measures were used to gauge IR effectiveness. A number of queries were selected and subjected to further detailed analysis to further explore the influence of topic segmentation on IR. The findings reveal that the system with topic segmentation gives better performance than the system without topic segmentation.

**Notes:** Harrag, Fouzi Hamdi-Cherif, Aboubekeur Al-Salman, Abdul Malik S. El-Qawasmeh, Eyas**URL:** <Go to ISI>://WOS:000288722300007

**Reference Type: Journal Article****Record Number:** 93**Author:** Hasnaoui, A. Bencheikh, A. Ait-Ameur, K.**Year:** 2011**Title:** Tailored TEM<sub>p0</sub> beams for large size 3-D laser prototyping**Journal:** Optics and Lasers in Engineering**Volume:** 49**Issue:** 2**Pages:** 248-251**Date:** Feb**Short Title:** Tailored TEM<sub>p0</sub> beams for large size 3-D laser prototyping**ISSN:** 0143-8166**DOI:** 10.1016/j.optlaseng.2010.09.013**Accession Number:** WOS:000285169500009

**Abstract:** The Laser-Lithography technique allows the fabrication of complex objects having microsized by selectively solidifying polymeric materials layer by layer upon exposure to a focused Gaussian laser beam having a beam propagation factor  $M^2=1$ . We can expect that extension of this technique to large sizes 3-D prototyping comes up against a large increase in the design time. A possible solution is the increase in the focused spot size, but unfortunately at the price of a great reduction in the longitudinal resolution due to the resulting increase in the depth of focus. To overcome these difficulties, we propose the use of a rectified TEM<sub>p0</sub> beam allowing the obtaining of a Gaussian beam intensity profile in the focus plane of a lens. The reshaped TEM<sub>p0</sub> beam has a beam propagation factor  $M^2$  approximate to  $(2p+1)$ , and this yields to a relative improvement of the longitudinal resolution although the spot size is increased for reducing the processing time. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Hasnaoui, A. Bencheikh, A. Ait-Ameur, K.**URL:** <Go to ISI>://WOS:000285169500009

**Reference Type: Journal Article****Record Number:** 94**Author:** Hasnaoui, A. Bencheikh, A. Fromager, M. Cagniot, E. Ait-Ameur, K.**Year:** 2011**Title:** Creation of a sharper focus by using a rectified TEMpo beam (vol 284, pg 1331, 2011)**Journal:** Optics Communications**Volume:** 284**Issue:** 16-17**Pages:** 4107-4107**Date:** Aug**Short Title:** Creation of a sharper focus by using a rectified TEMpo beam (vol 284, pg 1331, 2011)**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2011.04.060**Accession Number:** WOS:000291920000051**Notes:** Hasnaoui, A. Bencheikh, A. Fromager, M. Cagniot, E. Ait-Ameur, K.**URL:** <Go to ISI>://WOS:000291920000051

**Reference Type: Journal Article****Record Number:** 95**Author:** Hasnaoui, A. Bencheikh, A. Fromager, M. Cagniot, E. Ait-Ameur, K.**Year:** 2011**Title:** Creation of a sharper focus by using a rectified TEM<sub>p0</sub> beam**Journal:** Optics Communications**Volume:** 284**Issue:** 5**Pages:** 1331-1334**Date:** Mar**Short Title:** Creation of a sharper focus by using a rectified TEM<sub>p0</sub> beam**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2010.11.011**Accession Number:** WOS:000287179500041

**Abstract:** The superresolution technique is usually used in optical imaging for its ability to make the central diffractive spot smaller than the Airy spot. In this paper, we apply the superresolution technique for transforming a symmetrical TEM<sub>p0</sub> Laguerre-Gauss beam into a Gaussian intensity distribution in the plane of a converging lens. The beam shaping is achieved by an annular binary Diffractive Optical Element having a transmittance, alternatively equal to -1 or +1, modelled on the p light rings of the incident beam. It is observed that the rectified TEM<sub>30</sub> beam at focus has a focal volume 170 times smaller than that of a Gaussian beam. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Hasnaoui, A. Bencheikh, A. Fromager, M. Cagniot, E. Ait-Ameur, K.**URL:** <Go to ISI>://WOS:000287179500041

**Reference Type: Journal Article****Record Number:** 96**Author:** Ihaddadene, R. Affatato, S. Zavalloni, M. Bouzid, S. Viceconti, M.**Year:** 2011**Title:** Carbon composition effects on wear behaviour and wear mechanisms of metal-on-metal hip prosthesis**Journal:** Computer Methods in Biomechanics and Biomedical Engineering**Volume:** 14**Pages:** 33-34**Short Title:** Carbon composition effects on wear behaviour and wear mechanisms of metal-on-metal hip prosthesis**ISSN:** 1025-5842**DOI:** 10.1080/10255842.2011.591623**Accession Number:** WOS:000295867500011**Notes:** Ihaddadene, R. Affatato, S. Zavalloni, M. Bouzid, S. Viceconti, M. 36th Congress of the Society-of-Biomechanics Aug 31-sep 02, 2011 Besancon, FRANCE Soc Biomecanique 1**URL:** <Go to ISI>://WOS:000295867500011

**Reference Type: Journal Article****Record Number:** 97**Author:** Ihaddadene, R. Affatato, S. Zavalloni, M. Bouzid, S. Viceconti, M.**Year:** 2011**Title:** Femoral head diameter and carbon composition effect on wear of metal-on-metal hip replacements**Journal:** Computer Methods in Biomechanics and Biomedical Engineering**Volume:** 14**Pages:** 31-32**Short Title:** Femoral head diameter and carbon composition effect on wear of metal-on-metal hip replacements**ISSN:** 1025-5842**DOI:** 10.1080/10255842.2011.591531**Accession Number:** WOS:000295867500010**Notes:** Ihaddadene, R. Affatato, S. Zavalloni, M. Bouzid, S. Viceconti, M. 36th Congress of the Society-of-Biomechanics Aug 31-sep 02, 2011 Besancon, FRANCE Soc Biomecanique 1**URL:** <Go to ISI>://WOS:000295867500010

**Reference Type: Journal Article****Record Number:** 98**Author:** Iratni, A. Katebi, R. Mostefai, M.**Year:** 2011**Title:** Non-linear State Dependent Differential Riccati States Filter for Wastewater Treatment Process**Journal:** Studies in Informatics and Control**Volume:** 20**Issue:** 3**Pages:** 247-254**Date:** Sep**Short Title:** Non-linear State Dependent Differential Riccati States Filter for Wastewater Treatment Process**ISSN:** 1220-1766**Accession Number:** WOS:000299459200005

**Abstract:** The most important issues relating to monitoring, quality control and prediction models for environmental protection in the treatment plant waste water are based on the amount of information and measures that are available. The key step in controlling and monitoring the plant is to obtain an accurate and robust estimate of the states model. The paper focuses on estimating non-measurable physical states of wastewater treatment system, which are unavailable because of difficulties techniques or the high cost of physical sensors. The developed filter is dealing with the non-linearity describing the system. The Activated Sludge Process (ASP) as the biological technique most commonly used wastewater treatment, attracts much attention the research community. We developed for this class of processes a robust non-linear estimator known as "state-dependent differential Riccati filter (SDDRF). The sensor software is simple to implement and has a computational cost relatively low. The results are compared with the extended Kalman filter (EKF) to demonstrate the improved performance of the filter SDDRF. The filter allows the online monitoring of process variables, which are not directly measurable. The simulation results prove the advantage of using this approach.

**Notes:** Iratni, Abdelhamid Katebi, Reza Mostefai, Mohammed**URL:** <Go to ISI>://WOS:000299459200005

**Reference Type: Journal Article****Record Number:** 99**Author:** Ismail, J. Zairi, F. Nait-Abdelaziz, M. Bouzid, S. Azari, Z.**Year:** 2011**Title:** Experimental and numerical investigations on erosion damage in glass by impact of small-sized particles**Journal:** Wear**Volume:** 271**Issue:** 5-6**Pages:** 817-826**Date:** Jun**Short Title:** Experimental and numerical investigations on erosion damage in glass by impact of small-sized particles**ISSN:** 0043-1648**DOI:** 10.1016/j.wear.2011.03.009**Accession Number:** WOS:000292720600022

**Abstract:** The present paper deals with damage mechanisms in soda-lime glass subjected to particle impacts. Sandblasting experiments on glass using small-sized particles were performed and resulting damaged sites were analyzed by means of a 3D optical profilometer. A particular attention is paid to determine the different morphologies of imprints and cracks with regard to particle size and impact velocity. The impacted sites show that damage patterns fairly coincide with those caused by static indentation; localized deformation and cracks nucleation are generated close to the impact zone. According to our previous work concerning the damage due to static indentation in glass (Ismail et al., Computational Materials Science 42 (2008) 407-415 [18]), the current paper takes advantage of the continuum damage mechanics (CDM) approach to simulate, via finite element analysis, the erosion behavior of soda-lime glass impacted with small-sized particles. Experimental data obtained by means of split Hopkinson pressure bar and drop ball tests are used to identify the parameters of the anisotropic stress-based damage evolution law. It is shown that the implemented anisotropic stress-based CDM model is able to predict the impact damage patterns experimentally observed. It is further shown that the removed volume in one impact site measured by 3D profilometry is well captured by the anisotropic CDM model coupled with a vanishing element technique. The dependence of material removal on the particle size and velocity is numerically studied and the trends are identified. The crater sizes predicted by the damage model are then compared with empirical models proposed in the literature to describe the velocity dependency of erosion. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Ismail, J. Zairi, F. Nait-Abdelaziz, M. Bouzid, S. Azari, Z.**URL:** <Go to ISI>://WOS:000292720600022

**Reference Type: Journal Article****Record Number:** 100**Author:** Issaadi, S. Douadi, T. Zouaoui, A. Chafaa, S. Khan, M. A. Bouet, G.**Year:** 2011**Title:** Novel thiophene symmetrical Schiff base compounds as corrosion inhibitor for mild steel in acidic media**Journal:** Corrosion Science**Volume:** 53**Issue:** 4**Pages:** 1484-1488**Date:** Apr**Short Title:** Novel thiophene symmetrical Schiff base compounds as corrosion inhibitor for mild steel in acidic media**ISSN:** 0010-938X**DOI:** 10.1016/j.corsci.2011.01.022**Accession Number:** WOS:000288972000040

**Abstract:** The inhibiting effect of two Schiff bases on the corrosion of the mild steel (MS) in 1 M HCl has been studied by electrochemical impedance spectroscopy (EIS) and Tafel polarisation measurements. The Schiff bases, 4,4'-bis(3-carboxaldehyde thiophene) diphenyl diimino ether (L(1)) and 4,4'-bis(3-carboxaldehyde thiophene) diphenyl diimino ethane (L(2)), were synthesized using 3-carboxaldehydethiophene and its corresponding amine. Polarisation curves reveal that both compounds are mixed type (cathodic/anodic) inhibitors and inhibition efficiency (% IE) increases with increasing concentration of compounds. It is suggested that their effects depend on their concentrations and the molecular structures. Adsorption of compounds on mild steel surface is spontaneous and obeys Langmuir's isotherm. Published by Elsevier Ltd.

**Notes:** Issaadi, S. Douadi, T. Zouaoui, A. Chafaa, S. Khan, M. A. Bouet, G.**URL:** <Go to ISI>://WOS:000288972000040

**Reference Type: Journal Article****Record Number:** 101**Author:** Kadem, A. Baleanu, D.**Year:** 2011**Title:** Solution of a fractional transport equation by using the generalized quadratic form**Journal:** Communications in Nonlinear Science and Numerical Simulation**Volume:** 16**Issue:** 8**Pages:** 3011-3014**Date:** Aug**Short Title:** Solution of a fractional transport equation by using the generalized quadratic form**ISSN:** 1007-5704**DOI:** 10.1016/j.cnsns.2010.10.032**Accession Number:** WOS:000289601700008

**Abstract:** In this manuscript the one dimensional fractional transport equation in which the prescribed source and angular flux are spatially quadratic is investigated within the generalized quadratic form method. It is reported that the angular flux satisfies Fick's law and the corresponding scalar flux satisfies the fractional generalization of the classic diffusion equation. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Kadem, Abdelouahab Baleanu, Dumitru**URL:** <Go to ISI>://WOS:000289601700008

**Reference Type: Journal Article****Record Number:** 102**Author:** Kadem, A. Baleanu, D.**Year:** 2011**Title:** ON FRACTIONAL COUPLED WHITHAM-BROER-KAUP EQUATIONS**Journal:** Romanian Journal of Physics**Volume:** 56**Issue:** 5-6**Pages:** 629-635**Short Title:** ON FRACTIONAL COUPLED WHITHAM-BROER-KAUP EQUATIONS**ISSN:** 1221-146X**Accession Number:** WOS:000292678100001

**Abstract:** Finding the fractional version of a given classical nonlinear equation or to a given system of differential equations is still an open problem in the field of the fractional calculus. In this paper the homotopy perturbation method is used to find an analytical approximate solution for the coupled Whitham-Broer-Kaup equations. The obtained results indicate that the method is efficient and accurate.

**Notes:** Kadem, Abdelouahab Baleanu, Dumitru**URL:** <Go to ISI>://WOS:000292678100001

**Reference Type: Journal Article****Record Number:** 103**Author:** Kadem, A. Baleanu, D.**Year:** 2011**Title:** HOMOTOPY PERTURBATION METHOD FOR THE COUPLED FRACTIONAL LOTKA-VOLTERRA EQUATIONS**Journal:** Romanian Journal of Physics**Volume:** 56**Issue:** 3-4**Pages:** 332-338**Short Title:** HOMOTOPY PERTURBATION METHOD FOR THE COUPLED FRACTIONAL LOTKA-VOLTERRA EQUATIONS**ISSN:** 1221-146X**Accession Number:** WOS:000291142400003

**Abstract:** Fractional differential equations started to have important applications in various fields of science and engineering involving dynamics of complex phenomena. Finding new methods to solve the fractional differential equations is an open issue in the area of fractional calculus. In this paper the homotopy perturbation method is used to find an analytic approximate solution for the coupled Lotka-Volterra equations.

**Notes:** Kadem, Abdelouahab Baleanu, Dumitru**URL:** <Go to ISI>://WOS:000291142400003

**Reference Type: Journal Article****Record Number:** 104**Author:** Kadem, A. Kilicman, A.**Year:** 2011**Title:** Note on transport equation and fractional Sumudu transform**Journal:** Computers & Mathematics with Applications**Volume:** 62**Issue:** 8**Pages:** 2995-3003**Date:** Oct**Short Title:** Note on transport equation and fractional Sumudu transform**ISSN:** 0898-1221**DOI:** 10.1016/j.camwa.2011.08.009**Accession Number:** WOS:000296213200012

**Abstract:** In this paper, the Chebyshev polynomials to solve analytically the fractional neutron transport equation in one-dimensional plane geometry are used. The procedure is based on the expansion of the angular flux in terms of the Chebyshev polynomials. The obtained system of fractional linear differential equation is solved analytically by using fractional Sumudu transform. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Kadem, Abdelouahab Kilicman, Adem**URL:** <Go to ISI>://WOS:000296213200012

**Reference Type: Journal Article****Record Number:** 105**Author:** Kahoul, A. Abassi, A. Deghfel, B. Nekkab, M.**Year:** 2011**Title:** K-shell fluorescence yields for elements with  $6 \leq Z \leq 99$ **Journal:** Radiation Physics and Chemistry**Volume:** 80**Issue:** 3**Pages:** 369-377**Date:** Mar**Short Title:** K-shell fluorescence yields for elements with  $6 \leq Z \leq 99$ **ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2010.11.011**Accession Number:** WOS:000287292100012

**Abstract:** In this study, empirical K-shell fluorescence yields ( $\omega(K)$ ) from the available experimental data for elements with  $6 \leq Z \leq 99$  were calculated. The experimental data are fitted using the quantity  $(\omega(K)/(1-\omega(K)))^{1/q}$  (where  $q = 3, 3.5$  and  $4$ ) vs.  $Z$  to deduce the empirical fluorescence yields. A comparison is made between the results of the procedures followed here and the literature theoretical and empirical values. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Kahoul, A. Abassi, A. Deghfel, B. Nekkab, M.**URL:** <Go to ISI>://WOS:000287292100012

**Reference Type: Journal Article****Record Number:** 106**Author:** Kahoul, A. Deghfel, B. Abdellatif, A. Nekkab, M.**Year:** 2011**Title:** New procedure calculation of K-shell ionization cross sections by proton impact**Journal:** Radiation Physics and Chemistry**Volume:** 80**Issue:** 12**Pages:** 1300-1311**Date:** Dec**Short Title:** New procedure calculation of K-shell ionization cross sections by proton impact**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2011.06.016**Accession Number:** WOS:000295665100002

**Abstract:** The database, which relies on different compilations available in the literature and on other experimental values extracted from papers published from 1992 till 2010, is used, within the individual treatment of the elements from beryllium ( $(4)\text{Be}$ ) to uranium ( $(92)\text{U}$ ), to deduce the empirical cross sections. These experimental data can be presented in a single curve, depending on a scaling law extracted from studies in the most familiar theories of collision (PWBA and BEA). Then, a fourth order polynomial was used to fit very well the existing database of K-shell ionization cross sections by proton. This procedure generates a new set of parameters to calculate empirical cross sections. Following the present procedure, our results are compared with those obtained using the ECPSSR model where a discrepancy is observed in the low-proton energy regime. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Kahoul, A. Deghfel, B. Abdellatif, A. Nekkab, M.**URL:** <Go to ISI>://WOS:000295665100002

**Reference Type: Journal Article****Record Number:** 107**Author:** Kara, M. Merouani, B. Chorfi, L.**Year:** 2011**Title:** COMPUTATION OF THE TORSIONAL MODES IN AN AXISYMMETRIC ELASTIC LAYER**Journal:** Electronic Transactions on Numerical Analysis**Volume:** 38**Pages:** 303-316**Short Title:** COMPUTATION OF THE TORSIONAL MODES IN AN AXISYMMETRIC ELASTIC LAYER**ISSN:** 1068-9613**Accession Number:** WOS:000299643200016

**Abstract:** This paper is devoted to the numerical study of an eigenvalue problem modeling the torsional modes in an infinite and axisymmetric elastic layer. In the cylindrical coordinates  $(r, z)$ , without  $\theta$ , the problem is posed in a semi-infinite strip  $\Omega = \mathbb{R}^+ \times ]0, L[$ . For the numerical approximation, we formulate the problem in the bounded domain  $\Omega(\mathbb{R}) = ]0, R[ \times ]0, L[$ . To this end, we use the localized finite element method, which links two representations of the solution: the analytic solution in the exterior domain  $\Omega(\mathbb{R})' = ]R, +\infty[ \times ]0, L[$  and the numerical solution in the interior domain  $\Omega(\mathbb{R})$ .

**Notes:** Kara, Mohamed Merouani, Boubakeur Chorfi, Lahcene**URL:** <Go to ISI>://WOS:000299643200016

**Reference Type: Journal Article****Record Number:** 108**Author:** Kerboua, N. Moussaceb, K. Kaci, M. Benachour, D. Sadoun, T. Rouba, N.**Year:** 2011**Title:** Modeling of the Kinetic Degradation of Unstabilized and HALS-Stabilized LDPE Films in Natural Aging**Journal:** Arabian Journal for Science and Engineering**Volume:** 36**Issue:** 4**Pages:** 541-552**Date:** Jul**Short Title:** Modeling of the Kinetic Degradation of Unstabilized and HALS-Stabilized LDPE Films in Natural Aging**ISSN:** 1319-8025**DOI:** 10.1007/s13369-011-0065-5**Accession Number:** WOS:000294498400004

**Abstract:** In this work, we propose new mathematical models describing the kinetic degradation of unstabilized low-density polyethylene (LDPE) and LDPE stabilized with hindered amine light stabilizers (HALS). The samples were exposed to natural weathering conditions, and the degradation was measured by a change in elongation at break with time. The mathematical approach developed was based on multiple linear regression analysis (MLRA). We tested the reliability of the selected models using four statistical criteria: residual variance, coefficient of determination, Student test and Fisher-Snedecor test. The linear systems resulting from the MLRA were solved using the Cholesky method. The results showed that the polynomial models developed to predict elongation at break were reliable for both types of samples under natural weathering conditions. The experimental half-life times are close to those predicted by the models.

**Notes:** Kerboua, Nadra Moussaceb, Karim Kaci, Mustapha Benachour, Djafer Sadoun, Tahar Rouba, Nabila

**URL:** <Go to ISI>://WOS:000294498400004

**Reference Type: Journal Article****Record Number:** 109**Author:** Kerkache, L. Layadi, A. Dogheche, E. Remiens, D.**Year:** 2011**Title:** Structural, ferroelectric and dielectric properties of In<sub>2</sub>O<sub>3</sub>:Sn (ITO) on PbZr<sub>0.53</sub>Ti<sub>0.47</sub>O<sub>3</sub> (PZT)/Pt and annealing effect**Journal:** Journal of Alloys and Compounds**Volume:** 509**Issue:** 20**Pages:** 6072-6076**Date:** May**Short Title:** Structural, ferroelectric and dielectric properties of In<sub>2</sub>O<sub>3</sub>:Sn (ITO) on PbZr<sub>0.53</sub>Ti<sub>0.47</sub>O<sub>3</sub> (PZT)/Pt and annealing effect**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2011.03.022**Accession Number:** WOS:000289462600026

**Abstract:** Ferroelectric indium tin oxide (ITO) on PbZr<sub>0.53</sub>Ti<sub>0.47</sub>O<sub>3</sub> (PZT)/Pt structure, prepared by RF sputtering onto SiO<sub>2</sub>/Si substrates, is studied in order to investigate the effect of ITO as a top electrode in these systems. X-ray diffraction, scanning electron microscopy (SEM) and atomic force microscopy (AFM) experiments were performed to study the structure and the surface morphology of the samples. From X-ray diffraction, we observe that the ITO thin film grows with the (1 1 1) texture and the peaks attributed to PZT are all from the perovskite phase. The average roughness (RMS) of the PZT surface is found to be 1.650 nm from AFM experiment. The ferroelectric and dielectric properties were inferred from polarization hysteresis loops, capacitance and dielectric constant measurements. These properties have been compared to those of the widely studied Pt/PZT/Pt system prepared under the same conditions. The effect of ITO/PZT/Pt annealing has been studied. Annealing at 400 degrees C leads to 13% increase in the dielectric constant  $\epsilon_r$ . (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Kerkache, L. Layadi, A. Dogheche, E. Remiens, D.**URL:** <Go to ISI>://WOS:000289462600026

**Reference Type: Journal Article****Record Number:** 110**Author:** Kessal, A. Lazhar, R. Gaubert, J. P. Mohammed, M.**Year:** 2011**Title:** Analysis and design of an isolated single-phase power factor corrector with a fast regulation**Journal:** Electric Power Systems Research**Volume:** 81**Issue:** 9**Pages:** 1825-1831**Date:** Sep**Short Title:** Analysis and design of an isolated single-phase power factor corrector with a fast regulation**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2011.05.012**Accession Number:** WOS:000293316700009

**Abstract:** This paper presents an analysis and a modeling approach to obtain a small-signal model design and the digital implementation of a linear control technique for single-phase boost power factor correctors (PFC). Such converters present nonlinear characteristics and approximations of them are used to drive the models. The proposed circuit significantly improves the dynamic response of the converter to load steps without the need of a high crossover frequency of the voltage loop by adding low-pass filter. So, a low distortion of the input current is easily achieved. This controller has been verified via simulation in Simulink using a continuous time plant model and a discrete time controller. Real-time implementation is performed on an experimental test bench utilizing a rapid prototyping tool. The controller is experimentally confirmed for steady-state performance and transient response. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Kessal, Abdelhalim Lazhar, Rahmani Gaubert, Jean-Paul Mohammed, Mostefai**URL:** <Go to ISI>://WOS:000293316700009

**Reference Type: Journal Article****Record Number:** 111**Author:** Khaber, L. Ferhat-Hamida, A. Hachemi, A. Hachemi, H. Beniaiche, A.**Year:** 2011**Title:** Characterization of the Landau expansion equation for SrTiO<sub>3</sub> under pressure**Journal:** Physica B-Condensed Matter**Volume:** 406**Issue:** 20**Pages:** 3922-3925**Date:** Oct**Short Title:** Characterization of the Landau expansion equation for SrTiO<sub>3</sub> under pressure**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2011.07.027**Accession Number:** WOS:000295004500031

**Abstract:** This work focuses on the characterization of the expansion of Landau's main equation for Pm (3) over barm structures, which are transformed with symmetry subgroups, associated with M + 3 and R + 4 special points of the Brillouin zone, under hydrostatic pressure. This solution has been adapted to include the general influence of hydrostatic pressure and the evolution of the order parameter. We present a simple scheme in order to search systematically the ground state of all perovskite structures derivable from octahedral rotations under high pressure. We have applied this adaptation to SrTiO<sub>3</sub> perovskite. Results of the characterization of Landau's equation for the cubic-tetragonal phase transition under pressure are discussed here. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Khaber, L. Ferhat-Hamida, A. Hachemi, A. Hachemi, H. Beniaiche, A.**URL:** <Go to ISI>://WOS:000295004500031

**Reference Type: Journal Article****Record Number:** 112**Author:** Kharmouche, A.**Year:** 2011**Title:** Thickness Dependent Magnetic and Structural Properties of Co(x)Cr(1-x) Thin Films Evaporated on Si(100) and Glass Substrates**Journal:** Journal of Nanoscience and Nanotechnology**Volume:** 11**Issue:** 6**Pages:** 4757-4764**Date:** Jun**Short Title:** Thickness Dependent Magnetic and Structural Properties of Co(x)Cr(1-x) Thin Films Evaporated on Si(100) and Glass Substrates**ISSN:** 1533-4880**DOI:** 10.1166/jnn.2011.4137**Accession Number:** WOS:000291568100013

**Abstract:** Series of Co(x)Cr(1-x) thin films have been prepared by thermal evaporation onto Si(100) and Corning glass substrates, x ranging from 1 to 0.60, and the magnetic layer thickness from 17 to 220 nm. The dependence of the magnetic and crystallographic properties on the thickness of CoCr layers have been investigated. The chromium content effect on the saturation magnetization of the films has also been examined. Microscopic characterizations of the films, performed with X-ray diffraction (XRD) measurements, infer that all the samples are composed of hcp phase crystallites with good orientation of the c axis showing a (0001) preferred orientation. The grain size increases with thickness. Atomic force microscopy (AFM) observations show very smooth film surfaces, the highest rms value being 18 angstrom. The saturation magnetization  $M(s)$  was found to decrease from 1400 emu/cm<sup>3</sup> to a few emu/cm<sup>3</sup> as x decreases from 1 to 0.60, for all values of the thickness. In-plane squareness up to  $S = 0.83$  has been observed for the CoCr/Si thinnest film, and  $S = 0.90$  for the Co/Si thinnest film, too. Magnetic Force Microscopy (MFM) study points out the absence of stripe domains equilibrium magnetization structure for the CoCr thin films whereas the thick Co films present a well defined stripe pattern. From the magnetocrystalline anisotropy field  $H(a)$  values extracted from the fit of the BLS spectra, we have computed effective magnetic anisotropy factors  $K(u)$  as well. Their negative values for the CoCr samples confirm an in-plane magnetic anisotropy for the thin film magnetization.

**Notes:** Kharmouche, A.**URL:** <Go to ISI>://WOS:000291568100013

**Reference Type: Journal Article****Record Number:** 113**Author:** Kharmouche, A.**Year:** 2011**Title:** Magnetic Studies of Vapor-Deposited Co/Si(100) and Co/Glass Thin Films**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 24**Issue:** 1-2**Pages:** 591-595**Date:** Jan**Short Title:** Magnetic Studies of Vapor-Deposited Co/Si(100) and Co/Glass Thin Films**ISSN:** 1557-1939**DOI:** 10.1007/s10948-010-0952-0**Accession Number:** WOS:000289855700096

**Abstract:** Magnetic force microscopy and alternating gradient field magnetometry techniques were used to investigate the static magnetic properties of vapor-deposited cobalt films with different thicknesses ranging from 50 to 195 nm. Brillouin light scattering (BLS) and ferromagnetic resonance (FMR) techniques were performed to study the dynamic properties of these films. Despite thicknesses well above the theoretical critical thickness that allows the presence of stripe domains, only the thicker films exhibit a magnetic stripe domain structure. The magnetocrystalline anisotropy factors, deduced and computed from BLS and FMR measurements, were found to decrease with thickness. Values of these computed effective anisotropy factors, of up to  $7 \times 10^6$  erg cm<sup>-3</sup>, have been found. All these results will be discussed and correlated.

**Notes:** Kharmouche, A.**URL:** <Go to ISI>://WOS:000289855700096

**Reference Type: Journal Article****Record Number:** 114**Author:** Khelil, K. Hussain, A. Bekka, R. E. Berrezek, F.**Year:** 2011**Title:** Improved multiple description wavelet based image coding using subband uniform quantization**Journal:** Aeu-International Journal of Electronics and Communications**Volume:** 65**Issue:** 11**Pages:** 967-974**Short Title:** Improved multiple description wavelet based image coding using subband uniform quantization**ISSN:** 1434-8411**DOI:** 10.1016/j.aeue.2011.03.011**Accession Number:** WOS:000295807000013

**Abstract:** The objective of multiple description coding (MDC) is to encode a source into multiple descriptions supporting different quality levels of reconstruction. In this paper, we use the multiple description transform coding (MDTC) algorithm based on the wavelet transform that has been shown to be robust to packet losses allowing a graceful quality degradation. The case of transmitting still images with four descriptions is considered. We propose to use subband uniform quantization with different quantization steps, optimized using a genetic algorithm (GA), when compressing to a target bit-rate. Simulation results show that the proposed method offers substantial improvements in the case of packet loss when compared to previously reported work that applies uniform quantization with a fixed step size. (C) 2011 Elsevier GmbH. All rights reserved.

**Notes:** Khelil, K. Hussain, A. Bekka, R. E. Berrezek, F.**URL:** <Go to ISI>://WOS:000295807000013

**Reference Type: Journal Article****Record Number:** 115**Author:** Laantri, N. Jalbout, M. Khyatti, M. Ben Ayoub, W. Dahmoul, S. Ayad, M. Bedadra, W. Abdoun, M. Mesli, S. Kandil, M. Hamdi-Cherif, M. Boualga, K. Bouaouina, N. Chouchane, L. Benider, A. Ben-Ayed, F. Goldgar, D. Corbex, M.**Year:** 2011**Title:** XRCC1 and hOGG1 Genes and Risk of Nasopharyngeal Carcinoma in North African Countries**Journal:** Molecular Carcinogenesis**Volume:** 50**Issue:** 9**Pages:** 732-737**Date:** Sep**Short Title:** XRCC1 and hOGG1 Genes and Risk of Nasopharyngeal Carcinoma in North African Countries**ISSN:** 0899-1987**DOI:** 10.1002/mc.20754**Accession Number:** WOS:000293952200008

**Abstract:** Although genetic susceptibility to nasopharyngeal carcinoma (NPC) has been recognized for a long time, little is known about the responsible genes. X-Ray repair cross-complementing protein 1 (XRCC1) and human 8-oxo-guanine glycosylase 1 (hOGG1) genes are involved in deoxyribonucleic acid (DNA) repair and were found associated with NPC risk in three Asian case-control studies. The objective of the present study was to test these genes in a sample from North Africa, one of the major NPC endemic regions in the world. Three single nucleotide polymorphisms (SNPs) in the XRCC1 gene and one SNP in the hOGG1 gene were genotyped in 598 NPC cases from Morocco, Algeria, and Tunisia and 545 controls frequency matched by recruitment center, age, sex, and urban/rural household. The genotype and allelic distributions for the hOGG1 (326)Ser/Cys SNP and for the XRCC1 (399)Arg/Trp, (280)Arg/His, and (194)Arg/Trp SNPs did not differ significantly among NPC cases and controls. The XRCC1 (194)Trp allele frequency was significantly lower in the North African population than in Asian population ( $f = 0.04$  vs. 0.31 in Cantonese Chinese and 0.21 Han Chinese). The hOGG1 (326)Ser allele frequency was significantly higher in the North African population ( $f = 0.73$ ) than in Asian populations ( $f = 0.39$  in Taiwanese). The results of the present study obtained from a large sample indicate that the XRCC1 and hOGG1 genes are unlikely to play a role in the susceptibility to NPC in North Africans. Our results do not corroborate those found in Asian population on smaller samples. (C) 2011 Wiley-Liss, Inc.

**Notes:** Laantri, Nadia Jalbout, Majida Khyatti, Meriem Ben Ayoub, Wided Dahmoul, Sami Ayad, Messaoud Bedadra, Wided Abdoun, Meriem Mesli, Sarah Kandil, Mostafa Hamdi-Cherif, Mokhtar Boualga, Kada Bouaouina, Noureddine Chouchane, Lotfi Benider, Abdellatif Ben-Ayed, Farhat Goldgar, David Corbex, Marilys

**URL:** <Go to ISI>://WOS:000293952200008

**Reference Type: Journal Article****Record Number:** 116**Author:** Labraoui, N. Gueroui, M. Aliouat, M. Petit, J.**Year:** 2011**Title:** RAHIM: Robust Adaptive Approach Based on Hierarchical Monitoring Providing Trust Aggregation for Wireless Sensor Networks**Journal:** Journal of Universal Computer Science**Volume:** 17**Issue:** 11**Pages:** 1550-1571**Short Title:** RAHIM: Robust Adaptive Approach Based on Hierarchical Monitoring Providing Trust Aggregation for Wireless Sensor Networks**ISSN:** 0948-695X**Accession Number:** WOS:000298050700003

**Abstract:** In-network data aggregation has a great impact on the energy consumption in large-scale wireless sensor networks. However, the resource constraints and vulnerable deployment environments challenge the application of this technique in terms of security and efficiency. A compromised node may forge arbitrary aggregation value and mislead the base station into trusting a false reading. In this paper, we present RAHIM, a reactive defense to secure data aggregation scheme in cluster-based wireless sensor networks. The proposed scheme is based on a novel application of adaptive hierarchical level of monitoring providing accuracy of data aggregation result in lightweight manner, even if all aggregator nodes and a part of sensors are compromised in the network.

**Notes:** Labraoui, Nabila Gueroui, Mourad Aliouat, Makhoul Petit, Jonathan**URL:** <Go to ISI>://WOS:000298050700003

**Reference Type: Journal Article****Record Number:** 117**Author:** Labraoui, N. Guerroui, M. Aliouat, M. Zia, T.**Year:** 2011**Title:** Data Aggregation Security Challenge in Wireless Sensor Networks: A Survey**Journal:** Ad Hoc & Sensor Wireless Networks**Volume:** 12**Issue:** 3-4**Pages:** 295-324**Short Title:** Data Aggregation Security Challenge in Wireless Sensor Networks: A Survey**ISSN:** 1551-9899**Accession Number:** WOS:000290592000007

**Abstract:** Data aggregation in wireless sensor networks (WSN) is a rapidly emerging research area. It can greatly help conserve the scarce energy resources by eliminating redundant data thus achieving a longer network lifetime. However, securing data aggregation in WSN is made even more challenging, by the fact that the sensor nodes and aggregators deployed in hostile environments are exposed to various security threats. In this paper, we survey the current research related to security in data aggregation in wireless sensor networks. We have classified the security schemes studied in two main categories: cryptographic based scheme and trust based scheme. We provide an overview and a comparative study of these schemes and highlight the future research directions to address the flaws in existing schemes.

**Notes:** Labraoui, Nabila Guerroui, Mourad Aliouat, Makhoul Zia, Tanveer**URL:** <Go to ISI>://WOS:000290592000007

**Reference Type: Journal Article****Record Number:** 118**Author:** Laribi, R. Lainer, F. Tamendjari, A. Keciri, S. Arrar, L. Venturini, S. Rovellini, P.**Year:** 2011**Title:** Characterization of ten varieties of Algerian olive oil: profile study in phenolic compounds by HPLC**Journal:** Rivista Italiana Delle Sostanze Grasse**Volume:** 88**Issue:** 3**Pages:** 161-171**Date:** Jul-Sep**Short Title:** Characterization of ten varieties of Algerian olive oil: profile study in phenolic compounds by HPLC**ISSN:** 0035-6808**Accession Number:** WOS:000297969700003**Notes:** Laribi, R. Lainer, F. Tamendjari, A. Keciri, S. Arrar, L. Venturini, S. Rovellini, P.**URL:** <Go to ISI>://WOS:000297969700003

**Reference Type: Journal Article****Record Number:** 119**Author:** Latreche, A. Ouennoughi, Z. Sellai, A. Weiss, R. Ryssel, H.**Year:** 2011**Title:** Electrical characteristics of Mo/4H-SiC Schottky diodes having ion-implanted guard rings: temperature and implant-dose dependence**Journal:** Semiconductor Science and Technology**Volume:** 26**Issue:** 8**Date:** Aug**Short Title:** Electrical characteristics of Mo/4H-SiC Schottky diodes having ion-implanted guard rings: temperature and implant-dose dependence**ISSN:** 0268-1242**DOI:** 10.1088/0268-1242/26/8/085003**Article Number:** 085003**Accession Number:** WOS:000293895900004

**Abstract:** The electrical characteristics of ion-implanted guard rings for molybdenum (Mo) Schottky diodes on 4H-SiC are analyzed on the basis of the standard thermionic emission model and the assumption of a Gaussian distribution of the barrier height. For edge termination, high-resistivity guard rings manufactured by carbon and aluminum ion-implanted areas were used. Extractions of barrier heights of molybdenum on silicon carbide (4H-SiC) Schottky diodes have been performed on structures with various gate metallization, using both current-voltage-temperature (I-V-T) and capacitance-voltage (C-V) measurements. Characteristic features of the Schottky barrier height (SBH) are considered in relation to the specific dose of the carbon-or aluminum-implanted guard ring. Contacts showed excellent Schottky behavior ideality factors between 1.02 and 1.24 in the range of 303-473 K. The measured SBHs were between 0.92 and 1.17 eV in the same temperature range from I-V-T characteristics. The variations in the barrier height, which is significantly temperature-and implantation-dose-dependent, are well fitted to a single Gaussian distribution function. Experimental results agree reasonably well by using this approach, particularly for carbon implantation dose of  $1.75 \times 10^{14} \text{ cm}^{-2}$ , and a mean barrier height ( $\Phi_{B0}$ ) of 1.22 eV and zero bias standard deviation  $\sigma(0) = 0.067 \text{ V}$  have been obtained. Furthermore, the modified Richardson plot according to the Gaussian distribution model resulted in a mean barrier height ( $\Phi_{B0}$ ) and a Richardson constant ( $A^*$ ) of 1.22 eV and  $148 \text{ A cm}^{-2} \text{ K}^{-2}$ , respectively. The  $A^*$  value obtained from this plot is in very close agreement with the theoretical value of  $146 \text{ A cm}^{-2} \text{ K}^{-2}$  for n-type 4H-SiC. Therefore, it has been concluded that the temperature dependence of the forward (I-V) characteristics of the Mo/4H-SiC contacts can be successfully explained on the basis of a thermionic emission conduction mechanism with Gaussianly distributed barriers.

**Notes:** Latreche, A. Ouennoughi, Z. Sellai, A. Weiss, R. Ryssel, H.**URL:** <Go to ISI>://WOS:000293895900004

**Reference Type: Journal Article****Record Number:** 120**Author:** Lograda, T. Chaker, A. N. Chalchat, J. C. Ramdani, M. Figueredo, G.**Year:** 2011**Title:** COMPOSITION OF THE ESSENTIAL OIL OF *Genista tricuspidata***Journal:** Chemistry of Natural Compounds**Volume:** 46**Issue:** 6**Pages:** 992-994**Date:** Jan**Short Title:** COMPOSITION OF THE ESSENTIAL OIL OF *Genista tricuspidata***ISSN:** 0009-3130**DOI:** 10.1007/s10600-011-9808-5**Accession Number:** WOS:000288438500045**Notes:** Lograda, T. Chaker, A. N. Chalchat, J. C. Ramdani, M. Figueredo, G.**URL:** <Go to ISI>://WOS:000288438500045

**Reference Type: Journal Article****Record Number:** 121**Author:** Louaar, S. Achouri, A. Lefahal, M. Laouer, H. Medjroubi, K. Duddeck, H. Akkal, S.**Year:** 2011**Title:** Flavonoids from Algerian Endemic *Centaurea microcarpa* and their Chemotaxonomical Significance**Journal:** Natural Product Communications**Volume:** 6**Issue:** 11**Pages:** 1603-1604**Date:** Nov**Short Title:** Flavonoids from Algerian Endemic *Centaurea microcarpa* and their Chemotaxonomical Significance**ISSN:** 1934-578X**Accession Number:** WOS:000297401800013**Abstract:** Six flavonoids, namely 6-methoxykaempferol (1), 6-methoxykaemplerol 7-O-glucoside (2), kaemplerol 7-O-glucoside (3), 6-methoxyluteolin (4), patuletin 7-O-glucoside (5), and hispidulin 7-O-glucoside (6), were isolated from a n-butanolic fraction of *Centaurea microcarpa* Coss et Dur. flowers. This work describes for the first time the phytochemical composition of this endemic Algerian plant.**Notes:** Louaar, Souheila Achouri, Amel Lefahal, Mostefa Laouer, Hocine Medjroubi, Kamel Duddeck, Helmut Akkal, Salah**URL:** <Go to ISI>://WOS:000297401800013

**Reference Type: Journal Article****Record Number:** 122**Author:** Madani, A. Nessark, B. Boukherroub, R. Chehimi, M. M.**Year:** 2011**Title:** Preparation and electrochemical behaviour of PPy-CdS composite films**Journal:** Journal of Electroanalytical Chemistry**Volume:** 650**Issue:** 2**Pages:** 176-181**Date:** Jan**Short Title:** Preparation and electrochemical behaviour of PPy-CdS composite films**ISSN:** 1572-6657**DOI:** 10.1016/j.jelechem.2010.10.017**Accession Number:** WOS:000285656000003

**Abstract:** PPy/CdS composite films made from polypyrrole (PPy) with embedded semiconductor (CdS) quantum dots were obtained by electropolymerization of pyrrole in the presence of CdS nanoparticles dispersed in the electrolytic aqueous solution. For the characterization of the modified surface electrode by PPy-CdS, the scan electron microscopy (SEM), X-ray photoelectron spectroscopy (XPS) and UV-visible were used. Cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS) have been used to investigate the electrochemical behaviour of the resulting materials. The illumination effects are also observed in the reduced form of the polymer. This study showed that the presence of CdS nanoparticles in the polypyrrole film improves the optical properties of PPy via a simple preparation method and show that these films have potential in the photoelectrochemical applications such as photovoltaic cells. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Madani, Ahmed Nessark, Belkacem Boukherroub, Rabah Chehimi, Mohamed M.**URL:** <Go to ISI>://WOS:000285656000003

**Reference Type: Journal Article****Record Number:** 123**Author:** Makhloufi, A. Baitiche, M. Merbah, M. Benachour, D.**Year:** 2011**Title:** SYNTHESIS OF NEW QUINOXALINE DERIVATIVES**Journal:** Synthetic Communications**Volume:** 41**Issue:** 23**Pages:** 3532-3540**Short Title:** SYNTHESIS OF NEW QUINOXALINE DERIVATIVES**ISSN:** 0039-7911**DOI:** 10.1080/00397911.2010.519091**Accession Number:** WOS:000297976300013

**Abstract:** New quinoxaline derivatives were prepared by the reaction of 2-hydroxyquinoxaline 1 and alkyl or alkylaminoalkyl halides in dimethylformamide using potassium carbonate as a base. The hydroxyl group was readily converted into a thiol function by treatment with phosphorus pentasulfide and/or Lawesson's reagent in pyridine, and the subsequent alkylation of the thiol group was carried out under phase-transfer catalyst conditions. Chlorination of 1 was carried out with phosphorus oxychloride. Branching of alkylamino side chains to the 2-OH, 2-SH, and 2-Cl quinoxalines resulted in the synthesis of several compounds. Synthesis and alkylation of 2-hydroxy 7-nitroquinoxaline are also reported.

**Notes:** Makhloufi, A. Baitiche, M. Merbah, M. Benachour, D.**URL:** <Go to ISI>://WOS:000297976300013

**Reference Type: Journal Article****Record Number:** 124**Author:** Mallem, N. Djouima, M. Ababsa, A. Malek, R. Khalfa, S.**Year:** 2011**Title:** Place of self blood glucose monitoring and interpretation tools on the balance of non-insulin-diabetes type 2**Journal:** Diabetes & Metabolism**Volume:** 37**Pages:** A53-A53**Date:** Mar**Short Title:** Place of self blood glucose monitoring and interpretation tools on the balance of non-insulin-diabetes type 2**ISSN:** 1262-3636**Accession Number:** WOS:000289009800216**Notes:** Mallem, N. Djouima, M. Ababsa, A. Malek, R. Khalfa, S. 1**URL:** <Go to ISI>://WOS:000289009800216

**Reference Type: Journal Article****Record Number:** 125**Author:** Malou, Z. Hamidouche, M. Bouaouadja, N. Fantozzi, G.**Year:** 2011**Title:** STATISTICAL ANALYSIS OF A SODA LIME GLASS THERMAL SHOCK RESISTANCE**Journal:** Ceramics-Silikaty**Volume:** 55**Issue:** 3**Pages:** 214-220**Short Title:** STATISTICAL ANALYSIS OF A SODA LIME GLASS THERMAL SHOCK RESISTANCE**ISSN:** 0862-5468**Accession Number:** WOS:000297615100003

**Abstract:** Comparatively to the as received soda lime glass samples, the strength distribution after thermal shocks showed the appearance of a second branch in the Weibull curves. This branch is observed for temperature differences ( $\Delta T$ ) equal or higher than the critical temperature difference ( $\Delta T_c$ ) for both water and motor oil cooling baths. The dispersion is more spread out in these two baths in comparison with the olive oil bath probably because of more pronounced slow crack growth effect. The Weibull modulus varies according to the used cooling bath and the considered temperature difference. In the case of thermal shock caused by air blast cooling at  $T = 20$  degrees C, a bimodal distribution is observed for only the critical state. The initial cracking time, obtained by acoustic emission, corresponds to the unstable propagation of the most critical defect. The number of cracks induced by thermal shock is proportional to the number of acoustic events.

**Notes:** Malou, Zahra Hamidouche, Mohamed Bouaouadja, Nouredine Fantozzi, Gilbert**URL:** <Go to ISI>://WOS:000297615100003

**Reference Type: Journal Article****Record Number:** 126**Author:** Mansouri, M. Delenne, J. Y. Seridi, A. El Youssoufi, M. S.**Year:** 2011**Title:** Numerical model for the computation of permeability of a cemented granular material**Journal:** Powder Technology**Volume:** 208**Issue:** 2**Pages:** 532-536**Date:** Mar**Short Title:** Numerical model for the computation of permeability of a cemented granular material**ISSN:** 0032-5910**DOI:** 10.1016/j.powtec.2010.08.055**Accession Number:** WOS:000289395400045

**Abstract:** We present a 3D model designed to compute permeability in a cemented polydisperse granular material composed of spherical grains. A non-cohesive granular deposit is constructed by means of the Discrete Element Method (DEM) then cement is deposited on grains using three simple models. Finally the solid sample is subjected to an upward hydraulic gradient in order to measure permeability. The fluid flow through the connected sample pores is modeled using the Lattice Boltzmann Method (LBM). The computed permeability coefficients are in good agreement with the existing classical values. The evolution of permeability with the cement deposit growth is studied for the three proposed cementation models. (C) 2010 Elsevier B.V. All rights reserved.

**Notes:** Mansouri, M. Delenne, J-Y Seridi, A. El Youssoufi, M. S. Symposium on Science and Technology of Powders and Sintered Materials (STPMF 2009) May 25-27, 2009 Montpellier, FRANCE Grp Powder Sci & Technol, Powderes & Sintered Mat Comm, French Soc Met & Mat, French Ceram Grp Si

**URL:** <Go to ISI>://WOS:000289395400045

**Reference Type: Journal Article****Record Number:** 127**Author:** Mebarki, M. Layadi, A. Guittoum, A. Benabbas, A. Ghebouli, B. Saad, M. Menni, N.**Year:** 2011**Title:** Structural and electrical properties of evaporated Fe thin films**Journal:** Applied Surface Science**Volume:** 257**Issue:** 16**Pages:** 7025-7029**Date:** Jun**Short Title:** Structural and electrical properties of evaporated Fe thin films**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2011.02.114**Accession Number:** WOS:000290015600001

**Abstract:** Series of Fe thin films have been prepared by thermal evaporation onto glass and Si(1 0 0) substrates. The Rutherford backscattering (RBS), X-ray diffraction (XRD), Scanning electron microscopy (SEM) and the four point probe techniques have been used to investigate the structural and electrical properties of these Fe thin films as a function of the substrate, the Fe thickness to in the 76-431 nm range and the deposition rate. The Fe/Si samples have a  $\langle 110 \rangle$  for all thicknesses, whereas the Fe/glass grows with a strong  $\langle 100 \rangle$  texture; as  $t$  increases ( $> 100$  nm), the preferred orientation changes to  $\langle 110 \rangle$ . The compressive stress in Fe/Si remains constant over the whole thickness range and is greater than the one in Fe/glass which is relieved when  $t > 100$  nm. The grain size  $D$  values are between 9.2 and 30 nm. The Fe/glass films are more electrically resistive than the Fe/Si(1 0 0) ones. Diffusion at the grain boundary seems to be the predominant factor in the electrical resistivity  $\rho$  values with the reflection coefficient  $R$  greater in Fe/glass than in Fe/Si. For the same thickness (100 nm), the decrease of the deposition rate from 4.3 to 0.3 angstrom/s did not affect the texture and the reflection coefficient  $R$  but led to an increase in  $D$  and a decrease in the strain and in  $\rho$  for both Fe/glass and Fe/Si systems. On the other hand, keeping the same deposition rate (0.3 angstrom/s) and increasing the thickness  $t$  from 76 to 100 nm induced different changes in the two systems. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Mebarki, M. Layadi, A. Guittoum, A. Benabbas, A. Ghebouli, B. Saad, M. Menni, N.**URL:** <Go to ISI>://WOS:000290015600001

**Reference Type: Journal Article****Record Number:** 128**Author:** Medkour, Y. Roumili, A. Maouche, D. Maamache, M.**Year:** 2011**Title:** First-principles study of the structural, electronic, and magnetic properties of InCCo<sub>3</sub> and InNCo<sub>3</sub>**Journal:** Solid State Communications**Volume:** 151**Issue:** 24**Pages:** 1916-1919**Date:** Dec**Short Title:** First-principles study of the structural, electronic, and magnetic properties of InCCo<sub>3</sub> and InNCo<sub>3</sub>**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2011.09.023**Accession Number:** WOS:000297779600016

**Abstract:** Spin-polarized calculations were performed to investigate the structural, elastic, electronic, and magnetic properties of InCCo<sub>3</sub> and InNCo<sub>3</sub>. The deviation of our calculated lattice parameters and equilibrium volume from experimental results is less than 0.8% and 2.5%, respectively. The obtained values of elasticity moduli CB, bulk modulus B. and shear modulus Care discussed. From the calculated band structure and the total and partial densities of states, we have concluded that these compounds are electrical conductors; moreover, they are bonded by a mixture of covalent, ionic, and metallic bonds. Our calculations show that InCCo<sub>3</sub> has nonmagnetic properties, while InNCo<sub>3</sub> could have a magnetic behaviour, with an average magnetic moment about 0.54 mu(B)/atom, which is mostly derived from d electrons of the cobalt atoms in the energy range from -5 eV up to the Fermi level. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Medkour, Y. Roumili, A. Maouche, D. Maamache, M.**URL:** <Go to ISI>://WOS:000297779600016

**Reference Type: Journal Article****Record Number:** 129**Author:** Menouar, S. Maamache, M. Bekkar, H. Choi, J. R.**Year:** 2011**Title:** Gaussian Wave Packet for Time-dependent Hamiltonian Systems Involving Quadratic, Inverse Quadratic, and  $(1/x)^p$  plus  $p(1/x)$  Terms**Journal:** Journal of the Korean Physical Society**Volume:** 58**Issue:** 1**Pages:** 154-157**Date:** Jan**Short Title:** Gaussian Wave Packet for Time-dependent Hamiltonian Systems Involving Quadratic, Inverse Quadratic, and  $(1/x)^p$  plus  $p(1/x)$  Terms**ISSN:** 0374-4884**DOI:** 10.3938/jkps.58.154**Accession Number:** WOS:000288414300029

**Abstract:** The exact solution of the Schrodinger equation is constructed for time-dependent Hamiltonian systems involving quadratic, inverse quadratic and  $(1/x)^p + p(1/x)$  terms. The solution corresponds to a semiclassical Gaussian wave packet centered around the classical guiding trajectory. The behavior of the Gaussian wave packet we obtained is very similar to that of a classical wave packet because its guiding trajectory follows the classical equation of motion. Gaussian wave packets are ubiquitous in quantum mechanics and are fundamental states of many physical systems that exhibit various nonclassical properties.

**Notes:** Menouar, S. Maamache, M. Bekkar, H. Choi, J. R.**URL:** <Go to ISI>://WOS:000288414300029

**Reference Type: Journal Article****Record Number:** 130**Author:** Menouar, S. Maamache, M. Choi, J. R.**Year:** 2011**Title:** Gaussian Wave Packet for a Time-Dependent Harmonic Oscillator Model of a Charged Particle in a Variable Magnetic Field**Journal:** Chinese Journal of Physics**Volume:** 49**Issue:** 4**Pages:** 871-876**Date:** Aug**Short Title:** Gaussian Wave Packet for a Time-Dependent Harmonic Oscillator Model of a Charged Particle in a Variable Magnetic Field**ISSN:** 0577-9073**Accession Number:** WOS:000299877900002**Abstract:** We obtained the exact solution of the Schrodinger equation for a time-dependent harmonic oscillator model of a charged particle in a variable magnetic field, which is the semiclassical Gaussian wave packet centered around the classical guiding trajectory  $(p(i), q(i))$ . The Gaussian wave packet presented here is well-localized in space and useful for determining various features of the classical-like wave packet.**Notes:** Menouar, S. Maamache, M. Choi, J. R.**URL:** <Go to ISI>://WOS:000299877900002

**Reference Type: Journal Article****Record Number:** 131**Author:** Mentar, L. Khelladi, M. R. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2011**Title:** Electrocrystallisation of cobalt, copper and cobalt-copper alloys on fluorine-doped tin oxide electrodes**Journal:** Transactions of the Institute of Metal Finishing**Volume:** 89**Issue:** 3**Pages:** 143-150**Date:** May**Short Title:** Electrocrystallisation of cobalt, copper and cobalt-copper alloys on fluorine-doped tin oxide electrodes**ISSN:** 0020-2967**DOI:** 10.1179/174591911x13013911711888**Accession Number:** WOS:000291382200006

**Abstract:** In this work, a systemic study of the Co, Cu and Co-Cu electrocrystallisation process was performed on a fluorine doped tin oxide coated conducting glass substrate. This was carried out in a sulphate solution of Na<sub>2</sub>SO<sub>4</sub>+H<sub>3</sub>BO<sub>3</sub> (pH 3.8) without complexing agent. The influence of applied potentials on the electrochemical nucleation and growth has been studied, using cyclic voltammetry and chronoamperometry techniques. The cyclic voltammetry results clearly show that the potential of Co-Cu dissolution and their positive shifts depend on the cathodic limit and reveal a variation in the deposit composition when switching potential is varied. A number of kinetics parameters have been estimated from the analysis of current transients on the basis of the Scharifker-Hills model for electrochemical nucleation and diffusion controlled growth. From the analysis of the experimental current transients, it has been found that the nucleation mechanism is instantaneous with a typical three-dimensional nucleation and growth process for Co, Cu and Co-Cu respectively. A strong dependence of the number of active sites N(0) with applied potential is observed on the fluorine doped tin oxide surface.

**Notes:** Mentar, L. Khelladi, M. R. Azizi, A. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000291382200006

**Reference Type: Journal Article****Record Number:** 132**Author:** Merabet, M. Benalia, S. Rached, D. Khenata, R. Bouhemadou, A. Bin Omran, S. Reshak, A. H. Rabah, M.**Year:** 2011**Title:** Structural and electronic properties of bulk GaP and AIP and their (GaP)(n)/(AIP)(n) superlattices**Journal:** Superlattices and Microstructures**Volume:** 49**Issue:** 2**Pages:** 132-143**Date:** Feb**Short Title:** Structural and electronic properties of bulk GaP and AIP and their (GaP)(n)/(AIP)(n) superlattices**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2010.11.012**Accession Number:** WOS:000288351500003

**Abstract:** The structural and the electronic properties of binary GaP and AIP compounds and their (GaP)(n)/(AIP)(n) superlattices are investigated using the recent version of the first-principles full potential linear muffin-tin orbitals method (FP-LMTO) (Lmtart 7.0). The structural parameters and the pressures at which these compounds undergo structural phase transition from zinc-blende (B3) to the rocksalt (B1) are determined. From the results of the electronic properties we find that the parent materials (GaP, AIP) have indirect bandgaps. The resemblances between GaP and AIP and their small lattice mismatch led us to perform investigations on zinc-blende/zinc-blende (GaP)(n)/(AIP)(n) for n = 1, 2 and 3 monolayer. Our calculations performed for band structure and density of state show an indirect band gap superlattices for n = 1 and 2 and a direct band gap for n = 3. Details of the electronic structure of superlattices are discussed. An excellent agreement was found between our results and those of other theoretical predictions and experimental measurements. (C) 2010 Elsevier Ltd. All rights reserved.

**Notes:** Merabet, M. Benalia, S. Rached, D. Khenata, R. Bouhemadou, A. Bin Omran, S. Reshak, Ali H. Rabah, M.**URL:** <Go to ISI>://WOS:000288351500003

**Reference Type: Journal Article****Record Number:** 133**Author:** Merdas, A. Fiorio, B. Chikh, N. E.**Year:** 2011**Title:** Study of the adhesion of composite strips and rods to concrete by bending (the beam test)**Journal:** Comptes Rendus Mecanique**Volume:** 339**Issue:** 12**Pages:** 796-804**Date:** Dec**Short Title:** Study of the adhesion of composite strips and rods to concrete by bending (the beam test)**ISSN:** 1631-0721**DOI:** 10.1016/j.crme.2011.10.002**Accession Number:** WOS:000298209800007

**Abstract:** The Near Surface Mounted (NSM) technique has been used in recent years for the strengthening of reinforced concrete beams. It involves the insertion of strips or rods of polymers reinforced with carbon fiber (CFRP) in the groove made previously in the concrete cover of corresponding surfaces, filled with epoxy adhesive for fixation. In order to characterize the bond behavior of the laminate and rods to concrete, an experimental work of pullout-bending tests was carried out. The pullout force at the laminate and the slip at the free and loaded end were measured. The influences of the concrete strength, the strength of the bond, and bond length on the bonding behavior between the three materials concrete, epoxy adhesive and CFRP were analyzed. (C) 2011 Academie des sciences. Publie par Elsevier Masson SAS. Tous droits reserves.

**Notes:** Merdas, Abdelghani Fiorio, Bruno Chikh, Nasr-Eddine**URL:** <Go to ISI>://WOS:000298209800007

**Reference Type: Journal Article****Record Number:** 134**Author:** Merzouk, B. Gourich, B. Madani, K. Vial, C. Sekki, A.**Year:** 2011**Title:** Removal of a disperse red dye from synthetic wastewater by chemical coagulation and continuous electrocoagulation. A comparative study**Journal:** Desalination**Volume:** 272**Issue:** 1-3**Pages:** 246-253**Date:** May**Short Title:** Removal of a disperse red dye from synthetic wastewater by chemical coagulation and continuous electrocoagulation. A comparative study**ISSN:** 0011-9164**DOI:** 10.1016/j.desal.2011.01.029**Accession Number:** WOS:000289708200032

**Abstract:** The effectiveness of chemical coagulation (CC) was compared to electrocoagulation (EC) with aluminium electrodes for decolourization purpose of a synthetic textile wastewater containing a disperse red dye. For CC, ferric chloride  $\text{FeCl}_3$  and aluminium sulphate  $\text{Al}_2(\text{SO}_4)_3$  as the coagulant were compared: the respective effects of initial pH, coagulant dosage, initial dye concentration, ionic strength and mixing conditions were investigated in order to maximize decolourization yield. The comparison between CC and EC is based on recently published data on EC by the same authors. Experimental results showed first that  $\text{Al}_2(\text{SO}_4)_3$  was far more effective than  $\text{FeCl}_3$  for colour removal using CC, regardless of operating conditions. A removal yield higher than 90% could be achieved with a 40 mg/L dose of  $\text{Al}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$  in a large range of pH from 4 to 8 and for a dye concentration up to 235 mg/L. The removal yield could however be enhanced up to 95% using EC for pH values between 6 and 9 at the expense of higher operating costs. Nevertheless, EC presented the additional advantages to be more robust against pH change and to reduce simultaneously equipment costs in comparison to CC. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Merzouk, B. Gourich, B. Madani, K. Vial, Ch. Sekki, A.**URL:** <Go to ISI>://WOS:000289708200032

**Reference Type: Journal Article****Record Number:** 135**Author:** Messalti, S. Belkhiat, S. Saadate, S. Flieller, D.**Year:** 2011**Title:** Improvement of Power System Transient Stability Using TCVR and TCPAR, a Comparative Study**Journal:** International Review of Electrical Engineering-Iree**Volume:** 6**Issue:** 1**Pages:** 309-315**Date:** Jan-Feb**Short Title:** Improvement of Power System Transient Stability Using TCVR and TCPAR, a Comparative Study**ISSN:** 1827-6660**Accession Number:** WOS:000289220600002

**Abstract:** This paper examines the effects of Thyristor Controlled Voltage Regulator (TCVR) and Thyristor Controlled Phase Angle Regulator (TCPAR) on the transient stability improvement of a multi-machine power system. The proposed control strategy is proposed to supply a supplementary control signal to both FACTS devices to increase the Critical Clearing Time (CCT). To show the effectiveness of the dynamic oscillation, the criterion of relative rotor angles, using Runge-Kutta method is used to demonstrate that the proposed TCVR and TCPAR controllers significantly improves the dynamic performance of the power system. The effectiveness of the proposed method is tested on the WSCC3 nine-bus system applied to the case of three-phase short circuit fault in one transmission line. The simulation results and their comparison are presented in this paper. Copyright (c) 2011 Praise Worthy Prize S.r.l. - All rights reserved

**Notes:** Messalti, Sabir Belkhiat, Saad Saadate, Shahrokh Flieller, Damien B**URL:** <Go to ISI>://WOS:000289220600002

**Reference Type: Journal Article****Record Number:** 136**Author:** Mouhoub, N. E. Benhocine, A. Belouadah, H.**Year:** 2011**Title:** A new method for constructing a minimal PERT network**Journal:** Applied Mathematical Modelling**Volume:** 35**Issue:** 9**Pages:** 4575-4588**Date:** Sep**Short Title:** A new method for constructing a minimal PERT network**ISSN:** 0307-904X**DOI:** 10.1016/j.apm.2011.03.031**Accession Number:** WOS:000291407800038

**Abstract:** A project is an enterprise consisting of several activities which are to be carried out in some specific order. The activities and the order in which they need to be carried out can be represented by a PERT network. The PERT technique is a traditional, well-known approach to the expert of project management. When networks are used, it often becomes necessary to draw dummy activities. Since the computation of project completion time is proportional to the number of arcs, including dummy arcs, it is desirable to draw a network with as few dummy activities as possible. In this paper, we propose a new method for constructing, for a given project scheduling problem, a PERT network having as small as possible the number of dummy arcs by using some results on line graphs. This algorithm deals with the existence of transitive arcs. The paper contains illustrative examples, proofs of some theoretical results as well as a comparative study with a similar algorithm known in the literature. Computational results showed the superiority of our algorithm. (C) 2011 Elsevier Inc. All rights reserved.

**Notes:** Mouhoub, Nasser Eddine Benhocine, Abdelhamid Belouadah, Hocine**URL:** <Go to ISI>://WOS:000291407800038

**Reference Type: Journal Article****Record Number:** 137**Author:** Naidja, H. Bencheikh, K. Bartel, J. Quentin, P.**Year:** 2011**Title:** System of fermions confined in a harmonic potential and subject to a magnetic field or a rotational motion**Journal:** Physical Review A**Volume:** 83**Issue:** 5**Date:** May**Short Title:** System of fermions confined in a harmonic potential and subject to a magnetic field or a rotational motion**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.83.053631**Article Number:** 053631**Accession Number:** WOS:000291015100007**Abstract:** Making use of the Bloch density matrix technique, we derive exact analytical expressions for the density profile in Fourier space, for the current density and the so-called integrated current for fermionic systems confined by a two-dimensional harmonic oscillator, in the presence of a magnetic field or in a rotating trap of arbitrary strength. We present numerical, illustrative examples with or without magnetic field (with or without rotation).**Notes:** Naidja, H. Bencheikh, K. Bartel, J. Quentin, P.**URL:** <Go to ISI>://WOS:000291015100007

**Reference Type: Journal Article**

**Record Number: 138**

**Author: Naouel, A.**

**Year: 2011**

**Title: THE IMPACT OF THE BOLOGNA PROCESS ON THE ALGERIAN UNIVERSITIES**

**Journal: Inted2011: 5th International Technology, Education and Development Conference**

**Pages: 3919-3926**

**Short Title: THE IMPACT OF THE BOLOGNA PROCESS ON THE ALGERIAN UNIVERSITIES**

**Accession Number: WOS:000326447703142**

**Abstract:** Twenty-First century Higher Education has witnessed many challenges in the Algerian context. With the educational reform taking place in our universities, I have tried to bring about a thorough understanding of the real conditions that led to the adoption of the Bologna Process in our educational system. As a matter of fact, I have focused on the investigation of the different conditions under which the LMD (Licence, Master, Doctorat) architecture has been introduced as well as the resource of its supervision and application. One of the main thrusts of this study is to delimit the boundaries of benefits and shortcomings of the new system and say to what extent the Bologna Process has served and would serve brain-drain and brain-gain under a same equality level.

**Notes:** Naouel, Abdellatif Chova, LG Torres, IC Martinez, AL 5th International Technology, Education and Development Conference (INTED) Mar 07-09, 2011 Valencia, SPAIN 978-84-614-7423-3

**URL:** <Go to ISI>://WOS:000326447703142

**Reference Type: Journal Article****Record Number:** 139**Author:** Ouahrani, T. Reshak, A. H. Khenata, R. Baltache, H. Amrani, B. Bouhemadou, A.**Year:** 2011**Title:** Structural, electronic, linear, and nonlinear optical properties of ZnCdTe<sub>2</sub> chalcopyrite**Journal:** Physica Status Solidi B-Basic Solid State Physics**Volume:** 248**Issue:** 3**Pages:** 712-718**Date:** Mar**Short Title:** Structural, electronic, linear, and nonlinear optical properties of ZnCdTe<sub>2</sub> chalcopyrite**ISSN:** 0370-1972**DOI:** 10.1002/pssb.200945463**Accession Number:** WOS:000288089900030

**Abstract:** We report results of first-principles density functional calculations using the full-potential linearized augmented plane wave method. The generalized gradient approximation (GGA) and the Engel-Vosko-GGA (EV-GGA) formalism were used for the exchange-correlation energy to calculate the structural, electronic, linear, and nonlinear optical properties of the chalcopyrite ZnCdTe<sub>2</sub> compound. The valence band maximum and the conduction band minimum are located at the G-point, resulting in a direct band gap of about 0.71 eV for GGA and 1.29 eV for EV-GGA. The results of bulk properties, such as lattice parameters (a, c, and u), bulk modulus B, and its pressure derivative B' are evaluated. The optical properties of this compound, namely the real and the imaginary parts of the dielectric function, reflectivity, and refractive index, show a considerable anisotropy as a consequence ZnCdTe<sub>2</sub> possesses a strong birefringence. In addition, the extinction coefficient, the electron energy loss function, and the nonlinear susceptibility are calculated and their spectra are analyzed. (C) 2011 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Ouahrani, Tarik Reshak, Ali H. Khenata, R. Baltache, H. Amrani, B. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000288089900030

**Reference Type: Journal Article****Record Number:** 140**Author:** Oulmi, K. Zitouni, B. Ben Moussa, H. Abdenebi, H. Andreadis, G. M.**Year:** 2011**Title:** Total polarization effect on the location of maximum temperature value in planar SOFC**Journal:** International Journal of Hydrogen Energy**Volume:** 36**Issue:** 6**Pages:** 4236-4243**Date:** Mar**Short Title:** Total polarization effect on the location of maximum temperature value in planar SOFC**ISSN:** 0360-3199**DOI:** 10.1016/j.ijhydene.2010.07.107**Accession Number:** WOS:000289331800053

**Abstract:** The aim of the present study is the evaluation and the location of the maximum temperature values within the solid and porous components of a planar SOFC under the effect of total polarization: Ohmic, activation, concentration and the chemical reaction. The temperature field in SOFC components (interconnection, cathode, anode and electrolyte) is obtained by developing a mathematical model in FORTRAN language. The mathematical model predictions show the effect of the overpotentials on the thermal gradient and its locations in an SOFC with two geometries: i) anode or ii) electrolyte supported. The results are also discussed, following the SOFC low or high operating temperatures. Copyright (C) 2010, Hydrogen Energy Publications, LLC. Published by Elsevier Ltd. All rights reserved.

**Notes:** Oulmi, Kafia Zitouni, Bariza Ben Moussa, Hocine Abdenebi, Hafsia Andreadis, G. M.**URL:** <Go to ISI>://WOS:000289331800053

**Reference Type: Journal Article****Record Number:** 141**Author:** Ourari, A. Derafa, W. Bouacida, S. Aggoun, D.**Year:** 2011**Title:** catena-Poly (pyridine-kappa N)copper(II) -mu-3-{ 1- (2-aminoethyl)imino ethyl}-6-methyl-2-oxo-2H-pyran-4-olato-kappa N-4,N,O-4:O-2 perchlorate**Journal:** Acta Crystallographica Section E-Structure Reports Online**Volume:** 67**Pages:** M1720-U1700**Date:** Dec**Short Title:** catena-Poly (pyridine-kappa N)copper(II) -mu-3-{ 1- (2-aminoethyl)imino ethyl}-6-methyl-2-oxo-2H-pyran-4-olato-kappa N-4,N,O-4:O-2 perchlorate**ISSN:** 1600-5368**DOI:** 10.1107/s1600536811046411**Accession Number:** WOS:000298794900148

**Abstract:** In the title compound,  $\{[\text{Cu}(\text{C}_{10}\text{H}_{13}\text{N}_2\text{O}_3)(\text{C}_5\text{H}_5\text{N})]\text{ClO}_4\}_n$ , the Cu-II atom has an N3O2 coordination sphere. The complex contains two different ligands, viz. a pyridine molecule and a Schiff base molecule, resulting from the condensation of ethylenediamine with dehydroacetic acid. The Cu-II atom exhibits a square-pyramidal geometry: three of the four donors of the pyramid base belong to the Schiff base ligand (an N atom from the amine group, a second N atom from the imine group and the O atom of the pyranone residue) and the fourth donor is the pyridine N atom. The coordination around the metal ion is completed by a longer axial bond to the pyranone O atom of an adjacent Schiff base, so forming a one-dimensional polymer. The complex has a +1 charge that is compensated by a perchlorate ion. The crystal packing, which can be described as alternating chains of cations and tetrahedral perchlorate anions along the a axis, is stabilized by intermolecular N-H center dot center dot center dot O, C-H center dot center dot center dot O and C-H center dot center dot center dot N hydrogen-bonding interactions.

**Notes:** Ourari, Ali Derafa, Wassila Bouacida, Sofiane Aggoun, Djouhra 12**URL:** <Go to ISI>://WOS:000298794900148

**Reference Type: Journal Article****Record Number:** 142**Author:** Ramdani, M. Lograda, T. Chalard, P. Chalchat, J. C. Figueredo, G.**Year:** 2011**Title:** Chemical Variability of Essential Oils in Natural Populations of *Cupressus dupreziana***Journal:** Natural Product Communications**Volume:** 6**Issue:** 1**Pages:** 87-92**Date:** Jan**Short Title:** Chemical Variability of Essential Oils in Natural Populations of *Cupressus dupreziana***ISSN:** 1934-578X**Accession Number:** WOS:000286793200021

**Abstract:** Essential oils extracted from dried leaves of *Cupressus dupreziana* A. Camus, an endemic species in the Tassili n'Ajjer (Central Sahara of Algeria), were analyzed by gas chromatography coupled to mass spectrometry (GC-MS). Analyses were carried out on 164 trees of 26 natural populations in order to determine the intra-specific variability. Thirty-two terpenoids were identified, the major ones being  $\alpha$ -pinene (11.5 - 44.2),  $\Delta^3$ -carene (5.7 - 31.7) and germacrene-D (15.7 - 54.1). The terpenoid markers used made it possible to determine the individual patterns of chemotypic variability. This variability confirmed that genetic factors were not responsible for the decrease in the number of this species, the main reason probably being the Tassili n'Ajjer desertification.

**Notes:** Ramdani, Messaoud Lograda, Takia Chalard, Pierre Chalchat, Jean Claude Figueredo, Gilles

**URL:** <Go to ISI>://WOS:000286793200021

**Reference Type: Journal Article****Record Number:** 143**Author:** Rebbas, K. Vela, E. Gharzouli, R. Djellouli, Y. Alatou, D. Gachet, S.**Year:** 2011**Title:** Phytosociological characterization of the vegetation of Gouraya National Park (Bejaia, Algeria)**Journal:** Revue D Ecologie-La Terre Et La Vie**Volume:** 66**Issue:** 3**Pages:** 267-289**Date:** Sep**Short Title:** Phytosociological characterization of the vegetation of Gouraya National Park (Bejaia, Algeria)**ISSN:** 0249-7395**Accession Number:** WOS:000295751200005

**Abstract:** Phytosociological characterization of the vegetation of Gouraya National Park (Bejaia, Algeria). - Gouraya National Park covers a calcareo-dolomitic littoral solid mass and its silicolous prolongation towards the west. It belongs to the regional hotspot of "Kabylies-Numidia-Kroumiria" but its vegetation was just partially explored. We try here a first synthesis under the phytosociological point of view. On the basis of 144 species and 56 floristic "releves" submitted to factorial correspondence analysis and ascending hierarchical classification, the phytosociological study of Gouraya National Park highlighted seven vegetation groups attached to four phytosociological classes : the Quercetea ilicis Braun-Blanquet, 1947 and subordinated syntaxa, the Querco-Fagetea Braun-Blanquet & Vlieg, 1937 and subordinated syntaxa, and the Crithmo-limonielea Braun-Blanquet, 1947 and Asplenieta rupestris (H.M) Braun-Blanquet, 1934. We can note also the presence of species characteristic of the Rosmarinetea officinalis Braun-Blanquet, 1947 em. Rivas Martinez, Diaz, Prieto, Loidi & Penas, 1991 and of Stellarieteu mediae R. TX. Lohmeyer & Preising 1950. Within these groups, those assigned to Bupleuro-Euphorbietum dendroidis Gehu et al., 1992 can be divided in two subgroups, the typical sub-association and a new sub-association named here bupleuretosum plantaginei, characterized by the presence of rupicolous endemism. This study showed the peculiarity of the vegetation of this local biodiversity hotspot (important area for plants) and will be followed by a more in-depth study of the rupicolous littoral and sub-littoral vegetation of the area.

**Notes:** Rebbas, Khellaf Vela, Errol Gharzouli, Rachid Djellouli, Yamna Alatou, Djamel Gachet, Sophie

**URL:** <Go to ISI>://WOS:000295751200005

**Reference Type: Journal Article****Record Number:** 144**Author:** Rezkallah, Z. Houamer, S. Dal Cappello, C. Charpentier, I. Roy, A. C.**Year:** 2011**Title:** Ionization of molecules by electron impact: Differential and total cross sections**Journal:** Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms**Volume:** 269**Issue:** 23**Pages:** 2750-2757**Date:** Dec**Short Title:** Ionization of molecules by electron impact: Differential and total cross sections**ISSN:** 0168-583X**DOI:** 10.1016/j.nimb.2011.08.028**Accession Number:** WOS:000298072000011

**Abstract:** The first Born approximation is applied to calculate differential and total ionization cross sections of a set of small molecules, namely, HF, H<sub>2</sub>O, NH<sub>3</sub> and CH<sub>4</sub> by electron impact. The molecular targets are described by single center molecular orbitals consisting of linear combinations of atomic orbitals (MO-LCAO). First, we have considered electron momentum spectroscopy experiments to check the accuracy of the wave functions. The triply, doubly, singly differential and total cross sections are then evaluated in a systematic way for a variety of kinematics. The results are discussed and compared with experiments. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Rezkallah, Z. Houamer, S. Dal Cappello, C. Charpentier, I. Roy, A. C.**URL:** <Go to ISI>://WOS:000298072000011

**Reference Type: Journal Article****Record Number:** 145**Author:** Rokbi, M. Osmani, H. Benseddiq, N. Imad, A.**Year:** 2011**Title:** On experimental investigation of failure process of woven-fabric composites**Journal:** Composites Science and Technology**Volume:** 71**Issue:** 11**Pages:** 1375-1384**Date:** Jul**Short Title:** On experimental investigation of failure process of woven-fabric composites**ISSN:** 0266-3538**DOI:** 10.1016/j.compscitech.2011.05.003**Accession Number:** WOS:000293723700001

**Abstract:** In this paper an experimental investigation is performed to describe the fracture behavior and failure mechanisms of woven fabrics composites, under static loading, using a compact tension test (CT). We studied the development of the different damage phases using the digital image correlation and the compliance method. The crack length was estimated at in the front of the notch tip. The approach of the effective crack length via the compliance procedure was compared to the measures of the damage in the epoxy/glass fiber composite obtained by the digital image correlation (DIC). (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Rokbi, M. Osmani, H. Benseddiq, N. Imad, A.**URL:** <Go to ISI>://WOS:000293723700001

**Reference Type: Journal Article****Record Number:** 146**Author:** Sahnoune, F. Belhouchet, H. Saheb, N. Heraiz, M. Chegaar, M. Goeuriot, P.**Year:** 2011**Title:** Phase transformation and sintering behaviour of mullite and mullite-zirconia composite materials**Journal:** Advances in Applied Ceramics**Volume:** 110**Issue:** 3**Pages:** 175-180**Date:** Apr**Short Title:** Phase transformation and sintering behaviour of mullite and mullite-zirconia composite materials**ISSN:** 1743-6753**DOI:** 10.1179/1743676111y.0000000004**Accession Number:** WOS:000289621200010

**Abstract:** Mullite is one of the most promising engineering materials for applications at elevated temperatures, but has poor mechanical properties at ambient temperature; therefore, it is usually reinforced with particles, fibres or whiskers to improve its properties. Among particles added to mullite are ZrO<sub>2</sub> particles which improve its fracture toughness through the well known process of phase transformation from tetragonal to monoclinic in zirconia particles. The aim of the present work is to explore the utilisation of Algerian kaolin, alpha-Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub> to synthesise mullite-ZrO<sub>2</sub> composites through reaction sintering and investigate phase transformation and sintering behaviour of the composites. The raw materials were mixed through planetary ball milling followed by attrition milling. Compacted samples were sintered at temperatures between 1100 and 1600 degrees C for 2 h. The bulk density was measured by the water immersion method. X-ray diffraction (Rietveld method) was used to characterise phases present in the sintered samples. It was found that the zirconia phase retained its tetragonal structure with the addition of up to 16% zirconia. The formation of primary mullite in all samples was complete at 1250 degrees C. The cristobalite started to form at 1150 degrees C, and disappeared at 1300 degrees C in the samples of mullite, and at 1250 degrees C when ZrO<sub>2</sub> was added. The zircon compound ZrSiO<sub>4</sub> started to form at 1250 degrees C and completely disappeared at 1400 degrees C. The increase in ZrO<sub>2</sub> ratio promoted the formation of grains with spherical shape.

**Notes:** Sahnoune, F. Belhouchet, H. Saheb, N. Heraiz, M. Chegaar, M. Goeuriot, P.**URL:** <Go to ISI>://WOS:000289621200010

**Reference Type: Journal Article****Record Number:** 147**Author:** Salmi, M. Chegaar, M. Mialhe, P.**Year:** 2011**Title:** A Collection of Models for the Estimation of Global Solar Radiation in Algeria**Journal:** Energy Sources Part B-Economics Planning and Policy**Volume:** 6**Issue:** 2**Pages:** 187-191**Short Title:** A Collection of Models for the Estimation of Global Solar Radiation in Algeria**ISSN:** 1556-7249**DOI:** 10.1080/15567240903485949**Article Number:** Pii 936281793**Accession Number:** WOS:000289569000009

**Abstract:** Three analytical-based models are developed to estimate the monthly global solar radiation in the Algerian territory. The models are based on measured global solar radiation in the horizontal surface as well as sunshine hours in 4 different sites during a period of 6 years. The results show a remarkable agreement between the measured and computed values using the different models.

**Notes:** Salmi, M. Chegaar, M. Mialhe, P.**URL:** <Go to ISI>://WOS:000289569000009

**Reference Type: Journal Article****Record Number:** 148**Author:** Saoud, F. S. Plenet, J. C. Louail, L. Maouche, D.**Year:** 2011**Title:** Mechanism of the phase transition in GaN under pressure up to 100 GPa**Journal:** Computational and Theoretical Chemistry**Volume:** 964**Issue:** 1-3**Pages:** 65-71**Date:** Mar**Short Title:** Mechanism of the phase transition in GaN under pressure up to 100 GPa**ISSN:** 2210-271X**DOI:** 10.1016/j.comptc.2010.11.037**Accession Number:** WOS:000288916400010

**Abstract:** We report the results of a theoretical study on the behaviour of the structural parameters and the pressure of transitions from B4 (wurtzite) to B3 (zinc-blende) phase, from B4 (wurtzite) to B1 (rocksalt) phase and from B3 (zinc-blende) to B1 (rocksalt) phase of GaN in a significant range of pressure from 0 to 100 GPa at  $T = 0$  K. According to our knowledge, for the first time a theoretical study is driven until 100 GPa. The transition from B4 (wurtzite) to B3 (zinc-blende) phase is not reported in literature. For this reason the pressure of transition and the evolution of the structural parameters are estimated according to the corresponding pressure. The calculations are based on the ab initio plane-wave pseudo-potential Density-Functional Theory (DFT), within both the Generalized Gradient Approximation (GGA) and Local-Density Approximation (LDA) for the exchange and correlation potential. The calculated values of transition pressure, lattice parameters are in very good agreement with experimental results. A linear-response approach to the density-functional theory is used to derive the phonon frequencies and densities of states. Where, we discussed the contribution of the phonons in the instability of B3 (zinc-blende) phase. (c) 2010 Elsevier B.V. All rights reserved.

**Notes:** Saoud, F. Saad Plenet, J. C. Louail, L. Maouche, D.**URL:** <Go to ISI>://WOS:000288916400010

**Reference Type: Journal Article****Record Number:** 149**Author:** Saoud, L. S. Khellaf, A.**Year:** 2011**Title:** A neural network based on an inexpensive eight-bit microcontroller**Journal:** Neural Computing & Applications**Volume:** 20**Issue:** 3**Pages:** 329-334**Date:** Apr**Short Title:** A neural network based on an inexpensive eight-bit microcontroller**ISSN:** 0941-0643**DOI:** 10.1007/s00521-010-0377-5**Accession Number:** WOS:000288558100003

**Abstract:** In this paper, a neural network is trained and validated using a low end and inexpensive microcontroller. The well-known backpropagation algorithm is implemented to train a neural network model. Both the training and the validation parts are shown through an alphanumeric liquid crystal display. A chemical process was chosen as a realistic nonlinear system to demonstrate the feasibility, and the performance of the results found using the microcontroller. A comparison was made between the microcontroller and the computer results.

**Notes:** Saoud, L. Saad Khellaf, A.**URL:** <Go to ISI>://WOS:000288558100003

**Reference Type: Journal Article****Record Number:** 150**Author:** Sarra, M. Gaubert, J. P. Chaoui, A. Krim, F.**Year:** 2011**Title:** Experimental Validation of Two Control Techniques Applied to a Three Phase Shunt Active Power Filter for Power Quality Improvement**Journal:** International Review of Electrical Engineering-Iree**Volume:** 6**Issue:** 6**Pages:** 2825-2836**Date:** Nov**Short Title:** Experimental Validation of Two Control Techniques Applied to a Three Phase Shunt Active Power Filter for Power Quality Improvement**ISSN:** 1827-6660**Accession Number:** WOS:000298763700016

**Abstract:** This paper presents the comparative evaluation of the performance of two control techniques to determine the reference current for a three phase shunt active power filter (APF) in order to improve the power quality and compensate reactive power required by nonlinear load. The first one is based on the use of classic PI controller and the second one is based on instantaneous power theory (p-q theory). Both control techniques are based on time domain, simulated with Matlab/Simulink and validated with an experimental test bench developed in the LAII laboratory, University of Poitiers. Various simulation and experimental results are presented under steady state and transient conditions with a comparison between the two control techniques. Copyright (C) 2011 Praise Worthy Prize S.r.l. - All rights reserved.

**Notes:** Sarra, Mustapha Gaubert, Jean-Paul Chaoui, Abdelmadjid Krim, Fateh Si**URL:** <Go to ISI>://WOS:000298763700016

**Reference Type: Journal Article****Record Number:** 151**Author:** Sarra, M. Gaubert, J. P. Chaoui, A. Krim, F. Ieee,**Year:** 2011**Title:** Two Control Strategies Comparison of a Three Phase Shunt Active Power Filter for Power Quality Improvement with Experimental Validation**Journal:** Proceedings of the 2011-14th European Conference on Power Electronics and Applications (Epe 2011)**Short Title:** Two Control Strategies Comparison of a Three Phase Shunt Active Power Filter for Power Quality Improvement with Experimental Validation**Accession Number:** WOS:000308003502071

**Abstract:** This paper presents the comparative evaluation of the performance of two control techniques to determine the reference current for a three phase shunt active power filter (APF) in order to improve the power quality and compensate reactive power required by nonlinear load. The first one is based on the use of classic PI controller and the second one is based on instantaneous power theory (p-q theory). Both control techniques are based on time domain, simulated with Matlab/Simulink and validated with an experimental test bench developed in the LAII laboratory, University of Poitiers. Various simulation and experimental results are presented under steady state and transient conditions with a comparison between the two control techniques.

**Notes:** Sarra, Mustapha Gaubert, Jean-Paul Chaoui, Abdelmadjid Krim, Fateh 14th European Conference on Power Electronics and Applications (EPE)/ECCE Europe Conference on Power Electronics and Adjustable Speed Drives - Towards the 20-20-20 Target Aug 30-sep 01, 2011 Birmingham, ENGLAND IEEE, IEEE Power Elect Soc (PELS), Alstom, Mitsubishi Elect Europ, Star Alliance, PPM Power, Plexim, CITCEA, Dynex, TRW Conekt, MDL Technol, Chroma, United Technol Res Ctr, Converteam, Australian Comm Power Engn (ACPE), Assoc Ingenieurs Electriciens Inst Montefiore (AIM), Czech Electrotech Soc (CES), European Ctr Power Elect (ECPE), IEEE Ind Applicat Soc (IAS), IEEE Ind Elect Soc (IES), Inst Engn & Technol (IET), Korean Inst Power Elect (KIPE), Koninklijk Inst Ingenieurs (KIVI-NIRIA), Leonardo Energy, Norsk Elektroteknisk Forening (NEF), NMI, Osterreichischer Verband Elektrotechnik (OVE), Soc Elect, Elect & Technol Informat & Commun (SEE), Assoc Polish Elect Engineers, Svenska Elektro Dataingenjorerers Riksforening (SER), Soc Royale Belge Electriciens - Koninklijke Belgische Vereniging Elektrotechnici (SRBE-KBVE), Technol Inst - Koninklijke Vlaamse Ingenieursvereniging (TI-KVIV), Assoc Elect, Elect & Informat Technol 978-90-75815-15-3

**URL:** <Go to ISI>://WOS:000308003502071

**Reference Type: Journal Article****Record Number:** 152**Author:** Satour, F. Z. Zegadi, A. Merabet, A.**Year:** 2011**Title:** A Photoacoustic Study of Xenon Implantation in CuInSe<sub>2</sub>**Journal:** Acta Physica Polonica A**Volume:** 120**Issue:** 6A**Pages:** A31-A33**Date:** Dec**Short Title:** A Photoacoustic Study of Xenon Implantation in CuInSe<sub>2</sub>**ISSN:** 0587-4246**Accession Number:** WOS:000301171100009

**Abstract:** In this paper, we report a study on the optical properties of xenon ion implanted CuInSe<sub>2</sub> single crystals using a high resolution near-infrared photoacoustic spectrometer of the gas-microphone type. Samples of high quality of CuInSe<sub>2</sub>, p-type conducting, have been implanted with Xe<sup>+</sup> at 40 keV with doses of  $5 \times 10^{15}$ ,  $10^{16}$  and  $5 \times 10^{16}$  ions/cm<sup>2</sup>. Photoacoustic spectra have been measured before and after implantation. A newly developed theoretical model based on a two-layer sample configuration has been used to single out the spectral dependence of the absorption coefficient of the implanted layer from that of the substrate. The absorption spectra were used to evaluate the gap energy and to establish ionization energies for several shallow and deep defect states. The resulting effects following the introduction of xenon into CuInSe<sub>2</sub> at different doses are discussed in the light of published literature.

**Notes:** Satour, F. Z. Zegadi, A. Merabet, A. Fall Meeting of the European-Materials-Research-Society (E-MRS)/Symposium H - Novel Materials for Electronics, Optoelectronics, Photovoltaics and Energy Saving Applications Sep 19-23, 2011 Warsaw, POLAND European Mat Res Soc (E-MRS) Si

**URL:** <Go to ISI>://WOS:000301171100009

**Reference Type: Journal Article****Record Number:** 153**Author:** Shah, S. Zilov, A. Malek, R. Soewondo, P. Bech, O. Litwak, L.**Year:** 2011**Title:** Improvements in quality of life associated with insulin analogue therapies in people with type 2 diabetes: Results from the A(1)chieve observational study**Journal:** Diabetes Research and Clinical Practice**Volume:** 94**Issue:** 3**Pages:** 364-370**Date:** Dec**Short Title:** Improvements in quality of life associated with insulin analogue therapies in people with type 2 diabetes: Results from the A(1)chieve observational study**ISSN:** 0168-8227**DOI:** 10.1016/j.diabres.2011.10.020**Accession Number:** WOS:000298144400016

**Abstract:** Aims: To determine the effects on quality of life after starting insulin with, or switching to, insulin analogue therapies in the 24-week, prospective, non-interventional, observational A(1)chieve study conducted across four continents in people with type 2 diabetes. Methods: Health-related quality of life (HRQoL) was assessed at baseline and at 24 weeks by the validated EQ-5D questionnaire (visual analogue score [VAS] and five dimensions) in 66,726 people who had started using basal insulin detemir, mealtime insulin aspart (with or without a basal insulin) or biphasic insulin aspart 30. Results: For the overall cohort, reported HRQoL increased significantly by 13.8 points from 63.4 points at baseline to 77.2 points at 24 weeks ( $p < 0.001$ ) (scale 1-100, 100 = best health imaginable). Beginning or changing insulin was associated with a significant increase in HRQoL score (+ 15.0 points and + 11.1 points, respectively), resulting in a similar score at 24 weeks in the two populations (77.8 and 75.9 points). Reported HRQoL also increased statistically significantly in people administering any insulin analogue regimen and across all regions, although there were some marked regional differences in reported HRQoL at baseline. Conclusion: Compared with baseline scores, beginning insulin with, or switching to, insulin analogue therapies are associated with increased HRQoL. (C) 2011 Published by Elsevier Ireland Ltd.

**Notes:** Shah, Siddharth Zilov, Alexey Malek, Rachid Soewondo, Pradana Bech, Ole Litwak, Leon**URL:** <Go to ISI>://WOS:000298144400016

**Reference Type: Journal Article****Record Number:** 154**Author:** Slimani, L. Bouktir, T.**Year:** 2011**Title:** Optimal Power Flow Using Artificial Bee Colony with Incorporation of FACTS Devices: a Case Study**Journal:** International Review of Electrical Engineering-Iree**Volume:** 6**Issue:** 7**Pages:** 3091-3101**Date:** Nov-Dec**Short Title:** Optimal Power Flow Using Artificial Bee Colony with Incorporation of FACTS Devices: a Case Study**ISSN:** 1827-6660**Accession Number:** WOS:000300470500007

**Abstract:** This paper presents solution of optimal power flow (OPF) problem of practical power system via an Artificial Bee Colony (ABC) algorithm. The objective is to minimize the total fuel cost of generation and environmental pollution caused by fossil based thermal generating units and also maintaining an acceptable system performance in terms of limits on generator reactive power outputs, bus voltages, Static VAR Compensator (SVC) parameters and overload in transmission lines. CPU times can be reduced by decomposing the problem in two subproblems, the first subproblem minimize the fuel cost of generation and environmental pollution and the second one is a reactive power dispatch so optimum bus voltages can be determined and reduce the losses by controlling tap changes of the transformers and the static Var Compensators (SVC). To verify the proposed approach and for comparison purposes, we perform simulations on IEEE 30-bus system with six generating units and on the Algerian network with 114 buses, 175 branches (lines and transformers) and 15 generators. The obtained results indicate that ABC is an easy to use, fast, robust and powerful optimization technique compared to the other global optimization method (PSO). Copyright (C) 2011 Praise Worthy Prize S.r.l. - All rights reserved.

**Notes:** Slimani, Linda Bouktir, Tarek B**URL:** <Go to ISI>://WOS:000300470500007

**Reference Type: Journal Article****Record Number:** 155**Author:** Tamoum, M. Allam, R. Djahli, F.**Year:** 2011**Title:** ACCURATE LARGE-SIGNAL CHARACTERIZATION OF LDMOSFET TRANSISTOR IN PACKAGE**Journal:** Microwave and Optical Technology Letters**Volume:** 53**Issue:** 3**Pages:** 575-579**Date:** Mar**Short Title:** ACCURATE LARGE-SIGNAL CHARACTERIZATION OF LDMOSFET TRANSISTOR IN PACKAGE**ISSN:** 0895-2477**DOI:** 10.1002/mop.25800**Accession Number:** WOS:000286964400030

**Abstract:** In this article, we present an accurate characterization of the RF LDMOSFET transistors for the extracting of the large-signal model. They are generally available encapsulated in package. A measurement of the package parameters are made only by removing the semiconductor chip. The transistor is then characterized by conventional method. The same component can be used in the desired function, thereby avoiding the technological dispersions. The LDMOSFET transistor used is a BLF2043F (NXP semiconductors). To validate our method, we implemented a 2.5-GHz 10-W power amplifier. The measured and simulated results match very well. (c) 2011 Wiley Periodicals, Inc. Microwave Opt Technol Lett 53:575-579, 2011; View this article online at [wileyonlinelibrary.com](http://wileyonlinelibrary.com). DOI 10.1002/mop.25800

**Notes:** Tamoum, Mohammed Allam, Rachid Djahli, Farid**URL:** <Go to ISI>://WOS:000286964400030

**Reference Type: Journal Article****Record Number:** 156**Author:** Tighilt, Y. Bouttout, F. Khellaf, A.**Year:** 2011**Title:** Modeling and Design of Printed Antennas Using Neural Networks**Journal:** International Journal of Rf and Microwave Computer-Aided Engineering**Volume:** 21**Issue:** 2**Pages:** 228-233**Date:** Mar**Short Title:** Modeling and Design of Printed Antennas Using Neural Networks**ISSN:** 1096-4290**DOI:** 10.1002/mmce.20509**Accession Number:** WOS:000288179100013

**Abstract:** A single neural network is developed to model the resonant frequency of rectangular patch printed on uniaxially anisotropic substrate with air gap using effective parameters in conjunction with spectral dyadic Green's function. Also, the strength of ANN models in antenna design is demonstrated by considering two case studies: the design of circular patch antenna and planar inverted-F antenna. Results show good agreement with literature. (C) 2011 Wiley Periodicals, Inc. Int J RF and Microwave CAE 21:228-233, 2011.

**Notes:** Tighilt, Yamina Bouttout, Farid Khellaf, Abdelhafid**URL:** <Go to ISI>://WOS:000288179100013

**Reference Type: Journal Article****Record Number:** 157**Author:** van Zyl, B. P. Berkane, K. Bencheikh, K. Farrell, A.**Year:** 2011**Title:** Gradient corrections to the kinetic energy density functional of a two-dimensional Fermi gas at finite temperature**Journal:** Physical Review B**Volume:** 83**Issue:** 19**Date:** May**Short Title:** Gradient corrections to the kinetic energy density functional of a two-dimensional Fermi gas at finite temperature**ISSN:** 1098-0121**DOI:** 10.1103/PhysRevB.83.195136**Article Number:** 195136**Accession Number:** WOS:000291089600005

**Abstract:** We examine the leading-order semiclassical gradient corrections to the noninteracting kinetic-energy density functional of a two-dimensional Fermi gas by applying the extended Thomas-Fermi theory at finite temperature. We find a nonzero von Weizsacker-like gradient correction, which in the high-temperature limit goes over to the functional form  $(\hbar^2/24m)(\nabla \rho)^2/\rho$ . Our work provides a theoretical justification for the inclusion of gradient corrections in applications of density-functional theory to inhomogeneous two-dimensional Fermi systems at any finite temperature.

**Notes:** van Zyl, B. P. Berkane, K. Bencheikh, K. Farrell, A.**URL:** <Go to ISI>://WOS:000291089600005

**Reference Type: Journal Article****Record Number:** 158**Author:** Widad, S. Bachra, K. Messaoud, B. Djebbar, A. Pierre, D. Mustapha, B.**Year:** 2011**Title:** Hepatotoxicity and Langerhans Islets Regenerative Effects of Polar and Neutral Lipids of *Nigella sativa* L. in Nicotinamide/streptozotocin-Induced Diabetic Rats**Journal:** Pteridines**Volume:** 22**Issue:** 4**Pages:** 97-104**Date:** Dec**Short Title:** Hepatotoxicity and Langerhans Islets Regenerative Effects of Polar and Neutral Lipids of *Nigella sativa* L. in Nicotinamide/streptozotocin-Induced Diabetic Rats**ISSN:** 0933-4807**Accession Number:** WOS:000300022800002

**Abstract:** The extracted oil from *Nigella sativa* seeds is reported to be effective against various diseases and chemically-induced hepatotoxicity and nephrotoxicity. The effect of oral administration of *Nigella sativa* total, polar and neutral oils was investigated on hepatoprotective status in streptozotocin/nicotinamide (STZ-N)-induced diabetic rats. The toxicity was assessed biochemically by monitoring aspartate transaminase (AST), alanine transaminase (ALT), gamma-glutamyl transpeptidase (gamma-GT) and alkaline phosphatase (AP) activities as well as bilirubin titre and histologically under light microscope. The study was also undertaken to evaluate the effect of oil fractions on the regeneration of pancreatic Langerhans islets in treated diabetic rats. Biochemical analysis showed that lipid fractions from total oil of *Nigella sativa* seeds are not hepatotoxic. However, histological study of the liver demonstrated major and minor tissue damages with the neutral fraction exhibiting the most protective effect. At the end of the experiment period (17 days) of treatment with thymoquinone (25mg/kg bw/day) or neutral lipid fraction (100mg/kg bw/day), a positive effect on the regenerative of Langerhans islets, initially distorted by STZ, was observed. Thus, the hypoglycaemic effect of neutral lipid fraction could be a result of the regeneration of the pancreatic Langerhans islets.

**Notes:** Widad, Sobhi Bachra, Khettal Messaoud, Belmouhoub Djebbar, Atmani Pierre, Duez Mustapha, Benboubetra**URL:** <Go to ISI>://WOS:000300022800002

**Reference Type: Journal Article****Record Number:** 159**Author:** Zaghouane-Boudiaf, H. Boutahala, M.**Year:** 2011**Title:** Preparation and characterization of organo-montmorillonites. Application in adsorption of the 2,4,5-trichlorophenol from aqueous solution**Journal:** Advanced Powder Technology**Volume:** 22**Issue:** 6**Pages:** 735-740**Date:** Nov**Short Title:** Preparation and characterization of organo-montmorillonites. Application in adsorption of the 2,4,5-trichlorophenol from aqueous solution**ISSN:** 0921-8831**DOI:** 10.1016/j.apr.2010.10.014**Accession Number:** WOS:000296270400007

**Abstract:** X-ray diffraction has been used to study the changes in the surface properties of montmorillonitic clay through the changes in the basal spacings of sodium-montmorillonite (NaMt), acid-activated montmorillonite (AMt), pillared-montmorillonite (AlMt) and surfactant-intercalated organoclays. The basal spacing value of the NaMt increased from 12.01 to 18.1 angstrom by pillaring with Keggin ions ((hydroxyaluminum polycation) and until 21 angstrom by intercalation of the cationic surfactant in the interlayer space of the clay. Confirmations of the intercalated cationic surfactant have been characterized using Fourier transform infrared spectroscopy (FTIR). Thermogravimetric analysis shows that the thermal decomposition of montmorillonites modified with the cationic surfactant hexadecyltrimethylammonium (HDTMA) takes place in four steps. The surface areas of organo-montmorillonites were found to be much lower than that of raw montmorillonite. Surface areas of pillared and acid-activated montmorillonite are very high. This was explained by the emergence of the micropores and mesopores in the structure of the sample resulting from treatment. Adsorption of the 2,4,5-trichlorophenol (2,4,5-TCP) onto samples was studied. The greatest value of adsorption capacity of samples is attributed to the organo-montmorillonite (MtC16). (C) 2010 The Society of Powder Technology Japan. Published by Elsevier B.V. and The Society of Powder Technology Japan. All rights reserved.

**Notes:** Zaghouane-Boudiaf, H. Boutahala, Mokhtar**URL:** <Go to ISI>://WOS:000296270400007

**Reference Type: Journal Article****Record Number:** 160**Author:** Zaghouane-Boudiaf, H. Boutahala, M.**Year:** 2011**Title:** Kinetic analysis of 2,4,5-trichlorophenol adsorption onto acid-activated montmorillonite from aqueous solution**Journal:** International Journal of Mineral Processing**Volume:** 100**Issue:** 3-4**Pages:** 72-78**Date:** Sep**Short Title:** Kinetic analysis of 2,4,5-trichlorophenol adsorption onto acid-activated montmorillonite from aqueous solution**ISSN:** 0301-7516**DOI:** 10.1016/j.minpro.2011.04.011**Accession Number:** WOS:000295501700002

**Abstract:** This study has investigated the potential use of acid-activated montmorillonite (AMt) as adsorbent for the removal of 2,4,5-trichlorophenol (2,4,5-TCP) from aqueous solution. The kinetics of adsorption were studied in a batch system. Important parameters which affect the adsorption, such as pH of solution, the mass of acid-activated montmorillonite, temperature and initial TCP concentration have been investigated. The increase in adsorbent mass, pH and temperature resulted in a lower TCP loading per unit weight of the acid-activated montmorillonite, but an increase of adsorption was observed when initial concentration of 2,4,5-TCP increases. The effect of different adsorption parameters was fitted to the pseudo-first-order, pseudo-second-order and the intraparticle kinetic models. The linear regression method was used to obtain the relative parameters. According to the error analysis, it was found that the pseudo-second-order kinetic model was better to predict the experimental results. The value of activation energy was calculated as 47.7 kJ/mol. The result obtained indicates that the adsorption is assigned to a physisorption. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Zaghouane-Boudiaf, Hassina Boutahala, Mokhtar**URL:** <Go to ISI>://WOS:000295501700002

**Reference Type: Journal Article****Record Number:** 161**Author:** Zaghouane-Boudiaf, H. Boutahala, M.**Year:** 2011**Title:** Adsorption of 2,4,5-trichlorophenol by organo-montmorillonites from aqueous solutions: Kinetics and equilibrium studies**Journal:** Chemical Engineering Journal**Volume:** 170**Issue:** 1**Pages:** 120-126**Date:** May**Short Title:** Adsorption of 2,4,5-trichlorophenol by organo-montmorillonites from aqueous solutions: Kinetics and equilibrium studies**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2011.03.039**Accession Number:** WOS:000291454600016

**Abstract:** Two montmorillonites modified with organic surfactant hexadecyltrimethylammonium bromide via ion exchange were used as adsorbents to remove 2,4,5-trichlorophenol (2,4,5-TCP) from aqueous solution in a batch system. Due to their organophilic nature, exchanged montmorillonites are able to adsorb 2,4,5-TCP at a very high extents. The maximum capacity at 20 degrees C and pH 4 was 368 and 303 mg/g for organo-montmorillonite (MtC16) and acid-activated-organo-montmorillonite (AMtC16) respectively. Experiments were showed that lower pH increased the amount of adsorbed TCP which reached a maximum at pH 4. The adsorption kinetics was found to follow the pseudo-second-order kinetic model. The non-linear Langmuir model provided the best correlation of experimental data. Isotherms were also used to obtain the thermodynamic parameters. The negative values of Delta G degrees and Delta H degrees indicated the spontaneous and exothermal nature of the processes. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Zaghouane-Boudiaf, Hassina Boutahala, Mokhtar**URL:** <Go to ISI>://WOS:000291454600016

**Reference Type: Journal Article****Record Number:** 162**Author:** Zaghouane-Boudiaf, H. Boutahala, M. Tiar, C. Arab, L. Garin, F.**Year:** 2011**Title:** Treatment of 2,4,5-trichlorophenol by MgAl-SDBS organo-layered double hydroxides: Kinetic and equilibrium studies**Journal:** Chemical Engineering Journal**Volume:** 173**Issue:** 1**Pages:** 36-41**Date:** Sep**Short Title:** Treatment of 2,4,5-trichlorophenol by MgAl-SDBS organo-layered double hydroxides: Kinetic and equilibrium studies**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2011.07.032**Accession Number:** WOS:000295504300005

**Abstract:** Clay-based adsorbents were synthesized by incorporating anionic surfactants sodium dodecylbenzenesulfonate (SDBS), into calcined magnesium aluminum layered double hydroxide (MgAl-C) via ion exchange. The sample has been characterized by powder X-ray diffraction, FT-IR spectroscopy and B.E.T measurement. The result shows that SDBS adsorption on the calcined phase is enhanced by reconstruction of a matrix hydrotalcite intercalated by the dodecylbenzenesulfonate with basal spacing of 30 angstrom, which is larger than that of MgAl-CO(3). The product which is an organophilic layered double hydroxide or organo-LDH (MgAl-SDBS) was examined for their ability to adsorb organic pollutant. The adsorption of 2,4,5-trichlorophenol (TCP) from aqueous solutions by MgAl-SDBS hydrotalcite was investigated in a batch mode. The influence of solution pH, initial TCP concentration and temperature has been tested in kinetic runs. The results showed that the kinetic adsorption could be described by a pseudo-second order model very well. The equilibrium isotherm for TCP uptake was fitted to the Langmuir model with correlation coefficient  $R(2)$  of 0.998 at low concentrations and 0.992 for all concentrations. Its maximum adsorption amount is 240.5 mg/g from this model, while the real amount is 160 mg/g at 298 K and pH 4. The negative value of  $\Delta G$  degrees and the positive value of  $\Delta H$  degrees indicate the spontaneous and endothermic nature of the process. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Zaghouane-Boudiaf, H. Boutahala, M. Tiar, C. Arab, L. Garin, F.**URL:** <Go to ISI>://WOS:000295504300005

**Reference Type: Journal Article****Record Number:** 163**Author:** Zebiri, C. Lashab, M. Benabdelaziz, F.**Year:** 2011**Title:** Rectangular microstrip antenna with uniaxial bi-anisotropic chiral substrate-superstrate**Journal:** Iet Microwaves Antennas & Propagation**Volume:** 5**Issue:** 1**Pages:** 17-29**Date:** Jan**Short Title:** Rectangular microstrip antenna with uniaxial bi-anisotropic chiral substrate-superstrate**ISSN:** 1751-8725**DOI:** 10.1049/iet-map.2009.0446**Accession Number:** WOS:000285962400003

**Abstract:** The effects of the uniaxial anisotropy and chirality of the superstrate on the resonant frequency and bandwidth of rectangular microstrip patch in a substrate-superstrate configuration are investigated. The theoretical study is rigorously formulated via the integral equation and solved using Galerkin's moment method. The complex resonant frequency for the TM(01) mode is studied using sinusoidal basis functions. The effects of the uniaxial anisotropic permittivity on the resonant frequency of a monolayer have been studied by many authors. Recently the same resonator antenna with a uniaxial permeability and chiral substrate has been studied by the authors, and it was found that these elements enhance the antenna characteristics. Some researchers have suggested the use of an anisotropic superstrate to improve the characteristics of the antenna. Therefore the aim of this work is focused on the effects of a superstrate having uniaxial electric, uniaxial magnetic anisotropies, and chirality elements on the resonant frequency and the bandwidth of the rectangular microstrip antenna.

**Notes:** Zebiri, C. Lashab, M. Benabdelaziz, F.**URL:** <Go to ISI>://WOS:000285962400003

**Reference Type: Journal Article****Record Number:** 164**Author:** Zeghdane, R. Abbaoui, L. Tocino, A.**Year:** 2011**Title:** Higher-order semi-implicit Taylor schemes for Ito stochastic differential equations**Journal:** Journal of Computational and Applied Mathematics**Volume:** 236**Issue:** 6**Pages:** 1009-1023**Date:** Oct**Short Title:** Higher-order semi-implicit Taylor schemes for Ito stochastic differential equations**ISSN:** 0377-0427**DOI:** 10.1016/j.cam.2011.06.012**Accession Number:** WOS:000298271800002

**Abstract:** The paper considers the derivation of families of semi-implicit schemes of weak order  $N = 3.0$  (general case) and  $N = 4.0$  (additive noise case) for the numerical solution of Itô stochastic differential equations. The degree of implicitness of the schemes depends on the selection of  $N$  parameters which vary between 0 and 1 and the families contain as particular cases the 3.0 and 4.0 weak order explicit Taylor schemes. Since the implementation of the multiple integrals that appear in these theoretical schemes is difficult, for the applications they are replaced by simpler random variables, obtaining simplified schemes. In this way, for the multidimensional case with one-dimensional noise, we present an infinite family of semi-implicit simplified schemes of weak order 3.0 and for the multidimensional case with additive one-dimensional noise, we give an infinite family of semi-implicit simplified schemes of weak order 4.0. The mean-square stability of the 3.0 family is analyzed, concluding that, as in the deterministic case, the stability behavior improves when the degree of implicitness grows. Numerical experiments confirming the theoretical results are shown. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Zeghdane, R. Abbaoui, L. Tocino, A.**URL:** <Go to ISI>://WOS:000298271800002

**Reference Type: Journal Article****Record Number:** 165**Author:** Zerarga, F. Bouhemadou, A. Khenata, R. Binomran, S.**Year:** 2011**Title:** FP-LAPW study of the structural, elastic and thermodynamic properties of spinel oxides ZnX<sub>2</sub>O<sub>4</sub> (X = Al, Ga, In)**Journal:** Computational Materials Science**Volume:** 50**Issue:** 9**Pages:** 2651-2657**Date:** Jul**Short Title:** FP-LAPW study of the structural, elastic and thermodynamic properties of spinel oxides ZnX<sub>2</sub>O<sub>4</sub> (X = Al, Ga, In)**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2011.04.013**Accession Number:** WOS:000292852000016

**Abstract:** We have performed density functional self-consistent calculations based on the full-potential augmented plane wave plus local orbital method with the local density approximation to investigate the structural, elastic and thermal properties of three spinel oxides: ZnAl<sub>2</sub>O<sub>4</sub>, ZnGa<sub>2</sub>O<sub>4</sub> and ZnIn<sub>2</sub>O<sub>4</sub>. The computed ground state structural parameters, i.e. lattice constant, free internal parameter, bulk modulus and its pressure derivative, are in good agreement with the available theoretical and experimental works. Single and polycrystalline elastic parameters and their pressure dependence are calculated and compared with the previous theoretical results. Thermal and pressure effects on some macroscopic properties of ZnAl<sub>2</sub>O<sub>4</sub>, ZnGa<sub>2</sub>O<sub>4</sub> and ZnIn<sub>2</sub>O<sub>4</sub> are predicted using the quasi-harmonic Debye model in which the lattice vibrations are taken into account. We have computed the variations of the lattice constant, bulk modulus, volume expansion coefficient, heat capacities and Debye temperature with pressure and temperature in the ranges of 0-30 GPa and 0-1600 K. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Zerarga, F. Bouhemadou, A. Khenata, R. Binomran, S.**URL:** <Go to ISI>://WOS:000292852000016

**Reference Type: Journal Article****Record Number:** 166**Author:** Zerarga, F. Bouhernadou, A. Khenata, R. Bin-Omran, S.**Year:** 2011**Title:** Structural, electronic and optical properties of spinel oxides ZnAl<sub>2</sub>O<sub>4</sub>, ZnGa<sub>2</sub>O<sub>4</sub> and ZnIn<sub>2</sub>O<sub>4</sub>**Journal:** Solid State Sciences**Volume:** 13**Issue:** 8**Pages:** 1638-1648**Date:** Aug**Short Title:** Structural, electronic and optical properties of spinel oxides ZnAl<sub>2</sub>O<sub>4</sub>, ZnGa<sub>2</sub>O<sub>4</sub> and ZnIn<sub>2</sub>O<sub>4</sub>**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2011.06.016**Accession Number:** WOS:000294520000033

**Abstract:** We report the systematic trends for structural, band structure, total density of states, dielectric function, reflectivity, refractive index and loss function for the family of spinel oxides ZnB<sub>2</sub>O<sub>4</sub> depending on the type of B element (B are Al, Ga and In). The full-potential augmented plane wave plus local orbitals method based on the density functional theory is used within the generalized gradient approximation (GGA). Moreover, the alternative form of GGA proposed by Engel and Vosko (GGA-EV) is also used for the band structure calculations. The optimized zero pressure geometrical parameters: the unit cell length *a*, the internal coordinate *u*, the bulk modulus *B* and the pressure derivative of the bulk modulus *B'* are in agreement with the available experimental data. Results obtained for the band structure using GGA-EV show a significant improvement over other theoretical works and are closer to the experimental data. Calculations of optical spectra have been performed for the energy range 0-35 eV. The peaks and structures in the optical spectra are assigned to interband transitions. Pressure dependence of the band gaps, static dielectric constant and static refractive index are also investigated. (C) 2011 Elsevier Masson SAS. All rights reserved.

**Notes:** Zerarga, F. Bouhernadou, A. Khenata, R. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000294520000033

**Reference Type: Journal Article****Record Number:** 167**Author:** Zidane, Y. Ourari, A. Mousser, H. Mousser, A.**Year:** 2011**Title:** Dimeric (2-cyanophenolato-kappa O){2,2'- ethylenebis(nitrilomethylidyne) diphenolato-kappa O-4,N,N',O'} manganese(III) monohydrate**Journal:** Acta Crystallographica Section E-Structure Reports Online**Volume:** 67**Pages:** M1069-U632**Date:** Aug**Short Title:** Dimeric (2-cyanophenolato-kappa O){2,2'- ethylenebis(nitrilomethylidyne) diphenolato-kappa O-4,N,N',O'} manganese(III) monohydrate**ISSN:** 1600-5368**DOI:** 10.1107/s1600536811026584**Accession Number:** WOS:000294613900044

**Abstract:** The molecules of the title compound, [Mn(C<sub>7</sub>H<sub>4</sub>NO)(C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>)]center dot H<sub>2</sub>O, form dimers in the solid state across a crystallographic inversion center. The bridging Mn<sub>2</sub>O<sub>2</sub> group is built of phenoxy groups, and is asymmetric, with an Mn-O distances of 1.9002 (13) and 2.6236 (14) angstrom. A substantial cavity between the two Mn atoms [Mn center dot center dot center dot Mn = 3.5082 (4) angstrom] is produced by the formation of the dimer. In the crystal, an extended network of O-H center dot center dot center dot O hydrogen-bonding interactions stabilizes the structure.

**Notes:** Zidane, Youcef Ourari, Ali Mousser, Henia Mousser, Abdelhamid 8**URL:** <Go to ISI>://WOS:000294613900044

**Reference Type: Journal Article****Record Number:** 168**Author:** Zoubida, Z. Abdehak, M. Slimane, L. Djemal, A. Cherif, M. H.**Year:** 2011**Title:** LUNG CANCER INCIDENCE AND TRENDS IN SETIF, ALGERIA BETWEEN 1986 AND 2008**Journal:** Journal of Epidemiology and Community Health**Volume:** 65**Pages:** A405-A405**Date:** Aug**Short Title:** LUNG CANCER INCIDENCE AND TRENDS IN SETIF, ALGERIA BETWEEN 1986 AND 2008**ISSN:** 0143-005X**DOI:** 10.1136/jech.2011.142976n.87**Accession Number:** WOS:000293901802137**Notes:** Zoubida, Z. Abdehak, M. Slimane, L. Djemal, A. Cherif, M. Hamdi 1**URL:** <Go to ISI>://WOS:000293901802137

**Reference Type: Journal Article****Record Number:** 169**Author:** Zoubida, Z. Abdellouche, D. Djazia, A. D. Laouamri, S. Mahnane, A. Cherif, M. H.**Year:** 2011**Title:** BREAST CANCER IN SETIF, ALGERIA: EPIDEMIOLOGY AND TRENDS**Journal:** Annals of Oncology**Volume:** 22**Pages:** 40-40**Date:** May**Short Title:** BREAST CANCER IN SETIF, ALGERIA: EPIDEMIOLOGY AND TRENDS**ISSN:** 0923-7534**Accession Number:** WOS:000290610100063**Notes:** Zoubida, Z. Abdellouche, D. Djazia, A. Djema Laouamri, S. Mahnane, A. Cherif, M. Hamdi Conference on Improving Care and Knowledge through Translational Research (IMPAKT) Breast Cancer May 05-07, 2011 Brussels, BELGIUM 2**URL:** <Go to ISI>://WOS:000290610100063

**Reference Type: Journal Article****Record Number:** 170**Author:** Zoubida, Z. Djemal, A. Aicha, D. D. Abbes, M. Mokhtar, H. C.**Year:** 2011**Title:** TRENDS IN PROSTATE CANCER INCIDENCE IN SETIF, ALGERIA BETWEEN 1987 AND 2007**Journal:** Journal of Epidemiology and Community Health**Volume:** 65**Pages:** A404-A405**Date:** Aug**Short Title:** TRENDS IN PROSTATE CANCER INCIDENCE IN SETIF, ALGERIA BETWEEN 1987 AND 2007**ISSN:** 0143-005X**DOI:** 10.1136/jech.2011.142976n.86**Accession Number:** WOS:000293901802136**Notes:** Zoubida, Z. Djemal, A. Aicha, D. D. Abbes, M. Mokhtar, H. C. 1**URL:** <Go to ISI>://WOS:000293901802136

**Reference Type: Journal Article****Record Number:** 171**Author:** Zoubida, Z. Djemal, A. Aicha, D. D. Slimane, L. Cherif, M. H.**Year:** 2011**Title:** TRENDS IN BREAST CANCER INCIDENCE IN SETIF, ALGERIA BETWEEN 1987 AND 2007**Journal:** Journal of Epidemiology and Community Health**Volume:** 65**Pages:** A405-A405**Date:** Aug**Short Title:** TRENDS IN BREAST CANCER INCIDENCE IN SETIF, ALGERIA BETWEEN 1987 AND 2007**ISSN:** 0143-005X**DOI:** 10.1136/jech.2011.142976n.88**Accession Number:** WOS:000293901802138**Notes:** Zoubida, Z. Djemal, A. Aicha, D. D. Slimane, L. Cherif, M. Hamdi 1**URL:** <Go to ISI>://WOS:000293901802138

**Reference Type: Journal Article****Record Number:** 172**Author:** Zoubida, Z. Z. Dib, A. Abdellouche, D. Djazia, A. D. Laouamri, S. Mahnane, A. Cherif, M. H.**Year:** 2011**Title:** INCIDENCE OF LUNG CANCER INCREASING IN SETIF, ALGERIA, 1986-2006**Journal:** Lung Cancer**Volume:** 71**Pages:** S30-S30**Date:** Feb**Short Title:** INCIDENCE OF LUNG CANCER INCREASING IN SETIF, ALGERIA, 1986-2006**ISSN:** 0169-5002**DOI:** 10.1016/s0169-5002(11)70193-3**Accession Number:** WOS:000288417000054**Notes:** Zoubida, Z. Z. Dib, A. Abdellouche, D. Djazia, A. Djema Laouamri, S. Mahnane, A. Cherif, M. Hamdi 2**URL:** <Go to ISI>://WOS:000288417000054

**Reference Type: Book Section****Record Number:** 1**Author:** Abdellatif, N.**Year:** 2011**Title:** Guidance and counselling in algeria: a clarion call for a restructured policy in education**Editor:** Ongen, D. E. Hursen, C. Halat, M. Boz, H.**Book Title:** 2nd World Conference on Psychology, Counselling and Guidance-2011**Volume:** 30**Series Title:** Procedia Social and Behavioral Sciences**Short Title:** Guidance and counselling in algeria: a clarion call for a restructured policy in education**ISBN:** 1877-0428**DOI:** 10.1016/j.sbspro.2011.10.048**Accession Number:** WOS:000300440500048

**Abstract:** Guidance and counselling for lifelong learning in Algeria has become a crucial question of social, economic and political importance that affects both the scope of training and the world of work. Guidance and Counselling are also major personal concerns for each person at different stages of their training and their personal life. Consequently, and in order to provide equality of opportunity, Algeria needs to develop professionals who can provide the appropriate guidance and counselling service to different audiences as to assist them in making the best life choices to suit them. This article will thus provide an opportunity to collate and compare the contributions of Algeria to the areas of guidance and counselling by fostering a multidisciplinary approach to orientation.

**Notes:** Abdellatif, Naouel 2nd World Conference on Psychology, Counselling and Guidance (WCPCG) May 25-29, 2011 Antalya, TURKEY

**URL:** <Go to ISI>://WOS:000300440500048

**Reference Type: Book Section****Record Number:** 2**Author:** Bakhouché, B. Beniaiche, A.**Year:** 2011**Title:** Application of the Stokes vector for the polarimetric characterization of a low density polyethylene**Editor:** Hamieh, T.**Book Title:** Seventh International Conference on Material Sciences**Volume:** 21**Series Title:** Physics Procedia**Short Title:** Application of the Stokes vector for the polarimetric characterization of a low density polyethylene**ISBN:** 1875-3892**DOI:** 10.1016/j.phpro.2011.10.004**Accession Number:** WOS:000298818800004

**Abstract:** Exploiting the polarimetric information of electromagnetic waves is now the subject of growing interest in many research fields such as biochemistry, medicine, astronomy and remote sensing from space; because it increases considerably the number of information about the medium that we want to analyze. The object of this work is the exploitation of the Stokes formalism based on the study of the polarization in the light-media interaction, to see the influence of the temperature of the manufacturing process of polymer samples (low density polyethylene) on the optical characteristics and especially the polarimetric ones of a light beam passing through these samples. The results demonstrate that these techniques could provide information for the optical characterization of polymers in general. (C) 2010 Published by Elsevier B. V. Selection and/or peer-review under responsibility of the Organizer.

**Notes:** Bakhouché, B. Beniaiche, A. 7th International Conference on Material Sciences May 20-22, 2010 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000298818800004

**Reference Type: Book Section****Record Number:** 3**Author:** Benaouda, N. Guyennet, H. Hammad, A. Lehsaini, M.**Year:** 2011**Title:** Design and Verification of a Self-organisation Algorithm for Sensor Networks**Editor:** AbdManaf, A. Sahibuddin, S. Ahmad, R. Daud, S. M. ElQawasmeh, E.**Book Title:** Informatics Engineering and Information Science, Pt Iii**Volume:** 253**Pages:** 530-543**Series Title:** Communications in Computer and Information Science**Short Title:** Design and Verification of a Self-organisation Algorithm for Sensor Networks**ISBN:** 1865-0929 978-3-642-25461-1; 978-3-642-25462-8**Accession Number:** WOS:000310861200048

**Abstract:** For ad hoc networks, clustering is the organization method that groups the nodes into clusters managed by nodes called cluster-heads. This hierarchical organization allows an effective way of improving performance, security, fault tolerance and scalability of the platform. In this paper, we introduce a new approach to self-organize an ad hoc network, and define communication protocols so that to optimize communication in the routing. We implement a hierarchy structure to the ad hoc network, that is: many clusters with one leader per group, and a coordinator for the whole network. In order to optimize the communication process, decent metrics are chosen in group formation and in leader election. To illustrate the performance of our algorithm, we verify it using model checking; we simulate it and compare its performance with a geographical-based algorithm.

**Notes:** Benaouda, Nacera Guyennet, Herve Hammad, Ahmed Lehsaini, Mohamed International Conference on Informatics Engineering and Information Science (ICIEIS 2011) Nov 14-16, 2011 Univ Teknol Malaysia, Kuala Lumpur, MALAYSIA Springer

**URL:** <Go to ISI>://WOS:000310861200048

**Reference Type: Book Section****Record Number:** 4**Author:** Bouamama, L. Kara, S. Chaab, O. Simoens, S.**Year:** 2011**Title:** Particle concentration effect on diffraction efficiency in two views off-axis holograms**Editor:** Lehmann, P. H. Osten, W. Gastinger, K.**Book Title:** Optical Measurement Systems for Industrial Inspection Vii**Volume:** 8082**Series Title:** Proceedings of SPIE**Short Title:** Particle concentration effect on diffraction efficiency in two views off-axis holograms**ISBN:** 0277-786X 978-0-8194-8678-3**DOI:** 80822g 10.1117/12.889503**Accession Number:** WOS:000295076900086

**Abstract:** Characterizing tracer micro particles in fluids is of a great challenge for digital holographic techniques. The real locations and the number of these particles are the main parameters in such studies. For the first parameter, holographic techniques are very useful, unfortunately, they suffer from the large depth of focus which increases the location uncertainty of the particles. To minimize this uncertainty, we proposed a two orthogonal views system which, from our point of view, makes the location more precise by crossing the two views data in the reconstruction process. For the second parameter (particle number), off-axis configuration is recognized to be more convenient for large particle numbers than the in line configuration. In order to validate the effectiveness of the off-axis configuration in terms of number of tracer particles, we carry out some experiments. The number of particle was increased continuously after each recording. We have also tried to keep unchanged the experiment conditions during all the recording process. In the present work, we describe the manner in which the experiments were conducted and the obtained results in term of diffraction efficiency of the reconstructed holograms.

**Notes:** Bouamama, L. Kara, S. Chaab, O. Simoens, S. Conference on Optical Measurement Systems for Industrial Inspection VII May 23-26, 2011 Munich, GERMANY Spie**URL:** <Go to ISI>://WOS:000295076900086

**Reference Type: Book Section****Record Number:** 5**Author:** Bouguezel, S. Ahmad, M. O. Swamy, M. N. S. Ieee,**Year:** 2011**Title:** An Efficient Algorithm for the Conjugate Symmetric Sequency-Ordered Complex Hadamard Transform**Book Title:** 2011 Ieee International Symposium on Circuits and Systems**Pages:** 1516-1519**Series Title:** IEEE International Symposium on Circuits and Systems**Short Title:** An Efficient Algorithm for the Conjugate Symmetric Sequency-Ordered Complex Hadamard Transform**ISBN:** 0271-4302 978-1-4244-9474-3**Accession Number:** WOS:000297265301182

**Abstract:** In this paper, an efficient algorithm for fast computation of the conjugate symmetric sequency-ordered complex Hadamard transform (CS-SCHT) of any length that is a power of two is proposed using the Kronecker product. Since the CS-SCHT matrix is factored into a product of sparse matrices, the resulting structure for the algorithm is very attractive for implementation and similar to that of the well-known Walsh-Hadamard transform, except for some multiplications by -1 or (-root-1). It is shown that the proposed N-point complex-valued CS-SCHT algorithm requires  $N \log_2(N)$  complex additions/subtractions and  $(N/2 - 1)$  multiplications by (-root-1)

**Notes:** Bouguezel, Saad Ahmad, M. Omair Swamy, M. N. S. Iscas IEEE International Symposium on Circuits and Systems (ISCAS) May 15-18, 2011 Rio de Janeiro, BRAZIL Ieee

**URL:** <Go to ISI>://WOS:000297265301182

**Reference Type: Book Section****Record Number:** 6**Author:** Bouguezel, S. Ahmad, M. O. Swamy, M. N. S. Ieee,**Year:** 2011**Title:** A Low-Complexity Parametric Transform for Image Compression**Book Title:** 2011 Ieee International Symposium on Circuits and Systems**Pages:** 2145-2148**Series Title:** IEEE International Symposium on Circuits and Systems**Short Title:** A Low-Complexity Parametric Transform for Image Compression**ISBN:** 0271-4302 978-1-4244-9474-3**Accession Number:** WOS:000297265302118

**Abstract:** In this paper, a one-parameter eight-point orthogonal transform suitable for image compression is proposed. An algorithm for its fast computation is developed and an efficient structure for a simple implementation valid for all possible values of its independent parameter is proposed. It is shown that an appropriate selection of the values of the parameter results in a number of new multiplication-free transforms having a good compromise between the computational complexity and performance. Applying the proposed transform to image compression, we show that it outperforms the existing transforms having complexities similar to that of the proposed one.

**Notes:** Bouguezel, Saad Ahmad, M. Omair Swamy, M. N. S. Iscas IEEE International Symposium on Circuits and Systems (ISCAS) May 15-18, 2011 Rio de Janeiro, BRAZIL Ieee

**URL:** <Go to ISI>://WOS:000297265302118

**Reference Type: Book Section****Record Number:** 7**Author:** Guechi, A. Chegaar, M. Merabet, A.**Year:** 2011**Title:** The Effect of Water Vapor on the Performance of Solar Cells**Editor:** Hamieh, T.**Book Title:** Seventh International Conference on Material Sciences**Volume:** 21**Series Title:** Physics Procedia**Short Title:** The Effect of Water Vapor on the Performance of Solar Cells**ISBN:** 1875-3892**DOI:** 10.1016/j.phpro.2011.10.016**Accession Number:** WOS:000298818800016

**Abstract:** The objective of this study is to determine the effect of variations in global spectral distribution due to the variation of water vapor on the performance of two types of solar cells, nanocrystalline silicon (nc-Si:H) and cadmium telluride (CdTe) using the spectral irradiance model for clear skies SMARTS2 over a typical rural environment in Setif. Water vapor can reduce the amount of sunlight reaching a solar cell, and thereby cause a reduction in the electrical current, fill factor, open circuit voltage. The results indicate that water vapor increase in the atmosphere reduces the short circuit current of the CdTe cell by 3.15% while this reduction is about 2.38% for the (nc-Si:H) cell. The efficiency for both cells increases with increasing water vapor. These findings should be taken into consideration by solar cell engineers for better sizing of these types of solar cells. (C) 2010 Published by Elsevier B. V. Selection and/or peer-review under responsibility of the Organizer.

**Notes:** Guechi, A. Chegaar, M. Merabet, A. 7th International Conference on Material Sciences May 20-22, 2010 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000298818800016

**Reference Type: Book Section****Record Number:** 8**Author:** Harrag, F. El-Qawasmeh, E. Al-Salman, A. M. S.**Year:** 2011**Title:** Extracting Named Entities from Prophetic Narration Texts (Hadith)**Editor:** Zain, J. M. Mohd, W. M. B. ElQawasmeh, E.**Book Title:** Software Engineering and Computer Systems, Pt 2**Volume:** 180**Pages:** 289-297**Series Title:** Communications in Computer and Information Science**Short Title:** Extracting Named Entities from Prophetic Narration Texts (Hadith)**ISBN:** 1865-0929 978-3-642-22190-3**Accession Number:** WOS:000303027000026

**Abstract:** In this paper, we report our work on a Finite State Transducer-based entity extractor, which applies named-entity extraction techniques to identify useful entities from prophetic narrations texts. A Finite State Transducer has been implemented in order to capture different types of named entities. For development and testing purposes, we collected a set of prophetic narrations texts from "Sahih Al-Bukhari" corpus. Preliminary evaluation results demonstrated that our approach is feasible. Our system achieved encouraging precision and recall rates, the overall precision and recall are 71% and 39% respectively. Our future work includes conducting larger-scale evaluation studies and enhancing the system to capture named entities from chains of transmitters (Salasil Al-Assanid) and biographical texts of narrators (Tarajims).

**Notes:** Harrag, Fouzi El-Qawasmeh, Eyas Al-Salman, Abdul Malik Salman 2nd International Conference on Software Engineering and Computing Systems (ICSECS 2011) Jun 27-29, 2011 Univ Malaysia Pahang, Kuantan, MALAYSIA Springer

**URL:** <Go to ISI>://WOS:000303027000026

**Reference Type: Book Section****Record Number:** 9**Author:** Keraghel, F. Loucif, K. Delplancke, M. P.**Year:** 2011**Title:** STUDY OF BRONZE POROUS ALLOY Cu-Sn WORKED OUT BY METALLUGY OF THE POWDERS**Editor:** Hamieh, T.**Book Title:** Seventh International Conference on Material Sciences**Volume:** 21**Series Title:** Physics Procedia**Short Title:** STUDY OF BRONZE POROUS ALLOY Cu-Sn WORKED OUT BY METALLUGY OF THE POWDERS**ISBN:** 1875-3892**DOI:** 10.1016/j.phpro.2011.10.023**Accession Number:** WOS:000298818800023

**Abstract:** Porous bronzes take popularity in various fields of technology. Their development is based on the metallurgy of powders. The samples, in the present study, are worked out by pressure sintering pressure. We used various techniques of characterization: density, hardness, optical and electronic microscopy and diffraction of x-rays. We showed that in the temperature and pressure range or field swept the density believes linearly with these two parameters. The secondary phase was identified. By microscopy, we proved that the structure is not homogeneous. (C) 2010 Published by Elsevier B. V. Selection and/or peer-review under responsibility of the Organizer.

**Notes:** Keraghel, F. Loucif, K. Delplancke, M. P. 7th International Conference on Material Sciences May 20-22, 2010 Beirut, LEBANON**URL:** <Go to ISI>://WOS:000298818800023

**Reference Type: Book Section****Record Number:** 10**Author:** Manallah, A. Bouafia, M.**Year:** 2011**Title:** Application of the technique of total integrated scattering of light for micro-roughness evaluation of polished surfaces**Editor:** Hamieh, T.**Book Title:** Seventh International Conference on Material Sciences**Volume:** 21**Series Title:** Physics Procedia**Short Title:** Application of the technique of total integrated scattering of light for micro-roughness evaluation of polished surfaces**ISBN:** 1875-3892**DOI:** 10.1016/j.phpro.2011.10.026**Accession Number:** WOS:000298818800026

**Abstract:** The method of light scattering applied to measure the roughness of polished surfaces is based on the statistical evaluation of the light sent by the surface under test; it can therefore characterize the surface as a function of the distribution of scattered light and correlate this distribution with the parameters of roughness. The light scattered by a rough surface contains information about its quality. The scattering measurement technique used in this work is the total integrated scattering (TIS), which measure the ratio of scattered light within a hemisphere covering the surface to be inspected, to the total reflected light by the surface. Then the rms roughness is obtained when it is small compared to the wavelength of light of test. (C) 2011 Published by Elsevier B. V. Selection and/or peer-review under responsibility of the Organizer.

**Notes:** Manallah, Aissa Bouafia, Mohamed 7th International Conference on Material Sciences May 20-22, 2010 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000298818800026

**Reference Type: Book Section****Record Number:** 11**Author:** Mebarki, Z.**Year:** 2011**Title:** Factors Underlying the Reading Performance of Algerian Microbiology Students**Editor:** Bekirogullari, Z.**Book Title:** 2nd International Conference on Education and Educational Psychology 2011**Volume:** 29**Series Title:** Procedia Social and Behavioral Sciences**Short Title:** Factors Underlying the Reading Performance of Algerian Microbiology Students**ISBN:** 1877-0428**DOI:** 10.1016/j.sbspro.2011.11.422**Accession Number:** WOS:000299993000223

**Abstract:** This study aims at identifying some of the factors that have a bearing on the reading achievement of ESP students. The research questions were: (1) What are the factors which underlie the students' reading performance? and (2) What test tasks influence their reading achievement? The findings of the first question indicate that there are three factors which underlie adequate understanding of texts: (i) lexical knowledge, (ii) coherency, and (iii) comprehension. The findings of the second question indicate that the students performed moderately on the, local. reading skills as well as on, global. reading skills and strategies. (C) 2011 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of Dr. Zafer Bekirogullari.

**Notes:** Mebarki, Zahia 2nd International Conference on Education and Educational Psychology (ICEEPSY) Oct 19-22, 2011 Istanbul, TURKEY

**URL:** <Go to ISI>://WOS:000299993000223

**Reference Type: Book Section****Record Number:** 12**Author:** Rokbi, M. Osmani, H. Imad, A. Benseddiq, N.**Year:** 2011**Title:** Effect of Chemical treatment on Flexure Properties of Natural Fiber-reinforced Polyester Composite**Editor:** Guagliano, M. Vergani, L.**Book Title:** 11th International Conference on the Mechanical Behavior of Materials**Volume:** 10**Series Title:** Procedia Engineering**Short Title:** Effect of Chemical treatment on Flexure Properties of Natural Fiber-reinforced Polyester Composite**ISBN:** 1877-7058**DOI:** 10.1016/j.proeng.2011.04.346**Accession Number:** WOS:000300451302020

**Abstract:** This paper focuses on the study of the effect of chemical treatments of fibers by alkalization on the flexural properties of polyester matrix composite reinforced with natural fibers. The used reinforcement consists of Alfa fiber, extracted from the plant *Stippa tenacissima* from Hodna Region (Algeria). Alfa fibers are subjected to alkali treatments with NaOH at 1, 5 and 10% for a period of 0, 24, and 48 h to 28 degrees C. The composites reinforced with layers of Alfa random costituente a rate of 40% by weight. Influence of alkaline treatments on the flexural properties is studied to determine the optimum conditions of alkaline treatment. The experimental results show that the bending behavior of composites made from alkali treated fibers are better compared to the untreated fiber composite, For a fiber processing Alfa 10% NaOH in 24h, the flexural strength and flexural modulus improved by 23 MPa to 57MPa and from 1.16 to 3.04 GPa. However, the flexural properties of composites decreased after alkali treatment with 5% NaOH for 48 h. This is mainly due to the reduction of lignin that binds the cellulose fibrils together. (C) 2011 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of ICM 11.

**Notes:** Rokbi, Mansour Osmani, Hocine Imad, Abdellatif Benseddiq, Nouredine Icm11 11th International Conference on the Mechanical Behavior of Materials (ICM) 2011 Como, ITALY**URL:** <Go to ISI>://WOS:000300451302020



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# PRODUCTION SCIENTIFIQUE ANNEE 2012

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1**Reference Type: Journal Article****Record Number: 1****Author:** Abdelkader, R. Larbi, D. Rihab, H. Fethi, B. Chemseddine, F. Azzedine, H.**Year:** 2012**Title:** Geochemical characterization of groundwater from shallow aquifer surrounding Fetzara Lake N. E. Algeria**Journal:** Arabian Journal of Geosciences**Volume:** 5**Issue:** 1**Pages:** 1-13**Date:** Jan**Short Title:** Geochemical characterization of groundwater from shallow aquifer surrounding Fetzara Lake N. E. Algeria**ISSN:** 1866-7511**DOI:** 10.1007/s12517-010-0202-6**Accession Number:** WOS:000299294800001

**Abstract:** Hydrogeochemical investigations were carried out around Fetzara Lake, Northeast Algeria, to assess the quality of groundwater for its suitability for drinking and irrigation purposes. The groundwater chemistry is mainly controlled by the water-rock interactions, but also influenced by other processes such as evapotranspiration and ion exchange. Groundwater samples collected, during two periods (1993 and 2007) from wells in the area were analyzed for pH, EC, TDS, Ca(2+), Mg(2+), Na(+), K(+), CO<sub>3</sub>(2-), HCO<sub>3</sub>(-), Cl(-), SO<sub>4</sub>(2-), and NO<sub>3</sub>(-). The chemical relationships in Piper's diagram and Gibbs's diagram suggest that groundwaters mainly belong to noncarbonate alkali type and Cl(-) group and are controlled by evaporation dominance, respectively, due to the sluggish drainage conditions, greater water-rock interaction, and anthropogenic activities. A comparison of the groundwater quality in relation to drinking water quality standards proves that most of the water samples are not suitable for drinking. US Salinity Laboratory's and Wilcox's diagrams and %Na(+) used for evaluating the water quality for irrigation suggest that the majority of the groundwater samples are not good for irrigation.

**Notes:** Abdelkader, Rouabhia Larbi, Djabri Rihab, Hadji Fethi, Baali Chemseddine, Fehdi Azzedine, Hani**URL:** <Go to ISI>://WOS:000299294800001

**Reference Type: Journal Article****Record Number: 2****Author:** Abdellatif, A. Kahoul, A. Deghfel, B. Nekkab, M. Medjadi, D. E.**Year:** 2012**Title:** Analytical formulas for calculation of K X-ray production cross sections by alpha ions**Journal:** Radiation Physics and Chemistry**Volume:** 81**Issue:** 5**Pages:** 499-505**Date:** May**Short Title:** Analytical formulas for calculation of K X-ray production cross sections by alpha ions**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2011.12.036**Accession Number:** WOS:000302456000003

**Abstract:** In the present study, different procedures are followed to deduce the semi-empirical and the empirical K X-ray production cross sections induced by alpha ions from the available experimental data and the theoretical results of the ECPSSR model for elements with  $20 \leq Z \leq 30$ . The deduced K X-ray production cross sections are compared with predictions from ECPSSR model and with other earlier works. Generally, the deduced K X-ray production cross sections obtained by fitting the available experimental data for each element separately give the most reliable values than those obtained by a global fit. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Abdellatif, A. Kahoul, A. Deghfel, B. Nekkab, M. Medjadi, D. E.**URL:** <Go to ISI>://WOS:000302456000003

**Reference Type: Journal Article****Record Number:** 3**Author:** Abdenacer, M. Kahina, B. I. Aicha, N. Nabil, N. Jean-Louis, G. Joseph, B.**Year:** 2012**Title:** Sequential optimization approach for enhanced production of glutamic acid from *Corynebacterium glutamicum* 2262 using date juice**Journal:** Biotechnology and Bioprocess Engineering**Volume:** 17**Issue:** 4**Pages:** 795-803**Date:** Aug**Short Title:** Sequential optimization approach for enhanced production of glutamic acid from *Corynebacterium glutamicum* 2262 using date juice**ISSN:** 1226-8372**DOI:** 10.1007/s12257-011-0486-8**Accession Number:** WOS:000307972400016

**Abstract:** To improve glutamic acid production from *Corynebacterium glutamicum* 2262 using date juice, a culture medium was screened and optimized using the statistical experimental designs of Plackett-Burman and response-surface methodology. In the first step, a two-level Plackett-Burman design was adopted to select the most important nutrients influencing the glutamic acid production, which showed that the date juice sugars, urea, peptone, and glycine betaine were the most significant ingredients ( $P < 0.05$ ). Finally, response surface Box-Behnken design was employed to develop a mathematical model to identify the optimum concentrations of key components for higher glutamic acid production, which revealed the following: date juice (45 g/L), urea (16.9 g/L), peptone (15 g/L), and glycine betaine (12 g/L). The high correlation between the predicted and observed values indicated the validity of the model. Glutamic acid concentration increased significantly with optimized medium (33.2 g/L) when compared with non-optimized medium (12 g/L).

**Notes:** Abdenacer, Mouffok Kahina, Bedaida Ibissam Aicha, Nancib Nabil, Nancib Jean-Louis, Goergen Joseph, Boudrant

**URL:** <Go to ISI>://WOS:000307972400016

**Reference Type: Journal Article****Record Number:** 4**Author:** Achili, B. Daachi, B. Amirat, Y. Ali-Cherif, A. Daachi, M. E.**Year:** 2012**Title:** A stable adaptive force/position controller for a C5 parallel robot: a neural network approach**Journal:** Robotica**Volume:** 30**Pages:** 1177-1187**Date:** Dec**Short Title:** A stable adaptive force/position controller for a C5 parallel robot: a neural network approach**ISSN:** 0263-5747**DOI:** 10.1017/s0263574711001354**Accession Number:** WOS:000310314000012

**Abstract:** This paper presents an adaptive force/position controller for a parallel robot executing constrained motions. This controller, based on an MLPNN (or Multi-Layer Perceptron Neural Network), does not require the inverse dynamic model of the robot to derive the control law. A neural identification of the dynamic model of the robot is proposed to determine the principal components of the MLPNN input vector. The latter is used to compensate the dynamic effects arising from the robot-environment interaction and its parameters are adjusted according to an adaptation law based on the Lyapunov-analysis methodology. The proposed controller is evaluated experimentally on the C5 parallel robot. This method is capable of tracking accurately the force/position trajectories and its stability robustness is proved.

**Notes:** Achili, B. Daachi, B. Amirat, Y. Ali-Cherif, A. Daachi, M. E. 7**URL:** <Go to ISI>://WOS:000310314000012

**Reference Type: Journal Article****Record Number: 5****Author:** Ahmia, M. Belbachir, H.**Year:** 2012**Title:** Preserving log-convexity for generalized Pascal triangles**Journal:** Electronic Journal of Combinatorics**Volume:** 19**Issue:** 2**Date:** May**Short Title:** Preserving log-convexity for generalized Pascal triangles**ISSN:** 1077-8926**Article Number:** P16**Accession Number:** WOS:000303921400001

**Abstract:** We establish the preserving log-convexity property for the generalized Pascal triangles. It is an extension of a result of H. Davenport and G. Polya "On the product of two power series", who proved that the binomial convolution of two log-convex sequences is log-convex.

**Notes:** Ahmia, Moussa Belbachir, Hacene**URL:** <Go to ISI>://WOS:000303921400001

**Reference Type: Journal Article****Record Number:** 6**Author:** Aib, A. Bensalem, N.**Year:** 2012**Title:** Optimal Control Problem Governed by an Infinite Dimensional One-Nilpotent Bilinear Systems**Journal:** Bulletin Mathematique De La Societe Des Sciences Mathematiques De Roumanie**Volume:** 55**Issue:** 2**Pages:** 107-128**Short Title:** Optimal Control Problem Governed by an Infinite Dimensional One-Nilpotent Bilinear Systems**ISSN:** 1220-3874**Accession Number:** WOS:000305315400001**Abstract:** The object of this work is to construct an explicit linear operators  $B$  which commute with a given linear operator  $A$  in infinite dimensional spaces. This construction can be applied to give exact optimal solution for a class of infinite dimensional bilinear systems.**Notes:** Aib, Aziza Bensalem, Naceurdine**URL:** <Go to ISI>://WOS:000305315400001

**Reference Type: Journal Article**

**Record Number: 7**

**Author:** Aibeche, A. Chikouche, W. Daikh, Y.

**Year:** 2012

**Title:** REAL INTERPOLATION SPACES BETWEEN THE DOMAIN OF THE LAPLACE OPERATOR WITH TRANSMISSION CONDITIONS AND  $L_p$  ON A POLYGONAL DOMAIN

**Journal:** Electronic Journal of Differential Equations

**Date:** Jan

**Short Title:** REAL INTERPOLATION SPACES BETWEEN THE DOMAIN OF THE LAPLACE OPERATOR WITH TRANSMISSION CONDITIONS AND  $L_p$  ON A POLYGONAL DOMAIN

**ISSN:** 1072-6691

**Article Number:** 10

**Accession Number:** WOS:000302624600002

**Abstract:** We provide a description of the real interpolation spaces between the domain of the Laplace operator (with transmission conditions in a polygonal domain  $\Omega$ ) and  $L_p(\Omega)$  as interpolation spaces between  $W^{-2, W-p}(\Omega)$  (possibly augmented with singular solutions) and  $L_p(\Omega)$ . This result relies essentially on estimates on the resolvent and the reiteration theorem.

**Notes:** Aibeche, Aissa Chikouche, Wided Daikh, Yasmina

**URL:** <Go to ISI>://WOS:000302624600002

**Reference Type: Journal Article****Record Number:** 8**Author:** Aliouat, M. Aliouat, Z. Naidja, M. Ieee,**Year:** 2012**Title:** Adaptative Nodes Diagnosis and Recovery for Wireless Sensor Networks**Journal:** 2012 Ieee Symposium on Computer Applications and Industrial Electronics (Iscaie 2012)**Short Title:** Adaptative Nodes Diagnosis and Recovery for Wireless Sensor Networks**Accession Number:** WOS:000320669800053

**Abstract:** The rapid increasing development of the Wireless Sensor Networks (WSN) and their wide spread over numerous domains of our daily life, keep on drawing researchers attention in order to make them reaching the expected and promising maturity. So, for this purpose, many attributes in WSN have been paid more attention than that of dependability. Indeed, when the node density is large, a node failure rate increases inevitably leading to impede the proper functioning of a WSN. Therefore, to ensure that the running applications can be completed successfully, it is crucial to detect failed sensor nodes or precisely failed parts of a sensor node and then take appropriate actions to continue using the correct parts and overcome as possible the failed ones. In this paper, we present a diagnosis mechanism for sensor nodes failures in WSN; this mechanism distinguishes several causes of node performance degradation and provides an effective alternate action to recover from the failure enabling a node to carry on contributing to successful network deployment goal.

**Notes:** Aliouat, Makhoulf Aliouat, Zibouda Naidja, Miloud IEEE Symposium on Computer Applications and Industrial Electronics (ISCAIE) Dec 03-04, 2012 Kota Kinabalu, MALAYSIA IEEE, IEEE Malaysia, IEEE Malaysia Power Elect (PEL)/Ind Elect (IE)/Ind Applicat (IA) Joint Chapter, IEEE Malaysia Power & Energy Chapter 978-1-4673-3033-6

**URL:** <Go to ISI>://WOS:000320669800053

**Reference Type: Journal Article****Record Number:** 9**Author:** Aliouat, M. Aliouat, Z. Titouna, C. Ieee,**Year:** 2012**Title:** Resilient Sinks for Long Lived Wireless Sensor Networks**Journal:** 2012 Ieee Symposium on Computer Applications and Industrial Electronics (Iscaie 2012)**Short Title:** Resilient Sinks for Long Lived Wireless Sensor Networks**Accession Number:** WOS:000320669800055

**Abstract:** Wireless sensor network is a set of autonomous sensor nodes dedicated to sense sizes of physical phenomena of a geographical area of interest. The sizes so collected are converted to numerical data to be transmitted to a specific node called base station or sink. After some appropriate processing, the data are sent out to a monitoring center. Therefore, a sink takes over a vital role in a WSN since it achieves an interface between the rest of the deployed sensor network and the end user. Consequently, a failed sink may abort the overall mission of the network. Due to their crucial functions, sinks must be designed and maintained to be robust enough in order to face trouble coming from the harsh environment wherein nodes are deployed. Thus, as a keystone of a WSN, sink has to be provided with ability to recover from failures. In this paper, we propose a protocol avoiding the sink to be a central point of failure, thus giving it the capacity for fault tolerance more significantly. This protocol allows error detection instantaneously and speedy error recovery. The results obtained from simulation, with TinyOS/PowerTOSSIM simulator, have been very convincing.

**Notes:** Aliouat, Makhoulf Aliouat, Zibouda Titouna, Chafiq IEEE Symposium on Computer Applications and Industrial Electronics (ISCAIE) Dec 03-04, 2012 Kota Kinabalu, MALAYSIA IEEE, IEEE Malaysia, IEEE Malaysia Power Elect (PEL)/Ind Elect (IE)/Ind Applicat (IA) Joint Chapter, IEEE Malaysia Power & Energy Chapter 978-1-4673-3033-6

**URL:** <Go to ISI>://WOS:000320669800055

**Reference Type: Journal Article****Record Number:** 10**Author:** Aliouat, Z. Aliouat, M. Ieee,**Year:** 2012**Title:** Efficient Management of Energy Budget for PEGASIS Routing Protocol**Journal:** 2012 6th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (Setit)**Pages:** 516-521**Short Title:** Efficient Management of Energy Budget for PEGASIS Routing Protocol**Accession Number:** WOS:000318244900087

**Abstract:** Sensor nodes of Wireless Sensor Networks (WSNs) are usually powered by non rechargeable exhaustible batteries with limited lifetime duration. As the deployment of these WSNs operates in harsh environments, generally inaccessible and sometimes hostile, the replacement of depleted batteries is not feasible or cumbersome because of the huge number of nodes. Therefore, sensor nodes have to ensure their mission with their unique strict initial energy budget. This constraint makes the scarce energy resource the most decisive and of critical importance in the WSNs. As data routing is an essential basic service in a WSN and communication in that network is the most energy consumer activity, so devising routing protocols optimizing energy consumption is actually a research area very active. In this context, we propose MH-PEGASIS: a multi hops routing protocol, minimizing the energy consumption and extending the network life time. This new protocol is a more efficient variant of the well known protocol PEGASIS. Simulations carried out in an environment of the NS2 simulator gave results outperforming those of original PEGASIS.

**Notes:** Aliouat, Zibouda Aliouat, Makhoulf 6th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT) Mar 21-24, 2012 Sousse, TUNISIA IEEE, IEEE Commun Soc, SAI 978-1-4673-1658-3

**URL:** <Go to ISI>://WOS:000318244900087

**Reference Type: Journal Article****Record Number:** 11**Author:** Allali, D. Bouhemadou, A. Bin-Omran, S.**Year:** 2012**Title:** Theoretical prediction of the structural, electronic and optical properties of SnB<sub>2</sub>O<sub>4</sub> (B = Mg, Zn, Cd)**Journal:** Computational Materials Science**Volume:** 51**Issue:** 1**Pages:** 194-205**Date:** Jan**Short Title:** Theoretical prediction of the structural, electronic and optical properties of SnB<sub>2</sub>O<sub>4</sub> (B = Mg, Zn, Cd)**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2011.07.046**Accession Number:** WOS:000296214300026

**Abstract:** The structural, electronic and optical properties of the cubic spinels SnB<sub>2</sub>O<sub>4</sub>, with B = Mg, Zn and Cd, were studied by means of the full-potential (linear) augmented plane wave plus local orbitals method within the local density and generalized gradient approximations for the exchange-correlation potential. The Engel-Vosko form of the generalized gradient approximation (EV-GGA), which better optimizes the potential for the band structures, was also used. The results of bulk properties, including lattice constants, internal parameters, bulk moduli and their pressure derivatives are in good agreement with the literature data. The band structures show a direct band gap (Gamma-Gamma) for the three compounds. The computed band gaps using the EV-GGA show a significant improvement over the more common GGA. All the calculated band gaps increase with increasing pressure and fit well to a quadratic function. Analysis of the density of states revealed that the lowering of the direct gap (Gamma-Gamma) from SnMg<sub>2</sub>O<sub>4</sub> to SnZn<sub>2</sub>O<sub>4</sub> to SnCd<sub>2</sub>O<sub>4</sub> can be attributed to the p-d mixing in the upper valence band of SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub>. We present calculations of the frequency-dependent complex dielectric function  $\epsilon(\omega)$ . We find that the values of zero-frequency limit  $\epsilon(0)$  increase with decreasing the energy band gap. The origin of the peaks and structures in the optical spectra is determined in terms of the calculated energy band structures. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Allali, D. Bouhemadou, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000296214300026

**Reference Type: Journal Article****Record Number:** 12**Author:** Allali, D. Bouhemadou, A. Zerarga, F. Ghebouli, M. A. Bin-Omran, S.**Year:** 2012**Title:** Prediction study of the elastic and thermodynamic properties of the SnMg<sub>2</sub>O<sub>4</sub>, SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub> spinel oxides**Journal:** Computational Materials Science**Volume:** 60**Pages:** 217-223**Date:** Jul**Short Title:** Prediction study of the elastic and thermodynamic properties of the SnMg<sub>2</sub>O<sub>4</sub>, SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub> spinel oxides**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2012.03.044**Accession Number:** WOS:000303657700027

**Abstract:** We have carried out a first-principles density functional study of the structural, elastic and thermodynamic properties for the SnMg<sub>2</sub>O<sub>4</sub>, SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub> cubic normal spinel structures. We have calculated the equilibrium structural parameters: the lattice constant and internal structural parameter. These results agree very well with experimental data. We have investigated the zero-pressure single-crystal and polycrystalline elastic constants and their related properties, confirming prior theoretical results for SnMg<sub>2</sub>O<sub>4</sub> and predicting values for SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub>. The pressure dependence of the elastic constants C<sub>ij</sub> can be fit by a straight line over the range 0-30 GPa. Thermal and pressure effects on some macroscopic properties of SnMg<sub>2</sub>O<sub>4</sub>, SnZn<sub>2</sub>O<sub>4</sub> and SnCd<sub>2</sub>O<sub>4</sub> are predicted using the quasi-harmonic Debye model in which the lattice vibrations are taken into account. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Allali, D. Bouhemadou, A. Zerarga, F. Ghebouli, M. A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000303657700027

**Reference Type: Journal Article****Record Number:** 13**Author:** Amin, B. Khenata, R. Bouhemadou, A. Ahmad, I. Maqbool, M.**Year:** 2012**Title:** Opto-electronic response of spinels MgAl<sub>2</sub>O<sub>4</sub> and MgGa<sub>2</sub>O<sub>4</sub> through modified Becke-Johnson exchange potential**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 13**Pages:** 2588-2592**Date:** Jul**Short Title:** Opto-electronic response of spinels MgAl<sub>2</sub>O<sub>4</sub> and MgGa<sub>2</sub>O<sub>4</sub> through modified Becke-Johnson exchange potential**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.03.075**Accession Number:** WOS:000304664500043

**Abstract:** A first-principles technique capable of describing the state accurately near to excited states of semiconductors and insulators, namely the modified Becke-Johnson (mBJ) exchange potential approximation is used to investigate the opto-electronic response of magnesium spinel oxides: MgAl<sub>2</sub>O<sub>4</sub> and MgGa<sub>2</sub>O<sub>4</sub>. The predicted bandgaps using the mBJ exchange approximation show a significant improvement over previous theoretical work using the common LDA and GGA, and are very closer to the experimental results. Band gap dependent optical parameters, like dielectric constant, index of refraction, reflectivity and optical conductivity are calculated and analyzed. The static dielectric constant and refractive index of MgGa<sub>2</sub>O<sub>4</sub> are much larger than that of MgAl<sub>2</sub>O<sub>4</sub>. Refractive index drops below unity for higher energy photons, higher than 17 eV, show that the velocities of incident photons are greater than the velocity of light. However, these overlook can be explained by the fact that a signal must be transmitted as a wave packet rather than monochromatic wave. Moreover, the peak positions of the calculated optical parameters move down to low energies when the value of the band gap decreases. This comprehensive theoretical study of the optoelectronic properties predicts that these materials can be effectively used in the optical devices working in major part of the spectrum. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Amin, B. Khenata, R. Bouhemadou, A. Ahmad, Iftikhar Maqbool, M.**URL:** <Go to ISI>://WOS:000304664500043

**Reference Type: Journal Article****Record Number:** 14**Author:** Amira, S. Dade, M. Schinella, G. Rios, J. L.**Year:** 2012**Title:** Anti-inflammatory, anti-oxidant, and apoptotic activities of four plant species used in folk medicine in the Mediterranean basin**Journal:** Pakistan Journal of Pharmaceutical Sciences**Volume:** 25**Issue:** 1**Pages:** 65-72**Date:** Jan**Short Title:** Anti-inflammatory, anti-oxidant, and apoptotic activities of four plant species used in folk medicine in the Mediterranean basin**ISSN:** 1011-601X**Accession Number:** WOS:000300070900011

**Abstract:** The aim of this research was to study the potential anti-inflammatory activity of myrtle (*Myrtus communis*), sarsaparilla (*Smilax aspera*), Arabian or French lavender (*Lavandula stoechas*), and calamint (*Calamintha nepeta*) along with their apoptotic effects on the pro-inflammatory cells, and the correlation of these effects with the plants' potential anti-oxidant activity. Myrtle extract exhibited the highest inhibitory activity in the paw oedema induced by carrageenan (60% at 3 h), whereas calamint, lavender, and sarsaparilla produced inhibitions of 49%, 38%, and 47%, respectively. None of them had an effect on the TPA-induced ear oedema. Moreover, all the extracts except sarsaparilla showed different degrees of anti-oxidant activity. Lavender and myrtle at 200  $\mu$ g/mL decreased cell viability by 63% and 59%, respectively, after 3 h of incubation. Neutrophil elimination through apoptosis could be implicated in the resolution of acute inflammation in the case of lavender, whereas the reduction of reactive oxygen species produced by neutrophils, such as the superoxide anion and the hydroxyl radical, could be implicated in the overall reduction of inflammation. These results may support the traditional use of these plants.

**Notes:** Amira, Smain Dade, Martin Schinella, Guillemo Rios, Jose-Luis**URL:** <Go to ISI>://WOS:000300070900011

**Reference Type: Journal Article****Record Number:** 15**Author:** Amrane, M. Houcher, Z. Begag, S. Houcher, B. Benlatreche, C. Touabti, A. Laouamri, S. Malek, R.**Year:** 2012**Title:** Influence of Retinopathy on Plasma Concentrations of total Homocysteine and other Biochemical Parameters in Algerian Patients with Type 2 Diabetes Mellitus**Journal:** Pteridines**Volume:** 23**Issue:** 3**Pages:** 96-103**Date:** Sep**Short Title:** Influence of Retinopathy on Plasma Concentrations of total Homocysteine and other Biochemical Parameters in Algerian Patients with Type 2 Diabetes Mellitus**ISSN:** 0933-4807**Accession Number:** WOS:000312490400003

**Abstract:** Homocysteine (HCY) has been identified as a risk factor for vascular disease in the general population. Diabetic retinopathy (DR) itself rather than hyperhomocysteinemia is the leading cause of blindness among patients with type 2 diabetes mellitus (T2DM). Our study was conducted with 60 healthy control subjects and 178 subjects with T2DM. They were enrolled in the Diabetes Prevention Program from September 2007 to December 2008. Of the 178 patients, 121 cases (68%) had DR. Mean plasma total HCY (tHCY) levels were found to be higher in T2DM patients compared to controls ( $p < 0.001$ ), and were also higher than that of the DR group ( $p < 0.001$ ). Plasma folic acid levels were lower in the DR group compared with T2DM without DR and the control group ( $p < 0.001$ ), but there were no significant differences between the latter and the controls. Moderate hyperhomocysteinemia was significantly associated with lower vitamin B12 and folic acid concentrations and older age. Concentrations of serum total cholesterol, LDL-cholesterol (LDL-C), and triglycerides (TG) were significantly raised ( $p < 0.001$ ) whereas the level of HDL-cholesterol (HDL-C) was decreased ( $p < 0.001$ ) in diabetic subjects as compared to controls. Logistic regression analysis showed that DR after adjustment was significantly associated with the following factors: cholesterol, HDL-C and TG. The analysis in DR patients after controlling for cholesterol and TG was independent of plasma tHCY concentrations (OR = 28.5 and OR = 11.9; respectively). In conclusion, results suggest a possible association between moderate hyperhomocysteinemia, traditional risk factors and folic acid deficiency could be an independent risk factor for DR.

**Notes:** Amrane, Mounira Houcher, Zahira Begag, Samia Houcher, Bakhouch Benlatreche, Cherifa Touabti, Abderrezak Laouamri, Slimane Malek, Rachid

**URL:** <Go to ISI>://WOS:000312490400003

**Reference Type: Journal Article****Record Number:** 16**Author:** Anane, Z. Bayadi, A. Ieee,**Year:** 2012**Title:** Studies on the influence of corona on overvoltage surges by simulation using the ATP/EMTP**Journal:** 2012 24th International Conference on Microelectronics (Icm)**Short Title:** Studies on the influence of corona on overvoltage surges by simulation using the ATP/EMTP**Accession Number:** WOS:000318036700100

**Abstract:** Electrical systems are subjected to constraints more severe continuation with overvoltage's which can be due to lightning and switching strikes. Under the influence of the intense corona effect which accompanies of atmospheric overvoltage, these overvoltages undergo deformations at the same time as an attenuation of their amplitude, this phenomenon of distortion, which is superimposed on the distortion by skin effect, is due to the dissipation of energy by injection of space charges around the conductor, this process with place as soon as the instantaneous voltage exceeds the threshold voltage of the corona effect conductors. In this paper, an analogical model of the corona effect has been implemented in the Alternative Transients Program/Electromagnetic Transients Program (ATP/EMTP). This model was incorporated into a transmission lines, the line is divided on a number of the short sections. This study is to have the attenuation and the distortion of the overvoltage waves due to the corona effect on this transmission line.

**Notes:** Anane, Zahira Bayadi, Abdelhafid 24th International Conference on Microelectronics (ICM) Dec 17-20, 2012 Algiers, ALGERIA 978-1-4673-5289-5**URL:** <Go to ISI>://WOS:000318036700100

**Reference Type: Journal Article****Record Number:** 17**Author:** Annani, F. Alfarhan, A. H. Samraoui, B.**Year:** 2012**Title:** AQUATIC HEMIPTERA OF NORTHEASTERN ALGERIA: DISTRIBUTION, PHENOLOGY AND CONSERVATION**Journal:** Revue D Ecologie-La Terre Et La Vie**Volume:** 67**Issue:** 4**Pages:** 423-435**Date:** Dec**Short Title:** AQUATIC HEMIPTERA OF NORTHEASTERN ALGERIA: DISTRIBUTION, PHENOLOGY AND CONSERVATION**ISSN:** 0249-7395**Accession Number:** WOS:000313532600005

**Abstract:** A survey, involving the sampling of 83 sites, investigated the aquatic hemiptera of north-eastern Algeria, a well known hotspot of aquatic biodiversity. The study recorded 35 species with data on distribution and phenology presented and discussed. Aspects of the life history of some species (*Notonecta glauca* and *Notonecta obliqua*) were inferred from their distribution and phenology and they were found to aestivate at high altitude refuges. Insect conservation in North Africa is still embryonic, relying mainly on protected areas to provide surrogate conservation to a rich and diverse group. This is inadequate in view of the current distribution of aquatic insects, often located in unprotected habitats (intermittent streams, temporary pools, dulary ponds) and the fact that diverse manifestations of global changes (loss of habitats due to water extraction and dam construction, invasive species, habitat fragmentation) are fast eroding the biodiversity of protected areas.

**Notes:** Annani, Fouzi Alfarhan, Ahmed H. Samraoui, Boudjema**URL:** <Go to ISI>://WOS:000313532600005

**Reference Type: Journal Article****Record Number:** 18**Author:** Arab, F. Sahraoui, F. A. Haddadi, K. Louail, L.**Year:** 2012**Title:** Ab initio investigations of structural, elastic and electronic properties of ZnSiP<sub>2</sub>: Pressure effect**Journal:** Computational Materials Science**Volume:** 65**Pages:** 520-527**Date:** Dec**Short Title:** Ab initio investigations of structural, elastic and electronic properties of ZnSiP<sub>2</sub>: Pressure effect**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2012.08.012**Accession Number:** WOS:000310357400071

**Abstract:** In this work, we present ab initio investigations of the pressure effect on the structural, elastic and electronic properties of ZnSiP<sub>2</sub> by employing the plane wave pseudo-potential method (PP-PW) within the generalized gradient approximation (GGA-PW91). The calculated equilibrium structural parameters are in excellent agreement with available experimental and theoretical results. We have found that ZnSiP<sub>2</sub> undergoes a structural phase transition under pressure from chalcopyrite to rocksalt type structure at 35 GPa. Single-crystal and polycrystalline elastic constants and some related properties under pressure effect in both chalcopyrite and rocksalt phases have been predicted. The analysis of the bulk modulus to shear modulus (B/G) ratio shows that ZnSiP<sub>2</sub> must be classified as brittle material. Electronic properties and chemical bonding nature have been studied throughout the band structure, density of states and charge distribution analyses. It is found that the studied compound is a direct band gap (Gamma - Gamma) semiconductor ( $E_g = 1.34$  eV) in chalcopyrite structure, and is a conductor in the rock-salt structure. The chemical bonding of ZnSiP<sub>2</sub> has a mixture of ionic-covalent and ionic-covalent-metallic character, respectively in chalcopyrite and rocksalt type structure. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Arab, F. Sahraoui, F. Ali Haddadi, K. Louail, L.**URL:** <Go to ISI>://WOS:000310357400071

**Reference Type: Journal Article****Record Number:** 19**Author:** Aroui, L. Zerroual, L. Boutahala, M.**Year:** 2012**Title:** Synthesis and characterization of a PbO<sub>2</sub>-clay nanocomposite: Removal of lead from water with montmorillonite**Journal:** Materials Research Bulletin**Volume:** 47**Issue:** 2**Pages:** 206-211**Date:** Feb**Short Title:** Synthesis and characterization of a PbO<sub>2</sub>-clay nanocomposite: Removal of lead from water with montmorillonite**ISSN:** 0025-5408**DOI:** 10.1016/j.materresbull.2011.11.043**Accession Number:** WOS:000300272200008

**Abstract:** The aim of this paper is to present the results obtained with Pb(II) sorption on an Algerian Clay. The experiments were carried out using a batch process. Powder X-rays diffraction patterns (PXRD) prove that in the montmorillonite Pb replaces Na ions. A significant restructuring at the particle scale is observed leading to the disappearance of the d(0 0 1) reflection of the clay at high concentrations of lead. The replacement of hydrated Na with Pb ions influenced significantly the thermal behaviour of the montmorillonite samples with regard to their dehydration and dehydroxilation capacities with a lowering of the water content. A PbO<sub>2</sub>-clay composite material with good electrical conductivity is synthesized. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Aroui, L. Zerroual, L. Boutahala, M.**URL:** <Go to ISI>://WOS:000300272200008

**Reference Type: Journal Article****Record Number:** 20**Author:** Bakour, S. Kempf, M. Touati, A. Ameur, A. A. Haouchine, D. Sahli, F. Rolain, J. M.**Year:** 2012**Title:** Carbapenemase-producing *Acinetobacter baumannii* in two university hospitals in Algeria**Journal:** Journal of Medical Microbiology**Volume:** 61**Issue:** 9**Pages:** 1341-1343**Date:** Sep**Short Title:** Carbapenemase-producing *Acinetobacter baumannii* in two university hospitals in Algeria**ISSN:** 0022-2615**DOI:** 10.1099/jmm.0.045807-0**Accession Number:** WOS:000309193900025**Notes:** Bakour, Sofiane Kempf, Marie Touati, Abdelaziz Ameur, Abdennour Ait Haouchine, Djamila Sahli, Farida Rolain, Jean-Marc**URL:** <Go to ISI>://WOS:000309193900025

**Reference Type: Journal Article****Record Number:** 21**Author:** Belkhir, N. Bouzid, D. Herold, V.**Year:** 2012**Title:** Morphological behavior and wear of polyurethane pads used in glass polishing process**Journal:** Precision Engineering-Journal of the International Societies for Precision Engineering and Nanotechnology**Volume:** 36**Issue:** 4**Pages:** 641-649**Date:** Oct**Short Title:** Morphological behavior and wear of polyurethane pads used in glass polishing process**ISSN:** 0141-6359**DOI:** 10.1016/j.precisioneng.2012.05.006**Accession Number:** WOS:000307682900013

**Abstract:** The porous polyurethane polishing pads are used in the optical glass chemical mechanical polishing process. The wear of the polishing pad and morphology are important for the polishing process efficiency and the surface quality. The subject of this work is to evaluate the morphology and wear of porous polyurethane polishing pads, and their influence on the material removal rate and quality in the optical glass chemical mechanical polishing process. For this study, several optical glass polishing operations were done using different porous polyurethane polishing pads. The polishing pads were recovered after polishing to be characterized using several techniques such as: the SEM, the optical microscopy and the mechanical profilometry. The obtained results show, that the polyurethane polishing pads produce good surface quality with high material removal rate. The polyurethane polishing pads are relatively wear resistant in the first hour of use: however some changes were seen on the polishing pads, and their characteristics. The most conspicuous change is the abrasive grains incrustation in the polishing pads microstructure that changes their properties. (C) 2012 Elsevier Inc. All rights reserved.

**Notes:** Belkhir, N. Bouzid, D. Herold, V.**URL:** <Go to ISI>://WOS:000307682900013

**Reference Type: Journal Article****Record Number:** 22**Author:** Belkhir, N. Bouzid, D. Herold, V.**Year:** 2012**Title:** EFFICIENCY OF POLYURETHANE POLISHERS DURING THE OPTICAL GLASS POLISHING**Journal:** Annales De Chimie-Science Des Materiaux**Volume:** 37**Issue:** 1**Pages:** 31-48**Date:** Jan-Feb**Short Title:** EFFICIENCY OF POLYURETHANE POLISHERS DURING THE OPTICAL GLASS POLISHING**ISSN:** 0151-9107**DOI:** 10.3166/acsm.37.31-48**Accession Number:** WOS:000308047900004

**Abstract:** The subject of this work is to study the efficiency of the polyurethane polishing pad relatively to its quality during the free abrasive polishing process of the optical glass. In this work, samples of BK7 optical glass were polished. Three kinds of polyurethane polishers were used. The glass surface and the polishers were characterized using several characterization techniques. The obtained results show that the polishing pad quality influences the polishing efficiency and the glass surface quality. The polyurethane polishers undergo wear during their use more than one hour in the glass polishing process, where some changes of the polisher characteristics were observed.

**Notes:** Belkhir, Nabil Bouzid, Djamel Herold, Volker**URL:** <Go to ISI>://WOS:000308047900004

**Reference Type: Journal Article****Record Number:** 23**Author:** Benabid, S. Douadi, T. Debab, H. De Backer, M. Sauvage, F. X.**Year:** 2012**Title:** Synthesis, Spectroscopic, and Electrochemical Characterization of a Schiff Base: 4,4'-bis (4-diethylaminosalicylaldehyde)diphenyl methane diimine and Its Complexes With Copper(II), Cobalt(II), and Cadmium(II)**Journal:** Synthesis and Reactivity in Inorganic Metal-Organic and Nano-Metal Chemistry**Volume:** 42**Issue:** 1**Pages:** 1-8**Short Title:** Synthesis, Spectroscopic, and Electrochemical Characterization of a Schiff Base: 4,4'-bis (4-diethylaminosalicylaldehyde)diphenyl methane diimine and Its Complexes With Copper(II), Cobalt(II), and Cadmium(II)**ISSN:** 1553-3174**DOI:** 10.1080/15533174.2011.614993**Accession Number:** WOS:000302534200001**Abstract:** The synthesis of a new ligand tetradentate Schiff base: 4,4'-bis[(4-diethyl aminosalicylaldehyde) diphenyl methane] diimine (H<sub>2</sub>L), obtained by condensation of 4,4'-diaminodiphenyl methane with 4-diethylaminosalicylaldehyde, and its complexes with copper(II), cobalt(II) and cadmium(II), is described. The metal complexes were characterized by elemental analysis, by UV-visible, infrared, and EPR spectroscopy, by cyclic voltammetry, and by thermal analysis (DTA-TG). The coordination of the metal ions to the ligand occurs through the N<sub>2</sub>O<sub>2</sub> system. Thermal studies indicate that the ligand is more stable than the metal complexes (up to 310 degrees C).**Notes:** Benabid, Sonia Douadi, Tahar Debab, Houria De Backer, Marc Sauvage, Francois-Xavier**URL:** <Go to ISI>://WOS:000302534200001

**Reference Type: Journal Article****Record Number:** 24**Author:** Benamrani, H. Satour, F. Z. Zegadi, A. Zouaoui, A.**Year:** 2012**Title:** Photoacoustic spectroscopy analysis of silicon crystals**Journal:** Journal of Luminescence**Volume:** 132**Issue:** 2**Pages:** 305-312**Date:** Feb**Short Title:** Photoacoustic spectroscopy analysis of silicon crystals**ISSN:** 0022-2313**DOI:** 10.1016/j.jlumin.2011.08.027**Accession Number:** WOS:000298269600011

**Abstract:** A high resolution fully automated photoacoustic spectrometer (PAS) of the gas-microphone type is used in the photon energy region 0.8-1.6 eV to analyze the optical properties of silicon single crystals at different frequencies between 25 and 312 Hz. At modulating frequencies at which the sample thickness approaches its thermal diffusion length, the results obtained of untreated specimens using different PA cells reveal the presence of several peaks in the absorption tail, some of which are independent of the photon energy. The magnitude of these peaks is seen to be stronger than that of the maximum of the fundamental edge of silicon, thus making it indistinct. At lower modulating frequencies at which the sample thickness is far less than its thermal diffusion length and using a highly reflecting backing material, multiple reflections of the light beam within the sample interfaces are seen to enhance the PA amplitude signal sensitivity response as predicted theoretically. The effect of etching silicon samples in a diluted solution of hydrofluoric acid (5%) on photoacoustic spectra has been investigated. It is observed that this process removes all spurious features in the spectra originating from the surface contaminants making the fundamental absorption edge clearly visible and leaving only one distinct peak at  $h\nu = 0.9$  eV. Transmission-photoacoustic (T-PAS) has also been used to study silicon single crystals. In the light of recent literature a comparison is carried out between the results obtained using the two techniques in determining the absorption coefficient and the gap energy. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Benamrani, H. Satour, F. Z. Zegadi, A. Zouaoui, A.**URL:** <Go to ISI>://WOS:000298269600011

**Reference Type: Journal Article****Record Number:** 25**Author:** Benbahouche, S. Brient, A. Rouxel, T. Sangleboeuf, J. C.**Year:** 2012**Title:** Effect of Water Corrosion on Cracks and Vickers Imprints in Glass**Journal:** International Journal of Fracture**Volume:** 175**Issue:** 2**Pages:** 199-206**Date:** Jun**Short Title:** Effect of Water Corrosion on Cracks and Vickers Imprints in Glass**ISSN:** 0376-9429**DOI:** 10.1007/s10704-012-9712-4**Accession Number:** WOS:000304111800008

**Abstract:** Erosion and corrosion result in potential material loss. The erosion is a physical phenomenon but corrosion is chemical one. The study of these two phenomena, as functions of time and temperature, would lead to a better understanding of glass surface damage. Results allow one to determine the effects of immersion time, temperature of the water bath and residual stresses generated by Vickers indentation on the radial crack and topography of the imprint on the surface of a soda-lime silica glass. Water corrosion effects are different at the imprint corner and the radial crack tip as compared to edges and faces.

**Notes:** Benbahouche, Saci Brient, Antoine Rouxel, Tanguy Sangleboeuf, Jean-Christophe**URL:** <Go to ISI>://WOS:000304111800008

**Reference Type: Journal Article****Record Number:** 26**Author:** Bencheikh, A. Ferria, K.**Year:** 2012**Title:** Gaussian laser beam tailoring using acoustooptic cell**Journal:** Optics and Laser Technology**Volume:** 44**Issue:** 4**Pages:** 806-809**Date:** Jun**Short Title:** Gaussian laser beam tailoring using acoustooptic cell**ISSN:** 0030-3992**DOI:** 10.1016/j.optlastec.2011.11.026**Accession Number:** WOS:000300118900015

**Abstract:** Profile shaping of a Gaussian laser beam by an acoustic wave is well described using Collins integral and ABCD matrix formalism. It is shown by a numerical simulation that the relative width of the laser beam to the ultrasonic wavelength and the acoustic pressure inside the acoustooptic cell act on the light intensity diffraction pattern. Obtained results show that the output intensity profile differs from the incident Gaussian beam shape, and it is more broadened with an increase in the acoustic pressure. The intensity of a focused laser beam is transformed in a flat form in the central region if the acoustic pressure is properly controlled. On the other hand the intensity longitudinal range (ILR) of the flat shape is discussed along the propagation axes, we have found the ILR is about 2 mm for a focal length distance  $f=100$  mm. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Bencheikh, Abdelhalim Ferria, Kouider**URL:** <Go to ISI>://WOS:000300118900015

**Reference Type: Journal Article****Record Number:** 27**Author:** Benterki, S. Laouar, N. Bousbaa, C. Bouras, N. Bouaouadja, N.**Year:** 2012**Title:** Influence of the angle of illumination on light scattering by sandblasted soda-lime-silica glass**Journal:** Glass Technology-European Journal of Glass Science and Technology Part A**Volume:** 53**Issue:** 2**Pages:** 53-59**Date:** Apr**Short Title:** Influence of the angle of illumination on light scattering by sandblasted soda-lime-silica glass**ISSN:** 1753-3546**Accession Number:** WOS:000308258900003

**Abstract:** It is well known that the vision of vehicle drivers is influenced by scattered light caused by damaged windshields. This is particularly produced during the night, at sunrise and sunset. This scattered light depends on various factors such as inclination angle, intensity of the light source and surface state of the windshields. The objective of our work is to study the influence of the angle of illumination on light scattering by sandblasted soda-lime-silica glass. Firstly the effect of the angle of illumination and the projected sand mass on light scattering is studied. The results show that the number of created defects increases with the projected sand mass until a saturation state is reached at 50 g under the chosen test conditions. In this case, the specular transmission decreases and reaches a constant value of about 18% showing the importance of scattered light. At the same time, the angle of illumination affects the optical transmission and therefore the light scattering. For an angle of 60 degrees and a sand mass of 50 g, for example, the specular transmission decreases to about 59%. Secondly we combined two parameters (the angle of illumination and the projected sand mass) to distinguish between the transparent domain and the blurred one. These domains are limited by the minimal transmission ( $T_{\min}=73\%$ ) and by the roughness ( $R_a$ ) limits. The determined limits are ( $R_a \leq 0.23 \mu m$ ) for the transparent domain and ( $R_a \geq 0.51 \mu m$ ) for the blurred domain. Between these two limits, there is a mixed domain.

**Notes:** Benterki, S. Laouar, N. Bousbaa, C. Bouras, N. Bouaouadja, N.**URL:** <Go to ISI>://WOS:000308258900003

**Reference Type: Journal Article****Record Number:** 28**Author:** Berri, S. Maouche, D. Medkour, Y.**Year:** 2012**Title:** Ab initio study of the structural, electronic and elastic properties of AgSbTe<sub>2</sub>, AgSbSe<sub>2</sub>, Pr<sub>3</sub>AlC, Ce<sub>3</sub>AlC, Ce<sub>3</sub>AlN, La<sub>3</sub>AlC and La<sub>3</sub>AlN compounds**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 17**Pages:** 3320-3327**Date:** Sep**Short Title:** Ab initio study of the structural, electronic and elastic properties of AgSbTe<sub>2</sub>, AgSbSe<sub>2</sub>, Pr<sub>3</sub>AlC, Ce<sub>3</sub>AlC, Ce<sub>3</sub>AlN, La<sub>3</sub>AlC and La<sub>3</sub>AlN compounds**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.04.011**Accession Number:** WOS:000305792400003

**Abstract:** In this paper, we study the structural, electronic and elastic properties of the ternary AgSbTe<sub>2</sub>, AgSbSe<sub>2</sub>, Pr<sub>3</sub>AlC, Ce<sub>3</sub>AlC, Ce<sub>3</sub>AlN, La<sub>3</sub>AlC and La<sub>3</sub>AlN compounds using the full-potential linearized augmented plane wave (FP-LAPW) scheme and the pseudopotential plane wave (PP-PW) scheme in the frame of generalized gradient approximation (GGA). Results are given for the lattice parameters, bulk modulus, and its pressure derivative. The calculated lattice parameters are in good agreement with experimental results. We have determined the full set of first-order elastic constants, shear modulus, Young's modulus and Poisson's ratio of these compounds. Also, we have presented the results of the band structure, densities of states, it is found that this compounds metallic behavior, and a negative gap  $\Gamma \rightarrow R$  for Pr<sub>3</sub>AlC. The analysis charge densities show that bonding is of covalent-ionic and ionic nature for AgSbSe<sub>2</sub> and AgSbTe<sub>2</sub> compounds. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Berri, S. Maouche, D. Medkour, Y.**URL:** <Go to ISI>://WOS:000305792400003

**Reference Type: Journal Article****Record Number:** 29**Author:** Berri, S. Maouche, D. Zerarga, F. Medkour, Y.**Year:** 2012**Title:** Ab initio study of the structural, electronic, elastic and magnetic properties of Cu<sub>2</sub>GdIn, Ag<sub>2</sub>GdIn and Au<sub>2</sub>GdIn**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 17**Pages:** 3328-3334**Date:** Sep**Short Title:** Ab initio study of the structural, electronic, elastic and magnetic properties of Cu<sub>2</sub>GdIn, Ag<sub>2</sub>GdIn and Au<sub>2</sub>GdIn**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.04.012**Accession Number:** WOS:000305792400004

**Abstract:** We performed first-principle calculations for the structural, electronic, elastic and magnetic properties of Cu<sub>2</sub>GdIn, Ag<sub>2</sub>GdIn and Au<sub>2</sub>GdIn using the full-potential linearized augmented plane wave (FP-LAPW) scheme within the generalized gradient approximation by Wu and Cohen (GGA-WC), GGA+U, the local spin density approximation (LSDA) and LSDA+U. The lattice parameters, the bulk modulus and its pressure derivative and the elastic constants were determined. Also, we present the band structures and the densities of states. The electronic structures of the ferromagnetic configuration for Heusler compounds (X<sub>2</sub>GdIn) have a metallic character. The magnetic moments were mostly contributed by the rare-earth Gd 4f ion. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Berri, Saadi Maouche, Djamel Zerarga, Fares Medkour, Youcef**URL:** <Go to ISI>://WOS:000305792400004

**Reference Type: Journal Article****Record Number:** 30**Author:** Bouabdallah, L.**Year:** 2012**Title:** Anthropometry of Algerian elderly**Journal:** Work-a Journal of Prevention Assessment & Rehabilitation**Volume:** 41**Pages:** 5415-5416**Short Title:** Anthropometry of Algerian elderly**ISSN:** 1051-9815**DOI:** 10.3233/wor-2012-0838-5415**Accession Number:** WOS:000306361805101

**Abstract:** In Algeria, a lot of attention is given to the elderly by both the government and private institutions. On the government side, two ministries participate in caring for the elderly. These are the ministry of social development and the Ministry of public health. On the private side, a lot of effort is given to the elderly through many societies and centres. If the elderly is to live independently and self-efficiently, whether at home or in social care institutions, equipment, tools, environment, daily-use items, and personal-use items should be designed for them, so that their needs are entirely satisfied, and abilities and limitations are carefully considered. Therefore, this study was carried out to provide anthropometric data of the elderly in Algeria, so that it may be used either to design equipment for them or to evaluate it in order that its use is efficient, and safe. Therefore, An anthropometric study of Algerian elderly was carried out. 29 body dimensions were measured. Mean, variation measures, and percentiles, were calculated. Body dimensions results were presented in one table so that they can easily be used by designers.

**Notes:** Bouabdallah, L. 1**URL:** <Go to ISI>://WOS:000306361805101

**Reference Type: Journal Article****Record Number:** 31**Author:** Bouamama, K. Djemia, P. Faurie, D. Abadias, G.**Year:** 2012**Title:** Structural and elastic properties of single-crystal and polycrystalline Ti<sub>1-x</sub>Zr<sub>x</sub>N alloys: A computational study**Journal:** Journal of Alloys and Compounds**Volume:** 536**Pages:** S138-S142**Date:** Sep**Short Title:** Structural and elastic properties of single-crystal and polycrystalline Ti<sub>1-x</sub>Zr<sub>x</sub>N alloys: A computational study**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2011.12.034**Accession Number:** WOS:000310837500032

**Abstract:** First-principles pseudopotential calculations of the lattice constants and of the single-crystal elastic constants of Ti<sub>1-x</sub>Zr<sub>x</sub>N (0 ≤ x ≤ 1) alloys were carried out. These calculations were performed using density functional perturbation theory (DFPT) within the virtual crystal approximation (VCA) for the disordered alloys and the supercell method (SC) for the ordered alloys. For the exchange-correlation potential we used both the local density (LDA) and the generalized gradient methods (GGA). The calculated equilibrium lattice parameters exhibit a positive deviation from Vegard's rule corresponding to a positive bowing parameter, while the calculated single-crystal stiffnesses, namely C-11, C-12 and C-44, gradually decrease from TiN to ZrN. In a second stage, in the frame of anisotropic elasticity, we have estimated by homogenization methods the averaged stiffnesses <C-ij>, direction dependent Young's moduli and Poisson's ratios of polycrystalline Ti<sub>1-x</sub>Zr<sub>x</sub>N (0 ≤ x ≤ 1) alloys considering a {1 1 1}-fiber texture. (c) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bouamama, Kh Djemia, P. Faurie, D. Abadias, G. 1**URL:** <Go to ISI>://WOS:000310837500032

**Reference Type: Journal Article****Record Number:** 32**Author:** Bouamama, S. Blum, C. Boukerram, A.**Year:** 2012**Title:** A population-based iterated greedy algorithm for the minimum weight vertex cover problem**Journal:** Applied Soft Computing**Volume:** 12**Issue:** 6**Pages:** 1632-1639**Date:** Jun**Short Title:** A population-based iterated greedy algorithm for the minimum weight vertex cover problem**ISSN:** 1568-4946**DOI:** 10.1016/j.asoc.2012.02.013**Accession Number:** WOS:000302787900002

**Abstract:** Given an undirected, vertex-weighted graph, the goal of the minimum weight vertex cover problem is to find a subset of the vertices of the graph such that the subset is a vertex cover and the sum of the weights of its vertices is minimal. This problem is known to be NP-hard and no efficient algorithm is known to solve it to optimality. Therefore, most existing techniques are based on heuristics for providing approximate solutions in a reasonable computation time. Population-based search approaches have shown to be effective for solving a multitude of combinatorial optimization problems. Their advantage can be identified as their ability to find areas of the space containing high quality solutions. This paper proposes a simple and efficient population-based iterated greedy algorithm for tackling the minimum weight vertex cover problem. At each iteration, a population of solutions is established and refined using a fast randomized iterated greedy heuristic based on successive phases of destruction and reconstruction. An extensive experimental evaluation on a commonly used set of benchmark instances shows that our algorithm outperforms current state-of-the-art approaches. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Bouamama, Salim Blum, Christian Boukerram, Abdellah**URL:** <Go to ISI>://WOS:000302787900002

**Reference Type: Journal Article****Record Number:** 33**Author:** Boubatra, M. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2012**Title:** The influence of pH electrolyte on the electrochemical deposition and properties of nickel thin films**Journal:** Ionics**Volume:** 18**Issue:** 4**Pages:** 425-432**Date:** Apr**Short Title:** The influence of pH electrolyte on the electrochemical deposition and properties of nickel thin films**ISSN:** 0947-7047**DOI:** 10.1007/s11581-011-0642-3**Accession Number:** WOS:000302249500012

**Abstract:** Ni thin films were electrodeposited on gold substrate from chloride solution with different pH at room temperature. The effect of electrolyte pH on Ni coatings was studied by using the cyclic voltammetry, the scanning electron microscopy (SEM), x-ray diffraction, and alternating gradient force magnetometer measurements. From electrochemical measurements, the onset potential for reduction of Ni was gradually shifted towards more cathodic scan with increase in pH; this is due to the protons in the case of low pH values and to the hydroxide ions in the case of higher pH values. The SEM study showed that a granular and compact structure of the electrodeposited Ni layers and the variation of film morphology with bath pH are established. The x-ray diffraction spectra revealed the formation of fcc structure Ni thin films with a preferential orientation along the Ni(111). The size of the deposited crystals in both the cases has been found to be in the range of 49-153 nm. Magnetic properties such as coercivity and saturation magnetization showed strong dependence on the electrolyte solution pH and consequently the crystallite size. Coercivity higher than 130-160 Oe was achieved for a pH value of 4 to 5. The differences observed in the magnetic properties were attributed to the structural changes caused by the electrolyte pH.

**Notes:** Boubatra, Mustapha Azizi, Amor Schmerber, Guy Dinia, Aziz**URL:** <Go to ISI>://WOS:000302249500012

**Reference Type: Journal Article****Record Number:** 34**Author:** Bouchama, Z. Harmas, M. N.**Year:** 2012**Title:** Optimal robust adaptive fuzzy synergetic power system stabilizer design**Journal:** Electric Power Systems Research**Volume:** 83**Issue:** 1**Pages:** 170-175**Date:** Feb**Short Title:** Optimal robust adaptive fuzzy synergetic power system stabilizer design**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2011.11.003**Accession Number:** WOS:000300129700021

**Abstract:** A new particle swarm optimized robust indirect adaptive power system stabilizer is developed based on recently developed synergetic control methodology. Fuzzy systems are used in an adaptive scheme to approximate the system using a nonlinear model while synergetic control guarantees robustness and the use of a chatter free continuous control law which makes the controller easy to implement. In addition the controller parameters are optimized using PSO approach. Simulation of severe operating conditions of a power system is conducted to validate the effectiveness of the proposed approach while stability is guaranteed via Lyapunov synthesis. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bouchama, Z. Harmas, M. N.**URL:** <Go to ISI>://WOS:000300129700021

**Reference Type: Journal Article****Record Number:** 35**Author:** Bouguezel, S.**Year:** 2012**Title:** A Reciprocal-Orthogonal Parametric Transform and Its Fast Algorithm**Journal:** Ieee Signal Processing Letters**Volume:** 19**Issue:** 11**Pages:** 769-772**Date:** Nov**Short Title:** A Reciprocal-Orthogonal Parametric Transform and Its Fast Algorithm**ISSN:** 1070-9908**DOI:** 10.1109/lsp.2012.2220354**Accession Number:** WOS:000309732000001

**Abstract:** In this letter, a reciprocal-orthogonal parametric transform and an efficient algorithm for its simple construction and fast computation are proposed. The algorithm is developed by introducing a recursive approach to decompose the transform matrix into a product of sparse matrices using the Kronecker product. It is shown that the structure of the resulting algorithm is very similar to that of the well-known Walsh-Hadamard transform, except for the multipliers introduced by the independent parameters. The transform has a large number of independent parameters that can be chosen arbitrarily from the complex plane. Thus, many interesting special cases can easily be obtained from the proposed transform. Moreover, we carry out a number of experiments to show that its independent parameters can successfully be used as an additional secret key for image encryption.

**Notes:** Bouguezel, Saad**URL:** <Go to ISI>://WOS:000309732000001

**Reference Type: Journal Article****Record Number:** 36**Author:** Bouhelal, S. Cagiao, M. E. Di Lorenzo, M. L. Zouai, F. Khellaf, S. Tabet, H. Benachour, D. Calleja, F. J. B.**Year:** 2012**Title:** Study of rheological and mechanical properties of ternary blends of iPP/LDPE/EPDM**Journal:** Journal of Polymer Engineering**Volume:** 32**Issue:** 3**Pages:** 143-151**Date:** May**Short Title:** Study of rheological and mechanical properties of ternary blends of iPP/LDPE/EPDM**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2011-0130**Accession Number:** WOS:000313417000001

**Abstract:** Compatible blends of isotactic polypropylene (iPP)/low-density polyethylene (LDPE)/ethylene-propylene-diene monomer (EPDM) were prepared by reactive blending in the presence of dicumyl peroxide (DCP). The blends were characterized using different techniques: dynamical rheological analysis (DRA), differential scanning calorimetry (DSC), optical microscopy (OM) and scanning electron microscopy (SEM), dynamical mechanical thermal analysis (DMTA), viscosity and impact strength, to evaluate their properties. Results revealed that the presence of the peroxide in LDPE/EPDM blends gives rise to crosslinking reactions, as is the case in iPP/LDPE/EPDM blends. However, in the latter case, scission reactions of the iPP component also take place. As a consequence of the whole process, morphological changes arise mainly in the amorphous regions, without affecting the degree of crystallinity of the components. The mechanical properties of the blends are consequently improved, due to the crosslinked network thus formed in the blends.

**Notes:** Bouhelal, Said Esperanza Cagiao, M. Di Lorenzo, Maria Laura Zouai, Foued Khellaf, Souhila Tabet, Habiba Benachour, Djafer Balta Calleja, Francisco J.

**URL:** <Go to ISI>://WOS:000313417000001

**Reference Type: Journal Article****Record Number:** 37**Author:** Bouhemadou, A. Ghebouli, M. A. Ugur, G. Ugur, S. Ghebouli, B. Khenata, R. Bin-Omran, S.**Year:** 2012**Title:** Ab initio study of some fundamental physical properties of the cubic inverse-perovskite Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**Journal:** Computational Materials Science**Volume:** 58**Pages:** 162-166**Date:** Jun**Short Title:** Ab initio study of some fundamental physical properties of the cubic inverse-perovskite Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2012.01.030**Accession Number:** WOS:000302118400022

**Abstract:** Structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC are investigated via ab initio calculations. Total energy calculations show that the ferromagnetic state is energetically more stable than the non-magnetic state at equilibrium volume. No found imaginary phonon frequency in the whole Brillouin zone for the two compounds supports their dynamical stability. The elastic parameters are predicted. The electrical conductivity is assured by the Mn-d electrons. The total moment comes principally from the transition metal Mn in both compounds. The magnetic moment of the Mn atom decrease considerably when the Zn atom is substituted by the Ge one. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Ghebouli, M. A. Ugur, G. Ugur, S. Ghebouli, B. Khenata, R. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000302118400022

**Reference Type: Journal Article****Record Number:** 38**Author:** Bouhemadou, A. Haddadi, K. Khenata, R. Rached, D. Bin-Omran, S.**Year:** 2012**Title:** Structural, elastic and thermodynamic properties under pressure and temperature effects of MgIn<sub>2</sub>S<sub>4</sub> and CdIn<sub>2</sub>S<sub>4</sub>**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 12**Pages:** 2295-2300**Date:** Jun**Short Title:** Structural, elastic and thermodynamic properties under pressure and temperature effects of MgIn<sub>2</sub>S<sub>4</sub> and CdIn<sub>2</sub>S<sub>4</sub>**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.03.017**Accession Number:** WOS:000303803000060

**Abstract:** A density functional-based method is used to investigate the structural, elastic and thermodynamic properties of the cubic spinel semiconductors MgIn<sub>2</sub>S<sub>4</sub> and CdIn<sub>2</sub>S<sub>4</sub> at different pressures and temperatures. Computed ground structural parameters are in good agreement with the available experimental data. Single-crystal elastic parameters are calculated for pressure up to 10 GPa and temperature up to 1200 K. The obtained elastic constants values satisfy the requirement of mechanical stability, indicating that MgIn<sub>2</sub>S<sub>4</sub> and CdIn<sub>2</sub>S<sub>4</sub> compounds could be stable in the investigated pressure range. Isotropic elastic parameters for ideal polycrystalline MgIn<sub>2</sub>S<sub>4</sub> and CdIn<sub>2</sub>S<sub>4</sub> aggregates are computed in the framework of the Voigt-Reuss-Hill approximation. Pressure and thermal effects on some macroscopic properties such as lattice constant, volume expansion coefficient and heat capacities are predicted using the quasi-harmonic Debye model in which the lattice vibrations are taken into account. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Haddadi, K. Khenata, R. Rached, D. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000303803000060

**Reference Type: Journal Article****Record Number:** 39**Author:** Bouhemadou, A. Ugur, G. Ugur, S. Soyalp, F. Khenata, R. Bin-Omran, S.**Year:** 2012**Title:** Theory study of structural parameters, elastic stiffness, electronic structures and lattice dynamics of RBRh3 (R = Sc, Y, La and Lu)**Journal:** Computational Materials Science**Volume:** 54**Pages:** 336-344**Date:** Mar**Short Title:** Theory study of structural parameters, elastic stiffness, electronic structures and lattice dynamics of RBRh3 (R = Sc, Y, La and Lu)**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2011.10.029**Accession Number:** WOS:000300471500049

**Abstract:** Density functional-based method has been used to investigate the systematic trends for structural parameters, elastic stiffness, lattice dynamics and thermal properties of cubic perovskite-type RBRh3 depending on the type of R atoms (R are Sc, Y, La and Lu). The structural parameters, single-crystal elastic constants, directional elastic wave velocities and their pressure dependence are calculated and analyzed in comparison with the available experimental and theoretical data. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio, Lamé's coefficients, average sound velocity, Debye temperature and thermal conductivity are predicted in the frame work of the Voigt-Reuss-Hill approximation for the polycrystalline RBRh3. The correlation between the mechanical properties and electronic structures has been discussed. Using the density-functional perturbation theory (DFPT), the phonon properties of RBRh3 (R = Sc, Y and La) are investigated for the first time. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Ugur, G. Ugur, S. Soyalp, F. Khenata, R. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000300471500049

**Reference Type: Journal Article****Record Number:** 40**Author:** Bouhous, M. Larous, L.**Year:** 2012**Title:** Efficiency of the entomopathogenic fungus *Verticillium lecanii* in the biological control of *Trialeurodes vaporariorum*, (Homoptera: Aleyrodidae), a greenhouse culture pest**Journal:** African Journal of Microbiology Research**Volume:** 6**Issue:** 10**Pages:** 2435-2442**Date:** Mar**Short Title:** Efficiency of the entomopathogenic fungus *Verticillium lecanii* in the biological control of *Trialeurodes vaporariorum*, (Homoptera: Aleyrodidae), a greenhouse culture pest**ISSN:** 1996-0808**DOI:** 10.5897/ajmr11.1502**Accession Number:** WOS:000304801400026

**Abstract:** Our investigation in the region of Jijel revealed that whiteflies are the predominant greenhouses pests; they are polyphagous, moreover, some species can transmit many plant viruses. The treatment method is based on the systematic use of insecticides that have side effects on both the consumer and the farmer. The objective of this study was to evaluate the use of biological control in situ and in vitro as an alternative method by using an entomopathogenic fungus *Verticillium lecanii*. In vitro experiments showed that the fungus was active during all stages of development of the insect, *Trialeurodes vaporariorum* Westwood (Homoptera: Aleyrodidae): Eggs (LD50 = 0.59. 10(7) spores / ml) larvae (LD50 = 0.5. 10(3) spores / ml) and adults. Our results showed the influence of spore concentration, contact time and relative humidity on the development of the parasite to reach an efficient anti-larval effect of 100%.

**Notes:** Bouhous, Mostefa Larous, Larbi**URL:** <Go to ISI>://WOS:000304801400026

**Reference Type: Journal Article****Record Number:** 41**Author:** Boukhenfouf, W. Boucenna, A.**Year:** 2012**Title:** URANIUM CONTENT AND DOSE ASSESSMENT FOR PHOSPHATE FERTILISER AND SOIL SAMPLES: COMPARISON OF URANIUM CONCENTRATION BETWEEN VIRGIN SOIL AND FERTILISED SOIL**Journal:** Radiation Protection Dosimetry**Volume:** 148**Issue:** 2**Pages:** 263-267**Date:** Jan**Short Title:** URANIUM CONTENT AND DOSE ASSESSMENT FOR PHOSPHATE FERTILISER AND SOIL SAMPLES: COMPARISON OF URANIUM CONCENTRATION BETWEEN VIRGIN SOIL AND FERTILISED SOIL**ISSN:** 0144-8420**DOI:** 10.1093/rpd/ncr025**Accession Number:** WOS:000299345400019

**Abstract:** Specific activity of U-235 and U-238 in soil and fertiliser samples from Guellal region in Setif (Algeria) was determined by gamma-ray spectrometry. The selected phosphate fertilisers samples were collected from two types of fertilisers NPK (N, nitrogen; P, phosphorus; K, potassium) and NPKs (sulphate-based NPK). These last ones are used to fertilise the studied area as well as a radioactivity comparison between the soils before and after fertilisation. NPK and NPKs fertilisers have presented higher concentrations of the radionuclide U-238, up to 1125 and 1545 Bq kg<sup>-1</sup>, respectively. For soils before and after fertilisation, the concentrations of U-238 were, respectively, 252.8 and 316.2 Bq kg<sup>-1</sup>. The average value and range of measured concentration of U-235 for soils before fertilisation was 12.16 +/- 1.4 Bq kg<sup>-1</sup> and for the fertilised soils was 15.16 +/- 1.8 Bq kg<sup>-1</sup>, whereas the corresponding values for NPK and NPKs fertilisers were, respectively, 49.38 +/- 5.7 and 50.61 +/- 5.2 Bq kg<sup>-1</sup>.

**Notes:** Boukhenfouf, Wassila Boucenna, Ahmed**URL:** <Go to ISI>://WOS:000299345400019

**Reference Type: Journal Article****Record Number:** 42**Author:** Bounib, H. Osmani, H. Loncif, K. Chevalier, J. Fantozzi, G.**Year:** 2012**Title:** Microstructural and mechanical characterization of kaolin DD3 after addition of dolomite (5-20% weight)**Journal:** Annales De Chimie-Science Des Materiaux**Volume:** 37**Issue:** 5-6**Pages:** 171-184**Date:** Sep-Dec**Short Title:** Microstructural and mechanical characterization of kaolin DD3 after addition of dolomite (5-20% weight)**ISSN:** 0151-9107**DOI:** 10.3166/acsm.37.171-184**Accession Number:** WOS:000317634100003

**Abstract:** Microstructural and mechanical characterization of kaolin DD3 after addition of dolomite (5-20% weight). The mixtures between 5 and 20% weight of dolomite were treated and sintered under the same conditions between 1200 degrees C and 1550 degrees C. XRD Spectra show that the addition from 5 to 20% weight of dolomite led, after sintering, to form ceramic composite composed mainly of phases: mullite, anorthite, spinel and indialite (alpha-cordierite). The addition of dolomite more than 10% reduces the rate of the amorphous phase to 9.6% after sintering in the temperature range 1200 degrees C and 1500 degrees C. Ceramics obtained is characterized by: an apparent density in the range 2,88 to 3,21 g/cm(3), a very low porosity, a module of rupture between 67 and 112 MPa and a Vickers microhardness from 9,1 to 10,67 GPa.

**Notes:** Bounib, Hamou Osmani, Hocine Loncif, Kamel Chevalier, Jerome Fantozzi, Gilbert**URL:** <Go to ISI>://WOS:000317634100003

**Reference Type: Journal Article****Record Number:** 43**Author:** Boureghda, A.**Year:** 2012**Title:** A modified variable time step method for solving ice melting problem**Journal:** Journal of Difference Equations and Applications**Volume:** 18**Issue:** 9**Pages:** 1443-1455**Short Title:** A modified variable time step method for solving ice melting problem**ISSN:** 1023-6198**DOI:** 10.1080/10236198.2011.561797**Accession Number:** WOS:000308421900002

**Abstract:** A modified numerical method was used by authors for solving 1D Stefan problem. In this paper a modified method is proposed with difference formulae and different methods of calculating the variable time step, which are deduced from Taylor series expansions of different conditions at the boundary. Also an extrapolation formula for the solution at the first point at the right of the computational domain is proposed. The numerical results are compared with those obtained from other methods.

**Notes:** Boureghda, Abdellatif**URL:** <Go to ISI>://WOS:000308421900002

**Reference Type: Journal Article****Record Number:** 44**Author:** Brik, M. Touahria, M. Ieee,**Year:** 2012**Title:** EduBank: a Bank of Educational Resources based on Ontologies**Journal:** 2012 6th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (Setit)**Pages:** 92-96**Short Title:** EduBank: a Bank of Educational Resources based on Ontologies**Accession Number:** WOS:000318244900017

**Abstract:** Nowadays, web contains a multitude of information sources and knowledge which often are represented as HTML files. These files can be used as educational resources (ERs) or may contain inside an object (piece of text, image.) which representing a learning object of lower granularity, and can be appropriate for a specific educational scenario. In this paper we propose an approach that allows us to extract and annotate these resources in order to store them into an interoperable Learning Object Repository (LOR) EDUcational BANK. This LOR is qualified as "smart" LOR which the users can search the ERs from different points of view, especially educational type and domain topic.

**Notes:** Brik, Mourad Touahria, Mohamed 6th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT) Mar 21-24, 2012 Sousse, TUNISIA IEEE, IEEE Commun Soc, SAI 978-1-4673-1658-3

**URL:** <Go to ISI>://WOS:000318244900017

**Reference Type: Journal Article****Record Number:** 45**Author:** Charef, N. Benmaamar, Z. Arrar, L. Baghiani, A. Zalloum, R. M. Mubarak, M. S.**Year:** 2012**Title:** PREPARATION OF A NEW POLYSTYRENE SUPPORTED-ETHYLENEDIAMINEDIACETIC ACID RESIN AND ITS SORPTION BEHAVIOR TOWARD DIVALENT METAL IONS**Journal:** Solvent Extraction and Ion Exchange**Volume:** 30**Issue:** 1**Pages:** 101-112**Short Title:** PREPARATION OF A NEW POLYSTYRENE SUPPORTED-ETHYLENEDIAMINEDIACETIC ACID RESIN AND ITS SORPTION BEHAVIOR TOWARD DIVALENT METAL IONS**ISSN:** 0736-6299**DOI:** 10.1080/07366299.2011.581070**Accession Number:** WOS:000302370600009

**Abstract:** A new polystyrene-supported ethylenediaminediacetic acid resin has been synthesized through a reaction between the amination of the commercially available 4-chloromethyl polystyrene polymer with ethylenediamine and the subsequent carboxymethylation with monobromoacetic acid, using ethylenediamine as spacer. The chelation behavior of this resin toward the divalent metal ions  $\text{Cu}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Zn}^{2+}$ , and  $\text{Pb}^{2+}$  in aqueous solutions was investigated. Batch equilibration experiments were carried out as a function of contact time, pH, amount of metal-ion, and polymer mass. The amount of metal-ion uptake of the polymer was determined by using atomic absorption spectrometry (AAS). Results of the investigation revealed that the resin exhibited higher capacities and a more pronounced adsorption toward  $\text{Cu}^{2+}$  and that the metal-ion uptake follows the order:  $\text{Cu}^{2+} > \text{Zn}^{2+} > \text{Ni}^{2+} > \text{Pb}^{2+}$ . The adsorption and binding capacity of the resin toward the various metal ions investigated are discussed.

**Notes:** Charef, Noureddine Benmaamar, Zina Arrar, Lekhmici Baghiani, Abderrahmane Zalloum, Ruba M. Mubarak, Mohammad S.

**URL:** <Go to ISI>://WOS:000302370600009

**Reference Type: Journal Article****Record Number:** 46**Author:** Cherif, A. Richard, C. Guyomar, D. Belkhiat, S. Meddad, M.**Year:** 2012**Title:** Simulation of multimodal vibration damping of a plate structure using a modal SSDI-Max technique**Journal:** Journal of Intelligent Material Systems and Structures**Volume:** 23**Issue:** 6**Pages:** 675-689**Date:** Apr**Short Title:** Simulation of multimodal vibration damping of a plate structure using a modal SSDI-Max technique**ISSN:** 1045-389X**DOI:** 10.1177/1045389x12437891**Accession Number:** WOS:000302564800006

**Abstract:** Modal synchronized switch damping on inductor control is a vibration damping technique that combines the advantages of both semiactive and active control techniques based on a modal strategy. This method allows targeting any unwanted vibration mode of a structure while using a semiactive autonomous synchronized switch damping on inductor damping technique. This article presents a performance analysis of an improved modal synchronized switch damping on inductor approach called "SSDI-Max." The particularity of this new approach is to maximize the self-generated voltage amplitude by a proper definition of the switch instants (voltage inversion) according to the chosen targeted mode. Following the basic modal synchronized switch damping on inductor technique, the switch is synchronized with the chosen modal coordinate extremum. In the investigated approach, the voltage is increased by waiting for the next voltage extremum following immediately any targeted modal coordinate extremum in a given time window. This article presents simulations performed on a model representative of a clamped plate. The damping results are given in the case of multimodal, pulse, or noise excitations. This article analyzes the performance of the observer used to focus on a given mode and the influence of the control time window on the damping performance of the system. The results show that substantial damping increase can be obtained with a very slight modification of the control architecture and the same control energy.

**Notes:** Cherif, Aida Richard, Claude Guyomar, Daniel Belkhiat, Saad Meddad, Mounir**URL:** <Go to ISI>://WOS:000302564800006

**Reference Type: Journal Article****Record Number:** 47**Author:** Cheriti, M. Kahoul, A.**Year:** 2012**Title:** Double perovskite oxides Sr<sub>2</sub>MMoO<sub>6</sub> (M = Fe and Co) as cathode materials for oxygen reduction in alkaline medium**Journal:** Materials Research Bulletin**Volume:** 47**Issue:** 1**Pages:** 135-141**Date:** Jan**Short Title:** Double perovskite oxides Sr<sub>2</sub>MMoO<sub>6</sub> (M = Fe and Co) as cathode materials for oxygen reduction in alkaline medium**ISSN:** 0025-5408**DOI:** 10.1016/j.materresbull.2011.09.016**Accession Number:** WOS:000298619400024

**Abstract:** The oxygen reduction reaction (ORR) was studied on Sr<sub>2</sub>MMoO<sub>6</sub> (M = Fe and Co) double perovskites, prepared by a solid-state reaction, in 0.5 M NaOH at 25 degrees C with a rotating disk electrode (RDE). The two oxide powders were characterized by X-ray diffraction, scanning electron microscopy and BET analysis. The electrochemical techniques considered are linear voltammetry, steady state polarization and ac impedance spectroscopy. The electrocatalysts (SFMO/C, SCMO/C) consisting of the double perovskite oxides and carbon (Vulcan XC-72) were mixed and spread out into a thin layer on a glassy carbon substrate. At room temperature, a significantly electrocatalytic activity is observed for both electrocatalysts. Compared to SFMO/C, the SCMO/C electrocatalyst was found to show a relatively high electrocatalytic activity for O<sub>2</sub> reduction, which agrees well with the results obtained using the ac impedance spectroscopy. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Cheriti, Mabrouk Kahoul, Abdelkrim**URL:** <Go to ISI>://WOS:000298619400024

**Reference Type: Journal Article****Record Number:** 48**Author:** Chibane, L. Djellouli, B.**Year:** 2012**Title:** Role of Periodic Input Composition and Sweeping Gas for Improvement of Hydrogen Production in a Palladium Membrane Reactor by Partial Oxidation of Methane**Journal:** Chinese Journal of Chemical Engineering**Volume:** 20**Issue:** 3**Pages:** 577-588**Date:** Jun**Short Title:** Role of Periodic Input Composition and Sweeping Gas for Improvement of Hydrogen Production in a Palladium Membrane Reactor by Partial Oxidation of Methane**ISSN:** 1004-9541**Accession Number:** WOS:000306455700024

**Abstract:** The partial oxidation of methane under periodic operation over Ni/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub> catalyst was investigated in a Pd-membrane reactor. The effects of key parameters such as the inlet composition and the sweeping gas on methane conversion and the hydrogen recovery are numerically established with two periodic input functions. In order to analyze the effect of the inputs modulation, the reaction was performed under low steam to methane ratio at a moderate temperature and pressure. It was obtained that to achieve process intensification is to operate the process in a periodic way. The main results show that the periodic input functions can improve the performance of the process compared to the optimal steady state operation. Moreover, there is an optimum amplitude of manipulated inputs leads to a maximum of hydrogen recovery. It is noteworthy that the comparison between the predicted performance via the sinusoidal and the square ways show that the better average performance was obtained with the square way.

**Notes:** Chibane, Lemnouer Djellouli, Brahim**URL:** <Go to ISI>://WOS:000306455700024

**Reference Type: Journal Article****Record Number:** 49**Author:** Chihi, T. Fatmi, M.**Year:** 2012**Title:** Theoretical prediction of the structural, elastic, electronic and thermodynamic properties of V<sub>3</sub>M (M = Si, Ge and Sn) compounds**Journal:** Superlattices and Microstructures**Volume:** 52**Issue:** 4**Pages:** 697-703**Date:** Oct**Short Title:** Theoretical prediction of the structural, elastic, electronic and thermodynamic properties of V<sub>3</sub>M (M = Si, Ge and Sn) compounds**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2012.06.009**Accession Number:** WOS:000309297300012

**Abstract:** Density functional theory (DFT), is used in our calculations to study the V<sub>3</sub>M (M = Si, Ge and Sn) compounds, we are found that V<sub>3</sub>Sn compound is mechanically unstable because of a negative C<sub>44</sub> = -19.41 GPa. For each of these compounds considered, the lowest energy structure is found to have the lowest N(E-f) value. Also there is a strong interaction between V and V, the interaction between M (M = Si, Ge, Sn) and V (M and M) is negative, not including Si [Sn]. In phonon density of states PDOS. the element contributions varies from lighter (high frequency) to heaviest (low frequency). (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Chihi, T. Fatmi, M.**URL:** <Go to ISI>://WOS:000309297300012

**Reference Type: Journal Article****Record Number: 50****Author:** Chihi, T. Fatmi, M. Bouhemadou, A.**Year:** 2012**Title:** Structural, mechanical and electronic properties of transition metal hydrides MH<sub>2</sub> (M = Ti, Zr, Hf, Sc, Y, La, V and Cr)**Journal:** Solid State Sciences**Volume:** 14**Issue:** 5**Pages:** 583-586**Date:** May**Short Title:** Structural, mechanical and electronic properties of transition metal hydrides MH<sub>2</sub> (M = Ti, Zr, Hf, Sc, Y, La, V and Cr)**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2012.02.010**Accession Number:** WOS:000304640900006

**Abstract:** First-principles calculations have been carried out to investigate the structural, mechanic and electronic of transition metal hydrides MH<sub>2</sub> (M = Ti, Zr, Hf, Sc, Y, La, V and Cr). It is found that TiH<sub>2</sub> is mechanically unstable because of a negative C<sub>44</sub> = -21.31 GPa and C<sub>11</sub>-C<sub>12</sub> < 0, the same behavior can be found in MH<sub>2</sub> (M = Zr, Hf, and Y) compounds. Also there is a strong interaction between M (Ti, Zr, Hf, Sc, Y, La, V and Cr) and H. On the other hand, the H-H bond orders are always negative or nil reason of brittleness. (C) 2012 Elsevier Masson SAS. All rights reserved.

**Notes:** Chihi, T. Fatmi, M. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000304640900006

**Reference Type: Journal Article****Record Number:** 51**Author:** Chihi, T. Fatmi, M. Ghebouli, B.**Year:** 2012**Title:** First-principles prediction of metastable niobium and tantalium nitrides M4N5 and M5N6 stoichiometry**Journal:** Solid State Sciences**Volume:** 14**Issue:** 1**Pages:** 80-83**Date:** Jan**Short Title:** First-principles prediction of metastable niobium and tantalium nitrides M4N5 and M5N6 stoichiometry**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2011.10.020**Accession Number:** WOS:000300204900011**Abstract:** A first-principles plane-wave pseudopotential method based on the density functional theory is used to investigate the structural, elastic and electronic properties of M4N5 and M5N6 (M = a transition metal (TM) Nb, Ta). C-33 elastic constant for all compounds is found to be much larger than C-11, indicating that a-axis is more compressible than c-axis. Interestingly, we find that C-33 and C-11 are significantly larger than other elastic constants, resulting in a pronounced elastic anisotropy. (C) 2011 Elsevier Masson SAS. All rights reserved.**Notes:** Chihi, T. Fatmi, M. Ghebouli, B.**URL:** <Go to ISI>://WOS:000300204900011

**Reference Type: Journal Article****Record Number:** 52**Author:** Chihi, T. Fatmi, M. Ghebouli, M. A.**Year:** 2012**Title:** Ab initio study of some fundamental properties of the M<sub>3</sub>X (M=Cr, V; X=Si, Ge) compounds**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 17**Pages:** 3591-3595**Date:** Sep**Short Title:** Ab initio study of some fundamental properties of the M<sub>3</sub>X (M=Cr, V; X=Si, Ge) compounds**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.05.032**Accession Number:** WOS:000305792400054

**Abstract:** M<sub>3</sub>X (M=Cr, V; X=Si, Ge) compounds are studied using first-principles calculations based on the Density Functional Theory (DFT). It is found that the bulk of Cr<sub>3</sub>X (X=Si, Ge) compounds are comparable to those of Al<sub>2</sub>O<sub>3</sub>, the nearest-neighbor distance DM-M and DM-X in these compounds increase and the bulk modulus decrease, there is a strong interaction between M and M (M=Cr the interaction is stronger). Also the interaction between M (M=Cr, V) and X (X=Ge) is negative, an anti-bonding-type interaction is dominant between these atoms. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Chihi, T. Fatmi, M. Ghebouli, M. A.**URL:** <Go to ISI>://WOS:000305792400054

**Reference Type: Journal Article****Record Number:** 53**Author:** Chorfa, A. Belkhir, N. Rubio, F. Rubio, J.**Year:** 2012**Title:** SILVER DIFFUSION AND COLORATION OF SODA LIME AND BOROSILICATE GLASSES PART 1: EFFECT ON THE TRANSMISSION AND COLORATION OF STAINED GLASSES**Journal:** Ceramics-Silikaty**Volume:** 56**Issue:** 1**Pages:** 69-75**Short Title:** SILVER DIFFUSION AND COLORATION OF SODA LIME AND BOROSILICATE GLASSES PART 1: EFFECT ON THE TRANSMISSION AND COLORATION OF STAINED GLASSES**ISSN:** 0862-5468**Accession Number:** WOS:000304224600012

**Abstract:** Using the conventional method of coloration, soda lime and borosilicate glasses have been painted. Once stained, these glasses were heat treated at temperatures close to their transition temperatures (T). A parametric study was carried out in order to determine at first the effect of the silver concentration in the stain spread on glass. In addition, it was studied the effect of the heat treatment duration and the chemical composition of the painted glasses on the formation and size of the silver nanoparticles, the silver diffusion depth and also the glasses coloration. The characterization was made using UV-Vis spectroscopy, Raman confocal spectroscopy, SEM, EDX Technique and Abbe Refractometer. The obtained results shows that the coloration intensity of both glass types painted by the conventional method differs and depends essentially on the proportion of alkali ions in the glass. Moreover it was found that the effect of the silver concentration in the stain is primordial and the heat treatment duration has a limited effect.

**Notes:** Chorfa, Abdellah Belkhir, Nabil Rubio, Fausto Rubio, Juan**URL:** <Go to ISI>://WOS:000304224600012

**Reference Type: Journal Article****Record Number:** 54**Author:** Chouder, A. Silvestre, S. Sadaoui, N. Rahmani, L.**Year:** 2012**Title:** Modeling and simulation of a grid connected PV system based on the evaluation of main PV module parameters**Journal:** Simulation Modelling Practice and Theory**Volume:** 20**Issue:** 1**Pages:** 46-58**Date:** Jan**Short Title:** Modeling and simulation of a grid connected PV system based on the evaluation of main PV module parameters**ISSN:** 1569-190X**DOI:** 10.1016/j.simpat.2011.08.011**Accession Number:** WOS:000298533400004

**Abstract:** In this work we present a new method for the modeling and simulation study of a photovoltaic grid connected system and its experimental validation. This method has been applied in the simulation of a grid connected PV system with a rated power of 3.2 Kw(p), composed by a photovoltaic generator and a single phase grid connected inverter. First, a PV module, forming part of the whole PV array is modeled by a single diode lumped circuit and main parameters of the PV module are evaluated. Results obtained for the PV module characteristics have been validated experimentally by carrying out outdoor I-V characteristic measurements. To take into account the power conversion efficiency, the measured AC output power against DC input power is fitted to a second order efficiency model to derive its specific parameters. The simulation results have been performed through Matlab/Simulink environment. Results has shown good agreement with experimental data, whether for the I-V characteristics or for the whole operating system. The significant error indicators are reported in order to show the effectiveness of the simulation model to predict energy generation for such PV system. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Chouder, Aissa Silvestre, Santiago Sadaoui, Nawel Rahmani, Lazhar**URL:** <Go to ISI>://WOS:000298533400004

**Reference Type: Journal Article****Record Number:** 55**Author:** Daachi, M. E. Achili, B. Daachi, B. Amirat, Y. Chikouche, D.**Year:** 2012**Title:** Hybrid Moment/Position Control of a Parallel Robot**Journal:** International Journal of Control Automation and Systems**Volume:** 10**Issue:** 3**Pages:** 536-546**Date:** Jun**Short Title:** Hybrid Moment/Position Control of a Parallel Robot**ISSN:** 1598-6446**DOI:** 10.1007/s12555-012-0310-z**Accession Number:** WOS:000304725200010

**Abstract:** In this paper, a hybrid moment/position controller in task space is proposed for tasks involving a contact between a robot and its environment. We consider a contour-tracking task performed by a six DOF (Degrees Of Freedom) parallel robot. The task space dynamic model of the robot in contact with its environment, seen as a black box, is estimated by a MLP-NN (Multi Layer Perceptron Neural Network). The neural network non-linearity is treated using Taylor series expansion. An adaptation algorithm of the neural parameters resulting from a closed-loop stability analysis is proposed. The performance of the proposed controller is validated on the C5 parallel robot by considering two different environments: rigid and compliant.

**Notes:** Daachi, Mohamed El Hossine Achili, Brahim Daachi, Boubaker Amirat, Yacine Chikouche, Djamel

**URL:** <Go to ISI>://WOS:000304725200010

**Reference Type: Journal Article****Record Number:** 56**Author:** Dal Cappello, C. Charpentier, I. Houamer, S. Hervieux, P. A. Ruiz-Lopez, M. F. Mansouri, A. Roy, A. C.**Year:** 2012**Title:** Triple-differential cross sections for the ionization of thymine by electrons and positrons**Journal:** Journal of Physics B-Atomic Molecular and Optical Physics**Volume:** 45**Issue:** 17**Date:** Sep**Short Title:** Triple-differential cross sections for the ionization of thymine by electrons and positrons**ISSN:** 0953-4075**DOI:** 10.1088/0953-4075/45/17/175205**Article Number:** 175205**Accession Number:** WOS:000308666000009

**Abstract:** We apply the second Born approximation and the BBK methods to study triple-differential cross sections for the ionization of valence orbitals of a thymine molecule by electrons and positrons. Calculations have been performed for a coplanar geometry at an incident energy of 250 eV and an ejected-electron energy of 20 eV, while the angle of scattering is fixed at 10 degrees.. We use an accurate single-centre wavefunction for the initial state of the target and the well-known CNDO model. The present second Born approximation (with the single-centre wavefunction for the initial state) and the BBK model (with the CNDO model) yield cross sections in good agreement with the recent experimental data for electron impact. In the case of positron impact, we find that the contribution of the second term of the Born series is not insignificant for the present kinematics.

**Notes:** Dal Cappello, C. Charpentier, I. Houamer, S. Hervieux, P. A. Ruiz-Lopez, M. F. Mansouri, A. Roy, A. C.**URL:** <Go to ISI>://WOS:000308666000009

**Reference Type: Journal Article****Record Number:** 57**Author:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N.**Year:** 2012**Title:** First-Principles Study of Structural, Elastic and Mechanical Properties of Zinc-Blende Boron Nitride (B3-BN)**Journal:** Acta Physica Polonica A**Volume:** 122**Issue:** 1**Pages:** 109-115**Date:** Jul**Short Title:** First-Principles Study of Structural, Elastic and Mechanical Properties of Zinc-Blende Boron Nitride (B3-BN)**ISSN:** 0587-4246**Accession Number:** WOS:000307259400021

**Abstract:** First principles study of structural, elastic properties and anisotropy effect on the mechanical parameters of the zinc-blende boron nitride has been performed using the pseudopotential plane wave method based on density functional theory with the Teter and Pade exchange-correlation functional of the local density approximation. The equilibrium lattice constant, molecular and crystal densities, bond length, the independent elastic constants, bulk modulus and its pressure derivatives, compressibility, shear modulus, internal strain parameter, isotropy factor, compliance constants, the Debye temperature, Young's modulus, Poisson's ratio, the Lamé constants and sound velocity for directions within the important crystallographic planes of this compound are obtained and analyzed in comparison with the available theoretical data reported in the literature.

**Notes:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N.**URL:** <Go to ISI>://WOS:000307259400021

**Reference Type: Journal Article****Record Number:** 58**Author:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N.**Year:** 2012**Title:** First-Principles Study of Structural, Elastic and Mechanical Properties of Zinc-Blende Boron Nitride (B3-BN)**Journal:** Acta Physica Polonica A**Volume:** 122**Issue:** 1**Pages:** 109-115**Date:** Jul**Short Title:** First-Principles Study of Structural, Elastic and Mechanical Properties of Zinc-Blende Boron Nitride (B3-BN)**ISSN:** 0587-4246**Accession Number:** WOS:000307259400021

**Abstract:** First principles study of structural, elastic properties and anisotropy effect on the mechanical parameters of the zinc-blende boron nitride has been performed using the pseudopotential plane wave method based on density functional theory with the Teter and Pade exchange-correlation functional of the local density approximation. The equilibrium lattice constant, molecular and crystal densities, bond length, the independent elastic constants, bulk modulus and its pressure derivatives, compressibility, shear modulus, internal strain parameter, isotropy factor, compliance constants, the Debye temperature, Young's modulus, Poisson's ratio, the Lamé constants and sound velocity for directions within the important crystallographic planes of this compound are obtained and analyzed in comparison with the available theoretical data reported in the literature.

**Notes:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N.**URL:** <Go to ISI>://WOS:000307259400021

**Reference Type: Journal Article****Record Number:** 59**Author:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N. Belagraa, L.**Year:** 2012**Title:** Effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide**Journal:** Pramana-Journal of Physics**Volume:** 79**Issue:** 1**Pages:** 95-106**Date:** Jul**Short Title:** Effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide**ISSN:** 0304-4289**DOI:** 10.1007/s12043-012-0283-8**Accession Number:** WOS:000307029700008

**Abstract:** In this paper we present the results obtained from first-principles calculations of the effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide, using the pseudopotential plane-wave method (PP-PW) based on density functional theory within the Teter and Pade exchange-correlation functional form of the local density approximation (LDA). The lattice parameter, molecular and crystal densities, near-neighbour distances, independent elastic constants, bulk modulus, shear modulus, anisotropy factor and energy bandgaps of (B3) BP under high pressure are presented. The results showed a phase transition pressure from the zinc blende to rock-salt phase at around 1.56 Mbar, which is in good agreement with the theoretical data reported in the literature.

**Notes:** Daoud, Salah Loucif, Kamel Bioud, Nadhira Lebgaa, Noudjoud Belagraa, Laarbi**URL:** <Go to ISI>://WOS:000307029700008

**Reference Type: Journal Article****Record Number:** 60**Author:** Daoud, S. Loucif, K. Bioud, N. Lebgaa, N. Belagraa, L.**Year:** 2012**Title:** Effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide**Journal:** Pramana-Journal of Physics**Volume:** 79**Issue:** 1**Pages:** 95-106**Date:** Jul**Short Title:** Effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide**ISSN:** 0304-4289**DOI:** 10.1007/s12043-012-0283-8**Accession Number:** WOS:000307029700008

**Abstract:** In this paper we present the results obtained from first-principles calculations of the effect of hydrostatic pressure on the structural, elastic and electronic properties of (B3) boron phosphide, using the pseudopotential plane-wave method (PP-PW) based on density functional theory within the Teter and Pade exchange-correlation functional form of the local density approximation (LDA). The lattice parameter, molecular and crystal densities, near-neighbour distances, independent elastic constants, bulk modulus, shear modulus, anisotropy factor and energy bandgaps of (B3) BP under high pressure are presented. The results showed a phase transition pressure from the zinc blende to rock-salt phase at around 1.56 Mbar, which is in good agreement with the theoretical data reported in the literature.

**Notes:** Daoud, Salah Loucif, Kamel Bioud, Nadhira Lebgaa, Noudjoud Belagraa, Laarbi**URL:** <Go to ISI>://WOS:000307029700008

**Reference Type: Journal Article****Record Number:** 61**Author:** Djouada, I. Kharmouche, A. Schmerber, G.**Year:** 2012**Title:** Influence of annealing on the structural properties of evaporated  $\text{Co}_x\text{Cr}_{1-x}/\text{Si}(100)$  and  $\text{Co}_x\text{Cr}_{1-x}/\text{glass}$  thin films**Journal:** European Physical Journal-Applied Physics**Volume:** 58**Issue:** 1**Date:** Apr**Short Title:** Influence of annealing on the structural properties of evaporated  $\text{Co}_x\text{Cr}_{1-x}/\text{Si}(100)$  and  $\text{Co}_x\text{Cr}_{1-x}/\text{glass}$  thin films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2012110391**Article Number:** 10301**Accession Number:** WOS:000302132600004

**Abstract:** Series of  $\text{Co}_x\text{Cr}_{1-x}$  thin films have been evaporated under vacuum onto  $\text{Si}(1\ 0\ 0)$  and glass substrates,  $x$  ranging from 0.80 to 0.88; these chemical composition values are provided by modeling Rutherford Backscattering (RBS) spectra using SIMNRA program. Thickness ranges from 17 to 220 nm. Microscopic characterizations of the films have been performed with X-ray diffraction (XRD) measurements. The samples have been annealed for 1 h at 700 degrees C. All the as deposited samples are polycrystalline, with an hcp structure and show a  $\langle 0\ 0\ 0\ 1 \rangle$  preferred orientation. The annealed samples, on the contrary, present hcp and fcc phases. The as deposited films are under a compressive stress while the annealed films are under a tensile stress. Grain sizes increase with chromium content decrease and are higher for the annealed films. Excellent orientations of the CoCr crystallites around the normal to the film plane have been observed, the full width at half maximum (FWHM) ranging from 0.49 degrees to 0.79 degrees.

**Notes:** Djouada, I. Kharmouche, A. Schmerber, G.**URL:** <Go to ISI>://WOS:000302132600004

**Reference Type: Journal Article****Record Number:** 62**Author:** Doudou, S. Khaber, F.**Year:** 2012**Title:** Direct adaptive fuzzy control of a class of MIMO non-affine nonlinear systems**Journal:** International Journal of Systems Science**Volume:** 43**Issue:** 6**Pages:** 1029-1038**Short Title:** Direct adaptive fuzzy control of a class of MIMO non-affine nonlinear systems**ISSN:** 0020-7721**DOI:** 10.1080/00207721.2010.547631**Accession Number:** WOS:000302231300004

**Abstract:** An adaptive fuzzy control approach is proposed for a class of multiple-input-multiple-output (MIMO) nonlinear systems with completely unknown non-affine functions. The global implicit function theorem is first used to prove the existence of an unknown ideal implicit controller that can achieve the control objectives. Within this scheme, fuzzy systems are employed to approximate the unknown ideal implicit controller, and robustifying control terms are used to compensate the approximation errors and external disturbances. The adjustable parameters of the used fuzzy systems are deduced from the stability analysis of the closed-loop system in the sense of Lyapunov. To show the efficiency of the proposed controllers, two simulation examples are presented.

**Notes:** Doudou, Sofiane Khaber, Farid**URL:** <Go to ISI>://WOS:000302231300004

**Reference Type: Journal Article****Record Number:** 63**Author:** Eddiai, A. Meddad, M. Guyomar, D. Hajjaji, A. Boughaleb, Y. Yuse, K. Touhtouh, S. Sahraoui, B.**Year:** 2012**Title:** Enhancement of electrostrictive polymer efficiency for energy harvesting with cellular polypropylene electrets**Journal:** Synthetic Metals**Volume:** 162**Issue:** 21-22**Pages:** 1948-1953**Date:** Dec**Short Title:** Enhancement of electrostrictive polymer efficiency for energy harvesting with cellular polypropylene electrets**ISSN:** 0379-6779**DOI:** 10.1016/j.synthmet.2012.08.012**Accession Number:** WOS:000311917900027

**Abstract:** The purpose of this paper is to propose new means for harvesting energy using electrostrictive polymers. The recent development of electrostrictive polymers has generated new opportunities for high-strain actuators. At the current time, the investigation of using electrostrictive polymer for energy harvesting, or mechanical-to-electrical energy conversion, is beginning to show its potential for this application. The objective of this work was to study the effect of cellular polypropylene electrets after high-voltage corona poling on an electrostrictive polyurethane composite filled with 1 vol.% carbon black at a low applied voltage in order to increase the efficiency of the electromechanical conversion with electrostrictive polymers.

Theoretical analysis supported by experimental investigations showed that an energy harvesting with this structure rendered it possible to obtain harvested power up to 13.93 nW using a low electric field of 0.4 V/ $\mu\text{m}$  and a transverse strain of 3% at a mechanical frequency of 15 Hz. This represents an efficiency of 78.14% at low frequency. This percentage is very significant compared to other structures. Finally, it was found that the use of polypropylene electrets with electrostrictive polymers was the best way to decrease the power of polarization in order to obtain a good efficiency of the electromechanical conversion for energy harvesting. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Eddiai, A. Meddad, M. Guyomar, D. Hajjaji, A. Boughaleb, Y. Yuse, K. Touhtouh, S. Sahraoui, B.**URL:** <Go to ISI>://WOS:000311917900027

**Reference Type: Journal Article****Record Number:** 64**Author:** Eddiai, A. Meddad, M. Touhtouh, S. Hajjaji, A. Boughaleb, Y. Guyomar, D. Belkhiat, S. Sahraoui, B.**Year:** 2012**Title:** Mechanical characterization of an electrostrictive polymer for actuation and energy harvesting**Journal:** Journal of Applied Physics**Volume:** 111**Issue:** 12**Date:** Jun**Short Title:** Mechanical characterization of an electrostrictive polymer for actuation and energy harvesting**ISSN:** 0021-8979**DOI:** 10.1063/1.4729532**Article Number:** 124115**Accession Number:** WOS:000305832100108

**Abstract:** Electroactive polymers have been widely used as smart material for actuators in recent years. Electromechanical applications are currently focused on energy harvesting and actuation, including the development of wireless portable electronic equipment autonomous and specific actuators such as artificial muscles. The problem to be solved is to make its devices the most efficient, as possible in terms of harvested energy and action. These two criteria are controlled by the permittivity of the electrostrictive polymer used, the Young's modulus, and their dependence on frequency and level of stress. In the present paper, we presented a model describing the mechanical behaviour of electrostrictive polymers with taking into account the mechanical losses. Young's modulus follows a linear function of strain and stress. However, when the elongation becomes higher, the data obtained from this strain linear trend and significant hysteresis loops appear the reflections on the existence of mechanical losses. In this work, to provide the analysis of the experimental observations, we utilized a theoretical model in order to define a constitutive law implying a representative relationship between stress and strain. After detailing this theoretical model, the simulation results are compared with experimental ones. The results show that hysteresis loss increases with the increase of frequency and strain amplitude. The model used here is in good agreement with the experimental results. (C) 2012 American Institute of Physics. [<http://dx.doi.org/10.1063/1.4729532>]

**Notes:** Eddiai, A. Meddad, M. Touhtouh, S. Hajjaji, A. Boughaleb, Y. Guyomar, D. Belkhiat, S. Sahraoui, B.**URL:** <Go to ISI>://WOS:000305832100108

**Reference Type: Journal Article****Record Number:** 65**Author:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Bouhemadou, A. Binomran, S.**Year:** 2012**Title:** Structural, electronic, optical and thermodynamic properties of  $\text{Na}_x\text{Rb}_{1-x}\text{H}$  and  $\text{Na}_x\text{K}_{1-x}\text{H}$  alloys**Journal:** Journal of Physics and Chemistry of Solids**Volume:** 73**Issue:** 1**Pages:** 1-7**Date:** Jan**Short Title:** Structural, electronic, optical and thermodynamic properties of  $\text{Na}_x\text{Rb}_{1-x}\text{H}$  and  $\text{Na}_x\text{K}_{1-x}\text{H}$  alloys**ISSN:** 0022-3697**DOI:** 10.1016/j.jpcs.2011.08.015**Accession Number:** WOS:000297891400001

**Abstract:** A theoretical study of the structural, electronic, optical and thermodynamic properties of  $\text{Na}_x\text{Rb}_{1-x}\text{H}$  and  $\text{Na}_x\text{K}_{1-x}\text{H}$  ternary alloys in NaCl phase has been carried out using the first-principles method. We modeled the alloys at some selected compositions with ordered structures described in terms of periodically repeated supercells. The dependences on the composition of the lattice constant, band gap, dielectric constant, refractive index, Debye temperature, mixing entropy and heat capacities were analyzed for  $x=0, 0.25, 0.50, 0.75$  and 1. The lattice constants of  $\text{Na}_x\text{Rb}_{1-x}\text{H}$  and  $\text{Na}_x\text{K}_{1-x}\text{H}$  exhibit a marginal deviation from Vegard's law. A strong deviation of the bulk modulus from linear concentration dependence was observed for both alloys. We found that the composition dependence of the energy band gap is highly non linear and the large bowing coefficient for  $\text{Na}_x\text{Rb}_{1-x}\text{H}$  is sensitive to the composition. Using the approach of Zunger and co-workers, the microscopic origins of the gap bowing were detailed and explained. The thermodynamic stability of these alloys was investigated by calculating the phase diagram. The thermal effect on some macroscopic properties was investigated using the quasi-harmonic Debye model. There is a good agreement between our results and the available experimental data for the binary compounds, which is a support for those of the ternary alloys that we report for the first time. (C) 2011 Published by Elsevier Ltd.

**Notes:** Fatmi, Messaoud Ghebouli, Brahim Ghebouli, Mohamed Amine Bouhemadou, Abdelmadjid Binomran, Saad**URL:** <Go to ISI>://WOS:000297891400001

**Reference Type: Journal Article****Record Number:** 66**Author:** Ferkhi, M. Ringuede, A. Khaled, A. Zerroual, L. Cassir, M.**Year:** 2012**Title:** La<sub>1.98</sub>NiO<sub>4</sub> +/-delta, a new cathode material for solid oxide fuel cell: Impedance spectroscopy study and compatibility with gadolinia-doped ceria and yttria-stabilized zirconia electrolytes**Journal:** Electrochimica Acta**Volume:** 75**Pages:** 80-87**Date:** Jul**Short Title:** La<sub>1.98</sub>NiO<sub>4</sub> +/-delta, a new cathode material for solid oxide fuel cell: Impedance spectroscopy study and compatibility with gadolinia-doped ceria and yttria-stabilized zirconia electrolytes**ISSN:** 0013-4686**DOI:** 10.1016/j.electacta.2012.04.064**Accession Number:** WOS:000306884100011

**Abstract:** A new SOFC cathode material, La<sub>1.98</sub>NiO<sub>4</sub> +/-delta, was tested in presence of two electrolytes, yttria-stabilized zirconia (YSZ) and gadolinia-doped ceria (GDC). XRD analysis showed the absence of undesirable phases at the La<sub>1.98</sub>NiO<sub>4</sub> +/-delta/GDC interface, whereas lanthanum zirconate (La<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>), an insulating phase, is present between electrode La<sub>1.98</sub>NiO<sub>4</sub> +/-delta and YSZ electrolyte. XPS analysis showed that the oxygen lattice can be present in form of La-O and LaNiO<sub>3</sub>, which explains the high conductivity for these materials. At temperatures lower than 650 degrees C, the area specific resistance of the electrodes, measured by electrochemical impedance spectroscopy is significantly inferior when associated to GDC rather than YSZ electrolyte. In addition, in the case of GDC, a lower activation energy of about 0.7 eV was obtained, which could be explained by a higher mobility of oxide ions at the La<sub>1.98</sub>NiO<sub>4</sub> +/-delta/GDC interface compared to the La<sub>1.98</sub>NiO<sub>4</sub> +/-delta/YSZ one. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Ferkhi, M. Ringuede, A. Khaled, A. Zerroual, L. Cassir, M.**URL:** <Go to ISI>://WOS:000306884100011

**Reference Type: Journal Article****Record Number:** 67**Author:** Foudi, N. Gomez, I. Benyahia, C. Longrois, D. Norel, X.**Year:** 2012**Title:** Prostaglandin E-2 receptor subtypes in human blood and vascular cells**Journal:** European Journal of Pharmacology**Volume:** 695**Issue:** 1-3**Pages:** 1-6**Date:** Nov**Short Title:** Prostaglandin E-2 receptor subtypes in human blood and vascular cells**ISSN:** 0014-2999**DOI:** 10.1016/j.ejphar.2012.08.009**Accession Number:** WOS:000310581100001

**Abstract:** Prostaglandin E-2 is produced in inflammatory responses via the cyclooxygenase pathway and regulates a variety of physiological and pathological reactions through four different receptor subtypes; EP1, EP2, EP3 and EP4. The role of the classical prostanoid receptors stimulated by prostaglandin I-2 and thromboxane A(2) in the blood circulation has been largely studied, whereas the other receptors such as EP activated by prostaglandin E-2, have been recently shown to be also implicated. There is now increasing evidence suggesting an important role of EP3 and EP4 receptor subtypes in the control of the human vascular tone and remodeling of the vascular wall as well in platelet aggregation and thrombosis. These receptors are implicated in vascular homeostasis and in the development of some pathological situations, such as atherosclerosis, aneurysms and hypertension. The use of specific EP agonists/antagonists would provide a novel cardiovascular therapeutic approach. In this review, we discuss the role of prostaglandin E-2 receptors in the control of human blood and vascular cells. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Foudi, Nabil Gomez, Ingrid Benyahia, Chabha Longrois, Dan Norel, Xavier**URL:** <Go to ISI>://WOS:000310581100001

**Reference Type: Journal Article****Record Number:** 68**Author:** Foudia, M. Matrakova, M. Zerroual, L.**Year:** 2012**Title:** PbSO<sub>4</sub> as a precursor for positive active material electrodes**Journal:** Journal of Power Sources**Volume:** 207**Pages:** 51-55**Date:** Jun**Short Title:** PbSO<sub>4</sub> as a precursor for positive active material electrodes**ISSN:** 0378-7753**DOI:** 10.1016/j.jpowsour.2012.01.075**Accession Number:** WOS:000302666800009

**Abstract:** The present work investigates the use of PbSO<sub>4</sub> as a precursor for positive active material (PAM) electrodes. Lead sulphate was prepared by the chemical precipitation of a lead nitrate solution in the presence of sodium sulphate. Tubular electrodes were filled with PbSO<sub>4</sub> and oxidized in solutions with different pH. The study is based on X-ray diffraction analysis (XRD), Thermogravimetry (TG), Differential scanning calorimetry (DSC) and Scanning electronic microscopy (SEM). The capacity of the different PAM electrodes was also determined. The results show that the pH of the electrolyte affects significantly the average crystallite size, phase composition and PAM capacity. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Foudia, M. Matrakova, M. Zerroual, L. 8th International Conference on Lead-Acid Batteries (LABAT) Jun 07-10, 2011 Bulgaria

**URL:** <Go to ISI>://WOS:000302666800009

**Reference Type: Journal Article****Record Number:** 69**Author:** Ghebouli, B. Ghebouli, M. A. Bouhemadou, A. Fatmi, M. Khenata, R. Rached, D. Ouahrani, T. Bin-Omran, S.**Year:** 2012**Title:** Theoretical prediction of the structural, elastic, electronic, optical and thermal properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) under pressure effect**Journal:** Solid State Sciences**Volume:** 14**Issue:** 7**Pages:** 903-913**Date:** Jul**Short Title:** Theoretical prediction of the structural, elastic, electronic, optical and thermal properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) under pressure effect**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2012.04.019**Accession Number:** WOS:000307032500025

**Abstract:** Some physical properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) have been investigated using pseudopotential plane-wave method based on the density functional theory. The calculated lattice parameters within GGA and LDA agree reasonably with the available experimental data. The elastic constants and their pressure derivatives are predicted using the static finite strain technique. We derived the bulk and shear moduli. Young's modulus, Poisson's ratio and Lamé's constants for ideal polycrystalline aggregates. The analysis of B/G ratio indicates that CsXF<sub>3</sub> (X = Ca, Sr and Hg) are ductile materials. The thermal effect on the volume, bulk modulus, heat capacity and Debye temperature was predicted. (C) 2012 Elsevier Masson SAS. All rights reserved.

**Notes:** Ghebouli, B. Ghebouli, M. A. Bouhemadou, A. Fatmi, M. Khenata, R. Rached, D. Ouahrani, T. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000307032500025

**Reference Type: Journal Article****Record Number:** 70**Author:** Ghebouli, B. Ghebouli, M. A. Bouhemadou, A. Fatmi, M. Khenata, R. Rached, D. Ouahrani, T. Bin-Omran, S.**Year:** 2012**Title:** Theoretical prediction of the structural, elastic, electronic, optical and thermal properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) under pressure effect**Journal:** Solid State Sciences**Volume:** 14**Issue:** 7**Pages:** 903-913**Date:** Jul**Short Title:** Theoretical prediction of the structural, elastic, electronic, optical and thermal properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) under pressure effect**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2012.04.019**Accession Number:** WOS:000307032500025

**Abstract:** Some physical properties of the cubic perovskites CsXF<sub>3</sub> (X = Ca, Sr and Hg) have been investigated using pseudopotential plane-wave method based on the density functional theory. The calculated lattice parameters within GGA and LDA agree reasonably with the available experimental data. The elastic constants and their pressure derivatives are predicted using the static finite strain technique. We derived the bulk and shear moduli. Young's modulus, Poisson's ratio and Lamé's constants for ideal polycrystalline aggregates. The analysis of B/G ratio indicates that CsXF<sub>3</sub> (X = Ca, Sr and Hg) are ductile materials. The thermal effect on the volume, bulk modulus, heat capacity and Debye temperature was predicted. (C) 2012 Elsevier Masson SAS. All rights reserved.

**Notes:** Ghebouli, B. Ghebouli, M. A. Bouhemadou, A. Fatmi, M. Khenata, R. Rached, D. Ouahrani, T. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000307032500025

**Reference Type: Journal Article****Record Number:** 71**Author:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B.**Year:** 2012**Title:** First-principles study on stability, energy gaps, optical phonon and related parameters of In<sub>1-x-y</sub>Al<sub>x</sub>Ga<sub>y</sub>As alloys**Journal:** Journal of Solid State Chemistry**Volume:** 192**Pages:** 161-167**Date:** Aug**Short Title:** First-principles study on stability, energy gaps, optical phonon and related parameters of In<sub>1-x-y</sub>Al<sub>x</sub>Ga<sub>y</sub>As alloys**ISSN:** 0022-4596**DOI:** 10.1016/j.jssc.2012.03.052**Accession Number:** WOS:000307028300025

**Abstract:** Based on the density functional theory as implemented in the Abinit code under the virtual crystal approximation, the lattice constant, bulk modulus, elastic constants, gap energies, electron effective mass, the dielectric constants and born effective charge in In<sub>1-x-y</sub>Al<sub>x</sub>Ga<sub>y</sub>As have been calculated with both GGA and LDA in the range  $0 \leq y \leq 0.9801$ . The optical and acoustical phonon frequencies, Frohlich coupling parameter, deformation energy and polaron effective mass are calculated and their dependence on the Ga content is examined. For AlAs, our results are in reasonable agreement with the known data in the literature; while for other contents our treatments are predictions. (C) 2012 Elsevier Inc. All rights reserved.

**Notes:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B.**URL:** <Go to ISI>://WOS:000307028300025

**Reference Type: Journal Article****Record Number:** 72**Author:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B. Bouhemadou, A. Soyalp, F. Ucgun, E. Ocak, H. Y.**Year:** 2012**Title:** Theoretical prediction of the fundamental properties for the ternary Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub>**Journal:** Journal of Solid State Chemistry**Volume:** 196**Pages:** 498-503**Date:** Dec**Short Title:** Theoretical prediction of the fundamental properties for the ternary Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub>**ISSN:** 0022-4596**DOI:** 10.1016/j.jssc.2012.06.044**Accession Number:** WOS:000310394500072

**Abstract:** Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub> are good candidate for hydrogen storage. The structural, elastic, electronic and optical properties of Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub> compounds have been investigated using pseudo-potential plane-wave method based on the density functional theory. Computed lattice constant and H atom positional parameter at equilibrium agree well with the available experimental data. A quadratic pressure dependence of the elastic stiffness is found. A set of isotropic elastic parameters and related properties, namely bulk and shear moduli, Young's modulus, Poisson's ratio, average sound velocity and Debye temperature are numerically estimated in the framework of the Voigt-Reuss-Hill approximation for Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub> polycrystalline aggregate. The analyses of the band structure indicates that Li<sub>2</sub>PtH<sub>6</sub> and Na<sub>2</sub>PtH<sub>6</sub> are indirect gap semiconductors. The static dielectric constant and static refractive index are inversely proportional to the fundamental gap. (C) 2012 Elsevier Inc. All rights reserved.

**Notes:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B. Bouhemadou, A. Soyalp, F. Ucgun, E. Ocak, H. Y.**URL:** <Go to ISI>://WOS:000310394500072

**Reference Type: Journal Article****Record Number:** 73**Author:** Guessoum, M. Nekkaa, S. Fenouillot-Rimlinger, F. Haddaoui, N.**Year:** 2012**Title:** Effects of Kaolin Surface Treatments on the Thermomechanical Properties and on the Degradation of Polypropylene**Journal:** International Journal of Polymer Science**Short Title:** Effects of Kaolin Surface Treatments on the Thermomechanical Properties and on the Degradation of Polypropylene**ISSN:** 1687-9422**DOI:** 10.1155/2012/549154**Article Number:** 549154**Accession Number:** WOS:000307641700001

**Abstract:** The effects of kaolin content and treatments on the thermal and mechanical properties and on the degradation of polypropylene were examined using mechanical tests, differential scanning calorimetry (DSC), and thermogravimetry (TGA). The weak interactions filler/matrix have been reinforced using a modification with urea then with an ammonium salt and a surface treatment with a silane coupling agent. The XRD results showed that the peak at the d-value of 10.7 angstrom increases in urea/kaolin complex, but the treatment with the ammonium salt caused the return to the initial state of the clay. FTIR results showed the appearance of new bands characteristic of the interactions between urea and kaolinite and the alkylammonium and kaolinite. The mechanical properties of the composites exhibited important variations while the DSC results showed the decrease of the crystallization temperature as a function of kaolin content. TGA thermograms pointed out the improvement of the composites' thermal stability.

**Notes:** Guessoum, Melia Nekkaa, Sorya Fenouillot-Rimlinger, Francoise Haddaoui, Nacerddine**URL:** <Go to ISI>://WOS:000307641700001

**Reference Type: Journal Article****Record Number:** 74**Author:** Guettal, D. Ziadi, A.**Year:** 2012**Title:** Reducing transformation and global optimization**Journal:** Applied Mathematics and Computation**Volume:** 218**Issue:** 10**Pages:** 5848-5860**Date:** Jan**Short Title:** Reducing transformation and global optimization**ISSN:** 0096-3003**DOI:** 10.1016/j.amc.2011.11.053**Accession Number:** WOS:000298968300002

**Abstract:** In this paper, we give new results on the Alienor method of dimension reduction. This technique is used to solve multidimensional global optimization problems of type  $\min_{x \in X} f(x)$  where  $f$  is a non convex Lipschitz function and  $X$  a compact set of  $\mathbb{R}^n$  ( $n \geq 2$ ) defined by Lipschitz constraints. The idea is to construct an  $\alpha$ -dense curve  $h$  in the feasible set  $X$ . The global minimum of  $f$  on  $X$  is then approximated by the global minimum of  $f$  on the curve  $h$ . That is, our problem has become a one-dimensional problem which can be solved by the Piyavskii-Shubert method. Examples of these curves and numerical implementations on several test functions are given. Crown Copyright (C) 2011 Published by Elsevier Inc. All rights reserved.

**Notes:** Guettal, Djaouida Ziadi, Abdelkader**URL:** <Go to ISI>://WOS:000298968300002

**Reference Type: Journal Article****Record Number:** 75**Author:** Guittoum, A. Bourzami, A. Layadi, A. Schmerber, G.**Year:** 2012**Title:** Structural, electrical and magnetic properties of evaporated permalloy thin films: effect of substrate and thickness**Journal:** European Physical Journal-Applied Physics**Volume:** 58**Issue:** 2**Date:** May**Short Title:** Structural, electrical and magnetic properties of evaporated permalloy thin films: effect of substrate and thickness**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2012110343**Article Number:** 20301**Accession Number:** WOS:000312495000003

**Abstract:** We have studied the effects of the substrate and the thickness on the structural, electrical and magnetic properties of permalloy thin films Ni<sub>81</sub>Fe<sub>19</sub> (Py). Series of Py thin films were evaporated on four various substrates: glass, kapton, Si(1 0 0) and Si(1 1 1). The thickness ranges from 13 nm to 190 nm. We show that evaporated permalloy on kapton and Si(1 1 1) present a strong  $\langle 1 1 1 \rangle$  preferred orientation for samples thicker than 85 nm; however, the films grown on glass and Si(1 0 0) present a weak (1 1 1) texture for most of these samples. Generally, the lattice constant for Py/glass, Py/Si(1 0 0) and Py/Si(1 1 1) samples is found to be smaller than the bulk value ( $a(\text{bulk})$ ), while for the Py/kapton, it is larger than  $a(\text{bulk})$ . There is an overall increase of the grain sizes (100 angstrom-480 angstrom) with thickness for Py/Si(1 1 1), Py/Si(1 0 0) and Py/glass. For the Py/kapton samples, the grain sizes (about 130 angstrom) seem to be independent of the thickness. The resistivity,  $\rho$ , decreases with increasing thickness for all samples. The highest values of  $\rho$  were observed in the Py/kapton thin films, diffusion at the grain boundaries might be in part responsible for these high values. The magnetization easy axis is found to be in the film plane for all samples. For all series, the two thinner films seem to exhibit a perpendicular magnetocrystalline anisotropy. The coercive field,  $H-C//$ , values range from 1 Oe to 67 Oe. A peak in the  $H-C//$  vs.  $t$  curve is observed for Py/Si while for Py on glass and Py/kapton,  $H-C//$  seems to be constant. We also observed that for the thicker Py/Si(1 1 1) samples, the coercivity decreases as the grain sizes increase.

**Notes:** Guittoum, A. Bourzami, A. Layadi, A. Schmerber, G.**URL:** <Go to ISI>://WOS:000312495000003

**Reference Type: Journal Article****Record Number:** 76**Author:** Hachouf, N. Kharfi, F. Boucenna, A.**Year:** 2012**Title:** Characterization and MCNP simulation of neutron energy spectrum shift after transmission through strong absorbing materials and its impact on tomography reconstructed image**Journal:** Applied Radiation and Isotopes**Volume:** 70**Issue:** 10**Pages:** 2355-2361**Date:** Oct**Short Title:** Characterization and MCNP simulation of neutron energy spectrum shift after transmission through strong absorbing materials and its impact on tomography reconstructed image**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2012.06.017**Accession Number:** WOS:000309620000013

**Abstract:** An ideal neutron radiograph, for quantification and 3D tomographic image reconstruction, should be a transmission image which exactly obeys to the exponential attenuation law of a monochromatic neutron beam. There are many reasons for which this assumption does not hold for high neutron absorbing materials. The main deviations from the ideal are due essentially to neutron beam hardening effect. The main challenges of this work are the characterization of neutron transmission through boron enriched steel materials and the observation of beam hardening. Then, in our work, the influence of beam hardening effect on neutron tomographic image, for samples based on these materials, is studied. MCNP and FBP simulation are performed to adjust linear attenuation coefficients data and to perform 2D tomographic image reconstruction with and without beam hardening corrections. A beam hardening correction procedure is developed and applied based on qualitative and quantitative analyses of the projections data. Results from original and corrected 2D reconstructed images obtained shows the efficiency of the proposed correction procedure. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Hachouf, N. Kharfi, F. Boucenna, A.**URL:** <Go to ISI>://WOS:000309620000013

**Reference Type: Journal Article****Record Number:** 77**Author:** Hacine-Gharbi, A. Ravier, P. Harba, R. Mohamadi, T.**Year:** 2012**Title:** Low bias histogram-based estimation of mutual information for feature selection**Journal:** Pattern Recognition Letters**Volume:** 33**Issue:** 10**Pages:** 1302-1308**Date:** Jul**Short Title:** Low bias histogram-based estimation of mutual information for feature selection**ISSN:** 0167-8655**DOI:** 10.1016/j.patrec.2012.02.022**Accession Number:** WOS:000305771400007

**Abstract:** This paper presents a low bias histogram-based estimation of mutual information and its application to feature selection problems. By canceling the first order bias, the estimation avoids the bias accumulation problem that affects classical methods. As a consequence, on a synthetic feature selection problem, only the proposed method results in the exact number of features to be chosen in the Gaussian case when compared to four other approaches. In a speech recognition application, the proposed method and the Sturges method are the only ones that lead to a correct number of selected features in the noise free case. In the reduced data case, only the proposed method points out the optimal number of features to select. Finally, in the noisy case, only the proposed method leads to results of high quality; other methods show severely underestimated numbers of selected features. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Hacine-Gharbi, Abdenour Ravier, Philippe Harba, Rachid Mohamadi, Tayeb**URL:** <Go to ISI>://WOS:000305771400007

**Reference Type: Journal Article****Record Number:** 78**Author:** Haddadi, K. Bouhemadou, A. Bin-Omran, S.**Year:** 2012**Title:** Structural, elastic, electronic, chemical bonding and thermodynamic properties of CaMg<sub>2</sub>N<sub>2</sub> and SrMg<sub>2</sub>N<sub>2</sub>: First-principles calculations**Journal:** Computational Materials Science**Volume:** 53**Issue:** 1**Pages:** 204-213**Date:** Feb**Short Title:** Structural, elastic, electronic, chemical bonding and thermodynamic properties of CaMg<sub>2</sub>N<sub>2</sub> and SrMg<sub>2</sub>N<sub>2</sub>: First-principles calculations**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2011.08.009**Accession Number:** WOS:000300722900028

**Abstract:** We report first-principles density functional theory calculations of the structural, elastic, electronic, chemical bonding and thermodynamic properties of the ternary alkaline earth metal nitrides CaMg<sub>2</sub>N<sub>2</sub> and SrMg<sub>2</sub>N<sub>2</sub>. The calculated equilibrium structural parameters agree well with the experimental findings. Single-crystal and polycrystalline elastic constants and some related properties under pressure effect have been predicted. Both compounds exhibit a striking elastic anisotropy and a ductile behavior. Electronic properties and chemical bonding nature have been studied throughout the band structure, density of states and charge distribution analyses. It is found that these two materials have a direct band gap (Gamma-Gamma) and a transition to an indirect gap (Gamma-M) occurs at about 8.63 and 5.16 GPa in CaMg<sub>2</sub>N<sub>2</sub> and SrMg<sub>2</sub>N<sub>2</sub>, respectively. The chemical bonding has a mixture covalent-ionic character. Thermal effects on some macroscopic properties are predicted using the quasi-harmonic Debye model. (C) 2011 Elsevier B. V. All rights reserved.

**Notes:** Haddadi, K. Bouhemadou, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000300722900028

**Reference Type: Journal Article****Record Number:** 79**Author:** Haddadi, K. Bouhemadou, A. Zerarga, F. Bin-Omran, S.**Year:** 2012**Title:** First-principles investigation of the ternary scandium based inverse-perovskite carbides Sc(3)AC (A = Al, Ga, In and Tl)**Journal:** Solid State Sciences**Volume:** 14**Issue:** 8**Pages:** 1175-1185**Date:** Aug**Short Title:** First-principles investigation of the ternary scandium based inverse-perovskite carbides Sc(3)AC (A = Al, Ga, In and Tl)**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2012.04.028**Accession Number:** WOS:000308769000029

**Abstract:** Based on first-principles approach, we present a comparative study of structural, electronic, elastic and thermo-dynamical properties of the series of inverse-perovskites Sc(3)AC, with A = Al, Ga, In and Tl. The calculated equilibrium lattice constants are in excellent agreement with the experimental and available theoretical data. The electronic band structures and densities of states profiles show that the studied compounds are conductors. Analysis of atomic site projected local density of states and charge densities reveals that a mixture of covalent-ionic-metallic characterizes the chemical bonding of the considered inverse-perovskites. Pressure dependence up to 40 GPa of the single-crystal and polycrystalline elastic constants has been investigated in details. The computed B/G ratios show that all Sc(3)AC compounds are brittle. We have estimated the sound velocities in the principal directions. Through the quasi-harmonic Debye model, in which the phononic effects are taken into account, the temperature and pressure effects on the lattice constant, bulk modulus, heat capacity and Debye temperature are performed. (C) 2012 Elsevier Masson SAS. All rights reserved.

**Notes:** Haddadi, K. Bouhemadou, A. Zerarga, F. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000308769000029

**Reference Type: Journal Article****Record Number:** 80**Author:** Hamidatou, L. A. Dekar, S. Boukari, S.**Year:** 2012**Title:** k(0)-NAA quality assessment in an Algerian laboratory by analysis of SMELS and four IAEA reference materials using Es-Salam research reactor**Journal:** Nuclear Instruments & Methods in Physics Research Section a-Accelerators Spectrometers Detectors and Associated Equipment**Volume:** 682**Pages:** 75-78**Date:** Aug**Short Title:** k(0)-NAA quality assessment in an Algerian laboratory by analysis of SMELS and four IAEA reference materials using Es-Salam research reactor**ISSN:** 0168-9002**DOI:** 10.1016/j.nima.2012.04.042**Accession Number:** WOS:000305659300013

**Abstract:** Different types of synthetic multi-element standard material (SMELS) and four IAEA reference materials, 140, SI-1, Soil-7 and Lichen-336 were analyzed for validation and QC/QA of the k(0)-standardised Neutron Activation Analysis (k(0)-NAA). The samples of SMELS and RMs were irradiated at Es-Salam research reactor and measured on an absolutely calibrated HPGe detector with 35% relative efficiency connected to a Canberra Genie 2k inspector. Concentrations of 33 elements such as As, Au, Ba, Br, Ca, Ce, Co, Cr, Cs, Eu, Fe, Hf, In, K, La, Mn, Mo, Na, Nd, Rb, Sb, Sc, Sc, Sm, Sr, Ta, Tb, Th, Tm, U, Yb, Zn, and Zr were determined in SMELS and RMs. The analytical results agreed well with the assigned values of SMELS and certified values of RMs. In the case of RMs, concentrations of a few elements, whose certified values are not available, could be determined. The comparison between experimental values and assigned/certified data for SMELS and RMs was made by means of the results from Relative Bias, Z-score and U-score. The relative bias of the elements determined in SMELS with respect to the assigned values were all within +/- 4.6%. For RMs with respect to certified values were within +/- 10% except for few elements for which RB varied from -28.6% to +12.8%. The Z-score values at 95% confidence level for most of the elements in both the materials were within +/- 1. The U-scores for most of the elements were lower than 1. (C) 2012 Elsevier BM. All rights reserved.

**Notes:** Hamidatou, L. A. Dekar, S. Boukari, S.**URL:** <Go to ISI>://WOS:000305659300013

**Reference Type: Journal Article****Record Number:** 81**Author:** Harrouche, F. Falkaoui, A. Feniniche, H. Touafek, I.**Year:** 2012**Title:** APPLICATION OF FUZZY LOGIC (FL) IN DIAGNOSIS OF ROTATING MACHINES**Journal:** Icem15: 15th International Conference on Experimental Mechanics**Short Title:** APPLICATION OF FUZZY LOGIC (FL) IN DIAGNOSIS OF ROTATING MACHINES**Article Number:** Unsp 2882**Accession Number:** WOS:000320722902015

**Abstract:** This work deals with the application of the fuzzy logic to automate diagnosis of bearing defects in rotating machines based on vibration signals. The classification tool used is a fuzzy inference system (FIS) of Mamdani type. The vector form of (input) contains parameters extracted from the signals collected from the test bench studied. The output vector contains the classes for the different operating modes of the experimental study. The results show that pretreatment data (filtering, decimation,..), the choice of parameters of fuzzy inference system (input variables and output types and parameters of membership functions associated with different variables input and output of the system, the generation of fuzzy inference rules, ...) are of major importance for the performance of fuzzy inference system used as a tool for fault diagnosis of rotating machinery.

**Notes:** Harrouche, Fateh Falkaoui, Ahmed Feniniche, Hocine Touafek, Ishak SilvaGomes, JF Vaz, MAP 15th International Conference on Experimental Mechanics (ICEM) Jul 22-27, 2012 Univ Porto, Fac Engr (FEUP), Porto, PORTUGAL Portuguese Assoc Expt Mech (APAET), European Soc Expt Mech (EURASEM), Amer Soc Expt Mech (SEM), British Soc Strain Measurement (BSSM), Japanese Soc Mech Engr (JSME), Int Measurement Confederat (IMEKO), Assoc Francaise Mecanique (AFM), European Assoc Dynam Mat (DYMAT), Inst Engenharia Mecanica & Gestao Ind (INEGI), Lab Biomecanica Porto (LABIOMEPE), Lab Nacl Engenharia Civil (LNEC), Fundacao Ciencia & Tecnologia (FCT), DYN CORK Tech Ind, Lda, Amorim Cork Composites, Comissao Coordenacao & Desenvolvimento Reg Norte (CCDRN), Camara Municipal Porto (CMP), Guimaraes, Teatro Nacl S Joao, ABREU PCO 978-972-8826-26-0

**URL:** <Go to ISI>://WOS:000320722902015

**Reference Type: Journal Article****Record Number:** 82**Author:** Hidalgo, N. P. Bouhraoua, R. T. Boukreris, F. Benia, F. Khelil, M. A. Pujade-Villar, J.**Year:** 2012**Title:** NEW APHID RECORDS (HEMIPTERA APHIDIDAE) FROM ALGERIA AND THE NORTHERN AFRICA**Journal:** Redia-Giornale Di Zoologia**Volume:** 95**Pages:** 31-34**Short Title:** NEW APHID RECORDS (HEMIPTERA APHIDIDAE) FROM ALGERIA AND THE NORTHERN AFRICA**ISSN:** 0370-4327**Accession Number:** WOS:000312749000004

**Abstract:** Five species of aphids are recorded for the first time in Algeria: *Aphis hillerislambersi* Nieto Nafria & Mier Durante, *Hyalopterus amygdali* ((E.) Blanchard), *Hyalopterus persikonus* Miller, Lozier & Foottit, *Melanaphis donacis* (Passerini) and *Uroleucon aeneum* (Hille Ris Lambers). The records of *A. hillerislambersi*, *H. persikonus* and *U. aeneum* are also new to the Northern Africa. Two new plant-aphid relationships, previously unknown anywhere in the world, are established for two polyphagous species: *Macrosiphum euphorbiae* on *Galactites tomentosa* and *Myzus persicae* on *Thapsia villosa*. 28 plant-aphid relationships are also recorded for the first time in Algeria.

**Notes:** Perez Hidalgo, Nicolas Bouhraoua, Rachid T. Boukreris, Fatima Benia, Farida Khelil, Mohamed-Anouar Pujade-Villar, Juli

**URL:** <Go to ISI>://WOS:000312749000004

**Reference Type: Journal Article****Record Number:** 83**Author:** Houamer, S. Dal Cappello, C. Charpentier, I. Hervieux, P. A. Roy, A. C.**Year:** 2012**Title:** Comment on "Experimental and theoretical study of the triple-differential cross section for electron-impact ionization of thymine molecules"**Journal:** Physical Review A**Volume:** 86**Issue:** 2**Date:** Aug**Short Title:** Comment on "Experimental and theoretical study of the triple-differential cross section for electron-impact ionization of thymine molecules"**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.86.026701**Article Number:** 026701**Accession Number:** WOS:000307791100017

**Abstract:** In their recent paper, Bellm et al. [Phys. Rev. A 85, 022710 (2012)] performed (e,2e) experiments on thymine at an incident energy of 250 eV. They wrote in the conclusion that a model based on the first Born approximation using the completely neglected differential overlap description is in very good agreement with the experimental data. On the contrary, we argue that this model fails to describe experiments on water performed at the same incident energy and is unable to explain any shift of the binary or recoil peaks.

**Notes:** Houamer, S. Dal Cappello, C. Charpentier, I. Hervieux, P. A. Roy, A. C.**URL:** <Go to ISI>://WOS:000307791100017

**Reference Type: Journal Article****Record Number:** 84**Author:** Houcher, Z. Houcher, B. Touabti, A. Begag, S. Egin, Y. Akar, N.**Year:** 2012**Title:** Nutritional Factors, Homocysteine and C677T Polymorphism of the Methylenetetrahydrofolate Reductase Gene in Algerian Subjects with Cardiovascular Disease**Journal:** Pteridines**Volume:** 23**Issue:** 1**Pages:** 14-21**Date:** Mar**Short Title:** Nutritional Factors, Homocysteine and C677T Polymorphism of the Methylenetetrahydrofolate Reductase Gene in Algerian Subjects with Cardiovascular Disease**ISSN:** 0933-4807**Accession Number:** WOS:000307700500003

**Abstract:** The C677T variant of methylenetetrahydrofolate reductase (MTHFR), a key enzyme in the remethylation of homocysteine (HCY) to methionine, is a frequent genetic cause of moderate hyperhomocysteinemia (HHCY) among individuals with cardiovascular disease (CVD), and particularly when combined with other factors such as hyperlipidaemia. However, in Algeria the influence of nutrient-gene interactions is not known. The aim of the present study was to explore the influence of age and gender, together with folate status, on the association between the C677T MTHFR polymorphism and plasma total HCY (tHCY) concentrations. This research was carried out as a prospective study on 98 patients hospitalized in the Cardiology Section, University of Setif, Algeria. Mean age of participants was 57 y (range 20-96 y). The genetic analysis of the MTHFR C677T polymorphism was performed by real-time polymerase chain reaction (PCR) performed on Light Cycler in borosilicate capillaries with MTHFR 677CT polymorphism detection kit. The concentrations of tHCY, folic acid vitamin B-12 levels were determined using a competitive immunoassay on the IMMULITE 1000 Analyzers. Plasma total cholesterol, triglycerides, glucose, creatinine and urea concentrations were measured by colorimetric methods. Assays were conducted according to the manufacturers' instructions. Plasma tHCY was significantly higher in the patients with CVD, and HHCY was associated with the presence of mildly elevated serum urea and creatinine ( $p < 0.05$ ). MTHFR gene mutation does not seem to be associated with elevation of plasma tHCY in the studied patients and this lack of correlation could be influenced by the higher folate concentrations in our study. CVD patients with 677CT/TT genotypes had a higher concentration of total cholesterol than those with 677CC genotype ( $p < 0.05$ ). Although, the presence of 677T variant together with hypofolatemia ( $< 15.4$  ng/ml) had a more detrimental effect on the level of total cholesterol ( $p < 0.05$ ). Folate and vitamin B-12 were much higher in 677CC genotype compared to 677CT/TT genotype in CVD subjects without hyperlipidemia ( $p < 0.05$ ). However in patients with hyperlipidemia these values became lower also with 677CC genotype. In conclusion, hyperlipidemia affects the levels of plasma folate and vitamin B-12 concentrations independent of mutated MTHFR genotype. The effect of 677T variant on total cholesterol, folate and vitamin B-12 concentrations may relate to possible adverse effects of elevated tHCY on lipid profiles and on plasma folate and vitamin B12

**Notes:** Houcher, Zahira Houcher, Bakhouch Touabti, Abderrezak Begag, Samia Egin, Yonca Akar, Nejat**URL:** <Go to ISI>://WOS:000307700500003

**Reference Type: Journal Article****Record Number:** 85**Author:** Iratni, A. Katebi, R. Mostefai, M.**Year:** 2012**Title:** On-line robust nonlinear state estimators for nonlinear bioprocess systems**Journal:** Communications in Nonlinear Science and Numerical Simulation**Volume:** 17**Issue:** 4**Pages:** 1739-1752**Date:** Apr**Short Title:** On-line robust nonlinear state estimators for nonlinear bioprocess systems**ISSN:** 1007-5704**DOI:** 10.1016/j.cnsns.2011.09.032**Accession Number:** WOS:000297893800025

**Abstract:** This paper presents the design of a new robust nonlinear estimator for estimation of states of nonlinear systems. Two approaches are considered based on the state-dependent Riccati equation formulation and the technique of H-infinity control design. The proposed method differs from other well-known state estimators, because not only nonlinear dynamics but also the robustness is taken into account. The proposed method is implemented and tested on a biological wastewater system. The simulation study compares the Extended Kalman Estimator (EKE), the State-Dependent Riccati Estimator (SDRE), and the Extended H-infinity Estimator (EHE) with a new proposed State Dependent H-infinity Estimator (SDHE). The results are compared for different weather conditions, i.e. dry, rain and storm, showing a superior performance of the proposed method. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Iratni, A. Katebi, R. Mostefai, M.**URL:** <Go to ISI>://WOS:000297893800025

**Reference Type: Journal Article****Record Number:** 86**Author:** Kadem, A. Baleanu, D.**Year:** 2012**Title:** Two-dimensional transport equation as Fredholm integral equation**Journal:** Communications in Nonlinear Science and Numerical Simulation**Volume:** 17**Issue:** 2**Pages:** 530-535**Date:** Feb**Short Title:** Two-dimensional transport equation as Fredholm integral equation**ISSN:** 1007-5704**DOI:** 10.1016/j.cnsns.2011.01.027**Accession Number:** WOS:000295995400007

**Abstract:** The transport equation has many applications in various fields of science and engineering. In this paper we shown that we can transform a transport equation in two-dimensional case into a Fredholm integral equation of the second kind with a compact integral operator for the angular flux by using the Sumudu transform. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Kadem, Abdelouahab Baleanu, Dumitru**URL:** <Go to ISI>://WOS:000295995400007

**Reference Type: Journal Article****Record Number:** 87**Author:** Kadem, A. Kilicman, A.**Year:** 2012**Title:** The Approximate Solution of Fractional Fredholm Integrodifferential Equations by Variational Iteration and Homotopy Perturbation Methods**Journal:** Abstract and Applied Analysis**Short Title:** The Approximate Solution of Fractional Fredholm Integrodifferential Equations by Variational Iteration and Homotopy Perturbation Methods**ISSN:** 1085-3375**DOI:** 10.1155/2012/486193**Article Number:** 486193**Accession Number:** WOS:000304992900001**Abstract:** Variational iteration method and homotopy perturbation method are used to solve the fractional Fredholm integrodifferential equations with constant coefficients. The obtained results indicate that the method is efficient and also accurate.**Notes:** Kadem, Abdelouahab Kilicman, Adem**URL:** <Go to ISI>://WOS:000304992900001

**Reference Type: Journal Article****Record Number:** 88**Author:** Kahoul, A. Aylikci, V. Aylikci, N. K. Cengiz, E. Apaydin, G.**Year:** 2012**Title:** Updated database and new empirical values for K-shell fluorescence yields**Journal:** Radiation Physics and Chemistry**Volume:** 81**Issue:** 7**Pages:** 713-727**Date:** Jul**Short Title:** Updated database and new empirical values for K-shell fluorescence yields**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2012.03.006**Accession Number:** WOS:000305656800001

**Abstract:** The measured K-shell fluorescence yield values that were reported in the literature from 1994 to 2011 were reviewed and presented in a table form (about 341 new measurements). The Weighted-mean values of experimental data were fitted by the analytical function to deduce new empirical K-shell fluorescence yields for a broad range of elements. The results were compared with the other theoretical, experimental and semi-empirical values reported in the literature. Reasonable agreement was typically obtained between our result and other works. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Kahoul, A. Aylikci, V. Aylikci, N. Kup Cengiz, E. Apaydin, G.**URL:** <Go to ISI>://WOS:000305656800001

**Reference Type: Journal Article****Record Number:** 89**Author:** Kahoul, A. Aylikci, V. Aylikci, N. K. Cengiz, E. Apaydin, G.**Year:** 2012**Title:** Updated database and new empirical values for K-shell fluorescence yields**Journal:** Radiation Physics and Chemistry**Volume:** 81**Issue:** 7**Pages:** 713-727**Date:** Jul**Short Title:** Updated database and new empirical values for K-shell fluorescence yields**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2012.03.006**Accession Number:** WOS:000305656800001

**Abstract:** The measured K-shell fluorescence yield values that were reported in the literature from 1994 to 2011 were reviewed and presented in a table form (about 341 new measurements). The Weighted-mean values of experimental data were fitted by the analytical function to deduce new empirical K-shell fluorescence yields for a broad range of elements. The results were compared with the other theoretical, experimental and semi-empirical values reported in the literature. Reasonable agreement was typically obtained between our result and other works. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Kahoul, A. Aylikci, V. Aylikci, N. Kup Cengiz, E. Apaydin, G.**URL:** <Go to ISI>://WOS:000305656800001

**Reference Type: Journal Article****Record Number:** 90**Author:** Kebiche, H. Debarnot, D. Merzouki, A. Poncin-Epaillard, F. Haddaoui, N.**Year:** 2012**Title:** Relationship between ammonia sensing properties of polyaniline nanostructures and their deposition and synthesis methods**Journal:** Analytica Chimica Acta**Volume:** 737**Pages:** 64-71**Date:** Aug**Short Title:** Relationship between ammonia sensing properties of polyaniline nanostructures and their deposition and synthesis methods**ISSN:** 0003-2670**DOI:** 10.1016/j.aca.2012.06.003**Accession Number:** WOS:000306630800007

**Abstract:** The ammonia absorption properties of polyaniline nanostructures are studied in terms of sensitivity, response and recovery times and stability. These characteristics are obtained by measuring, at room temperature, the absorbance variations at 632 nm. The nanostructures are synthesized either by interfacial or rapid or dropwise polymerizations with the oxidant-to-monomer mole ratio equals to 0.5 or 1. The influence of the deposition method (in-situ or drop-coating technique) as well as the nature of the dopant (HCl CSA or I-2) on the gas detection properties are also studied. The results show a strong dependence of the morphology on the deposition method, the in-situ technique leads to the best sensitivity and response time. For this deposition method, the nanostructures sensitivity, response time and regeneration rate depend on the synthesis method, the dopant and the mole ratio. The ageing effect after 8 months under ambient conditions and the mechanism of interaction between the polyaniline nanostructures and ammonia molecules are also presented. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Kebiche, H. Debarnot, D. Merzouki, A. Poncin-Epaillard, F. Haddaoui, N.**URL:** <Go to ISI>://WOS:000306630800007

**Reference Type: Journal Article****Record Number:** 91**Author:** Kessal, A. Rahmani, L. Gaubert, J. P. Mostefai, M.**Year:** 2012**Title:** Experimental design of a fuzzy controller for improving power factor of boost rectifier**Journal:** International Journal of Electronics**Volume:** 99**Issue:** 12**Pages:** 1611-1621**Short Title:** Experimental design of a fuzzy controller for improving power factor of boost rectifier**ISSN:** 0020-7217**DOI:** 10.1080/00207217.2012.680788**Accession Number:** WOS:000310605200001

**Abstract:** This article presents the design and the implementation of dSPACE DS1104 controller board-based PI and fuzzy logic peak current-mode controllers in the voltage loop and two controllers in the current loop based first on a standard fixed hysteresis band control, followed by a variable hysteresis band control to achieve constant switching frequency for a single-phase active power factor corrector in the continuous conduction mode. All these controllers have been verified via simulation in Simulink and a real-time implementation is performed on an experimental test bench utilising a rapid prototyping tool. The controllers are experimentally compared for steady-state performance and transient response. It is shown that the PI and fuzzy logic controllers give a superior steady-state performance, whereas the fuzzy logic inference based controller can achieve better dynamic response than its PI counterpart under large load disturbance and plant uncertainties. Furthermore, the variable hysteresis band control in the current loop gives a low total harmonic distortion of the input current compared to a standard fixed hysteresis band control.

**Notes:** Kessal, Abdelhalim Rahmani, Lazhar Gaubert, Jean-Paul Mostefai, Mohammed**URL:** <Go to ISI>://WOS:000310605200001

**Reference Type: Journal Article****Record Number:** 92**Author:** Kessal, A. Rahmani, L. Mostefai, M. Gaubert, J.**Year:** 2012**Title:** Power Factor Correction based on Fuzzy Logic Controller with Fixed Switching Frequency**Journal:** Elektronika Ir Elektrotechnika**Issue:** 2**Pages:** 67-72**Short Title:** Power Factor Correction based on Fuzzy Logic Controller with Fixed Switching Frequency**ISSN:** 1392-1215**DOI:** 10.5755/j01.eee.118.2.1176**Accession Number:** WOS:000300916300014

**Abstract:** A. Kessal, L. Rahmani, M. Mostefai, J. Gaubert. Power Factor Correction based on Fuzzy Logic Controller with Fixed Switching Frequency // Electronics and Electrical Engineering. - Kaunas: Technologija, 2012. - No. 2(118). - P. 67-72. This paper presents an application of different methods to regulate the output voltage of AC-DC converter associated with power factor corrector (PFC), a classical PI regulator was used, and another based on fuzzy logic was built, the both regulators were inserted in the voltage loop. To reduce the total harmonic distortion of the input current to give it a sinusoidal shape, hysteresis bands control were used, the variable band hysteresis give better results compared to other bands. All these controllers have been verified via simulation in Simulink and experimental test. The fuzzy logic inference based controller can achieve better dynamic response than its PI counterpart under large load disturbance and plant uncertainties. Furthermore, the variable hysteresis band control in the current loop gives a low THD of the input current compared to classical bands control. Ill. 12, bibl. 10, tabl. 2 (in English; abstracts in English and Lithuanian).

**Notes:** Kessal, A. Rahmani, L. Mostefai, M. Gaubert, J.**URL:** <Go to ISI>://WOS:000300916300014

**Reference Type: Journal Article****Record Number:** 93**Author:** Kharfi, F. Denden, O. Bourenane, A. Bitam, T. Ali, A.**Year:** 2012**Title:** Spatial resolution limit study of a CCD camera and scintillator based neutron imaging system according to MTF determination and analysis**Journal:** Applied Radiation and Isotopes**Volume:** 70**Issue:** 1**Pages:** 162-166**Date:** Jan**Short Title:** Spatial resolution limit study of a CCD camera and scintillator based neutron imaging system according to MTF determination and analysis**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2011.09.020**Accession Number:** WOS:000297901400026

**Abstract:** Spatial resolution limit is a very important parameter of an imaging system that should be taken into consideration before examination of any object. The objectives of this work are the determination of a neutron imaging system's response in terms of spatial resolution. The proposed procedure is based on establishment of the Modulation Transfer Function (MTF). The imaging system being studied is based on a high sensitivity CCD neutron camera ( $2 \times 10^{-5}$  lx at f1.4). The neutron beam used is from the horizontal beam port (H.6) of the Algerian Es-Salam research reactor. Our contribution is on the MTF determination by proposing an accurate edge identification method and a line spread function undersampling problem-resolving procedure. These methods and procedure are integrated into a MatLab code. The methods, procedures and approaches proposed in this work are available for any other neutron imaging system and allow for judging the ability of a neutron imaging system to produce spatial (internal details) properties of any object under examination. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Kharfi, F. Denden, O. Bourenane, A. Bitam, T. Ali, A.**URL:** <Go to ISI>://WOS:000297901400026

**Reference Type: Journal Article****Record Number:** 94**Author:** Khelladi, M. R. Mentar, L. Azizi, A. Kadirgan, F. Schmerber, G. Dinia, A.**Year:** 2012**Title:** Nucleation, growth and properties of Co nanostructures electrodeposited on n-Si(1 1 1)**Journal:** Applied Surface Science**Volume:** 258**Issue:** 8**Pages:** 3907-3912**Date:** Feb**Short Title:** Nucleation, growth and properties of Co nanostructures electrodeposited on n-Si(1 1 1)**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2011.12.060**Accession Number:** WOS:000300185800090

**Abstract:** In the present work, cobalt thin films deposited directly on n-Si(111) surfaces by electrodeposition in Watts bath have been investigated. The electrochemical deposition and properties of deposits were studied using cyclic voltammetry (CV), chronoamperometry (CA), ex situ atomic force microscopy (AFM), X-ray diffraction (XRD) and alternating gradient field magnetometer (AGFM) techniques. The nucleation and growth kinetics at the initial stages of Co studied by current transients indicate a 3D island growth (Volmer-Weber); it is characterized by an instantaneous nucleation mechanism followed by diffusion limited growth. According to this model, the estimated nucleus density and diffusion coefficient are on the order of magnitude of  $10^6 \text{ cm}^{-2}$  and  $10^{-5} \text{ cm}^2 \text{ s}^{-1}$ , respectively. AFM characterization of the deposits shows a granular structure of the electrodeposited layers. XRD measurements indicate a small grain size with the presence of a mixture of hcp and fcc Co structures. The hysteresis loops with a magnetic field in the parallel and perpendicular direction and showed that the easy magnetization axis of Co thin film is in the film plane. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Khelladi, Mohamed Redha Mentar, Loubna Azizi, Amor Kadirgan, Figen Schmerber, Guy Dinia, Aziz

**URL:** <Go to ISI>://WOS:000300185800090

**Reference Type: Journal Article****Record Number:** 95**Author:** Khelladi, M. R. Mentar, L. Azizi, A. Makhloufi, L. Schmerber, G. Dinia, A.**Year:** 2012**Title:** The potential dependence of Co-Cu alloy thin films electrodeposited on n-Si(100) substrate**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 23**Issue:** 12**Pages:** 2245-2250**Date:** Dec**Short Title:** The potential dependence of Co-Cu alloy thin films electrodeposited on n-Si(100) substrate**ISSN:** 0957-4522**DOI:** 10.1007/s10854-012-0784-8**Accession Number:** WOS:000310955900025

**Abstract:** The aim of this work is to study the effect of the deposition potential on the properties of Co-Cu alloy thin films on n-type Si substrate. Voltammetric measurements showed that the potential dissolution of Co and consequently the composition of the films depend greatly on the applied potentials. The compositional measurement, which was made using an atomic absorption spectroscopy (AAS), demonstrated that the Co content of the films considerably increases as the applied potentials tend toward negative values. SEM micrographs revealed a transition of branched dendritic structures to well covered, agglomerated and compact alloy morphology with increased Co concentrations in the deposits. X-ray diffraction analysis showed that the films crystallize in varieties of phases; a mixture of Co fcc and hcp, and Cu fcc structures, greatly related to applied potential. The increase of the applied potential induces a decrease in the grain size and the lattice constant. The magnetization of the alloys was found to be enhanced for high Co concentrations and consequently at high deposition potential.

**Notes:** Khelladi, M. R. Mentar, L. Azizi, A. Makhloufi, L. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000310955900025

**Reference Type: Journal Article****Record Number:** 96**Author:** Khelladi, M. R. Mentar, L. Boubatra, M. Azizi, A.**Year:** 2012**Title:** Study of nucleation and growth process of electrochemically synthesized ZnO nanostructures**Journal:** Materials Letters**Volume:** 67**Issue:** 1**Pages:** 331-333**Date:** Jan**Short Title:** Study of nucleation and growth process of electrochemically synthesized ZnO nanostructures**ISSN:** 0167-577X**DOI:** 10.1016/j.matlet.2011.09.098**Accession Number:** WOS:000298272200094

**Abstract:** The electrodeposition of ZnO nanostructures on ITO substrates was investigated by cyclic voltammetry, chronoamperometry and X-ray diffraction techniques. The potential deposition-dependent nucleation and growth mechanism of electrodeposited ZnO were studied by using the Scharifker-Hills nucleation model. From the analysis of the experimental current transients, the nucleation is in a good agreement with the instantaneous nucleation and three-dimensional (3D) diffusion-limited growth. X-ray diffraction measurements indicated that the as-grown films were of hexagonal wurtzite phase with a high crystalline quality. (C) 2011 Elsevier B.V. All rights reserved.

**Notes:** Khelladi, M. R. Mentar, L. Boubatra, M. Azizi, A.**URL:** <Go to ISI>://WOS:000298272200094

**Reference Type: Journal Article****Record Number:** 97**Author:** Khellaf, S. Khoffi, F. Tabet, H. Lallam, A. Bouhelal, S. Cagiao, M. E. Benachour, D. BaltaCalleja, F. J.**Year:** 2012**Title:** Study of iPP crosslinking by means of dynamic and steady rheology measurements**Journal:** Journal of Applied Polymer Science**Volume:** 124**Issue:** 4**Pages:** 3184-3191**Date:** May**Short Title:** Study of iPP crosslinking by means of dynamic and steady rheology measurements**ISSN:** 0021-8995**DOI:** 10.1002/app.34996**Accession Number:** WOS:000299947100058

**Abstract:** The crosslinking of isotactic polypropylene (iPP) using crosslinking agents (CAs) based on a peroxide/sulfur/accelerator system is a very attractive new method that has been reported recently. The present work deals with the study of the dynamic rheological behavior of iPP during and after the crosslinking process. The influence of the CA concentration and the processing temperature T on the rheological behavior of the iPP was analyzed. The kinetics of the crosslinking reaction was established using the technique described by G. A. Harpell and D. H. Walrod. This reaction is found to be of order one. At T = 180 degrees C, the crosslinking reaction was faster. By varying the crosslinking agent content, different crosslinking degrees of iPP, expressed by the corresponding gel content, are achieved. On the other hand, the modified polypropylene exhibits an unexpected viscosity-shear rate pattern, which describes the reverse crosslinking reaction mainly occurring by the opening of the bridges of the new interpenetrating network (IPN) formed. (C) 2011 Wiley Periodicals, Inc. J Appl Polym Sci, 2012

**Notes:** Khellaf, S. Khoffi, F. Tabet, H. Lallam, A. Bouhelal, S. Cagiao, M. E. Benachour, D. BaltaCalleja, F. J.**URL:** <Go to ISI>://WOS:000299947100058

**Reference Type: Journal Article****Record Number:** 98**Author:** Kim, H. K. Schoffler, M. S. Houamer, S. Chuluunbaatar, O. Titze, J. N. Schmidt, L. P. H. Jahnke, T. Schmidt-Bocking, H. Galstyan, A. Popov, Y. V. Doerner, R.**Year:** 2012**Title:** Electron transfer in fast proton-helium collisions**Journal:** Physical Review A**Volume:** 85**Issue:** 2**Date:** Feb**Short Title:** Electron transfer in fast proton-helium collisions**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.85.022707**Article Number:** 022707**Accession Number:** WOS:000300237000005

**Abstract:** We have measured the electron-transfer process in fast collisions (630-1200 keV/u) of protons with helium, which is dependent on the projectile scattering angle and the final electronic state. The fully differential data accompanied by theoretical second-order perturbation theory allow a detailed insight into the mechanism of electron-transfer processes.

**Notes:** Kim, Hong-Keun Schoeffler, M. S. Houamer, S. Chuluunbaatar, O. Titze, J. N. Schmidt, L. Ph H. Jahnke, T. Schmidt-Boecking, H. Galstyan, A. Popov, Yu V. Doerner, R.

**URL:** <Go to ISI>://WOS:000300237000005

**Reference Type: Journal Article****Record Number:** 99**Author:** Kolli, M. Hamidouche, M. Bouaouadja, N. Fantozzi, G.**Year:** 2012**Title:** THERMOMECHANICAL CHARACTERIZATION OF A FIRE CLAY REFRACTORY MADE OF ALGERIAN KAOLIN**Journal:** Annales De Chimie-Science Des Materiaux**Volume:** 37**Issue:** 2-4**Pages:** 71-84**Date:** Mar-Aug**Short Title:** THERMOMECHANICAL CHARACTERIZATION OF A FIRE CLAY REFRACTORY MADE OF ALGERIAN KAOLIN**ISSN:** 0151-9107**DOI:** 10.3166/acsm.37.71-84**Accession Number:** WOS:000316162500002

**Abstract:** The thermomechanical behaviour of a mullitic refractory made of Algerian kaolin was investigated. Bending tests reveal that the behaviour was linear until 900 degrees C and became visco-plastic at 1000 degrees C. A maximum of strength (33 MPa) was reached at 900 degrees C where a crack bridging strengthening process was reported. The elaborated refractory presents a maximum elastic modulus of (8.21 GPa) at 700 degrees C due to the crack healing phenomenon. The calculated apparent activation energy for creep deformation is about 335 kJ/mole ( $T \leq 1050$  degrees C). For the highest temperature ( $> 1050$  degrees C), an increase of the activation energy was recorded. Cyclic thermal shocks realized from 950 degrees C into a water bath kept at ambient temperature show that the elaborated refractory can be classified as a good thermal shock resistant material.

**Notes:** Kolli, Mostafa Hamidouche, Mohamed Bouaouadja, Noureddine Fantozzi, Gilbert**URL:** <Go to ISI>://WOS:000316162500002

**Reference Type: Journal Article****Record Number:** 100**Author:** Labraoui, N. Gueroui, M. Aliouat, M.**Year:** 2012**Title:** Secure DV-Hop localization scheme against wormhole attacks in wireless sensor networks**Journal:** Transactions on Emerging Telecommunications Technologies**Volume:** 23**Issue:** 4**Pages:** 303-316**Date:** Jun**Short Title:** Secure DV-Hop localization scheme against wormhole attacks in wireless sensor networks**ISSN:** 2161-3915**DOI:** 10.1002/ett.1532**Accession Number:** WOS:000305691700002

**Abstract:** Localization is an important topic in mobile wireless ad hoc and sensor networks, which has received considerable attention from the research community during the past few decades. In many sensor networks applications, location awareness is useful or even necessary. However, because of their key role in wireless sensor networks, localization systems can be the target of an attack that could compromise the entire functioning of a wireless sensor network. In this paper, we present a novel defense mechanism against wormhole attacks in DV-Hop localization algorithm. The main idea of our approach is to plug in a proactive countermeasure to the basic DV-Hop scheme called Infection prevention. We choose the wormhole attack as our defending target because it is a particularly challenging attack that can be successfully launched without compromising any nodes or having access to any cryptographic keys. Using analysis and simulation, we show that our solution is effective in detecting and defending against wormhole attacks with a high detection rate. Copyright (c) 2011 John Wiley & Sons, Ltd.

**Notes:** Labraoui, Nabila Gueroui, Mourad Aliouat, Makhoulf**URL:** <Go to ISI>://WOS:000305691700002

**Reference Type: Journal Article****Record Number:** 101**Author:** Laib, S. Djahli, F. Mayouf, A. Carru, J. C. Devers, T.**Year:** 2012**Title:** A generalized CAD model for the full-wave modeling of Coplanar striplines discontinuities**Journal:** International Journal of Numerical Modelling-Electronic Networks Devices and Fields**Volume:** 25**Issue:** 1**Pages:** 82-95**Date:** Jan-Feb**Short Title:** A generalized CAD model for the full-wave modeling of Coplanar striplines discontinuities**ISSN:** 0894-3370**DOI:** 10.1002/jnm.816**Accession Number:** WOS:000298577700007

**Abstract:** In this work, the coplanar stripline (CPS) and its discontinuities: open-end, short-end, gaps and resonator have been modeled. New integral equations for the electrical field components are formulated, in the spectral domain, using an exact dyadic Green's function, applied to the CPS structure. The use of this form of Green's function allows the consideration of the effects of the dielectric losses, the surface wave excitation and the space wave radiation on the propagation characteristics of the CPS and its discontinuities. The resulting integral equation has been solved using the two-dimensional Galerkin's technique. The resolution of the resulting matrix equation gives the scattering parameters of the studied structures. The obtained results are commented and compared with those of other approaches and measurements. Copyright (C) 2011 John Wiley & Sons, Ltd.

**Notes:** Laib, S. Djahli, F. Mayouf, A. Carru, J. -C. Devers, T.**URL:** <Go to ISI>://WOS:000298577700007

**Reference Type: Journal Article****Record Number:** 102**Author:** Layadi, A.**Year:** 2012**Title:** Exchange coupled bilayer thin films with tilted out-of-plane anisotropy easy axis**Journal:** Journal of Applied Physics**Volume:** 112**Issue:** 7**Date:** Oct**Short Title:** Exchange coupled bilayer thin films with tilted out-of-plane anisotropy easy axis**ISSN:** 0021-8979**DOI:** 10.1063/1.4754805**Article Number:** 073901**Accession Number:** WOS:000310489400070

**Abstract:** The ferromagnetic resonance (FMR) modes are worked out for the case of exchange coupled bilayer thin films where the anisotropy axis in the ferromagnetic film is tilted out of the plane. General formulas are obtained for the mode position, frequency and field linewidths, and intensity for an arbitrary tilt angle. The analysis is then applied for the in-plane, weak and strong perpendicular anisotropies. Analytical expressions for the magnetization curve and the FMR modes are derived. It will be shown how the exchange anisotropy field  $H_E$ , the uniaxial anisotropy  $H_K$ , and the magnetization angle are related to the FMR spectrum characteristics and how they can be found in a straightforward manner. (C) 2012 American Institute of Physics.

[<http://dx.doi.org/10.1063/1.4754805>]**Notes:** Layadi, A.**URL:** <Go to ISI>://WOS:000310489400070

**Reference Type: Journal Article****Record Number:** 103**Author:** Litimein, F. Khenata, R. Bouhemadou, A. Al-Douri, Y. Bin Omran, S.**Year:** 2012**Title:** First-principle calculations to investigate the elastic and thermodynamic properties of RBRh3 (R = Sc, Y and La) perovskite compounds**Journal:** Molecular Physics**Volume:** 110**Issue:** 2**Pages:** 121-128**Short Title:** First-principle calculations to investigate the elastic and thermodynamic properties of RBRh3 (R = Sc, Y and La) perovskite compounds**ISSN:** 0026-8976**DOI:** 10.1080/00268976.2011.635607**Accession Number:** WOS:000300402900005

**Abstract:** We have performed first-principle calculations using the full-potential linear augmented plane wave (FP-LAPW) method within density functional theory (DFT) to investigate the structural, elastic and thermodynamic properties of the cubic perovskite RBRh3 (R = Sc, Y and La) compounds. The exchange-correlation potential is treated within the generalized gradient approximation of Perdew-Burke-Ernzerhof (GGA-PBE). Single-crystal elastic constants are calculated using the total energy variation versus strain technique, then the shear modulus, Young's modulus, Poisson's ratio and anisotropic factor are derived for polycrystalline RBRh3 using the Voigt-Reuss-Hill approximations. Analysis of the calculated elastic constants  $C_{ij}$  and B/G ratios shows that these compounds are mechanically stable and ductile in nature. Using the quasi-harmonic Debye model, the effect of pressure P and temperature T on the lattice parameter  $a(0)$ , bulk modulus B-0, thermal expansion coefficient  $\alpha$ , Debye temperature  $\theta(D)$  and the heat capacity C-v for these compounds are investigated for the first time. The computed structural and elastic constants are in good agreement with the available experimental and theoretical data.

**Notes:** Litimein, F. Khenata, R. Bouhemadou, A. Al-Douri, Y. Bin Omran, S.**URL:** <Go to ISI>://WOS:000300402900005

**Reference Type: Journal Article****Record Number:** 104**Author:** Longrois, D. Gomez, I. Foudi, N. Topal, G. Dhaouadi, M. Kotelevets, L. Chastre, E. Norel, X.**Year:** 2012**Title:** Prostaglandin E-2 induced contraction of human intercostal arteries is mediated by the EP3 receptor**Journal:** European Journal of Pharmacology**Volume:** 681**Issue:** 1-3**Pages:** 55-59**Date:** Apr**Short Title:** Prostaglandin E-2 induced contraction of human intercostal arteries is mediated by the EP3 receptor**ISSN:** 0014-2999**DOI:** 10.1016/j.ejphar.2012.01.041**Accession Number:** WOS:000301799400008

**Abstract:** Arterial vascularization of the spinal cord may be mechanically or functionally altered during thoracoabdominal surgery/ intravascular procedures. Increased arterial pressure has been shown to restore spinal perfusion and function probably by increasing the blood flow through the intercostal arteries. The regulation of human intercostal artery (HICA) vascular tone is not well documented. Prostaglandin (PG) E-2 concentration is increased during inflammatory conditions and has been shown to regulate vascular tone in many preparations. In this context, the pharmacological response of HICA to PGE<sub>2</sub> and the characterization of the PGE<sub>2</sub> receptor subtypes (EP<sub>1</sub>, EP<sub>2</sub>, EP<sub>3</sub> or EP<sub>4</sub>) involved are of importance and that is the aim of this study. Rings of HICA were prepared from 29 patients and suspended in organ baths for isometric recording of tension. Cumulative concentration-response curves were performed in these preparations with various EP receptor agonists in the absence or presence of different receptor antagonists or inhibitors. PGE<sub>2</sub> induced the contraction of HICA (E-max=7.28 +/- 0.16 g; pEC<sub>50</sub> value=0.79 +/- 0.18; n=17); contractions were also observed with the EP<sub>3</sub> receptor agonists, sulprostone, 17-phenyl-PGE<sub>2</sub>, misoprostol or ONO-AE-248. In conclusion, PGE<sub>2</sub> induced vasoconstriction of HICA via EP<sub>3</sub> receptor subtypes and this result was confirmed by the use of selective EP receptor antagonists (L-826266, ONO-8713, SC-51322) and by a strong detection of EP<sub>3</sub> mRNA. These observations suggest that in the context of perioperative inflammation, increased PGE<sub>2</sub> concentrations could trigger vasoconstriction of HICA and possibly alter spinal vascularization. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Longrois, Dan Gomez, Ingrid Foudi, Nabil Topal, Gokce Dhaouadi, Malek Kotelevets, Larissa Chastre, Eric Norel, Xavier**URL:** <Go to ISI>://WOS:000301799400008

**Reference Type: Journal Article****Record Number:** 105**Author:** Mahgoun, H. Bekka, R. E. Felkaoui, A.**Year:** 2012**Title:** Gearbox fault diagnosis using ensemble empirical mode decomposition (EEMD) and residual signal**Journal:** Mechanics & Industry**Volume:** 13**Issue:** 1**Pages:** 33-44**Short Title:** Gearbox fault diagnosis using ensemble empirical mode decomposition (EEMD) and residual signal**ISSN:** 2257-7777**DOI:** 10.1051/meca/2011150**Accession Number:** WOS:000311264300005

**Abstract:** This paper presents the application of new Lime frequency method, ensemble empirical mode decomposition (EEMD), in purpose to detect localized faults of damage at an early stage. EEMD is a self adaptive analysis method for non-linear and non-stationary signals and it was recently proposed by Huang and Wu to overcome the drawbacks of the traditional empirical mode decomposition (EMD). The vibration signal is usually noisy. To detect the fault at an early stage of its development, generally the residual signal is used. There exist different methods in literature to calculate the residual signal, in this paper we mention some of them and we propose a new method which is based on EEMD. The results given by the different methods are compared by using simulated and experimental signals.

**Notes:** Mahgoun, Hafida Bekka, Rais Elhadi Felkaoui, Ahmed**URL:** <Go to ISI>://WOS:000311264300005

**Reference Type: Journal Article****Record Number:** 106**Author:** Mami, N. A.**Year:** 2012**Title:** INCREASING SELF-EFFICACY TOWARDS ICT IN THE ALGERIAN HIGHER EDUCATION**Journal:** 5th International Conference of Education, Research and Innovation (Iceri 2012)**Pages:** 4702-4706**Short Title:** INCREASING SELF-EFFICACY TOWARDS ICT IN THE ALGERIAN HIGHER EDUCATION**Accession Number:** WOS:000318422204101

**Abstract:** The introduction of the MD system in the Algerian university has created a situation of distress on how to apply the Bologna principles in the Algerian Higher Education. The increasing nature of the socio-economic demand, the emergent need of creating job opportunities in collaboration with the industrial needs nationally and internationally and the widespread use of Information and Communication Technologies were all challenging imperatives that imposed an adjacent policy for Higher Education in Algeria. On the other hand, the increasing number of students enrolling at Tertiary Education makes it difficult to cope up with the quality demand of an elitist formation. In this critical sightseeing, Algeria has to increase self-efficacy in using ICT in order to stay in line with the international educational standards. The world ranking of universities reveals that much needs to be done in order to establish quality assurance at the level of Higher Education. To do so, a number of measures have been set by the Ministry of Higher Education and Scientific Research in order to encourage research and to generalize ICT opportunities. In this paper, I shall present a case study of how to better implement ICT use at university level in order to succeed in promoting education nationally and internationally on a win-win basis.

**Notes:** Mami, Naouel Abdellatif Chova, LG Martinez, AL Torres, IC 5th International Conference of Education, Research and Innovation (ICERI) Nov 19-21, 2012 Madrid, SPAIN 978-84-616-0763-1

**URL:** <Go to ISI>://WOS:000318422204101

**Reference Type: Journal Article****Record Number:** 107**Author:** Maouche, N. Guergouri, M. Gam-Derouich, S. Jouini, M. Nessark, B. Chehimi, M. M.**Year:** 2012**Title:** Molecularly imprinted polypyrrole films: Some key parameters for electrochemical picomolar detection of dopamine**Journal:** Journal of Electroanalytical Chemistry**Volume:** 685**Pages:** 21-27**Date:** Oct**Short Title:** Molecularly imprinted polypyrrole films: Some key parameters for electrochemical picomolar detection of dopamine**ISSN:** 1572-6657**DOI:** 10.1016/j.jelechem.2012.08.020**Accession Number:** WOS:000311881300004

**Abstract:** Dopamine-imprinted polypyrrole films were electrochemically prepared on glassy carbon electrodes in aqueous solutions of pyrrole, dopamine (DA) and LiClO<sub>4</sub> as supporting electrolyte. Cyclic voltammetry and chronoamperometry were compared as electropolymerization methods. The dopamine template molecule was successfully trapped in the polypyrrole (PPy) film where it created artificial recognition sites. After extraction of the template, the PPy film acted as a molecularly imprinted polymer (MIP) for the specific and selective recognition of dopamine whereas the non imprinted polymer (NIP) film did not exhibit any oxidation peak which demonstrates that the imprinted PPy films are specific towards dopamine. The performance of the MIP films was optimized by selecting chronoamperometry rather than cyclic voltammetry as a method of MIP preparation, however for a short electropolymerization time of 15 s. The optimal thickness for the detection of dopamine was 100 nm. The dopamine-imprinted PPy films were found to selectively detect dopamine against the interferents ascorbic acid (AA), 2-phenyl ethylamine (PEA) and noradrenaline (NAD). The limit of detection (LOD), achieved via square wave voltammetry was as low as 5.7 pmol L<sup>-1</sup>. This work highlights the possibility to design, via a simple and rapid electrochemical fabrication procedure, molecularly imprinted polymer films for specific, selective and ultrasensitive electroanalysis of molecules. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Maouche, Naima Guergouri, Mounia Gam-Derouich, Sarra Jouini, Mohamed Nessark, Belkacem Chehimi, Mohamed M.**URL:** <Go to ISI>://WOS:000311881300004

**Reference Type: Journal Article****Record Number:** 108**Author:** Marghsi, M. Benachour, D.**Year:** 2012**Title:** USE OF A TWO-DIMENSIONAL PSEUDO-HOMOGENEOUS MODEL FOR THE STUDY OF TEMPERATURE AND CONVERSION PROFILES DURING A POLYMERIZATION REACTION IN A TUBULAR CHEMICAL REACTOR**Journal:** Materiali in Tehnologije**Volume:** 46**Issue:** 5**Pages:** 539-546**Date:** Sep-Oct**Short Title:** USE OF A TWO-DIMENSIONAL PSEUDO-HOMOGENEOUS MODEL FOR THE STUDY OF TEMPERATURE AND CONVERSION PROFILES DURING A POLYMERIZATION REACTION IN A TUBULAR CHEMICAL REACTOR**ISSN:** 1580-2949**Accession Number:** WOS:000310039700019

**Abstract:** A two-dimensional pseudo-homogeneous model is used to study temperature and conversion profiles during the polymerization reaction of low-density polyethylene (LDPE) in a tubular chemical reactor. This model is integrated with the Runge-Kutta 4th-order semi-implicit method, using orthogonal collocation to transform a system of complex equations into the ordinary differential ones, with respect to the heat and mass transfers involved. Ethylene polymerization has been simulated over a range of temperatures and pressures and according to the mechanisms of radical polymerization. The results of several tests, carried out under the conditions similar to those of an industrial-scale polymerization, are presented. The influences of the initial temperature  $T_0$ , the total pressure  $P_t$  and the ratio  $L/D$  (the main dimensions of the reactor) on the profiles of the temperature and conversion rates are tested and analyzed to predict the behavior and performance of the tubular chemical reactor considered. The focus was on the effect of an increase in the initial temperature  $T_0$  since such a rise results in a decrease in  $T_c$  (hot spot) appearing at the entrance of the reactor on the one hand, and in an improved conversion on the other hand. An opposite effect is observed for  $P_t$  since a pressure increase will result in a rapid rise in  $T_c$  and a decrease in the conversion. The ranges of pressures and temperatures are thus limited by the system performance: excessive pressures must be avoided and working temperatures must be chosen in the range where the polymerization reaction is very fast; such conditions allow not only a good conversion, but also a resulting polymer with a low crystallinity and, thus, a low density. In the present work the effect of the  $L/D$  ratio was also studied in order to find the most suitable ratio that permits the best evacuation of the heat released during the polymerization.

**Notes:** Marghsi, Mohamed Benachour, Djafer**URL:** <Go to ISI>://WOS:000310039700019

**Reference Type: Journal Article****Record Number:** 109**Author:** Mayouf, A. Mayouf, F. Djahli, F. Devers, T.**Year:** 2012**Title:** Full-wave modeling of superconducting microstrip lines including the nonlinearity behavior**Journal:** Physica C-Superconductivity and Its Applications**Volume:** 476**Pages:** 15-18**Date:** Jun**Short Title:** Full-wave modeling of superconducting microstrip lines including the nonlinearity behavior**ISSN:** 0921-4534**DOI:** 10.1016/j.physc.2012.02.002**Accession Number:** WOS:000302769900003

**Abstract:** This paper describes a new theoretical model to characterize the superconducting microstrip line and carefully studies the effects of the nonlinearity of superconductors, the strip thickness and losses on circuit performances. The microstrip line has been considered as a multilayered structure. The integral equation for the electrical field has been formulated, in the spectral domain, using the exact dyadic Green's function of bianisotropic planar media. The Galerkin's technique has been used for solving this integral equation. Obtained results concern the effective permittivity constant and the attenuation constant versus frequency and temperature rate. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Mayouf, A. Mayouf, F. Djahli, F. Devers, T.**URL:** <Go to ISI>://WOS:000302769900003

**Reference Type: Journal Article****Record Number:** 110**Author:** Meddad, M. Eddiai, A. Guyomar, D. Belkhiat, S. Cherif, A. Yuse, K. Hajjaji, A.**Year:** 2012**Title:** An adaptive prototype design to maximize power harvesting using electrostrictive polymers**Journal:** Journal of Applied Physics**Volume:** 112**Issue:** 5**Date:** Sep**Short Title:** An adaptive prototype design to maximize power harvesting using electrostrictive polymers**ISSN:** 0021-8979**DOI:** 10.1063/1.4751456**Article Number:** 054109**Accession Number:** WOS:000309072200110

**Abstract:** The harvesting energy with electrostrictive polymers has great potential for remote applications such as in vivo sensors, embedded micro-electro-mechanical systems devices, and distributed network instruments. A majority of current research activities in this field refers to classical piezoelectric ceramics, but electrostrictive polymers offer promise of energy harvesting with few moving parts; power can be produced by simply stretching and contracting a relatively low-cost rubbery material. The use of such polymers for energy harvesting is a growing field, which has great potential from an energy density viewpoint. The output power is inversely proportional to the harvester's frequency bandwidth. Consequently, it is much harder to efficiently harvest power from low-frequency sources with a large frequency band response and with a very small system size than from a stabilized high-frequency vibration source. This paper presents a new structure that is able to predict mechanical frequency excitation in order to increase power-harvesting capabilities of electrostrictive polymers. An equivalent structure scheme has been developed by using current and electrical schemes models. With a transverse strain of 0.5% and a bias field of 10 V/ $\mu\text{m}$ , such a process rendered it possible to increase the converted power by 80% with a low-frequency mechanical excitation. This study contributes to provide a framework for developing an innovative energy-harvesting technology that collects vibrations from the environment and converts them into electricity to power a variety of sensors. (C) 2012 American Institute of Physics. [<http://dx.doi.org/10.1063/1.4751456>]

**Notes:** Meddad, M. Eddiai, A. Guyomar, D. Belkhiat, S. Cherif, A. Yuse, K. Hajjaji, A.**URL:** <Go to ISI>://WOS:000309072200110

**Reference Type: Journal Article****Record Number:** 111**Author:** Meddad, M. Eddialal, A. Guyomar, D. Belkhiat, S. Hajjaji, A. Cherif, A. Boughaleb, Y.**Year:** 2012**Title:** Study of the behaviour of electrostrictive polymers for energy harvesting with FFT analysis**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 14**Issue:** 1-2**Pages:** 55-60**Date:** Jan-Feb**Short Title:** Study of the behaviour of electrostrictive polymers for energy harvesting with FFT analysis**ISSN:** 1454-4164**Accession Number:** WOS:000302579300008

**Abstract:** Electrostrictive polymers energy harvesters are an emerging technology that promises high power density, low cost and scalability. Power can be produced simply by stretching and contracting a polymer film. At present, the investigation of using electrostrictive polymers for energy harvesting (a conversion of mechanical to electrical energy) is beginning to show potential for this application. The relative energy gain basically depends in the current induced by the mechanical strain and frequency. Previous work of some of the co-authors, has indicated that one can measure the dielectric constant, the Young modulus and the electrostrictive coefficient of a polymer film by the determination of the current flowing through the sample when simultaneously driven by electrical field and mechanical excitation. This paper investigates the effects of this method for different frequencies for both electrical field E and strain in order to develop a more in-depth understanding of the changes in system response for increased current and energy harvesting. Results relating amplitude strain and the frequency for electrical field provide a framework for developing energy harvesting techniques which improve the overall performance of the system. Experimental data indicate that the current induced with polymer is proportional with the change in frequency of the deformation. In the present paper the theory is detailed and the simulation results are compared with experimental ones. Good agreements are found between both approaches.

**Notes:** Meddad, M. Eddialal, A. Guyomar, D. Belkhiat, S. Hajjaji, A. Cherif, A. Boughaleb, Y.**URL:** <Go to ISI>://WOS:000302579300008

**Reference Type: Journal Article****Record Number:** 112**Author:** Medkour, Y. Roumili, A. Louail, L. Maouche, D. Saoudi, A.**Year:** 2012**Title:** Structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**Journal:** Computational and Theoretical Chemistry**Volume:** 991**Pages:** 161-164**Date:** Jul**Short Title:** Structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**ISSN:** 2210-271X**DOI:** 10.1016/j.comptc.2012.04.013**Accession Number:** WOS:000305919500023

**Abstract:** We report first-principles calculations, on the structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC antiperovskite. Our calculations show that these compounds are more stable in the ferromagnetic states, the estimated equilibrium lattice parameters ( $a$  and  $V$ ) are in agreement with the experimental ones. From the single crystal elastic constants: we have derived the polycrystalline elastic moduli, the calculated bulk modulus of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC which are respectively 191 and 221 GPa. Mn<sub>3</sub>ZnC shows a weak resistance to shear deformation (54 GPa) as compared to Mn<sub>3</sub>GeC (116 GPa). Similarly to previous studies on carbides antiperovskite, these compounds are good electrical conductors. The investigation of the total and partial densities of states shows that the conductivity is assured by  $d$  electrons of the transition metal atoms. The ground state was found ferromagnetic and the magnetic moment in these compounds is mainly related to the spin polarisation of Mn  $d$  electrons. The average magnetic moment per unit formula decreases from 7.02  $\mu(B)$  to 3.18  $\mu(B)$  for Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC respectively. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Medkour, Y. Roumili, A. Louail, L. Maouche, D. Saoudi, A.**URL:** <Go to ISI>://WOS:000305919500023

**Reference Type: Journal Article****Record Number:** 113**Author:** Medkour, Y. Roumili, A. Louail, L. Maouche, D. Saoudi, A.**Year:** 2012**Title:** Structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**Journal:** Computational and Theoretical Chemistry**Volume:** 991**Pages:** 161-164**Date:** Jul**Short Title:** Structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC**ISSN:** 2210-271X**DOI:** 10.1016/j.comptc.2012.04.013**Accession Number:** WOS:000305919500023

**Abstract:** We report first-principles calculations, on the structural, elastic, electronic and magnetic properties of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC antiperovskite. Our calculations show that these compounds are more stable in the ferromagnetic states, the estimated equilibrium lattice parameters (*a* and *V*) are in agreement with the experimental ones. From the single crystal elastic constants: we have derived the polycrystalline elastic moduli, the calculated bulk modulus of Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC which are respectively 191 and 221 GPa. Mn<sub>3</sub>ZnC shows a weak resistance to shear deformation (54 GPa) as compared to Mn<sub>3</sub>GeC (116 GPa). Similarly to previous studies on carbides antiperovskite, these compounds are good electrical conductors. The investigation of the total and partial densities of states shows that the conductivity is assured by *d* electrons of the transition metal atoms. The ground state was found ferromagnetic and the magnetic moment in these compounds is mainly related to the spin polarisation of Mn *d* electrons. The average magnetic moment per unit formula decreases from 7.02  $\mu$ (B) to 3.18  $\mu$ (B) for Mn<sub>3</sub>ZnC and Mn<sub>3</sub>GeC respectively. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Medkour, Y. Roumili, A. Louail, L. Maouche, D. Saoudi, A.**URL:** <Go to ISI>://WOS:000305919500023

**Reference Type: Journal Article****Record Number:** 114**Author:** Medkour, Y. Roumili, A. Maouche, D. Saoudi, A. Louail, L.**Year:** 2012**Title:** Systematic study of the elastic properties of Mn(3)AC antiperovskite with A = Zn, Al, Ga, In, Tl, Ge and Sn**Journal:** Journal of Alloys and Compounds**Volume:** 541**Pages:** 75-78**Date:** Nov**Short Title:** Systematic study of the elastic properties of Mn(3)AC antiperovskite with A = Zn, Al, Ga, In, Tl, Ge and Sn**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2012.06.081**Accession Number:** WOS:000308868300014

**Abstract:** First principle calculations were made to investigate the elastic properties of Mn(3)AC antiperovskites, A = Zn, Al, Ga, In, Tl, Ge and Sn. The estimated equilibrium lattice parameters are in agreement with the experimental ones. From the single crystal elastic constants we have calculated the polycrystalline elastic moduli: the bulk modulus B, shear modulus G, tetragonal shear modulus G', Young's modulus Y, Cauchy's pressure CP, Poisson's ratio  $\nu$ , elastic anisotropy factor and Pugh's criterion G/B. Using Debye's approximation we have deduced the elastic wave velocities and Debye's temperature. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Medkour, Y. Roumili, A. Maouche, D. Saoudi, A. Louail, L.**URL:** <Go to ISI>://WOS:000308868300014

**Reference Type: Journal Article****Record Number:** 115**Author:** Mefti, M. Bouzerzour, H.**Year:** 2012**Title:** Study of the genetic variation of tall fescue varieties using AFLP markers**Journal:** Cahiers Agricultures**Volume:** 21**Issue:** 1**Pages:** 4-10**Date:** Jan-Feb**Short Title:** Study of the genetic variation of tall fescue varieties using AFLP markers**ISSN:** 1166-7699**DOI:** 10.1684/agr.2012.0540**Accession Number:** WOS:000301701900002

**Abstract:** Study of the genetic variation of tall fescue varieties using AFLP markers Little information is available regarding genetic variation in tall fescue (*Festuca arundinacea* Schreb). Such information is important in constructing mapping populations and targeting germplasm collection and utilization. The objective of this study was to evaluate the genetic diversity among seven tall fescue accessions from diverse geographic origins. Tall fescue accessions were assayed by a fluorescence-labeled amplified fragment length polymorphism (AFLP) detection method using DNA samples bulked from each accession. On the basis of 105 AFLP markers from two primer combinations, the seven accessions were clustered in groups that largely supported the known origins of these plants. Fraydo and Lutine are genetically the most divergent, Tank and Sisa are genetically very similar, whereas Centurion has a very similar structure to the genotypes Flecha and endophyte-infected Flecha (E542), and a large genetic distance from Lutine although both Centurion and Lutine were bred by the same institute (Institut national de la recherche agronomique [INRA]).

**Notes:** Mefti, Mohammed Bouzerzour, Hamena**URL:** <Go to ISI>://WOS:000301701900002

**Reference Type: Journal Article****Record Number:** 116**Author:** Mehenni, T. Moussaoui, A.**Year:** 2012**Title:** Data mining from multiple heterogeneous relational databases using decision tree classification**Journal:** Pattern Recognition Letters**Volume:** 33**Issue:** 13**Pages:** 1768-1775**Date:** Oct**Short Title:** Data mining from multiple heterogeneous relational databases using decision tree classification**ISSN:** 0167-8655**DOI:** 10.1016/j.patrec.2012.05.014**Accession Number:** WOS:000308385800014

**Abstract:** Nowadays, the expansion of computer networks and the diversity of data sources require new data mining approaches in multi-database systems. We propose a classification approach across multiple heterogeneous relational databases. More specifically, given a set of inter-related databases, we use a regression model for predicting the most useful links that will be connected to build a multi-relational decision tree. Experiments performed on different real and synthetic databases were very satisfactory compared with previous classification approaches in multiple databases. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Mehenni, Tahar Moussaoui, Abdelouahab**URL:** <Go to ISI>://WOS:000308385800014

**Reference Type: Journal Article****Record Number:** 117**Author:** Menouar, S. Maamache, M. Choi, J. R. Sever, R.**Year:** 2012**Title:** On the Quantization of One-Dimensional Nonstationary Coulomb Potential System**Journal:** Journal of the Physical Society of Japan**Volume:** 81**Issue:** 6**Date:** Jun**Short Title:** On the Quantization of One-Dimensional Nonstationary Coulomb Potential System**ISSN:** 0031-9015**DOI:** 10.1143/jpsj.81.064003**Article Number:** 064003**Accession Number:** WOS:000304751400017

**Abstract:** Exact solutions of the one-dimensional Schrodinger equation with a time-dependent Coulomb potential  $[-z(t)/|x|]$  are investigated using the invariant method (Lewis and Riesenfeld theorem) together with unitary transformation approach. The eigenfunctions and the corresponding eigenvalues of the system are obtained analytically. When the time dependence of all coefficients vanishes, our results exactly reduce to those known for stationary case.

**Notes:** Menouar, Salah Maamache, Mustapha Choi, Jeong Ryeol Sever, Ramazan**URL:** <Go to ISI>://WOS:000304751400017

**Reference Type: Journal Article****Record Number:** 118**Author:** Mentar, L.**Year:** 2012**Title:** A study of the electrodeposition of Co-Cu alloys thin films on FTO substrate**Journal:** Ionics**Volume:** 18**Issue:** 1-2**Pages:** 223-229**Date:** Jan**Short Title:** A study of the electrodeposition of Co-Cu alloys thin films on FTO substrate**ISSN:** 0947-7047**DOI:** 10.1007/s11581-011-0602-y**Accession Number:** WOS:000300677300029

**Abstract:** In this work, the early stages and the properties of the electrodeposition process of Co-Cu alloys thin films on a fluorine-doped tin oxide (FTO)-coated conducting glass substrate from a sulfate bath were investigated using conventional electrochemical techniques and X-ray diffraction technique (XRD). FTO was chosen as a foreign substrate because of its high transparency and its properties as inert material. Within the potential range analyzed, the kinetics of the Co-Cu electrodeposition corresponded to a model including instantaneous nucleation on active sites and diffusion controlled cluster growth. The number of active sites of the substrate,  $N_0$ , and the diffusion coefficient,  $D$ , were determined from the analysis of potentiostatic current transients on the basis of existing theoretical models. XRD patterns of the Co-Cu alloys thin films display fcc and hcp phase, with peaks quite close to those of the Co phase (fcc and hcp). Therefore, the variation of the composition of thin films alloy is possible depending on the deposition potential.

**Notes:** Mentar, Loubna**URL:** <Go to ISI>://WOS:000300677300029

**Reference Type: Journal Article****Record Number:** 119**Author:** Mentar, L. Khelladi, M. R. Azizi, A. Kahoul, A.**Year:** 2012**Title:** Influence of organic additives on electrodeposition of Co-Cu alloys from sulphate bath**Journal:** Transactions of the Institute of Metal Finishing**Volume:** 90**Issue:** 2**Pages:** 98-104**Date:** Mar**Short Title:** Influence of organic additives on electrodeposition of Co-Cu alloys from sulphate bath**ISSN:** 0020-2967**DOI:** 10.1179/0020296712z.0000000008**Accession Number:** WOS:000302782900008

**Abstract:** In this work, the authors report on the influence of additives on the onset of deposition, the current efficiency (CE) and the nucleation growth mechanism of Co-Cu alloys electrodeposited on n-Si(100) substrate from sulphate solution with an addition of sodium citrate (SC) and citric acid (CA). The study was carried out by means of cyclic voltammetry, chronoamperometry methods using the Scharifker-Hills model for the determination of nucleation and growth mechanism and some kinetic parameters for nucleation. The CV curves indicate that the deposition potential of Cu(II) is shifted to more negative potentials while additive anion is added in the solution. Also, the results show that the additives do not improve the CE. For all baths, electrodeposited Co-Cu alloy follows instantaneous nucleation and three-dimensional (3D) diffusion limited growth. The nucleation density in the solutions without additive and with SC increases exponentially with the potential whereas in solution containing CA additive, it is no longer possible to consider exponential increase, indicating the existence of a reaction in addition to the 3D nucleation mechanism in the Co-Cu electrodeposition process.

**Notes:** Mentar, L. Khelladi, M. R. Azizi, A. Kahoul, A.**URL:** <Go to ISI>://WOS:000302782900008

**Reference Type: Journal Article****Record Number:** 120**Author:** Messalti, S. Belkhiat, S. Saadate, S. Flieller, D.**Year:** 2012**Title:** A new approach for load flow analysis of integrated AC-DC power systems using sequential modified Gauss-Seidel methods**Journal:** European Transactions on Electrical Power**Volume:** 22**Issue:** 4**Pages:** 421-432**Date:** May**Short Title:** A new approach for load flow analysis of integrated AC-DC power systems using sequential modified Gauss-Seidel methods**ISSN:** 1430-144X**DOI:** 10.1002/etep.570**Accession Number:** WOS:000303154500002

**Abstract:** The paper describes a new approach for the load flow calculations of integrated ACDC system. A simple and reliable method for sequential modified Gauss and GaussSeidel power flow for ACDC system is developed. This approach is based on applying nodal injection theory at all buses. The DC system is treated by the current injected to the buses where it is connected and its effect is reflected at internal buses by additional power injection. Iterations between AC and DC power flow algorithms are made to match boundary conditions between the two systems. In this approach, the active and reactive power and the AC voltages at the converter buses are considered as the interface between the AC and DC equations in each iteration step. The combined ACDC equations are solved separately using sequential modified Gauss and GaussSeidel methods. The developed algorithm to solve the ACDC power flow has been tested on the IEEE 9-bus test system. Copyright (c) 2011 John Wiley & Sons, Ltd.

**Notes:** Messalti, Sabir Belkhiat, Saad Saadate, Shahrokh Flieller, Damien**URL:** <Go to ISI>://WOS:000303154500002

**Reference Type: Journal Article****Record Number:** 121**Author:** Mezaache-Aichour, S. Gueehi, A. Nicklin, J. Drider, D. Prevost, H. Strange, R. N.**Year:** 2012**Title:** ISOLATION, IDENTIFICATION AND ANTIMICROBIAL ACTIVITY OF PSEUDOMONADS ISOLATED FROM THE RHIZOSPHERE OF POTATOES GROWING IN ALGERIA**Journal:** Journal of Plant Pathology**Volume:** 94**Issue:** 1**Pages:** 89-98**Date:** Mar**Short Title:** ISOLATION, IDENTIFICATION AND ANTIMICROBIAL ACTIVITY OF PSEUDOMONADS ISOLATED FROM THE RHIZOSPHERE OF POTATOES GROWING IN ALGERIA**ISSN:** 1125-4653**Accession Number:** WOS:000302375300009

**Abstract:** Fourteen bacterial isolates from the rhizosphere of potato plants growing near Setif, (Algeria) were characterised as fluorescent Pseudomonads by phenotypical methods and one was identified as *Pseudomonas chlororaphis* by sequencing ribosomal DNA. In dual culture, this isolate inhibited the growth of the phytopathogenic fungi *Fusarium oxysporum* f. sp. *lycopersici*, *F. oxysporum* f. sp. *albedinis*, *F. solani* and *Rhizoctonia solani* and the oomycete *Pythium ultimum*. Extracts of supernatants from liquid cultures of the *Ps. chlororaphis* isolate completely inhibited these organisms when incorporated into potato dextrose agar at a rate equivalent to 0.31 ml culture filtrate/ml, or greater. In a disc assay, extracts equivalent to 0.31 ml supernatant gave inhibition zones of 15 mm and 25 mm for the Gram-positive bacteria *Bacillus subtilis* and *Paracoccus paratrophus*, respectively. Fractionation of extracts of supernatants by TLC and HPLC with diode array detection allowed the identification of phenazine carboxylic acid as one of the antimicrobial compounds and the tentative identification of two others as 2-hydroxy phenazine carboxylic acid and 2-hydroxy phenazine.

**Notes:** Mezaache-Aichour, S. Gueehi, A. Nicklin, J. Drider, D. Prevost, H. Strange, R. N.**URL:** <Go to ISI>://WOS:000302375300009

**Reference Type: Journal Article****Record Number:** 122**Author:** Mokeddem, D. Khellaf, A.**Year:** 2012**Title:** Optimal feeding profile for a fuzzy logic controller in a bioreactors using genetic algorithm**Journal:** Nonlinear Dynamics**Volume:** 67**Issue:** 4**Pages:** 2835-2845**Date:** Mar**Short Title:** Optimal feeding profile for a fuzzy logic controller in a bioreactors using genetic algorithm**ISSN:** 0924-090X**DOI:** 10.1007/s11071-011-0192-2**Accession Number:** WOS:000300187500041

**Abstract:** The ultimate objective of any control strategy is to maximize productivity, and improve the quantity of products and reduce costs. The performance of a bioprocess operating in fed batch production of protein can be obtained in two steps. First, we determine the optimal trajectories (profiles) for the variables of interests and then a genetic algorithm based on a fuzzy logic controller is applied to regulate these variables around these profiles. An optimal feeding profile of a fed batch process based on an evolutionary algorithm is designed. This algorithm is well suited to derive multi-objective optimization, since it involves a set of non-dominated solutions distributed along the Pareto front. Several evolutionary multi-objective optimization algorithms have been developed in which the Non-dominated Sorting Genetic Algorithm NSGA-II is recognized to be very effective to overcome a variety of problems; an optimal control problem, usually solved by several methods considering single-objective dynamic optimization, is worked out.

**Notes:** Mokeddem, D. Khellaf, A.**URL:** <Go to ISI>://WOS:000300187500041

**Reference Type: Journal Article****Record Number:** 123**Author:** Mosbah, A. Aida, M. S.**Year:** 2012**Title:** Influence of deposition temperature on structural, optical and electrical properties of sputtered Al doped ZnO thin films**Journal:** Journal of Alloys and Compounds**Volume:** 515**Pages:** 149-153**Date:** Feb**Short Title:** Influence of deposition temperature on structural, optical and electrical properties of sputtered Al doped ZnO thin films**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2011.11.113**Accession Number:** WOS:000299105800029

**Abstract:** Al doped ZnO thin films have been deposited by DC magnetron sputtering technique from ZnO-2 wt.% Al<sub>2</sub>O<sub>3</sub> target onto glass and oxidized silicon substrates heated at temperature ranging between 150 and 370 degrees C in Ar plasma. X-ray diffraction analysis shows that the deposits have a preferential growth along the c-axis of the hexagonal structure. The average grain size increases from 10 to 59 nm with temperatures ranging from 150 up to 330 degrees C then it decreases to 45 nm at 370 degrees C. The root mean square (RMS) surface roughness decreases with substrate temperature from 20.9 to 4.1 nm. The films are transparent up to 90% in the visible wavelength range and the optical gap increases with substrate temperature from 3.41 to 3.64 eV. The resistivity measured in Van der Pauw configuration at room temperature is very sensitive to the substrate temperature. It decreases from  $5 \times 10^{-4}$  to  $3 \times 10^{-5}$  Ohm cm when the deposition temperature increases from 150 to 370 degrees C. Both carrier mobility and carrier concentration were found to increase with substrate temperature. (C) 2011 Elsevier B. V. All rights reserved.

**Notes:** Mosbah, A. Aida, M. S.**URL:** <Go to ISI>://WOS:000299105800029

**Reference Type: Journal Article****Record Number:** 124**Author:** Moualek, D. Pacha, L. A. Abrouk, S. Kediha, M. I. Nouioua, S. Aissa, L. A. Bellatache, M. Belarbi, S. Slimani, S. Khennouf, H. Fellahi, L. Hamimed, M. E. A. Benali, N. Chekkour, M. C. Maamoun, R. Dameche, R. Assami, S. Tazir, M.**Year:** 2012**Title:** Multicenter Transversal Two-Phase Study to Determine a National Prevalence of Epilepsy in Algeria**Journal:** Neuroepidemiology**Volume:** 39**Issue:** 2**Pages:** 131-134**Short Title:** Multicenter Transversal Two-Phase Study to Determine a National Prevalence of Epilepsy in Algeria**ISSN:** 0251-5350**DOI:** 10.1159/000339637**Accession Number:** WOS:000308731000009

**Abstract:** Background/Aims: The prevalence of epilepsy in Algeria is unknown. The aims of this multicenter transversal study were to determine the national prevalence and clinical characteristics of epilepsy in the Algerian population. Methods: This two-phase study was conducted in 5 circumscriptions and included 8,046 subjects aged over 2 months who attended the randomly selected public and private primary care clinics. In the phase 1 study, a questionnaire was submitted to the sample of patients. In the phase 2 study, all potentially epileptic people were examined by neurologists and a second questionnaire was submitted, eventually assessed by appropriate investigations. Results: Sixty-seven patients were identified as having active epilepsy, giving a crude prevalence ratio of 8.32 per 1,000(95% CI, 6.34-10.3) and an age-adjusted prevalence ratio of 8.9 per 1,000. The highest age-specific ratio was found in patients aged 10-19 years (16.92 per 1,000). Generalized seizures (68.7%) were more common than partial seizures (29.8%). Perinatal injuries were the major leading putative causes (11.9%). Conclusion: The prevalence of epilepsy of 8.32 determined in this study is relatively high. These results provide new epidemiological data and suggest that epilepsy remains an important public health issue to consider in Algeria. Copyright (C) 2012 S. Karger AG, Basel

**Notes:** Moualek, Dalila Pacha, Lamia Ali Abrouk, Samira Kediha, Mohamed Islam Nouioua, Sonia Aissa, Leila Ait Bellatache, Mounia Belarbi, Soreya Slimani, Saddek Khennouf, Houria Fellahi, Lynda Hamimed, Mohamed El Amine Benali, Nadia Chekkour, Mohamed Chahine Maamoun, Ramdane Dameche, Rachida Assami, Salima Tazir, Meriem

**URL:** <Go to ISI>://WOS:000308731000009

**Reference Type: Journal Article****Record Number:** 125**Author:** Mounira, R. Ouyahia, A. Gasmi, A. Guenifi, W. Boukhrissa, H. Lacheheb, A.**Year:** 2012**Title:** Clinical, diagnostic and Cryptococcosis neuromeningees evolutionary aspects in HIV infection**Journal:** Retrovirology**Volume:** 9**Date:** May**Short Title:** Clinical, diagnostic and Cryptococcosis neuromeningees evolutionary aspects in HIV infection**ISSN:** 1742-4690**DOI:** 10.1186/1742-4690-9-s1-p149**Article Number:** P149**Accession Number:** WOS:000309472000184**Notes:** Mounira, Rais Ouyahia, Amel Gasmi, Abedelkader Guenifi, Wahiba Boukhrissa, Houda Lacheheb, Abdelmadjid 1**URL:** <Go to ISI>://WOS:000309472000184

**Reference Type: Journal Article****Record Number:** 126**Author:** Naamoune, F. Messaoudi, B. Kahoul, A. Cherchour, N. Pailleret, A. Takenouti, H.**Year:** 2012**Title:** A new sol-gel synthesis of Mn<sub>3</sub>O<sub>4</sub> oxide and its electrochemical behavior in alkaline medium**Journal:** Ionics**Volume:** 18**Issue:** 4**Pages:** 365-370**Date:** Apr**Short Title:** A new sol-gel synthesis of Mn<sub>3</sub>O<sub>4</sub> oxide and its electrochemical behavior in alkaline medium**ISSN:** 0947-7047**DOI:** 10.1007/s11581-011-0621-8**Accession Number:** WOS:000302249500005

**Abstract:** In this investigation, Mn<sub>3</sub>O<sub>4</sub> spinel-type oxide was synthesized at low temperature using the Pechini process. We employed a sol-gel route, in which a solution of Mn(II) in a mixture of citric acid and ethylene glycol was heated to form a polymeric precursor, followed by annealing at lower temperature. The oxide obtained was identified by X-ray diffraction, scanning electron spectroscopy, and Raman spectroscopy. The results revealed that the formation of Mn<sub>3</sub>O<sub>4</sub> hausmannite structure with a minor secondary phase of MnSO<sub>4</sub> occurred at or above 280 A degrees C. The sample powder consisted of fine grains with homogeneous morphology and an average size close to 1 mu m was obtained. This new preparation procedure yielded an electrode oxide which appears to be a promising cathode material for fuel cells and metal-air batteries.

**Notes:** Naamoune, Farid Messaoudi, Bouzid Kahoul, Abdelkrim Cherchour, Nabila Pailleret, Alain Takenouti, Hisasi

**URL:** <Go to ISI>://WOS:000302249500005

**Reference Type: Journal Article****Record Number:** 127**Author:** Nechadi, E. Harmas, M. N. Hamzaoui, A. Essounbouli, N.**Year:** 2012**Title:** A new robust adaptive fuzzy sliding mode power system stabilizer**Journal:** International Journal of Electrical Power & Energy Systems**Volume:** 42**Issue:** 1**Pages:** 1-7**Date:** Nov**Short Title:** A new robust adaptive fuzzy sliding mode power system stabilizer**ISSN:** 0142-0615**DOI:** 10.1016/j.ijepes.2012.03.032**Accession Number:** WOS:000307600500001

**Abstract:** This paper presents a novel power system stabilizer based on adaptive fuzzy sliding mode approach without reaching phase. We consider consequences of a major post disturbance on a power system for three different loading and operating conditions. Speed deviation and accelerating power are selected as controller inputs. A new sliding surface enabling for sliding to occur at any state initial conditions is used to develop a robust controller. Moreover, two adaptive fuzzy systems are used to approximate power system dynamics. Stability issue is addressed via Lyapunov synthesis. The robustness of the proposed method is verified on a single-machine infinite-bus and on a multi-machine power system stabilizer under different operating conditions. A comparative simulation study is presented to evaluate achieved performance enhancements showing better oscillations damping and faster transient dynamic behaviour over three considered controllers: a conventional, a dual-input and a classical sliding mode power system stabilizer. (c) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Nechadi, E. Harmas, M. N. Hamzaoui, A. Essounbouli, N.**URL:** <Go to ISI>://WOS:000307600500001

**Reference Type: Journal Article****Record Number:** 128**Author:** Nechadi, E. Harmas, M. N. Hamzaoui, A. Essounbouli, N.**Year:** 2012**Title:** Type-2 fuzzy based adaptive synergetic power system control**Journal:** Electric Power Systems Research**Volume:** 88**Pages:** 9-15**Date:** Jul**Short Title:** Type-2 fuzzy based adaptive synergetic power system control**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2012.01.009**Accession Number:** WOS:000303956000002

**Abstract:** This paper introduces a new type-2 fuzzy based adaptive synergetic power system stabilizer used in damping power flow limiting oscillations that often occur following disturbances in power systems. Small magnitude and low frequency oscillations, linked to the electromechanical modes in power systems, often persist for long periods of time leading in some cases to loss of synchronism and eventually to blackouts. These oscillations may occur locally or between different areas of a power system. Among many robust control techniques to assure service continuity sliding mode has been proposed despite its inherent chattering drawback. This paper present a novel power system stabilizer based on synergetic control which possesses the same strong robustness and invariance to external disturbances as sliding mode but without its negative chattering. Type-1 fuzzy systems have also been heavily relied on to describe unknown system model but they lack fuzziness in dealing with uncertainties. Better suited to deal with uncertainties type-2 fuzzy systems are used in this paper in approximating the unknown power system nonlinear dynamics while stability is insured through Lyapunov synthesis. Severe operating conditions are used in a simulation study to test the validity and effectiveness of the proposed method. Results indicate good performance and satisfactory transient dynamic behaviour. A multi-machine power system is used to demonstrate the performance of the proposed controller and to show its superiority over other conventional stabilizers used in the literature. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Nechadi, E. Harmas, M. N. Hamzaoui, A. Essounbouli, N.**URL:** <Go to ISI>://WOS:000303956000002

**Reference Type: Journal Article****Record Number:** 129**Author:** Nekkaa, S. Guessoum, M. Grillet, A. C. Haddaoui, N.**Year:** 2012**Title:** Mechanical Properties of Biodegradable Composites Reinforced with Short Spartium Junceum Fibers before and after Treatments**Journal:** International Journal of Polymeric Materials**Volume:** 61**Issue:** 13**Pages:** 1021-1034**Short Title:** Mechanical Properties of Biodegradable Composites Reinforced with Short Spartium Junceum Fibers before and after Treatments**ISSN:** 0091-4037**DOI:** 10.1080/00914037.2011.617332**Accession Number:** WOS:000307939800004

**Abstract:** In the present study, Spartium junceum (SJ) fibers were chemically treated with different concentrations of two coupling agents, silane N [-3 Trimethoxysilyl propyl] ethylene diamine (Z-6020) and stearic acid, in order to improve the mechanical properties of polypropylene/Spartium junceum fibers (PP/SJ) composites. The chemical modification efficiency was verified by FTIR analysis, which showed the appearance of bands around 1260 and 1100 cm<sup>-1</sup> attributed to asymmetric stretching of Si-O-Si linkage and Si-O-Cellulose for (Z-6020) modified SJ fibers. The mechanical properties of the composites prepared from chemically treated Spartium junceum fibers are found to increase substantially compared to those with untreated fibers.

**Notes:** Nekkaa, S. Guessoum, M. Grillet, A. C. Haddaoui, N.**URL:** <Go to ISI>://WOS:000307939800004

**Reference Type: Journal Article****Record Number:** 130**Author:** Nemdili, S. Belkhiat, S.**Year:** 2012**Title:** Modeling and Simulation of Resistive Superconducting Fault-Current Limiters**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 25**Issue:** 7**Pages:** 2351-2356**Date:** Oct**Short Title:** Modeling and Simulation of Resistive Superconducting Fault-Current Limiters**ISSN:** 1557-1939**DOI:** 10.1007/s10948-012-1685-z**Accession Number:** WOS:000309157200043

**Abstract:** Superconducting fault-current limiters (SFCL) offer ideal performance in electrical power system. The design of SFCL has to be both flexible, to allow an easy adaptation to the specific requirements of each particular application, and a high quality standard with reproducible properties. Up to now no simulation model of SFCL has been validated or introduced in the Library of MATLAB software. In this paper a simulation model for a novel resistive type superconducting fault-current limiter is proposed. This model includes the electric field-current density (E-J) characteristics of High-Temperature Superconductors (HTS). A graphical interface using Graphical User Interface (GUI) of MATLAB is developed in order to ease the operation of the proposed model. This one facilitates the introduction or the parameter modification of materials candidate to a SFCL model. Thus, the operation characteristics and limitation behavior of SFCL have been investigated. The developed model accurately predicted the current-time waveforms achievable with typical limiters, and improved standard of understanding concerning the fault-current limitation mechanisms.

**Notes:** Nemdili, S. Belkhiat, S.**URL:** <Go to ISI>://WOS:000309157200043

**Reference Type: Journal Article****Record Number:** 131**Author:** Ouahrani, T. Khenata, R. Lasri, B. Reshak, A. H. Bouhemadou, A. Bin-Omran, S.**Year:** 2012**Title:** First and second harmonic generation of the  $XAl_2Se_4$  ( $X=Zn,Cd,Hg$ ) defect chalcopyrite compounds**Journal:** Physica B-Condensed Matter**Volume:** 407**Issue:** 18**Pages:** 3760-3766**Date:** Sep**Short Title:** First and second harmonic generation of the  $XAl_2Se_4$  ( $X=Zn,Cd,Hg$ ) defect chalcopyrite compounds**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2012.05.057**Accession Number:** WOS:000307774700014

**Abstract:** The chemical bonding of the  $ZnAl_2Se_4$ ,  $CdAl_2Se_4$  and  $HgAl_2Se_4$  defect chalcopyrites has been studied in the framework of the quantum theory of atoms in molecules (AIM). The GW quasi-particle approximation is used to correct the DFT-underestimation of energy gap, and as a consequence the linear and nonlinear optical properties are significantly enhanced. The second harmonic generation (SHG) displays certain dependence with the ionicity degree decrease through the dependency of the SHG on the band gap. The occurrence of the AIM saddle point is characterized and some clarifying features in relationship with the density topology are exposed, which enable to understand the relation with the second harmonic generation effect. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Ouahrani, Tank Khenata, R. Lasri, B. Reshak, Ali H. Bouhemadou, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000307774700014

**Reference Type: Journal Article****Record Number:** 132**Author:** Ouakdi, E. H. Louahdi, R. Khirani, D. Tabourot, L.**Year:** 2012**Title:** Evaluation of springback under the effect of holding force and die radius in a stretch bending test**Journal:** Materials & Design**Volume:** 35**Pages:** 106-112**Date:** Mar**Short Title:** Evaluation of springback under the effect of holding force and die radius in a stretch bending test**ISSN:** 0261-3069**DOI:** 10.1016/j.matdes.2011.09.003**Accession Number:** WOS:000301578700014

**Abstract:** In this work, we evaluate springback using U-form stretch bending tests. Tests are carried out on aluminum alloy test pieces using an experimental set up made in our laboratory. This apparatus can be mounted on a tensile testing machine and gives the possibility to vary several parameters. We show the role played by certain factors such as die radius of curvature, blank holding force (BHF) and stretching depth. Springback and sliding at extremities are strongly influenced by these technological and geometrical parameters. In this work we also show the gradual decrease of springback with the increase of stretching depth. The radius of curvature of the die can remarkably influence the two stages of springback. (C) 2011 Elsevier Ltd. All rights reserved.

**Notes:** Ouakdi, E. H. Louahdi, R. Khirani, D. Tabourot, L.**URL:** <Go to ISI>://WOS:000301578700014

**Reference Type: Journal Article****Record Number:** 133**Author:** Ould-Lahoucine, H. K. Chetouani, L.**Year:** 2012**Title:** Exact Green function for a Dirac particle in a weak gravitational plane wave field.

Alternative path integral approach

**Journal:** Journal of Mathematical Physics**Volume:** 53**Issue:** 7**Date:** Jul**Short Title:** Exact Green function for a Dirac particle in a weak gravitational plane wave field.

Alternative path integral approach

**ISSN:** 0022-2488**DOI:** 10.1063/1.4736720**Article Number:** 072303**Accession Number:** WOS:000307609900007**Abstract:** The exact Green function for a Dirac particle in interaction with a weak gravitational plane wave field is obtained throughout an alternative path integral approach. In addition, a canonical transformation is obtained so that the generating function is showed to be a solution to the Hamilton-Jacobi equation for spin zero particle. (C) 2012 American Institute of Physics.[<http://dx.doi.org/10.1063/1.4736720>]**Notes:** Ould-Lahoucine, H. K. Chetouani, L.**URL:** <Go to ISI>://WOS:000307609900007

**Reference Type: Journal Article****Record Number:** 134**Author:** Ould-Lahoucine, H. K. Chetouani, L.**Year:** 2012**Title:** Exact Green Function for a Dirac Particle in Presence of Two Orthogonal Plane Wave Fields. Path Integral Derivation**Journal:** International Journal of Theoretical Physics**Volume:** 51**Issue:** 7**Pages:** 2208-2219**Date:** Jul**Short Title:** Exact Green Function for a Dirac Particle in Presence of Two Orthogonal Plane Wave Fields. Path Integral Derivation**ISSN:** 0020-7748**DOI:** 10.1007/s10773-012-1100-3**Accession Number:** WOS:000304645000024**Abstract:** Exact Green function for a Dirac particle subject to a couple of orthogonal plane wave fields is obtained throughout a path integral approach. In addition, a suitable representation of the Dirac matrices is deduced so that the initial problem becomes the one of a free particle.**Notes:** Ould-Lahoucine, H. K. Chetouani, L.**URL:** <Go to ISI>://WOS:000304645000024

**Reference Type: Journal Article****Record Number:** 135**Author:** Ould-Lahoucine, H. K. Chetouani, L.**Year:** 2012**Title:** Exact Green function for a Dirac particle in a weak gravitational plane wave field.

Alternative path integral approach

**Journal:** Journal of Mathematical Physics**Volume:** 53**Issue:** 7**Date:** Jul**Short Title:** Exact Green function for a Dirac particle in a weak gravitational plane wave field.

Alternative path integral approach

**ISSN:** 0022-2488**DOI:** 10.1063/1.4736720**Article Number:** 072303**Accession Number:** WOS:000307609900007**Abstract:** The exact Green function for a Dirac particle in interaction with a weak gravitational plane wave field is obtained throughout an alternative path integral approach. In addition, a canonical transformation is obtained so that the generating function is showed to be a solution to the Hamilton-Jacobi equation for spin zero particle. (C) 2012 American Institute of Physics.[<http://dx.doi.org/10.1063/1.4736720>]**Notes:** Ould-Lahoucine, H. K. Chetouani, L.**URL:** <Go to ISI>://WOS:000307609900007

**Reference Type: Journal Article****Record Number:** 136**Author:** Ould-Lahoucine, H. K. Chetouani, L.**Year:** 2012**Title:** Exact Green Function for a Dirac Particle in Presence of Two Orthogonal Plane Wave Fields. Path Integral Derivation**Journal:** International Journal of Theoretical Physics**Volume:** 51**Issue:** 7**Pages:** 2208-2219**Date:** Jul**Short Title:** Exact Green Function for a Dirac Particle in Presence of Two Orthogonal Plane Wave Fields. Path Integral Derivation**ISSN:** 0020-7748**DOI:** 10.1007/s10773-012-1100-3**Accession Number:** WOS:000304645000024**Abstract:** Exact Green function for a Dirac particle subject to a couple of orthogonal plane wave fields is obtained throughout a path integral approach. In addition, a suitable representation of the Dirac matrices is deduced so that the initial problem becomes the one of a free particle.**Notes:** Ould-Lahoucine, H. K. Chetouani, L.**URL:** <Go to ISI>://WOS:000304645000024

**Reference Type: Journal Article****Record Number:** 137**Author:** Ourari, A. Khelafi, M. Aggoun, D. Jutand, A. Amatore, C.**Year:** 2012**Title:** Electrocatalytic oxidation of organic substrates with molecular oxygen using tetradentate ruthenium(III)-Schiff base complexes as catalysts**Journal:** Electrochimica Acta**Volume:** 75**Pages:** 366-370**Date:** Jul**Short Title:** Electrocatalytic oxidation of organic substrates with molecular oxygen using tetradentate ruthenium(III)-Schiff base complexes as catalysts**ISSN:** 0013-4686**DOI:** 10.1016/j.electacta.2012.05.021**Accession Number:** WOS:000306884100049

**Abstract:** Three complexes Ru(III)CIL<sub>n</sub> involving different tetradentate Schiff base ligands L-n (see L-1, L-2 and L-3 in Chart 1) were used as catalysts in the oxidation of cyclooctene and tetraline in the presence of molecular dioxygen associated with benzoic anhydride. The efficiency of this oxidation reaction was tested in the presence of two apical bases: 1- or 2-methylimidazole. All complexes exhibit a quasi-reversible redox system. The electrolysis experiments were carried out at controlled potential for each complex, using different substrates such as cyclooctene and tetraline. The oxidized products are cyclooctene oxide (turnover 6.7), a mixture of 1-tetralol and 1-tetralone (turnover 7.6) respectively. (C) 2012 Published by Elsevier Ltd.

**Notes:** Ourari, Ali Khelafi, Mostefa Aggoun, Djouhra Jutand, Anny Amatore, Christian**URL:** <Go to ISI>://WOS:000306884100049

**Reference Type: Journal Article****Record Number:** 138**Author:** Prall, M. Renschler, P. Gluck, F. Beglarian, A. Bichsel, H. Bornschein, L. Chaoui, Z. Drexlin, G. Frankle, F. Gorhardt, S. Mertens, S. Steidl, M. Thummler, T. Wustling, S. Weinheimer, C. Zadorozhny, S.**Year:** 2012**Title:** The KATRIN pre-spectrometer at reduced filter energy**Journal:** New Journal of Physics**Volume:** 14**Date:** Jul**Short Title:** The KATRIN pre-spectrometer at reduced filter energy**ISSN:** 1367-2630**DOI:** 10.1088/1367-2630/14/7/073054**Article Number:** 073054**Accession Number:** WOS:000307076400004

**Abstract:** The Karlsruhe Tritium Neutrino (KATRIN) experiment will determine the mass of the electron neutrino with a sensitivity of 0.2 eV (90% CL) via a measurement of the beta-spectrum of gaseous tritium near its endpoint of  $E_0 = 18.57$  keV. An ultra-low background of about  $b = 10$  mHz is among the requirements on reaching this sensitivity. In the KATRIN main beam line, two spectrometers of MAC-E filter type are used in tandem configuration. This setup, however, produces a Penning trap, which could lead to increased background. We have performed test measurements showing that the filter energy of the pre-spectrometer can be reduced by several keV in order to diminish this trap. These measurements were analyzed with the help of a complex computer simulation, modeling multiple electron reflections from both the detector and the photoelectric electron source used in our test setup.

**Notes:** Prall, M. Renschler, P. Glueck, F. Beglarian, A. Bichsel, H. Bornschein, L. Chaoui, Z. Drexlin, G. Fraenkle, F. Goerhardt, S. Mertens, S. Steidl, M. Thuemmler, Th Wuestling, S. Weinheimer, C. Zadorozhny, S.

**URL:** <Go to ISI>://WOS:000307076400004

**Reference Type: Journal Article****Record Number:** 139**Author:** Saadeh, H. A. Abu Shairah, E. A. Charef, N. Mubarak, M. S.**Year:** 2012**Title:** Synthesis and adsorption properties, toward some heavy metal ions, of a new polystyrene-based terpyridine polymer**Journal:** Journal of Applied Polymer Science**Volume:** 124**Issue:** 4**Pages:** 2717-2724**Date:** May**Short Title:** Synthesis and adsorption properties, toward some heavy metal ions, of a new polystyrene-based terpyridine polymer**ISSN:** 0021-8995**DOI:** 10.1002/app.34977**Accession Number:** WOS:000299947100008

**Abstract:** A novel polymeric ligand having 2,2':6',2-terpyridine as pendant group was prepared through a Williamson type etherification approach for the reaction between 4'-hydroxy-2,2': 6',2-terpyridine and the commercially available 4-chloromethyl polystyrene. The chelating properties of the new polymer toward the divalent metal ions ( $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Ni}^{2+}$ , and  $\text{Pb}^{2+}$ ) in aqueous solutions was studied by a batch equilibration technique as a function of contact time, pH, mass of resin, and concentration of metal ions. The amount of metal-ion uptake of the polymer was determined by using atomic absorption spectrometry. Results of the study revealed that the resin exhibited higher capacities and a more pronounced adsorption toward  $\text{Pb}^{2+}$  and that the metal-ion uptake follows the order:  $\text{Pb}^{2+} > \text{Cu}^{2+} > \text{Zn}^{2+} > \text{Ni}^{2+}$ . The adsorption and binding capacity of the resin toward the various metal ions investigated are discussed. (C) 2011 Wiley Periodicals, Inc. J Appl Polym Sci, 2012

**Notes:** Saadeh, Haythem A. Abu Shairah, Eman A. Charef, Nouredine Mubarak, Mohammad S.**URL:** <Go to ISI>://WOS:000299947100008

**Reference Type: Journal Article****Record Number:** 140**Author:** Saadi, Y. Maamache, M.**Year:** 2012**Title:** Non-adiabatic quantum evolution: The S matrix as a geometrical phase factor**Journal:** Physics Letters A**Volume:** 376**Issue:** 16**Pages:** 1328-1334**Date:** Mar**Short Title:** Non-adiabatic quantum evolution: The S matrix as a geometrical phase factor**ISSN:** 0375-9601**DOI:** 10.1016/j.physleta.2012.02.054**Accession Number:** WOS:000302851100004

**Abstract:** We present a complete derivation of the exact evolution of quantum mechanics for the case when the underlying spectrum is continuous. We base our discussion on the use of the Weyl eigendifferentials. We show that a quantum system being in an eigenstate of an invariant will remain in the subspace generated by the eigenstates of the invariant, thereby acquiring a generalized non-adiabatic or Aharonov-Anandan geometric phase linked to the diagonal element of the S matrix. The modified Pischl-Teller potential and the time-dependent linear potential are worked out as illustrations. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Saadi, Y. Maamache, M.**URL:** <Go to ISI>://WOS:000302851100004

**Reference Type: Journal Article****Record Number:** 141**Author:** Sahli, B.**Year:** 2012**Title:** A new criterion of optimization of the simple multipole coefficients in a modified Green's function for the elastic two-dimensional case**Journal:** Applied Mathematics Letters**Volume:** 25**Issue:** 1**Pages:** 77-80**Date:** Jan**Short Title:** A new criterion of optimization of the simple multipole coefficients in a modified Green's function for the elastic two-dimensional case**ISSN:** 0893-9659**DOI:** 10.1016/j.aml.2011.07.014**Accession Number:** WOS:000295758800015**Abstract:** The question of non-uniqueness in the integral formulation of an exterior boundary value problem in the elastic two-dimensional case has been resolved using the modified Green's function technique. In this work, a new criterion of optimality based on the minimization of the norm of the kernel of the modified integral operator is established. (C) 2011 Elsevier Ltd. All rights reserved.**Notes:** Sahli, Belkacem**URL:** <Go to ISI>://WOS:000295758800015

**Reference Type: Journal Article****Record Number:** 142**Author:** Saoud, L. S. Khellaf, A.**Year:** 2012**Title:** Nonlinear dynamic systems identification based on dynamic wavelet neural units (vol 19, pg 997, 2010)**Journal:** Neural Computing & Applications**Volume:** 21**Issue:** 6**Pages:** 1463-1463**Date:** Sep**Short Title:** Nonlinear dynamic systems identification based on dynamic wavelet neural units (vol 19, pg 997, 2010)**ISSN:** 0941-0643**DOI:** 10.1007/s00521-011-0520-y**Accession Number:** WOS:000307552600036**Notes:** Saoud, L. Saad Khellaf, A. Si**URL:** <Go to ISI>://WOS:000307552600036

**Reference Type: Journal Article****Record Number:** 143**Author:** Saoudi, A. Hachemi, A. Ferhat-Hamida, A. Medkour, Y. Reffas, M. Hachemi, H. Maamache, M.**Year:** 2012**Title:** First principles study of the structural, elastic, electronic and optical properties of CaSrTt (Tt=Si, Ge, Sn and Pb)**Journal:** Solid State Communications**Volume:** 152**Issue:** 19**Pages:** 1800-1806**Date:** Oct**Short Title:** First principles study of the structural, elastic, electronic and optical properties of CaSrTt (Tt=Si, Ge, Sn and Pb)**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2012.07.009**Accession Number:** WOS:000308841300002

**Abstract:** We present an ab initio study of the structural, elastic, electronic and optical properties of CaSrTt (Tt=Si, Ge, Sn and Pb) compounds. To more-accurately describe the properties of these materials, the calculations were based on the OFT theory with the generalized gradient approximation (GGA). In particular, the calculated lattice constants are in good agreement with the experimental results, with a deviation less than 0.67%, 2.74% and 1.7% for a, b and c, respectively. For the equilibrium volume, the deviation does not exceed 4.7%. Single-crystal elastic stiffness (C-ij) values were calculated and the polycrystalline elastic moduli (B and G) were estimated utilizing Voigt, Reuss and Hill's approximations. The electronic band-structure calculations indicate that these compounds are semiconductors, in agreement with the literature data on their Ae(2)Tt analogues. The dielectric function, refractive index, extinction coefficient, reflectivity spectrum and electron energy loss are calculated over a spectral range from 0 to 45 eV. Unfortunately, there is no available previous study for comparison. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Saoudi, A. Hachemi, A. Ferhat-Hamida, A. Medkour, Y. Reffas, M. Hachemi, H. Maamache, M.**URL:** <Go to ISI>://WOS:000308841300002

**Reference Type: Journal Article****Record Number:** 144**Author:** Satour, F. Z. Zegadi, A.**Year:** 2012**Title:** Optical properties of xenon implanted CuInSe<sub>2</sub> by photoacoustic spectroscopy**Journal:** Journal of Luminescence**Volume:** 132**Issue:** 7**Pages:** 1688-1694**Date:** Jul**Short Title:** Optical properties of xenon implanted CuInSe<sub>2</sub> by photoacoustic spectroscopy**ISSN:** 0022-2313**DOI:** 10.1016/j.jlumin.2012.02.009**Accession Number:** WOS:000303297200014

**Abstract:** A theoretical relation is derived for the normalized photoacoustic amplitude signal of a gas-coupled cell for the case of double-layer solid samples with particular application given to ion implanted semiconductors. Numerical estimates for a solar cell of the type CdS/CuInSe<sub>2</sub> based on experimental measured data of these compounds are given to illustrate the photoacoustic effect originating from double-layer samples. In application to ion implanted semiconductors, we show that the absorption coefficient of the implanted layer can be very easily extracted by photoacoustic spectroscopy if the absorption coefficient of the untreated substrate is known. We also present the optical properties results obtained from the analysis of the effect of xenon implantation into CuInSe<sub>2</sub> single crystals with the energy of 40 keV and a dose of  $5 \times 10^{16}$  ions/cm<sup>2</sup>. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Satour, F. Z. Zegadi, A.**URL:** <Go to ISI>://WOS:000303297200014

**Reference Type: Journal Article****Record Number:** 145**Author:** Satour, F. Z. Zegadi, A.**Year:** 2012**Title:** Xe irradiation-induced defects in CuInSe<sub>2</sub> by phase resolved photoacoustic spectroscopy**Journal:** Materials Science and Engineering B-Advanced Functional Solid-State Materials**Volume:** 177**Issue:** 5**Pages:** 436-440**Date:** Mar**Short Title:** Xe irradiation-induced defects in CuInSe<sub>2</sub> by phase resolved photoacoustic spectroscopy**ISSN:** 0921-5107**DOI:** 10.1016/j.mseb.2012.01.018**Accession Number:** WOS:000303084100007

**Abstract:** We report a study on the optical properties of 40 keV Xe<sup>+</sup> implants with a dose of  $5 \times 10^{16}$  ions/cm<sup>2</sup> into p-type conducting CuInSe<sub>2</sub> single crystals using the phase resolved method of the photoacoustic spectroscopy (PAS) technique. Photoacoustic spectra have been measured in the photon energy range  $0.7 < h\nu < 1.4$  eV prior and after implantation at various phase angles using a high resolution fully computerized spectrometer. Once the spectra separation is carried out, an analysis on the impact of Xe<sup>+</sup> on the defect structure of CuInSe<sub>2</sub> is presented. The results obtained here are discussed in the light of current reported literature. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Satour, F. Z. Zegadi, A.**URL:** <Go to ISI>://WOS:000303084100007

**Reference Type: Journal Article****Record Number:** 146**Author:** Sayah, S. Hamouda, A.**Year:** 2012**Title:** Nonsmooth Economic Power Dispatch through an Enhanced Differential Evolution Approach**Journal:** Proceedings of 2012 International Conference on Complex Systems (Iccs12)**Pages:** 126-131**Short Title:** Nonsmooth Economic Power Dispatch through an Enhanced Differential Evolution Approach**Accession Number:** WOS:000324984400021

**Abstract:** Economic power dispatch (EPD) is an important tool for optimal operation and planning of modern power systems. To solve effectively EPD problems, most of the conventional calculus methods rely on the assumption that the fuel cost characteristic of a generating unit is a continuous and convex function, resulting in inaccurate dispatch. This paper presents the design and application of an enhanced differential evolution (EDE) algorithm for the solution of the economic power dispatch problem, where the nonsmooth and nonconvex characteristics of the generators, such as valve-point effects and multi-fuel options of the practical generator operation are considered. The 10generator benchmark test system with valve-point loading effects and multi-fuel options was used for testing and validation purposes. The results obtained demonstrate the effectiveness of the proposed method for solving the nonsmooth economic dispatch problem.

**Notes:** Sayah, Samir Hamouda, Abdellatif Essaaidi, M Nemiche, M 1st International Conference on Complex Systems (ICCS) Nov 05-06, 2012 Agadir, MOROCCO 978-1-4673-4766-2

**URL:** <Go to ISI>://WOS:000324984400021

**Reference Type: Journal Article****Record Number:** 147**Author:** Sebhi, A. Osmani, H. Rech, J.**Year:** 2012**Title:** Tribological Behaviour of Coated Carbide Tools during Turning of Steels with Improved Machinability**Journal:** Strojnicki Vestnik-Journal of Mechanical Engineering**Volume:** 58**Issue:** 12**Pages:** 744-749**Date:** Dec**Short Title:** Tribological Behaviour of Coated Carbide Tools during Turning of Steels with Improved Machinability**ISSN:** 0039-2480**DOI:** 10.5545/sv-jme.2012.561**Accession Number:** WOS:000312922200007

**Abstract:** When competing with the industrial productivity, respecting the general rules of work and ecology of the environment system by avoiding various types of lubricating liquid, solid or any other form of machining, research is directed towards the steels with improved machinability and coating cutting tools. In order to best understand this, new and modern study parameters related to the cutting phenomenon have to be used, so it will be closer to the tribology of contact tool/chip/workpiece. In this context, the interaction of tribological of pairs of materials with improved machinability steels / coated carbide tools and the relationship between the friction coefficient, cutting speed, tool wear and surface quality will be studied. In this case a tribometer designed to identify the friction coefficient in difficult cutting conditions is used. The following steels (42CrMo4, 27MnCr5), TiN, AlTiN coated carbide tools have been used in the experimental work.

**Notes:** Sebhi, Amar Osmani, Hocine Rech, Joel**URL:** <Go to ISI>://WOS:000312922200007

**Reference Type: Journal Article****Record Number:** 148**Author:** Seddik, T. Khenata, R. Bouhemadou, A. Rached, D. Varshney, D. Bin-Omran, S.**Year:** 2012**Title:** Structural, electronic and elastic properties of the new ternary alkali metal chalcogenides KLiX (X = S, Se and Te)**Journal:** Computational Materials Science**Volume:** 61**Pages:** 206-212**Date:** Aug**Short Title:** Structural, electronic and elastic properties of the new ternary alkali metal chalcogenides KLiX (X = S, Se and Te)**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2012.04.020**Accession Number:** WOS:000304562000028

**Abstract:** The structural, electronic and elastic properties of the tetragonal alkali metal chalcogenides KLiX [X: S, Se and Te] have been investigated using the full-potential (linearized) augmented plane wave plus local orbitals method. The exchange-correlation potential is treated within the generalized gradient approximation of Wu and Cohen. Moreover, the alternative form of GGA proposed by Engel and Vosko is also used for the electronic properties. The calculated structural parameters are in excellent agreement with the experimental data. The elastic constants  $C_{ij}$  are predicted using the total energy variation versus strain technique. The polycrystalline elastic moduli, namely; shear modulus, Young's modulus, Poisson's ratio, sound velocities and Debye temperature are derived from the obtained single-crystal elastic constants. Brittleness behavior of these compounds is interpreted via the calculated elastic constants  $C_{ij}$ . Calculated band structures show that KLiS and KLiSe have an indirect energy band gap, whereas KLiTe has a direct energy band gap. The contribution of alkali metals and chalcogen atoms to the electronic band structure and electronic density of states has been analyzed. This is the first quantitative theoretical prediction of the elastic and electronic properties for these investigated compounds and still awaits experimental confirmations. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Seddik, T. Khenata, R. Bouhemadou, A. Rached, D. Varshney, Dinesh Bin-Omran, S.**URL:** <Go to ISI>://WOS:000304562000028

**Reference Type: Journal Article****Record Number:** 149**Author:** Seddik, T. Khenata, R. Merabiha, O. Bouhemadou, A. Bin-Omran, S. Rached, D.**Year:** 2012**Title:** Elastic, electronic and thermodynamic properties of fluoro-perovskite  $\text{KZnF}_3$  via first-principles calculations**Journal:** Applied Physics a-Materials Science & Processing**Volume:** 106**Issue:** 3**Pages:** 645-653**Date:** Mar**Short Title:** Elastic, electronic and thermodynamic properties of fluoro-perovskite  $\text{KZnF}_3$  via first-principles calculations**ISSN:** 0947-8396**DOI:** 10.1007/s00339-011-6643-2**Accession Number:** WOS:000300260600024

**Abstract:** The elastic, electronic and thermodynamic properties of fluoro-perovskite  $\text{KZnF}_3$  have been calculated using the full-potential linearized augmented plane wave (FP-LAPW) method. The exchange-correlation potential is treated with the generalized gradient approximation of Perdew-Burke-Ernzerhof (GGA-PBE). Also, we have used the Engel and Vosko GGA formalism (GGA-EV) to improve the electronic band structure calculations. The calculated structural properties are in good agreement with available experimental and theoretical data. The elastic constants  $C_{ij}$  are calculated using the total energy variation with strain technique. The shear modulus, Young's modulus, Poisson's ratio and the Lamé coefficients for polycrystalline  $\text{KZnF}_3$  aggregates are estimated in the framework of the Voigt-Reuss-Hill approximations. The ductility behavior of this compound is interpreted via the calculated elastic constants  $C_{ij}$ . Electronic and bonding properties are discussed from the calculations of band structure, density of states and electron charge density. The thermodynamic properties are predicted through the quasi-harmonic Debye model, in which the lattice vibrations are taken into account. The variation of bulk modulus, lattice constant, heat capacities and the Debye temperature with pressure and temperature are successfully obtained.

**Notes:** Seddik, T. Khenata, R. Merabiha, O. Bouhemadou, A. Bin-Omran, S. Rached, D.**URL:** <Go to ISI>://WOS:000300260600024

**Reference Type: Journal Article**

**Record Number: 150**

**Author:** Selmani, M. Messaoudi, T.

**Year:** 2012

**Title:** A Dynamic Frictionless Elastic-Viscoplastic Problem with Normal Damped Response and Damage

**Journal:** Mediterranean Journal of Mathematics

**Volume:** 9

**Issue:** 1

**Pages:** 81-94

**Date:** Feb

**Short Title:** A Dynamic Frictionless Elastic-Viscoplastic Problem with Normal Damped Response and Damage

**ISSN:** 1660-5446

**DOI:** 10.1007/s00009-011-0117-9

**Accession Number:** WOS:000299951400005

**Abstract:** We consider a mathematical model for the process of a frictionless contact between an elastic-viscoplastic body and a reactive foundation. The material is elastic-viscoplastic with internal state variable which may describe the damage of the system caused by plastic deformations. We establish a variational formulation for the model and prove the existence and uniqueness result of the weak solution. The proof is based on arguments of nonlinear equations with monotone operators, on parabolic type inequalities and fixed point.

**Notes:** Selmani, Mohamed Messaoudi, Tayeb

**URL:** <Go to ISI>://WOS:000299951400005

**Reference Type: Journal Article****Record Number:** 151**Author:** Selmani, M. Selmani, L.**Year:** 2012**Title:** Analysis of a frictionless contact problem for elastic-viscoplastic materials**Journal:** Nonlinear Analysis-Modelling and Control**Volume:** 17**Issue:** 1**Pages:** 99-117**Date:** Feb**Short Title:** Analysis of a frictionless contact problem for elastic-viscoplastic materials**ISSN:** 1392-5113**Accession Number:** WOS:000300934800008

**Abstract:** We consider a dynamic frictionless contact problem for elastic-viscoplastic materials with damage. The contact is modelled with normal compliance condition. The adhesion of the contact surfaces is considered and is modelled with a surface variable, the bonding field whose evolution is described by a first order differential equation. We derive variational formulation for the model and prove an existence and uniqueness result of the weak solution. The proof is based on arguments of nonlinear evolution equations with monotone operators, a classical existence and uniqueness result on parabolic inequalities, differential equations and fixed-point arguments.

**Notes:** Selmani, Mohamed Selmani, Lynda**URL:** <Go to ISI>://WOS:000300934800008

**Reference Type: Journal Article****Record Number:** 152**Author:** Vaiciulis, I. Girtan, M. Stanculescu, A. Leontie, L. Habelhames, F. Antohe, S.**Year:** 2012**Title:** ON TITANIUM OXIDE SPRAY DEPOSITED THIN FILMS FOR SOLAR CELLS APPLICATIONS**Journal:** Proceedings of the Romanian Academy Series a-Mathematics Physics Technical Sciences Information Science**Volume:** 13**Issue:** 4**Pages:** 335-342**Date:** Oct-Dec**Short Title:** ON TITANIUM OXIDE SPRAY DEPOSITED THIN FILMS FOR SOLAR CELLS APPLICATIONS**ISSN:** 1454-9069**Accession Number:** WOS:000312118100007

**Abstract:** Titanium oxide is one of the most promising candidate for relatively low cost, simple manufacture and high-performance new generation solar cells and the recent achievements in dye-sensitized solar cells (DSSCs) efficiencies and life time confirm the fact that these new generation solar cells becomes one of the future solutions in energy conversion. In DSSCs the presence of a dense titanium oxide layer is necessary in order to avoid short circuits between electrodes. Then, the interest to have a second porous TiO<sub>2</sub> layer is determined by the fact that compared to a flat surface, a dye-sensitized porous surface area increase the absorption and hence conduct to the increase of solar cells efficiencies. Generally these two layers are prepared by successive depositions using two different methods. In this paper we present a simple technique to prepare both layers during the same spraying process. Films morphology and structure of titanium oxide deposited on glass and ITO substrate was investigated by AFM, SEM and XRD respectively.

**Notes:** Vaiciulis, Ignas Girtan, Mihaela Stanculescu, Anca Leontie, Liviu Habelhames, Farid Antohe, Stefan

**URL:** <Go to ISI>://WOS:000312118100007

**Reference Type: Journal Article****Record Number:** 153**Author:** Zaghouane-Boudiaf, H. Boutahala, M. Arab, L.**Year:** 2012**Title:** Removal of methyl orange from aqueous solution by uncalcined and calcined MgNiAl layered double hydroxides (LDHs)**Journal:** Chemical Engineering Journal**Volume:** 187**Pages:** 142-149**Date:** Apr**Short Title:** Removal of methyl orange from aqueous solution by uncalcined and calcined MgNiAl layered double hydroxides (LDHs)**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2012.01.112**Accession Number:** WOS:000302824400017

**Abstract:** In this study, both uncalcined (MgNiAl-CO<sub>3</sub>) and calcined (MgNiAl-C) hydrotalcites were used in the adsorption of methyl orange (MO) from aqueous solution as an anionic dye in a batch system. Various conditions such as initial dye concentration, adsorbent dosage, contact time, solution pH, and temperature were investigated. The adsorption kinetics was studied using classic equations of pseudo-first-order, -second-order and intraparticle diffusion models. The dynamical data fit well with the pseudo-second-order kinetic model. The positive value of the changes in enthalpy ( $\Delta H$  degrees), the negative value of Gibbs free energy ( $\Delta G$  degrees), showed that the adsorption is endothermic and spontaneous for all the studied temperatures. The equilibrium adsorption data were analyzed using three non linear adsorption models: Langmuir, Freundlich and Redlich-Peterson. The results showed that Langmuir and Redlich-Peterson isotherms fit the experimental results very well with high correlation coefficients. The Langmuir isotherm model exhibited a maximum adsorption capacity  $q(\text{max})$  of 375 mg/g for the calcined MgNiAl-C. This result is of practical interest, with respect to the selection of sorbents, to optimize aquatic environment remediation technologies. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Zaghouane-Boudiaf, Hassina Boutahala, Mokhtar Arab, Loubna**URL:** <Go to ISI>://WOS:000302824400017

**Reference Type: Journal Article****Record Number:** 154**Author:** Zebiri, C. Benabdelaziz, F. Lashab, M.**Year:** 2012**Title:** Complex media parameter effect on the input impedance of rectangular microstrip antenna**Journal:** Proceedings of 2012 International Conference on Complex Systems (Iccs12)**Pages:** 559-561**Short Title:** Complex media parameter effect on the input impedance of rectangular microstrip antenna**Accession Number:** WOS:000324984400097**Abstract:** The effect of a chiral bi-anisotropic substrate with the complex constitutive parameters on the input impedance of a rectangular microstrip antenna has been studied on the basis of the integral equation formulation. The analysis is based on numerical solution of the integral equation using Galerkin procedure for moment method in the spectral domain.**Notes:** Zebiri, C. Benabdelaziz, F. Lashab, M. Essaaidi, M Nemiche, M 1st International Conference on Complex Systems (ICCS) Nov 05-06, 2012 Agadir, MOROCCO 978-1-4673-4766-2**URL:** <Go to ISI>://WOS:000324984400097

**Reference Type: Journal Article**

**Record Number: 155**

**Author: Zoubida, Z. Djamel, A.**

**Year: 2012**

**Title: EPIDEMIOLOGY OF GALLBLADDER CANCER IN ALGERIA**

**Journal: Annals of Oncology**

**Volume: 23**

**Pages: 78-78**

**Date: Jun**

**Short Title: EPIDEMIOLOGY OF GALLBLADDER CANCER IN ALGERIA**

**ISSN: 0923-7534**

**Accession Number: WOS:000305826900228**

**Notes: Zoubida, Zaidi Djamel, Abdellouche 14th World Congress on Gastrointestinal Cancer of the European-Society-for-Medical-Oncology (ESMO) Jun 27-30, 2012 Barcelona, SPAIN  
European Soc Med Oncol (ESMO) 4**

**URL: <Go to ISI>://WOS:000305826900228**

**Reference Type: Journal Article****Record Number:** 156**Author:** Zoukrami, F. Haddaoui, N. Bailly, C. Sclavons, M. Legras, R.**Year:** 2012**Title:** Elongational and Shear Flow Behavior of Calcium Carbonate Filled Low Density Polyethylene: Effect of Filler Particle Size, Content, and Surface Treatment**Journal:** Journal of Applied Polymer Science**Volume:** 123**Issue:** 1**Pages:** 257-266**Date:** Jan**Short Title:** Elongational and Shear Flow Behavior of Calcium Carbonate Filled Low Density Polyethylene: Effect of Filler Particle Size, Content, and Surface Treatment**ISSN:** 0021-8995**DOI:** 10.1002/app.34466**Accession Number:** WOS:000296437600028

**Abstract:** In this article, calcium carbonate filled low density polyethylene (LDPE) was prepared and the influence of filler content, particle size, and surface treatment with stearic acid on the strain hardening and viscoelastic properties of the composites were investigated. Both elongational and shear rheological measurements were conducted on the different formulations and completed by microscopical observations and by differential scanning thermal analysis. The obtained results indicate that the effect of filler content and particle size are negligible on strain hardening behavior. Also the filler surface treatment has a less important effect on the nonlinear elongational tests in comparison with low frequency range measurements. However in shear rheology, we noted the absence of yield stress and network structure at different filler contents, and the presence of shear thinning behavior. Scanning electron microscopy (SEM) observations showed the enhancement of dispersion for surface treated samples, while differential scanning calorimetry (DSC) experiments have shown that the content of crystallinity of LDPE matrix is slightly affected by the presence of filler. (C) 2011 Wiley Periodicals, Inc. J Appl Polym Sci 123: 257-266, 2012

**Notes:** Zoukrami, Fouzia Haddaoui, Nacerddine Bailly, Christian Sclavons, Michel Legras, Roger**URL:** <Go to ISI>://WOS:000296437600028

**Record Number: 1****Author:** Abdellatif-Mami, N.**Year:** 2012**Title:** SUPPORTING THE LMD SYSTEM THROUGH TUTORING: THE "CAN DO" CULTURE IN THE ALGERIAN CONTEXT**Editor:** Chova, L. G. Martinez, A. L. Torres, I. C.**Book Title:** Inted2012: International Technology, Education and Development Conference**Pages:** 4386-4391**Series Title:** INTED Proceedings**Short Title:** SUPPORTING THE LMD SYSTEM THROUGH TUTORING: THE "CAN DO" CULTURE IN THE ALGERIAN CONTEXT**ISBN:** 2340-1079 978-84-615-5563-5**Accession Number:** WOS:000326396404050

**Abstract:** The LMD system has been introduced in the Algerian context since the year 2004-2005. Since then, many shortcomings pertaining to its implementation as well as to the organisation of courses have been the weakest link in the success of the programme. The Large number of classes and the lack of human and material resources have hindered a successful approach to the values set by the Bologna Declaration. However, a number of measures have been taken by the Ministry of Higher Education and Scientific Research to appease the pressure of the many strikes witnessed by the university community. In this research, however, I shall demonstrate how an effective system of tutoring may help in improving customer service and integrate new starters effectively. Tutoring is the basic line of the LMD system. In Algeria, this notion lacks employability and focus to engage learners in self-directed and self-tested learning. Throughout an investigation conducted at Ferhat ABBAS University, Setif, I shall try to explain how developing people's management through academic tutoring may encourage leadership fundamentals in developing an internal coaching service. On the other hand, major changes in the Higher Education Area required a more qualified workforce with different skills. The LMD system was commissioned to design a one-day-career and to create an appreciative "can do" culture. In this research I shall explain how we can make this "can do" culture relevant in the Algerian context.

**Notes:** Abdellatif-Mami, Naouel 6th International Conference of Technology, Education and Development (INTED) Mar 05-07, 2012 Valencia, SPAIN**URL:** <Go to ISI>://WOS:000326396404050

**Reference Type: Book Section****Record Number:** 2**Author:** Abdellatif-Mami, N.**Year:** 2012**Title:** MANAGING QUALITY AND QUALITY ASSURANCE IN THE LMD ERA: THE ALGERIAN CASE**Editor:** Chova, L. G. Martinez, A. L. Torres, I. C.**Book Title:** Inted2012: International Technology, Education and Development Conference**Pages:** 4432-4439**Series Title:** INTED Proceedings**Short Title:** MANAGING QUALITY AND QUALITY ASSURANCE IN THE LMD ERA: THE ALGERIAN CASE**ISBN:** 2340-1079 978-84-615-5563-5**Accession Number:** WOS:000326396404056

**Abstract:** Higher Education, in Algeria, has witnessed many challenges since post-independence. However, with the implementation of the Bologna Declaration in 2004-2005, Algerian Higher Education had to adapt to a universal and globalized educational system in constant growth and change. Despite the numerous attempts to approach the LMD architecture in the Algerian context, adaptivity has not been properly addressed in both teaching and learning. Quality management (QM) was a preliminary issue in changing the design and the structure of the system. In order to intervene as a reassuring agent in this process of change, Quality Assurance (QA) was an important element in the new composition of the procedures pertaining to the good functioning of Higher Education Institutions. This research seeks to shed light on the evaluation of the Quality Assurance project as adopted by the Algerian Higher Education. The evaluation has been undertaken in the year 2011 after six years of implementation of the LMD system. The study reflects on the development of the Algerian approach towards quality and quality assurance in the organisation of teaching and evaluation including the European Credit Transfer System (ECTS) and its relevance to the university reform in other European countries. The results are used to promote exchanges of information and experiences between the decision makers and the practitioners in the field. More than that, this research aims to analyse how Quality Assurance initiatives could promote the quality of both teaching and learning and support better practices already established in Europe. Major results of the research focus on the decentralization of responsibilities, autonomy of providers and accountability which remain very difficult to apply in Algeria. Our aim is, thus, to provide a well-delimited concept to be implemented in the short-term.

**Notes:** Abdellatif-Mami, Naouel 6th International Conference of Technology, Education and Development (INTED) Mar 05-07, 2012 Valencia, SPAIN

**URL:** <Go to ISI>://WOS:000326396404056

**Reference Type: Book Section****Record Number:** 3**Author:** Azzi, M.**Year:** 2012**Title:** The New Pedagogical Practices within the LMD System: Perceptions of EFL Faculty Members**Editor:** Bekirogullari, Z.**Book Title:** International Conference on Education & Educational Psychology**Volume:** 69**Pages:** 1004-1013**Series Title:** Procedia Social and Behavioral Sciences**Short Title:** The New Pedagogical Practices within the LMD System: Perceptions of EFL Faculty Members**ISBN:** 1877-0428**DOI:** 10.1016/j.sbspro.2012.12.027**Accession Number:** WOS:000317131400124

**Abstract:** The LMD system has promoted new pedagogical practices. However, despite their promises to enhance both the teaching/learning process and the teaching profession, they are hardly adopted by EFL teachers in Algeria. The major thrust of the study is to identify one of the factors inhibiting their adoption namely, academics' perceptions. It is built on Rogers' innovation adoption/diffusion framework (1995) which has identified five (5) innovation perceived characteristics related to: relative advantage, compatibility, complexity, trialability and observability. The findings of the study highlight EFL academics' negative perceptions of the new pedagogical practices within the LMD system which might explain their failure to adopt them. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of Dr. Zafer Bekirogullari of Cognitive - Counselling, Research & Conference Services C-crcs.

**Notes:** Azzi, Meriem Icepsy 2012 3rd International Conference on Education and Educational Psychology (ICEEPSY) Oct 10-13, 2012 Istanbul, TURKEY Cognitive-Counselling, Res & Conf Serv (C-crcs), Point Loma Nazarene Univ

**URL:** <Go to ISI>://WOS:000317131400124

**Reference Type: Book Section****Record Number:** 4**Author:** Bakiri, Z. Chebli, D. Nacef, S.**Year:** 2012**Title:** Dynamic modelling of the secondary settler of a wastewater treatment via activated sludge to low-load**Editor:** Salame, C. Aillerie, M. Khoury, G.**Book Title:** Terragreen 2012: Clean Energy Solutions for Sustainable Environment**Volume:** 18**Pages:** 1-9**Series Title:** Energy Procedia**Short Title:** Dynamic modelling of the secondary settler of a wastewater treatment via activated sludge to low-load**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2012.05.012**Accession Number:** WOS:000305286700001

**Abstract:** The aim of this study is to apply a mathematical treatment to a case study that concerns the biological wastewater treatment. Its objective was to develop a model that aims at predicting the conditions that would lead to an outlet clear water out from a secondary settler. It deals with a wastewater treatment process which consists of the separation by decantation of an activated sludge coming out of an aerobic low-load reactor. First, it was necessary to estimate the pollution parameters namely: the total suspended solid (TSS), the chemical oxygen demand (COD), the biological oxygen demand (BOD5) and ammonia content (NH<sub>3</sub>-N). Secondly a mathematical model for the secondary settler was developed. The monitoring of the wastewater treatment plant as well as the knowledge of the experimental parameters such as the sludge blanket height, the TSS, and decantation time enabled us to develop the mathematical model. The advantage of this model is that it would allow a better process control. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of The TerraGreen Society.

**Notes:** Bakiri, Zahir Chebli, Derradji Nacef, Saci Cesse International Conference on Clean Energy Solutions for Sustainable Environment (TerraGreen) Feb 16-19, 2012 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000305286700001

**Reference Type: Book Section****Record Number:** 5**Author:** Benbahouche, L. Merabet, A. Zegadi, A.**Year:** 2012**Title:** A detailed investigation on the failure mechanisms for IGBTs under successive short-circuit conditions**Editor:** Pizzini, S. Kissinger, G. Yamada Kaneta, H. Kang, J.**Book Title:** Physica Status Solidi C: Current Topics in Solid State Physics, Vol 9, No 10-11**Volume:** 9**Series Volume:** 10-11**Pages:** 2036-2040**Series Title:** Physica Status Solidi C-Current Topics in Solid State Physics**Short Title:** A detailed investigation on the failure mechanisms for IGBTs under successive short-circuit conditions**ISBN:** 1862-6351**DOI:** 10.1002/pssc.201200055**Accession Number:** WOS:000314688000037

**Abstract:** The increasing demand in terms of device performance and reliability requires continuous developments of power semiconductors that operate under hard switching conditions SOA (Safe Operating Area). The aim of this paper to enable a better understanding of the main problems that are associated with successive short circuit failure modes like (latch up and second breakdown) and also to clarify the correlation with respect to the circuit elements. It investigates the temperature impact of successive short-circuit delay time effects on the failure mechanisms evolutions and to evaluates the feasibility and issues of IGBT under successive short-circuit conditions. The device behaviour can predicted at critical operations such as its latch up during a turn off short circuit condition or if there is an observable aging effect. It is shown that when applied to IXGH-IGBT at its worst short circuit condition (successive short circuit), this one can work securely without affecting the normal system operation at higher temperatures. (C) 2012 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Benbahouche, Ly Merabet, A. Zegadi, A. Symposium A on Advanced Silicon Materials Research for Electronic and Photovoltaic Applications III / Spring Meeting of the European-Materials-Research-Society (E-MRS) May 14-18, 2012 Strasbourg, FRANCE European Mat Res Soc (E-MRS)

**URL:** <Go to ISI>://WOS:000314688000037

**Reference Type: Book Section****Record Number:** 6**Author:** Benbahouche, L. Merabet, A. Zegadi, A. Ieee,**Year:** 2012**Title:** Failure Mechanisms and Comparative Study of Ruggedness in IGBTs Devices (IR, IXYS)**Book Title:** 2012 28th International Conference on Microelectronics**Pages:** 111-114**Series Title:** International Conference on Microelectronics-MIEL**Short Title:** Failure Mechanisms and Comparative Study of Ruggedness in IGBTs Devices (IR, IXYS)**ISBN:** 2159-1660 978-1-4673-0238-8**Accession Number:** WOS:000309119600020

**Abstract:** This paper present a detailed study of performance of two the most commercially available IGBT for International Rectifier and IXYS e. g. IRGBC40 (S, F, U) and IXGH40N60A, when subjected to two such stressful conditions short circuit operation and unclamped inductive switching and it takes into account specific phenomena limiting its SOA (Safe Operation Area), avalanche, second breakdown as well as latch up. As both these tests conditions are potentially destructive, it is extremely cost efficient to model the device performance under these conditions. The need of a good physics based simulation to carry out a reliability study is pointed out in this paper. An explanation comparison of ruggedness of IRGBC40 (S, F, U) as well as of IXGH40N60A which leads to a fundamental understanding of physics of two devices.

**Notes:** Benbahouche, Ly Merabet, A. Zegadi, A. Miel 28th International Conference on Microelectronics (MIEL) May 13-16, 2012 Nis, SERBIA IEEE, IEEE Serbia & Montenegro Sect - ED/SSC Chapter, IEEE Electron Devices Soc (EDS), IEEE Solid-State Circuits Soc (SSCS)

**URL:** <Go to ISI>://WOS:000309119600020

**Reference Type: Book Section****Record Number:** 7**Author:** Bouzid, D. Belkhie, N. Aliouane, T. Iop,**Year:** 2012**Title:** Optical glass surfaces polishing by cerium oxide particles**Book Title:** Materiaux 2010**Volume:** 28**Series Title:** IOP Conference Series-Materials Science and Engineering**Short Title:** Optical glass surfaces polishing by cerium oxide particles**ISBN:** 1757-8981**DOI:** 012007 10.1088/1757-899x/28/1/012007**Accession Number:** WOS:000301182700007

**Abstract:** The use of powders in metallic oxides as means of grinding and polishing of the optical glass components have seen recently a large application in optical industry. In fact, cerium oxide abrasive is more used in the optical glass polishing. It is used as grains abrasive in suspension or fixed abrasive (pellets); these pellets are manufactured from a mixture made of cerium oxide abrasive and a organic binder. The cerium oxide used in the experiments is made by (Logitech USA) of 99% purity, the average grain size of the particle is 300 nm, the density being 6,74 g/cm<sup>3</sup> and the specific surface is 3,3042 m<sup>2</sup>/g. In this study, we are interested in the surfaces quality of the optical glass borosilicate crown (BK7) polished by particles in cerium oxide bounded by epoxy. The surfaces of the optical glass treated are characterized by the roughness, the flatness by using the microscope Zygo and the SEM.

**Notes:** Bouzid, D. Belkhie, N. Aliouane, T. National conference on MATERIAUX Nov 04-07, 2010 Mahdia, TUNISIA Tunisian Mat Res Soc-Tu-MRS

**URL:** <Go to ISI>://WOS:000301182700007

**Reference Type: Book Section****Record Number:** 8**Author:** Bouzidi, K. Chegaar, M. Aillerie, M.**Year:** 2012**Title:** Solar cells parameters evaluation from dark I-V characteristics**Editor:** Salame, C. Aillerie, M. Khoury, G.**Book Title:** Terragreen 2012: Clean Energy Solutions for Sustainable Environment**Volume:** 18**Pages:** 1601-1610**Series Title:** Energy Procedia**Short Title:** Solar cells parameters evaluation from dark I-V characteristics**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2012.06.001**Accession Number:** WOS:000305286700165

**Abstract:** In this paper, a comparative analysis of three methods to determine the four solar cells parameters (the saturation current ( $I_s$ ), the series resistance ( $R_s$ ), the ideality factor ( $n$ ), and the shunt conductance ( $G_{sh}$ )) of the single diode lumped model from its dark curve is presented.

These methods are based on Gromov, Werner, and Mikhelashvili et al. methods that were used to extract the Schottky diode parameters. These techniques have been adequately modified, extended to cover the case of solar cells and used to extract the parameters of interest from experimental I-V characteristic of a Poly-Si solar cell under dark condition. (C) 2010 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of The TerraGreen Society.

**Notes:** Bouzidi, K. Chegaar, M. Aillerie, M. Cesse International Conference on Clean Energy Solutions for Sustainable Environment (TerraGreen) Feb 16-19, 2012 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000305286700165

**Reference Type: Book Section****Record Number:** 9**Author:** Chaoui, A. Gaubert, J. P. Bouafia, A. Ieee Industrial Electronics Society**Year:** 2012**Title:** Direct Power Control Concept and Analysis for Three Phase Shunt Active Power Filter**Book Title:** 38th Annual Conference on Ieee Industrial Electronics Society**Pages:** 1286-1294**Series Title:** IEEE Industrial Electronics Society**Short Title:** Direct Power Control Concept and Analysis for Three Phase Shunt Active Power Filter**ISBN:** 1553-572X 978-1-4673-2421-2**Accession Number:** WOS:000316962901046

**Abstract:** This paper deals with the concept and analysis of direct power control (DPC) for a three phase shunt active power filter (SAPF). From the topology of the SAPF and its equivalent scheme a new predefined switching table is designed by analyzing the voltage source inverter (VSI) switching vectors effect on the total derivatives of instantaneous and reactive power. To maintain the VSI dc-bus voltage at the required level an JP controller is used to obtain the active power control. The active and reactive powers are directly controlled by selecting the optimal switching state. The main advantages of this method are that it provides a sinusoidal source current and unity power factor with no need of linear current controllers and coordinates transformations or modulators. Extensive simulation and experimental results obtained from steady and transient states have proven the excellent performance and verify the validity and effectiveness of the proposed power control scheme.

**Notes:** Chaoui, Abdelmadjid Gaubert, Jean-Paul Bouafia, Abdelouahab Iecon 2012 38th Annual Conference on IEEE-Industrial-Electronics-Society (IECON ) Oct 25-28, 2012 Univ Quebec, Ecole Technologie Superieure Montreal (ETS), Montreal, CANADA IEEE, IEEE Ind Elect Soc (IES)

**URL:** <Go to ISI>://WOS:000316962901046

**Reference Type: Book Section****Record Number:** 10**Author:** Ferria, K. Griani, L. Laouar, N.**Year:** 2012**Title:** Acousto-optic Method Used to Control Water Pollution by Miscible Liquids**Editor:** Linde, B. B. J. Paczkowski, J. Ponikwicki, N.**Book Title:** International Congress on Ultrasonics**Volume:** 1433**Pages:** 76-83**Series Title:** AIP Conference Proceedings**Short Title:** Acousto-optic Method Used to Control Water Pollution by Miscible Liquids**ISBN:** 0094-243X 978-0-7354-1019-0**DOI:** 10.1063/1.3703143**Accession Number:** WOS:000307631000014

**Abstract:** An acousto-optic (A.O.) method has been developed for controlling the quality of water mixed by miscible liquids like acetone or ethanol. The liquid mixture is filled in a rectangular glass cell, which is placed orthogonally to the incident collimated beam of light. This cell consists of a piezoelectric transducer for generating ultrasonic waves. The collimated light while passing through this cell undergoes a diffraction phenomenon. The diffracted dots are collected by a converging photographic objective and displayed in its back focal plane. The location of the diffracted dots and their intensity are sensitive to any variation of the interaction medium. This result leads to decide about the quality of the water.

**Notes:** Ferria, Kouider Griani, Lazhar Laouar, Naamane Gdansk 2011 International Congress on Ultrasonics (ICU) Sep 05-08, 2011 Univ Gdansk, Inst Expt Phys, Gdansk-Oliwa Campus, Gdansk, POLAND Univ Gdansk, Polish Acoust Soc, Polish Acad Sci, Comm Acoust, Int Commiss Acoust (ICA)

**URL:** <Go to ISI>://WOS:000307631000014

**Reference Type: Book Section****Record Number:** 11**Author:** Guechi, A. Chegaar, M. Aillerie, M.**Year:** 2012**Title:** Environmental effects on the performance of nanocrystalline silicon solar cells**Editor:** Salame, C. Aillerie, M. Khoury, G.**Book Title:** Terragreen 2012: Clean Energy Solutions for Sustainable Environment**Volume:** 18**Pages:** 1611-1623**Series Title:** Energy Procedia**Short Title:** Environmental effects on the performance of nanocrystalline silicon solar cells**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2012.06.002**Accession Number:** WOS:000305286700166

**Abstract:** In this paper the global, direct and diffuse solar radiation incident on solar cells is simulated using the spectral model SMARTS2, for varying environmental conditions on the site of Setif. The effect of changes in total intensity and spectral distribution on the short circuit current and efficiency of nanocrystalline silicon (nc-Si: H) is examined. The results show a reduction in the short circuit current due to increasing turbidity. It is 27.06% and 67.97% under global and direct radiation respectively. However it increases under diffuse radiation. This increase is about 53.97%. Increasing albedo leads to an increase in the short circuit current of 5.70% and 27.05% for global and diffuse solar radiation, respectively and it is not influenced under direct solar radiation. The performance of the cells is notably reduced, both in terms of efficiency and open circuit voltage, with increasing air mass. It is about 81.86%, 37.47% and 94.18% for global, diffuse and direct solar radiation respectively. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of The TerraGreen Society.

**Notes:** Guechi, A. Chegaar, M. Aillerie, M. Cesse International Conference on Clean Energy Solutions for Sustainable Environment (TerraGreen) Feb 16-19, 2012 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000305286700166

**Reference Type: Book Section****Record Number:** 12**Author:** Habelhames, F. Lamiri, L. Wided, Z. Nessark, B.**Year:** 2012**Title:** Optical and Photo-Electrochemical Properties of Conducting Polymer/Inorganic Semiconductor Nanoparticle**Editor:** Yang, G.**Book Title:** Materials Science and Engineering Technology**Volume:** 428**Pages:** 78-83**Series Title:** Advanced Materials Research**Short Title:** Optical and Photo-Electrochemical Properties of Conducting Polymer/Inorganic Semiconductor Nanoparticle**ISBN:** 1022-6680 978-3-03785-302-3**DOI:** 10.4028/www.scientific.net/AMR.428.78**Accession Number:** WOS:000309243100017

**Abstract:** Optical and photoelectrochemical properties of polybithiophene Poly(bTh) films electrochemically synthesized and modified with incorporation of silicon nanoparticles (n-Si or p-Si) dispersed in the electrolytic during polymerization were studied. The characterisation of these modified surface electrodes by Poly(bTh)+n-Si or Poly(bTh)+p-Si, was carried out by using the photocurrent measurements and UV-visible spectroscopy. Cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS) have been used to investigate the electrochemical behaviour of the resulting materials. The results show that the photosensitive composite materials have good photoelectrochemical and optical properties, and it can be used as material for the photovoltaic cells applications.

**Notes:** Habelhames, Farid Lamiri, Leila Wided, Zerguine Nessark, Belkacem International Symposium on Materials Science and Engineering Technology (ISMSET 2011) Nov 12-13, 2011 Dubai, U ARAB EMIRATES Hong Kong Educ Technol Soc

**URL:** <Go to ISI>://WOS:000309243100017

**Reference Type: Book Section****Record Number:** 13**Author:** Houamer, S. Popov, Y. V. Dal Cappello, C.**Year:** 2012**Title:** Transfer ionization process in collision of fast protons with helium at milliradian scattering angles**Editor:** Williams, I. D. VanDerHart, H. W. McCann, J. F. Crothers, D. S. F.**Book Title:** Xxvii International Conference on Photonic, Electronic and Atomic Collisions**Volume:** 388**Series Title:** Journal of Physics Conference Series**Short Title:** Transfer ionization process in collision of fast protons with helium at milliradian scattering angles**ISBN:** 1742-6588**DOI:** 082020 10.1088/1742-6596/388/8/082020**Accession Number:** WOS:000314994700487**Abstract:** The first Born approximation is examined for different p+He fast capture processes at incident energies of about 1 MeV. Calculations have been performed for the singly differential cross sections (SDCS) vs scattering angles 0-0.5 mrad in the laboratory frame. In the case of transfer ionization, we observe that the two-step-2 mechanism has a dominant contribution to the SDCS for the kinematics considered in this work.**Notes:** Houamer, S. Popov, Yu V. Dal Cappello, C. Ipeac 2011 27th International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) Jul 27-aug 02, 2011 Queens Univ Belfast, Belfast, NORTH IRELAND Andor Technol, Belfast City Council, Belfast Visitor & Convent Bur, Coherent, CVI Melles Griot, Dell, Int Union Pure & Appl Phys (IUPAP), Invest No Ireland, Laserlines, UK Cold Atoms/Condensed Matter Network (EPSRC), Phys Review Letters & Phys Review A, Quantemol, Springer, Great Britain Sasakawa Fdn, IoP Publishing - Journal Phys B: Atom, Mol & Opt Phys, IoP Publishing - Journal Phys: Conf Series**URL:** <Go to ISI>://WOS:000314994700487

**Reference Type: Book Section****Record Number:** 14**Author:** Houria, C.**Year:** 2012**Title:** Decadal Evaluation of Durum Wheat Water Requirements to Improve Rainfed Agriculture under Semi-Arid conditions**Editor:** Salame, C. Aillerie, M. Khoury, G.**Book Title:** Terragreen 2012: Clean Energy Solutions for Sustainable Environment**Volume:** 18**Pages:** 896-904**Series Title:** Energy Procedia**Short Title:** Decadal Evaluation of Durum Wheat Water Requirements to Improve Rainfed Agriculture under Semi-Arid conditions**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2012.05.104**Accession Number:** WOS:000305286700093

**Abstract:** The estimating water requirement of durum wheat is a technical tool which seats a practical water management. The water needs of durum wheat grown on the High Plains of Setif raised sharply by the first decade of march. In fact, it reached 46 mm from the mid of the tillering to the mid of jointing (march - april) and raised to 103 mm during the booting - heading growth phase. For a crop cycle lasting from the mid-november to the third decade of may, the crop water requirements were estimated to 672 mm. The periods with the high water demand coincide with limited offer. These results suggested applying limited water quantities to reduce water deficit effect on the crop. This contributes to stabilize wheat production through soil conservation and durable management of the scarce water resources in semi-arid area. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review review under responsibility of The TerraGreen Society.

**Notes:** Houria, Chennafi Cesse International Conference on Clean Energy Solutions for Sustainable Environment (TerraGreen) Feb 16-19, 2012 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000305286700093

**Reference Type: Book Section****Record Number:** 15**Author:** Houria, C. Saci, A.**Year:** 2012**Title:** The performances of Durum Wheat Yield (*Triticum durum* Desf.) under Tillage Effect in Semi-Arid Environment**Editor:** Salame, C. Aillerie, M. Khoury, G.**Book Title:** Terragreen 2012: Clean Energy Solutions for Sustainable Environment**Volume:** 18**Pages:** 879-887**Series Title:** Energy Procedia**Short Title:** The performances of Durum Wheat Yield (*Triticum durum* Desf.) under Tillage Effect in Semi-Arid Environment**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2012.05.102**Accession Number:** WOS:000305286700091

**Abstract:** Yield performances of durum wheat (*Triticum durum* Desf.) variety Waha were evaluated under effects of crop precedent: fallow and wheat, and tool nature of soil preparation: scarifier, moldboards plow or disks plow, during 2006/2007 growth season. The results showed the advantage, in grain yield, of wheat that crop precedent is fallow relatively to wheat following wheat. Tool effect of tillage soil is related to crop precedent. Indeed, Waha cultivated under fallow tilled with scarifier produced more grain than after wheat. However, proper management of production system improved productivity efficiency in rainfed agriculture. It is focused on soil and water resources conservation. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review review under responsibility of The TerraGreen Society.

**Notes:** Houria, Chennafi Saci, A. Cesse International Conference on Clean Energy Solutions for Sustainable Environment (TerraGreen) Feb 16-19, 2012 Beirut, LEBANON

**URL:** <Go to ISI>://WOS:000305286700091

**Reference Type: Book Section****Record Number:** 16**Author:** Meguellati, S. Djabi, S.**Year:** 2012**Title:** Optical device for precision Moire topography of micro surfaces**Editor:** Benitez, P. David, S. DeLaFuente, M. C. Erdmann, A. Kidger, T. E. Mazuray, L. Raynor, J. M. Smith, D. G. Tissot, J. L. M. Wartmann, R. Wood, A. P. Wyrowski, F.**Book Title:** Optical Systems Design 2012**Volume:** 8550**Series Title:** Proceedings of SPIE**Short Title:** Optical device for precision Moire topography of micro surfaces**ISBN:** 0277-786X 978-0-8194-9301-9**DOI:** 85501m 10.1117/12.980888**Accession Number:** WOS:000322739600053

**Abstract:** This method of optical scanning presented in this paper is used for precision measurement deformation or absolute forms in comparison with a reference component form, of optical or mechanical components, on surfaces that are of the order of mm(2) and more. The principle of the method is to project the image of the source grating on the surface to be inspected, after reflection; the image of the source grating is printed by the object topography and is then projected onto the plane of the reference grating to detect defects. The optical device used allows the magnification dimensional surface up to 1000 times the surface inspected, which allows easy processing and reaches an exceptional nanometric imprecision of measurements. According to the measurement principle, the sensitivity for displacement measurement using moire technique depends on the frequency grating, for increase the detection resolution. This measurement technique can be used advantageously to measure the deformations generated by constraints on functional parts and the influence of these variations on the function. It can also be used for dimensional control when, for example, to quantify the error as to whether a piece is good or rubbish. It then suffices to compare a figure of moire fringes with another previously recorded from a piece considered standard, which saves time, money and accuracy. This method of control and measurement allows real time control; speed control and the detection resolution may vary depending on the importance of defects to be measured.

**Notes:** Meguellati, S. Djabi, S. Conference on Optical Systems Design Nov 26-29, 2012  
Barcelona, SPAIN Spie

**URL:** <Go to ISI>://WOS:000322739600053

**Reference Type: Book Section****Record Number:** 17**Author:** Moussaoui, S.**Year:** 2012**Title:** An Investigation of the Effects of Peer Evaluation in Enhancing Algerian Students' Writing Autonomy and Positive Affect**Editor:** Bekirogullari, Z.**Book Title:** International Conference on Education & Educational Psychology**Volume:** 69**Pages:** 1775-1784**Series Title:** Procedia Social and Behavioral Sciences**Short Title:** An Investigation of the Effects of Peer Evaluation in Enhancing Algerian Students' Writing Autonomy and Positive Affect**ISBN:** 1877-0428**DOI:** 10.1016/j.sbspro.2012.12.127**Accession Number:** WOS:000317131400223

**Abstract:** This paper reports the results of a study that was conducted on the effects of peer evaluation in promoting EFL students' writing autonomy and their positive affect. The researcher used pre- and post-training surveys, class observations and peer evaluation rubrics. The results of the study showed that unlike the control group, the subjects in the study group demonstrated positive attitudes towards giving and receiving peer feedback. In addition, their involvement in social interaction during the evaluation process, as writers and readers, has decreased their writing apprehension and increased their writing self-efficacy (positive affect). Moreover, the process of reading, rethinking and revising has enabled the subjects to try new writing tasks on their own and develop their writing autonomy. (C) 2012 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of Dr. Zafer Bekirogullari of Cognitive - Counselling, Research & Conference Services C-crcs.

**Notes:** Moussaoui, Samira Icepsy 2012 3rd International Conference on Education and Educational Psychology (ICEEPSY) Oct 10-13, 2012 Istanbul, TURKEY Cognitive-Counselling, Res & Conf Serv (C-crcs), Point Loma Nazarene Univ

**URL:** <Go to ISI>://WOS:000317131400223

**Reference Type: Book Section****Record Number:** 18**Author:** Saadi, Y. Maamache, M.**Year:** 2012**Title:** Time Dependent Systems with Continuous Spectra: Some Applications**Editor:** Mebarki, N. Mimouni, J. Belaloui, N. Moussa, K. A.**Book Title:** 8th International Conference on Progress in Theoretical Physics**Volume:** 1444**Pages:** 443-447**Series Title:** AIP Conference Proceedings**Short Title:** Time Dependent Systems with Continuous Spectra: Some Applications**ISBN:** 0094-243X 978-0-7354-1040-4**DOI:** 10.1063/1.4715473**Accession Number:** WOS:000306685200078

**Abstract:** We present some concrete applications to the recent results obtained for the study of time dependent systems involving continuous spectra. Before doing, a brief recall of these results is provided.

**Notes:** Saadi, Y. Maamache, M. Icftp 2011 8th International Conference on Progress in Theoretical Physics (ICPTP) Oct 23-25, 2011 Campus Mentouri Univ, Constantine, ALGERIA Algerian Minist Higher Educ & Sci Res, Directorate Gen Sci Res & Technol Dev (DGRSDT), Rectorate Mentouri Univ, Fac Sci Mentouri Univ

**URL:** <Go to ISI>://WOS:000306685200078

**Reference Type: Book Section****Record Number:** 19**Author:** Saadi, Y. Maamache, M.**Year:** 2012**Title:** Time Dependent Systems with Continuous Spectra: Some Applications**Editor:** Mebarki, N. Mimouni, J. Belaloui, N. Moussa, K. A.**Book Title:** 8th International Conference on Progress in Theoretical Physics**Volume:** 1444**Pages:** 448-452**Series Title:** AIP Conference Proceedings**Short Title:** Time Dependent Systems with Continuous Spectra: Some Applications**ISBN:** 0094-243X 978-0-7354-1040-4**DOI:** 10.1063/1.4715474**Accession Number:** WOS:000306685200079

**Abstract:** We present some concrete applications to the recent results obtained for the study of time dependent systems involving continuous spectra. Before doing, a brief recall of these results is provided.

**Notes:** Saadi, Y. Maamache, M. Icftp 2011 8th International Conference on Progress in Theoretical Physics (ICPTP) Oct 23-25, 2011 Campus Mentouri Univ, Constantine, ALGERIA Algerian Minist Higher Educ & Sci Res, Directorate Gen Sci Res & Technol Dev (DGRSDT), Rectorate Mentouri Univ, Fac Sci Mentouri Univ

**URL:** <Go to ISI>://WOS:000306685200079

**Reference Type: Book Section****Record Number:** 20**Author:** Yakhelef, A. Bouldjedri, A.**Year:** 2012**Title:** Shell Model Calculation for Te and Sn Isotopes in the Vicinity of Sn-100**Editor:** Mebarki, N. Mimouni, J. Belaloui, N. Moussa, K. A.**Book Title:** 8th International Conference on Progress in Theoretical Physics**Volume:** 1444**Pages:** 197-201**Series Title:** AIP Conference Proceedings**Short Title:** Shell Model Calculation for Te and Sn Isotopes in the Vicinity of Sn-100**ISBN:** 0094-243X 978-0-7354-1040-4**DOI:** 10.1063/1.4715420**Accession Number:** WOS:000306685200026

**Abstract:** New Shell Model calculations for even-even isotopes Sn104-108 and Te-106,Te-108, in the vicinity of Sn-100 have been performed. The calculations have been carried out using the windows version of NuShell@MSU. The two body matrix elements TBMEs of the effective interaction between valence nucleons are obtained from the renormalized two body effective interaction based on G-matrix derived from the CD-bonn nucleon-nucleon potential. The single particle energies of the proton and neutron valence spaces orbitals are defined from the available spectra of lightest odd isotopes of Sb and Sn respectively.

**Notes:** Yakhelef, A. Bouldjedri, A. Icftp 2011 8th International Conference on Progress in Theoretical Physics (ICPTP) Oct 23-25, 2011 Campus Mentouri Univ, Constantine, ALGERIA Algerian Minist Higher Educ & Sci Res, Directorate Gen Sci Res & Technol Dev (DGRSDT), Rectorate Mentouri Univ, Fac Sci Mentouri Univ

**URL:** <Go to ISI>://WOS:000306685200026

**Reference Type:** Book

**Record Number:** 1

**Author:** Mami, N. A.

**Year:** 2012

**Title:** SUCCESSFUL UNIVERSITY-INDUSTRY COOPERATION: HOW CAN THE ALGERIAN UNIVERSITY CREATE JOB OPPORTUNITIES WITHIN THE LMD SYSTEM?

**Series Editor:** Chova, L. G. Martinez, A. L. Torres, I. C.

**Series Title:** 5th International Conference of Education, Research and Innovation

**Number of Pages:** 4697-4701

**Short Title:** SUCCESSFUL UNIVERSITY-INDUSTRY COOPERATION: HOW CAN THE ALGERIAN UNIVERSITY CREATE JOB OPPORTUNITIES WITHIN THE LMD SYSTEM?

**ISBN:** 978-84-616-0763-1

**Accession Number:** WOS:000318422204100

**Abstract:** Globalization has created tremendous changes at all levels of the social, economic and educational standing making of the world a small village. Disparities have widened the gap between the developed and less developed countries in all fields of life. At the level of Higher Education, new conditions have been set as to how to manage successful transfer of knowledge. However, no chain being stronger than its weakest link, education itself had to respond to other profound changes liaised to the socioeconomic market and to the rapid development of Information and Communication Technologies. New disciplines offering vocational and learning specialties have been proposed within the LMD architecture adapted after the Bologna Process of 1999. In Algeria, however, the nature of the social and the industrial context makes it imperative to adapt the international model to internal needs and to create job opportunities that connect to the frames of the national economic landscape. To do so, however, collaboration needs to be developed in order to assure efficient university/industry cooperation.

Communication between stakeholders and decision-makers needs to be built on mutual understanding so as to create job opportunities on a win-win basis. In this paper, I shall propose a framework of action that can be applied in the Algerian context to ensure a successful transfer of knowledge in a globally competitive educational and industrial landscape

**Notes:** Mami, Naouel Abdellatif Iceri 2012 5th International Conference of Education, Research and Innovation (ICERI) Nov 19-21, 2012 Madrid, SPAIN

**URL:** <Go to ISI>://WOS:000318422204100



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# PRODUCTION SCIENTIFIQUE ANNEE 2013

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1

**Reference Type: Journal Article**

**Record Number: 1**

**Author:** Abdelaziz, A. A. Souraya, B.

**Year:** 2013

**Title:** ANALYSIS OF A DYNAMIC THERMO-ELASTIC-VISCOPLASTIC CONTACT PROBLEM

**Journal:** Electronic Journal of Qualitative Theory of Differential Equations

**Issue:** 71

**Pages:** 1-17

**Short Title:** ANALYSIS OF A DYNAMIC THERMO-ELASTIC-VISCOPLASTIC CONTACT PROBLEM

**ISSN:** 1417-3875

**Accession Number:** WOS:000332064800001

**Abstract:** We consider a dynamic frictionless contact problem for thermo-elastic-viscoplastic materials with damage and adhesion. The contact is modeled with normal compliance condition. We derive a weak formulation of the system, then we prove existence and uniqueness of the solution. The proof is based on arguments of monotonicity and fixed point.

**Notes:** Abdelaziz, Azeb Ahmed Souraya, Boutechebak

**URL:** <Go to ISI>://WOS:000332064800001

**Reference Type: Journal Article****Record Number:** 2**Author:** Abderrezek, M. Djahli, F. Fathi, M. Ayad, M.**Year:** 2013**Title:** Numerical Modeling of GaAs Solar Cell Performances**Journal:** Elektronika Ir Elektrotechnika**Volume:** 19**Issue:** 8**Pages:** 41-44**Short Title:** Numerical Modeling of GaAs Solar Cell Performances**ISSN:** 1392-1215**DOI:** 10.5755/j01.eee.19.8.5392**Accession Number:** WOS:000325684100009

**Abstract:** The process of modeling photovoltaic devices is a tedious task in that it depends heavily on several intrinsic and extrinsic properties of the material. In this paper, numerical solutions are obtained using the Personal Computer 1 Dimension (PC1D) software package in order to improve solar cells performance. The analysis deals with high efficiency GaAs solar cells, in order to search the technological parameters leading to optimal performances of the cells, the effects of the doping level and the thicknesses of the base and emitter layers were also investigated. The optimal fill factor and the conversion efficiency that were obtained are 86.76 % and 25.8 % respectively.

**Notes:** Abderrezek, M. Djahli, F. Fathi, M. Ayad, M.**URL:** <Go to ISI>://WOS:000325684100009

**Reference Type: Journal Article****Record Number:** 3**Author:** Abderrezek, M. Fathi, M. Djahli, F. Ayad, M.**Year:** 2013**Title:** Numerical Simulation of Luminescent Downshifting in Top Cell of Monolithic Tandem Solar Cells**Journal:** International Journal of Photoenergy**Short Title:** Numerical Simulation of Luminescent Downshifting in Top Cell of Monolithic Tandem Solar Cells**ISSN:** 1110-662X**DOI:** 10.1155/2013/480634**Article Number:** 480634**Accession Number:** WOS:000323261200001

**Abstract:** The increase in the conversion efficiency of monolithic tandem solar cells is limited by the short-circuit current density matching between the top and the bottom cells. Generally, the top cell presents the lowest current in the two subcells. In this paper, in order to increase the short-circuit current density in the top cell, we present a theoretical survey of the luminescence downshifting (LDS) approach for the design of monolithic tandem solar cells. The photovoltaic (PV) glass encapsulation material is replaced with a polymer material of polymethyl methacrylate (PMMA) type which is doped with diverse kinds of organic dyes. The performance of the n-p-p+ GaInP structure has been simulated as a function of the organic dyes. Gains achieved for the short-circuit current density and conversion efficiency are, respectively, 13.13% and 13.38%, under AM1.5G illumination spectra.

**Notes:** Abderrezek, Mahfoud Fathi, Mohamed Djahli, Farid Ayad, Mohammed**URL:** <Go to ISI>://WOS:000323261200001

**Reference Type: Journal Article****Record Number:** 4**Author:** Afghoul, H. Krim, F. Chikouche, D. Beddar, A. Babes, B.**Year:** 2013**Title:** Implementation of Direct Power Control for Shunt Active Power Filter**Journal:** 2013 3d International Conference on Systems and Control (Icsc)**Short Title:** Implementation of Direct Power Control for Shunt Active Power Filter**Accession Number:** WOS:000351821600110

**Abstract:** This paper deals with implementation of Direct Power Control (DPC) using conventional PI controller applied to shunt active filters (SAPFs) using new parameters. The PI controller regulates the DC-link voltage, active and reactive power-flows of the power filter. The steady state and dynamic behavior are presented and illustrate the operation and the performance of the system. Simulation and experiment results have proven the efficiency of standard DPC strategies. Thanks to its high level of power quality even the use of low distorted voltage source.

**Notes:** Afghoul, H. Krim, F. Chikouche, D. Beddar, A. Babes, B. Mehdi, D Aitouch, A Quevedo, J 3d International Conference on Systems and Control (ICSC) Oct 29-31, 2013 Algiers, ALGERIA IEEE Control Syst Soc, Univ Sci & Technol Houari Boumediene, Soc Sci Dev & New Technologies 978-1-4799-0275-0

**URL:** <Go to ISI>://WOS:000351821600110

**Reference Type: Journal Article****Record Number: 5****Author:** Alaa, N. E. Salim, M.**Year:** 2013**Title:** Existence Result for Triangular Reaction-Diffusion Systems with L-1 Data and Critical Growth with Respect to the Gradient**Journal:** Mediterranean Journal of Mathematics**Volume:** 10**Issue:** 1**Pages:** 255-275**Date:** Feb**Short Title:** Existence Result for Triangular Reaction-Diffusion Systems with L-1 Data and Critical Growth with Respect to the Gradient**ISSN:** 1660-5446**DOI:** 10.1007/s00009-012-0238-9**Accession Number:** WOS:000314777700019**Abstract:** In this paper we prove the existence of weak solutions for  $m \times m$  reaction-diffusion systems for which two main properties hold: the positivity of the solutions and the triangular structure. Moreover, the nonlinear terms have critical growth with respect to the gradient.**Notes:** Alaa, Nour Eddine Salim, Mosbahi**URL:** <Go to ISI>://WOS:000314777700019

**Reference Type: Journal Article****Record Number:** 6**Author:** Al-Douri, Y. Waheb, J. H. Ameri, M. Khenata, R. Bouhemadou, A. Reshak, A. H.**Year:** 2013**Title:** Morphology, Analysis and Properties Studies of CdS Nanostructures under Thiourea Concentration Effect for Photovoltaic Applications**Journal:** International Journal of Electrochemical Science**Volume:** 8**Issue:** 8**Pages:** 10688-10696**Date:** Aug**Short Title:** Morphology, Analysis and Properties Studies of CdS Nanostructures under Thiourea Concentration Effect for Photovoltaic Applications**ISSN:** 1452-3981**Accession Number:** WOS:000323548600043

**Abstract:** CdS nanostructures are prepared by sol-gel spin coating method using different thiourea concentrations. The thiourea concentration effect for CdS nanostructures deposited on quartz substrate is studied. The CdS nanostructures give important analysis of X-ray diffraction (XRD), optical transmittance using (UV-vis) and photoluminescence (PL) spectroscopy, in addition to characterization of atomic force microscopy (AFM). The calculated refractive index and optical dielectric constant have proved a good agreement with experimental and theoretical results.

**Notes:** Al-Douri, Y. Waheb, Jamal H. Ameri, M. Khenata, R. Bouhemadou, A. Reshak, A. H.**URL:** <Go to ISI>://WOS:000323548600043

**Reference Type: Journal Article****Record Number:** 7**Author:** Ali, S. Salim, M.**Year:** 2013**Title:** Effect of pH at Early Formed Structures in Cobalt Electrodeposition**Journal:** Asian Journal of Chemistry**Volume:** 25**Issue:** 8**Pages:** 4137-4140**Date:** Jul**Short Title:** Effect of pH at Early Formed Structures in Cobalt Electrodeposition**ISSN:** 0970-7077**Accession Number:** WOS:000317246400002

**Abstract:** The electrodeposition of cobalt on platinum water substrates was studied versus electrolyte pH. The crystallographic structure of electrodeposited cobalt films found to be very sensitive on the electrolyte pH value. During the initial stage of growth, at pH = 2 a mixture of Co-fcc and Co-hcp are formed with the prevailing Co-fcc phase. By increasing the pH (3.0 < pH < 4.0), Co-hcp becomes the major fraction with good crystallization state and large grain sizes. Electrochemical impedance spectroscopy technique was used to describe the interface's behavior and the passage steps of electrodeposition process. It was found that at pH 2, the impedance spectra are characterized by the presence of a semicircle feature at high frequencies and by complex inductance at low frequencies. At pH (3.0 < pH < 4.0), the inductive feature disappears and replaced by capacitive feature indicating the control of electrodeposition by the deposition process.

**Notes:** Ali, Sahari Salim, Mokhtari B**URL:** <Go to ISI>://WOS:000317246400002

8

**Reference Type: Journal Article**

**Record Number: 8**

**Author:** Alouani, M. L.

**Year:** 2013

**Title:** Delusions of persecution and acting out

**Journal:** European Psychiatry

**Volume:** 28

**Issue:** 8

**Pages:** 50-50

**Date:** Nov

**Short Title:** Delusions of persecution and acting out

**ISSN:** 0924-9338

**DOI:** 10.1016/j.eurpsy.2013.09.131

**Accession Number:** WOS:000209473800121

**Notes:** Alouani, M. L. S

**URL:** <Go to ISI>://WOS:000209473800121

**Reference Type: Journal Article****Record Number:** 9**Author:** Alti, A. Laborie, S. Roose, P. Ieee,**Year:** 2013**Title:** Context-aware Quality Adaptation Using Rich Explicit Constraints in E-health System**Journal:** 2013 8th International Workshop on Semantic and Social Media Adaptation and Personalization (Smap 2013)**Pages:** 47-52**Short Title:** Context-aware Quality Adaptation Using Rich Explicit Constraints in E-health System**DOI:** 10.1109/smap.2013.11**Accession Number:** WOS:000347642100008

**Abstract:** One of the key aspects of any e-health application is the quality management of urgent situations. Currently, these situations are accessible on a wide variety of embedded sensors. The heterogeneity of such sensors and the diversity of user's needs require management quality of service and adaptation to different critical situations (e.g. hypoglycemic diabetic coma). Since the last decade, a fair amount of research has been conducted in order to develop adaptation platforms. These platforms generally adapt services in order to comply with dynamic context evolution. However, we have noticed that current adaptation platforms do not fully exploit the semantic benefits for describing the heterogeneous contexts, the adaptation process. In this paper we propose a model for specifying rich contexts containing explicit constraints expressions with qualitative and quantitative information. Our proposal has the great advantage to offer to users a global flexible adaptation infrastructure exploiting semantic information at multiple levels, i.e., from the design level to the run-time level. To demonstrate the utility of our approach, we propose the design of an ambient system applied to a diabetes case study.

**Notes:** Alti, Adel Laborie, Sebastien Roose, Philippe 8th International Workshop on Semantic and Social Media Adaptation and Personalization (SMAP) Dec 12-13, 2013 Bayonne, FRANCE IEEE Computat Intelligence Soc, IEEE Syst, Man, & Cybernet Soc, Univ Pau Pays Ladour, IUT Bayonne Pays Basque, Conseil Gen Pyrenees Atlantiques, Reg Council, IEEE, LIUPPA 978-0-7695-5132-6

**URL:** <Go to ISI>://WOS:000347642100008

**Reference Type: Journal Article****Record Number:** 10**Author:** Amiour, M. D. Mezghache, H. Elouadi, B.**Year:** 2013**Title:** The use of three physico-chemical methods in the study of the organic matter associated with the sedimentary phosphorites in Djebel Onk Basin, Algeria**Journal:** Arabian Journal of Geosciences**Volume:** 6**Issue:** 2**Pages:** 309-319**Date:** Feb**Short Title:** The use of three physico-chemical methods in the study of the organic matter associated with the sedimentary phosphorites in Djebel Onk Basin, Algeria**ISSN:** 1866-7511**DOI:** 10.1007/s12517-011-0381-9**Accession Number:** WOS:000314035200002

**Abstract:** The study of the organic matter (OM) associated with the phosphate ore of Kef Essennoun deposit (Djebel Onk mining basin, Algeria) was with a view to determine the decomposition degree of the OM within the pellets and the matrix, and the conditions of diagenesis. The sedimentary phosphates of this deposit are constituted of sub-rounded, phosphate-rich grains (pellets) dispersed in a surrounding, much poorer than pellets in P, matrix (or gangue). The survey of the OM associated with both pellets and matrix used several types of analyses: scanning electron microscopy (SEM), scanning electron microscope with energy-dispersive X-ray analysis, Fourier transform infrared spectroscopy and nuclear magnetic resonance spectroscopy. The results show the OM, dispersed approximately homogeneously, in the form of large flat particles, within the gangue and within the phosphatic pellets in the form of small particles. The O/C ratio showed that the OM is more oxidised in the matrix than within the pellets. The oxidation increased with the phosphatisation rate of the pellets and more with the carbonation rate of the matrix, but it decreased with the silicification degree in the siliceous carbonated matrix. Two major functional classes were distinguished within pellets: aliphatic and oxygenated ones, the latter being fundamentally present in humic OM. The presence and abundance of these humic compounds in pelletal phosphorites are known from the 1980s and considered as witnessing a formation of apatite in a strictly closed environment, inside the pellet.

**Notes:** Amiour, Mohamed Dass Mezghache, Hamid Elouadi, Brahim**URL:** <Go to ISI>://WOS:000314035200002

**Reference Type: Journal Article****Record Number:** 11**Author:** Annicchiarico, P. Pecetti, L. Abdelguerfi, A. Bouzerzour, H. Kallida, R. Porqueddu, C. Simoes, N. M. Volaire, F.**Year:** 2013**Title:** Optimal forage grass germplasm for drought-prone Mediterranean environments**Journal:** Field Crops Research**Volume:** 148**Pages:** 9-14**Date:** Jul**Short Title:** Optimal forage grass germplasm for drought-prone Mediterranean environments**ISSN:** 0378-4290**DOI:** 10.1016/j.fcr.2013.03.024**Accession Number:** WOS:000320497600002

**Abstract:** Extensive livestock production is a basic socio-economic feature of rainfed Mediterranean agriculture that is threatened by overgrazing and desertification of natural grasslands and by climate change. The cultivation of improved, drought-tolerant perennial forages can alleviate these constraints. This study aimed to support breeders in choosing target species and plant types, and agronomists in setting site-specific forage recommendations for the western Mediterranean basin. Three-year dry matter (DM) yield and final survival of two cultivars of cocksfoot (Kasbah, completely summer dormant; Jana, non-dormant) and two of tall fescue (Centurion and Flecha, both incompletely dormant) that were top-performing in previous studies were assessed in six rainfed sites of Algeria, France, Italy, Morocco and Portugal. Site mean annual water for the crop ranged from 321 to 669 mm. On average, tall fescue displayed higher DM yield and a slight trend towards greater persistence than cocksfoot. However, species and cultivars within species displayed interaction with location. Factorial regression was preferable to other techniques for modelling adaptive responses. Cultivar DM yield was modelled as a function of spring-summer (April-September) drought stress and late-spring (May-June) daily maximum temperatures of locations, whereas cultivar final survival was modelled as a function of mean annual water available and absolute minimum temperature of locations. Indications on expected best-performing material were produced for combinations of these climatic variables, highlighting the excellent yielding ability of Flecha across drought-prone environments, the good persistence of Flecha and Kasbah in most environments, and the adaptation of the remaining cultivars to specific climatic conditions. Besides driving cultivar recommendations, our results can support breeders' decisions also in view of predicted climate changes. Tall fescue has general interest for Mediterranean drought-prone areas. Completely summer-dormant cocksfoot germplasm could also be useful for these areas, especially the warmer ones, if its yielding ability in the cool season could definitely be improved. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Annicchiarico, P. Pecetti, L. Abdelguerfi, A. Bouzerzour, H. Kallida, R. Porqueddu, C. Simoes, N. M. Volaire, F.**URL:** <Go to ISI>://WOS:000320497600002

**Reference Type: Journal Article****Record Number:** 12**Author:** Arikan, A. Smith, H. Trabelsi, N.**Year:** 2013**Title:** ON CERTAIN APPLICATIONS OF THE KHUKHRO-MAKARENKO THEOREM**Journal:** Glasgow Mathematical Journal**Volume:** 55**Issue:** 2**Pages:** 275-283**Date:** May**Short Title:** ON CERTAIN APPLICATIONS OF THE KHUKHRO-MAKARENKO THEOREM**ISSN:** 0017-0895**DOI:** 10.1017/s0017089512000493**Accession Number:** WOS:000316816900003

**Abstract:** Some recent results of Khukhro and Makarenko on the existence of characteristic  $X$ -subgroups of finite index in a group  $G$ , for certain varieties  $X$ , are used to obtain generalisations of some well-known results in the literature pertaining to groups  $G$ , in which all proper subgroups satisfy some condition or other related to the property 'soluble-by-finite'. In addition, a partial generalisation is obtained for the aforementioned results on the existence of characteristic subgroups.

**Notes:** Arikan, Ahmet Smith, Howard Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000316816900003

**Reference Type: Journal Article****Record Number:** 13**Author:** Arikan, A. Trabelsi, N.**Year:** 2013**Title:** ON GROUPS WHOSE PROPER SUBGROUPS ARE CHERNIKOV-BY-BAER OR (PERIODIC DIVISIBLE ABELIAN)-BY-BAER**Journal:** Journal of Algebra and Its Applications**Volume:** 12**Issue:** 6**Date:** Sep**Short Title:** ON GROUPS WHOSE PROPER SUBGROUPS ARE CHERNIKOV-BY-BAER OR (PERIODIC DIVISIBLE ABELIAN)-BY-BAER**ISSN:** 0219-4988**DOI:** 10.1142/s0219498813500151**Article Number:** 1350015**Accession Number:** WOS:000318791800015

**Abstract:** If  $X$  is a class of groups, then a group  $G$  is called a minimal non- $X$ -group if it is not an  $X$ -group but all of its proper subgroups belong to  $X$ . In this paper we prove that locally graded minimal non-(Chernikov-by-nilpotent)-groups are precisely minimal non-nilpotent-groups without maximal subgroups and that locally graded minimal non-(Chernikov-by-Baer)-groups are locally finite and coincide with the normal closure of an element. We also prove that an infinite locally graded minimal non-((periodic divisible abelian)-by-Baer)-group  $G$  is an imperfect locally nilpotent  $p$ -group, for some prime  $p$ , and there is an element  $a$  in  $G$  such that  $G = \langle a \rangle(G)$ .

**Notes:** Arikan, Ahmet Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000318791800015

**Reference Type: Journal Article****Record Number:** 14**Author:** Aylikci, V. Unver, Y. Dugdu, E. Tirasoglu, E. Aylikci, N. K. Unluer, D. Sancak, K. Kahoul, A. Dogan, M. Cengiz, E. Apaydin, G.**Year:** 2013**Title:** Structure and anion effect on conductivity and K and L shell fluorescence parameters at green solvents**Journal:** Chemical Physics Letters**Volume:** 556**Pages:** 365-371**Date:** Jan**Short Title:** Structure and anion effect on conductivity and K and L shell fluorescence parameters at green solvents**ISSN:** 0009-2614**DOI:** 10.1016/j.cplett.2012.11.078**Accession Number:** WOS:000313644100069**Abstract:** In this Letter; the changing iodine and bromine in the quaternary-imidazole ring and the behaviors of ionic liquids with this change were investigated by using the results of the K and L X-ray cross-sections and average fluorescence yields of bromine and iodine and the relation between these values and the H-1 NMR, IR, thermogravimetric analysis (TGA) and conductivity results. (C) 2012 Elsevier B. V. All rights reserved.**Notes:** Aylikci, V. Unver, Y. Dugdu, E. Tirasoglu, E. Aylikci, N. Kup Unluer, D. Sancak, K. Kahoul, A. Dogan, M. Cengiz, E. Apaydin, G.**URL:** <Go to ISI>://WOS:000313644100069

**Reference Type: Journal Article****Record Number:** 15**Author:** Azoug, S. E. Bouguezel, S. Ieee,**Year:** 2013**Title:** DOUBLE IMAGE ENCRYPTION BASED ON THE RECIPROCAL-ORTHOGONAL PARAMETRIC TRANSFORM AND CHAOTIC MAPS**Journal:** 2013 8th International Workshop on Systems, Signal Processing and Their Applications (Wosspa)**Pages:** 156-161**Short Title:** DOUBLE IMAGE ENCRYPTION BASED ON THE RECIPROCAL-ORTHOGONAL PARAMETRIC TRANSFORM AND CHAOTIC MAPS**Accession Number:** WOS:000333904600027

**Abstract:** In this paper, we propose a double image encryption method based on the reciprocal-orthogonal parametric (ROP) transform and chaotic maps. In this method, a complex-valued image is constructed by two secret real-valued images, one as amplitude and the other as phase. In addition, two chaotic random phase masks are generated using two non-independent chaotic maps; one mask is multiplied by the resulting complex-valued image before applying the two-dimensional (2-D) ROP transform and the other one is multiplied by the resulting matrix in the transform domain. This step is then followed by a chaotic scrambling between the real and imaginary parts before applying another 2-D ROP transform, which yields the encrypted image. The independent parameters of the ROP transforms and the parameters of the chaotic maps used for the masks and scrambling are successfully exploited as an encryption secret key. Simulation results demonstrate the robustness of the proposed method against blind decryption, brute force and statistical attacks.

**Notes:** Azoug, Self Eddine Bouguezel, Saad 8th International Workshop on Systems, Signal Processing and their Applications (WoSSPA) May 12-15, 2013 Zeralda, ALGERIA Ctr Dev Technologies Avancees 978-1-4673-5540-7

**URL:** <Go to ISI>://WOS:000333904600027

**Reference Type: Journal Article****Record Number:** 16**Author:** Badoud, A. Khemliche, M. Bouamama, B. O. Bacha, S. Villa, L. F. L.**Year:** 2013**Title:** Bond graph modeling and optimization of photovoltaic pumping system: Simulation and experimental results**Journal:** Simulation Modelling Practice and Theory**Volume:** 36**Pages:** 84-103**Date:** Aug**Short Title:** Bond graph modeling and optimization of photovoltaic pumping system:

Simulation and experimental results

**ISSN:** 1569-190X**DOI:** 10.1016/j.simpat.2013.05.001**Accession Number:** WOS:000322093000008

**Abstract:** Bond graphs are a promising possibility for modeling complex physical systems. This paper explores its potential by undertaking the analysis, modeling and design of a water pumping photovoltaic system. The effectiveness of photovoltaic water pumping systems depends on the sufficiency between the generated energy and the volume of pumped water. Another point developed in this paper presents the optimization of a photovoltaic (PV) water pumping system using maximum power point tracking technique (MPPT). The optimization is based on the detection of the optimal power. This optimization technique is developed to optimize the usage of power. The presented MPPT technique is used in photovoltaic water pumping system in order to increasing its efficiency. A buck-boost chopper allows an adaptation interface between the panel and the battery checked by a tracking mechanism known as the MPPT (Maximum Power Point Tracking). A new algorithm is presented to control a maximum power point tracker MPPT through a bond graph. From the chemical reactions in the batteries to the control laws of the power electronics structures, a bond graph model is proposed for every single part of the system. The model is used in simulations and the results compared to actual measurements. The model is used in simulations and the results compared to actual measurements, showing an accuracy of nearly 99%. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Badoud, Abd Essalam Khemliche, Mabrouk Bouamama, Belkacem Ould Bacha, Seddik Villa, Luiz Fernando Lavado**URL:** <Go to ISI>://WOS:000322093000008

**Reference Type: Journal Article****Record Number:** 17**Author:** Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Zaghbi, K. Julien, C. M.**Year:** 2013**Title:** Polypyrrole-covered MnO<sub>2</sub> as electrode material for supercapacitor**Journal:** Journal of Power Sources**Volume:** 240**Pages:** 267-272**Date:** Oct**Short Title:** Polypyrrole-covered MnO<sub>2</sub> as electrode material for supercapacitor**ISSN:** 0378-7753**DOI:** 10.1016/j.jpowsour.2013.04.013**Accession Number:** WOS:000321803700034

**Abstract:** gamma-MnO<sub>2</sub> has been synthesized by hydrothermal process, and studied as electrode material in aqueous asymmetric super-capacitor. We studied the blend formed by electrochemical polymerization of pyrrole deposited onto gamma-MnO<sub>2</sub> particles. The composite materials (PPy/MnO<sub>2</sub>) were characterized by different methods including cyclic voltammetry, chronoamperometry, X-ray diffractometry and BET measurements. The specific capacitance at constant current density 2 mA cm<sup>-2</sup> was calculated from galvanostatic charge-discharge cycling tests. The asymmetric super-capacitor using (PPy/MnO<sub>2</sub>) composite material has high specific capacitance of 141.6 F g<sup>-1</sup> compared with 73.7 F g<sup>-1</sup>, for gamma-MnO<sub>2</sub> before PPy coating. The improvement of the coating is not only due to the electronic conductivity of the polymer, but also due to an increase of the BET surface area that raises to 125 m<sup>2</sup> g<sup>-1</sup> after coating, against 64 m<sup>2</sup> g<sup>-1</sup> for pristine MnO<sub>2</sub>. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Zaghbi, K. Julien, C. M.**URL:** <Go to ISI>://WOS:000321803700034

**Reference Type: Journal Article****Record Number:** 18**Author:** Bakiri, Z. Nacef, S.**Year:** 2013**Title:** A simple model for secondary clarifier: application to wastewater treatment plant**Journal:** Desalination and Water Treatment**Volume:** 51**Issue:** 7-9**Pages:** 1571-1576**Date:** Feb**Short Title:** A simple model for secondary clarifier: application to wastewater treatment plant**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2012.715073**Accession Number:** WOS:000313795500027

**Abstract:** Wastewater treatment by low-rate activated sludge in aerobic stabilization ponds is a treatment process that has been, for most Algerian towns, the preferred tool for treating their wastewater because it has proven most reliable and easier to operate. The wastewater treatment plant of the City of Setif (Algeria) is a good example for this type of process. It has a capacity of 330,000 pop-equivalents and has been designed to accommodate 66,000 m<sup>3</sup>/d in dry weather. The work is based on the technical analysis from 2007. The mathematical model for the secondary clarifier was developed, including, propose a modified expression of the settling velocity. The treatment of the pollution parameters has been estimated. The test results have been updated, so that the results correspond to the present Algerian normalization.

**Notes:** Bakiri, Zahir Nacef, Saci International Conference of the European-Desalination-Society (EDS) on Desalination for the Environment, Clean Water and Energy Apr 23-26, 2012  
Barcelona, SPAIN European Desalinat Soc (EDS)

**URL:** <Go to ISI>://WOS:000313795500027

**Reference Type: Journal Article****Record Number:** 19**Author:** Bakour, S. Touati, A. Sahli, F. Ameer, A. A. Haouchine, D. Rolain, J. M.**Year:** 2013**Title:** Antibiotic resistance determinants of multidrug-resistant *Acinetobacter baumannii* clinical isolates in Algeria**Journal:** Diagnostic Microbiology and Infectious Disease**Volume:** 76**Issue:** 4**Pages:** 529-531**Date:** Aug**Short Title:** Antibiotic resistance determinants of multidrug-resistant *Acinetobacter baumannii* clinical isolates in Algeria**ISSN:** 0732-8893**DOI:** 10.1016/j.diagmicrobio.2013.04.009**Accession Number:** WOS:000322687500028

**Abstract:** Antibiotic susceptibility testing was performed on 71 *Acinetobacter baumannii* clinical isolates, and presence of antibiotic resistance genes was screened for by PCR amplification and sequencing. Resistance rates were very high for aminoglycosides (22-80%), fluoroquinolones (>90%), and cephalosporins (>90%) but remained low for rifampin (2.8%) or null for colistin. Antibiotic resistance encoding genes detected were as follows: bla(TEM-128) gene (74.6%), aph(3')-VI (50.7%), aadA (63.4%), ant(2'')-I (14.1%), aac(3)-Ia (91.1%), aac(6')-Ib (4.2%), mutation Ser83Leu in gyrA (94.4%), double mutations Ser83Leu and Ser80Leu (or Ser84Leu) in gyrA and parC (69.0%), and mutation I581N in RRDR of the rpoB gene. (c) 2013 Elsevier Inc. All rights reserved.

**Notes:** Bakour, Sofiane Touati, Abdelaziz Sahli, Farida Ameer, Abdennour Ait Haouchine, Djamila Rolain, Jean-Marc

**URL:** <Go to ISI>://WOS:000322687500028

**Reference Type: Journal Article****Record Number:** 20**Author:** Baleanu, D. Saadatmandi, A. Kadem, A. Dehghan, M.**Year:** 2013**Title:** The Fractional Linear Systems of Equations Within an Operational Approach**Journal:** Journal of Computational and Nonlinear Dynamics**Volume:** 8**Issue:** 2**Date:** Apr**Short Title:** The Fractional Linear Systems of Equations Within an Operational Approach**ISSN:** 1555-1423**DOI:** 10.1115/1.4007192**Article Number:** 021011**Accession Number:** WOS:000326031300011

**Abstract:** Fractional calculus is a rapidly going area from both experimental and theoretical points of view. As a result new methods and techniques should be developed in order to deal with new types of fractional differential equations. In this paper the operational matrix of fractional derivative together with the tau method are used to solve the linear systems of fractional differential equations. The results of this method are shown by solving three illustrative examples. By comparing the obtained results with the analytic solutions and with the ones provided by three standard methods for solving the fractional differential equations we conclude that our method gave comparable results.

**Notes:** Baleanu, Dumitru Saadatmandi, Abbas Kadem, Abdelouahab Dehghan, Mehdi**URL:** <Go to ISI>://WOS:000326031300011

**Reference Type: Journal Article****Record Number:** 21**Author:** Belattar, N. Mekhalif, T.**Year:** 2013**Title:** Adsorption Property and Chromatographic Affinity of Dye-Like Poly (Styrene Sodium Sulfonate) Sorbent toward Human Serum Albumin**Journal:** International Journal of Polymeric Materials and Polymeric Biomaterials**Volume:** 62**Issue:** 9**Pages:** 482-487**Date:** May**Short Title:** Adsorption Property and Chromatographic Affinity of Dye-Like Poly (Styrene Sodium Sulfonate) Sorbent toward Human Serum Albumin**ISSN:** 0091-4037**DOI:** 10.1080/00914037.2012.734349**Accession Number:** WOS:000316335300003

**Abstract:** Adsorption of proteins on various polymer surfaces plays an important role in different fields particularly in immobilization of enzymes and chromatographic processes for purification of biologically active compounds. On the basis of interactions of albumin with a multitude of endogenous and exogenous substances such as dyes, insoluble cross-linked polystyrene gel beads functionalized by sulfonate groups, the major chemical group of dyes was synthesized and its adsorption property and chromatographic affinity toward human serum albumin (HSA) was investigated in batch and by column respectively. The adsorption rate at interface was significantly high and the affinity constant evaluated by Langmuir model was in the order of  $7.78 \times 10^5 \text{ M}^{-1}$ . The affinity of HSA onto this adsorbent achieved in two pH ranges demonstrates that almost full albumin was adsorbed. The elution accomplished by using a continuous pH gradient allows substantially recovery in the range of 70-80% of the initial content.

**Notes:** Belattar, Noureddine Mekhalif, Tahar**URL:** <Go to ISI>://WOS:000316335300003

**Reference Type: Journal Article****Record Number:** 22**Author:** Benali, F. Hamidouche, M. Kolli, M. Bouaouadja, N. Fantozzi, G.**Year:** 2013**Title:** Effect of a Carboxylic Acid on Rheological Properties of a High Alumina Cement Mortar**Journal:** Iranian Journal of Chemistry & Chemical Engineering-International English Edition**Volume:** 32**Issue:** 4**Pages:** 49-57**Date:** Fal**Short Title:** Effect of a Carboxylic Acid on Rheological Properties of a High Alumina Cement Mortar**ISSN:** 1021-9986**Accession Number:** WOS:000343791600006

**Abstract:** In this work, we studied the effect of carboxylic acid on the rheological properties of a high-alumina cement mortar (CH45) produced by the Algerian firm REFRACTAL. The investigated properties are setting time, water consumption, electrical conductivity, pH, density and the compressive strength. The results show a setting time of about 200 min for the acid free, 180 min with 0.1% of carboxylic acid and 18 hours with 2% of this acid. A significant reduction in water consumption was noticed. The water/cement ratio of the acid free-mortar is reduced from 0.24 to 0.16 with 2% acid. The rheological investigations carried out on the mortar-water mixtures with and without carboxylic acid show a Newtonian behavior. The setting of hydrated mortar-water with acid mixtures shows an increase in the apparent density leading to an improvement of the compressive strength.

**Notes:** Benali, Farouk Hamidouche, Mohamed Kolli, Mostafa Bouaouadja, Noureddine Fantozzi, Gilbert

**URL:** <Go to ISI>://WOS:000343791600006

**Reference Type: Journal Article****Record Number:** 23**Author:** Bendjeddou, A. Llibre, J. Salhi, T.**Year:** 2013**Title:** Dynamics of the polynomial differential systems with homogeneous nonlinearities and a star node**Journal:** Journal of Differential Equations**Volume:** 254**Issue:** 8**Pages:** 3530-3537**Date:** Apr**Short Title:** Dynamics of the polynomial differential systems with homogeneous nonlinearities and a star node**ISSN:** 0022-0396**DOI:** 10.1016/j.jde.2013.01.032**Accession Number:** WOS:000315831000015

**Abstract:** We consider the class of polynomial differential equations  $(x) \text{ over dot} = \lambda x + P_n(x, y)$ ,  $(y) \text{ over dot} = \lambda y + \lambda y + Q_n(x, y)$ , in  $\mathbb{R}^2$  where  $P_n(x, y)$  and  $Q_n(x, y)$  are homogeneous polynomials of degree  $n > 1$  and  $\lambda \neq 0$ , i.e. the class of polynomial differential systems with homogeneous nonlinearities with a star node at the origin. We prove that these systems are Darboux integrable. Moreover, for these systems we study the existence and non-existence of limit cycles surrounding the equilibrium point located at the origin. Published by Elsevier Inc.

**Notes:** Bendjeddou, Ahmed Llibre, Jaume Salhi, Tayeb**URL:** <Go to ISI>://WOS:000315831000015

**Reference Type: Journal Article****Record Number:** 24**Author:** Benkadja, R. Hattab, A. Mahdaoui, N. Zehar, C.**Year:** 2013**Title:** Assessment of soil losses and siltation of the K'sob hydrological system (semiarid area-East Algeria)**Journal:** Arabian Journal of Geosciences**Volume:** 6**Issue:** 10**Pages:** 3959-3968**Date:** Oct**Short Title:** Assessment of soil losses and siltation of the K'sob hydrological system (semiarid area-East Algeria)**ISSN:** 1866-7511**DOI:** 10.1007/s12517-012-0653-z**Accession Number:** WOS:000324320400028

**Abstract:** Soil losses and siltation of the hydrological system (watershed-dam) of K'sob were obtained using direct and indirect methods. The Wadi K'sob watershed of 1,484 km<sup>2</sup>, average slope of 0.14, and average elevation of 1,060 m is located in a semiarid climate. The average annual rainfall is 341 mm and the mean annual water discharge is 0.89 m<sup>3</sup>/s. Data from the Medjez gauging station located 6 km upstream of the dam, are the daily liquid flow and instantaneous concentrations of suspended sediments. Over a time period from 1973 to 2010, the relationship between water and sediment discharges is quantified by the equation:  $Q (s) = 5.6 Q (1.31)$ . Thus, in view of the availability data on a daily scale, the assessment of soil erodibility of the K'sob watershed was used to estimate specific soil losses of 203 t km<sup>-2</sup> year<sup>-1</sup> or 301,000 t eroded annually from the K'sob basin. The bathymetric measurements of the sediment volumes deposited in the K'sob dam, has quantified the annual siltation of 0.8 hm<sup>3</sup>, corresponding to an average erodibility of the K'sob watershed of 809 t km<sup>-2</sup> year<sup>-1</sup>. However, when adding the volume of sediment removed by the dredging operation and de-silting by the valves during heavy floods, the value of soil losses is 2,780 t km<sup>-2</sup> year<sup>-1</sup>. The indirect assessment of soil erodibility of the basin was obtained by applying two models: the quantitative geomorphological analysis (QGA) and PISA model (prediction of silting in the artificial reservoirs, in Italian: Previsioni dell'Interimento nei Serbatoi Artificiali) using physical and climatic factors in the watershed. The obtained results by QGA method underestimate specific soil losses of 524 t km<sup>-2</sup> year<sup>-1</sup>. The PISA model gives a value of 2,915 t km<sup>-2</sup> year<sup>-1</sup>, which is close to the value obtained by bathymetric measurements. This study concludes that PISA model is most suitable to estimate soil loss and siltation of the K'sob hydrological system.

**Notes:** Benkadja, Rachid Hattab, Ali Mahdaoui, Nora Zehar, Cherif**URL:** <Go to ISI>://WOS:000324320400028

**Reference Type: Journal Article****Record Number:** 25**Author:** Benzid, K. Chetoui, A. Maamache, M. Turek, P. Tribollet, J.**Year:** 2013**Title:** Intrinsic decoherence and Rabi oscillation damping of Mn<sup>2+</sup> and Co<sup>2+</sup> electron spin qubits in bulk ZnO**Journal:** Epl**Volume:** 104**Issue:** 4**Date:** Nov**Short Title:** Intrinsic decoherence and Rabi oscillation damping of Mn<sup>2+</sup> and Co<sup>2+</sup> electron spin qubits in bulk ZnO**ISSN:** 0295-5075**DOI:** 10.1209/0295-5075/104/47005**Article Number:** 47005**Accession Number:** WOS:000328882700019

**Abstract:** We demonstrate by pulse EPR that two electron spin qubits in bulk ZnO, the Mn<sup>2+</sup> and the Co<sup>2+</sup> spin qubits, which have, respectively, long ( $T_2(6K) = 178 \mu s$ ) and short ( $T_2(1.7K) = 9 \mu s$ ) transverse spin coherence time  $T_2$  at low temperature, have however very short and similar Rabi oscillation damping times, on the order of TR approximate to 250 ns at low temperature. A detailed study of Mn<sup>2+</sup> spin qubits has shown that the main contribution to the Rabi oscillation damping rate is temperature independent and proportional to the Rabi frequency. This main contribution to the damping rate during coherent microwave manipulation of spins is interpreted as due to the changes of the dipolar couplings induced by the long microwave pulse used in this kind of EPR nutation experiment. Strategies are suggested for overcoming this problem of Rabi oscillation overdamping in future spin-based quantum computers. Copyright (C) EPLA, 2013

**Notes:** Benzid, K. Chetoui, A. Maamache, M. Turek, P. Tribollet, J.**URL:** <Go to ISI>://WOS:000328882700019

**Reference Type: Journal Article****Record Number:** 26**Author:** Berkane, K. Bencheikh, K.**Year:** 2013**Title:** SEMICLASSICAL EXPANSION OF THE SLATER SUM FOR POSITION DEPENDENT MASS DISTRIBUTIONS IN  $d$  DIMENSIONS**Journal:** Acta Physica Polonica B**Volume:** 44**Issue:** 4**Pages:** 685-698**Date:** Apr**Short Title:** SEMICLASSICAL EXPANSION OF THE SLATER SUM FOR POSITION DEPENDENT MASS DISTRIBUTIONS IN  $d$  DIMENSIONS**ISSN:** 0587-4254**DOI:** 10.5506/APhysPolB.44.685**Accession Number:** WOS:000319718600001

**Abstract:** We consider Hamiltonian systems with spatially varying effective mass and slowly varying local potential in  $d$  dimensions. The Slater sum is defined as the diagonal element of the Bloch propagator. We derive a gradient expansion of the Slater sum up to the second order. We will show that the derived analytical expression is valid for  $d = 1, 2, 3$  and  $4$ . A numerical example is shown to highlight the effect, of the spatially varying effective-mass.

**Notes:** Berkane, K. Bencheikh, K.**URL:** <Go to ISI>://WOS:000319718600001

**Reference Type: Journal Article****Record Number:** 27**Author:** Berri, S. Maouche, D. Bouarissa, N. Medkour, Y.**Year:** 2013**Title:** First principles study of structural, electronic and optical properties of AgSbS<sub>2</sub>**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 6**Pages:** 1439-1446**Date:** Dec**Short Title:** First principles study of structural, electronic and optical properties of AgSbS<sub>2</sub>**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2013.04.009**Accession Number:** WOS:000327166000013

**Abstract:** In this work, we study the structural, electronic and optical properties of AgSbS<sub>2</sub>, using full-potential linearized augmented plane wave and the pseudopotential plane wave scheme in the frame of generalized gradient approximation. Features such as the lattice constant, bulk modulus and its pressure derivative are reported. Our results suggest a phase transition from AF-IIb phase to rocksalt (B1) phase under high pressure. The calculated band structure and density of states show that the material under load has an indirect energy band gap X (L Gamma) for AF-IIb phase (semiconductor) and a negative band gap W -> (Gamma X) for B1 phase (semimetal). The optical properties are analyzed and the origin of some peaks in the spectra is discussed. Besides, the dielectric function, refractive index and extinction coefficient for radiation up to 14 eV have also been reported and discussed. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Berri, Saadi Maouche, D. Bouarissa, N. Medkour, Y.**URL:** <Go to ISI>://WOS:000327166000013

**Reference Type: Journal Article****Record Number:** 28**Author:** Berri, S. Maouche, D. Ibrir, M. Zerarga, F. Louail, L. Medkour, Y.**Year:** 2013**Title:** Study of structural, electronic and magnetic properties of Rh<sub>2</sub>MnX (X=Al, Ge and Sn) Heusler alloys using GGA-WC and GGA+U approaches**Journal:** Physica B-Condensed Matter**Volume:** 418**Pages:** 58-64**Date:** Jun**Short Title:** Study of structural, electronic and magnetic properties of Rh<sub>2</sub>MnX (X=Al, Ge and Sn) Heusler alloys using GGA-WC and GGA+U approaches**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2013.03.002**Accession Number:** WOS:000318601400010**Abstract:** We have performed first-principle calculations of the structural, electronic and magnetic properties of Rh<sub>2</sub>MnAl, Rh<sub>2</sub>MnGe and Rh<sub>2</sub>MnSn Heusler alloys, using the full-potential linearized augmented plane wave (FP-LAPW) scheme within the GGA-WC and GGA+U. Results are given for the lattice parameters, the bulk modulus and its pressure derivative. The total magnetic moments increase with increasing atomic number X. Also, we presented results of the band structure and the density of states. The electronic structure in the ferromagnetic configuration shows metallic character. (C) 2013 Elsevier B.V. All rights reserved.**Notes:** Berri, Saadi Maouche, D. Ibrir, M. Zerarga, F. Louail, L. Medkour, Y.**URL:** <Go to ISI>://WOS:000318601400010

**Reference Type: Journal Article****Record Number:** 29**Author:** Betrouche, M. Maamache, M. Choi, J. R.**Year:** 2013**Title:** Novel characteristics of energy spectrum for 3D Dirac oscillator analyzed via Lorentz covariant deformed algebra**Journal:** Scientific Reports**Volume:** 3**Date:** Nov**Short Title:** Novel characteristics of energy spectrum for 3D Dirac oscillator analyzed via Lorentz covariant deformed algebra**ISSN:** 2045-2322**DOI:** 10.1038/srep03221**Article Number:** 3221**Accession Number:** WOS:000327020700011

**Abstract:** We investigate the Lorentz-covariant deformed algebra for Dirac oscillator problem, which is a generalization of Kempf deformed algebra in 3 + 1 dimension of space-time, where Lorentz symmetry are preserved. The energy spectrum of the system is analyzed by taking advantage of the corresponding wave functions with explicit spin state. We obtained entirely new results from our development based on Kempf algebra in comparison to the studies carried out with the non-Lorentz-covariant deformed one. A novel result of this research is that the quantized relativistic energy of the system in the presence of minimal length cannot grow indefinitely as quantum number  $n$  increases, but converges to a finite value,  $c/\sqrt{\beta}$  where  $c$  is the speed of light and  $\beta$  is a parameter that determines the scale of noncommutativity in space. If we consider the fact that the energy levels of ordinary oscillator is equally spaced, which leads to monotonic growth of quantized energy with the increment of  $n$ , this result is very interesting. The physical meaning of this consequence is discussed in detail.

**Notes:** Betrouche, Malika Maamache, Mustapha Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000327020700011

**Reference Type: Journal Article****Record Number:** 30**Author:** Betrouche, M. Maamache, M. Choi, J. R.**Year:** 2013**Title:** Three-Dimensional Dirac Oscillator with Minimal Length: Novel Phenomena for Quantized Energy**Journal:** Advances in High Energy Physics**Short Title:** Three-Dimensional Dirac Oscillator with Minimal Length: Novel Phenomena for Quantized Energy**ISSN:** 1687-7357**DOI:** 10.1155/2013/383957**Article Number:** 383957**Accession Number:** WOS:000326833500001

**Abstract:** We study quantum features of the Dirac oscillator under the condition that the position and the momentum operators obey generalized commutation relations that lead to the appearance of minimal length with the order of the Planck length,  $\Delta x(\min) = (\hbar)^{1/3} \sqrt{\beta + \beta'}$ , where  $\beta$  and  $\beta'$  are two positive small parameters. Wave functions of the system and the corresponding energy spectrum are derived rigorously. The presence of the minimal length accompanies a quadratic dependence of the energy spectrum on quantum number  $n$ , implying the property of hard confinement of the system. It is shown that the infinite degeneracy of energy levels appearing in the usual Dirac oscillator is vanished by the presence of the minimal length so long as  $\beta \neq 0$ . Not only in the nonrelativistic limit but also in the limit of the standard case ( $\beta = \beta' = 0$ ), our results reduce to well known usual ones.

**Notes:** Betrouche, Malika Maamache, Mustapha Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000326833500001

**Reference Type: Journal Article****Record Number:** 31**Author:** Bouarissa, N. Zerroug, S. Siddiqui, S. A. Hajry, A.**Year:** 2013**Title:** Lattice properties, energy states and optical spectra of  $MnxGa_{1-x}As$  magnetic semiconductors**Journal:** Superlattices and Microstructures**Volume:** 64**Pages:** 237-244**Date:** Dec**Short Title:** Lattice properties, energy states and optical spectra of  $MnxGa_{1-x}As$  magnetic semiconductors**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2013.09.033**Accession Number:** WOS:000328297800027

**Abstract:** We present first-principles calculations based on the density functional theory for the electronic structure of the magnetic semiconductor  $MnxGa_{1-x}As$  with an experimentally realistic Mn contents. To calculate the electronic exchange and correlation energies, we use in this study the generalized gradient approximation (GGA) of Perdew-Burke-Ernzerhof and the GGA of Wu-Cohen. In addition, to calculate band structure with high accuracy we used modified Becke-Johnson exchange potential with the GGA approach. We find that the material system of interest possesses a spin-polarized valence band that could support ideal spin-polarized hole transport. We further find that sp-d hybridization plays a key role in the optical properties of  $MnxGa_{1-x}As$ . We therefore believe these results will be useful for spintronics applications. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Bouarissa, N. Zerroug, S. Siddiqui, S. A. Hajry, A.**URL:** <Go to ISI>://WOS:000328297800027

**Reference Type: Journal Article****Record Number:** 32**Author:** Boucenna, S. Medkour, Y. Louail, L. Boucenna, M. Hachemi, A. Roumili, A.**Year:** 2013**Title:** High pressure induced structural, elastic and electronic properties of Calcium Chalcogenides CaX (X = S, Se and Te) via first-principles calculations**Journal:** Computational Materials Science**Volume:** 68**Pages:** 325-334**Date:** Feb**Short Title:** High pressure induced structural, elastic and electronic properties of Calcium Chalcogenides CaX (X = S, Se and Te) via first-principles calculations**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2012.11.004**Accession Number:** WOS:000313561600047

**Abstract:** We present an ab initio study of the structural, elastic and electronic properties of CaX (X = S, Se and Te) compounds. In order to describe the properties of these materials rather well, the calculations were based on the DFT theory with generalized gradient approximation (GGA). In particular, our results for the pressure phase transition, elastic stiffness and band structures are in good agreement with the available experimental and theoretical results. We also presented the pressure dependence for all parameters. The generalized stability criteria show that CaSe and CaTe to be mechanically stable at pressures up to the transition pressure. The electronic band structure calculations suggest that these compounds are semiconductors at 0 GPa, in agreement with literature data. We discuss the pressure effect on the band gaps and the metallization phenomena. We investigated the bonding character of CaX in terms of electronic charge density and found out that the strong charge localization around the anion side. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Boucenna, S. Medkour, Y. Louail, L. Boucenna, M. Hachemi, A. Roumili, A.**URL:** <Go to ISI>://WOS:000313561600047

**Reference Type: Journal Article****Record Number:** 33**Author:** Bouchareb, H. Semcheddine, S.**Year:** 2013**Title:** Sliding Mode Observer for The Synchronous Machine with Permanent Magnets**Journal:** 2013 3d International Conference on Systems and Control (Icsc)**Short Title:** Sliding Mode Observer for The Synchronous Machine with Permanent Magnets**Accession Number:** WOS:000351821600122

**Abstract:** The sensors can be very expensive and their integration very complex in certain industrial processes. The greatnesses not measured estimated by means of observers are going to allow us to reduce the production cost by avoiding us placing sensors. In the linear case the observability is classically determined by a condition of rank and the observers for such systems are generally of type Luenberger, on the other hand in the not linear case, the observability is determined of multiple manners but the classic thought drives to a condition of rank with small arrangements. In the nonlinear case the used observers can be nonlinear sliding mode observers used in our application to estimate the speed and the position of the synchronous machine with permanent magnets.

**Notes:** Bouchareb, Hanane Semcheddine, Samia Mehdi, D Aitouch, A Quevedo, J 3d International Conference on Systems and Control (ICSC) Oct 29-31, 2013 Algiers, ALGERIA IEEE Control Syst Soc, Univ Sci & Technol Houari Boumediene, Soc Sci Dev & New Technologies 978-1-4799-0275-0

**URL:** <Go to ISI>://WOS:000351821600122

**Reference Type: Journal Article****Record Number:** 34**Author:** Boudissa, R. Bayadi, A. Baersch, R.**Year:** 2013**Title:** Effect of pollution distribution class on insulators flashover under AC voltage**Journal:** Electric Power Systems Research**Volume:** 104**Pages:** 176-182**Date:** Nov**Short Title:** Effect of pollution distribution class on insulators flashover under AC voltage**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2013.06.009**Accession Number:** WOS:000324358200022

**Abstract:** The aim of this paper concerns the effect of pollution distribution class on insulators flashover under AC voltage. Three scenarios of non-uniform pollution distribution were studied: transversal, longitudinal periodic and longitudinal non-periodic. These scenarios are commonly seen in the field with in-service insulators located near polluting sources and at sites with prevailing winds. In the first scenario, the flashover voltage of polluted insulators under non-uniform transversal distribution is 21% higher than that under uniform contamination. In such a case, the insulator can withstand the voltage stresses much better than under uniform contamination conditions. The flashover voltage of an insulating surface under periodic longitudinal pollution distribution is at maximum 30% lower than that obtained in the same insulation in the case of a uniform contamination. The third scenario has shown the existence of a minimum flashover voltage which is 42% lower than that obtained in a uniform distribution. Laboratory tests revealed that the minimum flashover voltage can be attributed to the maximum shortening of the weakly polluted creepage distance of the insulator before its full flashover. In a so unfavorable situation, it will be necessary either to proceed to a re-dimensioning of the insulation based on their performance under non-uniform contamination or take preventive measures of pollution control of the insulators. (c) 2013 Elsevier B.V. All rights reserved.

**Notes:** Boudissa, R. Bayadi, A. Baersch, R.**URL:** <Go to ISI>://WOS:000324358200022

**Reference Type: Journal Article****Record Number:** 35**Author:** Boudissa, R. Merabet, S. Iouknane, S. Bayadi, A.**Year:** 2013**Title:** Effect of Isolation Mode and Surface Condition of an Insulating Barrier on the Performance of a Non-uniform Field Electrode System under Positive DC Voltage**Journal:** Ieee Transactions on Dielectrics and Electrical Insulation**Volume:** 20**Issue:** 5**Pages:** 1523-1529**Date:** Oct**Short Title:** Effect of Isolation Mode and Surface Condition of an Insulating Barrier on the Performance of a Non-uniform Field Electrode System under Positive DC Voltage**ISSN:** 1070-9878**Accession Number:** WOS:000326120200008

**Abstract:** The aim of this paper is the study of the effect of the isolation and the surface condition of an insulating barrier on the performance of a non-uniform field electrode system. The study is carried out under positive DC voltage. The dielectric properties of the material were measured using the Schering bridge. The effect of the material isolation mode in the point-plane air gap system on the optimisation of its performance was analyzed. Moreover we present findings of experiments which allow quantifying the effects of the clean or polluted atmosphere and the contamination severity level on the electric strength of the air gap system. Finally, this investigation has been supported by laboratory observations of the discharge phenomena in the air gap from inception to full flashover in all cases using a video camera system. The results from this study show that there is a distance limit of the isolation barrier beyond which its performance is optimal. In addition, a limit level of pollution, from which its minimal electric strength is equivalent to that of a conducting barrier, has been detected.

**Notes:** Boudissa, Rabah Merabet, Samia Iouknane, Saloua Bayadi, Abdelhafid**URL:** <Go to ISI>://WOS:000326120200008

**Reference Type: Journal Article****Record Number:** 36**Author:** Boufassa, S. Doufnoune, R. Hellati, A. Haddaoui, N. Cagiao, M. E.**Year:** 2013**Title:** Effect of compatibilizing agents on the physical properties of iPP/HDPE organoclay blends**Journal:** Journal of Polymer Engineering**Volume:** 33**Issue:** 7**Pages:** 589-598**Date:** Oct**Short Title:** Effect of compatibilizing agents on the physical properties of iPP/HDPE organoclay blends**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2013-0048**Accession Number:** WOS:000325012500002

**Abstract:** Blends of isotactic polypropylene (iPP) and high density polyethylene (HDPE), with and without compatibilizers and with different organoclay amounts (1%, 3%, and 5%), were systematically investigated to assess the effect of the additives on the crystallinity of the blends, as well as the correlation between the microhardness, H and the Young's modulus E. The compatibilizers used were: maleic anhydride grafted styrene ethylene butadiene styrene (SEBS-g-MAH), maleic anhydride grafted polyethylene (PE-g-MAH), maleic anhydride grafted polypropylene (PP-g-MAH), ethylene propylene diene monomer (EPDM), and maleic anhydride grafted EPDM (EPDM-g-MAH). The thermal properties and crystallization behavior were determined by differential scanning calorimetry (DSC) and wide angle X-ray scattering (WAXS). Macro- and micromechanical properties were also investigated. The results obtained showed that the addition of clay slightly increases the crystallinity  $\alpha$ (WAXS) of the blends. However, the hardness H decreases enormously only by adding 1 wt% of clay. With higher clay amounts, H increases again. The relationship between the Young's modulus E and the hardness H for all the studied blends was found to be somewhat higher than the one obtained for polyethylene (PE) samples with different morphologies.

**Notes:** Boufassa, Samia Doufnoune, R. Hellati, Abdelhak Haddaoui, Nacceredine Esperanza Cagiao, M.

**URL:** <Go to ISI>://WOS:000325012500002

**Reference Type: Journal Article****Record Number:** 37**Author:** Bouguezel, S. Ahmad, M. O. Swamy, M. N. S.**Year:** 2013**Title:** Binary Discrete Cosine and Hartley Transforms**Journal:** Ieee Transactions on Circuits and Systems I-Regular Papers**Volume:** 60**Issue:** 4**Pages:** 989-1002**Date:** Apr**Short Title:** Binary Discrete Cosine and Hartley Transforms**ISSN:** 1549-8328**DOI:** 10.1109/tcsi.2012.2224751**Accession Number:** WOS:000317005400016

**Abstract:** In this paper, a systematic method for developing a binary version of a given transform by using the Walsh-Hadamard transform (WHT) is proposed. The resulting transform approximates the underlying transform very well, while maintaining all the advantages and properties of WHT. The method is successfully applied for developing a binary discrete cosine transform (BDCT) and a binary discrete Hartley transform (BDHT). It is shown that the resulting BDCT corresponds to the well-known sequency-ordered WHT, whereas the BDHT can be considered as a new Hartley-ordered WHT. Specifically, the properties of the proposed Hartley-ordering are discussed and a shift-copy scheme is proposed for a simple and direct generation of the Hartley-ordering functions. For software and hardware implementation purposes, a unified structure for the computation of the WHT, BDCT, and BDHT is proposed by establishing an elegant relationship between the three transform matrices. In addition, a spiral-ordering is proposed to graphically obtain the BDHT from the BDCT and vice versa. The application of these binary transforms in image compression, encryption and spectral analysis clearly shows the ability of the BDCT (BDHT) in approximating the DCT (DHT) very well.

**Notes:** Bouguezel, Saad Ahmad, M. Omair Swamy, M. N. S.**URL:** <Go to ISI>://WOS:000317005400016

**Reference Type: Journal Article****Record Number:** 38**Author:** Bouhemadou, A. Al-Essa, S. Allali, D. Ghebouli, M. A. Bin-Omran, S.**Year:** 2013**Title:** Electronic and optical properties of ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> cubic spinels by the modified Becke-Johnson density functional**Journal:** Solid State Sciences**Volume:** 20**Pages:** 127-134**Date:** Jun**Short Title:** Electronic and optical properties of ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> cubic spinels by the modified Becke-Johnson density functional**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2013.03.016**Accession Number:** WOS:000320085100023

**Abstract:** Structural, electronic and optical properties of the ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> cubic spinels have been investigated by means of the full-potential (linearized) augmented plane wave plus local orbitals based on density functional theory. The exchange-correlation potential is treated by the GGA-PBESol [J.P. Perdew, A. Ruzsinszky, G.I. Csonka, O.A. Vydrov, G.E. Scuseria, L.A. Constantin, X. Zhou, K. Burke, Phys. Rev. Lett. 100 (2008) 136406] and the recently proposed modified Becke-Johnson potential approximation (mBJ) [F. Tran, P. Blaha, Phys. Rev. Lett. 102 (2009) 226401], which successfully corrects the band-gap problem found with GGA for a wide range of materials. The obtained structural parameters are in good agreement with the available experimental data. This gives support for the predict properties for ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub>. The band structures reveal that both compounds are semiconductor with a direct gap. The obtained gap values show that mBJ is superior for estimating band gap energy. We have calculated the electron and hole effective masses in different directions. The density of states has been analyzed. Based on our electronic structure obtained using the mBJ method we have calculated various optical properties, including the complex dielectric function  $\epsilon(\omega)$ , complex index of refraction  $n(\omega)$ , reflectivity coefficient  $R(\omega)$ , absorption coefficient  $\alpha(\omega)$  and electron energy-loss function  $L(\omega)$  as functions of the photon energy. We find that the values of zero-frequency limit  $\epsilon(1)(0)$  increase with decreasing the energy band gap in agreement with the Penn model. The origin of the peaks and structures in the optical spectra is determined in terms of the calculated energy band structures. (C) 2013 Elsevier Masson SAS. All rights reserved.

**Notes:** Bouhemadou, A. Al-Essa, S. Allali, D. Ghebouli, M. A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000320085100023

**Reference Type: Journal Article****Record Number:** 39**Author:** Bouhemadou, A. Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bin-Omran, S. Ucgun, E. Ocak, H. Y.**Year:** 2013**Title:** Structural, elastic, electronic and lattice dynamical properties of III-P quaternary alloys matched to AIP**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 3**Pages:** 718-726**Date:** Jun**Short Title:** Structural, elastic, electronic and lattice dynamical properties of III-P quaternary alloys matched to AIP**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2012.12.014**Accession Number:** WOS:000319641500022

**Abstract:** We report a detailed study of the compositional dependence of the structural, elastic, electronic and dynamical properties of the  $\text{In}_{1-x-y}\text{Al}_x\text{Ga}_y\text{P}$  quaternary alloys matched to AIP using pseudo-potential plane-wave method based on the density functional theory. The reliability and accuracy of the predicted physical properties mentioned above for  $\text{In}_{1-x-y}\text{Al}_x\text{Ga}_y\text{P}/\text{AIP}$  are tested by comparing the calculated lattice constant, elastic constants and phonon dispersion curves for the binary AIP with the available experimental and theoretical data in the literature. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Bouhemadou, A. Ghebouli, M. A. Ghebouli, B. Fatmi, M. Bin-Omran, S. Ucgun, E. Ocak, H. Y.**URL:** <Go to ISI>://WOS:000319641500022

**Reference Type: Journal Article****Record Number:** 40**Author:** Bouhemadou, A. Ugur, G. Ugur, S. Al-Essa, S. Ghebouli, M. A. Khenata, R. Bin-Omran, S. Al-Douri, Y.**Year:** 2013**Title:** Elastic and thermodynamic properties of ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> compounds under pressure and temperature effects**Journal:** Computational Materials Science**Volume:** 70**Pages:** 107-113**Date:** Apr**Short Title:** Elastic and thermodynamic properties of ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> compounds under pressure and temperature effects**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2013.01.004**Accession Number:** WOS:000315297100012

**Abstract:** Results of ab initio calculations of the lattice parameter, elastic constants and some thermodynamic parameters in a wide range of pressures and temperatures are reported for the ZnSc<sub>2</sub>S<sub>4</sub> and CdSc<sub>2</sub>S<sub>4</sub> cubic spinels. The calculated equilibrium lattice parameters are compared with available experimental data. Elastic constants and some related properties for single-crystal and polycrystalline have been calculated at zero pressure and zero temperature using the analysis of changes in calculated stresses resulting from changes in strain. Evolution of the elastic constant with pressure and temperature is predicted. From the ab initio calculated total energy versus volume and using the quasi-harmonic Debye model, in which the phononic effects are taken into account, the evolution of some thermodynamic parameters with temperature and pressure is computed. This is the first quantitative theoretical prediction of the reported properties and it still awaits experimental confirmation. (C) 2013 Elsevier B. V. All rights reserved.

**Notes:** Bouhemadou, A. Ugur, G. Ugur, S. Al-Essa, S. Ghebouli, M. A. Khenata, R. Bin-Omran, S. Al-Douri, Y.

**URL:** <Go to ISI>://WOS:000315297100012

**Reference Type: Journal Article****Record Number:** 41**Author:** Boukelkoul, M. Ouarab, N. Kharoubi, M. Haroun, A.**Year:** 2013**Title:** Theoretical Study of the Kerr Effect in Ultrathin Films Fe-n/Ag(001)**Journal:** Sensor Letters**Volume:** 11**Issue:** 9**Pages:** 1658-1666**Date:** Sep**Short Title:** Theoretical Study of the Kerr Effect in Ultrathin Films Fe-n/Ag(001)**ISSN:** 1546-198X**DOI:** 10.1166/sl.2013.2989**Accession Number:** WOS:000331929600017

**Abstract:** Structural, magnetic and magneto-optical properties of ultrathin films of iron grown by pseudomorphic epitaxy on semi-infinite Ag(001) are theoretically and computationally investigated. The electronic structure is calculated using Spin-Polarized Relativistic Linear Muffin-Tin Orbitals with Atomic Sphere Approximation. A pseudomorphic, body centered tetragonal structure with tetragonality ratio  $c/a = 1.4$  has been found. The magnetic behaviour is characterized by an enhanced magnetic moment with a ferromagnetic atomic interplane coupling. The polar magneto-optical Kerr effect spectra are calculated over a photon energy range extended to 15 eV and the microscopic origin of the most interesting features of Kerr rotations is given by interband transitions.

**Notes:** Boukelkoul, M. Ouarab, N. Kharoubi, M. Haroun, A.**URL:** <Go to ISI>://WOS:000331929600017

**Reference Type: Journal Article****Record Number:** 42**Author:** Boukezata, B. Chaoui, A. Gaubert, J. P. Hachemi, M.**Year:** 2013**Title:** Improving the quality of energy in grid connected photovoltaicsystems**Journal:** 2013 3d International Conference on Systems and Control (Icsc)**Short Title:** Improving the quality of energy in grid connected photovoltaicsystems**Accession Number:** WOS:000351821600170

**Abstract:** This paper proposes the effective utilization of active power filter (APF) for interconnecting the PV modules to the grid using direct power control (DPC) method. Its main feature is the capability to compensate the reactive power and harmonic currents drawn by nonlinear loads and simultaneously inject the maximum power available from the PV array into the grid. The reference current containing PV maximum power and harmonic components is developed based on direct power control via an integral-proportional (IP) controller, exploiting optimal solar energy was extracted by an algorithm of maximization MPPT is the INC-COND. The whole system (single stage converter) presents increased efficiency when compared to the conventional system. Simulation results on MATLAB/Simulink of the proposed system have been done and the obtained results prove the effectiveness of using a shunt active power filter as the interfacing unit for grid integrated renewable energy system.

**Notes:** Boukezata, B. Chaoui, A. Gaubert, J. -P. Hachemi, M. Mehdi, D Aitouch, A Quevedo, J 3d International Conference on Systems and Control (ICSC) Oct 29-31, 2013 Algiers, ALGERIA IEEE Control Syst Soc, Univ Sci & Technol Houari Boumediene, Soc Sci Dev & New Technologies 978-1-4799-0275-0

**URL:** <Go to ISI>://WOS:000351821600170

**Reference Type: Journal Article****Record Number:** 43**Author:** Bounasla, N. Hemsas, K. E. Ieee,**Year:** 2013**Title:** Second Order Sliding Mode Control of a Permanent Magnet Synchronous Motor**Journal:** 2013 14th International Conference on Sciences and Techniques of Automatic Control and Computer Engineering (Sta)**Pages:** 535-539**Short Title:** Second Order Sliding Mode Control of a Permanent Magnet Synchronous Motor**Accession Number:** WOS:000351282000093**Abstract:** This paper presents a nonlinear control of a synchronous permanent magnet machine based on second order sliding mode control using super twisting algorithm. This algorithm allows to reduce the chattering phenomenon. Simulation results are presented to show the effectiveness of the proposed control method.**Notes:** Bounasla, N. Hemsas, K. E. 14th International Conference on Sciences and Techniques of Automatic Control & Computer Engineering (STA) Dec 20-22, 2013 Sousse, TUNISIA Univ Sfax, Nat Engr Sch Sfax, Lab Sci & Tech Automat Control & Comp Engr 978-1-4799-2954-2**URL:** <Go to ISI>://WOS:000351282000093

**Reference Type: Journal Article****Record Number:** 44**Author:** Bourahli, M. E. Osmani, H.**Year:** 2013**Title:** Chemical and Mechanical Properties of Diss (*Ampelodesmos mauritanicus*) Fibers**Journal:** Journal of Natural Fibers**Volume:** 10**Issue:** 3**Pages:** 219-232**Date:** Jul**Short Title:** Chemical and Mechanical Properties of Diss (*Ampelodesmos mauritanicus*) Fibers**ISSN:** 1544-0478**DOI:** 10.1080/15440478.2012.761115**Accession Number:** WOS:000324086300002

**Abstract:** In the present study, natural Diss fibers (*Ampelodesmos mauritanicus*) were treated and characterized in terms of physico-chemical performances and mechanical properties. The Diss fibers main constituents with their weight proportions are cellulose (44.1%), hemicelluloses (27%), lignin (16.80%), extractives (9%), and ashes (3.1%). The measured specific density (0.89 g/mL) decreases about 5% when alkaline treatment was used. The average elastic modulus, tensile strength, and tensile elongation at failure are respectively 9.3 Gpa, 149 Mpa, and 1.72% for a 20 mm gauge length. The degree of variability in fiber strength results at different gauge lengths was quantified by Weibull statistics. The Weibull modulus decreases from 2.96 to 2.73 and the tensile strength scale parameter decreases from 161 to 105 Mpa as the gauge length increases from 20 to 80 mm. We also investigated the alkali treatment effects on the mechanical properties and on the fibers structure. When treated with 5% NaOH during 2h, the Diss fibers tensile strength increased tremendously by about (37%). Longer processing time did not show any appreciable improvement. However, the tensile strength remains higher than for the untreated fibers.

**Notes:** Bourahli, M. El H. Osmani, H.**URL:** <Go to ISI>://WOS:000324086300002

**Reference Type: Journal Article****Record Number:** 45**Author:** Bouras, S. Ghebouli, B. Benkerri, M. Ghebouli, M. A. Bouhemadou, A.**Year:** 2013**Title:** First-principles calculations on elastic, electronic and optical properties for the alkaline platinum hydrides A(2)PtH(6) (A=K, Rb and Cs)**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 3**Pages:** 940-946**Date:** Jun**Short Title:** First-principles calculations on elastic, electronic and optical properties for the alkaline platinum hydrides A(2)PtH(6) (A=K, Rb and Cs)**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2013.01.024**Accession Number:** WOS:000319641500055

**Abstract:** The alkaline platinum hydrides are considered the most promising as hydrogen storage materials. The alloying ability of crystal, elastic constants and related parameters, electronic and optical properties have been studied using pseudo-potential plane-wave method based on the density functional theory. The investigated compounds show a weaker resistance to compression along the principal a-axis and their resistance to shear deformation is lower than the resistance to the unidirectional compression. The band structure indicates that A(2)PtH(6) (A=K, Rb and Cs) are X-X direct gap semiconductors. The effective electron mass at equilibrium has been predicted towards X-Gamma, X-W and L-W directions. The strong hybridization between Pt-d and H-s states in the upper valence band translates the existence of covalent bonding character in these compounds. The static optical dielectric constant is inverse proportional to the fundamental gap. (c) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Bouras, S. Ghebouli, B. Benkerri, M. Ghebouli, M. A. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000319641500055

**Reference Type: Journal Article****Record Number:** 46**Author:** Chaab, O. Bouamama, L. Simoens, S.**Year:** 2013**Title:** An adaptive anisotropic magnification algorithm of numerical reconstructed holographic image via a cascaded Fresnel transform**Journal:** Optics Communications**Volume:** 291**Pages:** 61-69**Date:** Mar**Short Title:** An adaptive anisotropic magnification algorithm of numerical reconstructed holographic image via a cascaded Fresnel transform**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2012.09.083**Accession Number:** WOS:000315001200010

**Abstract:** An algorithm that allows a direct control of output resolution of a numerical reconstructed holographic image by a cascaded Fresnel transform is presented. The proposed method is mainly expressed with the magnification term in order to eliminate the cumbersome distance tuning for providing a desired resolution. Also, with the benefit of the numerical Fresnel transform separability, the method has a capability to perform an anisotropic magnification for resizing the output resolution in orthogonal direction. The used range of the magnification values has been established with the Nyquist sampling-theorem. Simulated and experimental results are provided to show the effectiveness of the proposed method. Furthermore, it is extremely useful for the superposition or for the comparison of the reconstructed images at multi-scale resolutions. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Chaab, Omar Bouamama, Larbi Simoens, Serge**URL:** <Go to ISI>://WOS:000315001200010

**Reference Type: Journal Article****Record Number:** 47**Author:** Cheniti, H. Serradj, T. Brahamia, K. Makhlouf, A. Guerraiiche, S.**Year:** 2013**Title:** Physical knowledge of household waste in Algeria: Generation and composition in the town of Annaba**Journal:** Waste Management & Research**Volume:** 31**Issue:** 11**Pages:** 1180-1186**Date:** Nov**Short Title:** Physical knowledge of household waste in Algeria: Generation and composition in the town of Annaba**ISSN:** 0734-242X**DOI:** 10.1177/0734242x13502383**Accession Number:** WOS:000325924300013

**Abstract:** We investigated the physical composition of household waste in the town of Annaba, Algeria. The study was based on an adequate sampling protocol that takes into account the constraints of Algerian cities. Annaba was taken as a case study to check the situation in Algeria. Ninety to 120 kg was sorted for each type of habitat in the city during four seasons, from 2010 to 2011, according to 11 components of household waste. Variations in the production ratio and percentages of all components were recorded according to the seasons and the type of habitat during the four campaigns of characterization. Analysis of variance showed a significant difference of the waste composition by habitat type. A pairwise multiple comparisons using the Tukey test of the sampled habitat types was also carried out, which indicated no significant differences between the habitat type concerning paper, plastic, composite and glass variables. But for the remaining components, the study revealed, with a significance limit of 0.05, a clear difference in the average composition of the waste according to the type of habitat.

**Notes:** Cheniti, Hamza Serradj, Tayeb Brahamia, Khaled Makhlouf, Ali Guerraiiche, Said**URL:** <Go to ISI>://WOS:000325924300013

**Reference Type: Journal Article****Record Number:** 48**Author:** Cherif, A. Richard, C. Guyomar, D. Belkhiat, S. Meddad, M. Eddiai, A. Hajjaji, A.**Year:** 2013**Title:** Modal SSDI-Max Technique of a Smart Beam Structure: broadband excitation**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 15**Issue:** 5-6**Pages:** 438-446**Date:** May-Jun**Short Title:** Modal SSDI-Max Technique of a Smart Beam Structure: broadband excitation**ISSN:** 1454-4164**Accession Number:** WOS:000322288200010

**Abstract:** Semi-active control is based on modal control strategy that needs very some energy for work but is effective only when the excitation is targeted on a unique mode. To improve the performance of semi-active control in the case of a broadband excitation a modal approach SSDI-Max is proposed. This present paper presents an analysis of the performance of the SSDI-Max damping technique with a Beam-structure. It relies on simulations, made with the Matlab-Simulink environment, using a realistic model of a beam structure previously identified. The proposed method aims at maximizing the amplitude of the piezoelectric actuator by the definition of an optimal switching time according to the targeted mode chosen. Starting at this time, an algorithm is implemented to wait for the next voltage extremum within a given time window. The performances of the SSDI-Max method for the control of single mode of the structure are described in the case of pulse and noise excitations. Finally the influence of the delay time window used is described again for pulse and noise excitations for various modes.

**Notes:** Cherif, A. Richard, C. Guyomar, D. Belkhiat, S. Meddad, M. Eddiai, A. Hajjaji, A.**URL:** <Go to ISI>://WOS:000322288200010

**Reference Type: Journal Article****Record Number:** 49**Author:** Cheriti, M. Kahoul, A. Azizi, A. Alonso-Vante, N.**Year:** 2013**Title:** Effect of Co substitution for Fe in Sr<sub>2</sub>FeMoO<sub>6</sub> on electrocatalytic properties for oxygen reduction in alkaline medium**Journal:** Ionics**Volume:** 19**Issue:** 8**Pages:** 1155-1162**Date:** Aug**Short Title:** Effect of Co substitution for Fe in Sr<sub>2</sub>FeMoO<sub>6</sub> on electrocatalytic properties for oxygen reduction in alkaline medium**ISSN:** 0947-7047**DOI:** 10.1007/s11581-012-0834-5**Accession Number:** WOS:000322371300010

**Abstract:** Double perovskites Sr<sub>2</sub>Fe<sub>1-x</sub>Co<sub>x</sub>MoO<sub>6</sub> (x = 0, 0.25, 0.5, 0.75 and 1) have been investigated as cathode material for oxygen reduction reaction (ORR) in 0.5 M NaOH at 25 °C using the rotating disk electrode. The electrocatalytic powders were prepared by a solid-state process and characterised by X-Ray powder diffraction, scanning electron microscopy and infrared spectroscopy. The electrochemical techniques considered are linear voltammetry, steady-state polarization and impedance spectroscopy. The electrocatalysts Sr<sub>2</sub>Fe<sub>1-x</sub>Co<sub>x</sub>MoO<sub>6</sub>/C consisting of the double perovskite oxides and carbon (Vulcan XC-72) were mixed and spread out into a thin layer on a glassy carbon substrate. The electrocatalytic activity was strongly influenced by the Co substitution at room temperature. The relation between catalytic performance and the degree of Co content was examined. The Co-containing catalysts exhibited lower activity attributed to their high resistivity, and the highest activity toward oxygen reduction was observed for Sr<sub>2</sub>CoMoO<sub>6</sub>.

**Notes:** Cheriti, Mabrouk Kahoul, Abdelkrim Azizi, Amor Alonso-Vante, Nicolas**URL:** <Go to ISI>://WOS:000322371300010

**Reference Type: Journal Article****Record Number:** 50**Author:** Chermat, S. Djellouli, Y. Gharzouli, R.**Year:** 2013**Title:** Regressive dynamics of vegetation of Setif high plains : erosion of plant diversity in djebel Youssef (Algeria)**Journal:** Revue D Ecologie-La Terre Et La Vie**Volume:** 68**Issue:** 1**Pages:** 85-100**Date:** Mar**Short Title:** Regressive dynamics of vegetation of Setif high plains : erosion of plant diversity in djebel Youssef (Algeria)**ISSN:** 0249-7395**Accession Number:** WOS:000345191500007

**Abstract:** The extensive degradation of the vegetation of djebel Youssef (Setif High Plains) is mainly due to the anthropozoic action, worsened by very constraining climatic conditions, including recurrent periods of droughts. The flora and vegetation of this mountain had not been previously studied. Surveys that we have undertaken show the presence of a relatively rich and varied flora. To follow the evolution of the flora and vegetation, we conducted a diachronic study of 10 years. Results presented in this paper are the first observations for the decade 2000-2010. Regression of vegetation was accompanied by depletion of phanerophytes and proliferation of therophytes. At a very advanced dematorralization already succeeded a steppe, resulting from an extensive therophytization highlighted by the analysis of biological spectra. The flora is thus constituted by 70 % therophytes and marked by the scarcity of phanerophytes (7 %). The relative importance of desert species (over 12 % of the saharan-arabic species), indicates the progressive aridity of the region.

**Notes:** Chermat, Sabah Djellouli, Yamna Gharzouli, Rachid**URL:** <Go to ISI>://WOS:000345191500007

**Reference Type: Journal Article****Record Number:** 51**Author:** Cherrad, D. Maouche, D. Boudissa, M. Reffas, M. Louail, L. Maamache, M. Haddadi, K. Medkour, Y.**Year:** 2013**Title:** Ultra soft pseudo potential investigation of fundamental physical properties of CaXO<sub>3</sub> (X=Sn and Hf) distorted perovskites: A reference study to the perfect perovskites**Journal:** Physica B-Condensed Matter**Volume:** 429**Pages:** 95-105**Date:** Nov**Short Title:** Ultra soft pseudo potential investigation of fundamental physical properties of CaXO<sub>3</sub> (X=Sn and Hf) distorted perovskites: A reference study to the perfect perovskites**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2013.08.002**Accession Number:** WOS:000324249300019

**Abstract:** The structural, electronic and optical properties of CaXO<sub>3</sub> distorted perovskites compounds have been investigated by employing the Vanderbilt Ultra Soft Pseudo Potential (US-PP) using the plane wave method (PW) within density functional theory (OFT) and the local density approximation LOA. The studies of the dependence with pressure of enthalpies have confirmed the excellent mechanical stability of these materials. We have found that these compounds have a direct band gaps (G-G). The (110) charge density contour show that these distorted compounds exhibit a zig zag electronic short chains in contrast of ideal perovskites presenting a perfectly aligned chains. Elastic-electronic correlation was established between C<sub>ij</sub> individual elastic constant and the bonding-anti bonding chemical bonds. After that, some above properties were studied under hydrostatic pressure effect. CaSnO<sub>3</sub> perovskite was very sensitive towards pressure than CaHfO<sub>3</sub>. The reflectivity maximum of these materials occurs in the ultra-violet energy ranges, which indicate that these perovskites can serve in some technological applications. Optical anisotropy shows that the compound CaSnO<sub>3</sub> is considered as more anisotropic than CaHfO<sub>3</sub>. Furthermore, anisotropy maximum was found to be according to [0 1 0] and [1 0 0] directions for CaHfO<sub>3</sub> and CaSnO<sub>3</sub>, respectively. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Cherrad, Djellal Maouche, D. Boudissa, M. Reffas, M. Louail, L. Maamache, M. Haddadi, K. Medkour, Y.**URL:** <Go to ISI>://WOS:000324249300019

**Reference Type: Journal Article****Record Number:** 52**Author:** Chettah, H. Abdi, D.**Year:** 2013**Title:** Effect of the electrochemical technique on nanocrystalline ZnO electrodeposition, its structural, morphological and photoelectrochemical properties**Journal:** Thin Solid Films**Volume:** 537**Pages:** 119-123**Date:** Jun**Short Title:** Effect of the electrochemical technique on nanocrystalline ZnO electrodeposition, its structural, morphological and photoelectrochemical properties**ISSN:** 0040-6090**DOI:** 10.1016/j.tsf.2013.04.024**Accession Number:** WOS:000319456400018

**Abstract:** This article reports the influence of the electrochemical technique on the electrodeposition of nanoscopic zinc oxide from aqueous mixed bath of zinc nitrate and potassium chloride at 70 degrees C onto fluorine doped tin oxide coated glass substrates. ZnO thin films were elaborated via cyclic voltamperometry and chronoamperometry techniques. This study shows structural and morphological differences in films deposited according to both methods. Thin and adherent films obtained via cyclic voltamperometry have been obtained after 100 cycles, and those obtained using the chronoamperometric method grown at potential of -1 V vs. Ag/AgCl during 1 h. The structural characterisation of such films was performed using X-ray diffraction, which showed the most important peaks of ZnO wurtzite structure with preferential orientation along the (002) axis for deposits obtained via cyclic voltamperometry presenting nanometric grain sizes (42 nm). Atomic force microscopy was used to study surface morphology and estimate the surface roughness factor for two deposits. Photoelectrochemical study indicates that both kinds of films had n-type electrical conductivity and presents high photoanodic-generated currents. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Chettah, Hamdane Abdi, Djamila**URL:** <Go to ISI>://WOS:000319456400018

**Reference Type: Journal Article****Record Number: 53****Author:** Chihi, T. Bouhemadou, A. Bin-Omran, S.**Year:** 2013**Title:** Structural, elastic, and thermodynamic properties under pressure of the FeC in the martensitic phase: an ab-initio study**Journal:** High Pressure Research**Volume:** 33**Issue:** 3**Pages:** 572-583**Date:** Aug**Short Title:** Structural, elastic, and thermodynamic properties under pressure of the FeC in the martensitic phase: an ab-initio study**ISSN:** 0895-7959**DOI:** 10.1080/08957959.2013.806502**Accession Number:** WOS:000327006700012

**Abstract:** A detailed theoretical study of structural, elastic, and thermodynamic properties of the FeC in the martensitic phase has been carried out using ab-initio calculations based on the density functional theory within the generalized gradient approximation. The optimized structural properties, the lattice constant and bulk modulus and its pressure derivative, have been evaluated. The single-crystal elastic constants as well as the polycrystalline elastic moduli and their related properties have been calculated using the efficient strain-stress method, and the relevant mechanical properties of the FeC in the martensitic phase have been discussed. Pressure and temperature dependence of the lattice constant, bulk modulus, thermal expansion coefficient, heat capacity, Debye temperature, and Gruneisen parameter of the FeC in the martensitic phase have been investigated using the quasi-harmonic Debye model.

**Notes:** Chihi, T. Bouhemadou, A. Bin-Omran, S. Si**URL:** <Go to ISI>://WOS:000327006700012

**Reference Type: Journal Article****Record Number:** 54**Author:** Chihi, T. Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bin-Omran, S.**Year:** 2013**Title:** First-principles calculations of structural, electronic and optical properties of BaGaXH (X=Si, Ge, Sn)**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 6**Pages:** 1558-1565**Date:** Dec**Short Title:** First-principles calculations of structural, electronic and optical properties of BaGaXH (X=Si, Ge, Sn)**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2013.05.015**Accession Number:** WOS:000327166000029

**Abstract:** The structural, elastic, electronic and optical properties of the gallium monohydrides BaGaXH (X=Si, Ge, Sn) have been investigated by means of first principles calculations. The low values of the B/G ratio of these compounds correspond to the brittle nature, which is due to the hydrogen presence. The bulk modulus, Young's modulus, shear modulus decrease from Si to Sn for BaGaXH (X=Si, Ge, Sn) in the same column in the periodic table. Also the Debye temperature of these compounds has a relative high  $\theta_D$  value indicating that they possess good thermal conductivity. The mean sound velocities have a progressive decrease from silicon (Si) to tin (Sn). (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Chihi, T. Ghebouli, M. A. Ghebouli, B. Bouhemadou, A. Fatmi, M. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000327166000029

**Reference Type: Journal Article****Record Number:** 55**Author:** Dal Cappello, C. Rezkallah, Z. Houamer, S. Charpentier, I. Roy, A. C. Hervieux, P. A. Ruiz-Lopez, M. F.**Year:** 2013**Title:** Ionization of thymine by electron impact: investigation of inner shell orbitals**Journal:** European Physical Journal D**Volume:** 67**Issue:** 6**Date:** Jun**Short Title:** Ionization of thymine by electron impact: investigation of inner shell orbitals**ISSN:** 1434-6060**DOI:** 10.1140/epjd/e2013-40081-x**Article Number:** 117**Accession Number:** WOS:000321661200009

**Abstract:** Triply differential cross section for the ionization of inner orbitals of thymine by electron impact is investigated at low impact energy. Results of first and second Born calculations performed at 250 eV incident energy with coplanar asymmetric geometry are compared with recent experiments. The initial state of the target is described by one single center wavefunction. It is observed that second Born calculations improve substantially the agreement with experiments.

**Notes:** Dal Cappello, C. Rezkallah, Z. Houamer, S. Charpentier, I. Roy, A. C. Hervieux, P. A. Ruiz-Lopez, M. F.

**URL:** <Go to ISI>://WOS:000321661200009

**Reference Type: Journal Article****Record Number:** 56**Author:** Daoud, B. Hamitouche, M. Merikhi, K.**Year:** 2013**Title:** On the Nilpotency Class of a Generalized 3-Abelian Group**Journal:** Mediterranean Journal of Mathematics**Volume:** 10**Issue:** 3**Pages:** 1189-1194**Date:** Aug**Short Title:** On the Nilpotency Class of a Generalized 3-Abelian Group**ISSN:** 1660-5446**DOI:** 10.1007/s00009-013-0264-2**Accession Number:** WOS:000322138400004

**Abstract:** A group  $G$  is called 3-abelian if the map is an endomorphism of  $G$  and it is called generalized 3-abelian, if there exist elements such that the map is an endomorphism of  $G$ . Abdollahi, Daoud and Endimioni have proved that a generalized 3-abelian group  $G$  is nilpotent of class at most 10. Here, we improve the bound to 3 and we show that the exponent of its derived subgroup is finite and divides 9. We also prove that  $G$  is 3-Levi, 9-central, 9-abelian and 3-nilpotent of class at most 2.

**Notes:** Daoud, Bounabi Hamitouche, Meriem Merikhi, Khalissa**URL:** <Go to ISI>://WOS:000322138400004

**Reference Type: Journal Article****Record Number:** 57**Author:** Daoud, S. Bioud, N. Lebgaa, N.**Year:** 2013**Title:** Elastic and piezoelectric properties, sound velocity and Debye temperature of (B3) boron-bismuth compound under pressure**Journal:** Pramana-Journal of Physics**Volume:** 81**Issue:** 5**Pages:** 885-892**Date:** Nov**Short Title:** Elastic and piezoelectric properties, sound velocity and Debye temperature of (B3) boron-bismuth compound under pressure**ISSN:** 0304-4289**DOI:** 10.1007/s12043-013-0596-2**Accession Number:** WOS:000326862400015

**Abstract:** Pseudopotential plane-wave method (PP-PW) based on density functional theory (DFT) and density functional perturbation theory (DFPT) within the Teter and Pade exchange-correlation functional form of the local spin density approximation (LSDA) is applied to study the effect of pressure on the elastic and piezoelectric properties of the (B3) boron-bismuth compound. The phase transition, the independent elastic stiffness constants, the bulk modulus, the direct and converse piezoelectric coefficients, the longitudinal, transverse, and average sound velocities, and finally the Debye temperature under pressure are studied. The results obtained are generally lower than the available theoretical data (experimental data are not available) reported in the literature.

**Notes:** Daoud, S. Bioud, N. Lebgaa, N.**URL:** <Go to ISI>://WOS:000326862400015

**Reference Type: Journal Article****Record Number:** 58**Author:** Daoud, S. Bioud, N. Lebgaa, N. Belagraa, L. Mezouar, R.**Year:** 2013**Title:** Pressure effect on structural, elastic and electronic properties of (B3) BSb compound**Journal:** Indian Journal of Physics**Volume:** 87**Issue:** 4**Pages:** 355-362**Date:** Apr**Short Title:** Pressure effect on structural, elastic and electronic properties of (B3) BSb

compound

**ISSN:** 0973-1458**DOI:** 10.1007/s12648-012-0231-y**Accession Number:** WOS:000316357200008

**Abstract:** In this paper we present the results obtained from first-principles calculations of the pressure effect on the structural, elastic and electronic properties of (B3) boron-antimonide, using the pseudopotential plane wave method (PP-PW) based on density functional theory within the Teter and Pade exchange-correlation functional form of the local density approximation. The lattice parameter constant, crystal density, independent elastic constants, bulk modulus, shear modulus, zener anisotropy parameter and linear and quadratic pressure coefficients of the energy bandgaps under high pressures are presented. In the investigation of the stability criteria, the results show a phase transition from the zincblende (B3) to rock-salt (B1) phase (or to amorphous state) at around 0.72 Mbar, which is generally in good agreement with the available theoretical data reported in the literature.

**Notes:** Daoud, S. Bioud, N. Lebgaa, N. Belagraa, L. Mezouar, R.**URL:** <Go to ISI>://WOS:000316357200008

**Reference Type: Journal Article****Record Number:** 59**Author:** De Falco, M. de Giovanni, F. Musella, C. Trabelsi, N.**Year:** 2013**Title:** Strongly Inertial Groups**Journal:** Communications in Algebra**Volume:** 41**Issue:** 6**Pages:** 2213-2227**Date:** May**Short Title:** Strongly Inertial Groups**ISSN:** 0092-7872**DOI:** 10.1080/00927872.2012.655434**Accession Number:** WOS:000320091300020

**Abstract:** A subgroup  $X$  of a group  $G$  is strongly inert if the index  $|X, X-g: X|$  is finite for all elements  $g \in G$ , and a group is strongly inertial if all its subgroups are strongly inert. This article investigates the structure of strongly inertial groups. In particular, strongly inertial groups which are either finitely generated or minimax are completely classified. Moreover, groups in which many subgroups are strongly inert are studied.

**Notes:** De Falco, M. de Giovanni, Francesco Musella, C. Trabelsi, N.**URL:** <Go to ISI>://WOS:000320091300020

**Reference Type: Journal Article****Record Number:** 60**Author:** Deghfel, B. Kahoul, A. Kerai, S. Saadaoui, M. Dechoucha, S. Nekkab, M.**Year:** 2013**Title:** Z-dependence and collective analysis of M x-ray production cross sections for a wide range of elements ( $60 \leq Z \leq 90$ ) by proton impact**Journal:** Radiation Physics and Chemistry**Volume:** 92**Pages:** 32-36**Date:** Nov**Short Title:** Z-dependence and collective analysis of M x-ray production cross sections for a wide range of elements ( $60 \leq Z \leq 90$ ) by proton impact**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2013.06.021**Accession Number:** WOS:000324609900006

**Abstract:** Based on the remarkable spread of the ratios of the experimental to theoretical M-shell x-ray production cross section, where they are usually analyzed by a function depending only on the scaled velocity parameter, we attempt to deduce new semi-empirical cross sections by introducing the dependence of these ratios on the atomic number of the target, noted as "Z-dependence". For this effect, the ECPSSR model and the updated experimental data (from 1980 till 2009) of the M-shell x-ray production cross sections are combined to calculate the semi-empirical cross sections for a wide range of heavy elements ( $60 \leq Z \leq 90$ ) by proton impact. A brief discussion of the agreement between our results and earlier theoretical as well as experimental works has been demonstrated. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Deghfel, B. Kahoul, A. Kerai, S. Saadaoui, M. Dechoucha, S. Nekkab, M.**URL:** <Go to ISI>://WOS:000324609900006

**Reference Type: Journal Article****Record Number:** 61**Author:** Deghfel, B. Kahoul, A. Heraiz, S. Belouadah, N. Nekkab, M.**Year:** 2013**Title:** M x-ray production cross sections of heavy elements for low and high proton energy**Journal:** Radiation Physics and Chemistry**Volume:** 85**Pages:** 89-94**Date:** Apr**Short Title:** M x-ray production cross sections of heavy elements for low and high proton energy**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2012.12.020**Accession Number:** WOS:000317030000014

**Abstract:** The semi-empirical cross sections have been deduced by individual fittings of the updated experimental data (from 1980 till 2009) and normalized to their corresponding theoretical values (ECPSSR model) for elements with  $72 \leq Z \leq 90$  by protons energies varying from 0.1 to 4.0 MeV. Also, based on the individual fittings of the elements and the remarkable deviation of the experimental data from the ECPSSR values for low proton energy, we attempt to deduce another semi-empirical cross sections by introducing the low-high proton energy procedure which separates the fitting of the semi-empirical cross sections for low proton energy from those for high proton energy. Our results are presented for selected heavy elements. Finally, a comparison is made between our results and the experiment. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Deghfel, B. Kahoul, A. Heraiz, S. Belouadah, N. Nekkab, M.**URL:** <Go to ISI>://WOS:000317030000014

**Reference Type: Journal Article****Record Number:** 62**Author:** Djamel, H. Hafsia, A. Bariza, Z. Hocine, B. M. Kafia, O.**Year:** 2013**Title:** Thermal field in SOFC fed by hydrogen: Inlet gases temperature effect**Journal:** International Journal of Hydrogen Energy**Volume:** 38**Issue:** 20**Pages:** 8575-8583**Date:** Jul**Short Title:** Thermal field in SOFC fed by hydrogen: Inlet gases temperature effect**ISSN:** 0360-3199**DOI:** 10.1016/j.ijhydene.2013.01.004**Accession Number:** WOS:000321728000039

**Abstract:** In the present work, the effect of the hydrogen and the air temperature values on the temperature distribution in a Planar Solid Oxide Fuel Cell is studied by the aid of a two-dimensional mathematical model. Two different configurations of the Solid Oxide Fuel Cells are examined: i) the Anode Supported Planar Solid Oxide Fuel Cell (ASP\_SOFC) and the Electrolyte Supported Planar Solid Oxide Fuel Cell (ESP\_SOFC). In order to describe the temperature distribution within the SOFC, the coupling of the mass and energy transport phenomena along with the electrochemistry is required. The studied parameters are: a) the hydrogen and the air temperature values and b) the geometry configurations. The complex system of the governing equations is numerically solved with the finite differences method and the calculation of the temperature distribution within each domain of the SOFCs is calculated via the 2-D mathematical model processed by FORTRAN language. Finally, the mathematical model predictions for the temperature distribution under the influence of the studied parameters are thoroughly discussed. Copyright (C) 2013, Hydrogen Energy Publications, LLC. Published by Elsevier Ltd. All rights reserved.

**Notes:** Djamel, Haddad Hafsia, Abdenebi Bariza, Zitouni Hocine, Ben Moussa Kafia, Oulmi**URL:** <Go to ISI>://WOS:000321728000039

**Reference Type: Journal Article****Record Number:** 63**Author:** Djellali, S. Haddaoui, N. Sadoun, T. Bergeret, A. Grohens, Y.**Year:** 2013**Title:** Structural, morphological and mechanical characteristics of polyethylene, poly(lactic acid) and poly(ethylene-co-glycidyl methacrylate) blends**Journal:** Iranian Polymer Journal**Volume:** 22**Issue:** 4**Pages:** 245-257**Date:** Apr**Short Title:** Structural, morphological and mechanical characteristics of polyethylene, poly(lactic acid) and poly(ethylene-co-glycidyl methacrylate) blends**ISSN:** 1026-1265**DOI:** 10.1007/s13726-013-0126-6**Accession Number:** WOS:000318647300003

**Abstract:** In this work, uncompatibilized and compatibilized blends of low density polyethylene (LDPE) and poly(lactic acid) (PLA) were subjected to several investigations: Fourier transform infrared (FTIR) spectroscopy, morphological analysis and mechanical testing (tensile, impact, microhardness). The copolymer (ethylene-co-glycidyl methacrylate) (EGMA) was used as compatibilizer. The percentages of PLA in LDPE/PLA samples ranged from 0 to 100 wt% while the EGMA was added to the blend 60/40 (LDPE/PLA) at concentrations of 2, 5, 7, 10, 15 and 20 parts per hundred (phr). FTIR analysis showed the absence of any interaction between LDPE and PLA, but after addition of compatibilizer, reactions between epoxy groups of EGMA and carboxylic or hydroxyl groups of PLA were confirmed. Tensile and impact tests revealed a loss of ductility of LDPE with the incorporation of PLA, except for the composition 80/20 (LDPE/PLA). However, the addition of 15 phr of EGMA led to the maximum increase in the elongation-at-break (about three times the value of uncompatibilized blend) and in the impact strength, but a marginal improvement was observed for tensile strength. SEM micrographs confirmed that the enhancement of mechanical properties is due to the improvement of the interfacial adhesion between different phases owing to the presence of EGMA. The microhardness values of the different blends (uncompatibilized or compatibilized) were in good agreement with the macroscopic mechanical properties (tensile and impact strengths).

**Notes:** Djellali, Souad Haddaoui, Nacereddine Sadoun, Tahar Bergeret, Anne Grohens, Yves**URL:** <Go to ISI>://WOS:000318647300003

**Reference Type: Journal Article****Record Number:** 64**Author:** Djellit, I. Sahari, M. L. Hachemi, A.**Year:** 2013**Title:** COMPLEX DYNAMICS IN 2-SPECIES PREDATOR-PREY SYSTEMS**Journal:** Journal of Applied Analysis and Computation**Volume:** 3**Issue:** 1**Pages:** 11-20**Short Title:** COMPLEX DYNAMICS IN 2-SPECIES PREDATOR-PREY SYSTEMS**ISSN:** 2156-907X**Accession Number:** WOS:000344127200002

**Abstract:** In this work, we consider some dynamical properties and specific contact bifurcations of a discrete-time predator prey system having inverses with vanishing denominator. The dynamics is investigated by using concepts of focal points, prefocal curves and bifurcation theory. The system undergoes flip bifurcation and Neimark-Sacker bifurcation. Numerical simulations are presented not only to illustrate our results with the theoretical analysis, but also to confirm further the complexity of the dynamical behaviors as extinction, persistence and permanence.

**Notes:** Djellit, I. Sahari, M. L. Hachemi, A.**URL:** <Go to ISI>://WOS:000344127200002

**Reference Type: Journal Article****Record Number:** 65**Author:** Djemia, P. Benhamida, M. Bouamama, K. Belliard, L. Faurie, D. Abadias, G.**Year:** 2013**Title:** Structural and elastic properties of ternary metal nitrides  $Ti_xTa_{1-x}N$  alloys: First-principles calculations versus experiments**Journal:** Surface & Coatings Technology**Volume:** 215**Pages:** 199-208**Date:** Jan**Short Title:** Structural and elastic properties of ternary metal nitrides  $Ti_xTa_{1-x}N$  alloys: First-principles calculations versus experiments**ISSN:** 0257-8972**DOI:** 10.1016/j.surfcoat.2012.09.059**Accession Number:** WOS:000315659600029

**Abstract:** First-principles pseudopotential calculations of the lattice constants and of the single-crystal elastic constants for  $Ti_xTa_{1-x}N$  ( $0 \leq x \leq 1$ ) alloys with BI-rocksalt structure were first carried out. These calculations were performed using density functional perturbation theory (DFPT) within the virtual crystal approximation (VCA) for the disordered alloys and the supercell method (SC) for the ordered alloys, with the ABINIT program. For disordered structures, partial comparisons of the lattice constants and of the bulk modulus are provided with calculations that used the coherent potential approximation (CPA) with the exact muffin-tin orbitals (EMTO). For the exchange-correlation potential we used the generalized gradient methods (GGA). The calculated equilibrium lattice parameters by VCA are in good agreement with the stress-free lattice parameters  $a(0)$  and exhibit a positive deviation from Vegard's rule corresponding to a positive bowing parameter while the calculated single-crystal stiffness  $c(12)$  and  $c(44)$ , gradually increase when  $c(11)$  decreases from TaN to TiN. In a second stage, we have estimated by homogenization methods the averaged stiffnesses  $\langle C_{ij} \rangle$ , the Young modulus and Poisson ratio of polycrystalline  $Ti_xTa_{1-x}N$  ( $0 \leq x \leq 1$ ) alloys considering a random orientation of crystallites. Finally, comparisons are made with the experimental effective out-of-plane shear elastic modulus  $C_{44}$  and the effective out-of-plane longitudinal elastic constant  $C_{33}$  measured by Brillouin light scattering and picosecond ultrasonics, respectively, on thin films elaborated by magnetron sputtering. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Djemia, P. Benhamida, M. Bouamama, Kh. Belliard, L. Faurie, D. Abadias, G. 39th International Conference on Metallurgical Coatings and Thin Films (ICMTF) Apr 23-27, 2012 San Diego, CA Amer Vacuum Soc (AVS), Adv Surface Engn Div (ASED)

**URL:** <Go to ISI>://WOS:000315659600029

**Reference Type: Journal Article****Record Number:** 66**Author:** Dogan, M. Tirasoglu, E. Karahan, I. H. Aylikci, N. K. Aylikci, V. Kahoul, A. Cetinkara, H. A. Serifoglu, O.**Year:** 2013**Title:** Alloying effect on K X-ray intensity ratio and production cross section values of Zn and Cr in Zn-Cr alloys**Journal:** Radiation Physics and Chemistry**Volume:** 87**Pages:** 6-15**Date:** Jun**Short Title:** Alloying effect on K X-ray intensity ratio and production cross section values of Zn and Cr in Zn-Cr alloys**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2013.01.027**Accession Number:** WOS:000318390800002

**Abstract:** In this study,  $\sigma(K\alpha)$ ,  $\sigma(K\beta)$  production cross-sections and K-beta/K-alpha intensity ratios of Cr and Zn have been measured in pure metals and in different alloy compositions which have different composition values. And also, empirical and semi-empirical K-shell fluorescence yields ( $\omega(K)$ ) and K-beta/K-alpha intensity ratios from the available experimental data for elements with  $23 \leq Z \leq 30$  were calculated. The experimental data are fitted using the quantity  $(\omega(K)/(1-\omega(K)))^{1/4}$  vs.  $Z$  to deduce the empirical K-shell fluorescence yields and K-beta/K-alpha intensity ratios. The effects of alloying on the fluorescence parameters and bath temperatures on alloy compositions were investigated. Our analysis indicates that these effects arise from reorganization of atom and charge transfer mechanism in alloys. (c) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Dogan, M. Tirasoglu, E. Karahan, I. H. Aylikci, N. Kup Aylikci, V. Kahoul, A. Cetinkara, H. A. Serifoglu, O.**URL:** <Go to ISI>://WOS:000318390800002

**Reference Type: Journal Article****Record Number:** 67**Author:** Eddiai, A. Meddad, M. Sbiaai, K. Boughaleb, Y. Hajjaji, A. Guyomar, D.**Year:** 2013**Title:** A new technique for maximizing the energy harvested using electrostrictive polymer composite**Journal:** Optical Materials**Volume:** 36**Issue:** 1**Pages:** 13-17**Date:** Nov**Short Title:** A new technique for maximizing the energy harvested using electrostrictive polymer composite**ISSN:** 0925-3467**DOI:** 10.1016/j.optmat.2013.07.014**Accession Number:** WOS:000327232600003

**Abstract:** Recent trends in electromechanical conversion have demonstrated the advantages of using electrostrictive polymers for actuation or energy harvesting. At present, the investigation of using electrostrictive polymers for energy harvesting (a conversion of mechanical to electrical energy) is beginning to show potential for this application. This paper investigates the effects of different signals of electrical field  $E$  in order to develop a more in-depth understanding of the changes in electrostrictive polymers composites (EPCs) response for increased current and energy harvesting. Results relating strain and electric field provide a framework for developing energy harvesting techniques which improve the overall performance of the system. In the present paper the theory is detailed then, with the reversal of polarization in the half period by applying signals electrical field of  $10 \text{ V}/\mu\text{m}$  and transverse strain of  $0.5\%$  and considering a phase shift between them. The obtained power density for  $\phi = \pi/2$ , is 7 times higher than the one corresponding of classical techniques. The simulation results are compared with experimental ones and good agreements are found. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Eddiai, Adil Meddad, Mounir Sbiaai, Khalid Boughaleb, Yahia Hajjaji, Abdelwahed Guyomar, Daniel Si**URL:** <Go to ISI>://WOS:000327232600003

**Reference Type: Journal Article****Record Number:** 68**Author:** Farr, W. G. Creedon, D. L. Goryachev, M. Benmessai, K. Tobar, M. E.**Year:** 2013**Title:** Ultrasensitive microwave spectroscopy of paramagnetic impurities in sapphire crystals at millikelvin temperatures**Journal:** Physical Review B**Volume:** 88**Issue:** 22**Date:** Dec**Short Title:** Ultrasensitive microwave spectroscopy of paramagnetic impurities in sapphire crystals at millikelvin temperatures**ISSN:** 1098-0121**DOI:** 10.1103/PhysRevB.88.224426**Article Number:** 224426**Accession Number:** WOS:000332166200004

**Abstract:** Progress in the emerging field of engineered quantum systems requires the development of devices that can act as quantum memories. The realization of such devices by doping solid-state cavities with paramagnetic ions imposes a tradeoff between ion concentration and cavity coherence time. Here, we investigate an alternative approach involving interactions between photons and naturally occurring impurity ions in ultrapure crystalline microwave cavities exhibiting exceptionally high quality factors. We implement a hybrid whispering gallery/electron spin resonance method to perform rigorous spectroscopy of an undoped single-crystal sapphire resonator over the frequency range 8-19 GHz, and at external applied DC magnetic fields up to 0.9 T. Measurements of high-purity sapphire cooled close to 100 mK reveal the presence of Fe<sup>3+</sup>, Cr<sup>3+</sup>, and V<sup>2+</sup> impurities. A host of electron transitions are measured and identified, including the two-photon classically forbidden quadrupole transition ( $\Delta m(s) = 2$ ) for Fe<sup>3+</sup>, as well as hyperfine transitions of V<sup>2+</sup>.

**Notes:** Farr, Warrick G. Creedon, Daniel L. Goryachev, Maxim Benmessai, Karim Tobar, Michael E.

**URL:** <Go to ISI>://WOS:000332166200004

**Reference Type: Journal Article****Record Number:** 69**Author:** Fatmi, M. Ghebouli, B. Ghebouli, M. A. Chihi, T. Ouakdi, E. Heiba, Z. A.**Year:** 2013**Title:** Study of Precipitation Kinetics in Al-3.7 wt% Cu Alloy during Non-Isothermal and Isothermal Ageing**Journal:** Chinese Journal of Physics**Volume:** 51**Issue:** 5**Pages:** 1019-1032**Date:** Oct**Short Title:** Study of Precipitation Kinetics in Al-3.7 wt% Cu Alloy during Non-Isothermal and Isothermal Ageing**ISSN:** 0577-9073**DOI:** 10.6122/cjp.51.1019**Accession Number:** WOS:000332073900013

**Abstract:** Studies of transformation kinetics during ageing of Al-3.7 wt% Cu were performed by use of X-ray diffraction and Differential Scanning Calorimetry (DSC) methods at different heating rates. Both non-isothermal and isothermal ageing processes were conducted in order to determine the isothermal transformation kinetics based on the JMA (Johnson-Mehl-Avrami) equation and the Avrami exponent,  $n$ , whose mean is similar to 1.78. The frequency factor calculated by the isothermal treatment is similar to  $1.65 \times 10^{(6)} \text{ s}^{-1}$ . The activation energy of discontinuous precipitation has been calculated according to the three models proposed by Kissinger, Ozawa, and Boswell.

**Notes:** Fatmi, Messaoud Ghebouli, Brahim Ghebouli, Mohamed Amine Chihi, Tayeb Ouakdi, El-Hadj Heiba, Zein Abidin

**URL:** <Go to ISI>://WOS:000332073900013

**Reference Type: Journal Article****Record Number:** 70**Author:** Fellahi, O. Sarma, R. K. Das, M. R. Saikia, R. Marcon, L. Coffinier, Y. Hadjersi, T. Maamache, M. Boukherroub, R.**Year:** 2013**Title:** The antimicrobial effect of silicon nanowires decorated with silver and copper nanoparticles**Journal:** Nanotechnology**Volume:** 24**Issue:** 49**Date:** Dec**Short Title:** The antimicrobial effect of silicon nanowires decorated with silver and copper nanoparticles**ISSN:** 0957-4484**DOI:** 10.1088/0957-4484/24/49/495101**Article Number:** 495101**Accession Number:** WOS:000328215300001

**Abstract:** The paper reports on the preparation and antibacterial activity of silicon nanowire (SiNW) substrates coated with Ag or Cu nanoparticles (NPs) against *Escherichia coli* (*E. coli*) bacteria. The substrates are easily prepared using the metal-assisted chemical etching of crystalline silicon in hydrofluoric acid/silver nitrate (HF/AgNO<sub>3</sub>) aqueous solution. Decoration of the SiNWs with metal NPs is achieved by simple immersion in HF aqueous solutions containing silver or copper salts. The SiNWs coated with Ag NPs are biocompatible with human lung adenocarcinoma epithelial cell line A549 while possessing strong antibacterial properties to *E. coli*. In contrast, the SiNWs decorated with Cu NPs showed higher cytotoxicity and slightly lower antibacterial activity. Moreover, it was also observed that leakage of sugars and proteins from the cell wall of *E. coli* in interaction with SiNWs decorated with Ag NPs is higher compared to SiNWs modified with Cu NPs.

**Notes:** Fellahi, Ouarda Sarma, Rupak K. Das, Manash R. Saikia, Ratul Marcon, Lionel Coffinier, Yannick Hadjersi, Toufik Maamache, Mustapha Boukherroub, Rabah

**URL:** <Go to ISI>://WOS:000328215300001

**Reference Type: Journal Article****Record Number:** 71**Author:** Ferkous, N. Bounames, A. Maamache, M.**Year:** 2013**Title:** Time-dependent Schrodinger equation with non-central potentials**Journal:** Physica Scripta**Volume:** 88**Issue:** 3**Date:** Sep**Short Title:** Time-dependent Schrodinger equation with non-central potentials**ISSN:** 0031-8949**DOI:** 10.1088/0031-8949/88/03/035001**Article Number:** 035001**Accession Number:** WOS:000325198700001

**Abstract:** Using the Lewis-Riesenfeld theory, we show that the time-dependent Schrodinger equation for non-central potentials with an arbitrary angular function  $U(\theta)$  is analytically solvable. As a special case, we derive the exact solution for the double ring-shaped generalized non-central oscillator with time-dependent mass and frequency. The time-independent case, studied in the literature, is recovered.

**Notes:** Ferkous, N. Bounames, A. Maamache, M.**URL:** <Go to ISI>://WOS:000325198700001

**Reference Type: Journal Article****Record Number:** 72**Author:** Ferria, K. Griani, L. Laouar, N.**Year:** 2013**Title:** Acousto-optic method for quality control of water mixed with miscible liquids**Journal:** Optics and Laser Technology**Volume:** 49**Pages:** 51-55**Date:** Jul**Short Title:** Acousto-optic method for quality control of water mixed with miscible liquids**ISSN:** 0030-3992**DOI:** 10.1016/j.optlastec.2012.11.034**Accession Number:** WOS:000318578300009

**Abstract:** In this work, an acousto-optic (AO) method was developed to control the quality of water mixed with miscible liquids such as acetone and ethanol. A collimated laser beam passing through a transparent binary solution was diffracted by acoustic waves. It was proved that location of diffraction orders in a diffraction pattern was dependent on velocity of ultrasound while the velocity itself was determined by concentration of the solutions. We also found that acoustic impedances of the binary solutions have an influence on the diffraction efficiency. Finally, we noticed that measured dependences of the velocities and the diffraction efficiencies on the liquid concentrations were non-linear and symmetrical with respect to each other. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Ferria, Kouider Griani, Lazhar Laouar, Naamane**URL:** <Go to ISI>://WOS:000318578300009

**Reference Type: Journal Article****Record Number:** 73**Author:** Ferria, K. Merouani, M. Laouar, N. Bencheikh, A.**Year:** 2013**Title:** Acousto-Optical Technique used to Measure the Acoustic Reflection Coefficient of Some Materials**Journal:** Optical Measurement Techniques for Structures & Systems2 (Optimes2012)**Pages:** 145-154**Short Title:** Acousto-Optical Technique used to Measure the Acoustic Reflection Coefficient of Some Materials**Accession Number:** WOS:000319343800014

**Abstract:** The aim of this work is to present an acousto-optical (AO) approach to measure the acoustic reflection coefficient of some materials which are not porous and present a flat shape. The method consists of coupling a laser beam with two ultrasonic waves in an AO cell which is filled by distilled water. The first acoustic beam is incident on a flat sample, placed in the bottom of the cell, whereas the second one is reflected by the same sample. This double AO interaction leads to obtain two superposed diffraction patterns. Consequently an interference phenomenon can be observed. Exploiting the interference fringes contrast obtained by the overlapping of the diffraction orders, it was possible to determine the reflection coefficient of three sorts of metal sheets and a plate made of glass, in the frequency range of MHz. All the experimental results are presented and discussed. A practical relation between fringes contrast and the reflection coefficient has been obtained.

**Notes:** Ferria, K. Merouani, M. Laouar, N. Bencheikh, A. Dirckx, J Buytaert, J 5th International Conference on Optical Measurement Techniques for Structures and Systems2 (OPTIMESS) Apr 04-05, 2012 Antwerp, BELGIUM Fwo, bimef 978-90-423-0419-2

**URL:** <Go to ISI>://WOS:000319343800014

**Reference Type: Journal Article****Record Number:** 74**Author:** Flilissa, A. Meleard, P. Darchen, A.**Year:** 2013**Title:** Selective removal of dodecyl sulfate during electrolysis with aluminum electrodes**Journal:** Desalination and Water Treatment**Volume:** 51**Issue:** 34-36**Pages:** 6719-6728**Date:** Oct**Short Title:** Selective removal of dodecyl sulfate during electrolysis with aluminum electrodes**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2013.769915**Accession Number:** WOS:000326371800030

**Abstract:** Electrolyses with aluminum electrodes were performed to control the removal of dodecyl sulfate (DS) from aqueous solutions. When electrolyses were conducted in 0.1M HCl solution and in the presence of 6.9-13.8mmolL<sup>(-1)</sup> of DS the pH increased and electrogenerated Al<sup>3+</sup> ions and DS anion led to the formation of a precipitate after an induction period. The abatement of DS anion was about 80% at a concentration of 13.8mmolL<sup>(-1)</sup>, when the molar ratio DS/Al was near 3. For electrolyses carried out in 0.1M NaCl solution, the pH increased from 5 to 9.4 and an alumina precipitate was formed. The removal of DS anion was less efficient than in acid solution. The abatement did not depend upon the DS concentration in the range 6.9-13.8mmolL<sup>(-1)</sup> and it slightly increased until 20% with the electrolysis time. These results were in agreement with a DS anion adsorption on electro-generated alumina which was investigated. The adsorption capacity was found at 0.865mmolg<sup>(-1)</sup> of alumina. This selective removal of DS anion, thanks to a pH control, was applied in the recycling of a deinking wastewater.

**Notes:** Flilissa, Abdenacer Meleard, Philippe Darchen, Andre**URL:** <Go to ISI>://WOS:000326371800030

**Reference Type: Journal Article****Record Number:** 75**Author:** Ghadbane, M. Harzallah, D. Ibn Laribi, A. Jaouadi, B. Belhadj, H.**Year:** 2013**Title:** Purification and Biochemical Characterization of a Highly Thermostable Bacteriocin Isolated from *Brevibacillus brevis* Strain GM100**Journal:** Bioscience Biotechnology and Biochemistry**Volume:** 77**Issue:** 1**Pages:** 151-160**Date:** Jan**Short Title:** Purification and Biochemical Characterization of a Highly Thermostable Bacteriocin Isolated from *Brevibacillus brevis* Strain GM100**ISSN:** 0916-8451**DOI:** 10.1271/bbb.120681**Accession Number:** WOS:000316164800022

**Abstract:** A bacteriocin-producing (11,000 AU mL<sup>-1</sup>) strain was isolated from the rhizosphere of healthy Algerian plants *Ononis angustissima* Lam., and identified as *Brevibacillus brevis* strain GM100. The bacteriocin, called Bac-GM100, was purified to homogeneity from the culture supernatant, and, based on MALDI-TOF/MS analysis, was a monomer protein with a molecular mass of 4375.66 Da. The 21 N-terminal residues of Bac-GM100 displayed 65% homology with thurincin H from *Bacillus thuringiensis*. Bac-GM100 was extremely heat-stable (20 min at 120 degrees C), and was stable within a pH range of 3-10. It proved sensitive to various proteases, which demonstrated its protein nature. It was also found to display a bactericidal mode of action against gram-negative (*Salmonella enteric* ATCC 43972, *Pseudomonas aeruginosa* ATCC 49189, and *Agrobacterium tumefaciens* C58) and gram-positive (*Enterococcus faecalis* ENSAIA 631 and *Staphylococcus aureus* ATCC 6538) bacteria, and a fungistatic mode of action against the pathogenic fungus *Candida tropicalis* R2 CIP 203.

**Notes:** Ghadbane, Mouloud Harzallah, Daoud Ibn Laribi, Atef Jaouadi, Bassem Belhadj, Hani**URL:** <Go to ISI>://WOS:000316164800022

**Reference Type: Journal Article****Record Number:** 76**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Chihi, T. Heiba, Z. Boucetta, S.**Year:** 2013**Title:** Structural, Elastic, and Electronic Properties of  $\text{CuCl}_x\text{Br}_{(1-x)}$  Compounds under Pressure**Journal:** Chinese Journal of Physics**Volume:** 51**Issue:** 4**Pages:** 738-751**Date:** Aug**Short Title:** Structural, Elastic, and Electronic Properties of  $\text{CuCl}_x\text{Br}_{(1-x)}$  Compounds under Pressure**ISSN:** 0577-9073**DOI:** 10.6122/cjp.51.738**Accession Number:** WOS:000330611900010

**Abstract:** We have applied the pseudo-potential plane wave (PP-PW) method to study the structural, elastic, and electronic properties of  $\text{CuCl}_x\text{Br}_{(1-x)}$  under high pressure using the generalized gradient approximation (GGA). The effect of Cl substitutional impurities ( $x$ ) on the lattice parameters for both the GGA and virtual crystal approximation (VCA) approaches were studied. The pressures at which the compounds  $\text{CuCl}_x\text{Br}_{(1-x)}$  undergo a structural phase transition from ZnS type to NaCl type Pt were calculated. The elastic constants at various pressures in the  $0 < x < 1$  composition range were presented. The longitudinal-wave mode speed (V-L) and transverse-wave mode speed (V-T) in  $\text{CuCl}_x\text{Br}_{(1-x)}$  propagating in the [100], [110], and [111] directions at zero pressure for various Cl compositions ( $x$ ) in the range 0-1 were investigated. The band structure and band gap-pressure coefficients are also given. The calculated effective masses of electrons and heavy and light holes in the material under study for different concentrations  $x$  are presented.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Chihi, T. Heiba, Z. Boucetta, S.**URL:** <Go to ISI>://WOS:000330611900010

**Reference Type: Journal Article****Record Number:** 77**Author:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B. Fatmi, M. Ucgun, E.**Year:** 2013**Title:** Ab initio calculation of fundamental properties of  $\text{Ca}(x)\text{Mg}(1-x)\text{A}$  (A=Se and Te) alloys in the rock-salt structure**Journal:** Physica E-Low-Dimensional Systems & Nanostructures**Volume:** 49**Pages:** 83-91**Date:** Mar**Short Title:** Ab initio calculation of fundamental properties of  $\text{Ca}(x)\text{Mg}(1-x)\text{A}$  (A=Se and Te) alloys in the rock-salt structure**ISSN:** 1386-9477**DOI:** 10.1016/j.physe.2013.01.022**Accession Number:** WOS:000318203000014

**Abstract:** We employed the density-functional perturbation theory (DFPT) within the generalized gradient approximation (GGA), the local density approximation (LDA) and the virtual-crystal approximation (VCA) to study the effect of composition on the structure, stability, energy gaps, electron effective mass, the dynamic effective charge, optical and acoustical phonon frequencies and static and high dielectric constants of the rock-salt  $\text{Ca}_x\text{Mg}_{1-x}\text{Se}$  and  $\text{Ca}_x\text{Mg}_{1-x}\text{Te}$  alloys. The computed equilibrium lattice constant and bulk modulus show an important deviation from the linear concentration. From the Voigt-Reuss-Hill approximation,  $\text{Ca}_x\text{Mg}_{1-x}\text{Se}$  and  $\text{Ca}_x\text{Mg}_{1-x}\text{Te}$  present lower stiffness and lateral expansion. For Ca content ranging between 0.25 and 0.75, the elastic constants, energy gaps, electron effective mass and dynamic effective charge are predictions. The elastic constants and computed phonon dispersion curves indicate that these alloys are mechanically stable. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Ghebouli, M. A. Choutri, H. Bouarissa, N. Ghebouli, B. Fatmi, M. Ucgun, E.**URL:** <Go to ISI>://WOS:000318203000014

**Reference Type: Journal Article****Record Number:** 78**Author:** Gomez, I. Foudi, N. Longrois, D. Norel, X.**Year:** 2013**Title:** The role of prostaglandin E-2 in human vascular inflammation**Journal:** Prostaglandins Leukotrienes and Essential Fatty Acids**Volume:** 89**Issue:** 2-3**Pages:** 55-63**Date:** Aug**Short Title:** The role of prostaglandin E-2 in human vascular inflammation**ISSN:** 0952-3278**DOI:** 10.1016/j.plefa.2013.04.004**Accession Number:** WOS:000322939500001

**Abstract:** Prostaglandins (PG) are the product of a cascade of enzymes such as cyclooxygenases and PG synthases. Among PG, PGE(2) is produced by 3 isoforms of PGE synthase (PGES) and through activation of its cognate receptors (EP1-4), this PG is involved in the pathophysiology of vascular diseases. Some anti-inflammatory drugs (e.g. glucocorticoids, nonsteroidal anti-inflammatory drugs) interfere with its metabolism or effects. Vascular cells can initiate many of the responses associated with inflammation. In human vascular tissue, PGE(2) is involved in many physiological processes, such as increasing vascular permeability, cell proliferation, cell migration and control of vascular smooth muscle tone. PGE(2) has been shown to contribute to the pathogenesis of atherosclerosis, abdominal aortic aneurysm but also in physiologic/adaptive processes such as angiogenesis. Understanding the roles of PGE(2) and its cognate receptors in vascular diseases could help to identify diagnostic and prognostic biomarkers. In addition, from these recent studies new promising therapeutic approaches like mPGES-1 inhibition and/or EP4-antagonism should be investigated. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Gomez, I. Foudi, N. Longrois, D. Norel, X.**URL:** <Go to ISI>://WOS:000322939500001

**Reference Type: Journal Article****Record Number:** 79**Author:** Guechi, N. Bouhemadou, A. Guechi, A. Reffas, M. Louail, L. Bourzami, A. Chegaar, M. Bin-Omran, S.**Year:** 2013**Title:** First-principles prediction of the structural, elastic, electronic and optical properties of the Zintl phases  $MIn_2P_2$  ( $M = Ca, Sr$ )**Journal:** Journal of Alloys and Compounds**Volume:** 577**Pages:** 587-599**Date:** Nov**Short Title:** First-principles prediction of the structural, elastic, electronic and optical properties of the Zintl phases  $MIn_2P_2$  ( $M = Ca, Sr$ )**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2013.07.003**Accession Number:** WOS:000324082800097

**Abstract:** We have performed a detailed theoretical study of the structural, elastic, electronic and optical properties of two newly synthesized Zintl phases  $CaIn_2P_2$  and  $SrIn_2P_2$  by means of first-principles calculations based on density functional theory within the generalized gradient approximation of Wu and Cohen. The optimized lattice parameters, including the lattice constants and internal coordinates, are in good agreement with the existing experimental measurements. The relative changes of the structural parameters versus hydrostatic pressure have been investigated. The elastic properties of  $MIn_2P_2$  have been examined by calculating all independent single-crystal elastic constants  $C_{ij}$  using the static finite strain technique, and the polycrystalline isotropic elastic moduli, namely bulk modulus, shear modulus, Young's modulus and Poisson's coefficient, via the Voigt-Reuss-Hill approximations. The elastic wave velocities along some crystalline directions have been evaluated. The mechanical stability of the considered materials has been examined on the light of the pressure dependence of the elastic constants. The elastic anisotropy of the two phases has been studied using three different methods. The electronic properties have been studied throughout the calculations of the band structure, density of states, charge density distributions, charge transfers, and charge-carriers masses. These two materials turn out to be narrow gap semiconductors. Finally, we have predicted the basic optical properties, such as the dielectric function, refractive index, extinction coefficient, reflectivity coefficient, absorption coefficient and loss function for polarized incident radiation with electrical vector  $E$  parallel to the crystalline axes  $a$  and  $c$ . A considerable anisotropy is observed in the frequency dependent optical spectra. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Guechi, N. Bouhemadou, A. Guechi, A. Reffas, M. Louail, L. Bourzami, A. Chegaar, M. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000324082800097

**Reference Type: Journal Article****Record Number:** 80**Author:** Gueddim, A. Zerroug, S. Bouarissa, N.**Year:** 2013**Title:** Optical characteristics of ZnTe<sub>1-x</sub>O<sub>x</sub> alloys from first-principles calculations**Journal:** Journal of Luminescence**Volume:** 135**Pages:** 243-247**Date:** Mar**Short Title:** Optical characteristics of ZnTe<sub>1-x</sub>O<sub>x</sub> alloys from first-principles calculations**ISSN:** 0022-2313**DOI:** 10.1016/j.jlumin.2012.10.004**Accession Number:** WOS:000316238400040

**Abstract:** We report the optical and dielectric properties of ZnTe<sub>1-x</sub>O<sub>x</sub> ternary alloys in the zinc-blende structure. The calculations are performed using the full potential linearized augmented plane wave (FP-LAPW) method within the density functional theory (DFT) in the generalized gradient approximation (GGA) of Engel-Vosko. Features such as optical response function, spectral dependence of refractive index and the reflectivity spectrum as well as their dependence on oxygen concentration have been studied. The agreement between our results and data available in the literature is reasonably good. The present study spans very important technological visible/ultraviolet spectral region. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Gueddim, A. Zerroug, S. Bouarissa, N.**URL:** <Go to ISI>://WOS:000316238400040

**Reference Type: Journal Article****Record Number:** 81**Author:** Guerbous, L. Seraiche, M. Krachni, O.**Year:** 2013**Title:** Photoluminescence and electron-vibrational interaction in 4f(n-1)5d states of Ce<sup>3+</sup> or Pr<sup>3+</sup> ions doped LnBO(3) (Ln=Lu, Y, La) orthoborates materials**Journal:** Journal of Luminescence**Volume:** 134**Pages:** 165-173**Date:** Feb**Short Title:** Photoluminescence and electron-vibrational interaction in 4f(n-1)5d states of Ce<sup>3+</sup> or Pr<sup>3+</sup> ions doped LnBO(3) (Ln=Lu, Y, La) orthoborates materials**ISSN:** 0022-2313**DOI:** 10.1016/j.jlumin.2012.08.053**Accession Number:** WOS:000313393300027

**Abstract:** Calcite, vaterite and aragonite type rare earth LnBO(3) (Ln=Lu, Y, La) orthoborate powders, doped with 1% cerium or praseodymium, were prepared by the classical solid state reaction method. The structure and the morphology of these powder materials were checked by X-ray Diffraction, Fourier Transform Infra Red Spectroscopy (FTIR) and Scanning Electron Microscopy. Room temperature excitation and emission spectra of four compounds: LuBO<sub>3</sub> with calcite and vaterite structure, YBO<sub>3</sub> (vaterite type structure) and LaBO<sub>3</sub> with aragonite, doped with 1% cerium or praseodymium ions, have been measured and investigated. The effect of Ce<sup>3+</sup> and Pr<sup>3+</sup> crystalline environment in these compounds on the position of their 5d (4f5d) levels has been discussed. This work is also devoted to the problem of the electron-vibrational interaction (EVI) in 4f-5d optical transitions in orthoborate materials. The emission and excitation 4f-5d transitions resulted in broad vibronic bands whose shape functions were described and found. The main EVI parameters, such as the Huang-Rhys factor, effective phonon energy, and zero-phonon line position, were estimated. These values are checked by modeling the Ce<sup>3+</sup> 5d-4f and Pr<sup>3+</sup> 4f5d-4f(2) emission lines shapes, in which good agreement with experimental spectra confirms validity of the performed analysis. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Guerbous, L. Seraiche, M. Krachni, O.**URL:** <Go to ISI>://WOS:000313393300027

**Reference Type: Journal Article****Record Number:** 82**Author:** Habelhames, F. Lamiri, L. Zerguine, W. Nessark, B.**Year:** 2013**Title:** Improvement of photoelectrochemical and optical characteristics of MEH-PPV using titanium dioxide nanoparticles**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 3**Pages:** 727-731**Date:** Jun**Short Title:** Improvement of photoelectrochemical and optical characteristics of MEH-PPV using titanium dioxide nanoparticles**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2012.12.015**Accession Number:** WOS:000319641500023

**Abstract:** The use of bulk heterojunctions can increase the efficiency of exciton dissociation in polymer-based photovoltaics. We prepared and characterized bulk heterojunctions of poly[2-methoxy-5-(2'-ethylhexyloxy)-p-phenylenevinylene] (MEH-PPV) and titanium dioxide nanoparticles deposited by spin coating on indium tin oxide substrates. The surface morphology of the MEH-PPV+TiO<sub>2</sub> composite films revealed that addition of TiO<sub>2</sub> nanoparticles increased the film roughness. The effect of TiO<sub>2</sub> nanoparticles on the photoelectrochemical and optical characteristics of MEH-PPV polymer heterojunctions was studied. Addition of TiO<sub>2</sub> nanoparticles improved the absorbance of MEH-PPV composite films. Moreover, the photocurrent of the composite devices increased with the TiO<sub>2</sub> nanoparticle concentration. These observations provide an insight into new approaches to improve the light collection efficiency in photoconductive polymers. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Habelhames, Farid Lamiri, Leila Zerguine, Wided Nessark, Belkacem**URL:** <Go to ISI>://WOS:000319641500023

**Reference Type: Journal Article****Record Number:** 83**Author:** Habelhames, F. Wided, Z. Lamiri, L. Nessark, B. Derbal-Habak, H.**Year:** 2013**Title:** Morphology and Photoelectrochemical Characterization of MEH-PPV/PCBM Composite Film Doped with TiO<sub>2</sub> Nanoparticles**Journal:** Acta Metallurgica Sinica-English Letters**Volume:** 26**Issue:** 4**Pages:** 373-377**Date:** Aug**Short Title:** Morphology and Photoelectrochemical Characterization of MEH-PPV/PCBM Composite Film Doped with TiO<sub>2</sub> Nanoparticles**ISSN:** 1006-7191**DOI:** 10.1007/S40195-012-0269-z**Accession Number:** WOS:000322429300003

**Abstract:** Poly[2-methoxy-5-(20-ethylhexyloxy)-p-phenylenevinylene] (MEH-PPV), [6,6]-phenyl-C61-butyric acid methyl ester (PCBM) and titanium dioxide (TiO<sub>2</sub>) nanoparticles (n-type) were dissolved, mixed and deposited by physical methods (spin-coating) on indium tin-oxide (ITO) substrate. The incorporation of the titanium dioxide nanoparticles changed the morphology and increased the roughness of polymers film (MEH-PPV/PCBM), and the photocurrent density of the composite (MEH-PPV/PCBM + n-TiO<sub>2</sub>) was higher than that of single MEH-PPV/PCBM film. The study showed that the presence of n-TiO<sub>2</sub> particles in the polymeric film improves the photoelectrochemical properties of MEH-PPV/PCBM composite.

**Notes:** Habelhames, Farid Wided, Zerguine Lamiri, Leila Nessark, Belkacem Derbal-Habak, Hassina

**URL:** <Go to ISI>://WOS:000322429300003

**Reference Type: Journal Article****Record Number:** 84**Author:** Hachana, O. Hemsas, K. E. Tina, G. M. Ventura, C.**Year:** 2013**Title:** Comparison of different metaheuristic algorithms for parameter identification of photovoltaic cell/module**Journal:** Journal of Renewable and Sustainable Energy**Volume:** 5**Issue:** 5**Date:** Sep**Short Title:** Comparison of different metaheuristic algorithms for parameter identification of photovoltaic cell/module**ISSN:** 1941-7012**DOI:** 10.1063/1.4822054**Article Number:** 053122**Accession Number:** WOS:000326641300036

**Abstract:** The estimation of the photovoltaic (PV) cell/module model parameters could lead to accomplish a diagnostic tool and to estimate several factors which affect the health state of a PV generator. In this context, it is crucial to look for an extraction technique which performs this evaluation precisely and quickly. Due to the nonlinear and implicit nature of the PV cell/module, significant computational effort is required to obtain all the parameters; therefore, in this context different metaheuristic algorithms are proposed. For the identification of the meaningful parameters of PV cell/module models, illuminated current-voltage (I-V) curves, under real conditions of PV cells temperature and incident irradiance, are employed. Considering several PV cell/module models, the goodness of the proposed algorithms is analyzed by means of statistical errors, convergence speed, and unknown parameters precision. Then these algorithms are tested and validated using a daily set of measured I-V curves, specifically for each one both the whole set of measured data and a reduced set around the maximum power point are used. (C) 2013 AIP Publishing LLC.

**Notes:** Hachana, O. Hemsas, K. E. Tina, G. M. Ventura, C.**URL:** <Go to ISI>://WOS:000326641300036

**Reference Type: Journal Article****Record Number:** 85**Author:** Hachouf, N. Kharfi, F. Boucenna, A.**Year:** 2013**Title:** Characterization and MCNP simulation of neutron energy spectrum shift after transmission through strong absorbing materials and its impact on tomography reconstructed image (vol 70, pg 2355, 2012)**Journal:** Applied Radiation and Isotopes**Volume:** 71**Issue:** 1**Pages:** 72-72**Date:** Jan**Short Title:** Characterization and MCNP simulation of neutron energy spectrum shift after transmission through strong absorbing materials and its impact on tomography reconstructed image (vol 70, pg 2355, 2012)**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2012.08.006**Accession Number:** WOS:000312177500014**Notes:** Hachouf, N. Kharfi, F. Boucenna, A.**URL:** <Go to ISI>://WOS:000312177500014

**Reference Type: Journal Article****Record Number:** 86**Author:** Hacine-Gharbi, A. Deriche, M. Ravier, P. Harba, R. Mohamadi, T.**Year:** 2013**Title:** A new histogram-based estimation technique of entropy and mutual information using mean squared error minimization**Journal:** Computers & Electrical Engineering**Volume:** 39**Issue:** 3**Pages:** 918-933**Date:** Apr**Short Title:** A new histogram-based estimation technique of entropy and mutual information using mean squared error minimization**ISSN:** 0045-7906**DOI:** 10.1016/j.compeleceng.2013.02.010**Accession Number:** WOS:000321536300018

**Abstract:** Mutual Information (MI) has extensively been used as a measure of similarity or dependence between random variables (or parameters) in different signal and image processing applications. However, MI estimation techniques are known to exhibit a large bias, a high Mean Squared Error (MSE), and can computationally be very costly. In order to overcome these drawbacks, we propose here a novel fast and low MSE histogram-based estimation technique for the computation of entropy and the mutual information. By minimizing the MSE, the estimation avoids the error accumulation problem of traditional methods. We derive an expression for the optimal number of bins to estimate the MI for both continuous and discrete random variables. Experimental results from a speech recognition problem and a computer aided diagnosis problem show the power of the proposed approach in estimating the optimal number of selected features with enhanced classification results compared to existing approaches. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Hacine-Gharbi, A. Deriche, M. Ravier, P. Harba, R. Mohamadi, T. Si**URL:** <Go to ISI>://WOS:000321536300018

**Reference Type: Journal Article****Record Number:** 87**Author:** Haddou, A. Khachai, H. Khenata, R. Litimein, F. Bouhemadou, A. Murtaza, G. Alahmed, Z. A. Bin-Omran, S. Abbar, B.**Year:** 2013**Title:** Elastic, optoelectronic, and thermal properties of cubic CSi<sub>2</sub>N<sub>4</sub>: an ab initio study**Journal:** Journal of Materials Science**Volume:** 48**Issue:** 23**Pages:** 8235-8243**Date:** Dec**Short Title:** Elastic, optoelectronic, and thermal properties of cubic CSi<sub>2</sub>N<sub>4</sub>: an ab initio study**ISSN:** 0022-2461**DOI:** 10.1007/s10853-013-7636-7**Accession Number:** WOS:000324111000020

**Abstract:** The mechanical, optoelectronic, and thermodynamic properties of carbon silicon nitride spinel compound have been investigated using density functional theory. The exchange-correlation potential was treated with the local density approximation (LDA) and the generalized gradient approximation of Perdew-Burke and Ernzerhof (PBE-GGA). In addition, the Engel-Vosko generalized gradient approximation (EV-GGA) and the modified Becke-Johnson potential (TB-mBJ) were also applied to improve the electronic band structure calculations. The ground state properties, including lattice constants and bulk modulus, are in fairly good agreement with the available theoretical data. The elastic constants, Young's modulus, shear modulus, and Poisson's ratio have been determined by using the variation of the total energy with strain. From the elastic parameters, it is inferred that this compound is brittle in nature. The results of the electronic band structure show that CSi<sub>2</sub>N<sub>4</sub> has a direct energy band gap (I"-I"). The TB-mBJ approximation yields larger fundamental band gaps compared to those of LDA, PBE-GGA, and EV-GGA. In addition, we have calculated the optical properties, namely, the real and the imaginary parts of the dielectric function, refractive index, extinction coefficient, reflectivity, and energy loss function for radiation up to 40.0 eV. Using the quasi-harmonic Debye model which considers the phononic effects, the effect of pressure P and temperature T on the lattice parameter, bulk modulus, thermal expansion coefficient, Debye temperature, and the heat capacity for this compound were investigated for the first time.

**Notes:** Haddou, A. Khachai, H. Khenata, R. Litimein, F. Bouhemadou, A. Murtaza, G. Alahmed, Z. A. Bin-Omran, S. Abbar, B.**URL:** <Go to ISI>://WOS:000324111000020

**Reference Type: Journal Article****Record Number:** 88**Author:** Hadji, R. Boumazbeur, A. Limani, Y. Baghem, M. Chouabi, A. Demdoun, A.**Year:** 2013**Title:** Geologic, topographic and climatic controls in landslide hazard assessment using GIS modeling: A case study of Souk Ahras region, NE Algeria**Journal:** Quaternary International**Volume:** 302**Pages:** 224-237**Date:** Jul**Short Title:** Geologic, topographic and climatic controls in landslide hazard assessment using GIS modeling: A case study of Souk Ahras region, NE Algeria**ISSN:** 1040-6182**DOI:** 10.1016/j.quaint.2012.11.027**Accession Number:** WOS:000321537900017

**Abstract:** Landslides are the most common hazard in mountainous regions of northeast Algeria. In this study, landslide hazard zonation of Souk Ahras province was carried out using a Raster-based GIS and statistical processing. Landslide locations were defined from interpretation of aerial photographs and field surveys. Rotational, planar and complex landslides were identified. To reveal the controlling factors of landslides, a temporal distribution of 603 recognized landslides (1981-2011) is compared with the monthly precipitation variation, indicating a strong correlation between precipitation and landslide occurrence. The correlation between landslide and lithology, slope angle, and elevation shows the same results. Tabular data, maps and satellite images were collected, processed, and constructed into a spatial database in a GIS platform. The factors that influence landslide occurrence, such as slope angle, slope exposition and elevation were derived from the DEM; Lithology, soil deposits and faults were digitalized from the geologic maps; roads, streams and timber were extracted from Landsat image; precipitation was krigged from pluviometric measurement dataset. Different classes of thematic layers were assigned. A corresponding rating value as attribute information and an attribute map was generated for each data layer in the GIS. Landslide hazard areas were assessed and mapped using the landslide occurrence and permanent factor maps, by applying a probabilistic method with a logistic regression approach. The results of the analysis were verified using landslides location map, compared with the probability model. The resulting map can be used to mitigate this hazard, and to plan land use and urbanization. (c) 2012 Elsevier Ltd and INQUA. All rights reserved.

**Notes:** Hadji, Riheb Boumazbeur, Abd Errahmane Limani, Yacine Baghem, Mustapha Chouabi, Abd el Madjid Demdoun, Abdeslem

**URL:** <Go to ISI>://WOS:000321537900017

**Reference Type: Journal Article****Record Number:** 89**Author:** Hadji, S. Gaubert, J. P. Krim, F.**Year:** 2013**Title:** Maximum Power Point Tracking (MPPT) for Photovoltaic systems using open circuit voltage and short circuit current**Journal:** 2013 3d International Conference on Systems and Control (Icsc)**Short Title:** Maximum Power Point Tracking (MPPT) for Photovoltaic systems using open circuit voltage and short circuit current**Accession Number:** WOS:000351821600015

**Abstract:** This paper deals with a new Maximum Power Point Tracking (MPPT) method for Photovoltaic (PV) systems based on Genetic Algorithms (GAs). The proposed algorithm can estimate the current ( $I_{mpp}$ ) and voltage ( $V_{mpp}$ ) at maximum power point by measuring the open circuit voltage ( $V_{oc}$ ) and the short circuit current ( $I_{sc}$ ) without knowing the irradiance and the cell temperature. To study this method, Matlab/Simulink is used to implement both the algorithm and PV array model. We also give a comparison with the conventional Perturb and Observe (P&O) and Incremental Conductance (Inc-Cond) methods, we observe the advantages about: - Oscillations around the maximum power point. - Response to a rapid atmospheric changing. In GAs we search for a maximum of fitness function (at MPP) while with P&O and Inc-Cond we search for minimal value power derivation, so we have better stability with AGs method.

**Notes:** Hadji, S. Gaubert, J. -P. Krim, F. Mehdi, D Aitouch, A Quevedo, J 3d International Conference on Systems and Control (ICSC) Oct 29-31, 2013 Algiers, ALGERIA IEEE Control Syst Soc, Univ Sci & Technol Houari Boumediene, Soc Sci Dev & New Technologies 978-1-4799-0275-0

**URL:** <Go to ISI>://WOS:000351821600015

**Reference Type: Journal Article****Record Number:** 90**Author:** Hallal, A. Berdot, T. Dey, P. Bismaths, L. T. Joly, L. Bourzami, A. Bulou, H. Scheurer, F. Djeghloul, F. Urbain, E. Spor, D. Henk, J. Alouani, M. Weber, W.**Year:** 2013**Title:** Electron-Spin Motion as a New Tool to Investigate Ferromagnetic Film Systems: A Few Examples**Journal:** Sensor Letters**Volume:** 11**Issue:** 9**Pages:** 1632-1638**Date:** Sep**Short Title:** Electron-Spin Motion as a New Tool to Investigate Ferromagnetic Film Systems: A Few Examples**ISSN:** 1546-198X**DOI:** 10.1166/sl.2013.3029**Accession Number:** WOS:000331929600013

**Abstract:** When electrons are reflected from a ferromagnetic surface, their spin polarization vector is expected to move. This spin motion, comprising an azimuthal precession by an angle  $\epsilon$  and a polar rotation by an angle  $\phi$  about the magnetization direction of the ferromagnetic film has been studied in spin-polarized electron scattering experiments. As example we present studies of the influence of the lattice relaxation on the electron-spin motion in Fe films grown on Ag(001). The two central observations are: (1) Oscillations with monolayer periodicity of the electron-spin motion angles are observed as a function of the Fe thickness. They are attributed to the oscillatory behavior of the surface-lattice strain that is relaxed at island edges of the incompletely filled top Fe layer. (2) For strongly relaxed thick Fe films a giant spin precession angle of 180 degrees, which is accompanied by a pronounced minimum in the reflected electron intensity, is observed at low kinetic electron energies. Calculations reveal that lattice relaxations during growth of Fe on Ag(001) are responsible for the strong changes of the electron-spin motion angles. In the last paragraph we present first measurements on the spin filtering in ferromagnet/semiconductor Schottky junctions, which serve as a first step to measure the spin motion in transmission geometry in an all-solid state device.

**Notes:** Hallal, A. Berdot, T. Dey, P. Bismaths, L. Tati Joly, L. Bourzami, A. Bulou, H. Scheurer, F. Djeghloul, F. Urbain, E. Spor, D. Henk, J. Alouani, M. Weber, W.**URL:** <Go to ISI>://WOS:000331929600013

**Reference Type: Journal Article****Record Number:** 91**Author:** Hamadou, A. Lamari, S. Thobel, J. L.**Year:** 2013**Title:** Delay time calculation for dual-wavelength quantum cascade lasers**Journal:** Journal of Applied Physics**Volume:** 114**Issue:** 20**Date:** Nov**Short Title:** Delay time calculation for dual-wavelength quantum cascade lasers**ISSN:** 0021-8979**DOI:** 10.1063/1.4829914**Article Number:** 203102**Accession Number:** WOS:000327697600002

**Abstract:** In this paper, we calculate the turn-on delay ( $t_{th}$ ) and buildup ( $\Delta t$ ) times of a midinfrared quantum cascade laser operating simultaneously on two laser lines having a common upper level. The approach is based on the four-level rate equations model describing the variation of the electron number in the states and the photon number present within the cavity. We obtain simple analytical formulae for the turn-on delay and buildup times that determine the delay times and numerically apply our results to both the single and bimode states of a quantum cascade laser, in addition the effects of current injection on  $t_{th}$  and  $\Delta t$  are explored. (C) 2013 AIP Publishing LLC.

**Notes:** Hamadou, A. Lamari, S. Thobel, J. -L.**URL:** <Go to ISI>://WOS:000327697600002

**Reference Type: Journal Article****Record Number:** 92**Author:** Hamadou, A. Thobel, J. L. Lamari, S.**Year:** 2013**Title:** Rate equations analysis of a dual-wavelength quantum cascade laser**Journal:** Optics Communications**Volume:** 305**Pages:** 147-154**Date:** Sep**Short Title:** Rate equations analysis of a dual-wavelength quantum cascade laser**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2013.05.004**Accession Number:** WOS:000328524900025

**Abstract:** Based on a four-level rate equations model, we carry out a detailed analysis of the two modes of a mid-infrared quantum cascade laser operating simultaneously on two laser lines having a common upper level. Analytical solutions are obtained for the steady-states and the stability analysis of these predicts that, depending on the injected current, the device lases on either one of the two modes or on both wavelengths simultaneously. We also show through numerical simulations that the injected current influences significantly the population inversions and photon numbers dynamics trajectory of a two mode laser where the higher the current the shorter the time needed to reach saturation and therefore steady state operation. Crown Copyright (C) 2013 Published by Elsevier B.V. All rights reserved.

**Notes:** Hamadou, A. Thobel, J. -L. Lamari, S.**URL:** <Go to ISI>://WOS:000328524900025

**Reference Type: Journal Article****Record Number:** 93**Author:** Hamouda, A. Sayah, S.**Year:** 2013**Title:** Optimal capacitors sizing in distribution feeders using heuristic search based node stability-indices**Journal:** International Journal of Electrical Power & Energy Systems**Volume:** 46**Pages:** 56-64**Date:** Mar**Short Title:** Optimal capacitors sizing in distribution feeders using heuristic search based node stability-indices**ISSN:** 0142-0615**DOI:** 10.1016/j.ijepes.2012.10.016**Accession Number:** WOS:000314372000008

**Abstract:** A novel approach to size and locate capacitors in distribution feeders is presented in this paper. The proposed heuristic approach is formulated as a maximisation of a single objective function. This objective function includes both power loss reduction and capacitors investment costs. In this method where the capacitor optimal sizes and locations are decoupled, node stability indices are used to suitably select the capacitor probable locations. The capacitor initial sizes are determined while deriving the objective function subject to some constraints. The usually used voltage constraint has been substituted by a new one made on the reactive branch currents for which positive values (over-compensation) are allowed to improve voltage profile as well as the cost and power loss reductions. The developed algorithm has been implemented on several test systems and the obtained results have been compared with those of authors having used fuzzy logic and other heuristic search methods. (c) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Hamouda, Abdellatif Sayah, Samir**URL:** <Go to ISI>://WOS:000314372000008

**Reference Type: Journal Article****Record Number:** 94**Author:** Hichem, H. Djamila, A. Hania, A.**Year:** 2013**Title:** Optical, electrical and photoelectrochemical characterization of electropolymerized poly methylene blue on fluorine doped tin oxide conducting glass**Journal:** Electrochimica Acta**Volume:** 106**Pages:** 69-74**Date:** Sep**Short Title:** Optical, electrical and photoelectrochemical characterization of electropolymerized poly methylene blue on fluorine doped tin oxide conducting glass**ISSN:** 0013-4686**DOI:** 10.1016/j.electacta.2013.04.126**Accession Number:** WOS:000323192400008

**Abstract:** This paper describes the poly methylene bleu (PMB) electrodeposition on fluorine doped tin oxide (FTO) conducting glass and its optical, electrical and photoelectrochemical characterization. The deposited film shows a good electric conductivity which is well confirmed by the low gap value determined optically by UV-vis spectroscopy. Like all polymers the PMB presents an absorption difference in the visible range function of the polarization potential, it is expressed by the strong conjugation at oxidized state but is weakened with leucoform formation at reduced state. The electrochemical behaviour of the film allows us, to confirm the polymerization of the methylene blue (MB), to observe the oxidation and the reduction states of as prepared layer and to locate the energy levels HOMO and LUMO of this polymer. A photocurrent of some  $\mu A$  has been observed when the film is photosensitized with white light source. (c) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Hichem, Haffar Djamila, Abdi Hania, Adnani**URL:** <Go to ISI>://WOS:000323192400008

**Reference Type: Journal Article****Record Number:** 95**Author:** Home, P. D. Galvez, G. G. Malek, R. Hammerby, E. Nikolajsen, A. Andersen, M. F. B. Henriksen, O.**Year:** 2013**Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF STARTING INSULIN DETEMIR IN INSULIN-NAIVE PEOPLE WITH TYPE-2 DIABETES**Journal:** Value in Health**Volume:** 16**Issue:** 3**Pages:** A164-A164**Date:** May**Short Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF STARTING INSULIN DETEMIR IN INSULIN-NAIVE PEOPLE WITH TYPE-2 DIABETES**ISSN:** 1098-3015**Accession Number:** WOS:000318916401348**Notes:** Home, P. D. Galvez, G. G. Malek, R. Hammerby, E. Nikolajsen, A. Andersen, M. F. B. Henriksen, O.**URL:** <Go to ISI>://WOS:000318916401348

**Reference Type: Journal Article****Record Number:** 96**Author:** Home, P. D. Malek, R. Galvez, G. G. Hammerby, E. Nikolajsen, A. Henriksen, O. Andersen, M. F. B.**Year:** 2013**Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM NPH INSULIN TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES**Journal:** Value in Health**Volume:** 16**Issue:** 7**Pages:** A690-A690**Date:** Nov**Short Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM NPH INSULIN TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES**ISSN:** 1098-3015**Accession Number:** WOS:000326247603144**Notes:** Home, P. D. Malek, R. Galvez, G. G. Hammerby, E. Nikolajsen, A. Henriksen, O. Andersen, M. F. B.**URL:** <Go to ISI>://WOS:000326247603144

**Reference Type: Journal Article****Record Number:** 97**Author:** Houamer, S. Popov, Y. V.**Year:** 2013**Title:** Comment on 'Four-body charge transfer processes in proton-helium collisions'**Journal:** Journal of Physics B-Atomic Molecular and Optical Physics**Volume:** 46**Issue:** 2**Date:** Jan**Short Title:** Comment on 'Four-body charge transfer processes in proton-helium collisions'**ISSN:** 0953-4075**DOI:** 10.1088/0953-4075/46/2/028001**Article Number:** 028001**Accession Number:** WOS:000313569900016

**Abstract:** We found, within the plane-wave first Born approximation, that the proton-helium fully differential cross section for transfer excitation agrees well with the experimental one at the proton energy  $E-p = 300$  keV and small scattering angles both in shape and in magnitude. This result is in contradiction with that obtained in Chowdhury et al (2012 J. Phys B: At. Mol. Opt. Phys. 45 035203).

**Notes:** Houamer, S. Popov, Yu V.**URL:** <Go to ISI>://WOS:000313569900016

**Reference Type: Journal Article****Record Number:** 98**Author:** Houcher, B. Ozturk, A. Begag, S. Houcher, Z. Akar, N.**Year:** 2013**Title:** Identification of four common alpha-thalassemia gene deletions among a group with hemoglobinopathies in Setif population, Algeria**Journal:** Pteridines**Volume:** 24**Issue:** 3-4**Pages:** 251-255**Date:** Dec**Short Title:** Identification of four common alpha-thalassemia gene deletions among a group with hemoglobinopathies in Setif population, Algeria**ISSN:** 0933-4807**DOI:** 10.1515/pterid-2013-0034**Accession Number:** WOS:000328893900011

**Abstract:** alpha-Thalassemia (alpha-thal) is one of the most common genetic disorders in the world. It is characterized by the absence or reduced expression of a-globin genes. This study was carried out to evaluate the allelic frequency of alpha-thal defects in a patient for the first time in Setif (Algeria). One hundred and two patients with hemoglobinopathies from Setif region, Algeria, presenting thalassemia were included in this study. Genomic DNA isolation was carried out according to standard methods. For identifying the alpha-thal genotype, investigation of alpha-globin gene deletions (-alpha 3.7, -alpha 4.2, -(MED) and -alpha 20.5) was performed by using multiplex-polymerase chain reaction (PCR). Among the three deletions found, the most mutations were the -alpha 3.7 (10.78%), followed by the -(MED) (5.88%) and -alpha 20.5 (0.98%), whereas the -alpha 4.2 deletion was not observed (0.0%). The allele frequency is 0.054 (11/204) for the 3.7 deletion, 0.029 (6/204) for the MED and 0.005 (1/204) for the 20.5. Molecular heterogeneity of mutations is typical of a-thal in Algeria. Our findings will be valuable and essential for the molecular diagnosis and prevention strategies of hemoglobinopathy gene mutations in the Algerian population.

**Notes:** Houcher, Bakhouch Ozturk, Aysenur Begag, Samia Houcher, Zahira Akar, Nejat**URL:** <Go to ISI>://WOS:000328893900011

**Reference Type: Journal Article****Record Number:** 99**Author:** Hurtado-Nedelec, M. Csillag-Grange, M. J. Boussetta, T. Belambri, S. A. Fay, M. Cassinat, B. Gougerot-Pocidaló, M. A. Dang, P. M. C. El-Benna, J.**Year:** 2013**Title:** Increased reactive oxygen species production and p47phox phosphorylation in neutrophils from myeloproliferative disorders patients with JAK2 (V617F) mutation**Journal:** Haematologica**Volume:** 98**Issue:** 10**Pages:** 1517-1524**Date:** Oct**Short Title:** Increased reactive oxygen species production and p47phox phosphorylation in neutrophils from myeloproliferative disorders patients with JAK2 (V617F) mutation**ISSN:** 0390-6078**DOI:** 10.3324/haematol.2012.082560**Accession Number:** WOS:000328543400010

**Abstract:** Myeloproliferative disorders are associated with increased risk of thrombosis and vascular complications. The pathogenesis of these complications is not completely known. Reactive oxygen species produced by the neutrophil NADPH oxidase could have a role in this process. The aim of this study was to evaluate reactive oxygen species production by neutrophils of myeloproliferative disorder patients. Patients with or without the JAK2 V617F mutation were characterized. Reactive oxygen species production was assessed by chemiluminescence, and phosphorylation of the NADPH oxidase subunit p47phox was analyzed by Western blots. In a comparison of controls and myeloproliferative disorder patients without the JAK2 V617F mutation, reactive oxygen species production by neutrophils from patients with the JAK2 V617F mutation was dramatically increased in non-stimulated and in stimulated conditions. This increase was associated with increased phosphorylation of the p47phox on Ser345 and of the upstream kinase ERK1/2. In neutrophils from healthy donors, JAK2 can be activated by GM-CSF. GM-CSF-induced p47phox phosphorylation and priming of reactive oxygen species production are inhibited by the selective JAK2 inhibitors AG490 and lestaurtinib (CEP-701), supporting a role for JAK2 in the upregulation of NADPH oxidase activation. These findings show an increase in reactive oxygen species production and p47phox phosphorylation in neutrophils from myeloproliferative disorder patients with the JAK2 V617F mutation, and demonstrate that JAK2 is involved in GM-CSF-induced NADPH oxidase hyperactivation. As neutrophil hyperactivation could be implicated in the thrombophilic status of patients with myeloproliferative disorders, aberrant activation of JAK2 V617F, leading to excessive neutrophil reactive oxygen species production might play a role in this setting.

**Notes:** Hurtado-Nedelec, Margarita Csillag-Grange, Marie-Jose Boussetta, Tarek Belambri, Sahra Amel Fay, Michele Cassinat, Bruno Gougerot-Pocidaló, Marie-Anne Dang, Pham My-Chan El-Benna, Jamel

**URL:** <Go to ISI>://WOS:000328543400010

**Reference Type: Journal Article****Record Number:** 100**Author:** Kacem, R. Hemissi, Y. Talbi, S. Bouguatosha, S.**Year:** 2013**Title:** Total polyphenol content and assessment of antioxidant activity of selected medicinal plants**Journal:** Planta Medica**Volume:** 79**Issue:** 13**Pages:** 1215-1215**Date:** Sep**Short Title:** Total polyphenol content and assessment of antioxidant activity of selected medicinal plants**ISSN:** 0032-0943**Accession Number:** WOS:000209339700432**Notes:** Kacem, R. Hemissi, Y. Talbi, S. Bouguatosha, S.**URL:** <Go to ISI>://WOS:000209339700432

**Reference Type: Journal Article****Record Number:** 101**Author:** Karoui, H. Riffault, B. Jeannin, M. Kahoul, A. Gil, O. Ben Amor, M. Tlili, M. M.**Year:** 2013**Title:** Electrochemical scaling of stainless steel in artificial seawater: Role of experimental conditions on CaCO<sub>3</sub> and Mg(OH)<sub>2</sub> formation**Journal:** Desalination**Volume:** 311**Pages:** 234-240**Date:** Feb**Short Title:** Electrochemical scaling of stainless steel in artificial seawater: Role of experimental conditions on CaCO<sub>3</sub> and Mg(OH)<sub>2</sub> formation**ISSN:** 0011-9164**DOI:** 10.1016/j.desal.2012.07.011**Accession Number:** WOS:000315012500028

**Abstract:** In seawater, during the application of cathodic protection, a scale layer forms on the metal surface. As function of its chemical composition and compactness, it can improve the metal protection against corrosion by reducing the oxygen diffusion. The present investigation focuses on the electrochemical scaling of stainless steel in artificial seawater. Formed scales were characterized by X-ray diffraction, Raman spectroscopy and scanning electron microscopy. It was found that the formed scales are mainly CaCO<sub>3</sub> aragonite. The brucite (Mg(OH)<sub>2</sub>) was identified, as a component of the scale layer, only for a high temperature and a more cathodic potential. It was also shown that, unlike other substrates, stainless steel promotes the precipitation of brucite. If the experimental conditions favoured its formation, the scaling process starts with brucite deposition. The growth of CaCO<sub>3</sub> nucleuses, developed on interstice, recovers after brucite layer. (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Karoui, Hela Riffault, Benoit Jeannin, Marc Kahoul, Abdelkarim Gil, Otavio Ben Amor, Mohamed Tlili, Mohamed M.

**URL:** <Go to ISI>://WOS:000315012500028

**Reference Type: Journal Article****Record Number:** 102**Author:** Kessal, A. Rahmani, L. Gaubert, J. P. Mostefai, M.**Year:** 2013**Title:** Power Factor Corrector with a Fast Regulation and Constant Switching Frequency**Journal:** Arabian Journal for Science and Engineering**Volume:** 38**Issue:** 3**Pages:** 651-659**Date:** Mar**Short Title:** Power Factor Corrector with a Fast Regulation and Constant Switching Frequency**ISSN:** 1319-8025**DOI:** 10.1007/s13369-012-0329-8**Accession Number:** WOS:000315033600017

**Abstract:** This paper presents a modelling of power factor correction and digital implementation of different loops of circuit such as the PI controller for voltage loop and the hysteresis controllers for current loop. Three hysteresis control techniques: fixed band, sinusoidal band and variable band are applied and have been verified by simulation. For the experimental part, all cited controllers are applied and performance tests were used to validate the results obtained through simulations using a test bench based on dSPACE DS1104. Results show that the PI controller gives a better steady-state performance under large load disturbance and variation of reference values, whereas the variable band hysteresis control in the current loop gives a low THD of the input current compared to other hysteresis controls.

**Notes:** Kessal, Abdelhalim Rahmani, Lazhar Gaubert, Jean-Paul Mostefai, Mohammed**URL:** <Go to ISI>://WOS:000315033600017

**Reference Type: Journal Article****Record Number:** 103**Author:** Kharchouche, F. Belkhiat, S. Belkhiat, D. E. C.**Year:** 2013**Title:** Non-linear coefficient of BaTiO<sub>3</sub>-doped ZnO varistor**Journal:** Iet Science Measurement & Technology**Volume:** 7**Issue:** 6**Pages:** 326-333**Date:** Nov**Short Title:** Non-linear coefficient of BaTiO<sub>3</sub>-doped ZnO varistor**ISSN:** 1751-8822**DOI:** 10.1049/iet-smt.2012.0022**Accession Number:** WOS:000329736800004

**Abstract:** The effect of additions up to 9.6% wt BaTiO<sub>3</sub> on grain growth and microstructure in ZnO samples sintered at 1300 degrees C has been studied using scanning electron microscopy, energy dispersive X-ray, X-ray diffraction and impedance analyser as techniques. The sample doped with 1.6% wt BaTiO<sub>3</sub>, leads to grain size increasing and forms (Ba<sub>0.1089</sub>Ti<sub>0.931</sub>Zn<sub>2.03</sub> and Ba<sub>0.4</sub>Fe<sub>0.27</sub>Ti<sub>1.1</sub>Zn) solid solutions with ZnO. A homogeneous structure was obtained whereas with further additions 3%wt the structure was inhomogeneous and the solid solutions formed in the first segregate to grain boundaries. Afterwards, an excess of 9.6% wt BaTiO<sub>3</sub> leads to BaTiO<sub>3</sub> phase segregation locating on the surface of the sample and in the grain boundaries near the junctions between matrix grains. Experimental I-V current-voltage characteristics show that BaTiO<sub>3</sub> as additive in ZnO varistors, increases the non-linear coefficient ( $\alpha$ ) and the breakdown voltage. The highest non-linearity was obtained for 9.6% wt BaTiO<sub>3</sub> content with  $\alpha = 121.03$  and  $1.79 \mu A$  in leakage current. The average breakdown voltage per grain boundary ( $V_{gb}$ ) was evaluated in the ranges 1.7-3.46 V/gb and 1.34-2.54 V/gb in agreement with the literature.

**Notes:** Kharchouche, Faycal Belkhiat, Saad Belkhiat, Djamel Eddine Chouaib**URL:** <Go to ISI>://WOS:000329736800004

**Reference Type: Journal Article****Record Number:** 104**Author:** Kharmouche, A.**Year:** 2013**Title:** Magnetic anisotropy factors of vapor deposited CoCr thin films on Si and glass substrates**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 327**Pages:** 91-94**Date:** Feb**Short Title:** Magnetic anisotropy factors of vapor deposited CoCr thin films on Si and glass substrates**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2012.09.015**Accession Number:** WOS:000311219900018

**Abstract:** Series of  $\text{Co}_x\text{Cr}_{1-x}$  thin films have been evaporated under vacuum onto Si (100) and glass substrates. An alternating gradient field magnetometer is used to characterize the static magnetic properties of the samples and Brillouin light scattering is used to study their dynamic magnetic properties. The in-plane easy magnetization axis is found for all samples. Using these results, we computed the first, second and uniaxial magnetic anisotropy factors by several methods. Values of the computed effective magnetic anisotropy factors higher than  $10(6) \text{ erg cm}^{-3}$  have been found. The results are discussed and correlated. (c) 2012 Elsevier B.V. All rights reserved.

**Notes:** Kharmouche, A.**URL:** <Go to ISI>://WOS:000311219900018

**Reference Type: Journal Article****Record Number:** 105**Author:** Kharmouche, A. Djouada, I. Schmerber, G.**Year:** 2013**Title:** Annealing effect on the magnetic properties of evaporated CoCr thin films**Journal:** European Physical Journal-Applied Physics**Volume:** 63**Issue:** 2**Date:** Aug**Short Title:** Annealing effect on the magnetic properties of evaporated CoCr thin films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2013130141**Article Number:** 20303**Accession Number:** WOS:000209378200003

**Abstract:** Series of  $\text{Co}_x\text{Cr}_{(1-x)}$  thin films have been evaporated under vacuum onto monocrystalline silicon substrate,  $x$  being atomic percent of cobalt. The thickness ranges from 17 to 220 nm, values measured by Rutherford backscattering spectrometry. The samples have been annealed under vacuum for one hour at 700 degrees C. The as deposited films show a hexagonal close packed (hcp) structure while the annealed films show both hexagonal close packed and face centered cubic (fcc) structures. While the as deposited films are under a compressive stress, the annealed films, on the contrary, are under a tensile stress. The hysteresis loops present the same features for the as deposited and annealed films concerning the in-plane and out-of-plane anisotropies. Nevertheless, the coercive field is strongly improved for the annealed films. Moreover, these latter films present very high values of the squareness. A squareness value up to 0.96 has been measured. All these results and others are analyzed and discussed.

**Notes:** Kharmouche, Ahmed Djouada, Intissar Schmerber, Guy**URL:** <Go to ISI>://WOS:000209378200003

**Reference Type: Journal Article****Record Number:** 106**Author:** Kharoubi, M. Haroun, A. Alouani, M.**Year:** 2013**Title:** Origin of the polar Kerr rotation in ordered and disordered FePt multilayers**Journal:** Computational Materials Science**Volume:** 73**Pages:** 24-32**Date:** Jun**Short Title:** Origin of the polar Kerr rotation in ordered and disordered FePt multilayers**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2013.02.012**Accession Number:** WOS:000324084800004

**Abstract:** The electronic structure and the magneto-optical properties of ordered and disordered FePt multilayers have been calculated by means of the spin-polarized relativistic linear muffin-tin orbital (SPR-LMTO) method within both the local spin-density approximation (LSDA) and generalized gradient approximation (GGA). Both approximations lead to the same magneto-optical results. The ordered FePt magneto-optical properties have also been calculated within the linear augmented plane wave method and the results are in good agreement with the SPR-LMTO calculations. The complex Kerr angle for ordered and disordered FePt has been calculated for photon energies of up to 6 eV and is found to be in a good agreement with experiment. Different structures in the optical conductivity and Kerr rotation as a function of the photon energy are analyzed and discussed. To show the microscopic origin of the strong Kerr rotation at some particular photon energies the symmetry character of the bands contributing to interband transitions together with the interband electric dipole momentum matrix elements are analyzed in the whole Brillouin zone (BZ). This analysis showed that the assignment of the peaks is complex and cannot only be attributed to interband transitions along high symmetry BZ directions. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Kharoubi, M. Haroun, A. Alouani, M.**URL:** <Go to ISI>://WOS:000324084800004

**Reference Type: Journal Article****Record Number:** 107**Author:** Khelifa, M. R. Guessasma, S.**Year:** 2013**Title:** New Computational Model Based on Finite Element Method to Quantify Damage Evolution Due to External Sulfate Attack on Self-Compacting Concretes**Journal:** Computer-Aided Civil and Infrastructure Engineering**Volume:** 28**Issue:** 4**Pages:** 260-272**Date:** Apr**Short Title:** New Computational Model Based on Finite Element Method to Quantify Damage Evolution Due to External Sulfate Attack on Self-Compacting Concretes**ISSN:** 1093-9687**DOI:** 10.1111/j.1467-8667.2012.00793.x**Accession Number:** WOS:000315859700002

**Abstract:** This work combines experimental and numerical investigations to study the mechanical degradation of self-compacting concrete under accelerated aging conditions. Four different experimental treatments are tested among them constant immersion and immersion-drying protocols allow an efficient external sulfate attack of the material. Significant damage is observed due to interfacial ettringite. A predictive analysis is then adopted to quantify the relationship between ettringite growth and mechanical damage evolution during aging. Typical 3D microstructures representing the cement paste-aggregate structures are generated using Monte Carlo scheme. These images are converted into a finite element model to predict the mechanical performance under different criteria of damage kinetics. The effect of ettringite is then associated to the development of an interphase of lower mechanical properties. Our results show that the observed time evolution of Young's modulus is best described by a linear increase of the interphase content. Our model results indicate also that the interphase regions grow at maximum stress regions rather than exclusively at interfaces. Finally, constant immersion predicts a rate of damage growth five times lower than that of immersion-drying protocol.

**Notes:** Khelifa, Mohammed-Rissel Guessasma, Sofiane**URL:** <Go to ISI>://WOS:000315859700002

**Reference Type: Journal Article****Record Number:** 108**Author:** Khelladi, M. R. Mentar, L. Beniaiche, A. Makhloufi, L. Azizi, A.**Year:** 2013**Title:** A study on electrodeposited zinc oxide nanostructures**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 24**Issue:** 1**Pages:** 153-159**Date:** Jan**Short Title:** A study on electrodeposited zinc oxide nanostructures**ISSN:** 0957-4522**DOI:** 10.1007/s10854-012-0973-5**Accession Number:** WOS:000313799400023

**Abstract:** Zinc oxide (ZnO) nanostructures prepared by electrochemical deposition method from aqueous zinc nitrate solution at 65 degrees C onto fluorine doped tin oxide coated glass substrates were investigated. Characterization of ZnO nanostructures was realized using conventional electrochemical techniques, scanning electron microscopy (SEM) and X-ray diffraction (XRD) techniques. Cyclic voltammetry experiments were performed to elucidate the electrodic processes that occurred when potentials were applied and the optimum potential for electrodeposition were determined. From the Mott-Schottky measurements, the flat-band potential and the donor density for the ZnO nanostructure are determined. From single-step potential experiment in the potential ranges from -1.1 to -1.4 V, the formation of ZnO nuclei in the early deposition stages was proceeded according to the three dimensional (3D) instantaneous nucleation followed by diffusion-limited growth rather than a progressive one. SEM images demonstrated that the morphology of ZnO nanostructures depend greatly on the potential depositions. XRD studies revealed that the deposited films were polycrystalline in nature with wurtzite phase.

**Notes:** Khelladi, M. R. Mentar, L. Beniaiche, A. Makhloufi, L. Azizi, A.**URL:** <Go to ISI>://WOS:000313799400023

**Reference Type: Journal Article****Record Number:** 109**Author:** Khellaf, N. Kebiche, K.**Year:** 2013**Title:** Nonlinear analysis of hexagon-based tensegrity ring: Effect of slackened and yielded cables**Journal:** Ksce Journal of Civil Engineering**Volume:** 17**Issue:** 6**Pages:** 1371-1382**Date:** Sep**Short Title:** Nonlinear analysis of hexagon-based tensegrity ring: Effect of slackened and yielded cables**ISSN:** 1226-7988**DOI:** 10.1007/s12205-013-0079-5**Accession Number:** WOS:000323435300018

**Abstract:** This paper addresses static analysis of tensegrity rings as the last generation of tensegrity systems. It discusses also combined geometric and material nonlinearities. A numerical iterative method based on updated Lagrangian formulation is used. The Lagrangian formulation is subjected to Crisfield's spherical arc-length constraint. The resulting algorithm is new as it takes into account some slackening cables and yielding of others on the whole structure nonlinear behavior. Second-order geometric effects are included through higher order nonlinear stiffness matrices. Material nonlinearity cables-based yielding is modeled by means of the tangent stiffness modulus which is used not only to evaluate elastic rigidity matrix but second order elastic rigidity matrices as well. Results obtained from single or assembly of several hexagon-based ring cells submitted to different loading are discussed in detail.

**Notes:** Khellaf, N. Kebiche, K.**URL:** <Go to ISI>://WOS:000323435300018

**Reference Type: Journal Article****Record Number:** 110**Author:** Khenchouche, A. Sadouki, N. Boudriche, A. Houali, K. Graba, A. Ooka, T. Bouguermouh, A.**Year:** 2013**Title:** Human Papillomavirus and Epstein-Barr virus co-infection in Cervical Carcinoma in Algerian women**Journal:** Virology Journal**Volume:** 10**Date:** Nov**Short Title:** Human Papillomavirus and Epstein-Barr virus co-infection in Cervical Carcinoma in Algerian women**ISSN:** 1743-422X**DOI:** 10.1186/1743-422x-10-340**Article Number:** 340**Accession Number:** WOS:000327881400001

**Abstract:** Background: Despite the fact that the implication of human papillomavirus (HPV) in the carcinogenesis and prognosis of cervical cancer is well established, the impact of a co-infection with high risk HPV (HR-HPV) and Epstein-Barr virus (EBV) is still not fully understood. Methods: Fifty eight randomly selected cases of squamous cell carcinomas (SCC) of the uterine cervix, 14 normal cervixes specimens, 21 CIN-2/3 and 16 CIN-1 cases were examined for EBV and HPV infections. Detection of HR-HPV specific sequences was carried out by PCR amplification using consensus primers of Manos and by Digene Hybrid Capture. The presence of EBV was revealed by amplifying a 660 bp specific EBV sequence of BALF1. mRNA expression of LMP-1 in one hand and protein levels of BARF-1, LMP-1 and EBNA-1 in the other hand were assessed by RT-PCR and immunoblotting and/or immunohistochemistry respectively. Results: HR-HPV infection was found in patients with SCC (88%), low-grade (75%) and high grade (95%) lesions compared to only 14% of normal cervix cases. However, 69%, 12.5%, 38.1%, and 14% of SCC, CIN-1, CIN-2/3 and normal cervix tissues, respectively, were EBV infected. The highest co-infection (HR-HPV and EBV) was found in squamous cell carcinoma cases (67%). The latter cases showed 27% and 29% expression of EBV BARF-1 and LMP-1 oncogenes respectively. Conclusion: The high rate of HR-HPV and EBV co-infection in SCC suggests that EBV infection is incriminated in cervical cancer progression. This could be taken into account as bad prognosis in this type of cancer. However, the mode of action in dual infection in cervical oncogenesis needs further investigation.

**Notes:** Khenchouche, Abdelhalim Sadouki, Nabila Boudriche, Arab Houali, Karim Graba, Abdelaziz Ooka, Tadamasa Bouguermouh, Abdelmadjid

**URL:** <Go to ISI>://WOS:000327881400001

**Reference Type: Journal Article****Record Number:** 111**Author:** Kirane, M. Kadem, A. Debbouche, A.**Year:** 2013**Title:** Blowing-up solutions to two-times fractional differential equations**Journal:** Mathematische Nachrichten**Volume:** 286**Issue:** 17-18**Pages:** 1797-1804**Date:** Dec**Short Title:** Blowing-up solutions to two-times fractional differential equations**ISSN:** 0025-584X**DOI:** 10.1002/mana.201200047**Accession Number:** WOS:000328324500009

**Abstract:** Nonexistence results for a class of two-times differential equations with fractional derivatives of orders between zero and one are presented. Furthermore, the result is extended to a two-times system of two differential equations with fractional derivatives of orders between zero and one. (C) 2013 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Kirane, Mokhtar Kadem, Abdelouhab Debbouche, Amar**URL:** <Go to ISI>://WOS:000328324500009

**Reference Type: Journal Article****Record Number:** 112**Author:** Labraoui, N. Gueroui, M. Aliouat, M. Petit, J.**Year:** 2013**Title:** Reactive and adaptive monitoring to secure aggregation in wireless sensor networks**Journal:** Telecommunication Systems**Volume:** 54**Issue:** 1**Pages:** 3-17**Date:** Sep**Short Title:** Reactive and adaptive monitoring to secure aggregation in wireless sensor networks**ISSN:** 1018-4864**DOI:** 10.1007/s11235-013-9712-3**Accession Number:** WOS:000326707900002

**Abstract:** Data aggregation is considered as one of the fundamental distributed data processing procedures for saving the energy and minimizing the medium access layer contention in wireless sensor networks. However, sensor networks are likely to be deployed in an untrusted environment, which make them vulnerable against several attacks. A compromised node may forge arbitrary aggregation value and mislead the base station into trusting a false reading. Secure in-network aggregation can detect such manipulation. But, as long as such subversive activity is, reliable aggregation result can not be obtained. In contrast, the collection of individual sensor node values is robust and solves the problem of availability, but in an inefficient way. Our work seeks to bridge this gap in secure data collection. We propose a framework that enhances availability with efficiency close to that of in-network aggregation avoiding over-reliance on sensors. To achieve this, we design a scheme that is built on one core concept: no trust is supposed in any sensor. Therefore, we design a two hierarchical levels of monitoring to ensure the integrity and the accuracy of aggregate result, only when necessary, i.e. only when malicious activities are detected. Relying on this new type of monitoring mechanism, the framework has the ability to recover from aggregator failure without neglecting energy efficiency, providing thus much higher availability than other security protocols.

**Notes:** Labraoui, Nabila Gueroui, Mourad Aliouat, Makhlof Petit, Jonathan**URL:** <Go to ISI>://WOS:000326707900002

**Reference Type: Journal Article****Record Number:** 113**Author:** Laidoudi, S. Bioud, A. Y. Azizi, A. Schmerber, G. Bartringer, J. Barre, S. Dinia, A.**Year:** 2013**Title:** Growth and characterization of electrodeposited Cu<sub>2</sub>O thin films**Journal:** Semiconductor Science and Technology**Volume:** 28**Issue:** 11**Date:** Nov**Short Title:** Growth and characterization of electrodeposited Cu<sub>2</sub>O thin films**ISSN:** 0268-1242**DOI:** 10.1088/0268-1242/28/11/115005**Article Number:** 115005**Accession Number:** WOS:000326378700005

**Abstract:** This work demonstrates the electrodeposition of cuprous oxide (Cu<sub>2</sub>O) thin films onto a fluorine-doped tin oxide (FTO)-coated conducting glass substrates from Cu(II) sulfate solution with C<sub>6</sub>H<sub>8</sub>O<sub>7</sub> chelating agent. During cyclic voltammetry experiences, the potential interval where the electrodeposition of Cu<sub>2</sub>O is carried out was established. The thin films were obtained potentiostatically and were characterized through different techniques. From the Mott-Schottky measurements, the flat-band potential and the acceptor density for the Cu<sub>2</sub>O thin films are determined. All the films showed a p-type semiconductor character with a carrier density varying between  $2.41 \times 10^{18} \text{ cm}^{-3}$  and  $5.38 \times 10^{18} \text{ cm}^{-3}$ . This little difference is attributed to the increase of the stoichiometric defects in the films with the deposition potential. Atomic force microscopy analysis showed that the Cu<sub>2</sub>O thin films obtained at high potential are more homogenous in appearance and present lower crystallites size. X-ray diffraction measurements indicate a cubic structure with good crystallization state and the deposition potential was found to have an influence on the size of the crystallites. The optical measurements show a direct band gap between 2.07-2.49 eV depending on the applied potential.

**Notes:** Laidoudi, S. Bioud, A. Y. Azizi, A. Schmerber, G. Bartringer, J. Barre, S. Dinia, A.**URL:** <Go to ISI>://WOS:000326378700005

**Reference Type: Journal Article****Record Number:** 114**Author:** Langueur, H. Kassali, K. Lebgaa, N.**Year:** 2013**Title:** Density Functional Study of Structural, Mechanic, Thermodynamic and Dynamic Properties of SiGe Alloys**Journal:** Journal of Computational and Theoretical Nanoscience**Volume:** 10**Issue:** 1**Pages:** 86-94**Date:** Jan**Short Title:** Density Functional Study of Structural, Mechanic, Thermodynamic and Dynamic Properties of SiGe Alloys**ISSN:** 1546-1955**DOI:** 10.1166/jctn.2013.2662**Accession Number:** WOS:000314372700014

**Abstract:** The first-principles calculations based on the density-functional perturbation theory have been performed using the local-density approximation to investigate many physical properties of Si<sub>1</sub>(1-x)Ge(x) alloys. Specifically, the structural (lattice constant, bulk modulus), mechanical (elastic constant, Zener anisotropy factor, Young's modulus, isotropic shear modulus, and Poisson's ratio, sound velocities), dynamical (Debye temperature, internal energy, free energy, entropy and specific heat), and the vibrational properties (phonon dispersion curves) are calculated and compared with the available theoretical and experimental data. The effect of composition of Ge on these properties are studied using the virtual crystal (VC) and the supercell approximations. A good agreement between the calculated and experimental values of the lattice constant, the bulk modulus and elastic constants is obtained. The composition dependence of the optical and acoustic phonon frequencies at the high-symmetry points Gamma, X and L are found to be non-linear.

**Notes:** Langueur, H. Kassali, K. Lebgaa, N.**URL:** <Go to ISI>://WOS:000314372700014

**Reference Type: Journal Article****Record Number:** 115**Author:** Latoui, A. Djahli, F.**Year:** 2013**Title:** An Optical BILBO for Online Testing of Embedded Systems**Journal:** Ieee Design & Test**Volume:** 30**Issue:** 3**Pages:** 34-48**Date:** May-Jun**Short Title:** An Optical BILBO for Online Testing of Embedded Systems**ISSN:** 2168-2356**DOI:** 10.1109/mdt.2012.2204398**Accession Number:** WOS:000325499900005**Notes:** Latoui, Abdelhakim Djahli, Farid**URL:** <Go to ISI>://WOS:000325499900005

**Reference Type: Journal Article****Record Number:** 116**Author:** Latreche, A. Ouennoughi, Z.**Year:** 2013**Title:** Modified Airy function method modelling of tunnelling current for Schottky barrier diodes on silicon carbide**Journal:** Semiconductor Science and Technology**Volume:** 28**Issue:** 10**Date:** Oct**Short Title:** Modified Airy function method modelling of tunnelling current for Schottky barrier diodes on silicon carbide**ISSN:** 0268-1242**DOI:** 10.1088/0268-1242/28/10/105003**Article Number:** 105003**Accession Number:** WOS:000324646800003

**Abstract:** We present a simple method for analysing the tunnelling current through Schottky barrier diodes on SiC, based on the modified Airy function (MAF) approach. The MAF method is accurate for linear-shaped barriers which is the case for the top of the Schottky barrier diodes. The results have been compared with those obtained by the conventional Wentzel-Kramers-Brillouin (WKB). This study proves that the WKB method is valid for the Schottky barrier diodes with and without the incorporation of Schottky barrier lowering under low or high bias voltage.

**Notes:** Latreche, A. Ouennoughi, Z.**URL:** <Go to ISI>://WOS:000324646800003

**Reference Type: Journal Article****Record Number:** 117**Author:** Litwak, L. Goh, S. Y. Hussein, Z. Malek, R. Prusty, V. Khamseh, M. E.**Year:** 2013**Title:** Prevalence of diabetes complications in people with type 2 diabetes mellitus and its association with baseline characteristics in the multinational A(1)chieve study**Journal:** Diabetology & Metabolic Syndrome**Volume:** 5**Date:** Oct**Short Title:** Prevalence of diabetes complications in people with type 2 diabetes mellitus and its association with baseline characteristics in the multinational A(1)chieve study**ISSN:** 1758-5996**DOI:** 10.1186/1758-5996-5-57**Article Number:** 57**Accession Number:** WOS:000326632000001

**Abstract:** Background: Current International Diabetes Federation guidelines recommend a target HbA(1c) < 7.0%, but many people with diabetes worldwide find this difficult to achieve, increasing their risk of developing complications. This publication examines the prevalence of diabetes complications and its association with baseline characteristics in people with type 2 diabetes who participated in the A(1)chieve study. Methods: A(1)chieve was a 24-week, multinational, open-label, observational study of 66,726 people with type 2 diabetes who had begun using biphasic insulin aspart 30, insulin aspart, or insulin detemir in routine clinical care. Participants were enrolled from 28 countries across four continents (Asia, Africa, Europe and South America). Baseline measurements of disease characteristics included: glycated haemoglobin (HbA(1c)), fasting (FPG) and post-prandial plasma glucose (PPG), high-and low-density lipoprotein cholesterol (H-or LDL-C), systolic blood pressure (SBP), and body mass index (BMI). Data on complications and use of vascular disease preventative drugs were collected. Results: Complication rates were high (27.2% had macrovascular complications and 53.5% had microvascular complications), particularly in Russia, and use of vascular disease preventative drugs was lower than expected. Age, BMI, diabetes duration, LDL-C, and SBP were positively associated, and HDL-C negatively associated, with macro-and microvascular complications (all  $p < 0.05$ ). Hb(A1c) and FPG were negatively associated with macrovascular complications (both  $p < 0.05$ ), which may be linked to the cross-sectional study design. Conclusions: These results suggest a worldwide failure to achieve glycaemic targets. Better diabetes management with earlier initiation and optimisation of insulin regimens (e. g., with insulin analogues in the A(1)chieve population) may reduce the prevalence of vascular complications, improve the lives of people with diabetes and reduce the burden on healthcare systems.

**Notes:** Litwak, Leon Goh, Su-Yen Hussein, Zanariah Malek, Rachid Prusty, Vinay Khamseh, Mohammad E.

**URL:** <Go to ISI>://WOS:000326632000001

**Reference Type: Journal Article****Record Number:** 118**Author:** Madani, T. Allouche, L. Saffidine, N. Kaouane, N. Belkasmi, F. Semara, L.**Year:** 2013**Title:** Maternal and neonatal behaviors of Ouled Djellal sheep breed and their effects on production parameters**Journal:** Small Ruminant Research**Volume:** 114**Issue:** 1**Pages:** 46-50**Date:** Aug**Short Title:** Maternal and neonatal behaviors of Ouled Djellal sheep breed and their effects on production parameters**ISSN:** 0921-4488**DOI:** 10.1016/j.smallrumres.2013.06.003**Accession Number:** WOS:000323358100007

**Abstract:** Our study evaluated maternal and neonatal behaviors of the Algerian Ouled Djellal native sheep breed, their effects on growth and mortality of lambs from birth to weaning, and the influence of biotic factors related to mother or lamb on variation of their behaviors. Maternal behavior was scored (MBS) for 200 ewes on the day of lambing on a 5-points scale, based on the distance a ewe retreats from her lambs when lambs were handled, while neonatal behavior (NLB) was recorded for 52 lambs. The MBS for Ouled Djellal ewes indicated that 31.5% were good and 44% were excellent mothers. Multiparous ewes showed improved MBS compared to primiparous ( $P < 0.05$ ), and single born lambs were quicker to stand ( $P < 0.05$ ), to reach the udder ( $P < 0.05$ ) and to suckle ( $P < 0.01$ ) than twins, whereas both MBS and neonatal behaviors were not related to ewes age or sex of lamb. Interestingly, lamb birth weight was positively correlated to MBS ( $r = 0.21$ ,  $P < 0.01$ ) and negatively correlated to all neonatal behaviors ( $r = -0.70$ ,  $P < 0.01$ ). Lamb weight and mortality were recorded through weaning (90 days of age). Lamb growth was not related to MBS, while there was a negative correlation between lamb growth until weaning age and the time spent by lambs immediately following birth to stand, to locate the udder and to suckle ( $P < 0.01$ ). Lamb mortality rates between birth and weaning decreased with an increase in MBS ( $P < 0.01$ ). Likewise, lamb mortality to weaning was higher among lambs who were slow to stand, to reach the udder or to suckle ( $P < 0.01$ ). Scoring maternal and lamb behaviors can help formulate appropriate management programs to improve lamb growth and survival rates of Ouled Djellal breed. (c) 2013 Elsevier B.V. All rights reserved.

**Notes:** Madani, T. Allouche, L. Saffidine, N. Kaouane, N. Belkasmi, F. Semara, L.**URL:** <Go to ISI>://WOS:000323358100007

**Reference Type: Journal Article****Record Number:** 119**Author:** Malek, R. Arbouche, Z. Bachaoui, M. Zinai, S. Dahaoui, A. Senoussaoui, S. Salah-Mansour, A.**Year:** 2013**Title:** Criteria influencing the choice of starting insulin regimen in patients with type 2 diabetes in routine clinical practice: baseline data from the Algerian cohort of the A(1)chieve study**Journal:** Diabetes Research and Clinical Practice**Volume:** 101**Pages:** S45-S49**Date:** Aug**Short Title:** Criteria influencing the choice of starting insulin regimen in patients with type 2 diabetes in routine clinical practice: baseline data from the Algerian cohort of the A(1)chieve study**ISSN:** 0168-8227**Accession Number:** WOS:000209547200006

**Abstract:** Aim: To examine the criteria that may influence physicians' choice of starting insulin in type 2 diabetes patients in routine practice in Algeria as a sub-analysis of the A(1)chieve study. Methods: A(1)chieve was a 24-week international, prospective, non-interventional study conducted to evaluate the safety and effectiveness of biphasic insulin aspart 30 (BIAsp 30), insulin detemir (IDet), or insulin aspart alone or in combination, in real-life clinical settings. We report an analysis of baseline data from insulin-naïve patients initiating basal or premix insulin from the Algeria cohort (n = 1494). Demographic and anthropometric data, blood glucose control at inclusion, microvascular complications, and pre-study therapy was compared between the two groups. Results: A total of 772 insulin-naïve patients initiating therapy with IDet or BIAsp 30 were included in this analysis: IDet: 638 (83%), BIAsp 30: 134 (17%). Most IDet-group patients initiated once-daily therapy (n = 636; 99.7%); conversely, most BIAsp 30-group patients started twice-daily therapy (n = 104; 77.6%). Baseline factors influencing regimen choice were microvascular complications (odds ratio [95% CI], yes/no: 0.73 [0.55, 0.98]; p = 0.034) and HbA(1c) at baseline (%), odds ratio [95% CI] 0.82 [0.72, 0.94]; p = 0.004).

Conclusions: In routine practice, physicians in Algeria are more likely to prescribe basal insulin at initiation of insulin therapy in type 2 diabetes. The prescription of a premix insulin therapy correlated with poor glycaemic control and the incidence of microvascular complications. (C) 2013 Elsevier Ireland Ltd. All rights reserved.

**Notes:** Malek, Rachid Arbouche, Zakia Bachaoui, Malika Zinai, Sakina Dahaoui, Amine Senoussaoui, Souror Salah-Mansour, Abdellah 1**URL:** <Go to ISI>://WOS:000209547200006

**Reference Type: Journal Article****Record Number:** 120**Author:** Malek, R. Arbouche, Z. Dahaoui, A. Bachaoui, M.**Year:** 2013**Title:** Safety and effectiveness of insulin analogues in type 2 diabetic patients from Algeria: a sub-analysis of the A(1)chieve study**Journal:** Diabetes Research and Clinical Practice**Volume:** 101**Pages:** S15-S26**Date:** Aug**Short Title:** Safety and effectiveness of insulin analogues in type 2 diabetic patients from Algeria: a sub-analysis of the A(1)chieve study**ISSN:** 0168-8227**Accession Number:** WOS:000209547200003

**Abstract:** Aim: To determine the safety and effectiveness of insulin analogues in type 2 diabetes (T2D) patients in the Algerian cohort of the A(1)chieve study and to examine the status of T2D management across different regions in Algeria. Methods: Patients starting therapy with biphasic insulin aspart 30, insulin detemir, insulin aspart (IAsp) or IAsp + basal insulin at their physicians' decision were included. The primary outcome was the incidence of serious adverse drug reactions (SADRs), including major hypoglycaemia. Secondary outcomes included changes from baseline to Week 24 in hypoglycaemia, glycated haemoglobin A(1c) (HbA(1c)), fasting plasma glucose (FPG), postprandial plasma glucose (PPPG), weight and quality of life (QoL, evaluated using the EQ-5D questionnaire). Results: Overall, 1494 patients (mean $\pm$ -SD age: 60.1 $\pm$ -10.3 years; body mass index: 28.1 $\pm$ -4.9 kg/m<sup>2</sup>); HbA(1c): 9.2 $\pm$ -1.8%) were enrolled. Poor baseline glucose control was revealed across the different Algerian regions with mean HbA(1c) varying from 8.9% to 9.6%. Two SADRs were reported during the study. The proportion of patients reporting major hypoglycaemic events decreased from 1.1% at baseline to 0.2% at Week 24 ( $p = 0.0017$ ). Significant improvements in mean HbA(1c) (-1.3 $\pm$ -2.0%), FPG (-38.8 $\pm$ -79.9 mg/dL) and post-breakfast PPPG (-51.4 $\pm$ -97.1 mg/dL) were observed in the entire cohort (all  $p < 0.001$ ). The mean body weight increased by 0.9 $\pm$ -3.8 kg, while QoL increased by 9.2 $\pm$ -16.7 points after 24 weeks. Conclusions: Insulin analogue therapy was well-tolerated and significantly improved blood glucose control over 24 weeks in the Algerian cohort. (C) 2013 Elsevier Ireland Ltd. All rights reserved.

**Notes:** Malek, Rachid Arbouche, Zakia Dahaoui, Amine Bachaoui, Malika 1**URL:** <Go to ISI>://WOS:000209547200003

**Reference Type: Journal Article****Record Number:** 121**Author:** Malek, R. Galvez, G. G. Hammerby, E. Nikolajsen, A. Henriksen, O. Andersen, M. F. B.**Year:** 2013**Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM INSULIN GLARGINE TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES**Journal:** Value in Health**Volume:** 16**Issue:** 7**Pages:** A690-A690**Date:** Nov**Short Title:** SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM INSULIN GLARGINE TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES**ISSN:** 1098-3015**Accession Number:** WOS:000326247603145**Notes:** Malek, R. Galvez, G. G. Hammerby, E. Nikolajsen, A. Henriksen, O. Andersen, M. F. B.**URL:** <Go to ISI>://WOS:000326247603145

**Reference Type: Journal Article****Record Number:** 122**Author:** Malek, R. Gonzalez-Galvez, G. El Naggar, N. Shah, S. Prusty, V. Litwak, L.**Year:** 2013**Title:** Safety and Effectiveness of Insulin Detemir in Different Age-Groups in the A(1)chieve Study**Journal:** Diabetes Therapy**Volume:** 4**Issue:** 1**Pages:** 77-90**Date:** Jun**Short Title:** Safety and Effectiveness of Insulin Detemir in Different Age-Groups in the A(1)chieve Study**ISSN:** 1869-6953**DOI:** 10.1007/s13300-013-0021-3**Accession Number:** WOS:000209718100007

**Abstract:** Introduction: Diabetes therapy should balance glycemic control with risk of adverse events. This sub-analysis of the A(1)chieve study evaluated clinical safety and effectiveness of insulin detemir in different age-groups ( $\leq 40$  years,  $>40-65$  years, and  $>65$  years) of insulin-experienced and insulin-naive people with type 2 diabetes. Methods: A(1)chieve was an international, open-label, non-interventional, 24-week study in 66,726 people with type 2 diabetes starting/switching to therapy with biphasic insulin aspart 30, insulin detemir or insulin aspart (alone/in combination) in routine clinical practice. This sub-analysis evaluated clinical safety and effectiveness in patients starting/switching to insulin detemir ( $\pm$  oral glucose-lowering drugs). Results: In total, 15,241 patients were included in the sub-analysis. In all age-groups, the proportion of participants experiencing any, major or nocturnal hypoglycemia was significantly (all  $p < 0.05$ ) reduced relative to baseline, except in insulin-naive patients for any and nocturnal hypoglycemia, where there was a significant increase or no significant change in patients aged  $>65$  years and  $>40-65$  years, respectively, and no significant change in major hypoglycemia in insulin-naive patients aged  $\leq 40$  years. Seven serious adverse drug reactions were reported. Body weight was significantly reduced in patients aged  $\leq 40$  years and  $>40-65$  years and significantly increased in insulin-naive patients aged  $>65$  years at 24 weeks. At 24 weeks, glycated hemoglobin was reduced by 2.3%, 2.0%, and 1.8%, in the  $\leq 40$  years,  $>40-65$  years, and  $>65$  years age-groups, respectively (all  $p < 0.001$ ). Fasting and post-prandial plasma glucose were significantly reduced and health-related quality of life (HRQoL) significantly improved across all patient cohorts (all  $p < 0.001$ ). Conclusion: After 24-week treatment with insulin detemir, all age-groups of insulin-experienced and insulin-naive patients had significantly improved glycemic control and HRQoL. The proportion of patients experiencing hypoglycemia was reduced in all age-groups but unchanged in insulin-naive patients aged  $>40-65$  years and increased in insulin-naive patients aged  $>65$  years. The safety and effectiveness of insulin detemir may benefit all age-groups.

**Notes:** Malek, Rachid Gonzalez-Galvez, Guillermo El Naggar, Nabil Shah, Siddharth Prusty, Vinay Litwak, Leon**URL:** <Go to ISI>://WOS:000209718100007

**Reference Type: Journal Article****Record Number:** 123**Author:** Malha, S. I. R. Mandli, J. Ourari, A. Amine, A.**Year:** 2013**Title:** Carbon Black-Modified Electrodes as Sensitive Tools for the Electrochemical Detection of Nitrite and Nitrate**Journal:** Electroanalysis**Volume:** 25**Issue:** 10**Pages:** 2289-2297**Date:** Oct**Short Title:** Carbon Black-Modified Electrodes as Sensitive Tools for the Electrochemical Detection of Nitrite and Nitrate**ISSN:** 1040-0397**Accession Number:** WOS:000327668500007**Notes:** Malha, Seif Islam Rabie Mandli, Jihane Ourari, Ali Amine, Aziz**URL:** <Go to ISI>://WOS:000327668500007

**Reference Type: Journal Article****Record Number:** 124**Author:** Malou, Z. Hamidouche, M. Bouaouadja, N. Chevalier, J. Fantozzi, G.**Year:** 2013**Title:** THERMAL SHOCK RESISTANCE OF A SODA LIME GLASS**Journal:** Ceramics-Silikaty**Volume:** 57**Issue:** 1**Pages:** 39-44**Short Title:** THERMAL SHOCK RESISTANCE OF A SODA LIME GLASS**ISSN:** 0862-5468**Accession Number:** WOS:000321599300007

**Abstract:** We studied the thermal shock of a three millimeters thickness soda lime glass using the hot-cold thermal shock technique. The cooling was made by ambient air jet on previously warmed samples. The heat transfer coefficient was about 600 W/degrees C.m(2) (Biot number beta = 0.3). The thermal shock duration was fixed at 6 seconds. The hot temperature was taken between 100 degrees C and 550 degrees C while the cold temperature of the air flux was kept constant at 20 degrees C. The acoustic emission technique was used for determining the failure time and the critical temperature difference (Delta TC). By referring to experimental results, thermal shock modelling computations are conducted. Our aim is especially focused on the fracture initiation moments during the cooling process and on the crack initiation sites. The used modeling is based on the local approach of the thermal shock during the experimental data treatment. For each test, the temperature profile and the transient stress state through the samples thickness are determined. By applying the linear superposition property of the stress intensity factors, evolution of the stress intensity factor KI in function of the pre-existing natural flaws in the glass surface is established. The size of the critical flaw is determined by the linear fracture mechanics laws. Computation results confirm the experimental values of the critical difference temperature obtained that is the source of the glass degradation.

**Notes:** Malou, Z. Hamidouche, M. Bouaouadja, N. Chevalier, J. Fantozzi, G.**URL:** <Go to ISI>://WOS:000321599300007

**Reference Type: Journal Article****Record Number:** 125**Author:** Mami, N. A.**Year:** 2013**Title:** EVALUATION IN CAPACITY BUILDING STRATEGY: THE NEXT STEP IN THE LMD PHILOSOPHY**Journal:** 6th International Conference of Education, Research and Innovation (Iceri 2013)**Pages:** 2989-2993**Short Title:** EVALUATION IN CAPACITY BUILDING STRATEGY: THE NEXT STEP IN THE LMD PHILOSOPHY**Accession Number:** WOS:000347240603014

**Abstract:** The LMD (Licence-Master-Doctorat) architecture has acquired different connotations in the mind-set of its users due to a lack of, and sometimes, to the "erroneous" understanding of its functioning. To this, I propose a number of elements to be taken into account in order to come up to this impartiality. "Harmonization" is a recurrent issue in education. Credits and Mechanisms of control need to be readapted to the Algerian context and the difficulty of use of the LMD vocabulary form major hindrances to its workability. Finally, a competency-based logic needs to replace the current theoretical approaches to evaluation that bear upon imparting knowledge to the students rather than developing the ability of understanding. Thus, it is my contention that only when such an understanding is best profitable that a successful implementation is practically reached.

**Notes:** Mami, Naouel Abdellatif Chova, LG Martinez, AL Torres, IC 6th International Conference on Education, Research and Innovation (ICERI) Nov 18-20, 2013 Seville, SPAIN 978-84-616-3847-5

**URL:** <Go to ISI>://WOS:000347240603014

**Reference Type: Journal Article**

**Record Number:** 126

**Author:** Mami, N. A.

**Year:** 2013

**Title:** CREATIVE CLASSROOMS IN ALGERIA, APPLYING FLEXIBILITY AND INNOVATION IN LEARNING

**Journal:** 6th International Conference of Education, Research and Innovation (Iceri 2013)

**Pages:** 3155-3160

**Short Title:** CREATIVE CLASSROOMS IN ALGERIA, APPLYING FLEXIBILITY AND INNOVATION IN LEARNING

**Accession Number:** WOS:000347240603038

**Abstract:** We may look back at the time where learning took place in separate classrooms and where it was inculcated through a teacher-centred approach. We may think of how many schools were organized according to societal strict gender divisions, we may remember how doors' entrances were separated to divide boys and girls. Looking from that perspective, we shall recognize how time has changed to open up the possibility of thinking differently in order to radically stimulate different approaches to teaching and learning. The twenty first century globalization has reshaped the learning experience worldwide and has introduced new concepts within the realm of the LMD philosophy, the PARE reform and the "school without walls" ideology. Algeria makes no exception to this learning without boundaries that opens the horizons wide to new inspiring spaces built on flexibility, creativity and innovation. In this paper, I shall propose a network of options built on empirical research as to predictions of a creative learning environment. In this perspective, teachers should not be bond to the restrictions imposed by the curriculum, but should be able to plan a lesson while treasuring captivation and innovation within the students' classroom. On the other hand, students learn concepts while manipulating and living the learning process. It is, thus, in this essence that we can encourage creativity and innovation. The legacy of flexibility, creativity and innovation would, then, mean including appropriate design decisions that fit teaching and learning in the Algerian context, in particular and globalization, in general

**Notes:** Mami, Naouel Abdellatif Chova, LG Martinez, AL Torres, IC 6th International Conference on Education, Research and Innovation (ICERI) Nov 18-20, 2013 Seville, SPAIN 978-84-616-3847-5

**URL:** <Go to ISI>://WOS:000347240603038

**Reference Type: Journal Article****Record Number:** 127**Author:** Mansouri, A. Alghem, L. H. Beladel, B. Mokhtari, O. E. K. Bendaas, A. Benamar, M. E. A.**Year:** 2013**Title:** Hair-zinc levels determination in Algerian psoriatics using Instrumental Neutron Activation Analysis (INAA)**Journal:** Applied Radiation and Isotopes**Volume:** 72**Pages:** 177-181**Date:** Feb**Short Title:** Hair-zinc levels determination in Algerian psoriatics using Instrumental Neutron Activation Analysis (INAA)**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2012.11.003**Accession Number:** WOS:000314262700028

**Abstract:** Psoriasis is a multifactorial skin disease with an unknown etiology. Zinc has a positive impact on psoriasis. The aim of this study is to determine hair-zinc concentration in Algerian psoriatics. 58 psoriatics and 31 normal controls of both genders were selected. Hair zinc levels were determined using Instrumental Neutron Activation Analysis technique (INAA). Student's t-test and One-Way ANOVA were applied. The average zinc concentration for controls and patients were 152 +/- 53  $\mu$ g/g and 167 +/- 52  $\mu$ g/g respectively. They are not significantly different ( $p > 0.05$ ). Zn concentration for males and females controls and patients were 171 +/- 27  $\mu$ g/g, 151 +/- 37  $\mu$ g/g and 145 +/- 59  $\mu$ g/g, 178 +/- 58  $\mu$ g/g respectively. However, for females we have observed a significant difference ( $p < 0.05$ ). (c) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Mansouri, A. Alghem, L. Hamidatou Beladel, B. Mokhtari, O. E. K. Bendaas, A. Benamar, M. E. A.**URL:** <Go to ISI>://WOS:000314262700028

**Reference Type: Journal Article****Record Number:** 128**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2013**Title:** New Genetic-Fuzzy Controller for Improving Stability of Superconducting Generator with High Response Excitation in a SMIB Power System**Journal:** 2013 13th International Conference on Environment and Electrical Engineering (Eeeic)**Pages:** 330-335**Short Title:** New Genetic-Fuzzy Controller for Improving Stability of Superconducting Generator with High Response Excitation in a SMIB Power System**Accession Number:** WOS:000345761400060**Abstract:** As continuity of our previous published works dealing with improving transient stability of the superconducting generator with high response excitation (SGHRE), we have introduced in this paper fuzzy logic controllers (FLC) in the excitation and governor loops. In order to obtain optimal values of normalization and de-normalization factors, a genetic algorithm has been used (GFEG). Non-linear simulation results of SMIB, under different operating conditions, have demonstrated the effectiveness of the proposed stabilizer GFEG.**Notes:** Mayouf (Adjeroud), F. Djahli, F. Mayouf, A. Devers, T. 13th International Conference on Environment and Electrical Engineering (EEEIC) Nov 01-03, 2013 Wroclaw, POLAND 978-1-4799-2802-6**URL:** <Go to ISI>://WOS:000345761400060

**Reference Type: Journal Article****Record Number:** 129**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2013**Title:** Multi-machine Fuzzy Logic Excitation and Governor Stabilizers Design Using Genetic Algorithms**Journal:** 2013 13th International Conference on Environment and Electrical Engineering (Eeeic)**Pages:** 336-341**Short Title:** Multi-machine Fuzzy Logic Excitation and Governor Stabilizers Design Using Genetic Algorithms**Accession Number:** WOS:000345761400061

**Abstract:** In this paper, we have extended to the multimachine case our developed control model for SMIB stability improvement previously published. This model implements the fuzzy stabilizer in excitation and/or in turbine Governor systems (FLCE, FLCG and FLCEG). The optimal adjustment of the fuzzy logic controllers using genetic algorithm is carried out. Results obtained by nonlinear simulation using Matlab/Simulink of a multimachine system show the effectiveness of using both fuzzy controllers to exciter (FLCE) and to governor (FLCG) at the same time (FLCEG) for large and small disturbances.

**Notes:** Mayouf (Adjeroud), F. Djahli, F. Mayouf, A. Devers, T. 13th International Conference on Environment and Electrical Engineering (EEEIC) Nov 01-03, 2013 Wroclaw, POLAND 978-1-4799-2802-6

**URL:** <Go to ISI>://WOS:000345761400061

**Reference Type: Journal Article****Record Number:** 130**Author:** Meddad, M. Eddiai, A. Hajjaji, A. Guyomar, D. Belkhiat, S. Boughaleb, Y. Cherif, A.**Year:** 2013**Title:** Lowest of AC-DC power output for electrostrictive polymers energy harvesting systems**Journal:** Optical Materials**Volume:** 36**Issue:** 1**Pages:** 80-85**Date:** Nov**Short Title:** Lowest of AC-DC power output for electrostrictive polymers energy harvesting systems**ISSN:** 0925-3467**DOI:** 10.1016/j.optmat.2013.05.008**Accession Number:** WOS:000327232600016

**Abstract:** Advances in technology led to the development of electronic circuits and sensors with extremely low electricity consumption. At the same time, structural health monitoring, technology and intelligent integrated systems created a need for wireless sensors in hard to reach places in aerospace vehicles and large civil engineering structures. Powering sensors with energy harvesters eliminates the need to replace batteries on a regular basis. Scientists have been forced to search for new power source that are able to harvested energy from their surrounding environment (sunlight, temperature gradients etc.). Electrostrictive polymer belonging to the family of electro-active polymers, offer unique properties for the electromechanical transducer technology has been of particular interest over the last few years in order to replace conventional techniques such as those based on piezoelectric or electromagnetic, these materials are highly attractive for their low-density, with large strain capability that can be as high as two orders of magnitude greater than the striction-limited, rigid and fragile electroactive ceramics. Electrostrictive polymers sensors respond to vibration with an ac output signal, one of the most important objectives of the electronic interface is to realize the required AC-DC conversion. The goal of this paper is to design an active, high efficiency power doubler converter for electrostrictive polymers exclusively uses a fraction of the harvested energy to supply its active devices. The simulation results show that it is possible to obtain a maximum efficiency of the AC-DC converter equal to 80%. Preliminary experimental measurements were performed and the results obtained are in good agreement with simulations. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Meddad, Mounir Eddiai, Adil Hajjaji, Abdelwahed Guyomar, Daniel Belkhiat, Saad Boughaleb, Yahia Cherif, Aida Si**URL:** <Go to ISI>://WOS:000327232600016

**Reference Type: Journal Article****Record Number:** 131**Author:** Meddad, M. Eddiai, A. Belkhiat, S. Cherif, A. Hajjaji, A. Benahdouga, S. Sassi, Z. Touhtouh, S.**Year:** 2013**Title:** Analysis of micro power generator autonomous PZT with use of sliding mode control**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 15**Issue:** 5-6**Pages:** 487-492**Date:** May-Jun**Short Title:** Analysis of micro power generator autonomous PZT with use of sliding mode control**ISSN:** 1454-4164**Accession Number:** WOS:000322288200018

**Abstract:** Research on energy harvesting and related technologies have attracted attention and have shown their potential in a wide range of applications, the portable electronic devices (numerical telephones, diaries, microcomputers, watches, medical prostheses...) accompany us, often in a banal way, in the everyday life; they render very many services to us but, because of their insufficient autonomy, also force us in our desires of mobility and autonomy. Many mechanisms of energy conversion and device designs for vibration-based energy harvesting have been developed and reported in literature, In addition to electromagnetic and electrostatic mechanisms that have been widely applied, many other mechanisms such as electrostrictive and dielectric polymers have also been investigated. The power optimality performance of a piezoelectric energy harvester connected to a resistive load is studied. An analytical solution for the piezoelectric energy harvester based on the piezoelectric constitutive equations and the fundamental mechanics of materials relations is adapted to estimate the optimal power and vibration amplitude. The influence of geometrical parameter on the stack piezoelectric is also investigated. The power harvesting in a pressure-loaded plate depends on several factors. The dominant parameters that affect the performance are the ratio of thickness layer and the area of electrode, a designated power management module for sub mW energy harvester is proposed in this article to increase the energy conversion efficiency and extend the energy storage Life time for small input power, with use sliding mode control The specimen was simulate under tow values ratio of thickness layer and the area 1/0.09 and 0.1/0.01. The measured output voltages for two different ration is 8V and The results indicate that the electricity power output has 2.2 mW.

**Notes:** Meddad, M. Eddiai, A. Belkhiat, S. Cherif, A. Hajjaji, A. Benahdouga, S. Sassi, Z. Touhtouh, S.**URL:** <Go to ISI>://WOS:000322288200018

**Reference Type: Journal Article****Record Number:** 132**Author:** Meddad, M. Eddiai, A. Guyomar, D. Belkhiat, S. Hajjaji, A. Yuse, K. Boughaleb, Y.**Year:** 2013**Title:** Evaluation by fast Fourier transforms analysis of energy harvesting in electrostrictive polymers driven by an electric field and a mechanical excitation**Journal:** Journal of Intelligent Material Systems and Structures**Volume:** 24**Issue:** 4**Pages:** 411-420**Date:** Mar**Short Title:** Evaluation by fast Fourier transforms analysis of energy harvesting in electrostrictive polymers driven by an electric field and a mechanical excitation**ISSN:** 1045-389X**DOI:** 10.1177/1045389x12461077**Accession Number:** WOS:000314466400003

**Abstract:** Electrostrictive polymers offer the promise of energy harvesting with few moving parts where power can be produced simply by stretching and contracting a relatively low-cost rubbery material. The use of such polymers for energy harvesting is a growing field, which has great potential from an energy density viewpoint. Basically, the relative energy gain depends on the current induced by the mechanical strain and frequency. A previous study in the Laboratoire de Genie Electrique et Ferroelectricite laboratory has indicated that one can measure the dielectric constant, the Young's modulus, and the electrostrictive coefficient of a polymer film by determining the current flowing through the sample when the polymer film was simultaneously driven by an electrical field and mechanical excitation. The goal of this study has thus been to develop a solution for artificially increasing the coupling factor of electrostrictive materials, based on the optimization of the frequency of the electric field and the amplitude strain of the mechanical excitation leading to an increase in the generated current. When relating this parameter with a transverse strain of 5% and a bias field of 10 V/ $\mu\text{m}$ , it was found that such a process rendered it able to increase the converted power to 14  $\mu\text{W}$  at a mechanical frequency of 6 Hz. The converted power was much higher than for the frequency of 3 Hz for which a low power was consumed by the polarization of the polymer. The theoretical analysis was supported by the experimental investigations. The contribution of this study provides a framework for developing energy harvesting techniques that should improve the overall performance of the system.

**Notes:** Meddad, Mounir Eddiai, Adil Guyomar, Daniel Belkhiat, Saad Hajjaji, Abdelowahed Yuse, Kaori Boughaleb, Yahia

**URL:** <Go to ISI>://WOS:000314466400003

**Reference Type: Journal Article****Record Number:** 133**Author:** Mediani, C. Djoudi, M. Ieee,**Year:** 2013**Title:** E-PACAD: A collaborative learning environment based ontologies**Journal:** 2013 Fourth International Conference on Information and Communication Technology and Accessibility (Icta)**Short Title:** E-PACAD: A collaborative learning environment based ontologies**Accession Number:** WOS:000341665000009

**Abstract:** In this paper, we present a collaborative learning environment mediatized on the Internet. For its design, we take into account all the components intervening in the interaction and collaboration process and we propose an approach guided by ontologies (domain and application). The objective of this work is to allow multiple users (learners, teachers, administrators, managers, etc.) to interact collectively with the environment. In this collaboration model, the learning users are actors of the achievement of a common problem.

**Notes:** Mediani, Chahrazed Djoudi, Mahieddine 4th International Conference on Information and Communication Technology and Accessibility (ICTA) Oct 24-26, 2013 Hammamet, TUNISIA

**URL:** <Go to ISI>://WOS:000341665000009

**Reference Type: Journal Article****Record Number:** 134**Author:** Mekkaoui, F. Litimein, F. Khenata, R. Merabiha, O. Bouhemadou, A. Varshney, D. Soyalp, F. Ugur, S. Bin-Omran, S. Rached, D.**Year:** 2013**Title:** Prediction Study of the Mechanical and Thermodynamic Properties of the (R Sm, Eu, Gd, and Tb) Compounds**Journal:** International Journal of Thermophysics**Volume:** 34**Issue:** 11**Pages:** 2102-2118**Date:** Nov**Short Title:** Prediction Study of the Mechanical and Thermodynamic Properties of the (R Sm, Eu, Gd, and Tb) Compounds**ISSN:** 0195-928X**DOI:** 10.1007/s10765-013-1525-9**Accession Number:** WOS:000327949200007

**Abstract:** The structural, elastic, and thermodynamic properties of the cubic anti-perovskite (R = Sm, Eu, Gd, and Tb) compounds have been investigated using first principles full-potential augmented-plane wave plus local orbitals (FP-APW+lo) method with the generalized gradient approximation. The ground-state quantities such as the lattice parameter, bulk modulus, and its pressure derivative, as well as elastic constants are estimated. Computed equilibrium lattice constants agree well with the available experimental data. The full set of first-order elastic constants and their pressure dependence, which have not been calculated or measured yet, have been determined. The elastic moduli increase linearly with increasing pressure and satisfy the generalized elastic stability criteria for cubic crystals under hydrostatic pressure. The shear modulus, Young's modulus, and Poisson's ratio are calculated for ideal polycrystalline aggregates. The Debye temperature is estimated from the average sound velocity. From the elastic parameter behavior, it is inferred that cubic anti-perovskites are ductile in nature and that the bonding is predominantly of an ionic nature. Following the quasi-harmonic Debye model, the temperature effect on the lattice constant, bulk modulus, heat capacity, and Debye temperature is calculated reflecting the anharmonic phonon effects.

**Notes:** Mekkaoui, F. Litimein, F. Khenata, R. Merabiha, O. Bouhemadou, A. Varshney, D. Soyalp, F. Ugur, S. Bin-Omran, S. Rached, D.**URL:** <Go to ISI>://WOS:000327949200007

**Reference Type: Journal Article****Record Number:** 135**Author:** Merah, F. Berkouk, E.**Year:** 2013**Title:** Back-to-back five-level converters for wind energy conversion system with DC-bus imbalance minimization**Journal:** Renewable Energy**Volume:** 60**Pages:** 137-149**Date:** Dec**Short Title:** Back-to-back five-level converters for wind energy conversion system with DC-bus imbalance minimization**ISSN:** 0960-1481**DOI:** 10.1016/j.renene.2013.05.001**Accession Number:** WOS:000323628600016

**Abstract:** The use of multilevel converters has increased significantly owing to their advantages in high-voltage and high-power applications. Balancing of the DC capacitor in the neutral-point clamped (NPC) topology is a main concern in these converters. The DC voltage must be maintained at its reference value to avoid overvoltage stress on the semiconductor and to overcome modulation distortion. This paper presents a new method of regulating the DC voltage of a back-to-back NPC five-level converter applied in a wind energy conversion system based on doubly fed induction generator. The proposed control algorithms consist of two loops: the outer closed loop controls the average value of the DC voltage, whereas the inner loop controls the difference between the two voltages in each half-arm using a clamping bridge circuit. To verify the validity of the method and to prove the performance of the proposed control algorithms, simulation was carried out in a MATLAB Simulink environment. The results obtained show the effectiveness of the proposed algorithms. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Merah, Farid Berkouk, El Madjid**URL:** <Go to ISI>://WOS:000323628600016

**Reference Type: Journal Article**

**Record Number:** 136

**Author:** Merouani, B. Boufenocuch, R.

**Year:** 2013

**Title:** COEFFICIENTS OF SINGULARITIES FOR A SIMPLY SUPPORTED PLATE PROBLEMS IN PLANE SECTORS

**Journal:** Electronic Journal of Differential Equations

**Date:** Oct

**Short Title:** COEFFICIENTS OF SINGULARITIES FOR A SIMPLY SUPPORTED PLATE PROBLEMS IN PLANE SECTORS

**ISSN:** 1072-6691

**Article Number:** 238

**Accession Number:** WOS:000326150400003

**Abstract:** This article represents the solution to a plate problem in a plane sector that is simply supported, as a series. By using appropriate Green's functions, we establish a biorthogonality relation between the terms of the series, which allows us to calculate the coefficients.

**Notes:** Merouani, Boubakeur Boufenocuch, Razika

**URL:** <Go to ISI>://WOS:000326150400003

**Reference Type: Journal Article****Record Number:** 137**Author:** Messalti, S. Belkhiat, S.**Year:** 2013**Title:** Comparative Study of Resistive and Inductive Superconducting Fault Current Limiters SFCL for Power System Transient Stability Improvement**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 26**Issue:** 10**Pages:** 3009-3015**Date:** Oct**Short Title:** Comparative Study of Resistive and Inductive Superconducting Fault Current Limiters SFCL for Power System Transient Stability Improvement**ISSN:** 1557-1939**DOI:** 10.1007/s10948-013-2114-7**Accession Number:** WOS:000324129600005

**Abstract:** This paper presents a comparative study of resistive and inductive superconducting fault current limiter (SFCL) for power systems transient stability improvement. Two applications of transient stability assessment are presented in this paper: The first shows the efficiency of the resistive and inductive SFCL in series with a generator, the second uses SFCL installed in series with a transmission line. SFCL can just be operated during the period from the fault occurrence to the fault clearing; the modeling and the effect of SFCL has been investigated to have higher benefits for the power system. In the present work, modification of the admittance matrix method is used for modeling of SFCL; Critical Clearing Time (CCT) has been used as an index for evaluated transient stability. The transient stability is assessed by the criterion of relative rotor angles, using the Runge-Kutta method. The effectiveness of the proposed method is tested on the WSCC3 nine-bus system applied to the case of three-phase short circuit fault in one transmission line. A simulation and comparison are presented in this document.

**Notes:** Messalti, Sabir Belkhiat, Saad**URL:** <Go to ISI>://WOS:000324129600005

**Reference Type: Journal Article****Record Number:** 138**Author:** Messaoudi, A. Saidene, K. Seklaoui, S. Ziri, A.**Year:** 2013**Title:** STRATEGY MANAGEMENT OF PSYCHIATRIC INPATIENTS IN A CLOSED WARD OF A STUDY ABOUT TWO YEARS AT THE E S H PSYCHIATRY, TIZI-OUZOU, ALGERIA**Journal:** European Psychiatry**Volume:** 28**Short Title:** STRATEGY MANAGEMENT OF PSYCHIATRIC INPATIENTS IN A CLOSED WARD OF A STUDY ABOUT TWO YEARS AT THE E S H PSYCHIATRY, TIZI-OUZOU, ALGERIA**ISSN:** 0924-9338**Accession Number:** WOS:000335460601098**Notes:** Messaoudi, A. Saidene, K. Seklaoui, S. Ziri, A. 1**URL:** <Go to ISI>://WOS:000335460601098

**Reference Type: Journal Article****Record Number:** 139**Author:** Messaoudi, Y. Azizi, A. Fenineche, N. Schmerber, G. Dinia, A.**Year:** 2013**Title:** Electrochemical Production of Magnetic Co-Mo Alloys Thin Films**Journal:** Sensor Letters**Volume:** 11**Issue:** 9**Pages:** 1622-1626**Date:** Sep**Short Title:** Electrochemical Production of Magnetic Co-Mo Alloys Thin Films**ISSN:** 1546-198X**DOI:** 10.1166/sl.2013.2990**Accession Number:** WOS:000331929600011

**Abstract:** Co-Mo alloys thin films were electrodeposited on ruthenium substrate from sulfate solution without additives at pH = 4. The effect of deposition potential on Co-Mo films was studied by using the electrochemical analysis, scanning electron microscopy (SEM) with an energy dispersed X-ray microanalyzer (EDX), X-ray diffraction (XRD), and alternating gradient force magnetometer (AGFM) techniques. Cyclic Voltammetric analysis reveals that the codeposition of Co-Mo alloys was accompanied by concurrent reactions such as the hydrogen evolution reaction (HER) depended on the nature of the species in solution. SEM characterization of the deposits shows a nodular morphology and rounded crystallites distributed homogeneously on the substrate with the presence of holes as consequences of HER. XRD measurements indicate a small crystallite size with the presence of an hcp Co-Mo structures. The magnetic analysis by AGFM at room temperature revealed that the magnetic behaviour of the films was strongly influenced by the applied potential.

**Notes:** Messaoudi, Y. Azizi, A. Fenineche, N. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000331929600011

**Reference Type: Journal Article****Record Number:** 140**Author:** Messaoudi, Y. Fenineche, N. Guittoum, A. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2013**Title:** A study on electrodeposited Co-Mo alloys thin films**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 24**Issue:** 8**Pages:** 2962-2969**Date:** Aug**Short Title:** A study on electrodeposited Co-Mo alloys thin films**ISSN:** 0957-4522**DOI:** 10.1007/s10854-013-1198-y**Accession Number:** WOS:000321913900046

**Abstract:** Cobalt-Molybdenum (Co-Mo) induced electrodeposition has been studied from a sulphate bath on Ru electrodes at pH 4. The conditions of electrodeposition of Co-Mo alloys were determined using the cyclic voltametry at different ions concentration ratios. The theoretical model of Scharifker-Hills was used to analyse the current transients for studying the first stage of nucleation of Co-Mo alloys. The electrodeposited coatings were analysed by scanning electron microscopy, X-rays diffraction and alternating gradient force magnetometer techniques. The cyclic voltametry shows that the codeposition of Co-Mo alloys was accompanied by concurrent reactions such as the formation of the molybdenum oxides and the hydrogen evolution reaction. For the electrodeposited Co-Mo, the nucleation is in good agreement with the instantaneous nucleation and three-dimensional (3D) diffusion-limited growth. Co-Mo thin films of an hcp structure have been obtained, and the electrodeposition parameters such as the applied potential have a great influence on the structure, morphology and magnetic properties.

**Notes:** Messaoudi, Y. Fenineche, N. Guittoum, A. Azizi, A. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000321913900046

**Reference Type: Journal Article****Record Number:** 141**Author:** Mouffok, C. E. Madani, T. Semara, L. Ayache, N. Rahal, A.**Year:** 2013**Title:** Correlation between Body Condition Score, Blood Biochemical Metabolites, Milk Yield and Quality in Algerian Montbeliarde Cattle**Journal:** Pakistan Veterinary Journal**Volume:** 33**Issue:** 2**Pages:** 191-194**Short Title:** Correlation between Body Condition Score, Blood Biochemical Metabolites, Milk Yield and Quality in Algerian Montbeliarde Cattle**ISSN:** 0253-8318**Accession Number:** WOS:000316941100013

**Abstract:** This study aimed to investigate the correlation between body condition score (BCS), blood biochemical metabolites, milk yield (MY) and quality (Mfat) in Montbeliarde cattle (31 cows) reared in 5 farms of Algerian semi arid area. The BCS was measured in dry and peak of lactation (6 weeks after calving). Blood samples were taken at the time of body condition (BC) measurement for determination of energy (Glucose, cholesterol, triglycerides and B-Hydroxybutyrate), nitrogen (urea and albumin) and mineral (calcium) metabolites. Milk yield was recorded in the 6th week of lactation (peak). A sample of milk for each cow was used to determinate milk fat, density and acidity. The results showed a significant decrease in postpartum BCS accompanied by an increase in cholesterol and B-Hydroxybutyrate (BHB) concentration. The correlation analysis showed that BHB concentration in pre calving was negatively correlated with BCS ( $r=-0.321$ ;  $P<0.05$ ) and cholesterol ( $r=-0.308$ ;  $P<0.05$ ). In postpartum, BCS was negatively correlated with cholesterol ( $r=-0.416$ ;  $P<0.05$ ), urea ( $r=-0.366$ ;  $P<0.05$ ) and BHB ( $r=-0.487$ ;  $P<0.05$ ). However, the level of milk production decreased significantly with high glucose ( $r=-0.449$ ;  $P<0.05$ ) and BHB ( $r=-0.514$ ;  $P<0.05$ ). The fat content increased significantly with blood triglycerides ( $r=0.681$ ;  $P<0.05$ ) and BHB ( $r=0.522$ ;  $P<0.05$ ) concentration, indicating a high mobilization of body reserves used for the synthesis of milk fat. In conclusion, it can be assumed that the rate of BHB seems to be the best indicator of the nutritional status of dairy cows that determines their production level and quality. (C) 2012 PVJ. All rights reserved

**Notes:** Mouffok, Charef-Eddine Madani, Toufik Semara, Lounis Ayache, Nadhira Rahal, Amina**URL:** <Go to ISI>://WOS:000316941100013

**Reference Type: Journal Article****Record Number:** 142**Author:** Mouffok, C. E. Semara, L. Madani, T. Debeche, H. Belkasmi, F.**Year:** 2013**Title:** IMPACT OF PRE AND POST-CALVING BODY CONDITION SCORE CHANGE ON REPRODUCTION TRAITS OF MONTBELIAD COWS IN ALGERIAN SEMI ARID AREA**Journal:** Journal of Animal and Plant Sciences**Volume:** 23**Issue:** 5**Pages:** 1253-1263**Short Title:** IMPACT OF PRE AND POST-CALVING BODY CONDITION SCORE CHANGE ON REPRODUCTION TRAITS OF MONTBELIAD COWS IN ALGERIAN SEMI ARID AREA**ISSN:** 1018-7081**Accession Number:** WOS:000327694500007

**Abstract:** This study aimed to determine the relationships between body condition score (BCS) and its change around calving and the reproduction traits. A total of 220 Montbeliard dairy cows reared in four farms whose level of breeding proficiency is acceptable were included in this study. Body condition (BC) in dry and postpartum period was assessed monthly on a scale of 1 to 5. Eight reproductive parameters were recorded or calculated. The results show a significant decrease ( $p < 0.001$ ) of BCS from dry period (3.40 points) to the 2nd month of lactation (2.86 points). Reproductive parameters evaluated at 63, 90 days respectively for the intervals from calving to first insemination and conception shows a good command of the reproduction conduct. A complementary analyzes show a relationship between BC before calving and all reproductive parameters ( $p < 0.001$ ). The best records are observed in cows with BC at dry ranged from 3 to 3.5 points. The differences are equivalent to one estrous cycle (19 days) for reproduction intervals and 20%, 19% and 9% on pregnancy rates at 60, 90 and 120 days respectively. The postpartum body condition affects only the pregnancy rate at 60 days ( $p < 0.05$ ) against the level of post-partum loss of BC poses no significant effect ( $p > 0.05$ ).

**Notes:** Mouffok, C. E. Semara, L. Madani, T. Debeche, H. Belkasmi, F.**URL:** <Go to ISI>://WOS:000327694500007

**Reference Type: Journal Article****Record Number:** 143**Author:** Mouda, A. Alaa, N. Mesbahi, S. Bouarifi, W.**Year:** 2013**Title:** EXISTENCE OF SOLUTIONS FOR QUASILINEAR ELLIPTIC DEGENERATE SYSTEMS WITH L-1 DATA AND NONLINEARITY IN THE GRADIENT**Journal:** Electronic Journal of Differential Equations**Date:** Jun**Short Title:** EXISTENCE OF SOLUTIONS FOR QUASILINEAR ELLIPTIC DEGENERATE SYSTEMS WITH L-1 DATA AND NONLINEARITY IN THE GRADIENT**ISSN:** 1072-6691**Article Number:** 142**Accession Number:** WOS:000322084500001**Abstract:** In this article we show the existence of weak solutions for some quasilinear degenerate elliptic systems arising in modeling chemotaxis and angiogenesis. The nonlinearity we consider has critical growth with respect to the gradient and the data are in L-1.**Notes:** Mouda, Abdelhaq Alaa, Noureddine Mesbahi, Salim Bouarifi, Walid**URL:** <Go to ISI>://WOS:000322084500001

**Reference Type: Journal Article****Record Number:** 144**Author:** Mouloud, G. Daoud, H. Bassem, J. Atef, I. Hani, B.**Year:** 2013**Title:** New Bacteriocin from *Bacillus clausii* Strain GM17: Purification, Characterization, and Biological Activity**Journal:** Applied Biochemistry and Biotechnology**Volume:** 171**Issue:** 8**Pages:** 2186-2200**Date:** Dec**Short Title:** New Bacteriocin from *Bacillus clausii* Strain GM17: Purification, Characterization, and Biological Activity**ISSN:** 0273-2289**DOI:** 10.1007/s12010-013-0489-3**Accession Number:** WOS:000327494800023

**Abstract:** A bacteriocin-producing strain (9,000 AU/ml) was isolated from the rhizosphere of Algerian healthy plants *Ononis angustissima* Lam. and identified as *Bacillus clausii* strain GM17. The bacteriocin, called Bac-GM17, was purified from the culture supernatant after heat treatment, ammonium sulfate precipitation, Sephadex G-50 chromatography and Mono Q fast-performance liquid chromatography (FPLC). Based on matrix-assisted laser desorption ionization-time of flight mass spectrometry analysis, the purified Bac-GM17 is a monomer protein with a molecular mass of 5,158.11 Da. The N-terminal sequencing allowed for the straightforward identification of its first 20 residues, which were of pure bacteriocin. It also revealed that this bacteriocin contained a unique sequence, namely DWTC~~SK~~W~~S~~CLV~~C~~DDCSVELT, which suggests the identification of a novel compound. Bac-GM17 was extremely heat stable (20 min at 120 A degrees C) and was stable within the pH range (3-9). It was found to be resistant to the proteolytic action of trypsin, pepsin, papain, pronase E, and proteinase K. It was also noted to display a bactericidal mode of action against *Agrobacterium tumefaciens* C58 and a fungistatic mode of action against *Candida tropicalis* R2 CIP203.

**Notes:** Mouloud, Ghadbane Daoud, Harzallah Bassem, Jaouadi Atef, Ibn Laribi Hani, Belhadj**URL:** <Go to ISI>://WOS:000327494800023

**Reference Type: Journal Article****Record Number:** 145**Author:** Nebti, S. Boukerram, A.**Year:** 2013**Title:** Handwritten characters recognition based on nature-inspired computing and neuro-evolution**Journal:** Applied Intelligence**Volume:** 38**Issue:** 2**Pages:** 146-159**Date:** Mar**Short Title:** Handwritten characters recognition based on nature-inspired computing and neuro-evolution**ISSN:** 0924-669X**DOI:** 10.1007/s10489-012-0362-z**Accession Number:** WOS:000314286500002

**Abstract:** The enormous services obtainable by bank and postal systems are not 100 % guaranteed due to variability of handwriting styles. Various methods based on neural networks have been suggested to address this issue. Unfortunately, they often fall into local optima that arises from the use of old learning methods. Global optimization methods provided new directions for neural networks evolution that may be useful in recognition. This paper develops efficient algorithms that compute globally optimal solutions by exploiting the benefits of both swarm intelligence and neuro-evolution in a way to improve the overall performance of a character recognition system. Various adaptations implied to both MLP and RBF networks have been suggested namely: particle swarm optimization (PSO) and the bees algorithm (BA) for characters classification, MLP training or RBF design by co-evolution and effective combinations of MLPs, RBFs or SVMs as an attempt to overcome the drawbacks of old recognition methods. Results proved that networks combination proposals ensure the highest improvement compared to either standard MLP and RBF networks, the co-evolutionary alternatives or other classifiers combination based on common combination rules namely majority voting, the fusion rules of min, max, sum, average, product and Bayes, Decision template and the Behavior Knowledge Space (BKS).

**Notes:** Nebti, Salima Boukerram, Abdellah**URL:** <Go to ISI>://WOS:000314286500002

**Reference Type: Journal Article****Record Number:** 146**Author:** Nedjma, S. Djidjelli, H. Boukerrou, A. Benachour, D. Chibani, N.**Year:** 2013**Title:** Deinked and acetylated fiber of newspapers**Journal:** Journal of Applied Polymer Science**Volume:** 127**Issue:** 6**Pages:** 4795-4801**Date:** Mar**Short Title:** Deinked and acetylated fiber of newspapers**ISSN:** 0021-8995**DOI:** 10.1002/app.38048**Accession Number:** WOS:000312940400072

**Abstract:** Recently, the incorporation of lignocellulosic materials as reinforcing agents or as fillers in polymer composites has received an increased attention. Although natural fibers have a number of advantages over glass fibers, the strong polar character of their surface is a limiting factor, as compatibility with strongly apolar thermoplastic matrices is very low. Such problems of incompatibility may be overcome with fiber pretreatments, which can enhance compatibility, albeit having a negative impact on the economics. In this study, the newspaper is deinked and acetylated. The effect of esterification between the acetyl groups and the hydroxyl groups of the fiber was examined by Fourier transform infrared. X-ray diffraction and scanning electron microscopy were used to characterize the crystallinity and the surface morphology of the untreated deinked and acetylated fibers (newspaper). The thermal stability of deinked and acetylated fibers was slightly decreased. It was also shown that the deinking increased the crystallinity of newspaper fibers while acetylating decreased this crystallinity. Cellulose acetate is one of the most important cellulose derivatives and its main applications are its use in composites. (c) 2012 Wiley Periodicals, Inc. *J. Appl. Polym. Sci.*, 2013

**Notes:** Nedjma, Samira Djidjelli, Hocine Boukerrou, Amar Benachour, Djafer Chibani, Nacera**URL:** <Go to ISI>://WOS:000312940400072

**Reference Type: Journal Article****Record Number:** 147**Author:** Nekkaa, S. Guessoum, M. Benamara, R. Haddaoui, N.**Year:** 2013**Title:** Influence of Surface Flour Treatment on the Thermal, Structural and Morphological Properties of Polypropylene/Spartium Junceum Flour Composites**Journal:** Polymer-Plastics Technology and Engineering**Volume:** 52**Issue:** 2**Pages:** 175-181**Date:** Jan**Short Title:** Influence of Surface Flour Treatment on the Thermal, Structural and Morphological Properties of Polypropylene/Spartium Junceum Flour Composites**ISSN:** 0360-2559**DOI:** 10.1080/03602559.2012.734363**Accession Number:** WOS:000316206500010

**Abstract:** Vegetable flour (Spartium junceum) reinforced polymer composites provide the customers with more alternatives in the material market due to their unique advantages. The effects of Spartium junceum (SJ) flour content and coupling agent concentration on the composite properties were studied. The above samples were characterized by differential scanning calorimetry (DSC), thermogravimetric analysis (ATG), X-ray diffraction (XRD), and scanning electron microscopy. The results obtained from XRD indicated that the incorporation of SJ flour involves a shift to lower 2 of the other polypropylene peaks.

**Notes:** Nekkaa, Sorya Guessoum, Melia Benamara, Rabie Haddaoui, Nacerddine**URL:** <Go to ISI>://WOS:000316206500010

**Reference Type: Journal Article****Record Number:** 148**Author:** Nemdili, S. Belkhiat, S.**Year:** 2013**Title:** Electrothermal Modeling of Coated Conductor for a Resistive Superconducting Fault-Current Limiter**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 26**Issue:** 8**Pages:** 2713-2720**Date:** Aug**Short Title:** Electrothermal Modeling of Coated Conductor for a Resistive Superconducting Fault-Current Limiter**ISSN:** 1557-1939**DOI:** 10.1007/s10948-012-1895-4**Accession Number:** WOS:000323925500030

**Abstract:** Coated conductors are very promising for the design of a novel and efficient superconducting fault-current limiter (SFCL). The thermal and electrical behaviors of this type of SFCL in the presence of over-critical currents need to be investigated in detail to master its performance in a power grid. In this paper, an Electrothermal Model of a Coated Conductor (ETMCC), not simulated in the literature, is implemented and introduced in the library of MATLAB software. An algorithm to solve the differential equations characterizing the superconducting material is developed using the Runge-Kutta method. In this context the ETMCC under over-critical current is performed. Different dimensions and substrate configurations of the sandwich layers are considered. In order to improve the high-temperature superconductor (HTS)-FCL design, the influence of the substrate and shunted layers (using different materials) on the thermal stability is investigated. The simulation results are generalized, thus allowing us to determine the current threshold to achieve thermal stability of the HTS-FCL at any point of the coated conductor.

**Notes:** Nemdili, S. Belkhiat, S.**URL:** <Go to ISI>://WOS:000323925500030

**Reference Type: Journal Article****Record Number:** 149**Author:** Ollivier, A. Grougnet, R. Cachet, X. Meriane, D. Ardisson, J. Boutefnouchet, S. Deguin, B.**Year:** 2013**Title:** Large scale purification of the SERCA inhibitor Thapsigargin from *Thapsia garganica* L. roots using centrifugal partition chromatography**Journal:** Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences**Volume:** 926**Pages:** 16-20**Date:** May**Short Title:** Large scale purification of the SERCA inhibitor Thapsigargin from *Thapsia garganica* L. roots using centrifugal partition chromatography**ISSN:** 1570-0232**DOI:** 10.1016/j.jchromb.2013.02.015**Accession Number:** WOS:000318000800003

**Abstract:** Thapsigargin (Tg) is a selective and irreversible inhibitor of the sarcoplasmic/endoplasmic reticulum calcium ATPase (SERCA)-dependent pump at subnanomolecular concentrations. As such, it has become a powerful tool in the study of Ca<sup>2+</sup> signaling pathway. Purification of Tg from *Thapsia* species requires repeated chromatographic steps with normal-phase alumina or silica and reverse phase chromatography. We thus developed an innovative procedure coupling high pressure automatized extraction with centrifugal partition chromatography allowing a fast and safe large-scale isolation of highly pure Tg, in two steps from *Thapsia garganica* L. roots. Comparison of influence of extraction procedures, storage conditions and harvesting areas on Tg content in different Algerian specimens of *Thapsia garganica* L roots has been precised by mean of HPLC quantification procedure. Highest Tg content were found in the fresh material of the sample from Setif area. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Ollivier, Anthony Grougnet, Raphael Cachet, Xavier Meriane, Djamila Ardisson, Janick Boutefnouchet, Sabrina Deguin, Brigitte**URL:** <Go to ISI>://WOS:000318000800003

**Reference Type: Journal Article****Record Number:** 150**Author:** Ouennoughi, Z. Strenger, C. Bourouba, F. Haeublein, V. Ryssel, H. Frey, L.**Year:** 2013**Title:** Conduction mechanisms in thermal nitride and dry gate oxides grown on 4H-SiC**Journal:** Microelectronics Reliability**Volume:** 53**Issue:** 12**Pages:** 1841-1847**Date:** Dec**Short Title:** Conduction mechanisms in thermal nitride and dry gate oxides grown on 4H-SiC**ISSN:** 0026-2714**DOI:** 10.1016/j.microrel.2013.06.009**Accession Number:** WOS:000328667000002

**Abstract:** The charge conduction mechanisms in Metal-Oxide-Semiconductor (MOS) capacitors formed on n-type 4H-silicon carbide (SiC) using thermally grown silicon dioxide (SiO<sub>2</sub>) as gate dielectrics are analyzed. The possible conduction mechanisms have been identified in the whole measurement range. At high electric fields, the charge conduction is dominated by Fowler-Nordheim tunneling. In addition, trap assisted tunneling and ohmic type conduction are considered to explain the cause of leakages detected at intermediate and low oxide electric fields. Various electronic parameters are extracted. The oxide breakdown strengths are higher than 8 MV/cm. Fowler-Nordheim tunneling barrier height was found to be 2.74 eV for nitride oxides and 2.54 eV for dry oxides at high electric field regions and the trap energy level extracted using trap assisted tunneling emission model was estimated to be about 0.3 eV for both oxides. The possible contribution of the Poole-Frenkel effect to the conduction mechanism was also considered, and it was found that it does not play a dominant role. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Ouennoughi, Z. Strenger, C. Bourouba, F. Haeublein, V. Ryssel, H. Frey, L.**URL:** <Go to ISI>://WOS:000328667000002

**Reference Type: Journal Article****Record Number:** 151**Author:** Oulmi, K. Bouhidel, K. E. Andreadis, G. M.**Year:** 2013**Title:** Noise spectra of  $K^+$  and  $NH_4^+$  ions at over-limiting current in an electrochemical system with a cation exchange membrane**Journal:** Journal of Water Reuse and Desalination**Volume:** 3**Issue:** 3**Pages:** 291-296**Short Title:** Noise spectra of  $K^+$  and  $NH_4^+$  ions at over-limiting current in an electrochemical system with a cation exchange membrane**ISSN:** 2220-1319**DOI:** 10.2166/wrd.2013.001**Accession Number:** WOS:000340893800011

**Abstract:** The present work investigates the effect of the counter ion nature on the noise of the over-limiting current ( $I_{ov}$ ). Moreover, the electrochemical methods, current voltage curve (I-V) and the chronopotentiometry (V-t) measurements are applied. The over-limiting current is always accompanied by a neat electrical noise. It is a well accepted experimental phenomenon. The study of this noise may contribute to a better understanding of the  $I_{ov}$  and the feasibility of electro dialysis operation at this current in terms of energy consumption. The electrical noise depends directly on the counter ion nature. The power spectral density of the membrane's potential fluctuation was obtained via Fourier analysis of the time series recorded during the transport of counter ions ( $K^+$  and  $NH_4^+$ ). The spectra are evaluated above the limiting current indicating the differences between the  $K^+$  and the  $NH_4^+$ . It is found that the cation  $NH_4^+$  presents a singular behaviour and the noise is minimal.

**Notes:** Oulmi, K. Bouhidel, K. E. Andreadis, G. M.**URL:** <Go to ISI>://WOS:000340893800011

**Reference Type: Journal Article****Record Number:** 152**Author:** Ourari, A. Aggoun, D. Ouahab, L.**Year:** 2013**Title:** A novel copper(II)-Schiff base complex containing pyrrole ring: Synthesis, characterization and its modified electrodes applied in oxidation of aliphatic alcohols**Journal:** Inorganic Chemistry Communications**Volume:** 33**Pages:** 118-124**Date:** Jul**Short Title:** A novel copper(II)-Schiff base complex containing pyrrole ring: Synthesis, characterization and its modified electrodes applied in oxidation of aliphatic alcohols**ISSN:** 1387-7003**DOI:** 10.1016/j.inoche.2013.04.002**Accession Number:** WOS:000320749400027

**Abstract:** A new copper(II) complex Cu(II)-L containing N<sub>2</sub>O<sub>2</sub> donor atoms has been prepared from 6-[3'-(N-pyrrol) propoxy]-2-hydroxyacetophenone and diaminoethane in the presence of copper acetate monohydrate. It was characterized by spectroscopic methods such as FT-IR, UV-vis, mass spectra, elemental analysis and cyclic voltammetry. The molecular structure of Cu(II)-L has also been confirmed by X-ray diffraction analysis. The electrochemical behavior of copper(II)-Schiff base complex containing pyrrol groups has been investigated in DMF and acetonitrile solutions using cyclic voltammetry. Thus, conducting polymeric films of polypyrrole were obtained on the surfaces of glassy carbon and ITO electrodes using copper(II) complex as monomer. The modified electrodes were electrochemically and morphologically characterized and their electrocatalytic properties in heterogeneous phase have also been investigated. The AFM studies show that the morphology of polypyrrole (PPy) films on ITO-electrodes depends on the number of cyclical scans. The electrocatalytic performances of this complex seem to be more efficient towards the electro-oxidation of isopropyl alcohol than any other kinds of alcohols such as methanol, ethanol and benzyl alcohol. The electro-reduction of carbon dioxide was also examined. (c) 2013 Elsevier B.V. All rights reserved.

**Notes:** Ourari, Ali Aggoun, Djouhra Ouahab, Lahcene**URL:** <Go to ISI>://WOS:000320749400027

**Reference Type: Journal Article****Record Number:** 153**Author:** Saadi, S. Touiza, M. Kharfi, F. Guessoum, A.**Year:** 2013**Title:** Dyadic wavelet for image coding implementation on a Xilinx MicroBlaze processor: Application to neutron radiography**Journal:** Applied Radiation and Isotopes**Volume:** 82**Pages:** 200-210**Date:** Dec**Short Title:** Dyadic wavelet for image coding implementation on a Xilinx MicroBlaze processor: Application to neutron radiography**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2013.08.001**Accession Number:** WOS:000328804000033

**Abstract:** In this work, we present a mixed software/hardware implementation of 2-D signals encoder/decoder using dyadic discrete wavelet transform (DWT) based on quadrature mirror filters (QMF); using fast wavelet Manes algorithm. This work is designed and compiled on the embedded development kit EDK6.3i, and the synthesis software, ISE6.31, which is available with Xilinx Virtex-IIV2MB1000 FPGA. Huffman coding scheme is used to encode the wavelet coefficients so that they can be transmitted progressively through an Ethernet TCP/IP based connection. The possible reconfiguration can be exploited to attain higher performance. The design will be integrated with the neutron radiography system that is used with the Es-Salem research reactor. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Saadi, Slami Touiza, Maamar Kharfi, Faycal Guessoum, Abderrezak**URL:** <Go to ISI>://WOS:000328804000033

**Reference Type: Journal Article****Record Number:** 154**Author:** Sancho-Garnier, H. Khazraji, Y. C. Cherif, M. H. Mahnane, A. Hsairi, M. El Shalakamy, A. Osgul, N. Tuncer, M. Jumaan, A. O. Seoud, M.**Year:** 2013**Title:** Overview of Cervical Cancer Screening Practices in the Extended Middle East and North Africa Countries**Journal:** Vaccine**Volume:** 31**Pages:** G51-G57**Date:** Dec**Short Title:** Overview of Cervical Cancer Screening Practices in the Extended Middle East and North Africa Countries**ISSN:** 0264-410X**DOI:** 10.1016/j.vaccine.2012.06.046**Accession Number:** WOS:000329684500006

**Abstract:** National Organized Cervical Cancer Screening (NOCCS) programs are lacking in most of the "Extended Middle East and North Africa" (EMENA) countries. Consequently, most cervical cancers are diagnosed late and are associated with high mortality. In fact, in most of these countries, national mortality data are unknown due to the absence of population-based mortality registries. Most countries of the EMENA practice more or less limited opportunistic, cytology-based, screening tests, which often lack quality assurance and follow-up care. A few countries, within the initiation of a National Cancer Control Plan, have just started to implement organized screening programs using, for cervical cancer detection, visual inspection with acetic acid (Morocco) or cytology (Turkey). Moreover, most countries of the EMENA lack national guideline, as well as resources for the management of abnormal cytologic screening (or any other screening test). The main obstacle for the implementation of NOCCS is a lack of political understanding to support such public health programs and provide the necessary resources. Other obstacles that hinder the participation of women in cervical screening include a lack of knowledge of the disease, socio-religious and cultural barriers, and geographic and economic difficulties in accessing medical services. These countries are already convinced that prevention of cervical cancers in women who have cervical intraepithelial neoplasia is possible through various screening and treatment algorithms, but most countries still need to invest in well organized programs that can reduce cervical cancer incidence and mortality in women. This article forms part of a regional report entitled "Comprehensive Control of HPV Infections and Related Diseases in the Extended Middle East and North Africa Region" vaccine Volume 31, Supplement 6, 2013. Updates of the progress in the field are presented in a separate monograph entitled "Comprehensive Control of HPV Infections and Related Diseases" Vaccine Volume 30, Supplement 5, 2012. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Sancho-Garnier, Helene Khazraji, Youssef Chami Cherif, Moktar Hamdi Mahnane, Abbes Hsairi, Mohamed El Shalakamy, Amr Osgul, Nejat Tuncer, Murat Jumaan, Aisha O. Seoud, Muhieddine 6

**URL:** <Go to ISI>://WOS:000329684500006

**Reference Type: Journal Article****Record Number:** 155**Author:** Saoudi, A. Hachemi, A. Ferhat-Hamida, A. Medkour, Y. Reffas, M. Hachemi, H. Maamache, M.**Year:** 2013**Title:** First principles study of the structural, elastic, electronic and optical properties of CaSrTt (Tt=Si, Ge, Sn and Pb) (vol 152, pg 1800, 2012)**Journal:** Solid State Communications**Volume:** 161**Pages:** 51-51**Date:** May**Short Title:** First principles study of the structural, elastic, electronic and optical properties of CaSrTt (Tt=Si, Ge, Sn and Pb) (vol 152, pg 1800, 2012)**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2012.12.009**Accession Number:** WOS:000318839500013**Notes:** Saoudi, A. Hachemi, A. Ferhat-Hamida, A. Medkour, Y. Reffas, M. Hachemi, H. Maamache, M.**URL:** <Go to ISI>://WOS:000318839500013

**Reference Type: Journal Article****Record Number:** 156**Author:** Sayah, S. Hamouda, A.**Year:** 2013**Title:** A hybrid differential evolution algorithm based on particle swarm optimization for nonconvex economic dispatch problems**Journal:** Applied Soft Computing**Volume:** 13**Issue:** 4**Pages:** 1608-1619**Date:** Apr**Short Title:** A hybrid differential evolution algorithm based on particle swarm optimization for nonconvex economic dispatch problems**ISSN:** 1568-4946**DOI:** 10.1016/j.asoc.2012.12.014**Accession Number:** WOS:000316767100004

**Abstract:** This paper presents the design and application of an efficient hybrid heuristic search method to solve the practical economic dispatch problem considering many nonlinear characteristics of power generators, and their operational constraints, such as transmission losses, valve-point effects, multi-fuel options, prohibited operating zones, ramp rate limits and spinning reserve. These practical operation constraints which can usually be found at the same time in realistic power system operations make the economic load dispatch problem a nonsmooth optimization problem having complex and nonconvex features with heavy equality and inequality constraints. The proposed approach combines in the most effective way the properties of two of the most popular evolutionary optimization techniques now in use for power system optimization, the Differential Evolution (DE) and Particle Swarm Optimization (PSO) algorithms. To improve the global optimization property of DE, the PSO procedure is integrated as additional mutation operator. The effectiveness of the proposed algorithm (termed DEPSO) is demonstrated by solving four kinds of ELD problems with nonsmooth and nonconvex solution spaces. The comparative results with some of the most recently published methods confirm the effectiveness of the proposed strategy to find accurate and feasible optimal solutions for practical ELD problems. (C) 2012 Elsevier B. V. All rights reserved.

**Notes:** Sayah, Samir Hamouda, Abdellatif**URL:** <Go to ISI>://WOS:000316767100004

**Reference Type: Journal Article****Record Number:** 157**Author:** Sayah, S. Hamouda, A. Zehar, K.**Year:** 2013**Title:** Economic Dispatch Using Improved Differential Evolution Approach: A Case Study of the Algerian Electrical Network**Journal:** Arabian Journal for Science and Engineering**Volume:** 38**Issue:** 3**Pages:** 715-722**Date:** Mar**Short Title:** Economic Dispatch Using Improved Differential Evolution Approach: A Case Study of the Algerian Electrical Network**ISSN:** 1319-8025**DOI:** 10.1007/s13369-012-0339-6**Accession Number:** WOS:000315033600025

**Abstract:** Differential evolution (DE) is a simple but powerful evolutionary optimization algorithm with continually outperforming many of the already existing stochastic and direct search global optimization techniques. DE algorithm is a new optimization method that can handle non-differentiable, nonlinear, and multimodal objective functions. This paper presents an efficient modified differential evolution algorithm for solving economic dispatch problem. A new mutation strategy of the conventional DE is suggested to improve the performance and avoid premature convergence. Numerical results on the IEEE 30 bus test system and the practical Algerian 59 bus system show that the proposed approach is faster and more robust compared with those reported recently in the literature. The comparison results prove the capability of the proposed method in real-time implementation for the economic dispatch problem.

**Notes:** Sayah, Samir Hamouda, Abdellatif Zehar, Khaled**URL:** <Go to ISI>://WOS:000315033600025

**Reference Type: Journal Article****Record Number:** 158**Author:** Schoffler, M. S. Chuluunbaatar, O. Houamer, S. Galstyan, A. Titze, J. N. Schmidt, L. P. H. Jahnke, T. Schmidt-Bocking, H. Dorner, R. Popov, Y. V. Gusev, A. A. Dal Cappello, C.**Year:** 2013**Title:** Two-dimensional electron-momentum distributions for transfer ionization in fast proton-helium collisions**Journal:** Physical Review A**Volume:** 88**Issue:** 4**Date:** Oct**Short Title:** Two-dimensional electron-momentum distributions for transfer ionization in fast proton-helium collisions**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.88.042710**Article Number:** 042710**Accession Number:** WOS:000326079800003

**Abstract:** The momentum distribution of the electron in the reaction  $p + \text{He} \rightarrow \text{H} + \text{He}^{2+} + e$  is measured for projectile energies  $E_p = 300$  and  $630$  keV/u at very small scattering angles of the hydrogen. We present two-dimensional distributions parallel ( $k(\text{parallel to})$ ) and perpendicular ( $k(\text{perpendicular to})$ ) to the projectile beam as well as distributions  $k(\text{parallel to})$  for fixed  $k(\text{perpendicular to})$ . Theoretical calculations were carried out within the plane wave first Born approximation, which includes both mechanisms of the electron emission, namely, the shake-off and the sequential capture and ionization. It is shown that electron correlations in the initial ground-state wave function of the target play the most important role in the explanation of the experimentally observed enhanced backward electron emission.

**Notes:** Schoeffler, M. S. Chuluunbaatar, O. Houamer, S. Galstyan, A. Titze, J. N. Schmidt, L. Ph. H. Jahnke, T. Schmidt-Boecking, H. Doerner, R. Popov, Yu. V. Gusev, A. A. Dal Cappello, C.

**URL:** <Go to ISI>://WOS:000326079800003

**Reference Type: Journal Article****Record Number:** 159**Author:** Schoffler, M. S. Chuluunbaatar, O. Popov, Y. V. Houamer, S. Titze, J. Jahnke, T. Schmidt, L. P. H. Jagutzki, O. Galstyan, A. G. Gusev, A. A.**Year:** 2013**Title:** Transfer ionization and its sensitivity to the ground-state wave function**Journal:** Physical Review A**Volume:** 87**Issue:** 3**Date:** Mar**Short Title:** Transfer ionization and its sensitivity to the ground-state wave function**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.87.032715**Article Number:** 032715**Accession Number:** WOS:000316660000013

**Abstract:** We present kinematically complete theoretical calculations and experiments for transfer ionization in  $H^{++}$  He collisions at 630 keV/u. Experiment and theory are compared on the most detailed level of fully differential cross sections in the momentum space. This allows us to unambiguously identify contributions from the shake-off and binary encounter mechanisms of the reaction. It is shown that the simultaneous electron transfer and ionization is highly sensitive to the quality of a trial initial-state wave function. DOI:10.1103/PhysRevA.87.032715

**Notes:** Schoeffler, M. S. Chuluunbaatar, O. Popov, Yu. V. Houamer, S. Titze, J. Jahnke, T. Schmidt, L. Ph. H. Jagutzki, O. Galstyan, A. G. Gusev, A. A.

**URL:** <Go to ISI>://WOS:000316660000013

**Reference Type: Journal Article****Record Number:** 160**Author:** Seddik, T. Khenata, R. Bouhemadou, A. Guechi, N. Sayede, A. Varshney, D. Al-Douri, Y. Reshak, A. H. Bin-Omran, S.**Year:** 2013**Title:** External temperature and pressure effects on thermodynamic properties and mechanical stability of yttrium chalcogenides YX (X=S, Se and Te)**Journal:** Physica B-Condensed Matter**Volume:** 428**Pages:** 78-88**Date:** Nov**Short Title:** External temperature and pressure effects on thermodynamic properties and mechanical stability of yttrium chalcogenides YX (X=S, Se and Te)**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2013.07.014**Accession Number:** WOS:000324025300014

**Abstract:** The full potential linearized augmented plane wave method within the framework of density functional theory is employed to investigate the structural, thermodynamic and elastic properties of the yttrium chalcogenides (YX: X=S, Se, and Te) in their low-pressure phase (Fm (3) over barm) and high-pressure phase (Pm (3) over barm). The exchange-correlation potential is treated with the generalized gradient approximation of Perdew-Burke-Ernzerhof (GGA-PBE). Temperature dependence of the volume and both adiabatic and isothermal bulk moduli is predicted for a temperature range from 0 to 1200 K for the both phases of the herein considered materials. Furthermore, we have analyzed the thermodynamic properties such as the heat capacities, C-V and C-P, thermal expansion, alpha, and Debye temperature, Theta(D), under variable pressure and temperature. We have calculated the isothermal elastic constants C-ij(T) of the YX monochalcogenides in both NaCl-B1 and CsCl-B2 phases at zero pressure and a temperature range 0-1200 K. The results show that rare earth yttrium monochalcogenides are mechanically stable at high temperature. The elastic anisotropy of all studied materials in the two phases has been studied using three different methods. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Seddik, T. Khenata, R. Bouhemadou, A. Guechi, N. Sayede, A. Varshney, D. Al-Douri, Y. Reshak, A. H. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000324025300014

**Reference Type: Journal Article****Record Number:** 161**Author:** Selmani, M.**Year:** 2013**Title:** Frictional contact problem with wear for electro-viscoelastic materials with long memory**Journal:** Bulletin of the Belgian Mathematical Society-Simon Stevin**Volume:** 20**Issue:** 3**Pages:** 461-479**Date:** Jul-Sep**Short Title:** Frictional contact problem with wear for electro-viscoelastic materials with long memory**ISSN:** 1370-1444**Accession Number:** WOS:000325667500007

**Abstract:** We study a mathematical model for a quasistatic process of contact with normal compliance and friction when the wear of the contact surface due to friction is taken into account. The material is electro-viscoelastic with long memory. We establish a variational formulation for the model and prove the existence and uniqueness of the weak solution. The proof is based on classical results for elliptic variational inequalities and fixed point arguments.

**Notes:** Selmani, Mohamed**URL:** <Go to ISI>://WOS:000325667500007

**Reference Type: Journal Article****Record Number:** 162**Author:** Selmani, M. Selmani, L.**Year:** 2013**Title:** Frictional contact problem for elastic-viscoplastic materials with thermal effect**Journal:** Applied Mathematics and Mechanics-English Edition**Volume:** 34**Issue:** 6**Pages:** 761-776**Date:** Jun**Short Title:** Frictional contact problem for elastic-viscoplastic materials with thermal effect**ISSN:** 0253-4827**DOI:** 10.1007/s10483-013-1705-7**Accession Number:** WOS:000320041600008

**Abstract:** A dynamic contact problem for elastic-viscoplastic materials with thermal effects is investigated. The contact is bilateral, and the friction is modeled with Tresca's friction law with heat exchange. A variational formulation of the model is derived, and the existence of a unique weak solution is proved. The proofs are based on the classical result of nonlinear first order evolution inequalities, the equations with monotone operators, and the fixed point arguments. Finally, the continuous dependence of the solution on the friction yield limit is studied.

**Notes:** Selmani, M. Selmani, L.**URL:** <Go to ISI>://WOS:000320041600008

**Reference Type: Journal Article****Record Number:** 163**Author:** Semari, F. Ouahrani, T. Khachai, H. Khenata, R. Rabah, M. Bouhemadou, A. Murtaza, G. Amin, B. Rached, D.**Year:** 2013**Title:** ELECTRONIC BAND STRUCTURE, OPTICAL, THERMAL AND BONDING PROPERTIES OF  $\text{XMg}_2\text{O}_4$  (X = Si, Ge) SPINEL COMPOUNDS**Journal:** International Journal of Modern Physics B**Volume:** 27**Issue:** 18**Date:** Jul**Short Title:** ELECTRONIC BAND STRUCTURE, OPTICAL, THERMAL AND BONDING PROPERTIES OF  $\text{XMg}_2\text{O}_4$  (X = Si, Ge) SPINEL COMPOUNDS**ISSN:** 0217-9792**DOI:** 10.1142/s0217979213500823**Article Number:** 1350082**Accession Number:** WOS:000321626600003

**Abstract:** Bonding nature as well as structural, optoelectronic and thermal properties of the cubic  $\text{XMg}_2\text{O}_4$  (X = Si, Ge) spinel compounds have been calculated using a full-potential augmented plane-wave plus local orbitals (FP-APW+lo) method within the density functional theory. The exchange-correlation potential was treated with the PBE-GGA approximation to calculate the total energy. Moreover, the modified Becke-Johnson potential (TB-mBJ) was also applied to improve the electronic band structure calculations. The computed ground-state parameters (a, B, B' and u) are in excellent agreements with the available theoretical data. Calculations of the electronic band structure and bonding properties show that these compounds have a direct energy band gap ( $\Gamma$  -  $\Gamma$ ) with a dominated ionic character and the TB-mBJ approximation yields larger fundamental band gaps compared to those obtained using the PBE-GGA. Optical properties such as the complex dielectric function  $\epsilon(\omega)$ , reflectivity  $R(\omega)$  and energy loss function  $L(\omega)$ , for incident photon energy up to 40 eV, have been predicted. Through the quasi-harmonic Debye model, in which the phononic effects are considered, the effects of pressure P and temperature T on the thermal expansion coefficient, Debye temperature and heat capacity for the considered compounds are investigated for the first time.

**Notes:** Semari, F. Ouahrani, T. Khachai, H. Khenata, R. Rabah, M. Bouhemadou, A. Murtaza, G. Amin, B. Rached, D.**URL:** <Go to ISI>://WOS:000321626600003

**Reference Type: Journal Article****Record Number:** 164**Author:** Setifi, F. Charles, C. Houille, S. Thetiot, F. Triki, S. Gomez-Garcia, C. J. Pillet, S.**Year:** 2013**Title:** Spin crossover (SCO) iron(II) coordination polymer chain: Synthesis, structural and magnetic characterizations of Fe(abpt)(2)(mu-M(CN)(4)) (M = Pt-II and Ni-II)**Journal:** Polyhedron**Volume:** 61**Pages:** 242-247**Date:** Sep**Short Title:** Spin crossover (SCO) iron(II) coordination polymer chain: Synthesis, structural and magnetic characterizations of Fe(abpt)(2)(mu-M(CN)(4)) (M = Pt-II and Ni-II)**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2013.06.008**Accession Number:** WOS:000322938100032

**Abstract:** New iron(II) coordination polymeric neutral chain of formula [Fe(abpt)(2)(mu-M(CN)(4))], with M = Pt-II (1), Ni-II (2) and abpt = 4-amino-3,5-bis(pyridin-2-yl)-1,2,4-triazole, have been synthesized and characterized by infrared spectroscopy, X-ray diffraction and magnetic measurements. The two compounds are isostructural as deduced from a Rietveld analysis of X-ray powder diffraction data of 2 simulated from the single crystal structure of 1. The crystal packing of 1 is formed by regular chains running along the crystallographic [ -1 0 1 ] direction where the planar [Pt(CN)(4)](2-) anion acts as a mu(2)-bridging ligand via two nitrogen atoms of two different trans cyano groups, while the two abpt molecules act as chelating ligands. Along the neutral chains, the Fe ... Pt distances are imposed by the cyano groups of the [Pt(CN)(4)](2-) moiety (5.027 and 5.022 angstrom at 294 and 150 K, respectively), leading to Fe Fe intrachain distances of 10.055 and 10.045 angstrom at 294 and 150 K, respectively. The thermal dependence of the product of the molar magnetic susceptibility times the temperature (chi T-m) for compound 1 shows a constant value close to 0.2 emu K mol(-1) in the temperature range 10-300 K in the cooling and warming scans. Above 300 K, compound I shows a SCO transition from the IS to the HS configuration although the transition is not fully achieved at 400 K. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Setifi, Fatima Charles, Catherine Houille, Sylvie Thetiot, Franck Triki, Smail Gomez-Garcia, Carlos J. Pillet, Sebastien**URL:** <Go to ISI>://WOS:000322938100032

**Reference Type: Journal Article****Record Number:** 165**Author:** Setifi, Z. Domasevitch, K. V. Setifi, F. Mach, P. Ng, S. W. Petricek, V. Dusek, M.**Year:** 2013**Title:** Multiple anion... interactions in tris(1,10-phenanthroline-2N,N)iron(II) bis 1,1,3,3-tetracyano-2-(2-hydroxyethyl)propenide monohydrate**Journal:** Acta Crystallographica Section C-Crystal Structure Communications**Volume:** 69**Pages:** 1351-+**Date:** Nov**Short Title:** Multiple anion... interactions in tris(1,10-phenanthroline-2N,N)iron(II) bis 1,1,3,3-tetracyano-2-(2-hydroxyethyl)propenide monohydrate**ISSN:** 0108-2701**DOI:** 10.1107/s0108270113027108**Accession Number:** WOS:000326651300031

**Abstract:** In the ionic structure of the title compound,  $[\text{Fe}(\text{C}_{12}\text{H}_8\text{N}_2)_3](\text{C}_9\text{H}_5\text{N}_4\text{O}_2)_2\text{H}_2\text{O}$ , the octahedral tris-chelate  $[\text{Fe}(\text{phen})_3]^{2+}$  dications [ $\text{FeN} = 1.9647(14)\text{-}1.9769(14)\text{\AA}$ ; phen is 1,10-phenanthroline] afford one-dimensional chains by a series of slipped - stacking interactions [centroid-to-centroid distances =  $3.792(3)$  and  $3.939(3)\text{\AA}$ ]. The 1,1,3,3-tetracyano-2-(2-hydroxyethyl)propenide anions, denoted  $\text{tcoetOH}^-$ , reveal an appreciable delocalization of  $\pi$ -electron density, involving the central propenide [ $\text{CC} = 1.383(3)\text{-}1.401(2)\text{\AA}$ ] fragment and four nitrile groups, and this is also supported by density functional theory (DFT) calculations at the B97D/6-311+G(2d,2p) level. Primary noncovalent inter-moiety interactions comprise conventional  $\text{OH}\cdots\text{O}(\text{N})$  and weak  $\text{CH}\cdots\text{O}(\text{N})$  hydrogen bonding [ $\text{O}\cdots\text{O}(\text{N}) = 2.833(2)\text{-}3.289(5)\text{\AA}$  and  $\text{C}\cdots\text{O}(\text{N}) = 3.132(2)\text{-}3.439(2)\text{\AA}$ ]. The double anion... interaction involving a nitrile group of  $\text{tcoetOH}^-$  and two cis-positioned pyridine rings ( $\pi$ -pocket') of  $[\text{Fe}(\text{phen})_3]^{2+}$  [ $\text{N}\cdots\text{centroid} = 3.212(2)$  and  $3.418(2)\text{\AA}$ ] suggest the relevance of anion... stackings for charge-diffuse polycyanoanions and common M-chelate species.

**Notes:** Setifi, Zouaoui Domasevitch, Konstantin V. Setifi, Fatima Mach, Pavel Ng, Seik Weng Petricek, Vaclav Dusek, Michal Si 11

**URL:** <Go to ISI>://WOS:000326651300031

**Reference Type: Journal Article****Record Number:** 166**Author:** Shah, S. Yang, W. Y. Hasan, M. I. Malek, R. Bech, O. M. Home, P.**Year:** 2013**Title:** Biphasic Insulin Aspart 30 in Insulin-Naive People with Type 2 Diabetes in Non-western Nations: Results from a Regional Comparative Multinational Observational Study (A(1)chieve)**Journal:** Diabetes Technology & Therapeutics**Volume:** 15**Issue:** 11**Pages:** 954-963**Date:** Nov**Short Title:** Biphasic Insulin Aspart 30 in Insulin-Naive People with Type 2 Diabetes in Non-western Nations: Results from a Regional Comparative Multinational Observational Study (A(1)chieve)**ISSN:** 1520-9156**DOI:** 10.1089/dia.2013.0074**Accession Number:** WOS:000326401400009

**Abstract:** Background: A(1)chieve((R)) (Novo Nordisk A/S, Bagsvaerd, Denmark) was a prospective, multicenter, noninterventional study in 66,726 people with type 2 diabetes mellitus (T2DM) in 28 countries beginning biphasic insulin aspart 30 (aspart premix), insulin detemir, or insulin aspart in routine clinical care. Subjects and Methods: A subgroup of 27,594 insulin-naive people began therapy with aspart premix with or without oral agents. Safety and effectiveness data were taken from clinic records at baseline and after 24 weeks. Seven regional country groupings were prespecified. Results: Mean final insulin dose ranged from 0.680.26U/kg/day (Middle East/Gulf) to 0.38 +/- 0.14U/kg/day (South Asia). The baseline glycated hemoglobin (HbA(1c)) level varied from 10.5 +/- 2.0% (Latin America) to 9.2 +/- 1.3% (South Asia), with reductions from -2.9 +/- 2.1% (Latin America) to -1.9 +/- 1.3% (South Asia). The proportion of people reaching an HbA(1c) level of <7.0% was highest in China (56%) and lowest in North Africa (22%). Fasting plasma glucose level reductions were from -6.4 +/- 5.3mmol/L (Latin America) to -3.6 +/- 2.6mmol/L (South Asia). Most people began aspart premix twice daily, varying from 91% (North Africa) to 70% (Latin America). Improvement in HbA(1c) increased with baseline dose frequency (once daily, -1.5 +/- 1.4%; twice daily, -2.2 +/- 1.6%; three times daily, -2.9 +/- 2.2%). Conclusions: Insulin-naive people with T2DM beginning aspart premix insulin in routine clinical practice in non-western nations had clinically useful improvements in blood glucose control after 24 weeks in all seven regions. Improvements from baseline for glucose control variables were greater than cross-regional differences in those variables at 24 weeks.

**Notes:** Shah, Siddharth Yang, Wenying Hasan, Mohammad Imtiaz Malek, Rachid Bech, Ole Molskov Home, Philip

**URL:** <Go to ISI>://WOS:000326401400009

**Reference Type: Journal Article****Record Number:** 167**Author:** Slimani, L. Bouktir, T.**Year:** 2013**Title:** Economic power dispatch of power systems with pollution control using artificial bee colony optimization**Journal:** Turkish Journal of Electrical Engineering and Computer Sciences**Volume:** 21**Issue:** 6**Pages:** 1515-1527**Short Title:** Economic power dispatch of power systems with pollution control using artificial bee colony optimization**ISSN:** 1300-0632**DOI:** 10.3906/elk-1106-10**Accession Number:** WOS:000325373300001

**Abstract:** This paper presents a solution for the emission-controlled economic dispatch (ECED) problem of medium-sized power systems via an artificial bee colony algorithm. The ECED problem, which accounts for the minimization of both the fuel cost and the emission, is a multiple objective function problem. The objective is to minimize the total fuel cost of the generation and environmental pollution caused by fossil-based thermal generating units and to also maintain an acceptable system performance in terms of the limits on the generator's real and reactive power outputs, bus voltages, shunt capacitors/reactors, and power flow of transmission lines. The proposed algorithm is validated on an IEEE 30-bus system with 6 generating units. The results of the proposed technique are compared with that of the particle swarm optimization technique. The proposed approach is also tested on the Algerian 59-bus network and compared with global optimization methods (fuzzy genetic algorithm and ant colony optimization). The results show that the approach proposed can converge to a near solution and obtain a competitive solution in a critical situation and within a reasonable time.

**Notes:** Slimani, Linda Bouktir, Tarek**URL:** <Go to ISI>://WOS:000325373300001

**Reference Type: Journal Article****Record Number:** 168**Author:** Tebbakh, S. Beniaiche, A. Fenineche, N. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2013**Title:** Electrochemical nucleation behaviours and properties of electrodeposited Co-Ni alloy thin films**Journal:** Transactions of the Institute of Metal Finishing**Volume:** 91**Issue:** 1**Pages:** 17-23**Date:** Jan**Short Title:** Electrochemical nucleation behaviours and properties of electrodeposited Co-Ni alloy thin films**ISSN:** 0020-2967**DOI:** 10.1179/0020296712z.00000000076**Accession Number:** WOS:000313743600006

**Abstract:** The electrocrystallisation of Co, Ni and Co-Ni alloys on ruthenium surface from chloride baths has been studied by cyclic voltammetry and chronoamperometry measurements. The structural and magnetic properties were studied by X-ray diffraction and alternating gradient force magnetometer techniques respectively. The Co-Ni alloys were deposited from solution with molar ratios (Co/Ni) of 5 : 1, 1 : 1 and 1 : 5. From cyclic voltammetry measurements, for all molar ratios for electrodeposited Co-Ni, preferential deposition of Co occurs and anomalous codeposition takes place. Therefore, variation in the composition of thin films alloy is possible depending on the deposition potential. The Scharifker and Hills model was employed to analyse the current transients. For both Co and Co-Ni alloys, the nucleation was in good agreement with the instantaneous model followed by three-dimensional diffusion limited growth. However, for Ni after  $t(\max)$ , the nucleation process changes from progressive to instantaneous model. It is evident that the compositions of the electrolyte do not have influence on the type of nucleation for Co-Ni alloys. X-ray diffraction measurements indicate a small crystallite size with the presence of a mixture of hcp and fcc Co-Ni structures. The hysteresis loops with a magnetic field in the parallel and perpendicular directions showed that the easy magnetisation axis of Co-Ni thin film is in the film plane.

**Notes:** Tebbakh, S. Beniaiche, A. Fenineche, N. Azizi, A. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000313743600006

**Reference Type: Journal Article****Record Number:** 169**Author:** Tigrine, C. Bulzomi, P. Leone, S. Bouriche, H. Kameli, A. Marino, M.**Year:** 2013**Title:** Cleome arabica leaf extract has anticancer properties in human cancer cells**Journal:** Pharmaceutical Biology**Volume:** 51**Issue:** 12**Pages:** 1508-1514**Date:** Dec**Short Title:** Cleome arabica leaf extract has anticancer properties in human cancer cells**ISSN:** 1388-0209**DOI:** 10.3109/13880209.2013.796563**Accession Number:** WOS:000326192900003

**Abstract:** Context: *Cleome arabica* L. (Capparidaceae) is a desert plant widely distributed in the North part of Africa whose leaves are used in traditional medicine as a sedative for abdominal and rheumatic pains. Objectives: The anticancer activity of methanol *Cleome arabica* leaf extracts (CALE) is investigated in different human cancer cell lines. Materials and methods: Five different human cancer cell lines, representative of the most common cancers in Western countries (i.e., breast adenocarcinoma, colon carcinoma, neuroblastoma, hepatoma, cervix carcinoma) were treated with different concentrations of CALE (i.e., 1, 5, 10, 25, 50, 100 and 200  $\mu$ g/ml). Cell viability and cell cycle were measured by using a hemocytometer chamber and a cytofluorimeter, respectively. Epidermal growth factor (EGF) was used as a positive control. Western blots were performed to evaluate the CALE effects on pathways involved in cell growth regulation and on apoptotic cascade activation. Results and conclusion: Our results confirm that CALE has a high content of polyphenolic compounds (i.e., 32.21  $\pm$  3.44%), mainly as flavonoids (24.56  $\pm$  4.67%). In all tested cell lines CALE treatment reduces cell number in a dose-dependent manner ( $ED_{50} = 175 \pm 30 \mu$ g/ml). CALE (100 and 200  $\mu$ g/ml) increases by three-fold the activation of the apoptotic cascade involving caspase-3 activation and the cleavage of its substrate poly(ADP-ribose) polymerase (PARP). Intriguingly, CALE treatment (200  $\mu$ g/ml) also blocks EGF-induced cell growth by preventing the growth factor-triggered AKT and ERK phosphorylation. As a whole, these data strongly suggest that CALE possesses anticancer effects in all tested cancer cell lines.

**Notes:** Tigrine, Chafia Bulzomi, Pamela Leone, Stefano Bouriche, Hamama Kameli, Abdelkarim Marino, Maria

**URL:** <Go to ISI>://WOS:000326192900003

**Reference Type: Journal Article****Record Number:** 170**Author:** Tinouche, M. Kharmouche, A. Schmerber, G.**Year:** 2013**Title:** Structural and Magnetic Studies of CoCr Thin Films Prepared by Physical Vapor Deposition**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 26**Issue:** 4**Pages:** 769-772**Date:** Apr**Short Title:** Structural and Magnetic Studies of CoCr Thin Films Prepared by Physical Vapor Deposition**ISSN:** 1557-1939**DOI:** 10.1007/s10948-012-1914-5**Accession Number:** WOS:000317014500008

**Abstract:** We use physical vapor deposition (PVD) to produce, under vacuum, CoCr thin films onto Si (100) and glass substrates. The thicknesses of the samples were measured with a DEKTAK 150 profilometer and the micro structural properties were studied using a Siemens D500 X-ray diffractometer. The static magnetic characterization was done by means of an Alternating Gradient Field Magnetometer (A.G.F.M.) 2900 MicroMag. The films deposited on Corning glass are amorphous. Among all the samples deposited on Si(100) with thickness ranging from 100 nm to 340 nm, only those with thickness 163 nm, 178 nm and 340 nm are polycrystalline and present a hexagonal close-packed (h.c.p.) structure with aOE (c) 0001 > texture. The magnetization curve study infers that all the samples present a planar ferromagnetic anisotropy. The maximum saturation magnetization  $M(s)$  value being 400 emu/cm<sup>3</sup>, the coercive field decreases vs. thickness beyond a maximum value (178 nm). All these results will be presented and discussed.

**Notes:** Tinouche, M. Kharmouche, A. Schmerber, G. 3rd International Conference on Superconductivity and Magnetism (ICSM) Apr 29-may 04, 2012 Istanbul, TURKEY Si

**URL:** <Go to ISI>://WOS:000317014500008

**Reference Type: Journal Article****Record Number:** 171**Author:** Tocino, A. Zeghdane, R. Abbaoui, L.**Year:** 2013**Title:** Linear mean-square stability analysis of weak order 2.0 semi-implicit Taylor schemes for scalar stochastic differential equations**Journal:** Applied Numerical Mathematics**Volume:** 68**Pages:** 19-30**Date:** Jun**Short Title:** Linear mean-square stability analysis of weak order 2.0 semi-implicit Taylor schemes for scalar stochastic differential equations**ISSN:** 0168-9274**DOI:** 10.1016/j.apnum.2013.01.004**Accession Number:** WOS:000317023900002

**Abstract:** As in the deterministic case, the introduction of implicitness in stochastic schemes improves the stability behavior. In this paper a complete study for the linear MS-stability of the two-parameter family of semi-implicit weak order 2.0 Taylor schemes for scalar stochastic differential equations is given. Figures of the MS-stability regions and numerical examples that confirm the theoretical results are shown. (C) 2013 IMACS. Published by Elsevier B.V. All rights reserved.

**Notes:** Tocino, A. Zeghdane, R. Abbaoui, L.**URL:** <Go to ISI>://WOS:000317023900002

**Reference Type: Journal Article****Record Number:** 172**Author:** Touabti, A. F. Younsi, K. Bentriou, A. Smati, A.**Year:** 2013**Title:** Transient analysis helps IM for crater-type corrosion defects**Journal:** Oil & Gas Journal**Volume:** 111**Issue:** 11**Pages:** 94-+**Date:** Nov**Short Title:** Transient analysis helps IM for crater-type corrosion defects**ISSN:** 0030-1388**Accession Number:** WOS:000327050300019**Notes:** Touabti, Abdel-Fettah Younsi, Karim Bentriou, Abdelhak Smati, Abdelnacer**URL:** <Go to ISI>://WOS:000327050300019

**Reference Type: Journal Article****Record Number:** 173**Author:** Ynineb, F. Hafdallah, A. Aida, M. S. Attaf, N. Bougdira, J. Rinnert, H. Rahmane, S.**Year:** 2013**Title:** Influence of Sn content on properties of ZnO:SnO<sub>2</sub> thin films deposited by ultrasonic spray pyrolysis**Journal:** Materials Science in Semiconductor Processing**Volume:** 16**Issue:** 6**Pages:** 2021-2027**Date:** Dec**Short Title:** Influence of Sn content on properties of ZnO:SnO<sub>2</sub> thin films deposited by ultrasonic spray pyrolysis**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2013.07.023**Accession Number:** WOS:000327166000105

**Abstract:** The present work is devoted to the preparation of zinc oxide (ZnO): tin oxide (SnO<sub>2</sub>) thin films by ultrasonic spray technique. A set of films are deposited using a solution formed with zinc acetate and tin chloride salts mixture with varied weight ratio  $R = [Sn/(Zn+Sn)]$ . The ratio R is varied from 0 to 100% in order to investigate the influence of Sn concentration on the physical properties of ZnO:SnO<sub>2</sub> films. The X rays diffraction (XRD) analysis indicated that films are composed of ZnO and SnO<sub>2</sub> distinct phases without any alloys or spinel phase formations. The average grain size of crystallites varies with the ratio R from 17 to 20 nm for SnO<sub>2</sub> and from 24 to 40 nm for ZnO. The obtained films are highly transparent with a transmission coefficient equal to 80%. An increase in Sn concentration increases both the effective band gap energy from 3.2 to 4.01 eV and the photoluminescence intensity peak assigned defects to SnO<sub>2</sub>. The films electrical characterization indicated that films are resistive. Their resistivities vary between  $1.2 \times 10^2$  and  $3.3 \times 10^4$  ( $\Omega$  cm). The higher resistivity is measured in film deposited with a ratio R equal to 50%. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Ynineb, F. Hafdallah, A. Aida, M. S. Attaf, N. Bougdira, J. Rinnert, H. Rahmane, S.**URL:** <Go to ISI>://WOS:000327166000105

**Reference Type: Journal Article****Record Number:** 174**Author:** Yuse, K. Guyomar, D. Audigier, D. Eddiai, A. Meddad, M. Boughaleb, Y.**Year:** 2013**Title:** Adaptive control of stiffness by electroactive polyurethane**Journal:** Sensors and Actuators a-Physical**Volume:** 189**Pages:** 80-85**Date:** Jan**Short Title:** Adaptive control of stiffness by electroactive polyurethane**ISSN:** 0924-4247**DOI:** 10.1016/j.sna.2012.09.032**Accession Number:** WOS:000314622600011

**Abstract:** For applications concerning vehicle suspension or the membranes of acoustic loud speakers, a conventional stiffness control method is both useful and desired. However, without total replacement of the material itself or its structure, modification of the stiffness is not an easy matter. Besides, the technology of electro active polymers (EAPs) is a fast-moving topic. The high electro-induced strain level of these materials is an attractive advantage compared to many other mechanical/electrical converging sensor/actuator materials such as piezo devices. This paper presents an easy and innovative method to control the stiffness of EAPs. First, a polyurethane (PU) sample was pre-stretched in the 1-direction, and clamped at both ends. Then, an electrical field was induced in the 3-direction. The positive elongation in the 1-direction created a force opposite to that of the pre-stretching since the specimen was clamped. From the equation of force valence, a simple stiffness equation was obtained with the ratio between the pre-stretching force and the force created by the electrical stimuli. Concerning the electrical saturation in the EAP material, the variation in stiffness could be expressed by the equation of electrical field. With a simple experimental viewing, more than 30% of stiffness variation could be obtained with a moderate electrical induction,  $<32 \text{ V}/\mu \text{ m}$ . (C) 2012 Elsevier B.V. All rights reserved.

**Notes:** Yuse, Kaori Guyomar, Daniel Audigier, David Eddiai, Adil Meddad, Mounir Boughaleb, Yahia

**URL:** <Go to ISI>://WOS:000314622600011

**Reference Type: Journal Article****Record Number:** 175**Author:** Zerroug, S. Gueddim, A. Khan, M. A. Bouarissa, N.**Year:** 2013**Title:** Ab initio study of structural parameters and optical properties of ZnTe<sub>1-x</sub>O<sub>x</sub>**Journal:** Superlattices and Microstructures**Volume:** 53**Pages:** 155-162**Date:** Jan**Short Title:** Ab initio study of structural parameters and optical properties of ZnTe<sub>1-x</sub>O<sub>x</sub>**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2012.09.015**Accession Number:** WOS:000314075100015

**Abstract:** The present work employs the full potential linearized augmented plane wave (FP-LAPW) technique to investigate the structural and optical properties of zinc-blende-structured ZnTe<sub>1-x</sub>O<sub>x</sub> with oxygen concentration in the range 0-1. Features such as lattice constant, bulk modulus and its pressure derivative have been reported. In agreement with X-ray diffraction measurement, it is found that the lattice constant of ZnTe<sub>1-x</sub>O<sub>x</sub> does not follow Vegard's law. In addition, the spectral dependence of the dielectric functions of the material system of interest for various oxygen concentrations at energies below and above the fundamental absorption edge are examined and discussed. The calculated static and high-frequency dielectric constants are found to agree reasonably well with those reported in the literature. Other case, our results are predictions. The information derived from the present study may be useful for optical emitters/converters or intermediate/defect band solar cells. (C) 2012 Elsevier Ltd. All rights reserved.

**Notes:** Zerroug, S. Gueddim, A. Khan, M. Ajmal Bouarissa, N.**URL:** <Go to ISI>://WOS:000314075100015

**Reference Type: Book Section****Record Number:** 1**Author:** Abdelhak, M. Nourredine, B. Alicia, D. Yolanda, C.**Year:** 2013**Title:** Improvement of the surface state of a sandblasted glass by depositing a thin layer of SiO<sub>2</sub> using sol-gel technique**Editor:** ElBouari, A. ElOuatib, R. Hannache, H. Krimi, S. Lamire, M. Mansouri, I. Moussa, R. Aboulayt, A.**Book Title:** Remces Xii - Xiie Rencontre Marocaine Sur La Chimie De L'etat Solide**Volume:** 5**Series Title:** MATEC Web of Conferences**Short Title:** Improvement of the surface state of a sandblasted glass by depositing a thin layer of SiO<sub>2</sub> using sol-gel technique**ISBN:** 2261-236X**DOI:** 04021 10.1051/matecconf/20130504021**Accession Number:** WOS:000348252200027**Notes:** Abdelhak, M. Nourredine, B. Alicia, D. Yolanda, C. 12th Moroccan Meeting on Chemistry of Solid State (REMCES) Nov 21-23, 2012 Casablanca, MOROCCO Univ Hassan II Casablanca, Univ Hassan II Ain Chock, Fac Sci, REMAT, Fac Sci Ben Sick, Univ Hassan II Mohammedia Casablanca**URL:** <Go to ISI>://WOS:000348252200027

**Reference Type: Book Section****Record Number:** 2**Author:** Adel, A. Laborie, S. Roose, P.**Year:** 2013**Title:** Automatic Adaptation of Multimedia Documents**Editor:** Shakshuki, E. M.**Book Title:** 4th International Conference on Ambient Systems, Networks and Technologies**Volume:** 19**Pages:** 992-997**Series Title:** Procedia Computer Science**Short Title:** Automatic Adaptation of Multimedia Documents**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2013.06.138**Accession Number:** WOS:000361480500125

**Abstract:** Currently, multimedia documents can be displayed on multiple platforms (laptops, smartphones, tablets, etc.), that resulting in a birth of new information system called pervasive. The various execution contexts of a multimedia presentation introduce different constraints for the presentation itself. In this paper, we propose a specific ontology for on-the-fly (runtime) adaptation of multimedia documents. More precisely, we propose semantic rules allowing the automatic generation of dynamic and quality composition of heterogeneous components. Our proposed ontology has the great advantage to offer to users a flexible infrastructure in order to easily govern the response time and the quality assembly of their own applications at runtime. (c) 2013 The Authors. Published by Elsevier B.V.

**Notes:** Adel, Alt Laborie, Sebastien Roose, Philippe Ant 2013 4th International Conference on Ambient Systems, Networks and Technologies (ANT) / 3rd International Conference on Sustainable Energy Information Technology (SEIT) Jun 25-28, 2013 Halifax, CANADA

**URL:** <Go to ISI>://WOS:000361480500125

**Reference Type: Book Section****Record Number:** 3**Author:** Azzouzi, G. Tazibt, W.**Year:** 2013**Title:** Improving silicon solar cell efficiency by using the impurity photovoltaic effect**Editor:** ClimentFont, A. Perlado, M.**Book Title:** International Workshop Energy 2012**Volume:** 41**Pages:** 40-49**Series Title:** Energy Procedia**Short Title:** Improving silicon solar cell efficiency by using the impurity photovoltaic effect**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2013.09.005**Accession Number:** WOS:000345163700003

**Abstract:** The necessity to find new forms of renewable energy is very important and urgent nowadays. The renewable sources of energy derived from the sun are one of the promising options. The photovoltaic cells as one of renewable energy sources have been largely studied in order to obtain cheap, efficient and secure PV cells. The conversion efficiency is the most important property in the PV domain. The most important aim of PV manufacturers is to reduce the price of the solar cells and increase their efficiencies above the Shockley Queisser limit. Third generation concepts have been studied recently in an attempt to improve solar cell efficiency above this limit. The impurity photovoltaic (IPV) effect is one of these concepts used to augment cell infrared response and therefore enhance cell conversion efficiency. The idea of the IPV effect is based on the insertion of deep defects in the solar cell. These defects provide a multistep absorption mechanism for sub-band gap photons to create new electron-hole pairs. In this paper we study numerically the potential of the IPV effect in crystalline silicon solar cell doped with a new IPV impurity. We investigate the effect of certain impurity and structure parameters on silicon solar cell characteristics such as short circuit current density  $J(sc)$ , open circuit voltage  $V_{oc}$ , conversion efficiency and quantum efficiency QE using SCAPS simulator. We find that the incorporation of the IPV impurities into silicon solar cells can enhance spectral response, short circuit current density and conversion efficiency only under some conditions (C) 2013 The Authors. Published by Elsevier Ltd.

**Notes:** Azzouzi, Ghania Tazibt, Wahiba International Workshop on Energy Sep 17-20, 2012 Madrid, SPAIN

**URL:** <Go to ISI>://WOS:000345163700003

**Reference Type: Book Section****Record Number:** 4**Author:** Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Julien, C. M.**Year:** 2013**Title:** Polypyrrole-covered MnO<sub>2</sub> as Electrode Material for Hybrid Supercapacitor**Editor:** Long, J. W. Hu, C. C. Kulesza, P. Simon, P. Belanger, D. Kim, K. B. Morita, M. Sugimoto, W. Brousse, T. Ko, J. M. Naoi, K. Xia, Y. Y.**Book Title:** Electrochemical Capacitors**Volume:** 50**Series Volume:** 43**Pages:** 79-84**Series Title:** ECS Transactions**Short Title:** Polypyrrole-covered MnO<sub>2</sub> as Electrode Material for Hybrid Supercapacitor**ISBN:** 1938-5862 978-1-60768-431-2**DOI:** 10.1149/05043.0079ecst**Accession Number:** WOS:000339243100010

**Abstract:** MnO<sub>2</sub> has been studied as hybrid electrode material in aqueous asymmetric supercapacitor. It possesses the advantages of low cost, sufficiently high specific capacitance, and environmentally friendly nature. We studied the blend formed by electrochemical polymerization of pyrrole monomer (Py) deposited onto MnO<sub>2</sub> particles. The composite material (PPy/MnO<sub>2</sub>) has been characterized by different methods including cyclic voltammetry, chronoamperometry, X-ray diffractometry and BET measurements. At a constant current density 2 mA cm<sup>-2</sup> the specific capacitance was calculated from galvanostatic charge-discharge cycling tests. It has been demonstrated that the asymmetric supercapacitor using (PPy/MnO<sub>2</sub>) composite material has high specific capacitance of 141.6 F g<sup>-1</sup> compared with 73.7 F g<sup>-1</sup> for MnO<sub>2</sub>.

**Notes:** Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Julien, C. M. Symposium on Electrochemical Capacitors held during the PRiME Joint International Meeting of the Electrochemical-Society and the Electrochemical-Society-of-Japan Oct 07-12, 2012 Honolulu, HI Electrochem Soc, Electrochem Soc Japan, Japan Soc Appl Phys, Korean Electrochem Soc, Royal Australian Chem Inst, Electrochemistry Div, Chinese Soc Electrochemistry, Battery Div, Phys & Analyt Electrochemistry Div

**URL:** <Go to ISI>://WOS:000339243100010

**Reference Type: Book Section****Record Number: 5****Author:** Benatallah, M. F. Chegaar, M.**Year:** 2013**Title:** Investigation of wind characteristics in the southern region of Algeria**Editor:** Salame, C. Khoury, G. Aillerie, M.**Book Title:** Terragreen 13 International Conference 2013 - Advancements in Renewable Energy and Clean Environment**Volume:** 36**Pages:** 707-713**Series Title:** Energy Procedia**Short Title:** Investigation of wind characteristics in the southern region of Algeria**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2013.07.082**Accession Number:** WOS:000345406100081

**Abstract:** Before an investment in wind turbines takes place in a given site, it is important to know several fundamental properties such as wind behavior, availability, continuity, and probability in the proposed region. To make decisions with those properties, statistical and dynamic characteristics of wind of the site should be found out using wind observations and statistical wind evaluation. In this paper a preliminary examination of wind potential of two sites in the southern region of Algeria is dealt with. Wind measured data of a period of 18 years are collected from these two weather stations. Wind speed is studied to find the adequate probability distribution which fits the best the measured data. By performing the chi(2) test we find that the Weibull distribution function is the most adapted. The corresponding parameters were estimated using two methods. These are the quick and the least squares methods. Although that the first method is more practical, the obtained results by both methods can be used to estimate the Weibull parameters for both sites and good agreement is obtained with the measured data. (C) 2013 The Authors. Published by Elsevier Ltd.

**Notes:** Benatallah, M. F. Chegaar, M. TerraGreen International Conference on Advancements in Renewable Energy and Clean Environment Feb 15-17, 2013 Beirut, LEBANON TerraGreen

**URL:** <Go to ISI>://WOS:000345406100081

**Reference Type: Book Section****Record Number:** 6**Author:** Bouguezel, S. Ahmad, M. O. Swamy, M. N. S. Ieee,**Year:** 2013**Title:** A New Involutory Parametric Transform and its Application to Image Encryption**Book Title:** 2013 Ieee International Symposium on Circuits and Systems**Pages:** 2605-2608**Series Title:** IEEE International Symposium on Circuits and Systems**Short Title:** A New Involutory Parametric Transform and its Application to Image Encryption**ISBN:** 0271-4302 978-1-4673-5762-3; 978-1-4673-5760-9**Accession Number:** WOS:000332006802204

**Abstract:** In this paper, a novel involutory parametric transform is proposed by exploiting the reciprocal-orthogonal parametric transform. In addition, a recursive algorithm is proposed for its simple construction and fast computation. The transform has a very large number of independent parameters that are useful for many applications. Specifically, we show by implementing the double random phase encoding technique that the independent parameters of the proposed transform can successfully be used as an additional secret key for image encryption.

**Notes:** Bouguezel, Saad Ahmad, M. Omair Swamy, M. N. S. Iscas IEEE International Symposium on Circuits and Systems (ISCAS) May 19-23, 2013 Beijing, PEOPLES R CHINA IEEE, Peking Univ, Tsinghua Univ, Natl Nat Sci Fdn China, Broadcom, Microsoft Res Asia, Texas Instruments, Huawei, LG, Lenovo, MediaTek, Yahoo Beijing Global R&D Ctr

**URL:** <Go to ISI>://WOS:000332006802204

**Reference Type: Book Section****Record Number:** 7**Author:** Chegaar, M. Hamzaoui, A. Namoda, A. Petit, P. Aillerie, M. Herguth, A.**Year:** 2013**Title:** Effect of illumination intensity on solar cells parameters**Editor:** Salame, C. Khoury, G. Aillerie, M.**Book Title:** Terragreen 13 International Conference 2013 - Advancements in Renewable Energy and Clean Environment**Volume:** 36**Pages:** 722-729**Series Title:** Energy Procedia**Short Title:** Effect of illumination intensity on solar cells parameters**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2013.07.084**Accession Number:** WOS:000345406100083

**Abstract:** This work presents the influence of the irradiance intensity level on different parameters (ideality factor, saturation current, series resistance, shunt resistance.) of polycrystalline silicon solar cells. I-V characteristics of these cells were plotted with measurements done at room temperature, and were modeled using the single diode model. We find that the short circuit current, the photocurrent and the ideality factor increase linearly with the irradiation level intensity while the open circuit voltage and efficiency increase logarithmically. The fill factor increases slightly for low intensities, and then it decreases with higher intensities of irradiation. The saturation current increases exponentially. The series resistance remains invariant and the shunt resistance decreases linearly. (C) 2013 The Authors. Published by Elsevier Ltd.

**Notes:** Chegaar, M. Hamzaoui, A. Namoda, A. Petit, P. Aillerie, M. Herguth, A. TerraGreen International Conference on Advancements in Renewable Energy and Clean Environment Feb 15-17, 2013 Beirut, LEBANON TerraGreen

**URL:** <Go to ISI>://WOS:000345406100083

**Reference Type: Book Section****Record Number:** 8**Author:** Chennafi, H.**Year:** 2013**Title:** The Management of Soil and Water for Date Palm El-Hadjira Region, Daira of Touggourt (South of Algeria)**Editor:** Bouguedoura, N. Bennaceur, M. Pintaud, J. C.**Book Title:** I International Symposium on Date Palm**Volume:** 994**Pages:** 105-110**Series Title:** Acta Horticulturae**Short Title:** The Management of Soil and Water for Date Palm El-Hadjira Region, Daira of Touggourt (South of Algeria)**ISBN:** 0567-7572 978-90-66055-26-1**Accession Number:** WOS:000332964900009

**Abstract:** In a hyperarid area, date palm requires an appropriated management. El-Hadjira region belongs to the saharan bioclimat floor. The mean temperatures are of 10.12 degrees C (January) to 34.0 degrees C (summer), the corresponding absolute values are -3.45 and 48.75 degrees C. The thermal amplitudes are high and extremely brutal, rainfall is deficient and badly distributed. However, water resources are the fundamental element to improve production. Violence and frequency of wind determine the character of the desert region. The depth and organic matter soils are low, against, hydraulic conductivity and salinity are high. Monthly water requirements of date palm range from 49.6 to 240.6 mm. Flux density deficit in peak months is 7.8 mm day(-1). The electrical conductivity (EC, 25 degrees C) and sodium adsorption ratio (SAR) class irrigation water in the C-4-S-2 category. Requirements water of leaching salts are 276.0 mm in peak month. The techniques of surface irrigation and drainage water leaching salts from the soil associated with agricultural practices are reasoned for spatial and temporal management environment. The objective is to reduce the constrained effects of date palm production by efficient use of natural resources in a sustainable development context.

**Notes:** Chennafi, H. 1st International Symposium on Date Palm Nov 13-14, 2011 Algiers, ALGERIA Int Soc Hort Sci**URL:** <Go to ISI>://WOS:000332964900009

**Reference Type: Book Section****Record Number:** 9**Author:** Daili, Y. Gaubert, J. P. Rahmani, L. Bouzid, M. Ieee,**Year:** 2013**Title:** An Improved Voltage Control Scheme Based on Deadbeat-Repetitive Techniques of a Single Distributed Generation Unit In Island Mode**Book Title:** 39th Annual Conference of the Ieee Industrial Electronics Society**Pages:** 424-429**Series Title:** IEEE Industrial Electronics Society**Short Title:** An Improved Voltage Control Scheme Based on Deadbeat-Repetitive Techniques of a Single Distributed Generation Unit In Island Mode**ISBN:** 1553-572X 978-1-4799-0224-8**Accession Number:** WOS:000331149500064

**Abstract:** This paper proposes a voltage control of a single distributed generation (DG) unit powered local load. The DG system utilizes three phase four wire voltage source inverter VSI with split DC link as the medium interface and LC filter. A dual loop scheme is employed. Hysteresis current controller is used in the inner loop. In the outer loop, a compound control method based on deadbeat and repetitive controllers is proposed in this paper. Using repetitive controller the unwanted harmonics from the output voltage caused by nonlinear loads can be eliminated. The deadbeat regulator is adopted to increase dynamic response of the system to disturbance due to load transit. The proposed controller provides a set balanced three phase voltage despite unbalanced current load, low THD in worse case (uncontrolled rectified load) for a local load, guarantees a fast dynamic response to disturbance. Effectiveness of the proposed control strategy is evaluated based on time domain simulation studies in Matlab/Simulink (TM) environment and is verified by results obtained on laboratory benchmark.

**Notes:** Daili, Yacine Gaubert, Jean-Paul Rahmani, Lazhar Bouzid, Monia Iecon 2013 39th Annual Conference of the IEEE Industrial-Electronics-Society (IECON) Nov 10-14, 2013 Vienna, AUSTRIA IEEE Ind Elect Soc, Inst Elect & Elect Engineers, Austrian Inst Technol, Vienna Univ Technol

**URL:** <Go to ISI>://WOS:000331149500064

**Reference Type: Book Section****Record Number:** 10**Author:** Djemia, P. Bouamama, K. Iop,**Year:** 2013**Title:** Ab-initio calculations of the photoelastic constants of the cubic SiC polytype**Book Title:** 24th Iupap Conference on Computational Physics**Volume:** 454**Series Title:** Journal of Physics Conference Series**Short Title:** Ab-initio calculations of the photoelastic constants of the cubic SiC polytype**ISBN:** 1742-6588**DOI:** Unsp 012060 10.1088/1742-6596/454/1/012060**Accession Number:** WOS:000323968300061

**Abstract:** Residual defects after growth of semiconductors crystals is a hot issue to be solved for manufacturing new efficient electronic or optic devices. These defects can be conveniently observed using birefringence optical microscopy for extended defects that will create a local strain field which in turn can cause a nominally isotropic optical material to become anisotropic and induce birefringence. In order to perform a quantitative analysis, the knowledge of the photoelastic constants ( $P_{ij}$ ) of the material that measure the strength of the change of the refractive index under application of strains or stresses is necessary. As an experimental determination of the whole set of constants is not always possible, a theoretical evaluation can be of valuable interest. In this work, we propose ab-initio calculations by the WIEN2k program of the optical properties of the zinc blende silicon carbide polytype with a self-consistent scheme by solving the Kohn-Sham equations using a full potential linearized augmented plane waves (FPLAPW) method in the framework of the density functional theory (DFT) along with the generalized gradient approximation (GGA) pseudo-potentials. A combination of specific compressive and tensile strains is applied to the two atoms unit cell and the tensor containing each specific combination of the  $P_{ij}$  constants is extracted.

**Notes:** Djemia, P. Bouamama, Kh Iupap-ccp 2012 24th IUPAP Conference on Computational Physics (IUPAP-CCP) Oct 14-18, 2012 Kobe, JAPAN Int Union Pure & Appl Phys (IUPAP), Int Union Pure & Appl Phys (IUPAP), Commiss 20, Osaka Univ, Kyoto Univ, Kobe Univ, Univ Hyogo, Japan Phys Soc (JPS), Japan Soc Appl Phys (JSAP), Japan Soc Promot Sci (JSPS), Japan World Exposit 1970 Commemorat Fund (JEC Fund), Kobe Convent & Visitor Assoc, Nakauchi Tsutomu Convent Promot Fdn, Fujitsu, NEC

**URL:** <Go to ISI>://WOS:000323968300061

**Reference Type: Book Section****Record Number:** 11**Author:** Faci, A. Kolli, M. Bouaouadja, N. Chabane, B.**Year:** 2013**Title:** Study of the surface size defects in the case of a soda lime glass eroded by sandblasting**Editor:** ElBouari, A. ElOuatib, R. Hannache, H. Krimi, S. Lamire, M. Mansouri, I. Moussa, R. Aboulayt, A.**Book Title:** Remces Xii - Xiie Rencontre Marocaine Sur La Chimie De L'etat Solide**Volume:** 5**Series Title:** MATEC Web of Conferences**Short Title:** Study of the surface size defects in the case of a soda lime glass eroded by sandblasting**ISBN:** 2261-236X**DOI:** 04038 10.1051/matecconf/20130504038**Accession Number:** WOS:000348252200044**Notes:** Faci, A. Kolli, M. Bouaouadja, N. Chabane, B. 12th Moroccan Meeting on Chemistry of Solid State (REMCES) Nov 21-23, 2012 Casablanca, MOROCCO Univ Hassan II Casablanc, Univ Hassan II Ain Chock, Fac Sci, REMAT, Fac Sci Ben Sick, Univ Hassan II Mohammedia Casablanca**URL:** <Go to ISI>://WOS:000348252200044

**Reference Type: Book Section****Record Number:** 12**Author:** Guechi, A. Chegaar, M. Aillerie, M.**Year:** 2013**Title:** Air mass effect on the performance of organic solar cells**Editor:** Salame, C. Khoury, G. Aillerie, M.**Book Title:** Terragreen 13 International Conference 2013 - Advancements in Renewable Energy and Clean Environment**Volume:** 36**Pages:** 714-721**Series Title:** Energy Procedia**Short Title:** Air mass effect on the performance of organic solar cells**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2013.07.083**Accession Number:** WOS:000345406100082

**Abstract:** The objective of this study is to evaluate the effect of variations in global and diffuse solar spectral distribution due to the variation of air mass on the performance of two types of solar cells, DPB (etraphenyl-dibenzo-periflanthene) and CuPc (Copper-Phthalocyanine) using the spectral irradiance model for clear skies, SMARTS2, over typical rural environment in Setif. Air mass can reduce the sunlight reaching a solar cell and thereby cause a reduction in the electrical current, fill factor, open circuit voltage and efficiency. The results indicate that this atmospheric parameter causes different effects on the electrical current produced by DPB and CuPc solar cells. In addition, air mass reduces the current of the DPB and CuPc cells by 82.34% and 83.07 % respectively under global radiation. However these reductions are 37.85 % and 38.06%, for DPB and CuPc cells respectively under diffuse solar radiation. The efficiency decreases with increasing air mass for both DPB and CuPc solar cells. (C) 2013 The Authors. Published by Elsevier Ltd.

**Notes:** Guechi, A. Chegaar, M. Aillerie, M. TerraGreen International Conference on Advancements in Renewable Energy and Clean Environment Feb 15-17, 2013 Beirut, LEBANON TerraGreen

**URL:** <Go to ISI>://WOS:000345406100082

**Reference Type: Book Section****Record Number:** 13**Author:** Guessoum, M. Medjdoub, N. Nekkaa, S. Haddaoui, N.**Year:** 2013**Title:** Rheological and mechanical properties of recycled poly(ethylene terephthalate)/high density polyethylene blends**Editor:** ElBouari, A. ElOuatib, R. Hannache, H. Krimi, S. Lamire, M. Mansouri, I. Moussa, R. Aboulayt, A.**Book Title:** Remces Xii - Xiie Rencontre Marocaine Sur La Chimie De L'etat Solide**Volume:** 5**Series Title:** MATEC Web of Conferences**Short Title:** Rheological and mechanical properties of recycled poly(ethylene terephthalate)/high density polyethylene blends**ISBN:** 2261-236X**DOI:** 04026 10.1051/matecconf/20130504026**Accession Number:** WOS:000348252200032

**Abstract:** Triphenylphosphite (TPP) has been used as a chain extender to regenerate polyethylene terephthalate (PET) and high density polyethylene (HDPE) wastes and to improve the properties of PET/HDPE system based on recycled materials. TPP incorporation in PET and HDPE showed a noticeable increase of the torque as a function of the mixing time and proved that the degradation reactions are considerably decreased. In the case of PET/HDPE blends, the increase of the torque was strongly dependent on the composition of the homopolymers and on the time of mixing. TPP incorporation contributed to significant variations of the rheological and mechanical properties of the regenerated PET and HDPE and their blends.

**Notes:** Guessoum, M. Medjdoub, N. Nekkaa, S. Haddaoui, N. 12th Moroccan Meeting on Chemistry of Solid State (REMCES) Nov 21-23, 2012 Casablanca, MOROCCO Univ Hassan II Casablanc, Univ Hassan II Ain Chock, Fac Sci, REMAT, Fac Sci Ben Sick, Univ Hassan II Mohammedia Casablanca

**URL:** <Go to ISI>://WOS:000348252200032

**Reference Type: Book Section****Record Number:** 14**Author:** Medkour, Y. Roumili, A. Saoudi, A. Louail, L. Maouche, D.**Year:** 2013**Title:** Structural, elastic, electronic and magnetic properties of Fe(3)AC; A = Al, Ga and In**Editor:** ElBouari, A. ElOuatib, R. Hannache, H. Krimi, S. Lamire, M. Mansouri, I. Moussa, R. Aboulayt, A.**Book Title:** Remces Xii - Xiie Rencontre Marocaine Sur La Chimie De L'etat Solide**Volume:** 5**Series Title:** MATEC Web of Conferences**Short Title:** Structural, elastic, electronic and magnetic properties of Fe(3)AC; A = Al, Ga and In**ISBN:** 2261-236X**DOI:** 04042 10.1051/matecconf/20130504042**Accession Number:** WOS:000348252200048

**Abstract:** We report first principle calculations on the structural, electronic and magnetic properties of antiperovskite Fe(3)AC; A = Al, Ga and In. Calculations show that these compounds are more stable in the magnetic states, the estimated equilibrium lattice parameters (a and V) are in agreement with the experimental data. From the single crystal elastic constants, the polycrystalline elastic moduli is estimated. Similar to previous studies on carbides antiperovskite, these compounds are good electrical conductors. The analysis of the total and partial densities of states shows that the conductivity is assured by d electrons of the transition metal atoms. The magnetic character in these compounds is mainly related to the spin polarization of Fe-d electrons. The magnetic moment per unit formula is found to decrease from 3.52  $\mu_B$  to 3.06  $\mu_B$  corresponding to Fe<sub>3</sub>InC and Fe<sub>3</sub>AlC respectively.

**Notes:** Medkour, Y. Roumili, A. Saoudi, A. Louail, L. Maouche, D. 12th Moroccan Meeting on Chemistry of Solid State (REMCES) Nov 21-23, 2012 Casablanca, MOROCCO Univ Hassan II Casablanc, Univ Hassan II Ain Chock, Fac Sci, REMAT, Fac Sci Ben Sick, Univ Hassan II Mohammedia Casablanca

**URL:** <Go to ISI>://WOS:000348252200048

**Reference Type: Book Section****Record Number:** 15**Author:** Merahi, F. Mekhilef, S. Berkouk, E. M. Taallah, A. Ieee,**Year:** 2013**Title:** DC-Voltage Regulation of a Five Levels Neutral Point Clamped Cascaded Converter for Wind Energy Conversion System**Book Title:** 2013 4th Ieee International Symposium on Power Electronics for Distributed Generation Systems**Series Title:** IEEE International Symposium on Power Electronics for Distributed Generation Systems**Short Title:** DC-Voltage Regulation of a Five Levels Neutral Point Clamped Cascaded Converter for Wind Energy Conversion System**ISBN:** 2329-5759 978-1-4799-0692-5**Accession Number:** WOS:000345744500054

**Abstract:** Multilevel converters are widely recognized as a suitable solution for directly interfacing different types of energy storage systems and power sources to medium voltage grids, due to their advantages for high-voltage and high-power applications. The modeling and the control of the different components of the wind energy conversion system using back-to-back five level converters are presented. The wind turbine is controlled using the maximum power point tracking algorithm (MPPT) based on the wind speed estimation. The vector control of active and reactive power is used to control the doubly fed induction generator (DFIG) through the rotor. The grid side converter allows the control of the average DC-voltage on closed loop. The dynamic behavior of the global system is simulated in MATLAB Simulink environment. The results are shown to validate the effectiveness of the proposed system.

**Notes:** Merahi, Farid Mekhilef, Saad Berkouk, El Madjid Taallah, Ayoub Pedg 4th IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG) Jul 08-11, 2013 Rogers, AR IEEE, IEEE Power Elect Soc, Fuji Elect, Lien Chang, Eaton, Arkansas Power Elect Int, E UPS, Univ Arkansas

**URL:** <Go to ISI>://WOS:000345744500054

**Reference Type: Book Section****Record Number:** 16**Author:** Nia, M. Chegaar, M. Benatallah, M. F. Aillerie, M.**Year:** 2013**Title:** Contribution to the quantification of solar radiation in Algeria**Editor:** Salame, C. Khoury, G. Aillerie, M.**Book Title:** Terragreen 13 International Conference 2013 - Advancements in Renewable Energy and Clean Environment**Volume:** 36**Pages:** 730-737**Series Title:** Energy Procedia**Short Title:** Contribution to the quantification of solar radiation in Algeria**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2013.07.085**Accession Number:** WOS:000345406100084

**Abstract:** For an energy production optimization with a photovoltaic global system, a fundamental need is the knowledge of the global solar irradiation at different Algerian locations (Algiers, Oran, Bechar and Tamanrasset) using available climatological measured data. Different expressions relating the global solar irradiation to the calculated extraterrestrial global irradiation, measured sunshine duration and temperature at these locations are dealt with. These include the well-known Angstrom-Prescott linear regression, the logarithmic and the exponential relationships. Accordingly, several other models have also been tested to choose the more suitable for each location. The present work applied these considerations in the objective to optimize the production efficiency of photovoltaic energy using available data of the global solar irradiation. The modeled results are compared to the measured ones using statistical parameters tests such as the mean bias error (MBE), the mean absolute error (MAE), the root mean square error (RMSE) and the coefficient of determination ( $R^2$ ). The agreement between the measured and the computed values is remarkable and the models are recommended to predict the mean monthly global solar irradiation in Algeria and any location of the same climatic characteristics. (C) 2013 The Authors. Published by Elsevier Ltd.

**Notes:** Nia, M. Chegaar, M. Benatallah, M. F. Aillerie, M. TerraGreen International Conference on Advancements in Renewable Energy and Clean Environment Feb 15-17, 2013 Beirut, LEBANON TerraGreen

**URL:** <Go to ISI>://WOS:000345406100084

**Reference Type: Book****Record Number: 1****Author:** Alti, A. Laborie, S. Roose, P. Ieee,**Year:** 2013**Title:** A Framework for Managing and Optimizing the Adaptation Process Qualities**Series Title:** 2013 7th Ieee Gcc Conference and Exhibition**Number of Pages:** 125-130**Short Title:** A Framework for Managing and Optimizing the Adaptation Process Qualities**ISBN:** 978-1-4799-0724-3; 978-1-4799-0722-9**Accession Number:** WOS:000343832200025

**Abstract:** Multimedia technologies and advanced internet networks are vital to the economic development of both developed and developing countries. In the mobile multimedia domain, excellence is synonymous to the quality management of multimedia documents. Currently, these documents are accessible on a wide variety of devices, such as laptops, tablets and smartphones. The (hardware and software) heterogeneity of such devices and the diversity of user preferences require adaptation of multimedia documents. Current adaptation frameworks do not fully exploit the semantic benefits for describing the adaptation components and the quality of services. However, we have noticed that current adaptation frameworks do not handle any issue related to adaptation quality customization and optimization. This paper overcomes this limitation by proposing a generic framework for selecting a relevant set of adaptation services according to user preferences and allowing the automatic generation of a dynamic and a quality composition of heterogeneous adaptation components. Our proposal has the great advantage to offer to users a global flexible adaptation infrastructure for adaptation of multimedia document and customization of quality of service properties.

**Notes:** Alti, Adel Laborie, Sebastien Roose, Philippe Gcc 7th IEEE GCC Conference and Exhibition (GCC) Nov 17-20, 2013 Doha, QATAR Ieee

**URL:** <Go to ISI>://WOS:000343832200025

**Reference Type: Book****Record Number:** 2**Author:** Badoud, A. Khemliche, M. Bacha, S. Raison, B.**Year:** 2013**Title:** Modeling and performance analysis of multilevel inverter for single-phase grid connected photovoltaic modules**Series Editor:** Essaaidi, M. Zaz, Y.**Series Title:** Proceedings of 2013 International Renewable and Sustainable Energy Conference**Number of Pages:** 171-176**Short Title:** Modeling and performance analysis of multilevel inverter for single-phase grid connected photovoltaic modules**ISBN:** 978-1-4673-6373-0; 978-1-4673-6372-3**Accession Number:** WOS:000324675100034

**Abstract:** Power electronic converters always have been circuits of difficult modeling because differential equations that describe them have discontinuities. Although this situation has been improved since the appearance of the bond graph approach, able to jointly describe both continuous and discrete behaviors exhibited by some physical systems, nowadays it is possible to obtain very precise models which help us in the study and design of such circuits. This work gives an overview on single-phase grid converter based on seven level diode clamped multilevel inverter for photovoltaic system with maximum power tracking. In the first part, we develop a bond graph model of the inverter. A bond graph MPPT strategy is developed, the performance of the algorithm is studied. Then, we present the bond graph model of solar cell. Thus, we study a cascade constituted by two photovoltaic cell panels - five-level NPC VSI - permanent magnet synchronous machine (PMSM) fed by photovoltaic PV energy systems at different illuminations. At the full solar intensity, the maximum power point of current/voltage I/V characteristic of the PV modules is designed to be at the rated conditions of the machines. The steady-state output characteristics, the torque-speed characteristics, of the three DC motors with the two inputs are presented and compared.

**Notes:** Badoud, A. Khemliche, M. Bacha, S. Raison, B. Irsec 1st International Renewable and Sustainable Energy Conference (IRSEC) Mar 07-09, 2013 Ouarzazate, MOROCCO IEEE, IEEE Comp Soc, IEEE Commun Soc, Mediterranean Space Technol & Innovat

**URL:** <Go to ISI>://WOS:000324675100034

**Reference Type: Book****Record Number:** 3**Author:** Badoud, A. Khemliche, M. Bacha, S. Raison, B.**Year:** 2013**Title:** Modelling. design and control of wind diesel hybrid power system using bond graph**Series Editor:** Essaaidi, M. Zaz, Y.**Series Title:** Proceedings of 2013 International Renewable and Sustainable Energy Conference**Number of Pages:** 298-303**Short Title:** Modelling. design and control of wind diesel hybrid power system using bond graph**ISBN:** 978-1-4673-6373-0; 978-1-4673-6372-3**Accession Number:** WOS:000324675100057

**Abstract:** This paper illustrates the use of diesel electricity generator set and Dispatch Controller to adapt the number of running engines to a given electrical load that is partly met by wind turbines. Control coordination among the system components is established with a view to regulate the system voltage and frequency while extracting maximum power from wind. This paper utilized the bond graph approach in the modelling of such a wind/diesel hybrid power system for a stand-alone unit in a remote location. This design allows for the addition of wind energy inputs in conjunction with the diesel generators for fuel saving.

**Notes:** Badoud, A. Khemliche, M. Bacha, S. Raison, B. Irsec 1st International Renewable and Sustainable Energy Conference (IRSEC) Mar 07-09, 2013 Ouarzazate, MOROCCO IEEE, IEEE Comp Soc, IEEE Commun Soc, Mediterranean Space Technol & Innovat

**URL:** <Go to ISI>://WOS:000324675100057

**Reference Type: Book****Record Number:** 4**Author:** Djazia, K. Krim, F. Sarra, M.**Year:** 2013**Title:** Active Filter Under Unbalanced And Distorted Conditions**Series Editor:** Musirin, I. Salimin, R. H.**Series Title:** Proceedings of the 2013 Ieee 7th International Power Engineering and Optimization Conference**Number of Pages:** 664-669**Short Title:** Active Filter Under Unbalanced And Distorted Conditions**ISBN:** 978-1-4673-5074-7; 978-1-4673-5072-3**Accession Number:** WOS:000326869400126

**Abstract:** This paper describes the design and implementation of a new control method of shunt active filter to achieve near-sinusoidal source current waveform under unbalanced and distorted source voltage conditions. The proposed configuration, based on instantaneous active and reactive powers (pq method), uses the high selectivity extraction multivariable filters (MVF). These latter permit overall extraction of harmonic currents and reactive power references in order to achieve their compensation. Simulation results have proved excellent performance, and verify the validity of the proposed method, which are much better than conventional methods.

**Notes:** Djazia, K. Krim, F. Sarra, M. Peoco2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO) Jun 03-04, 2013 Malaysia IEEE, IEEE Malaysia, Power & Energy Chapter

**URL:** <Go to ISI>://WOS:000326869400126

**Reference Type: Book****Record Number: 5****Author:** Herbadji, O. Nadhir, K. Slimani, L. Bouktir, T. Ieee,**Year:** 2013**Title:** Optimal Power Flow with Emission Controlled using Firefly Algorithm**Series Title:** 2013 5th International Conference on Modeling, Simulation and Applied Optimization**Short Title:** Optimal Power Flow with Emission Controlled using Firefly Algorithm**ISBN:** 978-1-4673-5814-9; 978-1-4673-5812-5**Accession Number:** WOS:000326538300019

**Abstract:** This paper presents the use of a meta-heuristic nature-inspired algorithm, called firefly algorithm for the solution of the optimal power flow problem. The objective is to minimize the total fuel cost of generation and environmental pollution caused by fossil based thermal generating units and also maintain an acceptable system performance in terms of limits on generator real and reactive power outputs, bus voltages, shunt capacitors/reactors and power flow of transmission lines. In this work the standard IEEE 30-bus test system with six generating units has been used to test the effectiveness of the proposed method. Satisfactory results obtained from the proposed method were compared to those obtained by genetic algorithm (GA) and particle Swarm methods (PSO).

**Notes:** Herbadji, Ouafa Nadhir, Ketfi Slimani, Linda Bouktir, Tarek Icmsao 5th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO) Apr 28-30, 2013 Hammamet, TUNISIA

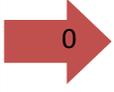
**URL:** <Go to ISI>://WOS:000326538300019

**Reference Type: Book****Record Number: 6****Author:** Layadi, T. M. Mostefai, M. Champenois, G. Abbes, D. Ieee,**Year:** 2013**Title:** Dimensioning a hybrid electrification system (PV/WT/DG plus battery) using a dynamic simulation**Series Title:** 2013 International Conference on Electrical Engineering and Software Applications**Number of Pages:** 485-490**Short Title:** Dimensioning a hybrid electrification system (PV/WT/DG plus battery) using a dynamic simulation**ISBN:** 978-1-4673-6302-0; 978-1-4673-6300-6**Accession Number:** WOS:000327207000083

**Abstract:** The aim of this paper is to demonstrate that a dynamic simulator, taking into account temporal data of renewable sources and using energy on one year, is able to sizing each element composing the electric generation system and the storage system. The electrical system includes photovoltaic panels (PV), a wind turbine (WT), a diesel generator (DG) and a storage battery. To illustrate the sizing capability of the dynamic simulator, we have fixed the surfaces of the PV and wind turbine as well as the battery. We are looking to obtain 100% supply by whole generation system. The study is limited to the power minimization of the diesel generator and to elaboration a strategy of starting and stopping the DG according to the SOC of the battery. I.e. with minimum power of DG, minimize the number of start-up and minimize the amount of excess energy. The simulation results for several sizing of DG illustrate the possibility to choose the power DG and the SOC thresholds of the battery to starting or stopping the DG.

**Notes:** Layadi, T. M. Mostefai, M. Champenois, G. Abbes, D. Iceesa 1st International Conference on Electrical Engineering and Software Applications (ICEESA) Mar 21-23, 2013 Hammamet, TUNISIA IEEE, IEEE Tunisia Sect, Assoc Tunisienne Tech Numeriques & Automatique, Ministere Enseignement Superieur & Rech Sci & Technologie, Univ Tunis, Ecole Nationale Superieure Ingenieurs Tunis

**URL:** <Go to ISI>://WOS:000327207000083



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# PRODUCTION SCIENTIFIQUE ANNEE 2014

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1

**Reference Type: Journal Article**

**Record Number: 1**

**Author:** Abaci, S. Nessark, B. Riahi, F.

**Year:** 2014

**Title:** Preparation and characterization of polyaniline+TiO<sub>2</sub> composite films

**Journal:** Ionics

**Volume:** 20

**Issue:** 12

**Pages:** 1693-1702

**Date:** Dec

**Short Title:** Preparation and characterization of polyaniline+TiO<sub>2</sub> composite films

**ISSN:** 0947-7047

**DOI:** 10.1007/s11581-014-1129-9

**Accession Number:** WOS:000345080000006

**Abstract:** In this work, we have prepared electrochemically and studied a composite materials based on an organic conducting polymer, polyaniline (PANI), in which inorganic semiconductor titanium dioxide (TiO<sub>2</sub>) particles were incorporated with different concentrations. The polyaniline/titanium dioxide composite material which had been deposited by cyclic voltammetry on substrates of indium tin oxide was then characterized. The cyclic voltammogram showed one redox couple characteristic of the oxidation and reduction states of the produced composite material. The impedance spectroscopy study showed that the resistance of the film increases with the TiO<sub>2</sub> content incorporated in the polymer. The incorporation of TiO<sub>2</sub> in PANI covering the surfaces was confirmed by the scanning electron microscopy and the energy dispersive X-ray analysis. The morphological analysis of the film surfaces showed that the TiO<sub>2</sub> nanoparticle increased the roughness. These observations allow to consider a new approach to improve the physicochemical properties of the interface between the organic and inorganic material. The I-V characteristics of PANI+TiO<sub>2</sub> heterostructure diode showed the nonlinear nature of the I-V curve of PANI+TiO<sub>2</sub> heterostructure device.

**Notes:** Abaci, Souhila Nessark, Belkacem Riahi, Farid

**URL:** <Go to ISI>://WOS:000345080000006

**Reference Type: Journal Article****Record Number: 2****Author:** Abdelhalim, C. Farid, D.**Year:** 2014**Title:** A Compact Planar UWB Antenna with Triple Controllable Band-Notched Characteristics**Journal:** International Journal of Antennas and Propagation**Short Title:** A Compact Planar UWB Antenna with Triple Controllable Band-Notched Characteristics**ISSN:** 1687-5869**DOI:** 10.1155/2014/848062**Article Number:** 848062**Accession Number:** WOS:000331322100001

**Abstract:** A modified compact planar ultrawideband (UWB) monopole antenna with triple controllable band-notched characteristics is presented in this paper. The proposed antenna consists of a modified stair cased V-shaped radiating element and partial ground plane. The triple band-notched characteristics are achieved by embedding two different vertical up C-shaped slots with a vertical down C-shaped slot in the radiating patch and in the ground plane, respectively. Besides, the bandwidth of each rejected band can be independently controlled by adjusting the dimensions of the corresponding band notched structure. The proposed antenna with rejected bands characteristics is successfully simulated, prototyped, and measured. The measured results show that the antenna operates until upper 11 GHz for voltage standing wave ratio (VSWR) is less than 2, and exhibits bands rejection of 1.6-2.66 GHz (49.76%), 3-4 GHz (28.57%), and 5.13-6.03 GHz (16.12%). Moreover, the proposed antenna shows a near omnidirectional radiation patterns, stable peak gain, and with small group delay and transfer function variation on the whole UWB frequency range except in the notched frequency bands, which makes it suitable for being used in the future UWB applications.

**Notes:** Abdelhalim, Chaabane Farid, Djahli**URL:** <Go to ISI>://WOS:000331322100001

**Reference Type: Journal Article****Record Number: 3****Author:** Abderrahmane, B. Djamila, A. Aicha, M.**Year:** 2014**Title:** Modified ZnO nanorod arrays with TiO<sub>2</sub> nanoparticles insertion: Effect on growth and properties**Journal:** Materials Science in Semiconductor Processing**Volume:** 27**Pages:** 877-882**Date:** Nov**Short Title:** Modified ZnO nanorod arrays with TiO<sub>2</sub> nanoparticles insertion: Effect on growth and properties**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2014.08.031**Accession Number:** WOS:000345644000117

**Abstract:** ZnO nanorods arrays (ZNAs) with hexagonal structures were elaborated on fluorine doped tin oxide (FTO) using a recurrent cyclic voltamperometry technique. Their XRD patterns show an hexagonal structure type Wurtzite with a preferential orientation along the axis (002). Their transparency increases with the enhancement of the sweeping rate. The insertion of TiO<sub>2</sub> nanoparticles during the electrodeposition strongly affected the ZNAs morphology, orientation and size. Its addition led to a greater compactness and well tightly arranged nanorods with important increasing generated photocurrents under illumination. It led also to the reduction of the optical gap layers of ZnO. The SEM analysis revealed that TiO<sub>2</sub> presents spherical orbicular nanostructures with smaller size than the ZNAs. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Abderrahmane, Berchi Djamila, Abdi Aicha, Medjahed**URL:** <Go to ISI>://WOS:000345644000117

**Reference Type: Journal Article****Record Number:** 4**Author:** Abderrezek, M. Fathi, M. Djahli, F. Ayad, M.**Year:** 2014**Title:** Study of the Effect of Luminescence Down-Shifting on GaAs Solar Cells With Several Optical Windows Layers**Journal:** Journal of Solar Energy Engineering-Transactions of the Asme**Volume:** 136**Issue:** 1**Date:** Feb**Short Title:** Study of the Effect of Luminescence Down-Shifting on GaAs Solar Cells With Several Optical Windows Layers**ISSN:** 0199-6231**DOI:** 10.1115/1.4025593**Accession Number:** WOS:000329932700023

**Abstract:** Luminescence down shifting (LDS) is an elegant approach used to improve the efficiency of single solar cells, in this approach, the photovoltaic (PV) glass material is replaced with a thin layer of polymer polymethyl methacrylate (PMMA) doped with optically active organic dyes. In this paper, we present a theoretical study. To assess the improvements introduced by LDS on an n-i-p-GaAs solar cells structure formed by diverse types of windows layers ( $\text{Al}_{0.8}\text{Ga}_{0.2}\text{As}$ ,  $\text{Al}_{0.52}\text{In}_{0.48}\text{P}$ , and  $\text{Ga}_{0.5}\text{In}_{0.5}\text{P}$ ). The performance of the solar cell is investigated as a function of organic dyes. It has been shown that the gain in power conversion efficiency attains values up to 5.79, 8.15, and 8.37% with  $\text{Al}_{0.8}\text{Ga}_{0.2}\text{As}$ ,  $\text{Al}_{0.52}\text{In}_{0.48}\text{P}$ , and  $\text{Ga}_{0.5}\text{In}_{0.5}\text{P}$  in the standard spectrum AM1.5G, moreover, they increase the short circuit current density.

**Notes:** Abderrezek, Mahfoud Fathi, Mohamed Djahli, Farid Ayad, Mohammed Si**URL:** <Go to ISI>://WOS:000329932700023

**Reference Type: Journal Article**

**Record Number: 5**

**Author:** Achache, M. Guerra, L.

**Year:** 2014

**Title:** A full Nesterov-Todd-step feasible primal-dual interior point algorithm for convex quadratic semi-definite optimization

**Journal:** Applied Mathematics and Computation

**Volume:** 231

**Pages:** 581-590

**Date:** Mar

**Short Title:** A full Nesterov-Todd-step feasible primal-dual interior point algorithm for convex quadratic semi-definite optimization

**ISSN:** 0096-3003

**DOI:** 10.1016/j.amc.2013.12.070

**Accession Number:** WOS:000332525000052

**Abstract:** In this paper, a short-step feasible primal-dual path-following interior point algorithm is proposed for solving a convex quadratic semidefinite optimization (CQSDO) problem. The algorithm uses at each iteration full Nesterov-Todd (NT) steps to find an  $\epsilon$ -approximated solution of CQSDO. The favorable iteration bound, namely  $O(\sqrt{n} \log n/\epsilon)$  is obtained for short-step method and which is as good as the linear and semidefinite optimization analogue. (C) 2013 Elsevier Inc. All rights reserved.

**Notes:** Achache, Mohamed Guerra, Loubna

**URL:** <Go to ISI>://WOS:000332525000052

**Reference Type: Journal Article****Record Number:** 6**Author:** Aggoune, L. Chetouani, Y. Radjeai, H.**Year:** 2014**Title:** Recursive Identification of the Dynamic Behavior in a Distillation Column by Means of Autoregressive Models**Journal:** Journal of Dynamic Systems Measurement and Control-Transactions of the Asme**Volume:** 136**Issue:** 4**Date:** Jul**Short Title:** Recursive Identification of the Dynamic Behavior in a Distillation Column by Means of Autoregressive Models**ISSN:** 0022-0434**DOI:** 10.1115/1.4026837**Article Number:** 044506**Accession Number:** WOS:000336917200034

**Abstract:** In this study, an Autoregressive with eXogenous input (ARX) model and an Autoregressive Moving Average with eXogenous input (ARMAX) model are developed to predict the overhead temperature of a distillation column. The model parameters are estimated using the recursive algorithms. In order to select an optimal model for the process, different performance measures, such as Aikeke's Information Criterion (AIC), Root Mean Square Error (RMSE), and Nash-Sutcliffe Efficiency (NSE), are calculated.

**Notes:** Aggoune, Lakhdar Chetouani, Yahya Radjeai, Hammoud**URL:** <Go to ISI>://WOS:000336917200034

7

**Reference Type: Journal Article**

**Record Number: 7**

**Author:** Aissaoui, A. Hemic, N.

**Year:** 2014

**Title:** A FRICTIONAL CONTACT PROBLEM WITH DAMAGE AND ADHESION FOR AN ELECTRO ELASTIC-VISCOPLASTIC BODY

**Journal:** Electronic Journal of Differential Equations

**Date:** Jan

**Short Title:** A FRICTIONAL CONTACT PROBLEM WITH DAMAGE AND ADHESION FOR AN ELECTRO ELASTIC-VISCOPLASTIC BODY

**ISSN:** 1072-6691

**Article Number:** 11

**Accession Number:** WOS:000333120800001

**Abstract:** We consider a quasistatic frictional contact problem for an electro elastic-viscoplastic body with damage and adhesion. The contact is modelled with normal compliance. The adhesion of the contact surfaces is taken into account and modelled by a surface variable. We derive variational formulation for the model which is in the form of a system involving the displacement field, the electric potential field, the damage field and the adhesion field. We prove the existence of a unique weak solution to the problem. The proof is based on arguments of time-dependent variational inequalities, parabolic inequalities, differential equations and fixed point.

**Notes:** Aissaoui, Adel Hemic, Nacerdine

**URL:** <Go to ISI>://WOS:000333120800001

**Reference Type: Journal Article****Record Number:** 8**Author:** Aissaoui, A. Hemici, N.**Year:** 2014**Title:** Bilateral contact problem with adhesion and damage**Journal:** Electronic Journal of Qualitative Theory of Differential Equations**Issue:** 18**Pages:** 1-16**Short Title:** Bilateral contact problem with adhesion and damage**ISSN:** 1417-3875**Accession Number:** WOS:000340873300001

**Abstract:** We study a mathematical problem describing the frictionless adhesive contact between a viscoelastic material with damage and a foundation. The adhesion process is modeled by a bonding field on the contact surface. The contact is bilateral and the tangential shear due to the bonding field is included. We establish a variational formulation for the problem and prove the existence and uniqueness of the solution. The existence of a unique weak solution for the problem is established using arguments of nonlinear evolution equations with monotone operators, a classical existence and uniqueness result for parabolic inequalities, and Banach's fixed point theorem.

**Notes:** Aissaoui, Adel Hemici, Nacerdine**URL:** <Go to ISI>://WOS:000340873300001

**Reference Type: Journal Article****Record Number:** 9**Author:** Al-Douri, Y. Ameri, M. Bouhemadou, A.**Year:** 2014**Title:** Optical investigations of  $Zn_xCd_{1-x}S$  nanostructures**Journal:** Optik**Volume:** 125**Issue:** 23**Pages:** 6958-6961**Short Title:** Optical investigations of  $Zn_xCd_{1-x}S$  nanostructures**ISSN:** 0030-4026**DOI:** 10.1016/j.ijleo.2014.08.061**Accession Number:** WOS:000344975300018

**Abstract:**  $Zn_xCd_{1-x}S$  nanostructures with ( $x=0, 0.25, 0.5, 0.75, 1$ ) have been grown on glass substrates using spray pyrolysis technique. X-ray diffraction results have showed that  $Zn_xCd_{1-x}S$  nanostructures were formed with hexagonal and cubic structures. The structural parameters have been evaluated as a function of concentration ( $x$ ). Also, the optical properties that depend on the mole fraction ( $x$ ) are investigated for  $Zn_xCd_{1-x}S$  nanostructures. (C) 2014 Elsevier GmbH. All rights reserved.

**Notes:** Al-Douri, Y. Ameri, M. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000344975300018

**Reference Type: Journal Article****Record Number:** 10**Author:** Al-Douri, Y. Khasawneh, Q. Kiwan, S. Hashim, U. Abd Hamid, S. B. Reshak, A. H. Bouhemadou, A. Ameri, M. Khenata, R.**Year:** 2014**Title:** Structural and optical insights to enhance solar cell performance of CdS nanostructures**Journal:** Energy Conversion and Management**Volume:** 82**Pages:** 238-243**Date:** Jun**Short Title:** Structural and optical insights to enhance solar cell performance of CdS nanostructures**ISSN:** 0196-8904**DOI:** 10.1016/j.enconman.2014.03.020**Accession Number:** WOS:000336017800024

**Abstract:** Sol-gel spin coating technique is used to prepare nanostructured CdS deposited on glass and quartz substrates with Cd:S 1.2:0.1 mol/L, 1000 rpm spin coating speed at 400 degrees C and 800 degrees C annealing temperatures, respectively. The effect of hydrothermal treatment on physical properties of crystalline size and morphology is reported. Structural, topographical and optical properties are investigated using X-ray diffraction (XRD), atomic force microscopy (AFM), UV-visible spectrophotometer (UV) and photoluminescence (PL). The optical properties are investigated experimentally and theoretically to verify the suitable model for electro-optical systems. Our results are in agreement with experimental and theoretical data. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Al-Douri, Y. Khasawneh, Q. Kiwan, S. Hashim, U. Abd Hamid, S. B. Reshak, A. H. Bouhemadou, A. Ameri, M. Khenata, R.**URL:** <Go to ISI>://WOS:000336017800024

**Reference Type: Journal Article****Record Number: 11****Author:** Aliouat, M. Aliouat, Z. Ieee,**Year:** 2014**Title:** Increasing Wireless Sensor Networks Durability through Fault Nodes Resilience Capability**Journal:** 2014 Ieee Conference on Wireless Sensors (Icwise)**Pages:** 49-54**Short Title:** Increasing Wireless Sensor Networks Durability through Fault Nodes Resilience Capability**Accession Number:** WOS:000380477100009

**Abstract:** A Wireless Sensor Network (WSN) is mission dependent and deployed in an interesting area in order to collect information describing an observable phenomenon. In a clustering configuration approach, nodes are organized in clusters, within one ClusterHead (CH) node is responsible for managing and scheduling sensed data communications among standard nodes and sink. So, the success of a WSN mission is tightly relied on the robustness of indispensable nodes: CH and sink. Since WSNs are generally deployed in harsh environments, CHs and Sink are prone to failures so, the survival of a WSN depends strictly on survival of its sink and CHs. In this paper, we investigate the ability to render CHs and sink more resilient to failure. To this end, we propose a protocol avoiding sink and CHs to be central point of failure and making them more faults tolerant. Simulation carried out via PowerTOSSIM/TinyOS showed attracting and convincing results.

**Notes:** Aliouat, Makhoulf Aliouat, Zibouda IEEE Conference on Wireless Sensors (ICWiSe) Oct 26-28, 2014 Subang Jaya, MALAYSIA IEEE, IEEE Comp Soc 978-1-4799-5594-7

**URL:** <Go to ISI>://WOS:000380477100009

**Reference Type: Journal Article****Record Number:** 12**Author:** Aliouat, M. Aliouat, Z. Ieee,**Year:** 2014**Title:** Improved Wireless Sensor Networks Durability Through Efficient Sink Motion Strategy**Journal:** 2014 Ieee Conference on Wireless Sensors (Icwise)**Pages:** 61-66**Short Title:** Improved Wireless Sensor Networks Durability Through Efficient Sink Motion Strategy**Accession Number:** WOS:000380477100011

**Abstract:** Over more than one decade, Wireless Sensor Networks (WSN) continue to draw more and more researchers attention because of the enormous benefit potential they may provide for industrial and socio-economical domains. Increasingly, lots of WSN applications are developed for many strategic, vital and comfort purpose areas. However, the prediction of WSNs widespread development has not yet reached the expected satisfactory level because of many obstacles slowing down their maturity. So, the limited energy budget the nodes have to use is the most decisive factor on which a WSN relies on. Knowing that the mainspring of a WSN is to provide end user with surroundings information gathered by sink from cluster heads, and the energy dissipation is proportional to distance between sender and receiver, so moving sink near clusterheads to collect sensed data is more advantageous. In this paper, we propose a new sink moving strategy and new clusters formation algorithm for which performance evaluation results obtained through NS2 simulator in terms of energy saving and WSN life time improvement are very convincing.

**Notes:** Aliouat, Makhoulf Aliouat, Zibouda IEEE Conference on Wireless Sensors (ICWiSe) Oct 26-28, 2014 Subang Jaya, MALAYSIA IEEE, IEEE Comp Soc 978-1-4799-5594-7

**URL:** <Go to ISI>://WOS:000380477100011

**Reference Type: Journal Article****Record Number:** 13**Author:** Allali, D. Bouhemadou, A. Al Safi, E. M. A. Bin-Omran, S. Chegaar, M. Khenata, R. Reshak, A. H.**Year:** 2014**Title:** Electronic and optical properties of the  $\text{SiB}_2\text{O}_4$  (B=Mg, Zn, and Cd) spinel oxides: An ab initio study with the Tran-Blaha-modified Becke-Johnson density functional**Journal:** Physica B-Condensed Matter**Volume:** 443**Pages:** 24-34**Date:** Jun**Short Title:** Electronic and optical properties of the  $\text{SiB}_2\text{O}_4$  (B=Mg, Zn, and Cd) spinel oxides: An ab initio study with the Tran-Blaha-modified Becke-Johnson density functional**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2014.02.053**Accession Number:** WOS:000335901900003

**Abstract:** We report ab initio density functional theory calculations of the structural, electronic and optical properties of the spinel oxides  $\text{SiMg}_2\text{O}_4$ ,  $\text{SiZn}_2\text{O}_4$ , and  $\text{SiCd}_2\text{O}_4$  using the hill-potential linearized augmented plane-wave method. The structural parameters calculated using both the local density and generalized gradient approximations to the exchange-correlation potential are consistent with the literature data. To calculate the electronic properties, the exchange-correlation potential is treated with various functionals, and we find that the newly developed Tran-Blaha-modified Becke-johnson functional significantly improves the band gap. We predict a direct band gap in all of the considered  $\text{SiB}_2\text{O}_4$  compounds, and the band gaps continuously decrease as the atomic size of the B element increases. The decrease in the fundamental direct band gap ( $\Gamma$ - $\Gamma$ ) from  $\text{SiMg}_2\text{O}_4$  to  $\text{SiZn}_2\text{O}_4$  to  $\text{SiCd}_2\text{O}_4$  can be attributed to p-d mixing in the upper valence bands of  $\text{SiZn}_2\text{O}_4$  and  $\text{SiCd}_2\text{O}_4$ . The lowest conduction band is well dispersive, similar to that found for transparent conducting oxides such as ZnO. This band is mainly defined by the s and p electrons of the Si and B (B=Mg, Zn, Cd) atoms. The topmost valence band is considerably less dispersive and is defined by 0-2p and B-d electrons. The charge-carrier effective masses are evaluated at the topmost valence band and at the bottommost conduction band that were calculated. The frequency-dependent complex dielectric function, absorption coefficient, refractive index, extinction coefficient, reflectivity and electron energy loss function were estimated. We find that the value of the zero-frequency limit of the dielectric function  $\epsilon(0)$  increases as the band gap decreases. The origins of the peaks and structures in the optical spectra are determined in terms of the calculated energy band structures. (c) 2014 Elsevier B.V. All rights reserved.

**Notes:** Allali, D. Bouhemadou, A. Al Safi, E. Muhammad Abud Bin-Omran, S. Chegaar, M. Khenata, R. Reshak, A. H.**URL:** <Go to ISI>://WOS:000335901900003

**Reference Type: Journal Article****Record Number:** 14**Author:** Alti, A. Laborie, S. Phillipe, R.**Year:** 2014**Title:** Dynamic semantic-based adaptation of multimedia documents**Journal:** Transactions on Emerging Telecommunications Technologies**Volume:** 25**Issue:** 2**Pages:** 239-258**Date:** Feb**Short Title:** Dynamic semantic-based adaptation of multimedia documents**ISSN:** 2161-3915**DOI:** 10.1002/ett.2677**Accession Number:** WOS:000331201200009

**Abstract:** One of the key aspects of any mobile multimedia application is the management of multimedia documents. Currently, multimedia documents can be displayed on multiple platforms (laptops, smartphones, tablets, etc.) that result in a birth of new information system called pervasive. The various execution contexts of a multimedia presentation introduce different constraints for the presentation itself. This includes device constraints and user preferences, resulting to the overall system heterogeneity increase. In this paper, we propose a specific ontology for on-the-fly (at runtime) adaptation of multimedia documents. Thus, we propose rules allowing automatic generation of dynamic and quality assembly of heterogeneous components. The proposed ontology has the great advantage to offer a flexible infrastructure to users to easily govern the response time and the quality assembly of their own applications at runtime.

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**Notes:** Alti, Adel Laborie, Sebastien Phillipe, Roose**URL:** <Go to ISI>://WOS:000331201200009

**Reference Type: Journal Article****Record Number: 15****Author:** Ammar, T. H. Benabderrahmane, B. Drabla, S.**Year:** 2014**Title:** FRICTIONAL CONTACT PROBLEMS FOR ELECTRO-VISCOELASTIC MATERIALS WITH LONG-TERM MEMORY, DAMAGE, AND ADHESION**Journal:** Electronic Journal of Differential Equations**Date:** Oct**Short Title:** FRICTIONAL CONTACT PROBLEMS FOR ELECTRO-VISCOELASTIC MATERIALS WITH LONG-TERM MEMORY, DAMAGE, AND ADHESION**ISSN:** 1072-6691**Article Number:** 222**Accession Number:** WOS:000350639400003

**Abstract:** We consider a quasistatic contact problem between two electro-viscoelastic bodies with long-term memory and damage. The contact is frictional and is modelled with a version of normal compliance condition and the associated Coulomb's law of friction in which the adhesion of contact surfaces is taken into account. We derive a variational formulation for the model and prove an existence and uniqueness result of the weak solution. The proof is based on arguments of evolutionary variational inequalities, a classical existence and uniqueness result on parabolic inequalities, and Banach fixed point theorem.

**Notes:** Ammar, Tedjani Hadj Benabderrahmane, Benyattou Drabla, Salah**URL:** <Go to ISI>://WOS:000350639400003

**Reference Type: Journal Article****Record Number:** 16**Author:** Ammar, T. H. Benyattou, B. Drabla, S.**Year:** 2014**Title:** A dynamic contact problem between elasto-viscoplastic piezoelectric bodies**Journal:** Electronic Journal of Qualitative Theory of Differential Equations**Issue:** 49**Short Title:** A dynamic contact problem between elasto-viscoplastic piezoelectric bodies**ISSN:** 1417-3875**Accession Number:** WOS:000347534600001

**Abstract:** We consider a dynamic contact problem with adhesion between two elastic-viscoplastic piezoelectric bodies. The contact is frictionless and is described with the normal compliance condition. We derive variational formulation for the model which is in the form of a system involving the displacement field, the electric potential field and the adhesion field. We prove the existence of a unique weak solution to the problem. The proof is based on arguments of nonlinear evolution equations with monotone operators, a classical existence and uniqueness result on parabolic inequalities, differential equations and fixed point arguments.

**Notes:** Ammar, Tedjani Hadj Benyattou, Benabderrahmane Drabla, Salah**URL:** <Go to ISI>://WOS:000347534600001

**Reference Type: Journal Article****Record Number:** 17**Author:** Ammar, T. H. Drabla, S. Benabderrahmane, B.**Year:** 2014**Title:** Analysis and approximation of frictionless contact problems between two piezoelectric bodies with adhesion**Journal:** Georgian Mathematical Journal**Volume:** 21**Issue:** 4**Pages:** 431-445**Date:** Dec**Short Title:** Analysis and approximation of frictionless contact problems between two piezoelectric bodies with adhesion**ISSN:** 1072-947X**DOI:** 10.1515/gmj-2014-0044**Accession Number:** WOS:000345983500007

**Abstract:** We consider a mathematical frictionless contact problem between two electro-elastic bodies. The contact is modelled with normal compliance and adhesion. We provide a variational formulation for the problem and prove the existence of a unique weak solution. The proofs are based on arguments of time-dependent variational inequalities, the Cauchy-Lipschitz Theorem and the Banach Fixed-Point Theorem. Then, a discrete scheme is introduced based on the finite element method to approximate the spatial variable. Furthermore, we provide optimal a priori error estimates for the displacements, the electric potential and the bonding at the contact interface.

**Notes:** Ammar, Tedjani Hadj Drabla, Salah Benabderrahmane, Benyattou**URL:** <Go to ISI>://WOS:000345983500007

**Reference Type: Journal Article****Record Number:** 18**Author:** Amrane, M. Begag, S. Houcher, Z. Houcher, B. Touabti, A. Nasri, R. Boussouf, K. Khattabi, S.**Year:** 2014**Title:** Plasma total homocysteine levels and other biochemical parameters in Algerian patients with deep vein thrombosis**Journal:** Pteridines**Volume:** 25**Issue:** 3-4**Pages:** 69-74**Date:** Dec**Short Title:** Plasma total homocysteine levels and other biochemical parameters in Algerian patients with deep vein thrombosis**ISSN:** 0933-4807**DOI:** 10.1515/pterid-2014-0009**Accession Number:** WOS:000346222200002

**Abstract:** We studied total plasma homocysteine levels (tHcy) in Algerian patients with a deep venous thrombosis (DVT). We measured tHcy levels in a total of 99 subjects enrolled in this study, including 40 patients with DVT and 59 healthy controls. The mean tHcy level in the patients was 12.62 +/- 8.7 mu mol/L and that in the controls was 10.2 +/- 2.1 mu mol/L. In a univariate regression model, tHcy concentrations were inversely correlated with triglycerides (TG) ( $r = -0.358$ ;  $p = 0.023$ ) and total cholesterol (TC) ( $r = -0.454$ ;  $p = 0.003$ ) concentrations. Logistic regression analysis showed that tHcy after adjustment was significantly associated with the following factors: TC ( $p = 0.003$ ) and TG ( $p = 0.023$ ). The analysis in DVT patients showed that variables independently associated with tHcy were TC [odds ratio (OR) 2.1, 95% confidence interval (CI) 1.7-2.6], low-density lipoprotein cholesterol (OR 2.0, 95% CI 1.6-2.5), creatinine (OR 2.2, 95% CI 1.7-2.6), and smoking (OR 2.1, 95% CI 1.7-2.5). In conclusion, these results indicate that tHcy levels and other biochemical parameters are important determinant factors for DVT diseases in Algerian patients.

**Notes:** Amrane, Mounira Begag, Samia Houcher, Zahira Houcher, Bakhoucha Touabti, Abderrezak Nasri, Ramdane Boussouf, Kheira Khattabi, Soumia

**URL:** <Go to ISI>://WOS:000346222200002

**Reference Type: Journal Article****Record Number:** 19**Author:** Aouachria, K. Quintard, G. Massardier-Nageotte, V. Belhaneche-Bensemra, N.**Year:** 2014**Title:** The Effect of Di-(-2-ethyl hexyl) phthalate (DEHP) as Plasticizer on the Thermal and Mechanical Properties of PVC/PMMA Blends**Journal:** Polimeros-Ciencia E Tecnologia**Volume:** 24**Issue:** 4**Pages:** 428-433**Date:** Jul-Aug**Short Title:** The Effect of Di-(-2-ethyl hexyl) phthalate (DEHP) as Plasticizer on the Thermal and Mechanical Properties of PVC/PMMA Blends**ISSN:** 0104-1428**DOI:** 10.1590/0104-1428.1588**Accession Number:** WOS:000342171400003

**Abstract:** Plasticizers play a key role in the formulation of polymers and in determining their physical properties and processability. This study examines the effect of di(2-ethyl hexyl) phthalate (DEHP) as plasticizer on the thermal and mechanical properties of PVC/PMMA blends. For that purpose, blends of variable composition, from 0 to 100 wt%, were prepared in the presence (15, 30 and 50 wt %) and in the absence of di(2-ethyl hexyl) phthalate. The thermal degradation of the blends was investigated by thermogravimetric analysis (TGA) in an atmosphere of synthetic air in the temperature range of 50-550 degrees C. The variation of the mechanical properties, such as tensile behavior, hardness and impact resistance, were investigated for all blend compositions. The effect of the plasticizer on the same properties was considered. The results obtained show that a range of properties can be generated according to the blend compositions. Therefore, the addition of PMMA to the blends stabilized PVC, for the initial thermal degradation, and the addition of the plasticizer caused a decrease of stress at break and Young modulus.

**Notes:** Aouachria, Kamira Quintard, Guilhem Massardier-Nageotte, Valerie Belhaneche-Bensemra, Naima**URL:** <Go to ISI>://WOS:000342171400003

**Reference Type: Journal Article****Record Number:** 20**Author:** Arab, L. Boutahala, M. Djellouli, B.**Year:** 2014**Title:** Equilibrium and kinetic studies on chromium(VI) removal by a mixed oxide derived from MgAl layered double hydroxide**Journal:** Comptes Rendus Chimie**Volume:** 17**Issue:** 7-8**Pages:** 860-868**Date:** Jul-Aug**Short Title:** Equilibrium and kinetic studies on chromium(VI) removal by a mixed oxide derived from MgAl layered double hydroxide**ISSN:** 1631-0748**DOI:** 10.1016/j.crci.2014.01.013**Accession Number:** WOS:000342037400034

**Abstract:** A magnesium aluminium hydrotalcite-like compound (HT) containing carbonate anions in the interlayer space and with a final Mg/Al ratio of 2 was synthesized by the coprecipitation method. The obtained material was characterized by powder X-ray diffraction (XRD), Fourier-Transform-Infrared spectroscopy (FT-IR), thermal analysis (ATG/ATD), and surface area measurements (BET). The interaction of the clay with Cr(VI) has been studied by ultraviolet-visible (UV-vis) spectroscopy. The calcined hydrotalcite (HT-C) showed the highest capacity of removal of chromium ions, and their sorption capacities for Cr(VI) are 4.85 mmol/g. The effect of various parameters on the preparation conditions for the removal of chromium, such as the contact time, the amount of sorbent, the initial concentration of Cr(VI), and the pH values of aqueous solution were also investigated to identify their influence on Cr(VI) sorption. The characterization of the calcined hydrotalcite (HT-C) after interaction with Cr(VI) ions by FT-IR spectroscopy showed that Cr(VI) was adsorbed and intercalated by the solid. (C) 2014 Academie des sciences. Published by Elsevier Masson SAS. All rights reserved.

**Notes:** Arab, Loubna Boutahala, Mokhtar Djellouli, Brahim**URL:** <Go to ISI>://WOS:000342037400034

**Reference Type: Journal Article****Record Number:** 21**Author:** Arab, L. Boutahala, M. Djellouli, B. Dintzer, T. Pitchon, V.**Year:** 2014**Title:** Characteristics of gold supported on nickel-containing hydrotalcite catalysts in CO oxidation**Journal:** Applied Catalysis a-General**Volume:** 475**Pages:** 446-460**Date:** Apr**Short Title:** Characteristics of gold supported on nickel-containing hydrotalcite catalysts in CO oxidation**ISSN:** 0926-860X**Accession Number:** WOS:000335610400053

**Abstract:** A series of catalysts containing Au supported on Ni-based hydrotalcites (HT) Ni-Mg-Al varying in Ni content, but with a constant Mg<sup>2+</sup>/Al<sup>3+</sup> ratio of 2, was prepared. Au nanoparticles were successfully formed and tested in the CO oxidation reaction. The effects of nickel content, HAuCl<sub>4</sub> concentration, reduction pre-treatment and Au loadings were studied. The catalysts were characterized by XRD, BET, TPR, XPS and TEM. Au/Ni-Mg-Al hydrotalcites led to strongly enhanced activities for the CO reaction when compared with the bare support. Reduction of the catalyst increased the catalytic performance, contributing to an improved dispersion of gold as revealed by TEM. A significant difference in CO oxidation activity was observed which proved dependent on the HT precursor composition; the highest activity was found for the catalysts containing the lowest nickel content which correlated with the formation of Au particles of smaller size. The optimization of the preparation parameters (initial concentration of gold, gold loading, pre-treatment) allowed the successful deposition of 4 nm Au particles (Au/Ni<sub>0.06</sub>Mg<sub>0.94</sub>), very active for CO oxidation. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Arab, Loubna Boutahala, Mokhtar Djellouli, Brahim Dintzer, Thierry Pitchon, Veronique**URL:** <Go to ISI>://WOS:000335610400053

**Reference Type: Journal Article****Record Number:** 22**Author:** Arabi, A. Bourouba, N. Belaout, A. Ayad, M. Ieee,**Year:** 2014**Title:** Catastrophic Faults Detection of Analog Circuits**Journal:** 2015 7th International Conference on Modelling, Identification and Control (ICMIC)**Pages:** 186-191**Short Title:** Catastrophic Faults Detection of Analog Circuits**Accession Number:** WOS:000380540900038

**Abstract:** In this paper, a new test technique of analog circuits using time mode simulation is proposed for the single catastrophic faults detection in analog circuits. This test process is performed to overcome the problem of catastrophic faults being escaped in a DC mode test applied to the inverter amplifier in previous research works. The circuit under test is a second order low pass filter constructed around this type of amplifier but performing a function that differs from that of the previous test. The test approach performed in this work is based on two key-elements where the first one concerns the unique square pulse signal selected as an input vector test signal to stimulate the fault effect at the circuit output response. The second element is the filter response conversion to a square pulses sequence obtained from an analog comparator. This signal conversion is achieved through a fixed reference threshold voltage of this comparison circuit. The measurement of the three first response signal pulses durations is regarded as fault effect detection parameter on one hand, and as a fault signature helping to hence fully establish an analog circuit fault diagnosis on another hand. The results obtained so far are very promising since the approach has lifted up the fault coverage ratio in both modes to over 90% and has revealed the harmful side of faults that has been masked in a DC mode test.

**Notes:** Arabi, Abderrazak Bourouba, Nacerdine Belaout, Abdesslam Ayad, Mouloud 7th International Conference on Modelling, Identification and Control (ICMIC) Dec 18-20, 2015 Sousse, TUNISIA Comp Appl Techn, Modelling Identificat & Control, Sci & Culture Dev Cent, Int Publisher & C O, IEEE 978-0-9567157-5-3

**URL:** <Go to ISI>://WOS:000380540900038

**Reference Type: Journal Article****Record Number:** 23**Author:** Arikan, A. Arikan, A. Trabelsi, N.**Year:** 2014**Title:** Zaitsev-Type Results**Journal:** Algebra and Logic**Volume:** 53**Issue:** 2**Pages:** 87-101**Date:** May**Short Title:** Zaitsev-Type Results**ISSN:** 0002-5232**DOI:** 10.1007/s10469-014-9273-x**Accession Number:** WOS:000339821300001**Abstract:** Certain results on soluble groups due to D. I. Zaitsev are extended to some more general contexts, for instance, to groups that satisfy an outer commutator law.**Notes:** Arikan, Ah. Arikan, Ayn. Trabelsi, N.**URL:** <Go to ISI>://WOS:000339821300001

**Reference Type: Journal Article****Record Number:** 24**Author:** Arikan, N. Iyigor, A. Candan, A. Ozduran, M. Karakoc, A. Ugur, S. Ugur, G. Bouhemadou, A. Bin-Omran, S. Guechi, N.**Year:** 2014**Title:** Ab-initio study of the structural, electronic, elastic and vibrational properties of the intermetallic Pd<sub>3</sub>V and Pt<sub>3</sub>V alloys in the L1(2) phase**Journal:** Metals and Materials International**Volume:** 20**Issue:** 4**Pages:** 765-773**Date:** Jul**Short Title:** Ab-initio study of the structural, electronic, elastic and vibrational properties of the intermetallic Pd<sub>3</sub>V and Pt<sub>3</sub>V alloys in the L1(2) phase**ISSN:** 1598-9623**DOI:** 10.1007/s12540-014-4022-1**Accession Number:** WOS:000339957700024

**Abstract:** Pseudopotential plane-wave method based on density functional theory within the generalized gradient approximation for the exchange-correlation potential has been applied to study the structural, electronic, elastic and vibrational properties of the binary intermetallic Pd<sub>3</sub>V and Pt<sub>3</sub>V in the L1(2) phase. The optimized lattice constant, bulk modulus and its pressure derivative, independent single-crystal elastic constants and elastic wave velocities in three different directions are evaluated and compared with the available experimental and theoretical data. The polycrystalline elastic parameters, hardness coefficient, elastic anisotropy, Debye temperature are estimated. The electronic band structure, electronic total and partial densities of states, and total magnetic moment of the Pd<sub>3</sub>V and Pt<sub>3</sub>V alloys are computed and analyzed in comparison with the existing theoretical and experimental findings. Phonon-dispersion curves and their corresponding total and projected densities of states were obtained for the first time using a linear-response in the framework of the density functional perturbation theory.

**Notes:** Arikan, N. Iyigor, A. Candan, A. Ozduran, M. Karakoc, A. Ugur, S. Ugur, G. Bouhemadou, A. Bin-Omran, S. Guechi, N.**URL:** <Go to ISI>://WOS:000339957700024

**Reference Type: Journal Article****Record Number:** 25**Author:** Asma, C. Meriem, E. Mahmoud, B. Djafer, B.**Year:** 2014**Title:** PHYSICOCHEMICAL CHARACTERIZATION OF GELATIN-CMC COMPOSITE EDIBLES FILMS FROM POLYION-COMPLEX HYDROGELS**Journal:** Journal of the Chilean Chemical Society**Volume:** 59**Issue:** 1**Pages:** 2279-2283**Date:** Mar**Short Title:** PHYSICOCHEMICAL CHARACTERIZATION OF GELATIN-CMC COMPOSITE EDIBLES FILMS FROM POLYION-COMPLEX HYDROGELS**ISSN:** 0717-9707**Accession Number:** WOS:000342613000007

**Abstract:** This study is concerned to elucidate the interaction behavior of films consisted of gelatin and carboxymethylcellulose, which are polyelectrolytes and have applications in tissues engineering. These films were chemically cross-linked using glutaraldehyde. The decrease of framework in triple helix of gelatin in the presence of polysaccharide and/or the cross-linking agent increases until a total disappearance was showed by XRD, the disappearance of macroporous gelatin structure in the presence of additives has been confirmed by SEM and AFM. According to DSC analysis, glass transition temperature ( $T_g$ ) increases and decreases as GTA and CMC were added, respectively. It was shown that swelling of macroporous structure in pseudophysiological mediums was more absorbent and used electrolytes exert an osmotic pressure or ionic strength inducing higher swelling. Also, it was found that diffusion mechanism is directly related to gelatin structure. On the other hand, the incorporation of CMC improves the flexibility of matrice.

**Notes:** Asma, Chetouani Meriem, Elkolli Mahmoud, Bounekhel Djafer, Benachour**URL:** <Go to ISI>://WOS:000342613000007

**Reference Type: Journal Article****Record Number: 26****Author:** Assali, A. Arab, F. Graine, R. Kanouni, F. Tanger Ltd**Year:** 2014**Title:** THE EFFECT OF RADIUS AND SIZE ON PHOTONIC BAND GAP OF A TRIANGULAR LATTICE OF RODS SI/AIR-BASED 2D-PHOTONIC CRYSTALS**Journal:** Nanocon 2013, 5th International Conference**Pages:** 380-385**Short Title:** THE EFFECT OF RADIUS AND SIZE ON PHOTONIC BAND GAP OF A TRIANGULAR LATTICE OF RODS SI/AIR-BASED 2D-PHOTONIC CRYSTALS**Accession Number:** WOS:000352070900067

**Abstract:** Photonic crystals (PhCs) have attracted a lot of research interest owing to their intrinsic properties control and manipulate light, generally possessing photonic band gap ranges of frequency in which light cannot propagate through the structure. Silicon based photonic crystals have attracted enormous interest for use in telecommunications such as waveguide and filter. We have performed a plane wave expansion method (PWE) implanted in the MPB code (MIT Photonic-Bands) to study and understand the behaviour of a two-dimensional photonic crystal by analysing the photonic band diagrams versus various parameters. The crystal forms a triangular lattice and consists of silicone infinitely long cylindrical rods. The effect of radius and size of structure on photonic band gaps (PBGs) of 2D-photonic crystals are investigated. We have shown an evolution of PBGs versus radius and size for both polarizations TE (transverse electric) and TM (transverse magnetic), which are corresponds to the optical communications systems. The calculated results are found to be in good agreement with other theoretical data.

**Notes:** Assali, Abdenacer Arab, Fahima Graine, Radouene Kanouni, Fares 5th NANOCON International Conference Oct 16-18, 2013 Brno, CZECH REPUBLIC TANGER Ltd, Czech Soc New Mat & Technologies, Reg Ctr Adv Technologies & Mat, Mat Res Soc Serbia, Norsk Materialteknisk Selskap 978-80-87294-47-5

**URL:** <Go to ISI>://WOS:000352070900067

**Reference Type: Journal Article****Record Number:** 27**Author:** Assas, O. Bouzgou, H. Fetah, S. Salmi, M. Boursas, A. Ieee,**Year:** 2014**Title:** Use of the Artificial Neural Network and Meteorological Data for Predicting Daily Global Solar Radiation in Djelfa, Algeria**Journal:** 2014 International Conference on Composite Materials & Renewable Energy Applications (Iccmrea)**Short Title:** Use of the Artificial Neural Network and Meteorological Data for Predicting Daily Global Solar Radiation in Djelfa, Algeria**Accession Number:** WOS:000360314400024

**Abstract:** This paper presents a set of artificial neural network models (ANN) to estimate daily global solar radiation (GSR) on a horizontal surface using meteorological variables: (mean daily extraterrestrial solar radiation intensity  $G(0)$ , the maximum possible sunshine hours  $S-0$ , mean daily relative humidity  $H$ , mean daily maximum air temperature  $T$ , mean daily atmospheric pressure  $P$  and wind speed  $V_x$ ) for Djelfa city in Algeria. In order to consider the effect of the different meteorological parameters on daily global solar radiation prediction, four following combinations of input features are considered: 1) Day of the year,  $G(0)$ ,  $S-0$ ,  $T$  and  $V_x$ . 2) Day of the year,  $G(0)$ ,  $S-0$ ,  $T$ ,  $P$  and  $V_x$ . 3) Day of the year,  $G(0)$ ,  $S-0$ ,  $T$ ,  $H$ ,  $P$  and  $V_x$ . 4) Day of the year,  $G(0)$ ,  $S-0$ ,  $T$ ,  $H$  and  $V_x$ . These models were compared using three evaluation criteria: Mean square error (MSE), mean absolute error (MAE), and root mean square error (RMSE). The results show that the two parameters: atmospheric pressure and relative humidity affect the prediction output of global solar radiation. In addition, the results show that the relative humidity is the most important features influencing the prediction performance. It can be concluded that fourth model can be used for forecasting daily global solar radiation in other locations in Algeria.

**Notes:** Assas, O. Bouzgou, H. Fetah, So Salmi, M. Boursas, A. International Conference on Composite Materials & Renewable Energy Applications (ICCMREA) Jan 22-24, 2014 Sousse, TUNISIA IEEE, IEEE Ind Applicat Soc, IEEE Tunisia Chapter, IEEE Tunisia Sect 978-1-4799-2516-2

**URL:** <Go to ISI>://WOS:000360314400024

**Reference Type: Journal Article****Record Number:** 28**Author:** Attia, S. Rouabah, K. Chikouche, D. Flissi, M.**Year:** 2014**Title:** Side peak cancellation method for sine-BOC(m,n)-modulated GNSS signals**Journal:** Eurasip Journal on Wireless Communications and Networking**Date:** Mar**Short Title:** Side peak cancellation method for sine-BOC(m,n)-modulated GNSS signals**ISSN:** 1687-1499**DOI:** 10.1186/1687-1499-2014-34**Article Number:** 34**Accession Number:** WOS:000347397300001

**Abstract:** In this paper, we propose an efficient scheme for side peak cancelation in binary offset carrier (m,n) (BOC(m,n)) with integer modulation order. The proposed scheme reduces significantly the width of the main peak of the auto-correlation function (ACF) and thus the range of influence of the multipath (MP) in BOC-modulated signals. It is based on the use of reference ACFs like that of ideal pseudo random noise (PRN) code generated by linear feedback shift register (LFSR) and used in global positioning system (GPS) and the Russian Globalnaya Navigatsionnaya Sputnikovaya Sistema (GLONASS). In MP environment, the proposed method is used in combination with fast iterative maximum likelihood algorithm (FIMLA) that is adapted to future modernized GPS and Galileo signals. As a result, the obtained ACF of the proposed scheme does not contain any side peaks, and thus, the discriminator function (DF) has no ambiguity in the delay-locked loop (DLL) code tracking operation. The simulation results show that the proposed technique has superior performances in MP mitigation and permits the same resistance to noise compared to the traditional techniques.

**Notes:** Attia, Salim Rouabah, Khaled Chikouche, Djamel Flissi, Mustapha**URL:** <Go to ISI>://WOS:000347397300001

**Reference Type: Journal Article****Record Number:** 29**Author:** Ayad, M. Chikouche, D. Boukazzoula, N. Rezki, M.**Year:** 2014**Title:** Search of a robust defect signature in gear systems across adaptive Morlet wavelet of vibration signals**Journal:** Iet Signal Processing**Volume:** 8**Issue:** 9**Pages:** 918-926**Date:** Dec**Short Title:** Search of a robust defect signature in gear systems across adaptive Morlet wavelet of vibration signals**ISSN:** 1751-9675**DOI:** 10.1049/iet-spr.2013.0439**Accession Number:** WOS:000346743400002

**Abstract:** Monitoring of rotating machines by vibration analysis is a topic that has received a great interest in recent years. Moreover, the vibrations from a machine are affected greatly by the conditions of its operation (speed, load and so on). A significant challenge remains with the monitoring of gears under fluctuating operating conditions. An unexpected fault of gear may cause huge economic losses, even personal injury. In this study, a new method based on adaptive Morlet wavelet (AMW) is proposed for the analysis of vibration signals produced from a gear system under test in order to detect early the presence of faults. The mother Morlet wavelet is adapted with the gear vibration signal by setting parameters of the wavelet to balance the time-frequency resolution. The obtained optimal pair of parameters results in the best time-frequency resolution for the given vibration signal; and the fault detection problem is considered just as a simple signature search in the time-scale domain using scalograms. An early indication of the presence of a gear defect is obtained at the 10th day of experimentation using the AMW-based method. Whereas, the gear system has a defect on the 12th day corresponding to the tooth damage which results in a complete change in the location of the AMW coefficients.

**Notes:** Ayad, Mouloud Chikouche, Djamel Boukazzoula, Nacereddine Rezki, Mohamed**URL:** <Go to ISI>://WOS:000346743400002

**Reference Type: Journal Article****Record Number:** 30**Author:** Ayad, M. Rezki, M. Saoudi, K. Benziane, M. Arabi, A. Chikouche, D. Ieee,**Year:** 2014**Title:** Wavelet transforms coefficients and autocorrelation of gear system for early damage detection**Journal:** 2015 7th International Conference on Modelling, Identification and Control (ICMIC)**Pages:** 543-548**Short Title:** Wavelet transforms coefficients and autocorrelation of gear system for early damage detection**Accession Number:** WOS:000380540900101**Abstract:** In the last few years, numerous new methods have been proposed to overcome the complexity of the signals generated by complex machines and those generated by faults.

Monitoring and fault diagnosis methods based on signal processing have proved effective in fault identification. The present paper introduces the theory of wavelet transforms coefficients (WTC) processes and autocorrelation as powerful tools for the diagnosis of rotating machines. This method is applied to for the analysis of vibration signals produced from a gear system under test in order to early detect the presence of faults. An early indication of the presence of a gear defect is obtained at the 10th day of experimentation.

**Notes:** Ayad, Mouloud Rezki, Mohamed Saoudi, Kamel Benziane, Mourad Arabi, Abderrazak Chikouche, Djamel 7th International Conference on Modelling, Identification and Control (ICMIC) Dec 18-20, 2015 Sousse, TUNISIA Comp Appl Techn, Modelling Identificat & Control, Sci & Culture Dev Cent, Int Publisher & C O, IEEE 978-0-9567157-5-3**URL:** <Go to ISI>://WOS:000380540900101

**Reference Type: Journal Article****Record Number:** 31**Author:** Badoud, A. Khemliche, M. Bouamama, B. O. Bacha, S.**Year:** 2014**Title:** Bond Graph Algorithms for Fault Detection and Isolation in Wind Energy Conversion**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 5**Pages:** 4057-4076**Date:** May**Short Title:** Bond Graph Algorithms for Fault Detection and Isolation in Wind Energy

Conversion

**ISSN:** 1319-8025**DOI:** 10.1007/s13369-014-1044-4**Accession Number:** WOS:000335830400059

**Abstract:** The use of wind energy has increased during the last years; however, wind power varies greatly throughout the day creating important intermittence problems. This paper deals with the modeling, fault detection and isolation of wind turbine generation systems by bond graph approach. The modeling of the wind phenomenon, the turbine mechanical system and the electrical machine, along with the corresponding converter and electrical grid are described, and the problem of fault diagnosis in wind energy conversion is addressed. One of the original points in this work is the use of a new fault detection and isolation method. The proposed method avoids the exploration of all the combinations for its application to the diagnostic of this system operation. The causal paths are used to generate the analytical redundancy relations at each computation step based on the constitutive and structural junction relations. This is shown through an algorithm for monitoring the system by sensor placements on the corresponding bond graph model. The performance of the developed algorithm is evaluated on a model of a commercial sized 4.8 MW wind turbine.

**Notes:** Badoud, Abd Essalam Khemliche, Mabrouk Bouamama, Belkacem Ould Bacha, Seddik**URL:** <Go to ISI>://WOS:000335830400059

**Reference Type: Journal Article****Record Number:** 32**Author:** Baka, O. Azizi, A. Velumani, S. Schmerber, G. Dinia, A.**Year:** 2014**Title:** Effect of Al concentrations on the electrodeposition and properties of transparent Al-doped ZnO thin films**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 25**Issue:** 4**Pages:** 1761-1769**Date:** Apr**Short Title:** Effect of Al concentrations on the electrodeposition and properties of transparent Al-doped ZnO thin films**ISSN:** 0957-4522**DOI:** 10.1007/s10854-014-1796-3**Accession Number:** WOS:000333050400025

**Abstract:** Al-doped zinc oxide (AZO) thin films are prepared on polycrystalline fluorine-doped tin oxide-coated conducting glass substrates from nitrates baths by the electrodeposition process at 70 A degrees C. The electrochemical, morphological, structural and optical properties of the AZO thin films were investigated in terms of different Al concentration in the starting solution. It was found that the carrier density of AZO thin films varied between  $-3.11$  and  $-5.56 \times 10^{20}$   $\text{cm}^{-3}$  when the Al concentration was between 0 and 5 at.%. Atomic force microscopy images reveal that the concentration of Al has a very significant influence on the surface morphology and roughness of thin AZO. X-ray diffraction spectra demonstrate preferential (002) crystallographic orientation having c-axis perpendicular to the surface of the substrate and average crystallites size of the films was about 33-54 nm. With increasing Al doping, AZO films have a strong improved crystalline quality. As compared to pure ZnO, Al-doped ZnO exhibited lower crystallinity and there is a shift in the (002) diffraction peak to higher angles. Due to the doping of Al of any concentration, the films were found to be showing > 80 % transparency. As Al concentration increased the optical band gap was also found to be increase from 3.22 to 3.47 eV. The room-temperature photoluminescence spectra indicated that the introduction of Al can improve the intensity of ultraviolet (UV) emission, thus suggesting its greater prospects in UV optoelectronic devices. A detailed comparison and apprehension of electrochemical, optical and structural properties of ZnO and ZnO:Al thin films is done for the determination of optimum concentration of Al doping.

**Notes:** Baka, O. Azizi, A. Velumani, S. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000333050400025

**Reference Type: Journal Article****Record Number:** 33**Author:** Bakhouche, B. Beniaiche, A. Guessas, H.**Year:** 2014**Title:** Method for determining the reflection-induced retardance of the Fresnel rhomb**Journal:** Optical Engineering**Volume:** 53**Issue:** 5**Date:** May**Short Title:** Method for determining the reflection-induced retardance of the Fresnel rhomb**ISSN:** 0091-3286**DOI:** 10.1117/1.oe.53.5.055108**Article Number:** 055108**Accession Number:** WOS:000340680800049

**Abstract:** A method used for measurement of the reflection-induced retardance of the Fresnel employing two polaroids is reported. The concept we propose is based on optimized Fresnel rhombs, using the total internal reflection phenomenon. The total internal reflection induces phase retardance between the polarization components of the incident light. The theoretical analysis of the principle is given taking Stokes-Mueller formalism as a mathematical tool. An application example of the method is shown; this method has advantages such as easy procurement of the optical devices needed and simplicity of operation. (C) 2014 Society of Photo-Optical Instrumentation Engineers (SPIE)

**Notes:** Bakhouche, Belkacem Beniaiche, Abdelkrim Guessas, Hocine**URL:** <Go to ISI>://WOS:000340680800049

**Reference Type: Journal Article****Record Number:** 34**Author:** Bakour, S. Touati, A. Bachiri, T. Sahli, F. Tiouit, D. Naim, M. Azouaou, M. Rolain, J. M.**Year:** 2014**Title:** First report of 16S rRNA methylase ArmA-producing *Acinetobacter baumannii* and rapid spread of metallo-beta-lactamase NDM-1 in Algerian hospitals**Journal:** Journal of Infection and Chemotherapy**Volume:** 20**Issue:** 11**Pages:** 696-701**Date:** Nov**Short Title:** First report of 16S rRNA methylase ArmA-producing *Acinetobacter baumannii* and rapid spread of metallo-beta-lactamase NDM-1 in Algerian hospitals**ISSN:** 1341-321X**DOI:** 10.1016/j.jiac.2014.07.010**Accession Number:** WOS:000345558200007

**Abstract:** Purpose: The aim of the present study was to characterize the molecular support of resistance to carbapenems, aminoglycosides and fluoroquinolones in carbapenem-resistant *Acinetobacter baumannii* clinical isolates recovered between January 2011 and April 2013 from Algerian hospitals. Methods: Antibiotic susceptibility testing was performed using disk diffusion and Etest methods. Carbapenemase activity was detected using both MALDI-TOF mass spectrometry assay and via microbiological tests. Carbapenem, aminoglycoside and fluoroquinolone resistance determinants were studied by PCR and sequencing. Clonal relationships between strains were determined using Multi Locus Sequence Typing (MLST). Results: A total of 47 imipenem-resistant *A. baumannii* were isolated and identified by MALDI-TOF mass spectrometry. All imipenem-resistant strains were positive in the modified Hodge test, and EDTA inhibited the activity of metallo-beta-lactamases enzymes in 11 strains. The bla(OXA-23) gene was detected in 33 strains and the bla(OXA-24) gene in 10 strains. The metallo-beta-lactamase bla(NDM-1) gene was detected in 11 isolates (23.4%) from Algiers and Setif, including 7 that co-expressed a bla(OXA-23) gene. Resistance to aminoglycosides was due to the production of aminoglycoside-modifying enzymes, AAC(3)-Ia, AADA, ANT(2'')-I, APH(3')-VI, and 16S rRNA methylases, ArmA. The fluoroquinolone resistance was mainly associated with mutations at Ser83Leu and Ser80Leu of the gyrA and parC genes, respectively. MLST revealed five sequence types (STs), 1, 2, 19, 25, and 85. The imipenem-resistant *A. baumannii* ST2 was the predominant clone (35/47). Conclusions: Here we report for the first time clinical multidrug-resistant *A. baumannii* isolates harboring 16S rRNA methylase gene, armA, and rapid spread of metallo-beta-lactamase NDM-1 isolated from patients in Algeria. (C) 2014, Japanese Society of Chemotherapy and The Japanese Association for Infectious Diseases. Published by Elsevier Ltd. All rights reserved.

**Notes:** Bakour, Sofiane Touati, Abdelaziz Bachiri, Taous Sahli, Farida Tiouit, Djamel Naim, Malek Azouaou, Mounia Rolain, Jean-Marc**URL:** <Go to ISI>://WOS:000345558200007

**Reference Type: Journal Article****Record Number:** 35**Author:** Ballouti, A. Djahli, F. Bendjadou, A. Belhaouchet, N. Benhamadouche, A.**Year:** 2014**Title:** MPPT System for Photovoltaic Module Connected to Battery Adapted for Unstable Atmospheric Conditions Using VHDL-AMS**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 3**Pages:** 2021-2031**Date:** Mar**Short Title:** MPPT System for Photovoltaic Module Connected to Battery Adapted for Unstable Atmospheric Conditions Using VHDL-AMS**ISSN:** 1319-8025**DOI:** 10.1007/s13369-013-0767-y**Accession Number:** WOS:000331977800045

**Abstract:** This paper presents a novel maximum power point tracking (MPPT) algorithm used in photovoltaic (PV) module connected to a storage battery. The main aim of this algorithm is to maximize the PV array output power by tracking continuously the maximum power point (MPP) which depends on atmospheric conditions (panel temperature and irradiance). The full system is composed of a PV array, a storage battery and an electronic boost-type DC-DC converter inserted between the PV array and the storage battery. The proposed MPPT control algorithm used to control the boost DC-DC converter is intended to lead the PV array power to its maximum point by keeping the PV array voltage stable with little deviation. The modeling of this system is realized using the novel concept of "functional prototyping" based on Very high speed integrated circuits Hardware Description language-Analog and Mixed Signal (VHDL-AMS) which can be particularly useful to design and redesign complex system with multi-technologic aspect, and to optimize strategies of control. The usefulness of the proposed MPPT algorithm has been fully verified by digital simulation using Simplorer software, where the obtained results show that the proposed MPPT method can improve PV power system performances noticeably in steady and dynamic states.

**Notes:** Ballouti, A. Djahli, F. Bendjadou, A. Belhaouchet, N. Benhamadouche, A.**URL:** <Go to ISI>://WOS:000331977800045

**Reference Type: Journal Article****Record Number:** 36**Author:** Basmadjian, C. Zhao, Q. Bentouhami, E. Djehal, A. Nebigil, C. G. Johnson, R. A. Serova, M. de Gramont, A. Faivre, S. Raymond, E. Desaubry, L. G.**Year:** 2014**Title:** Cancer wars: natural products strike back**Journal:** Frontiers in Chemistry**Volume:** 2**Short Title:** Cancer wars: natural products strike back**DOI:** 10.3389/fchem.2014.00020**Article Number:** Unsp 20**Accession Number:** WOS:000209678600023

**Abstract:** Natural products have historically been a mainstay source of anticancer drugs, but in the 90's they fell out of favor in pharmaceutical companies with the emergence of targeted therapies, which rely on antibodies or small synthetic molecules identified by high throughput screening. Although targeted therapies greatly improved the treatment of a few cancers, the benefit has remained disappointing for many solid tumors, which revitalized the interest in natural products. With the approval of rapamycin in 2007, 12 novel natural product derivatives have been brought to market. The present review describes the discovery and development of these new anticancer drugs and highlights the peculiarities of natural product and new trends in this exciting field of drug discovery.

**Notes:** Basmadjian, Christine Zhao, Qian Bentouhami, Embarek Djehal, Amel Nebigil, Canan G. Johnson, Roger A. Serova, Maria de Gramont, Armand Faivre, Sandrine Raymond, Eric Desaubry, Laurent G.

**URL:** <Go to ISI>://WOS:000209678600023

**Reference Type: Journal Article****Record Number:** 37**Author:** Belghalem, H. Hamidouche, M. Gremillard, L. Bonnefont, G. Fantozzi, G.**Year:** 2014**Title:** Thermal shock resistance of two micro-structured alumina obtained by natural sintering and SPS**Journal:** Ceramics International**Volume:** 40**Issue:** 1**Pages:** 619-627**Date:** Jan**Short Title:** Thermal shock resistance of two micro-structured alumina obtained by natural sintering and SPS**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2013.06.045**Accession Number:** WOS:000330820500079

**Abstract:** In the present work, the indentation air quenching technique was used to evaluate thermal shock behavior of a micro-structured alumina obtained with different sintering techniques (Spark Plasma Sintering and natural sintering) and conditions (varying dwell time, dwell temperature and pressure). The main objective is to evaluate the effect of the sintering technique on the thermal shock properties, by comparing the mechanical and thermal shock properties between samples prepared by natural sintering and SPS. Another objective is to determine how the grains size and porosity affect the initiation and growth of cracks in samples submitted to thermal shocks of different amplitudes. (C) 2013 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Belghalem, H. Hamidouche, M. Gremillard, L. Bonnefont, G. Fantozzi, G. A**URL:** <Go to ISI>://WOS:000330820500079

**Reference Type: Journal Article****Record Number:** 38**Author:** Belhatab, R. Amor, L. Barroso, J. G. Pedro, L. G. Figueiredo, A. C.**Year:** 2014**Title:** Essential oil from Artemisia herba-alba Asso grown wild in Algeria: Variability assessment and comparison with an updated literature survey**Journal:** Arabian Journal of Chemistry**Volume:** 7**Issue:** 2**Pages:** 243-251**Date:** Apr**Short Title:** Essential oil from Artemisia herba-alba Asso grown wild in Algeria: Variability assessment and comparison with an updated literature survey**ISSN:** 1878-5352**DOI:** 10.1016/j.arabjc.2012.04.042**Accession Number:** WOS:000333035900010

**Abstract:** The chemical variability of the essential oils of Artemisia herba-alba Asso aerial parts, collected at Algeria was evaluated. A. herba-alba populations were collected in four regions, Benifouda; Bougaa; Boussaada and Boutaleb, at two different periods, July (flowering phase), and October and November (vegetative phase). The essential oils were isolated by hydrodistillation and analyzed by Gas Chromatography (GC) and Gas Chromatography-Mass Spectrometry (GC-MS). The essential oils yield ranged between 0.2% and 0.9% (v/d.w.). Fifty components were identified in A. herba-alba oils, oxygen-containing monoterpenes being dominant in all cases (72-80%). Camphor (17-33%), alpha-thujone (7-28%) and chrysanthenone (4-19%) were the major oil components. Despite the similarity in main components, three types of oils could be defined, (a) alpha-thujone : camphor (23-28: 17-28%), (b) camphor : chrysanthenone (33: 12%) and (c) alpha-thujone : camphor : chrysanthenone (24: 19: 19%). The comparison between the present data and an updated survey of the existing literature reinforces the major variability of A. herba-alba essential oils and stresses the importance of obtaining a defined chemical type crop production avoiding the wild harvest. (C) 2012 Production and hosting by Elsevier B. V. on behalf of King Saud University.

**Notes:** Belhatab, Rachid Amor, Loubna Barroso, Jose G. Pedro, Luis G. Figueiredo, A. Cristina**URL:** <Go to ISI>://WOS:000333035900010

**Reference Type: Journal Article****Record Number:** 39**Author:** Belhouchet, H. Hamidouche, M. Torrecillas, R. Fantozzi, G.**Year:** 2014**Title:** The non-isothermal kinetics of mullite formation in boehmite-zircon mixtures**Journal:** Journal of Thermal Analysis and Calorimetry**Volume:** 116**Issue:** 2**Pages:** 795-803**Date:** May**Short Title:** The non-isothermal kinetics of mullite formation in boehmite-zircon mixtures**ISSN:** 1388-6150**DOI:** 10.1007/s10973-013-3601-6**Accession Number:** WOS:000334688900033

**Abstract:** In this work, we studied the kinetics of mullite formation in different composites under non-isothermal conditions using DTA. Different composites based of mullite, alumina, zircon and zirconia were prepared by reaction sintering of boehmite (as alumina source) and zircon. Several mixtures were used while varying the percentage of the boehmite from 30 to 70 mass% with a step of 10. Five compositions marked as B30, B40, B50, B60 and B70 corresponding to boehmite-zircon ratios (mass%) of 30/70, 40/60, 50/50, 60/40 and 70/30 were fabricated and studied. The DTA conducted at heating rates of 10, 20 and 30 K min<sup>-1</sup> showed an endothermic peak in all composites at about 1,603 K associated with mullite formation. The activation energies measured from non-isothermal treatments for five compositions (30, 40, 50, 60 and 70 mass% of boehmite) were 1,029, 1,085, 1,262, 1,508 and 1,321 kJ mol<sup>-1</sup>, respectively. The n values (Avrami parameter) for all compositions are larger than 2.5, the mullite crystallization of these composites is followed by three-dimensional growth.

**Notes:** Belhouchet, H. Hamidouche, M. Torrecillas, R. Fantozzi, G.**URL:** <Go to ISI>://WOS:000334688900033

**Reference Type: Journal Article****Record Number:** 40**Author:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**Year:** 2014**Title:** Multiphase Composites Obtained by Sintering Reaction of Boehmite and Zircon Part I: Development and Microstructural Characterization (Retracted article. See vol. 47, pg. 115, 2015)**Journal:** Science of Sintering**Volume:** 46**Issue:** 3**Pages:** 291-306**Short Title:** Multiphase Composites Obtained by Sintering Reaction of Boehmite and Zircon Part I: Development and Microstructural Characterization (Retracted article. See vol. 47, pg. 115, 2015)**ISSN:** 0350-820X**DOI:** 10.2298/sos1403291b**Accession Number:** WOS:000348599200003

**Abstract:** In this work, different composites (zircon-mullite, zirconia-mullite-zirconia, mullite-zirconia and alumina-zirconia-mullite) were developed by reactive sintering of a powder mixture of boehmite ( $\text{AlOOH}$ ) and zircon ( $\text{ZrSiO}_4$ ). These powder mixtures were mixed and ground by ball milling and then pressed in cylindrical form. Finally, the green specimens were sintered in air during 2 hours between 1400 degrees C and 1600 degrees C, with a heating and cooling rate of 5 degrees C/min. The dilatometric curves show that there are several microstructural transformations in these mixtures. X-rays diffraction spectra showed formation of several composites depending on the initial conditions (% of boehmite and zircon and sintering temperature). The micrographic observations of the samples confirmed the presence of various phases.

**Notes:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**URL:** <Go to ISI>://WOS:000348599200003

**Reference Type: Journal Article****Record Number:** 41**Author:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**Year:** 2014**Title:** Elaboration and characterization of multiphase composites obtained by reaction sintering of boehmite and zircon**Journal:** Journal of the Australian Ceramic Society**Volume:** 50**Issue:** 2**Pages:** 135-146**Short Title:** Elaboration and characterization of multiphase composites obtained by reaction sintering of boehmite and zircon**ISSN:** 0004-881X**Accession Number:** WOS:000338617900017

**Abstract:** In this work, different composites (zircon-mullite-zirconia, mullite-zircon-zirconia, mullite-zirconia, mullite-zirconia-alumina and alumina-mullite-zirconia) were developed by reaction sintering of boehmite ( $\text{AlOOH}$ ) and zircon ( $\text{ZrSiO}_4$ ). Several mixtures were used by varying the boehmite content from 10 to 90 wt. %. All powders were mixed and grounded by ball milling and then pressed in cylindrical form. Finally, the green specimens were sintered under normal conditions for 2 hours at temperatures between 1400 and 1600 degrees C, with a heating rate of 5 degrees C/min. The dilatometric curves reveal several microstructural transformations in these mixtures. The X-rays diffraction spectra revealed factors such as percentage of boehmite and zircon and the sintering temperature lead to the formation of several composites. The presence of the various phases was confirmed by micrographic observations.

**Notes:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**URL:** <Go to ISI>://WOS:000338617900017

**Reference Type: Journal Article****Record Number:** 42**Author:** Belkhiat, D. E. C. Jabri, D. Fourati, H. Ieee,**Year:** 2014**Title:** Robust H-infinity tracking control design for a class of switched linear systems using descriptor redundancy approach**Journal:** 2014 European Control Conference (Ecc)**Pages:** 2248-2253**Short Title:** Robust H-infinity tracking control design for a class of switched linear systems using descriptor redundancy approach**Accession Number:** WOS:000349955702091

**Abstract:** In this paper, the design of a switched Proportional-Derivative (PD) controller, for a class of Switched Linear Systems (SLS) subject to external disturbances, is investigated for the purpose of satisfying the robust H-infinity output feedback tracking performance. The main idea of the proposed synthesis approach consists to use the descriptor redundancy formulation in order to decouple the crossing terms between the controller's and the switched system's matrices. Based on the multiple Lyapunov functional methods, sufficient conditions for the existence of a switched PD controller are formulated in terms of Linear Matrix Inequalities (LMI). The efficiency of the proposed synthesis procedure is illustrated by a numerical example.

**Notes:** Belkhiat, Djamel Eddine Chouaib Jabri, Dalel Fourati, Hassen 13th European Control Conference (ECC) Jun 24-27, 2014 Univ Strasbourg, Strasbourg, FRANCE ICube lab, MathWorks, Groupement Rech Modeling, Anal & Control Dynam Syst, Siemens, Natl Ctr Sci Res, INRIA 978-3-9524269-1-3

**URL:** <Go to ISI>://WOS:000349955702091

**Reference Type: Journal Article****Record Number:** 43**Author:** Belkhir, N. Aliouane, T. Bouzid, D.**Year:** 2014**Title:** Correlation between contact surface and friction during the optical glass polishing**Journal:** Applied Surface Science**Volume:** 288**Pages:** 208-214**Date:** Jan**Short Title:** Correlation between contact surface and friction during the optical glass polishing**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2013.10.008**Accession Number:** WOS:000327493400028

**Abstract:** This study aims to determine the correlation between the contact surface, the polishing pressure and the friction coefficient during the optical glass polishing. For this purpose, BK7 optical glass samples were polished and the mentioned parameters were measured to find a correlation between them. Several methods of characterization have been used; the mechanical profilometer, the AFM, and in addition setups for measuring forces and the contact surface have been developed and adapted to the polishing machine. The found results have shown the existence of a close relationship between the three parameters and the influence of each other. This have allowed to deduce that during the polishing process it is very important to control the contact pressure and the polisher form according to the pressure distribution in order to guarantee a very high quality of the polished surface. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Belkhir, N. Aliouane, T. Bouzid, D.**URL:** <Go to ISI>://WOS:000327493400028

**Reference Type: Journal Article****Record Number:** 44**Author:** Benahmed, M. Akkal, S. Elomri, A. Laouer, H. Verite, P. Seguin, E.**Year:** 2014**Title:** Constituents from *Bupleurum montanum* (Coss. & Dur.) (Apiaceae)**Journal:** Arabian Journal of Chemistry**Volume:** 7**Issue:** 6**Pages:** 1065-1069**Date:** Dec**Short Title:** Constituents from *Bupleurum montanum* (Coss. & Dur.) (Apiaceae)**ISSN:** 1878-5352**DOI:** 10.1016/j.arabjc.2011.01.001**Accession Number:** WOS:000345631200026

**Abstract:** A chemical investigation of the aerial parts of *Bupleurum montanum* (Coss. & Dur.) (Apiaceae) afforded five compounds, quercitin 1, tamarexin 2, isorhamnetin-3-rutinoside 3, kaempferol-3-O-beta-rutinoside 4, and 3,4-dihydroxybenzoic acid (Protocatechuic acid) 5. The structural elucidation was performed mainly by MS, 1D and 2D NMR spectrum data. (C) 2011 Production and hosting by Elsevier B.V. on behalf of King Saud University.

**Notes:** Benahmed, M. Akkal, S. Elomri, A. Laouer, H. Verite, P. Seguin, E.**URL:** <Go to ISI>://WOS:000345631200026

**Reference Type: Journal Article****Record Number:** 45**Author:** Benaliouche, H. Touahria, M.**Year:** 2014**Title:** Comparative Study of Multimodal Biometric Recognition by Fusion of Iris and Fingerprint**Journal:** Scientific World Journal**Short Title:** Comparative Study of Multimodal Biometric Recognition by Fusion of Iris and Fingerprint**ISSN:** 1537-744X**DOI:** 10.1155/2014/829369**Article Number:** 829369**Accession Number:** WOS:000330894900001

**Abstract:** This research investigates the comparative performance from three different approaches for multimodal recognition of combined iris and fingerprints: classical sum rule, weighted sum rule, and fuzzy logic method. The scores from the different biometric traits of iris and fingerprint are fused at the matching score and the decision levels. The scores combination approach is used after normalization of both scores using the min-max rule. Our experimental results suggest that the fuzzy logic method for the matching scores combinations at the decision level is the best followed by the classical weighted sum rule and the classical sum rule in order. The performance evaluation of each method is reported in terms of matching time, error rates, and accuracy after doing exhaustive tests on the public CASIA-Iris databases V1 and V2 and the FVC 2004 fingerprint database. Experimental results prior to fusion and after fusion are presented followed by their comparison with related works in the current literature. The fusion by fuzzy logic decision mimics the human reasoning in a soft and simple way and gives enhanced results.

**Notes:** Benaliouche, Houda Touahria, Mohamed**URL:** <Go to ISI>://WOS:000330894900001

**Reference Type: Journal Article****Record Number:** 46**Author:** Bencheikh, A. Fromager, M. Ameur, K. A.**Year:** 2014**Title:** Generation of Laguerre-Gaussian LG(p0) beams using binary phase diffractive optical elements**Journal:** Applied Optics**Volume:** 53**Issue:** 21**Pages:** 4761-4767**Date:** Jul**Short Title:** Generation of Laguerre-Gaussian LG(p0) beams using binary phase diffractive optical elements**ISSN:** 1559-128X**DOI:** 10.1364/ao.53.004761**Accession Number:** WOS:000339870900019

**Abstract:** In recent years, considerable attention has been devoted to laser beams with specific intensity profile, i.e., non-Gaussian. In this work, we present a novel technique to generate high-radial-order Laguerre-Gaussian beams LG(p0) based on the use of a binary phase diffractive optical element (BPDOE). The latter is a phase plate made up of annular zones introducing alternatively a phase shift equal to 0 or pi modeled on positions which do not coincide with the position of the zeros of the desired LG(p0) beam. The LG(p0) beams are obtained by transforming a fundamental Gaussian beam through an appropriate BPDOE. The design of the latter is based on the calculation of the Fresnel-Kirchhoff integral, and the diffracted intensity at the focus plane of a lens has been modeled analytically for the first time. The numerical simulations and experiment demonstrate a good beam quality transformation. Obtained LG(p0) are suitable for atom trap and pumping solid state laser applications. (C) 2014 Optical Society of America

**Notes:** Bencheikh, Abdelhalim Fromager, Michael Ameur, Kamel Ait**URL:** <Go to ISI>://WOS:000339870900019

**Reference Type: Journal Article****Record Number:** 47**Author:** Bencheikh, K. Medjedel, S. Vignale, G.**Year:** 2014**Title:** Current reversals in rapidly rotating ultracold Fermi gases**Journal:** Physical Review A**Volume:** 89**Issue:** 6**Date:** Jun**Short Title:** Current reversals in rapidly rotating ultracold Fermi gases**ISSN:** 2469-9926**DOI:** 10.1103/PhysRevA.89.063620**Article Number:** 063620**Accession Number:** WOS:000338647500008

**Abstract:** We study the equilibrium current density profiles of harmonically trapped ultracold Fermi gases in quantum Hall-like states that appear when the quasi-two-dimensional trap is set in fast rotation. The density profile of the gas (in the rotating reference frame) consists of incompressible strips of constant quantized density separated by compressible regions in which the density varies. Remarkably, we find that the atomic currents flow in opposite directions in the compressible and incompressible regions—a prediction that should be amenable to experimental verification.

**Notes:** Bencheikh, K. Medjedel, S. Vignale, G.**URL:** <Go to ISI>://WOS:000338647500008

**Reference Type: Journal Article****Record Number:** 48**Author:** Benguerba, Y. Dumas, C. Ernst, B.**Year:** 2014**Title:** Modelling of the Membrane Permeability Effect on the H-2 Production Using CFD Method**Journal:** International Journal of Chemical Reactor Engineering**Volume:** 12**Issue:** 1**Date:** Apr**Short Title:** Modelling of the Membrane Permeability Effect on the H-2 Production Using CFD Method**ISSN:** 2194-5748**DOI:** 10.1515/ijcre-2013-0063**Accession Number:** WOS:000344851900001

**Abstract:** Autothermal reforming of CH<sub>4</sub> in a membrane catalytic microreactor for the production of hydrogen at different temperatures over supported Ni catalysts has been studied. A three-dimensional mathematical model was developed using a computational fluid dynamics (CFD) technique. The effect of using different membranes on the performance of the microreactor was analysed. The amounts of hydrogen produced and separated in each case, under the same operating conditions, were compared. It was proven that using the porous membrane (Ni-Al<sub>2</sub>O<sub>3</sub>) could be an economic solution for the production and separation of hydrogen in membrane reactors.

**Notes:** Benguerba, Yacine Dumas, Christine Ernst, Barbara**URL:** <Go to ISI>://WOS:000344851900001

**Reference Type: Journal Article****Record Number:** 49**Author:** Benmesli, S. Riahi, F.**Year:** 2014**Title:** Dynamic mechanical and thermal properties of a chemically modified polypropylene/natural rubber thermoplastic elastomer blend**Journal:** Polymer Testing**Volume:** 36**Pages:** 54-61**Date:** Jun**Short Title:** Dynamic mechanical and thermal properties of a chemically modified polypropylene/natural rubber thermoplastic elastomer blend**ISSN:** 0142-9418**DOI:** 10.1016/j.polymertesting.2014.03.016**Accession Number:** WOS:000337553600008

**Abstract:** Thermoplastic elastomers from blends of maleic anhydride-grafted natural rubber (NR-g-MAH) and maleic anhydride-grafted polypropylene (PP-g-MAH) have been prepared by melt mixing in a Brabender plasticorder. Grafting of each polymer was achieved in the molten state using dicumyl peroxide as the initiator. The effects on the dynamic mechanical and thermal properties were investigated over a wide range of temperatures. DMA analysis showed an increase of the glass transition temperature by 5 degrees C and a disappearance of the beta transition peak for NR-g-MAH/PP-g-MAH with respect to the unmodified NR/PP blend. The DSC analysis showed a slight increase of the fractional crystallinity of polypropylene for the dynamically vulcanized and grafted blends. These effects were attributed to the enhancement of the interactions that developed between the two polymers as a result of the grafting. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Benmesli, Sarnia Riahi, Farid**URL:** <Go to ISI>://WOS:000337553600008

**Reference Type: Journal Article****Record Number:** 50**Author:** Bensalem, S. Chegaar, M. Maouche, D. Bouhemadou, A.**Year:** 2014**Title:** Theoretical study of structural, elastic and thermodynamic properties of CZTX (X = S and Se) alloys**Journal:** Journal of Alloys and Compounds**Volume:** 589**Pages:** 137-142**Date:** Mar**Short Title:** Theoretical study of structural, elastic and thermodynamic properties of CZTX (X = S and Se) alloys**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2013.11.113**Accession Number:** WOS:000330181400022

**Abstract:** By means of first-principles calculation approach, structural parameters, elastic and thermodynamic properties of Copper-Zinc-Tin-(Sulphide, Selenide) or  $\text{Cu}_2\text{ZnSnX}_4$  (X = S and Se) alloys for the kesterite (KS) and stannite (ST) types have been investigated. The calculated lattice parameters are in good agreement with experimental reported data. The elastic constants are calculated for both types of both compounds using the static finite strain scheme; the pressure dependence of elastic constants is predicted. The bulk modulus, anisotropy factor, shear modulus, Young's modulus, Lamé's coefficient and Poisson's ratio have been estimated from the calculated single crystalline elastic constants. The analysis of B/G ratio shows that  $\text{Cu}_2\text{ZnSnX}_4$  or CZTX compounds behave as ductile. Through quasi-harmonic approximation, the temperature dependence of some thermodynamic functions and lattice heat capacity of both compounds for both types have been performed. (C) 2013 Elsevier B. V. All rights reserved.

**Notes:** Bensalem, S. Chegaar, M. Maouche, D. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000330181400022

**Reference Type: Journal Article****Record Number:** 51**Author:** Benseghir, A.**Year:** 2014**Title:** EXISTENCE AND EXPONENTIAL DECAY OF SOLUTIONS FOR TRANSMISSION PROBLEMS WITH DELAY**Journal:** Electronic Journal of Differential Equations**Date:** Oct**Short Title:** EXISTENCE AND EXPONENTIAL DECAY OF SOLUTIONS FOR TRANSMISSION PROBLEMS WITH DELAY**ISSN:** 1072-6691**Article Number:** 212**Accession Number:** WOS:000350638800002

**Abstract:** In this article we consider a transmission problem in a bounded domain with a delay term in the first equation. Under suitable assumptions on the weight of the damping and the weight of the delay, we prove the existence and the uniqueness of the solution using the semigroup theory. Also we show the exponential stability of the solution by introducing a suitable Lyapunov functional.

**Notes:** Benseghir, Aissa**URL:** <Go to ISI>://WOS:000350638800002

**Reference Type: Journal Article****Record Number: 52****Author:** Benterki, D. Benseridi, H. Dilmi, M.**Year:** 2014**Title:** Asymptotic Study of a Boundary Value Problem Governed by the Elasticity Operator with Nonlinear Term**Journal:** Advances in Applied Mathematics and Mechanics**Volume:** 6**Issue:** 2**Pages:** 191-202**Date:** Apr**Short Title:** Asymptotic Study of a Boundary Value Problem Governed by the Elasticity Operator with Nonlinear Term**ISSN:** 2070-0733**DOI:** 10.4208/aamm.2013.m207**Accession Number:** WOS:000334928600004**Abstract:** In this paper, a nonlinear boundary value problem in a three dimensional thin domain with Tresca's friction law is considered. The small change of variable  $z = x(3)/\epsilon$  transforms the initial problem posed in the domain  $\Omega(\epsilon)$  into a new problem posed on a fixed domain  $\Omega$  independent of the parameter  $\epsilon$ . As a main result, we obtain some estimates independent of the small parameter. The passage to the limit on  $\epsilon$ , permits to prove the results concerning the limit of the weak problem and its uniqueness.**Notes:** Benterki, D. Benseridi, H. Dilmi, M.**URL:** <Go to ISI>://WOS:000334928600004

**Reference Type: Journal Article****Record Number:** 53**Author:** Benyahia, A. Merrouche, A. Rahmouni, Z. E. Rokbi, M. Serge, W. Kouadri, Z.**Year:** 2014**Title:** Study of the alkali treatment effect on the mechanical behavior of the composite unsaturated polyester-Alfa fibers**Journal:** Mechanics & Industry**Volume:** 15**Issue:** 1**Pages:** 69-73**Short Title:** Study of the alkali treatment effect on the mechanical behavior of the composite unsaturated polyester-Alfa fibers**ISSN:** 2257-7777**DOI:** 10.1051/meca/2013082**Accession Number:** WOS:000342210500008

**Abstract:** In this paper, composites based on unsaturated polyester resin reinforced with short Alfa fibers are studied in detail. Alfa fibers have been previously treated with various concentrations NaOH (1, 3, 5, 7%) during 24 h. The influence of alkali treatment on fiber morphology is analyzed. Analysis by FTIR and X-ray diffraction showed physico-chemical changes in Alfa fiber treated surfaces. SEM observations also helped to highlight these changes. The results of static tests on composites showed improvements in tensile and flexural strengths of composites reinforced with the treated fibers, particularly the composite with treated fibers at 7% NaOH. These improvements were about 30% and 50%, respectively, compared to untreated fiber reinforced composite.

**Notes:** Benyahia, Azzedine Merrouche, Abdellah Rahmouni, Zine El Abidine Rokbi, Mansour Serge, Walter Kouadri, Zinat

**URL:** <Go to ISI>://WOS:000342210500008

**Reference Type: Journal Article****Record Number:** 54**Author:** Berri, S. Ibrir, M. Maouche, D. Attallah, M.**Year:** 2014**Title:** First principles study of structural, electronic and magnetic properties of ZrFeTiAl, ZrFeTiSi, ZrFeTiGe and ZrNiTiAl**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 371**Pages:** 106-111**Date:** Dec**Short Title:** First principles study of structural, electronic and magnetic properties of ZrFeTiAl, ZrFeTiSi, ZrFeTiGe and ZrNiTiAl**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2014.07.033**Accession Number:** WOS:000341165000018

**Abstract:** The electronic and magnetic properties of the ZrFeTiAl, ZrFeTiSi, ZrFeTiGe and ZrNiTiAl quaternary Hensler compounds have been investigated using first-principles calculations. Our calculations predict that ZrFeTiAl, ZrFeTiSi, ZrFeTiGe and ZrNiTiAl are half-metallic ferromagnets (HMFs) with a magnetic moment of 1, 2, 2, 3  $\mu(B)/fu$  and HM flip gaps of 0.56, 0.92, 0.86 and 0.65 eV, respectively. Our calculations show that these compounds are candidate materials for future spintronic applications. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Berri, Saadi Ibrir, Miloud Maouche, Djamel Attallah, Mourad**URL:** <Go to ISI>://WOS:000341165000018

**Reference Type: Journal Article****Record Number:** 55**Author:** Berri, S. Ibrir, M. Maouche, D. Bensalem, R.**Year:** 2014**Title:** First principles study of structural, electronic and magnetic properties of Mn<sub>2</sub>CoAs**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 361**Pages:** 132-136**Date:** Jun**Short Title:** First principles study of structural, electronic and magnetic properties of Mn<sub>2</sub>CoAs**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2014.02.064**Accession Number:** WOS:000334336000022

**Abstract:** We have performed first-principle calculations of the structural, electronic and magnetic properties of Mn<sub>2</sub>CoAs Heusler alloy, using full-potential linearized augmented plane wave (FP-LAPW) scheme within the GGA. Features such as the lattice constant, the bulk modulus and its pressure derivative are reported. The electronic band structures and density of states of the Mn<sub>2</sub>CoAs compound show that the spin-up electrons are metallic, but the spin-down bands have a gap of 0.48 eV, resulting in stable half-metallic ferrimagnetic behavior with a magnetic moment of 4.00  $\mu_B$ . (C) 2014 Elsevier B.V. All rights reserved

**Notes:** Berri, Saadi Ibrir, M. Maouche, D. Bensalem, R.**URL:** <Go to ISI>://WOS:000334336000022

**Reference Type: Journal Article****Record Number:** 56**Author:** Berri, S. Maouche, D. Ibrir, M. Bakri, B.**Year:** 2014**Title:** Electronic structure and magnetic properties of the perovskite cerium manganese oxide from ab initio calculations**Journal:** Materials Science in Semiconductor Processing**Volume:** 26**Pages:** 199-204**Date:** Oct**Short Title:** Electronic structure and magnetic properties of the perovskite cerium manganese oxide from ab initio calculations**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2014.04.027**Accession Number:** WOS:000344823400028

**Abstract:** We have performed first-principle calculations of the structural, electronic and magnetic properties of cerium manganese oxide (CeMnO)<sub>3</sub>, using full-potential linearized augmented plane-wave (FP-LAPW) scheme within GGA and GGA+U approaches. Features such as the lattice constant, bulk modulus and its pressure derivative are reported. Also, we have presented our results of the band structure and the density of states. The results show a half-metallic ferromagnetic ground state for CeMnO<sub>3</sub> in GGA+U treatment, whereas semi-metallic ferromagnetic character is observed in GGA. The results obtained, make the cubic CeMnO<sub>3</sub> a candidate material for future spintronic application. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Berri, Saadi Maouche, Djamel Ibrir, Miloud Bakri, Badis**URL:** <Go to ISI>://WOS:000344823400028

**Reference Type: Journal Article****Record Number:** 57**Author:** Berrouche, Y. Bekka, R. E.**Year:** 2014**Title:** Improved multiple description wavelet based image coding using Hadamard Transform**Journal:** Aeu-International Journal of Electronics and Communications**Volume:** 68**Issue:** 10**Pages:** 976-982**Short Title:** Improved multiple description wavelet based image coding using Hadamard Transform**ISSN:** 1434-8411**DOI:** 10.1016/j.aeue.2014.04.021**Accession Number:** WOS:000341741500008

**Abstract:** A new Multiple Description Transform Coding (MDTC) was proposed by combining the Discrete Wavelet Transform (DWT) and Hadamard Transform (HT). To overcome the inherent drawbacks in the Pairwise Correlating Transform (PCT), which are the computational complexity and hardware implementation, HT was used to introduce an effective redundancy between the descriptions by improving their correlation coefficient. The new approach were analyzed and compared to the conventional scheme in the case of four descriptions by using multiple gray scale test images having different spectral characteristics. The findings show a better performance of the proposed method, especially in the case of two packets lost. In addition, the proposed method ensures a low degradation of the image reconstructed when one packet or two packets are lost. Therefore, the proposed coder provides a good redundancy performance and an easier practical implementation than the classical approach. (C) 2014 Elsevier GmbH. All rights reserved.

**Notes:** Berrouche, Yaakoub Bekka, Rais El'hadi**URL:** <Go to ISI>://WOS:000341741500008

**Reference Type: Journal Article**

**Record Number: 58**

**Author: Bessou, S. Touahria, M.**

**Year: 2014**

**Title: AN ACCURACY-ENHANCED STEMMING ALGORITHM FOR ARABIC INFORMATION RETRIEVAL**

**Journal: Neural Network World**

**Volume: 24**

**Issue: 2**

**Pages: 117-128**

**Short Title: AN ACCURACY-ENHANCED STEMMING ALGORITHM FOR ARABIC INFORMATION RETRIEVAL**

**ISSN: 1210-0552**

**Accession Number: WOS:000336236800001**

**Abstract:** This paper provides a method for indexing and retrieving Arabic texts, based on natural language processing. Our approach exploits the notion of template in word stemming and replaces the words by their stems. This technique has proven to be effective since it has returned significant relevant retrieval results by decreasing silence during the retrieval phase. Series of experiments have been conducted to test the performance of the proposed algorithm ESAIR (Enhanced Stemmer for Arabic Information Retrieval). The results obtained indicate that the algorithm extracts the exact root with an accuracy rate up to 96% and hence, improving information retrieval.

**Notes:** Bessou, Sadik Touahria, Mohamed

**URL:** <Go to ISI>://WOS:000336236800001

**Reference Type: Journal Article****Record Number:** 59**Author:** Bezzaoucha, A. Atif, M. L. Bouamra, A. El Kebbou, A. Benzerga, M. Ben Abdelaziz, A. Soulimane, A. Ladner, J. Da Silva, G. B. Meguenni, K. Quessar, A. Heroual, N. Bouguizi, A. Boussouf, N. Makhoul, F. Lamdjadani, N. Tibiche, A. Abbassene, S. Regagba, D. Benameur, M. Maghreb Grp Bibliometric, Studies**Year:** 2014**Title:** Algerian medical teachers' research output and its determinants during the 2000-2009 decade**Journal:** Revue D Epidemiologie Et De Sante Publique**Volume:** 62**Issue:** 1**Pages:** 33-40**Date:** Feb**Short Title:** Algerian medical teachers' research output and its determinants during the 2000-2009 decade**ISSN:** 0398-7620**DOI:** 10.1016/j.respe.2013.08.005**Accession Number:** WOS:000330580700005

**Abstract:** Background. - Publications are the primary output of scientific research. We conducted a national study to quantify Algerian medical teachers' research output and identify its determinants during the 2000-2009 decade. Methods. - The American Medline database and the French Pascal database were used. A publication was eligible only if the lead author was an Algerian medical teacher (in medicine, pharmacy, or dentistry) working in Algeria. The same questionnaire was completed by cases (teachers who were first authors of an original article during the study period) and randomly selected controls. Logistic regression analysis was used to identify factors related to research output. Results. - A total of 79 original articles (42.2% of publications) were retrieved, a quarter of which were listed in Pascal alone. The publication rate was 2.6 original articles per 1000 teachers per year. The journals that published these original articles had a median impact factor of 0.83. The ability to publish an original article was 4.3 times higher if the teacher had undergone training in biostatistics and/or epidemiology (adjusted odds ratio [aOR] = 4.31, 95% confidence interval [CI]: 1.79-10.38). A promotion evaluation grid that did not encourage writing (aOR = 3.44, 95% CI: 1.42-8.33), a doctoral thesis, seniority, foreign collaboration, and English language proficiency were found to be associated with publication output. Conclusions. - Algerian medical teachers' research output was particularly low. Replacing the current promotion grid with a grid that promotes writing, developing abilities to read and write articles and developing English language proficiency are likely to improve this situation. (C) 2014 Published by Elsevier Masson SAS.

**Notes:** Bezzaoucha, A. Atif, M. L. Bouamra, A. El Kebbou, A. Benzerga, M. Ben Abdelaziz, A. Soulimane, A. Ladner, J. Da Silva, G. Borges Meguenni, K. Quessar, A. Heroual, N. Bouguizi, A. Boussouf, N. Makhoul, F. Lamdjadani, N. Tibiche, A. Abbassene, S. Regagba, D. Benameur, M.

**URL:** <Go to ISI>://WOS:000330580700005

**Reference Type: Journal Article****Record Number:** 60**Author:** Bouafassa, A. Rahmani, L. Kessal, A. Babes, B.**Year:** 2014**Title:** Unity power factor Converter based on a Fuzzy controller and Predictive Input Current**Journal:** Isa Transactions**Volume:** 53**Issue:** 6**Pages:** 1817-1821**Date:** Nov**Short Title:** Unity power factor Converter based on a Fuzzy controller and Predictive Input Current**ISSN:** 0019-0578**DOI:** 10.1016/j.isatra.2014.08.001**Accession Number:** WOS:000347766400012

**Abstract:** This paper proposes analysis and control of a single-phase power factor corrector (PFC). The proposed control is capable of achieving a unity power factor for each DC link voltage or load fluctuation. The method under study is composed of two intelligent approaches, a fuzzy logic controller to ensure an output voltage at a suitable value and predictive current control. The fuzzy controller is used with minimum rules to attain a low cost. The method is verified and discussed through simulation on the MATLAB/Simulink platform. It presents high dynamic performance under various parameter changes. Moreover, in order to examine and evaluate the method in real-time, a test bench is built using dSPACE 1104. The implantation of the proposed method is very easy and flexible and allows for operation under parameter variations. Additionally, the obtained results are very significant. (C) 2014 ISA. Published by Elsevier Ltd. All rights reserved.

**Notes:** Bouafassa, Amar Rahmani, Lazhar Kessal, Abdelhalim Babes, Badreddine**URL:** <Go to ISI>://WOS:000347766400012

**Reference Type: Journal Article****Record Number:** 61**Author:** Boubaaya, M. Tahi, H. Djezzar, B. Benmassai, K. Benabdelmoumene, A. Goudjil, M. Doumaz, D. Hemida, A. F. Ieee,**Year:** 2014**Title:** Reaction-Diffusion Model for interface traps induced by BTS stress including H<sup>+</sup>, H and H-2 as Diffusion Species**Journal:** 2014 9th International Design & Test Symposium (Idt)**Pages:** 231-235**Short Title:** Reaction-Diffusion Model for interface traps induced by BTS stress including H<sup>+</sup>, H and H-2 as Diffusion Species**Accession Number:** WOS:000380469600044**Abstract:** Negative and positive bias temperature instability (NBTI and PBTI) are described in the same model using the Reaction-Diffusion (RD) by taking into account all protagonist diffusion hydrogenate species; hydrogen atom (H), proton (H<sup>+</sup>) and hydrogen molecular (H-2). This model is based on the probability that the passivated dangling bonds at the interface of silicon-oxide release the hydrogen H or proton H<sup>+</sup>. This probability is expressed as a function of experimental parameters.**Notes:** Boubaaya, Mohamed Tahi, Hakim Djezzar, Boualem Benmassai, Karim Benabdelmoumene, Abdelmadjid Goudjil, Mohamed Doumaz, Djamila Hemida, Abdelhak Feraht 9th International Design & Test Symposium (IDT) Dec 16-18, 2014 Algiers, ALGERIA Ttcc, ieee, ieee comp soc, ceda 978-1-4799-8200-4**URL:** <Go to ISI>://WOS:000380469600044

**Reference Type: Journal Article****Record Number:** 62**Author:** Boubaha, B. Bencheikh, A. Ait-Ameur, K.**Year:** 2014**Title:** Spatial properties of rectified cosine Gaussian beams**Journal:** Journal of Optics**Volume:** 16**Issue:** 2**Date:** Feb**Short Title:** Spatial properties of rectified cosine Gaussian beams**ISSN:** 2040-8978**DOI:** 10.1088/2040-8978/16/2/025701**Article Number:** 025701**Accession Number:** WOS:000331056700011

**Abstract:** The cosine Gaussian beam (CGB) resulting from the coherent coaxial superposition of two Gaussian beams having the same width  $W$  and opposite radii of curvature  $R$  and  $-R$  is a ringed beam characterized by an  $M-2$  factor which can be very high, and adjustable by changing  $R$ . According to the paper by Hasnaoui et al(2011 Opt. Commun.284 1331-4) we expect that the CGB after 'rectification' by a binary diffractive optical element could be a good candidate for focal volume reduction, so useful to many laser applications. Unfortunately, this is not the case, and the physical factors responsible for this unexpected behaviour have been analysed. In particular, we have demonstrated that the three features ( $M-2$  factor, divergence and on-axis intensity) do not hold the same information about the spatial characteristics of rectified or unrectified CGBs.

**Notes:** Boubaha, B. Bencheikh, A. Ait-Ameur, K.**URL:** <Go to ISI>://WOS:000331056700011

**Reference Type: Journal Article****Record Number:** 63**Author:** Boucetta, S. Zegrar, F.**Year:** 2014**Title:** First-Principles Study of the Structural, Elastic, and Mechanical Properties of Ni<sub>3</sub>Ga Compound under Pressure**Journal:** Acta Physica Polonica A**Volume:** 125**Issue:** 1**Pages:** 54-59**Date:** Jan**Short Title:** First-Principles Study of the Structural, Elastic, and Mechanical Properties of Ni<sub>3</sub>Ga Compound under Pressure**ISSN:** 0587-4246**Accession Number:** WOS:000339823600010

**Abstract:** There was employed the density functional theory plane-wave pseudopotential method with local density approximation and generalized gradient approximation to investigate the structural, elastic and mechanical properties of the intermetallic compound Ni<sub>3</sub>Ga. The calculated equilibrium lattice constant and bulk modulus are in good agreement with the experimental values. The elastic constants were determined from a linear fit of the calculated stress strain function according to Hooke's law. From the elastic constants, the bulk modulus B, anisotropy factor A, shear modulus G, Young's modulus E and Poisson's ratio  $\nu$  for Ni<sub>3</sub>Ga compound are obtained. Our results for the bulk modulus B, anisotropy factor A, shear modulus G, Young's modulus E and Poisson's ratio  $\nu$  are consistent with the experimental values. The sound velocities and the Debye temperature are also predicted from elastic constants. The dependences of the elastic and mechanical properties of Ni<sub>3</sub>Ga compound on pressure were investigated for the first time. It was found that the cubic Ni<sub>3</sub>Ga compound is mechanically stable according to the elastic stability criteria and it is not elastically isotropic. By analyzing the ratio B/G, it was concluded that Ni<sub>3</sub>Ga compound is ductile in nature.

**Notes:** Boucetta, S. Zegrar, F.**URL:** <Go to ISI>://WOS:000339823600010

**Reference Type: Journal Article****Record Number:** 64**Author:** Bouchoul, B. Benaniba, M. T. Massardier, V.**Year:** 2014**Title:** Effect of Biobased Plasticizers on Thermal, Mechanical, and Permanence Properties of Poly(vinyl chloride)**Journal:** Journal of Vinyl & Additive Technology**Volume:** 20**Issue:** 4**Pages:** 260-267**Date:** Dec**Short Title:** Effect of Biobased Plasticizers on Thermal, Mechanical, and Permanence Properties of Poly(vinyl chloride)**ISSN:** 1083-5601**DOI:** 10.1002/vnl.21356**Accession Number:** WOS:000344350100009

**Abstract:** Phthalates can be replaced by other harmless and environmentally friendly plasticizers, such as isosorbide diesters (ISB), and epoxidized sunflower oil (ESO), which has been proved an efficient stabilizer for poly (vinyl chloride) (PVC) in helping to prevent degradation during processing. Formulations based on PVC with different amounts of ISB, ESO, and di-(2-ethylhexyl) phthalate (DEHP) from 0 to 60 parts by weight per hundred parts of resin were realized. To make PVC flexible with partial amounts of the debated phthalates as plasticizers, we use a combination of DEHP, ISB, and ESO. Effects of these two biobased plasticizers, ISB and ESO, and their mixture with DEHP on thermal stability by measuring discoloration degrees and thermal gravimetric analysis, on mechanical properties such tensile strength, elongation at break, and hardness, were characterized. Plasticizer permanence properties of PVC compounds were studied. Studies showed that processibility and flexibility were improved by the addition of a plasticizer system (ISB, ESO, and DEHP). An increase in the content of ISB and/or ESO increased thermal and mechanical properties, whereas compositions with ternary compositions of ISB/ESO/DEHP (15/15/30) exhibited the best performance properties. (c) 2014 Society of Plastics Engineers

**Notes:** Bouchoul, Boussaha Benaniba, Mohamed Tahar Massardier, Valerie**URL:** <Go to ISI>://WOS:000344350100009

**Reference Type: Journal Article****Record Number:** 65**Author:** Boudissa, R. Bayadi, A. Baersch, R.**Year:** 2014**Title:** AC performance of silicone and glass barriers in clean and polluted atmosphere**Journal:** Electric Power Systems Research**Volume:** 108**Pages:** 170-177**Date:** Mar**Short Title:** AC performance of silicone and glass barriers in clean and polluted atmosphere**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2013.11.012**Accession Number:** WOS:000331509700018

**Abstract:** The aim of this article consists in the comparative study of silicone rubber and glass insulating barriers performance. The study is carried out under AC voltage in a clean and polluted atmosphere. Their dielectric properties needed to characterize their performance were measured using the Schering bridge. The effect of the grounded electrode's sizes and their isolation in the point-plane air gap system on the optimization of the insulating barrier performance was analyzed. Moreover we present findings of experiments which allow quantifying the effects of the clean or polluted atmosphere, the degree of contamination, the number of polluted faces of the barrier as well as the electrode axis orientation of the rod-plane system on their protection reliability. Finally, this investigation has been supported by laboratory observations of the discharge phenomena in the air gap from inception to full flashover in all cases using a video camera system. The results from this study argue well for the use of silicone insulation as a barrier in non-uniform field electrode systems regardless of the nature of the environment in which it must operate. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Boudissa, R. Bayadi, A. Baersch, R.**URL:** <Go to ISI>://WOS:000331509700018

**Reference Type: Journal Article****Record Number:** 66**Author:** Boudjelaba, K. Ros, F. Chikouche, D.**Year:** 2014**Title:** Potential of Particle Swarm Optimization and Genetic Algorithms for FIR Filter Design**Journal:** Circuits Systems and Signal Processing**Volume:** 33**Issue:** 10**Pages:** 3195-3222**Date:** Oct**Short Title:** Potential of Particle Swarm Optimization and Genetic Algorithms for FIR Filter

Design

**ISSN:** 0278-081X**DOI:** 10.1007/s00034-014-9800-y**Accession Number:** WOS:000342227000011

**Abstract:** This article studies the performance of two metaheuristics, particle swarm optimization (PSO) and genetic algorithms (GA), for FIR filter design. The two approaches aim to find a solution to a given objective function but employ different strategies and computational effort to do so. PSO is a more recent heuristic search method than GA; its dynamics exploit the collaborative behavior of biological populations. Some researchers advocate the superiority of PSO over GA and highlight its capacity to solve complex problems thanks to its ease of implementation. In this paper, different versions of PSOs and GAs including our specific GA scheme are compared for FIR filter design. PSO generally outperforms standard GAs in some performance criteria, but our adaptive genetic algorithm is shown to be better on all criteria except CPU runtime. The study also underlines the importance of introducing intelligence in metaheuristics to make them more efficient by embedding self-tuning strategies. Furthermore, it establishes the potential complementarity of the approaches when solving this optimization problem.

**Notes:** Boudjelaba, Kamal Ros, Frederic Chikouche, Djamel**URL:** <Go to ISI>://WOS:000342227000011

**Reference Type: Journal Article****Record Number:** 67**Author:** Boudjelaba, K. Ros, F. Chikouche, D.**Year:** 2014**Title:** An efficient hybrid genetic algorithm to design finite impulse response filters**Journal:** Expert Systems with Applications**Volume:** 41**Issue:** 13**Pages:** 5917-5937**Date:** Oct**Short Title:** An efficient hybrid genetic algorithm to design finite impulse response filters**ISSN:** 0957-4174**DOI:** 10.1016/j.eswa.2014.03.034**Accession Number:** WOS:000336872300022

**Abstract:** Although genetic algorithms (GAs) have proved their ability to provide answers to the limitations of more conventional methods, they are comparatively inefficient in terms of the time needed to reach a repeatable solution of desired quality. An inappropriate selection of driving parameters is frequently blamed by practitioners. The use of hybrid schemes is interesting but often limited as they are computationally expensive and versatile. This paper presents a novel hybrid genetic algorithm (HGA) for the design of digital filters. HGA combines a pure genetic process and a dedicated local approach in an innovative and efficient way. The pure genetic process embeds several mechanisms that interact to make the GA self-adaptive in the management of the balance between diversity and elitism during the genetic life. The local approach concerns convergence of the algorithm and is highly optimized so as to be tractable. Only some promising reference chromosomes are submitted to the local procedure through a specific selection process. They are more likely to converge towards different local optima. This selective procedure is fully automatic and avoids excessive computational time costs as only a few chromosomes are concerned. The hybridization and the mechanisms involved afford the GA great flexibility. It therefore avoids laborious manual tuning and improves the usability of GAs for the specific area of FIR filter design. Experiments performed with various types of filters highlight the recurrent contribution of hybridization in improving performance. The experiments also reveal the advantages of our proposal compared to more conventional filter design approaches and some reference GAs in this field of application. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Boudjelaba, Kamal Ros, Frederic Chikouche, Djamel**URL:** <Go to ISI>://WOS:000336872300022

**Reference Type: Journal Article****Record Number:** 68**Author:** Boudjelaba, K. Ros, F. Chikouche, D.**Year:** 2014**Title:** Adaptive genetic algorithm-based approach to improve the synthesis of two-dimensional finite impulse response filters**Journal:** Iet Signal Processing**Volume:** 8**Issue:** 5**Pages:** 429-446**Date:** Jul**Short Title:** Adaptive genetic algorithm-based approach to improve the synthesis of two-dimensional finite impulse response filters**ISSN:** 1751-9675**DOI:** 10.1049/iet-spr.2013.0005**Accession Number:** WOS:000340570400001

**Abstract:** The design of finite impulse response (FIR) filters can be formulated as a non-linear optimization problem reputed to be difficult for conventional approaches. The constraints are high and a large number of parameters have to be estimated, especially when dealing with two-dimensional FIR filters. In order to improve the performance of conventional approaches, the authors explore several stochastic methodologies capable of handling large spaces. The authors specifically propose a new genetic algorithm (GA) in which some innovative concepts are introduced to improve the convergence and make its use easier for practitioners. The algorithm is globally improved by adapting the mutation and crossover and selection operators with the genetic advances. A dynamic ranking selection scheme is introduced to limit the promotion of extraordinary chromosomes. A refreshing mechanism is investigated to manage the trade-off between diversity and elitism. The key point of the proposed approach stems from the capacity of the GA to adapt the genetic operators during the genetic life while remaining simple and easy to implement. Most of the parameters and operators are changed by the GA itself. From an initial calibration, the GA performs the design problem while calibrating and repeatedly re-calibrating itself for solving it. The authors demonstrate on various cases of filter design a significant improvement in performance.

**Notes:** Boudjelaba, Kamal Ros, Frederic Chikouche, Djamel**URL:** <Go to ISI>://WOS:000340570400001

**Reference Type: Journal Article****Record Number:** 69**Author:** Boudjemaa, S. Djellouli, B.**Year:** 2014**Title:** Characterization of organomontmorillonite (organo-MMT) and study of its effects upon the formation of poly(methyl methacrylate)/organo-MMT nanocomposites prepared by in situ solution polymerisation**Journal:** Russian Journal of Applied Chemistry**Volume:** 87**Issue:** 10**Pages:** 1464-1473**Date:** Oct**Short Title:** Characterization of organomontmorillonite (organo-MMT) and study of its effects upon the formation of poly(methyl methacrylate)/organo-MMT nanocomposites prepared by in situ solution polymerisation**ISSN:** 1070-4272**DOI:** 10.1134/s1070427214100127**Accession Number:** WOS:000348379700012**Abstract:** Poly(methyl methacrylate)/montmorillonite nanocomposites were prepared by in situ solution polymerization of methyl methacrylate monomer (MMA) in the presence of the organic modified MMT-clay (OMMT). The results showed that, the basal space of the silicate layer increased, as determined by XRD, from 13.81 to 20.48 . The results of XRD and TEM indicated that the modified clays were dispersed in PMMA to form both exfoliated and intercalated PMMA/MMT nanocomposites. The effect of organic modifiers on the properties of the synthesized nanocomposites was studied. PMMA/OMMT with 5 wt % of organo-MMT gave the greatest improvement in thermal stability. The rheological properties of the PMMA/OMMT composites were investigated using ARES Rheometer operated in the dynamic mode with parallel plate geometry. The storage and loss moduli were increased with increasing the clay content. The stress-at-break was also relatively improved compared to the virgin PMMA in the same experimental conditions.**Notes:** Boudjemaa, S. Djellouli, B.**URL:** <Go to ISI>://WOS:000348379700012

**Reference Type: Journal Article**

**Record Number: 70**

**Author:** Boudjemaa, S. Djellouli, B.

**Year:** 2014

**Title:** CHARACTERIZATION OF ORGANOMONTMORILLONITE (ORGANO-MMT) AND STUDY OF ITS EFFECTS UPON THE FORMATION OF POLY (METHYL METHACRYLATE)/ORGANO-MMT NANOCOMPOSITES PREPARED BY IN-SITU SOLUTION POLYMERISATION

**Journal:** Revue Roumaine De Chimie

**Volume:** 59

**Issue:** 9

**Pages:** 769-779

**Date:** Sep

**Short Title:** CHARACTERIZATION OF ORGANOMONTMORILLONITE (ORGANO-MMT) AND STUDY OF ITS EFFECTS UPON THE FORMATION OF POLY (METHYL METHACRYLATE)/ORGANO-MMT NANOCOMPOSITES PREPARED BY IN-SITU SOLUTION POLYMERISATION

**ISSN:** 0035-3930

**Accession Number:** WOS:000354755800007

**Abstract:** Poly (methyl methacrylate)/montmorillonite nanocomposites were prepared by in situ solution polymerization of methyl methacrylate monomer (MMA) in the presence of the organic modified MMT-clay (OMMT). The results showed that the basal space of the silicate layer increased as determined by XRD, from 13.81 to 20.48 angstrom. The results of XRD and TEM indicated that the modified clays were dispersed in PMMA to form both exfoliated and intercalated PMMA/MMT nanocomposites. The effect of organic modifiers on the properties of the synthesized nanocomposites was studied. PMMA/OMMT with 5 wt % of Organo-MMT gave the greatest improvement in thermal stability. The rheological properties of the PMMA/OMMT composites were investigated using ARES Rheometer operated in the dynamic mode with parallel plate geometry. The storage and loss moduli were increased with increasing the clay content. The stress-at-break was also relatively improved compared to the virgin polystyrene in the same experimental conditions.

**Notes:** Boudjemaa, Soufiane Djellouli, Brahim

**URL:** <Go to ISI>://WOS:000354755800007

**Reference Type: Journal Article****Record Number:** 71**Author:** Boudries, A. Aliouat, M. Siarry, P.**Year:** 2014**Title:** Detection and replacement of a failing node in the wireless sensors networks**Journal:** Computers & Electrical Engineering**Volume:** 40**Issue:** 2**Pages:** 421-432**Date:** Feb**Short Title:** Detection and replacement of a failing node in the wireless sensors networks**ISSN:** 0045-7906**DOI:** 10.1016/j.compeleceng.2013.10.010**Accession Number:** WOS:000334978500012

**Abstract:** The lifetime in a wireless network, in particular a wireless sensor network, depends strongly on the connectivity factor between nodes. Several factors can be at the origin of a connectivity rupture such as: lack of energy on a significant node level, infection of a vital node by a malevolent code and a logical or physical failure of a primary node. This rupture can lead in some cases to a reconfiguration of the network by generating a prejudicial overhead or in other cases to a failure of the mission assigned to the network. In this paper, we propose a DRFN approach (Detection and Replacement of a Failing Node) for the connectivity maintenance by carrying out a replacement chain according to a distributed algorithm. Through simulation, we have shown our approach efficiency. Compared with similar work, our proposed approach consumes less energy, and improves the percentage of reduction in field coverage. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Boudries, Abdelmalek Aliouat, Makhlouf Siarry, Patrick Si**URL:** <Go to ISI>://WOS:000334978500012

**Reference Type: Journal Article****Record Number:** 72**Author:** Bouharati, S. Allag, F. Belmahdi, M. Bounechada, M. Boumaiza, S.**Year:** 2014**Title:** Risk factors analysis using the fuzzyfication of Reason's model**Journal:** 2014 1st International Conference on Information and Communication Technologies for Disaster Management (Ict-Dm)**Pages:** 48-50**Short Title:** Risk factors analysis using the fuzzyfication of Reason's model**Accession Number:** WOS:000365611500008

**Abstract:** Modern technology has now reached a point where improved safety can only be achieved through a better understanding of human error mechanisms. Much of the theoretical structure have a particular importance is the identification of cognitive processes common to a wide variety of error types. The "Reason's model" helps to understand the causes of accidents and to highlight the complexity of cause and effect. This model examines the preconditions for the event. It offers a typology of human errors it introduces into context, the technical and organizational system. An essential element of the accident risk analysis is making numerous decisions. In this process expert rely on gained knowledge and experience. Lack of knowledge concerning the rules of logic can lead to dangerous errors and may result in continuous failures in performance flow from faulty reasoning processes. Since these effect factors especially human interference are characterized by uncertainty and imprecision, we proposed a tool for data analysis based on artificial intelligence techniques, including the principles of fuzzy logic. The result was very satisfactory. Program established for predicting the performance of a plot just from probably inputs variables of the system.

**Notes:** Bouharati, S. Allag, F. Belmahdi, M. Bounechada, M. Boumaiza, S. Ouksel, AM NoualiTaboudjemat, N 1st International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) Mar 24-25, 2014 Algiers, ALGERIA IEEE, IEEE Algeria Subsect, RSDT, ATRST, ARPT, Algerie Telecom, Mobilis, Sonelgaz, Bull, Sonatrach, Naftal, Cerist 978-1-4799-4767-6

**URL:** <Go to ISI>://WOS:000365611500008

**Reference Type: Journal Article****Record Number:** 73**Author:** Bouhemadou, A. Boudrifa, O. Guechi, N. Khenata, R. Al-Douri, Y. Ugur, S. Ghebouli, B. Bin-Omran, S.**Year:** 2014**Title:** Structural, elastic, electronic, chemical bonding and optical properties of Cu-based oxides ACuO (A = Li, Na, K and Rb): An ab initio study**Journal:** Computational Materials Science**Volume:** 81**Pages:** 561-574**Date:** Jan**Short Title:** Structural, elastic, electronic, chemical bonding and optical properties of Cu-based oxides ACuO (A = Li, Na, K and Rb): An ab initio study**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2013.09.011**Accession Number:** WOS:000326940300080

**Abstract:** Ab initio total energy calculations were performed to study in details the structural, elastic, electronic, chemical bonding and optical properties of Cu-based ternary oxides ACuO (A = Li, Na, K and Rb). Optimized atomic coordinates and lattice constants agree well with the existing experimental and theoretical data. Numerical estimations of the six independent elastic constants  $C_{ij}$  and their related properties for monocrystalline ACuO were obtained. A set of elastic moduli for polycrystalline ACuO, namely bulk modulus B, shear modulus G, Young's modulus E, Poisson's ratio  $\sigma$ , Lamé coefficients  $\lambda$  and Debye temperature  $\theta(D)$  were evaluated. Band structure, total and site-projected l-decomposed densities of states, charge-carrier effective masses, charge transfers and charge density distribution maps were obtained; analyzed and compared with the available theoretical data. Complex dielectric function, refractive index, extinction coefficient, reflectivity and loss function spectra were calculated with an incident radiation polarized parallel to both [100] and [001] crystalline directions. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Boudrifa, O. Guechi, N. Khenata, R. Al-Douri, Y. Ugur, S. Ghebouli, B. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000326940300080

**Reference Type: Journal Article****Record Number:** 74**Author:** Boulanouar, F. Drabla, S.**Year:** 2014**Title:** GENERAL BOUNDARY STABILIZATION RESULT OF MEMORY-TYPE THERMOELASTICITY WITH SECOND SOUND**Journal:** Electronic Journal of Differential Equations**Date:** Sep**Short Title:** GENERAL BOUNDARY STABILIZATION RESULT OF MEMORY-TYPE THERMOELASTICITY WITH SECOND SOUND**ISSN:** 1072-6691**Article Number:** 202**Accession Number:** WOS:000350637400001

**Abstract:** In this article we consider an n-dimensional system of visco-thermoelasticity with second sound, where a viscoelastic dissipation is acting on a part of the boundary. We prove an explicit general decay rate result without imposing  $u(0) = 0$  as in [17]. This allows a larger class of relaxation functions and initial data, hence, generalizes some previous results existing in the literature.

**Notes:** Boulanouar, Fairouz Drabla, Salah**URL:** <Go to ISI>://WOS:000350637400001

**Reference Type: Journal Article****Record Number:** 75**Author:** Boumaza, M. Lamari, S.**Year:** 2014**Title:** Anisotropic intrasubband hole scattering by polar optical phonon modes in thin GaAs/Al<sub>x</sub>Ga<sub>1-x</sub>As quantum wells**Journal:** Superlattices and Microstructures**Volume:** 72**Pages:** 156-163**Date:** Aug**Short Title:** Anisotropic intrasubband hole scattering by polar optical phonon modes in thin GaAs/Al<sub>x</sub>Ga<sub>1-x</sub>As quantum wells**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2014.03.049**Accession Number:** WOS:000341555700016

**Abstract:** A theoretical investigation of the hole - polar optical phonon scattering processes in thin GaAs/Al<sub>x</sub>Ga<sub>1-x</sub>As quantum wells is carried out at room temperature for both the confined and interface phonon modes within the dielectric continuum model framework. For high accuracy, the model for the hole dispersion uses the 6 x 6 Luttinger-Kohn Hamiltonian. Detailed and extensive calculations based on this model show that the rates for intra-subband scattering processes differ significantly from those of bulk GaAs because of quantization and reduced dimensionality. Moreover, the study of scattering as a function of hole energy shows that the trend of the scattering rates is governed mostly by (i) overlap integrals and (ii) the density of the final states to which the hole scatters. The influence of warping, in the hole energy dispersion, on the phonon scattering rates is also explored and found to be important when the initial hole energy is high. Our calculations show evidence of strong anisotropy in the scattering rates especially for processes involving the heavy hole subband, which anisotropy is in fact quite important and far from being negligible. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Boumaza, Mohamed Lamari, Saadi**URL:** <Go to ISI>://WOS:000341555700016

**Reference Type: Journal Article****Record Number:** 76**Author:** Bouras, H. Keskes, S.**Year:** 2014**Title:** TEACHER-LEARNER RAPPORT IMPACT ON EFL LEANERS' MOTIVATION**Journal:** SOCIOINT14: International Conference on Social Sciences and Humanities**Pages:** 398-406**Short Title:** TEACHER-LEARNER RAPPORT IMPACT ON EFL LEANERS' MOTIVATION**Accession Number:** WOS:000363547600046

**Abstract:** This study investigated secondary school teachers and pupils' perceptions of the teacher characteristics and its impact on learners' motivation. The investigation explored 8 teaching elements grouped under one major section about teacher learner rapport. Participants for the study were selected through random sampling from four secondary schools in -Algeria- at the end of the academic year 2012-2013. A total number of 200 participants was surveyed. The same questionnaire was administered to 21 secondary school teachers. The questionnaire has elicited the opinions of both pupils and teachers to find out which teaching practices both groups believe foster learners' motivation in the foreign language classroom. From the analysis, it was clear that pupils find some teaching practices related to the teacher's rapport motivating.

Although teachers recognize rapport as a crucial factor, they differed from pupils in the ranking of their characteristics. This therefore implies that motivating learners requires a teacher to strike a good balance between his teaching methodology and his/her rapport with learners.

**Notes:** Bouras, Haron Keskes, Said Uslu, F International Conference on Social Sciences and Humanities (SOCIOINT) Sep 08-10, 2014 Istanbul, TURKEY Int Org Ctr Acad Res 978-605-64453-1-6

**URL:** <Go to ISI>://WOS:000363547600046

**Reference Type: Journal Article****Record Number:** 77**Author:** Bourouba, N. Lalla, K. Jimenez, J. P. M. Bouzit, N.**Year:** 2014**Title:** Dielectric behavior of ternary mixtures: epoxy resin plus titanates (MgTiO<sub>3</sub>, CaTiO<sub>3</sub> or BaTiO<sub>3</sub>) associated to oxides (CaO, MnO<sub>2</sub> or ZnO)**Journal:** European Physical Journal-Applied Physics**Volume:** 65**Issue:** 1**Date:** Jan**Short Title:** Dielectric behavior of ternary mixtures: epoxy resin plus titanates (MgTiO<sub>3</sub>, CaTiO<sub>3</sub> or BaTiO<sub>3</sub>) associated to oxides (CaO, MnO<sub>2</sub> or ZnO)**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2013130364**Article Number:** 10202**Accession Number:** WOS:000330728600004

**Abstract:** In the present work, we study the dielectric behavior of various ternary mixtures composed of epoxy resin (RE), of one of three different titanates (barium titanate, BaTiO<sub>3</sub>; calcium titanate, CaTiO<sub>3</sub>; magnesium titanate, MgTiO<sub>3</sub>) respectively with one of three oxides (calcium oxide, CaO; manganese dioxide, MnO<sub>2</sub>; zinc oxide, ZnO) using time domain reflectometry (TDR). The different composites are mixed at room temperature in different volume fractions keeping the epoxy resin at a constant volume fraction. Several mixture combinations are studied to see the oxides influence on the titanates dielectric behavior in the range from DC to 10 GHz. This is done through the experimental determination of the dielectric constant epsilon(s). A noticeable effect has been recorded at the low frequency and which consists of an increase of this dielectric permittivity when growing the volume fraction of manganese dioxide. One meaningful point of this study is the lowest static conductivity value ( $8.017 \times 10^{-3} / (\Omega \text{ m})$ ) being reached with an incursion of 7.5% of MnO<sub>2</sub> in a ternary mixture composed of RE, MgTiO<sub>3</sub> and MnO<sub>2</sub>. In addition, the behavior obtained experimentally has been validated by the Lichtenecker modified model. This study interest lies on an application of these materials in microelectronics and particularly in telecommunication components manufacturing.

**Notes:** Bourouba, Nacerdine Lalla, Khalfa Martinez Jimenez, Juan Pablo Bouzit, Nacerdine**URL:** <Go to ISI>://WOS:000330728600004

**Reference Type: Journal Article****Record Number:** 78**Author:** Bousbaci, A. Kamel, N. Ieee,**Year:** 2014**Title:** A Parallel Sampling-PSO-Multi-Core-K-means Algorithm Using Mapreduce**Journal:** 2014 14th International Conference on Hybrid Intelligent Systems (His)**Pages:** 129-134**Short Title:** A Parallel Sampling-PSO-Multi-Core-K-means Algorithm Using Mapreduce**Accession Number:** WOS:000380435700023

**Abstract:** Clustering is partitioning data into groups, such that data in the same group are similar. Many clustering algorithms are proposed in the literature. K-means is the most used one because of its implementation simplicity and efficiency. Many clustering algorithms are based on the K-means algorithms aiming to improve execution time or clustering quality or both of them. Improving clustering quality can be done by an optimal selection of the initial centroids using for example meta-heuristics. Improving execution time can be performed using parallelism. In this paper, we propose a parallel hybrid K-means based on Google's MapReduce framework for the parallelism and the PSO meta-heuristics for the choice of the initial centroids. This algorithm is used to cluster multi-dimensional data sets. The results proved that using a network of machines to process data improves the execution time and the clustering quality.

**Notes:** Bousbaci, Abdelhak Kamel, Nadjat 14th International Conference Hybrid Intelligent Systems Dec 14-16, 2014 Kuwait, KUWAIT 978-1-4799-7633-1

**URL:** <Go to ISI>://WOS:000380435700023

**Reference Type: Journal Article****Record Number:** 79**Author:** Chaabane, A. Djahli, F. Redadaa, S.**Year:** 2014**Title:** A Dual-Band-Notched Antenna for UWB Communication Systems Using Two Different Shaped Slots**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 8**Pages:** 6215-6223**Date:** Aug**Short Title:** A Dual-Band-Notched Antenna for UWB Communication Systems Using Two Different Shaped Slots**ISSN:** 1319-8025**DOI:** 10.1007/s13369-014-1210-8**Accession Number:** WOS:000339807800031

**Abstract:** A compact planar ultra-wideband (UWB) monopole antenna with controllable dual-band-notched characteristics is presented in this paper. U-shaped inverted slot and vertical up C-shaped slot are embedded in the feed line and in the radiating patch, for rejecting WiMAX and WLAN frequency bands, respectively. Moreover, the bandwidth of each rejected band can be independently shifted by adjusting the dimensions of the corresponding band-notched structure. The proposed antenna with two rejected bands characteristics is successfully simulated, prototyped, and measured. The measured results show that the proposed antenna operates until upper 10.6 GHz for voltage standing wave ratio (VSWR) less than 2 and exhibits bands rejection of 3.20-4.1 GHz (24.66%) and 5.20-5.96 GHz (13.62%) frequency band. Furthermore, the proposed antenna shows good radiation characteristics, stable peak gain, and provides more than 80% radiation efficiency, on the entire UWB frequency range except in the notched frequency bands, which prospects the employment in the UWB communication systems.

**Notes:** Chaabane, A. Djahli, F. Redadaa, S.**URL:** <Go to ISI>://WOS:000339807800031

**Reference Type: Journal Article**

**Record Number: 80**

**Author:** Chaabane, L. Abdelouahab, M.

**Year:** 2014

**Title:** DEVELOPMENT OF A NEW DATA FUSION SYSTEM FOR SEGMENTATION OF MR IMAGES

**Journal:** Journal of Circuits Systems and Computers

**Volume:** 23

**Issue:** 6

**Date:** Jul

**Short Title:** DEVELOPMENT OF A NEW DATA FUSION SYSTEM FOR SEGMENTATION OF MR IMAGES

**ISSN:** 0218-1266

**DOI:** 10.1142/s0218126614500789

**Article Number:** 1450078

**Accession Number:** WOS:000336384400002

**Abstract:** In this research paper, we propose an automatic segmentation method of multispectral magnetic resonance image (MRI) of the human brain using an information fusion approach through the framework of the possibility theory. The fusion process is summarized into three essential steps. First, a data is extracted from the various images and modeled in a common mathematical framework, in this step the fuzzy C-means (FCM) algorithm is chosen. The combination rule is used to combine this information in the second step. A final segmented image is the result of the last phase. Our experimental results using simulated brain MRI datasets show that the proposed approach overcome the impact of the noise and substantially improve the accuracy of image segmentation.

**Notes:** Chaabane, Lamiche Abdelouahab, Moussaoui

**URL:** <Go to ISI>://WOS:000336384400002

**Reference Type: Journal Article****Record Number:** 81**Author:** Chabou, M. C. Bendaoud, A. Kassi, M. A.**Year:** 2014**Title:** CLASSIFICATION AND MINERALOGY OF A NEW ORDINARY CHONDRITE FROM HASSI EL GASSI (SOUTHERN ALGERIA)**Journal:** Meteoritics & Planetary Science**Volume:** 49**Pages:** A67-A67**Date:** Sep**Short Title:** CLASSIFICATION AND MINERALOGY OF A NEW ORDINARY CHONDRITE FROM HASSI EL GASSI (SOUTHERN ALGERIA)**ISSN:** 1086-9379**Accession Number:** WOS:000341914200064**Notes:** Chabou, M. C. Bendaoud, A. Kassi, M. Ait 77th Annual Meeting of the Meteoritical Society Sep 08-13, 2014 Casablanca, MOROCCO Meteorit Soc 1 Si**URL:** <Go to ISI>://WOS:000341914200064

**Reference Type: Journal Article**

**Record Number: 82**

**Author: Chabou, M. C. Laghouag, M. Y.**

**Year: 2014**

**Title: ON THE ORIGIN OF THE AFLOU STRUCTURE (ALGERIA)**

**Journal: Meteoritics & Planetary Science**

**Volume: 49**

**Pages: A66-A66**

**Date: Sep**

**Short Title: ON THE ORIGIN OF THE AFLOU STRUCTURE (ALGERIA)**

**ISSN: 1086-9379**

**Accession Number: WOS:000341914200063**

**Notes: Chabou, M. C. Laghouag, M. Y. 77th Annual Meeting of the Meteoritical-Society Sep 08-13, 2014 Casablanca, MOROCCO Meteorit Soc 1 Si**

**URL: <Go to ISI>://WOS:000341914200063**

**Reference Type: Journal Article****Record Number:** 83**Author:** Chennoukh, K. W. Boukhelal, H. Sidimansour, N. Touhami, H. Hamdi, S. Mehalhal, N. Djenouni, A. Mesli, N. Boukhari, R. Belhani, M. F.**Year:** 2014**Title:** Congenital fibrinogen disorders in Algeria**Journal:** Haemophilia**Volume:** 20**Pages:** 108-108**Date:** May**Short Title:** Congenital fibrinogen disorders in Algeria**ISSN:** 1351-8216**Accession Number:** WOS:000335009500433**Notes:** Chennoukh, Karima Wafia Boukhelal, Houria Sidimansour, Nourredine Touhami, Hadj Hamdi, Selma Mehalhal, Nemra Djenouni, Amel Mesli, Naima Boukhari, Rachida Belhani, Meriem Fadila 3 Si**URL:** <Go to ISI>://WOS:000335009500433

**Reference Type: Journal Article****Record Number:** 84**Author:** Cherif, A. Meddad, M. Belkhiat, S. Richard, C. Guyomar, D. Eddiai, A. Hajjaji, A.**Year:** 2014**Title:** Improvement of piezoelectric transformer performances using SSHI and SSHI-max methods**Journal:** Optical and Quantum Electronics**Volume:** 46**Issue:** 1**Pages:** 117-131**Date:** Jan**Short Title:** Improvement of piezoelectric transformer performances using SSHI and SSHI-max methods**ISSN:** 0306-8919**DOI:** 10.1007/s11082-013-9712-2**Accession Number:** WOS:000329322800013

**Abstract:** The piezoelectric transformers reach densities of power more significant than their magnetic counterparts. However, one of the principal factors limiting the density of power is the acceptable maximum deformation by material constituting the transformer. The heating of the piezoelectric transformers is mainly of mechanical origin. This heating generates a degradation of the characteristics which in its turn generates an additional heating being able to lead to a phenomenon of thermal avalanche. In this work, two nonlinear methods [synchronized switch harvesting on inductor (SSHI) and SSHI-max] have been explored to improve the performance of the Rosen transformer basing on the tension generated by the secondary so as to increase the capacity of mechanic-electric conversion. The simulation results show that SSHI and SSHI-max techniques significantly increase the capacity of mechanic-electric conversion of inserts stuck on a vibrating structure and consequently, the power recovered in electric form. The comparative results of voltage gain, efficiency and the transmitted power of the transformer, before and after SSHI-max and SSHI control are given. These ones indicated that the two nonlinear techniques are promising as applications to improve the performances of the piezo-transformers.

**Notes:** Cherif, Aida Meddad, Mounir Belkhiat, Saad Richard, Claude Guyomar, Daniel Eddiai, Adil Hajjaji, Abdelwahed Si**URL:** <Go to ISI>://WOS:000329322800013

**Reference Type: Journal Article****Record Number:** 85**Author:** Cherif, M. H. Serraino, D. Mahnane, A. Laouamri, S. Zaidi, Z. Boukharouba, H. Cherka, D. Rakeb, M. Kara, L. Ayat, A. Birri, S. Virdone, S. De Paoli, P. Bidoli, E.**Year:** 2014**Title:** Time trends of cancer incidence in Setif, Algeria, 1986-2010: an observational study**Journal:** BMC Cancer**Volume:** 14**Date:** Aug**Short Title:** Time trends of cancer incidence in Setif, Algeria, 1986-2010: an observational study**ISSN:** 1471-2407**DOI:** 10.1186/1471-2407-14-637**Article Number:** 637**Accession Number:** WOS:000341656000002

**Abstract:** Background: Incidence rates of various cancers are increasing in Arab countries and are expected to reach those of industrialized ones in few decades. This paper aimed to describe the incidence rates of most common cancers - and/or of those cancer preventable through modifiable behaviors - recorded in the province of Setif, Algeria from 1986 through 2010. Methods: Cancer diagnoses for the 1986-2010 period were provided by the population-based Cancer Registry of Setif, disentangled by site, morphology, age (quinquennia), sex, and calendar period. The corresponding population was obtained from the Algerian Institute of Statistics. Age-standardized rates (world population) (ASR-WR) were computed by calendar period (five quinquennias from 1986-1990 to 2006-2010), while annual percent changes (APCs) were computed for the period 1996-2010. Results: During the 2006-2010 period, ASR-WR for all cancer sites were 106.4/100,000 in men and 110.3 in women. The four leading cancers were: lung (18.0%); colon-rectum (9.6%); bladder (9.1%); and prostate (6.5%) in men; breast (36.4%); colon-rectum (8.5%); cervix uteri (6.0%); and thyroid (6.0%) in women. Between 1996-2010, overall cancer incidence increased statistically significantly ( $p < 0.05$ ) in both men (APC = +2.5%) and women (APC = +3.7%). Statistically significant decreasing trends were observed for nasopharyngeal carcinoma (APC = -3.4%) in men, and for cervical (APC = -4.2%) and gallbladder (APC = -3.2%) cancers in women. Statistically significant increasing trends were observed for most common cancers both in men (lung:+1.8%, colon-rectum:+5.4%, prostate:+4.3%, liver:+8.9%, and bladder:+5.9%) and women (breast:+8.2%, colon-rectum:+4.5%, lung:+10.0%, liver:+5.4%, thyroid:+5.3%, and larynx:+13.8%). Conclusions: International recommendations against cancer must be strongly promoted in Setif after taking into account epidemiological transition, lifestyle, and environmental changes.

**Notes:** Cherif, Mokhtar Hamdi Serraino, Diego Mahnane, Abbes Laouamri, Slimane Zaidi, Zoubida Boukharouba, Hafida Cherka, Dahbia Rakeb, Manel Kara, Lamia Ayat, Asma Birri, Silvia Virdone, Saverio De Paoli, Paolo Bidoli, Ettore

**URL:** <Go to ISI>://WOS:000341656000002

**Reference Type: Journal Article****Record Number:** 86**Author:** Cherrad, D.**Year:** 2014**Title:** First-principles studies on (001) surface electronic bonding and magnetic properties of ZnCMn<sub>3</sub> and ZnNMn<sub>3</sub> intermetallic antiperovskites type compounds**Journal:** Journal of Alloys and Compounds**Volume:** 586**Pages:** 230-238**Date:** Feb**Short Title:** First-principles studies on (001) surface electronic bonding and magnetic properties of ZnCMn<sub>3</sub> and ZnNMn<sub>3</sub> intermetallic antiperovskites type compounds**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2013.09.189**Accession Number:** WOS:000329856800036

**Abstract:** We present the Mechanical, electronic and magnetic properties of the cubic intermetallic antiperovskites ZnCMn<sub>3</sub> and ZnNMn<sub>3</sub> in both bulks and (001) surface tetragonal slabs geometries. The calculations are based on the plane wave pseudo potential method (PP-PW) within spin polarized Generalized Gradient Approximation (GGA) of the exchange-correlation functional. Lattice parameters were found to be in agreement with available experimental results. In contrast of Bulk ZnCMn<sub>3</sub>, ZnNMn<sub>3</sub> was mechanically instable up to 157 MPa and shows a very weak resistance to elastic shear deformation. ZnNMn<sub>3</sub>(001) Surface was found to be slightly stable than that of ZnCMn<sub>3</sub>. More investigations reveal that the calculated magnetic moments per manganese atom (M<sub>m</sub>/atom) are about 2.62 and 2.82 μ<sub>B</sub> when replacing C by N respectively. Using the total density (number) of states TDOS (TNOS) and the projected ones PDOS (PNOS) we prove that total and manganese magnetic moments are mostly derived from Fed atoms states at the vicinity of Fermi level. TNOS and PNOS analysis prove that metallic character was assigned to major spin down (down arrow) participation. Magnetic moment of bulks structure are about 7.02, 7.82 μ<sub>B</sub>, when replacing C by N respectively which is somewhat conserved at surface geometries. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Cherrad, Djellal**URL:** <Go to ISI>://WOS:000329856800036

**Reference Type: Journal Article****Record Number:** 87**Author:** Chetouani, A. Elkolli, M. Bounekhel, M. Benachour, D.**Year:** 2014**Title:** Synthesis and properties of novel hydrogels from oxidized pectin crosslinked gelatin for biomedical applications**Journal:** Polymer Bulletin**Volume:** 71**Issue:** 9**Pages:** 2303-2316**Date:** Sep**Short Title:** Synthesis and properties of novel hydrogels from oxidized pectin crosslinked gelatin for biomedical applications**ISSN:** 0170-0839**DOI:** 10.1007/s00289-014-1189-z**Accession Number:** WOS:000340522100009

**Abstract:** Gelatin (G) edible films with a new kind of dialdehyde polysaccharide, oxidized pectin (OP) as crosslinking agent are successfully prepared using casting techniques. FTIR and X-ray diffraction studies demonstrate that crosslinking is achieved through the reaction of aldehyde groups of oxidized pectin with the free amino groups in gelatin with a small affectation of the triple helix of gelatin. The qualitative and quantitative data about structures of films were determined by atomic force microscopy. Thermogravimetric analysis reveals that G/OP film has improved thermal stability in comparison with pure gelatin. Examination of the hemolytic potential showed that the obtained hydrogels are non-hemolytic in nature. These hydrogels are also nontoxic and blood-compatible. This kind of hydrogel is expected to be useful in the biomedical field, e.g., as wound dressing.

**Notes:** Chetouani, Asma Elkolli, Meriem Bounekhel, Mahmoud Benachour, Djafer**URL:** <Go to ISI>://WOS:000340522100009

**Reference Type: Journal Article****Record Number:** 88**Author:** Chetouani, A. Elkolli, M. Bounekhel, M. Benachour, D.**Year:** 2014**Title:** Characterization and Bioevaluation of New Class of Hydrogels Based on Oxidized Pectin Crosslinked to Gelatin**Journal:** Journal of Biomaterials and Tissue Engineering**Volume:** 4**Issue:** 6**Pages:** 465-470**Date:** Jun**Short Title:** Characterization and Bioevaluation of New Class of Hydrogels Based on Oxidized Pectin Crosslinked to Gelatin**ISSN:** 2157-9083**DOI:** 10.1166/jbt.2014.1197**Accession Number:** WOS:000339429200007

**Abstract:** The chemical interaction of gelatin is performed in the presence of native pectin and/or oxidized pectin which is obtained by the action of sodium hypochlorite to generate mainly carboxyl groups. The effect of the latter on the chemical properties of pectin was investigated by determining the quantity of carbonyl and carboxyl group. The characterization of these new materials is made by FT-IR. The test of swelling in physiological media is studied. Examination of the hemolytic potential showed that the hydrogels were nonhemolytic in nature. The hydrogels were non-toxic and blood-compatible. On the other hand, antibacterial activity was elucidated.

**Notes:** Chetouani, Asma Elkolli, Meriem Bounekhel, Mahmoud Benachour, Djafer**URL:** <Go to ISI>://WOS:000339429200007

**Reference Type: Journal Article****Record Number:** 89**Author:** Chikouche, I. Sahari, A. Zouaoui, A.**Year:** 2014**Title:** INFLUENCE OF ELECTROPOLYMERIZATION METHOD ON MORPHOLOGIES AND CAPACITIVE PROPERTIES OF POLYPYRROLE FILMS GROWING ON SILICON**Journal:** Surface Review and Letters**Volume:** 21**Issue:** 6**Date:** Dec**Short Title:** INFLUENCE OF ELECTROPOLYMERIZATION METHOD ON MORPHOLOGIES AND CAPACITIVE PROPERTIES OF POLYPYRROLE FILMS GROWING ON SILICON**ISSN:** 0218-625X**DOI:** 10.1142/s0218625x14500826**Article Number:** 1450082**Accession Number:** WOS:000347075300007

**Abstract:** Two methods of Pyrrole electropolymerization were investigated to prepare polypyrrole films growing onto n-doped silicon n-Si (111): Polypyrrole films prepared by galvanostatic method exhibits toroidal morphology for thin films, and mixture of toroidal and globular morphologies for thick films. Polypyrrole films obtained from this method were characterized by lower surface roughness. Electropolymerization of pyrrole by potentiodynamic method provided Polypyrrole films with beans-like structures for both thin and thick films with high surface roughness. Due to their lower surface roughness, polypyrrole films produced by galvanostatic method exhibit high intensities in Raman spectroscopy. These polypyrrole films show better capacitive properties according to discharge test.

**Notes:** Chikouche, Imene Sahari, Ali Zouaoui, Ahmed**URL:** <Go to ISI>://WOS:000347075300007

**Reference Type: Journal Article****Record Number:** 90**Author:** Chougui, N. Drabla, S.**Year:** 2014**Title:** A QUASISTATIC ELECTRO-ELASTIC CONTACT PROBLEM WITH NORMAL COMPLIANCE, FRICTION AND ADHESION**Journal:** Electronic Journal of Differential Equations**Date:** Dec**Short Title:** A QUASISTATIC ELECTRO-ELASTIC CONTACT PROBLEM WITH NORMAL COMPLIANCE, FRICTION AND ADHESION**ISSN:** 1072-6691**Article Number:** 257**Accession Number:** WOS:000350760700002

**Abstract:** In this article we consider a mathematical model which describes the contact between a piezoelectric body and a deformable foundation. The constitutive law is assumed linear electro-elastic and the process is quasistatic. The contact is adhesive and frictional and is modelled with a version of normal compliance condition and the associated Coulomb's law of dry friction. The evolution of the bonding field is described by a first order differential equation. We derive a variational formulation for the model, in the form of a coupled system for the displacements, the electric potential and the bonding field. Under a smallness assumption on the coefficient of friction, we prove an existence result of the weak solution of the model. The proofs are based on arguments of time-dependent variational inequalities, differential equations and Banach fixed point theorem.

**Notes:** Chougui, Nadhir Drabla, Salah**URL:** <Go to ISI>://WOS:000350760700002

**Reference Type: Journal Article****Record Number:** 91**Author:** Choutri, H. Ghebouli, M. A. Ghebouli, B. Bouarissa, N. Ucgun, E. Ocak, H. Y.**Year:** 2014**Title:** Spin-polarized investigation of ferromagnetism on magnetic semiconductors  $Mn_xCa_{1-x}S$  in the rock-salt phase**Journal:** Materials Chemistry and Physics**Volume:** 148**Issue:** 3**Pages:** 1000-1007**Date:** Dec**Short Title:** Spin-polarized investigation of ferromagnetism on magnetic semiconductors  $Mn_xCa_{1-x}S$  in the rock-salt phase**ISSN:** 0254-0584**DOI:** 10.1016/j.matchemphys.2014.09.010**Accession Number:** WOS:000344429700072

**Abstract:** The structural, elastic, electronic and magnetic properties of the diluted magnetic semiconductors  $Mn_xCa_{1-x}S$  in the rock-salt phase have been investigated using first-principles calculations with both LDA and LDA + U functional. Features such as lattice constant, bulk modulus, elastic constants, spin-polarized band structure, total and local densities of states have been computed. We predict the values of the exchange constants and the band edge spin splitting of the valence and conduction bands. The hybridization between S-3p and Mn-3d produces small local magnetic moment on the nonmagnetic Ca and S sites. The ferromagnetism is induced due to the exchange splitting of S-3p and Mn-3d hybridized bands. The total magnetic moment per Mn of  $Mn_xCa_{1-x}S$  is 4.4  $\mu(B)$  and 4.5  $\mu(B)$  for LDA and LDA + U functional and is independent of the Mn concentration. The unfilled Mn-3d levels reduce the local magnetic moment of Mn from its free space charge value of 5  $\mu(B)$ -4.4  $\mu(B)$  and 4.5  $\mu(B)$  for LDA and LDA + U functional due to 3p-3d hybridization. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Choutri, H. Ghebouli, M. A. Ghebouli, B. Bouarissa, N. Ucgun, E. Ocak, H. Y.**URL:** <Go to ISI>://WOS:000344429700072

**Reference Type: Journal Article****Record Number:** 92**Author:** Dahbi, A. Hachemi, M. Nait-Said, N. Nait-Said, M. S.**Year:** 2014**Title:** Realization and control of a wind turbine connected to the grid by using PMSG**Journal:** Energy Conversion and Management**Volume:** 84**Pages:** 346-353**Date:** Aug**Short Title:** Realization and control of a wind turbine connected to the grid by using PMSG**ISSN:** 0196-8904**DOI:** 10.1016/j.enconman.2014.03.085**Accession Number:** WOS:000338601100036

**Abstract:** This paper studies the control of a variable-speed wind turbine using the permanent magnet synchronous generator (PMSG) driven by a wind turbine emulator. The wind turbine is realized by imposing the wind profile on emulator to behave as the real wind turbine when it receives the same wind profile. This wind turbine is connected to the grid by means of a two back-to-back voltage-fed pulse width-modulation (PWM) converters to interface the generator and the grid. This paper has three main objectives, the first is realization of the wind turbine emulator, the second is extracting and exploiting the maximum power from the wind, the third is feeding the grid by high-power and good electrical energy quality; to achieve that, we applied the strategies of maximum power point tracking (MPPT) using optimal torque control which allows the PMSG to operate at an optimal speed. The inverter is used for delivering power to the grid, controlled in a way to deliver only the active power into the grid, thus we have unit power factor. DC-link voltage is also controlled by the inverter. This paper shows the dynamic performances of the complete system by its simulation using Matlab Simulink. Experimental results has verified and validated the wind turbine emulator and the efficiency of MPPT control method using a variable wind profile. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Dahbi, Abdeldjalil Hachemi, Mabrouk Nait-Said, Nasreddine Nait-Said, Mohamed-Said**URL:** <Go to ISI>://WOS:000338601100036

**Reference Type: Journal Article****Record Number:** 93**Author:** Daoud, D. Douadi, T. Issaadi, S. Chafaa, S.**Year:** 2014**Title:** Adsorption and corrosion inhibition of new synthesized thiophene Schiff base on mild steel X52 in HCl and H<sub>2</sub>SO<sub>4</sub> solutions**Journal:** Corrosion Science**Volume:** 79**Pages:** 50-58**Date:** Feb**Short Title:** Adsorption and corrosion inhibition of new synthesized thiophene Schiff base on mild steel X52 in HCl and H<sub>2</sub>SO<sub>4</sub> solutions**ISSN:** 0010-938X**DOI:** 10.1016/j.corsci.2013.10.025**Accession Number:** WOS:000331672900008

**Abstract:** (NE)-N-(thiophen-3-ylmethylidene)-4-({4-[(E)-(thiophen-2-ylmethylidene)amino]phenyl}m-ethyl)aniline (L) was synthesized and its inhibiting action on the corrosion of mild steel X52 in 1 M hydrochloric acid and 1 M sulfuric acid was examined by different corrosion methods, such as weight loss, potentiodynamic polarization and electrochemical impedance spectroscopy (EIS). The experimental results suggest that this compound is an efficient corrosion inhibitor and the inhibition efficiency increases with the increase in inhibitor concentration. Adsorption of this compound on mild steel surface obeys Langmuir's isotherm. Correlation between quantum chemical calculations and inhibition efficiency of the investigated compound is discussed using the Density Functional Theory method (DFT). (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Daoud, Djamel Douadi, Tahar Issaadi, Saifi Chafaa, Salah**URL:** <Go to ISI>://WOS:000331672900008

**Reference Type: Journal Article****Record Number:** 94**Author:** Daoud, S. Bioud, N. Lebgaa, N.**Year:** 2014**Title:** Mechanical, piezoelectric and some thermal properties of (B3) BP under pressure (vol 21, pg 58, 2014)**Journal:** Journal of Central South University**Volume:** 21**Issue:** 10**Pages:** 4051-4051**Date:** Oct**Short Title:** Mechanical, piezoelectric and some thermal properties of (B3) BP under pressure (vol 21, pg 58, 2014)**ISSN:** 2095-2899**DOI:** 10.1007/s11771-014-2394-4**Accession Number:** WOS:000343919200041**Notes:** Daoud, S. Bioud, N. Lebgaa, N.**URL:** <Go to ISI>://WOS:000343919200041

**Reference Type: Journal Article****Record Number:** 95**Author:** Daoud, S. Bioud, N. Lebgaa, N.**Year:** 2014**Title:** Mechanical, piezoelectric and some thermal properties of (B3) BP under pressure**Journal:** Journal of Central South University**Volume:** 21**Issue:** 1**Pages:** 58-64**Date:** Jan**Short Title:** Mechanical, piezoelectric and some thermal properties of (B3) BP under pressure**ISSN:** 2095-2899**DOI:** 10.1007/s11771-014-1915-6**Accession Number:** WOS:000332458500009

**Abstract:** Some compounds of group III-V semiconductor materials exhibit very good piezoelectric, mechanical, and thermal properties and their use in surface acoustic wave (SAW) devices operating specially at GHz frequencies. These materials have been appreciated for a long time due to their high acoustic velocities, which are important parameters for active microelectromechanical systems (MEMS) devices. For this object, first-principles calculations of the anisotropy and the hydrostatic pressure effect on the mechanical, piezoelectric and some thermal properties of the (B3) boron phosphide are presented, using the density functional perturbation theory (DFPT). The independent elastic and compliance constants, the Reuss modulus, Voigt modulus, and the shear modulus, the Kleinman parameter, the Cauchy and Born coefficients, the elastic modulus, and the Poisson ratio for directions within the important crystallographic planes of this compound under pressure are obtained. The direct and converse piezoelectric coefficients, the longitudinal, transverse, and average sound velocity, the Debye temperature, and the Debye frequency of (B3) boron phosphide under pressure are also presented and compared with available experimental and theoretical data of the literature.

**Notes:** Daoud, S. Bioud, N. Lebgaa, N.**URL:** <Go to ISI>://WOS:000332458500009

**Reference Type: Journal Article****Record Number:** 96**Author:** Daoud, S. Bioud, N. Lebga, N.**Year:** 2014**Title:** Structural, elastic, piezoelectric and electronic properties of (B3) AIP compound under pressure**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 16**Issue:** 1-2**Pages:** 207-214**Date:** Jan-Feb**Short Title:** Structural, elastic, piezoelectric and electronic properties of (B3) AIP compound under pressure**ISSN:** 1454-4164**Accession Number:** WOS:000332347500033

**Abstract:** This paper carries out the First principles calculation of the crystal structure (zincblende (B3)) and phase transition of (B3) Aluminum phosphide based on the density functional theory (DFT) and density functional perturbation theory (DFPT). Using the relation between enthalpy and pressure, and the Born stability criteria, it finds that the transition phase from the B3 structural to the metallic nickel arsenic (NiAs) phase occurs respectively at the pressures of 6.62GPa and 22.25GPa. Then the elastic constants C-11, C-12, C-44, bulk modulus, shear modulus, anisotropy factor, piezoelectric coefficient and the linear and quadratic pressure coefficients of the energy bandgaps under pressures are discussed in detail. The results of the structural parameters, elastic and electronic properties are in good agreement with the available theoretical and experimental values. The maximum value of pressure is taken to be 9.50GPa, because beyond this value, the phase of AIP transforms from zincblende phase to nickel arsenic phase.

**Notes:** Daoud, S. Bioud, N. Lebga, N.**URL:** <Go to ISI>://WOS:000332347500033

**Reference Type: Journal Article****Record Number:** 97**Author:** De Falco, M. De Giovanni, F. Musella, C. Trabelsi, N.**Year:** 2014**Title:** GROUPS WHOSE PROPER SUBGROUPS OF INFINITE RANK HAVE FINITE CONJUGACY CLASSES**Journal:** Bulletin of the Australian Mathematical Society**Volume:** 89**Issue:** 1**Pages:** 41-48**Date:** Feb**Short Title:** GROUPS WHOSE PROPER SUBGROUPS OF INFINITE RANK HAVE FINITE CONJUGACY CLASSES**ISSN:** 0004-9727**DOI:** 10.1017/s0004972713000014**Accession Number:** WOS:000333066100006

**Abstract:** A group  $G$  is said to be an FC-group if each element of  $G$  has only finitely many conjugates, and  $G$  is minimal nonFC if all its proper subgroups have the property FC but  $G$  is not an FC-group. It is an open question whether there exists a group of infinite rank which is minimal nonFC. We consider here groups of infinite rank in which all proper subgroups of infinite rank are FC, and prove that in most cases such groups are either FC-groups or minimal nonFC.

**Notes:** De Falco, M. De Giovanni, F. Musella, C. Trabelsi, N.**URL:** <Go to ISI>://WOS:000333066100006

**Reference Type: Journal Article****Record Number:** 98**Author:** De Falco, M. de Giovanni, F. Musella, C. Trabelsi, N.**Year:** 2014**Title:** Groups with restrictions on subgroups of infinite rank**Journal:** Revista Matematica Iberoamericana**Volume:** 30**Issue:** 2**Pages:** 537-550**Short Title:** Groups with restrictions on subgroups of infinite rank**ISSN:** 0213-2230**DOI:** 10.4171/rmi/792**Accession Number:** WOS:000343019600008

**Abstract:** It is known that a (generalized) soluble group whose proper subgroups of infinite rank are abelian either is abelian or has finite rank. It is proved here that if  $G$  is a group of infinite rank such that all its proper subgroups of infinite rank have locally finite commutator subgroup, then the commutator subgroup  $G'$  of  $G$  is locally finite, provided that  $G$  satisfies a suitable generalized solubility condition. Moreover, a similar result is obtained for groups whose proper subgroups of infinite rank are quasihamiltonian.

**Notes:** De Falco, Maria de Giovanni, Francesco Musella, Carmela Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000343019600008

**Reference Type: Journal Article****Record Number:** 99**Author:** Derafa, A. Tellouche, G. Hoummada, K. Bouabellou, A. Mangelinck, D.**Year:** 2014**Title:** Effect of alloying elements Mo and W on Ni silicides formation**Journal:** Microelectronic Engineering**Volume:** 120**Pages:** 150-156**Date:** May**Short Title:** Effect of alloying elements Mo and W on Ni silicides formation**ISSN:** 0167-9317**DOI:** 10.1016/j.mee.2013.12.014**Accession Number:** WOS:000336697300025

**Abstract:** The effect of alloying Mo and W elements on the formation and stability of the Ni silicides are studied using in situ and ex situ measurements by X-ray diffraction (XRD), sheet resistance (Rs) and Rutherford back scattering (RBS). The results show that a low Mo concentration in Ni layer does not affect the sequence, texture and resistivity compared to the Ni/Si system. However, the addition of 10% Mo and 5% W in Ni layer leads to the suppression of a transient phase. For Ni (10% W), a (Ni<sub>x</sub>Si<sub>y</sub>) phase appears in the end of Ni consumption and the sheet resistance increases when this phase is formed. In all cases, ex situ XRD and RBS shows that, at high temperature, MoSi<sub>2</sub> and WSi<sub>2</sub> are formed at the surface before NiSi<sub>2</sub>. Low resistances films are obtained even for temperatures as high as 900 degrees C for the samples containing 10% Mo, 5% and 10% W. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Derafa, A. Tellouche, G. Hoummada, K. Bouabellou, A. Mangelinck, D.**URL:** <Go to ISI>://WOS:000336697300025

**Reference Type: Journal Article****Record Number:** 100**Author:** Dilmi, A. Bartil, T. Yahia, N. Benneghmouche, Z.**Year:** 2014**Title:** Hydrogels Based on 2-Hydroxyethylmethacrylate and Chitosan: Preparation, Swelling Behavior, and Drug Delivery**Journal:** International Journal of Polymeric Materials and Polymeric Biomaterials**Volume:** 63**Issue:** 10**Pages:** 502-509**Date:** Jul**Short Title:** Hydrogels Based on 2-Hydroxyethylmethacrylate and Chitosan: Preparation, Swelling Behavior, and Drug Delivery**ISSN:** 0091-4037**DOI:** 10.1080/00914037.2013.854221**Accession Number:** WOS:000333994700003

**Abstract:** The authors report preparation of chitosan by deacetylation of chitin extracted from shrimp shells. The quality of chitosan depended on the chemical extraction process, the concentration of chemicals used, soaking time, sequence of deproteination, decalcification, and deacetylation. Hydrogels composed of hydroxyethylmethacrylate and chitosan were subsequently prepared and their swelling and ibuprofen delivery kinetics at various chitosan concentrations were studied. The swelling properties of the network varied with the chitosan concentration. Furthermore, the swelling process followed second-order kinetics, while ibuprofen diffusion into the hydrogel showed Fickian behavior.

**Notes:** Dilmi, Abdelkader Bartil, Tahar Yahia, Nadjet Benneghmouche, Zinneddine**URL:** <Go to ISI>://WOS:000333994700003

**Reference Type: Journal Article****Record Number:** 101**Author:** Dilmi, M. Benseridi, H. Saadallah, A.**Year:** 2014**Title:** Asymptotic Analysis of a Bingham Fluid in a Thin Domain with Fourier and Tresca Boundary Conditions**Journal:** Advances in Applied Mathematics and Mechanics**Volume:** 6**Issue:** 6**Pages:** 797-810**Date:** Dec**Short Title:** Asymptotic Analysis of a Bingham Fluid in a Thin Domain with Fourier and Tresca Boundary Conditions**ISSN:** 2070-0733**DOI:** 10.4208/aamm.2013.m350**Accession Number:** WOS:000346401100006**Abstract:** In this paper we prove first the existence and uniqueness results for the weak solution, to the stationary equations for Bingham fluid in a three dimensional bounded domain with Fourier and Tresca boundary condition; then we study the asymptotic analysis when one dimension of the fluid domain tend to zero. The strong convergence of the velocity is proved, a specific Reynolds limit equation and the limit of Tresca free boundary conditions are obtained.**Notes:** Dilmi, M. Benseridi, H. Saadallah, A.**URL:** <Go to ISI>://WOS:000346401100006

**Reference Type: Journal Article****Record Number:** 102**Author:** Djenouhat, K. Ibsaine, O. Yahi, R. Benyahia, L. Bedioune, I.**Year:** 2014**Title:** Variation of alternative and classical complement pathways in ANCA-associated vasculitides**Journal:** Allergy**Volume:** 69**Pages:** 68-68**Date:** Sep**Short Title:** Variation of alternative and classical complement pathways in ANCA-associated vasculitides**ISSN:** 0105-4538**Accession Number:** WOS:000341139400153**Notes:** Djenouhat, K. Ibsaine, O. Yahi, R. Benyahia, L. Bedioune, I European-Academy-of-Allergy-and-Clinical-Immunology Congress Jun 07-11, 2014 Copenhagen, DENMARK  
European Acad Allergy & Clin Immunol 99 Si**URL:** <Go to ISI>://WOS:000341139400153

**Reference Type: Journal Article****Record Number:** 103**Author:** Djessas, K. Bouchama, I. Medjnoun, K. Bouloufa, A.**Year:** 2014**Title:** Simulation and performance analysis of superstrate Cu(In, Ga)Se-2 solar cells using nanostructured Zn<sub>1-x</sub>V<sub>x</sub>O thin films**Journal:** International Journal of Nanotechnology**Volume:** 11**Issue:** 9-11**Pages:** 854-868**Short Title:** Simulation and performance analysis of superstrate Cu(In, Ga)Se-2 solar cells using nanostructured Zn<sub>1-x</sub>V<sub>x</sub>O thin films**ISSN:** 1475-7435**DOI:** 10.1504/ijnt.2014.063794**Accession Number:** WOS:000340027100013

**Abstract:** In this paper, we describe in the first step the structural, electrical and optical properties of the nanostructured Zn<sub>1-x</sub>V<sub>x</sub>O thin films deposited on glass substrates by rf-magnetron sputtering using aerogel nanoparticles synthesised by the sol-gel method. The best properties, satisfying the role of window and buffer layers, were achieved, respectively, for the films of Zn<sub>0.99</sub>V<sub>0.01</sub>O elaborated at room temperature and Zn<sub>0.80</sub>V<sub>0.20</sub>O at 200 degrees C. In the second step, the nanostructured Zn<sub>0.99</sub>V<sub>0.01</sub>O and Zn<sub>0.80</sub>V<sub>0.20</sub>O layers are, respectively, proposed as alternative to the traditional (ITO) window and (CdS) buffer layers and tested numerically in Cu(In,Ga) Se-2 (CIGS) solar cell using one-dimensional AMPS-1D device simulator. The influence of physical and geometrical parameters of the p-type CIGS absorber layer on the performance of the superstrate SLG/(n+)Zn<sub>0.99</sub>V<sub>0.01</sub>O/(n) Zn<sub>0.80</sub>V<sub>0.20</sub>O/(p) Cu(In,Ga) Se-2/Mo solar cell was investigated. The calculations assume fixed Zn<sub>1-x</sub>V<sub>x</sub>O input parameters. The carrier concentration and thickness of the absorber layer were found to be a key factor, affecting the solar cell performance. On the basis of the simulation results, a short-circuit current density of about 33 mA/cm<sup>2</sup> has been obtained for 4 μm CIGS solar cell using n-type Zn<sub>0.80</sub>V<sub>0.20</sub>O buffer layer for 100 nm thick. It is also found that a conversion efficiency of more than 19% AM 1.5 G could be expected for more than 3 μm absorber thickness and acceptor concentration varying between 2 × 10<sup>16</sup> and 10<sup>17</sup> cm<sup>-3</sup>. From the results obtained, we suggest the use of Zn<sub>0.80</sub>V<sub>0.20</sub>O and Zn<sub>0.99</sub>V<sub>0.01</sub>O as a buffer and window layers, respectively, to achieve high-efficiency CIGS solar cells with better photovoltaic parameters.

**Notes:** Djessas, Kamal Bouchama, Idris Medjnoun, Kahina Bouloufa, Abdesselam**URL:** <Go to ISI>://WOS:000340027100013

**Reference Type: Journal Article****Record Number:** 104**Author:** Djied, A. Khachai, H. Seddik, T. Khenata, R. Bouhemadou, A. Guechi, N. Murtaza, G. Bin-Omran, S. Alahmed, Z. A. Ameri, M.**Year:** 2014**Title:** Structural phase transition, mechanical and optoelectronic properties of the tetragonal NaZnP: Ab-initio study**Journal:** Computational Materials Science**Volume:** 84**Pages:** 396-403**Date:** Mar**Short Title:** Structural phase transition, mechanical and optoelectronic properties of the tetragonal NaZnP: Ab-initio study**ISSN:** 0927-0256**DOI:** 10.1016/j.commatsci.2013.11.041**Accession Number:** WOS:000331086500048

**Abstract:** Ab-initio full potential augmented plane wave plus local orbitals method has been used to investigate the structural phase transition, mechanical and optoelectronic properties of the Nowotny-Juza filled-tetrahedral compound NaZnP. The exchange-correlation potential was treated within the generalized gradient approximation of Perdew-Burke and Ernzerhof (GGA-PBE) and the modified Becke-Johnson potential (TB-mBJ) to improve the accuracy of the electronic band structure. Total-energy and geometry optimizations have been carried out for all structural phases of NaZnP. The following sequence of pressure-driven structural transitions has been found: Cu<sub>2</sub>Sb-type → beta-phase → alpha-phase. The single-crystal elastic constants of NaZnP in the Cu<sub>2</sub>Sb-type structure have been calculated using total-energy versus strain method and their corresponding elastic moduli of polycrystalline aggregate, including Young's modulus, shear modulus and Poisson's ratio, have been derived. From the elastic parameters, it is inferred that this compound is brittle in nature. The elastic anisotropy was studied in detail using three different indexes; especially the 3D direction dependence of the Young's modulus was visually described. Furthermore, calculated electronic band structure shows that NaZnP in the Cu<sub>2</sub>Sb-type phase has a direct energy band gap (Gamma-Gamma). The TB-mBJ approximation yields larger fundamental band gaps compared to those of PBE-GGA. The examined charge density distributions for the Cu<sub>2</sub>Sb-type structure show a covalent character for Zn-P bond and ionic nature for Na-P bond. Additionally, real and imaginary parts of the dielectric function, reflectivity and energy loss function spectra have been calculated for radiation up to 30.0 eV with an incident radiation polarized parallel to both [100] and [001] crystalline directions. (C) 2013 Elsevier B. V. All rights reserved.

**Notes:** Djied, A. Khachai, H. Seddik, T. Khenata, R. Bouhemadou, A. Guechi, N. Murtaza, G. Bin-Omran, S. Alahmed, Z. A. Ameri, M.**URL:** <Go to ISI>://WOS:000331086500048

**Reference Type: Journal Article****Record Number:** 105**Author:** Gadri, S. Moussaoui, A. Belabdelouahab-Fernini, L. Ieee,**Year:** 2014**Title:** Language Identification: A New Fast Algorithm to Identify the Language of a Text in a Multilingual Corpus**Journal:** 2014 International Conference on Multimedia Computing and Systems (Icmcs)**Pages:** 321-326**Short Title:** Language Identification: A New Fast Algorithm to Identify the Language of a Text in a Multilingual Corpus**Accession Number:** WOS:000366999600057

**Abstract:** Identifying the language of a text is a very important preliminary phase in the categorization of multilingual documents or even in information retrieval. This phase becomes difficult if we just consider the word as a basic unit of information in texts. Because It could be possible for some languages as French or English but very difficult for some other languages as German, Chinese and Arabic. In this paper, we present the most known identification algorithms, and we propose a new fast and effective algorithm based on n-grams of characters. We also evaluate the obtained results with other algorithms when using the two approaches of texts segmentation: words approach, n-grams approach.

**Notes:** Gadri, Said Moussaoui, Abdelouahab Belabdelouahab-Fernini, Linda International Conference on Multimedia Computing and Systems (ICMCS) Apr 14-16, 2014 Marrakech, MOROCCO 978-1-4799-3824-7

**URL:** <Go to ISI>://WOS:000366999600057

**Reference Type: Journal Article****Record Number:** 106**Author:** Gahtar, A. Rahal, A. Benhaoua, B. Benramache, S.**Year:** 2014**Title:** A comparative study on structural and optical properties of ZnO and Al-doped ZnO thin films obtained by ultrasonic spray method using different solvents**Journal:** Optik**Volume:** 125**Issue:** 14**Pages:** 3674-3678**Short Title:** A comparative study on structural and optical properties of ZnO and Al-doped ZnO thin films obtained by ultrasonic spray method using different solvents**ISSN:** 0030-4026**DOI:** 10.1016/j.ijleo.2014.01.078**Accession Number:** WOS:000337930500063

**Abstract:** Transparent conducting ZnO and Al doped ZnO thin films were deposited on glass substrate by ultrasonic spray method. The thin films with concentration of 0.1 M were deposited at 350 degrees C with 2 min of deposition time. The effects of ethanol and methanol solution before and after doping on the structural, optical and electrical properties were examined. The DRX analyses indicated that ZnO films have nanocrystalline nature and hexagonal wurtzite structure with (1 0 0) and (0 0 2) preferential orientation corresponding to ZnO films resulting from methanol and ethanol solution, respectively. The crystallinity of the thin films improved with methanol solution after doping to (0 0 2) oriented. All films exhibit an average optical transparency about 90%, in the visible range. The band gaps values of ZnO thin films are increased after doping from 3.10 to 3.26 eV and 3.27 to 3.30 eV upon Al doping obtained by ethanol and methanol solution, respectively. The electrical conductivity increase from 7.5 to 15.2 ( $\Omega \text{ cm}^{-1}$ ) of undoped to Al doped ZnO thin films prepared by using ethanol solution. However, for the methanol solution; the electrical conductivity of the film is stabilized after doping. (C) 2014 Elsevier GmbH. All rights reserved.

**Notes:** Gahtar, Abdelouahab Rahal, Achour Benhaoua, Boubaker Benramache, Said**URL:** <Go to ISI>://WOS:000337930500063

**Reference Type: Journal Article****Record Number:** 107**Author:** Godard, G. Chabou, M. C. Adjerid, Z. Bendaoud, A.**Year:** 2014**Title:** First African diamonds discovered in Algeria by the ancient Arabo-Berbers: History and insight into the source rocks**Journal:** Comptes Rendus Geoscience**Volume:** 346**Issue:** 7-8**Pages:** 179-189**Date:** Jul-Aug**Short Title:** First African diamonds discovered in Algeria by the ancient Arabo-Berbers: History and insight into the source rocks**ISSN:** 1631-0713**DOI:** 10.1016/j.crte.2014.03.007**Accession Number:** WOS:000342526600003

**Abstract:** It is generally believed that the first diamonds ever found in Africa were discovered in South Africa in 1867. Actually, three diamonds had already been found in 1833 near Constantine (Algeria). One of these, still preserved, shows radiohalos that suggest an old age. It could be a Sahara diamond reworked in more recent sediments, possibly the Oligo-Miocene Numidian Flysch; however, this occurrence remains uncertain. The ancient Arabs or Berbers also knew of diamonds in the Reggane region (Algerian Sahara), at Bilad al-mas ("country of the diamond"). Since 1975, some 1500 diamonds have been collected from the alluvial deposits of this area. A manuscript written in Arabic in 1851 mentions diamonds in this region and describes their source rock, looked for in vain by modern geologists. The description is unclear, but might refer to Devonian oolitic ironstones. Modern investigations would rather suggest a kimberlitic primary source with intermediate Early Cretaceous palaeoplacers. (C) 2014 Academie des sciences. Published by Elsevier Masson SAS. All rights reserved.

**Notes:** Godard, Gaston Chabou, Moulley Charaf Adjerid, Zouhir Bendaoud, Abderrahmane**URL:** <Go to ISI>://WOS:000342526600003

**Reference Type: Journal Article****Record Number:** 108**Author:** Gouissem, L. Douibi, A. Benachour, D.**Year:** 2014**Title:** The Evolution of Properties of Recycled Poly(ethylene terephthalate) as Function of Chain Extenders, the Extrusion Cycle and Heat Treatment**Journal:** Polymer Science Series A**Volume:** 56**Issue:** 6**Pages:** 844-855**Date:** Nov**Short Title:** The Evolution of Properties of Recycled Poly(ethylene terephthalate) as Function of Chain Extenders, the Extrusion Cycle and Heat Treatment**ISSN:** 0965-545X**DOI:** 10.1134/s0965545x14060157**Accession Number:** WOS:000344575900011

**Abstract:** Poly(ethylene terephthalate) (PET) is the most widely used plastic in beverages packaging. It is also the most recycled plastic in the world. It is estimated that 6 million tons of PET are recycled (rPET) each year worldwide. Recycling of this material by melt processing has been the subject of many studies, in order to limit the degradation processes that lead to a significant decrease in the molecular weight (viscosity). Two key points are highlighted: The former is the presence of impurities like adhesive, glue and Poly Vinyl Chloride etc. The latter is the presence of water. These were therefore the main factors of the degradation of rPET. The impurities can be eliminated by a selective recovery and the moisture by a suitable drying combined with the addition of chain extenders namely Caprolactam (CAP) and/or Trimellitic anhydride (TMA). This combination has proved to be very promising since extruded mixtures (rPET/TMA or CAP) have quite acceptable rheological properties especially in terms of intrinsic viscosity, dynamic viscosity and melt flow index (MFI) at low concentration of chain extender. Rheological and FTIR analysis showed that the degradation of rPET becomes more significant from the second extrusion cycle. Finally, DSC analysis showed that T-g were not affected by extrusion cycle number; However, cold crystallization temperature T<sub>cc2</sub> were significantly affected by heat treatment. The DSC analysis showed also that from the 2nd extrusion cycle, a conversion of heating crystallization temperature (T<sub>c</sub>) which appeared during the first heating (1st scan) to a melting temperature (T<sub>m1</sub>) that appeared during the second heating (3rd scan) occurred due to the change of the decomposition mechanism environment (from oxygen environment to that of nitrogen).

**Notes:** Gouissem, Linda Douibi, Adelmalek Benachour, Djafer**URL:** <Go to ISI>://WOS:000344575900011

**Reference Type: Journal Article****Record Number:** 109**Author:** Griche, I. Saoudi, K. Gherbi, A. Ieee,**Year:** 2014**Title:** State of the Art of Power Converter Topologies for Distributed Generation Systems**Journal:** 2015 7th International Conference on Modelling, Identification and Control (ICMIC)**Pages:** 396-401**Short Title:** State of the Art of Power Converter Topologies for Distributed Generation Systems**Accession Number:** WOS:000380540900075

**Abstract:** Energy technologies have a central role in social and economic development at all scales, from household and community to regional, national, and international. Among its welfare effects, energy is closely linked to environmental pollution and degradation, economic development, and quality of living. In this paper, we will give a look at important of distributed generation as an approach in integration of green and renewable energy sources. This will put into focus the importance of inverter topology for distributed generation. Furthermore, we present the concepts that have been reported in the literature. The reference section at the end of this paper will give a wealth of information sources for readers. Finally, we will present the important system topologies that we will use in a later work.

**Notes:** Griche, Issam Saoudi, Kamel Gherbi, Ahmed 7th International Conference on Modelling, Identification and Control (ICMIC) Dec 18-20, 2015 Sousse, TUNISIA Comp Appl Techn, Modelling Identificat & Control, Sci & Culture Dev Cent, Int Publisher & C O, IEEE 978-0-9567157-5-3

**URL:** <Go to ISI>://WOS:000380540900075

**Reference Type: Journal Article****Record Number:** 110**Author:** Guechi, N. Bouhemadou, A. Khenata, R. Bin-Omran, S. Chegaar, M. Al-Douri, Y. Bourzami, A.**Year:** 2014**Title:** Structural, elastic, electronic and optical properties of the newly synthesized monoclinic Zintl phase BaIn<sub>2</sub>P<sub>2</sub>**Journal:** Solid State Sciences**Volume:** 29**Pages:** 12-23**Date:** Mar**Short Title:** Structural, elastic, electronic and optical properties of the newly synthesized monoclinic Zintl phase BaIn<sub>2</sub>P<sub>2</sub>**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2014.01.001**Accession Number:** WOS:000334485500003

**Abstract:** The present study explores the structural, elastic, electronic and optical properties of the newly synthesized monoclinic Zintl phase BaIn<sub>2</sub>P<sub>2</sub> using a pseudopotential plane-wave method in the framework of density functional theory within the generalized gradient approximation. The calculated lattice constants and internal coordinates are in very good agreement with the experimental findings. Independent single-crystal elastic constants as well as numerical estimations of the bulk modulus, the shear modulus, Young's modulus, Poisson's ratio, Pugh's indicator of brittle/ductile behaviour and the Debye temperature for the corresponding polycrystalline phase were obtained. The elastic anisotropy of BaIn<sub>2</sub>P<sub>2</sub> was investigated using three different indexes. The calculated electronic band structure and the total and site-projected I-decomposed densities of states reveal that this compound is a direct narrow-band-gap semiconductor. Under the influence of hydrostatic pressure, the direct D-D band gap transforms into an indirect B-D band gap at 4.08 GPa, then into a B-P band gap at 10.56 GPa. Optical macroscopic constants, namely, the dielectric function, refractive index, extinction coefficient, reflectivity coefficient, absorption coefficient and energy-loss function, for polarized incident radiation along the [100], [010] and [001] directions were investigated. (c) 2014 Elsevier Masson SAS. All rights reserved.

**Notes:** Guechi, N. Bouhemadou, A. Khenata, R. Bin-Omran, S. Chegaar, M. Al-Douri, Y. Bourzami, A.**URL:** <Go to ISI>://WOS:000334485500003

**Reference Type: Journal Article****Record Number:** 111**Author:** Guechi, N. Bourzami, A. Guittoum, A. Kharmouche, A. Colis, S. Meni, N.**Year:** 2014**Title:** Structural, magnetic and electrical properties of  $\text{Fe}_x\text{Ni}_{100-x}/\text{Si}(100)$  films**Journal:** Physica B-Condensed Matter**Volume:** 441**Pages:** 47-53**Date:** May**Short Title:** Structural, magnetic and electrical properties of  $\text{Fe}_x\text{Ni}_{100-x}/\text{Si}(100)$  films**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2014.01.023**Accession Number:** WOS:000334335500010

**Abstract:** A series of  $\text{Fe}_x\text{Ni}_{100-x}$  ( $2 \leq x \leq 100$ ) thin films with thicknesses between 110 and 150 nm were evaporated on Si(100) substrates. The structural, magnetic and electrical properties of the films were studied by means of X-ray diffraction (XRD), Atomic Force Microscopy (AFM), Alternating Gradient Field Magnetometer (AGFM) and four probe-point techniques. It was found that the films are polycrystalline and grow with  $\langle 111 \rangle$  and  $\langle 110 \rangle$  textures in the nickel-rich and iron-rich regions, respectively. The crystallite size and the internal strain rate  $\epsilon$  were computed vs the at% Fe using the line profile analysis of single peak. The study of the magnetization curves shows that all films have an in-plane easy magnetization axis. The saturation magnetization and the coercive field have been studied as a function of the iron atomic percentage. The electric measurements indicate a maximum electrical resistivity of 45  $\mu\Omega\text{cm}$  near the Anyster composition. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Guechi, N. Bourzami, A. Guittoum, A. Kharmouche, A. Colis, S. Meni, N.**URL:** <Go to ISI>://WOS:000334335500010

**Reference Type: Journal Article****Record Number:** 112**Author:** Guerba, H. Djellouli, B. Petit, C. Pitchon, V.**Year:** 2014**Title:** CO oxidation catalyzed by Ag/SBA-15 catalysts: Influence of the hydrothermal treatment**Journal:** Comptes Rendus Chimie**Volume:** 17**Issue:** 7-8**Pages:** 775-784**Date:** Jul-Aug**Short Title:** CO oxidation catalyzed by Ag/SBA-15 catalysts: Influence of the hydrothermal treatment**ISSN:** 1631-0748**DOI:** 10.1016/j.crci.2013.09.001**Accession Number:** WOS:000342037400024

**Abstract:** Four types of SBA-15 were prepared with different times and temperatures of treatment in order to obtain a range of micropore sizes. CO oxidation was used as a probe reaction in order to evaluate the nature of the active species when SBA-15s were doped with ca 10% Ag deposited from an AgNO<sub>3</sub> solution and calcined or reduced at 350 degrees C. The texture (TEM, nitrogen physisorption), structure (XRD) and reducibility (TPR) of the various catalysts (Ag/SBA-15) were studied and compared to those of a catalyst prepared by deposition of silver on fumed silica as a reference. These catalysts differ initially by the nature of silica and by pore sizes. In CO oxidation, pre-reduced catalysts are more active than pre-oxidised ones. This has to do with two phenomena, i.e. sintering, which produces large inactive silver particles, and formation of active silver species in the form of small Ag<sub>2</sub>O particles. (C) 2013 Academie des sciences. Published by Elsevier Masson SAS. All rights reserved.

**Notes:** Guerba, Hadjira Djellouli, Brahim Petit, Corinne Pitchon, Veronique**URL:** <Go to ISI>://WOS:000342037400024

**Reference Type: Journal Article****Record Number:** 113**Author:** Guerboussa, Y. Daoud, B.**Year:** 2014**Title:** Adjoint groups of p-nil rings and p-group automorphisms**Journal:** Bulletin of the Belgian Mathematical Society-Simon Stevin**Volume:** 21**Issue:** 2**Pages:** 339-349**Date:** Apr-Jun**Short Title:** Adjoint groups of p-nil rings and p-group automorphisms**ISSN:** 1370-1444**Accession Number:** WOS:000338094000011

**Abstract:** We introduce a class of rings, namely the class of left or right p-nil rings, for which the adjoint groups behave regularly. Every p-ring is close to being left or right p-nil in the sense that it contains a large ideal belonging to this class. Also their adjoint groups occur naturally as groups of automorphisms of p-groups. These facts and some of their applications are investigated in this paper.

**Notes:** Guerboussa, Yassine Daoud, Bounabi**URL:** <Go to ISI>://WOS:000338094000011

**Reference Type: Journal Article****Record Number:** 114**Author:** Guerriche, K. R. Bouktir, T.**Year:** 2014**Title:** Maximum Loading Point in Distribution System with Renewable Resources Penetration**Journal:** 2014 International Renewable and Sustainable Energy Conference (Irsec)**Pages:** 481-486**Short Title:** Maximum Loading Point in Distribution System with Renewable Resources Penetration**Accession Number:** WOS:000380510400027

**Abstract:** In the recent years a large power oscillation have being seen in the distribution power system as a result of the integration of distributed generation resources (DGs). So a static and dynamic modeling of this system must be understood in order to ensure the reliable operation of the distribution system. The purpose of this paper is to study the effect of various small scale DG types on the voltage stability and the overall system loadability. The study has been carried out using the IEEE 33 Bus radial distribution system. Continuous power flow method is used to test the increasing loadability margin and it is found that the type of DG units significantly decreases or increases the loadability margin of the power distribution system.

**Notes:** Guerriche, Khaled Ras Bouktir, Tarek Essaaidi, M Zaz, Y International Renewable and Sustainable Energy Conference (IRSEC) Oct 17-19, 2014 Ouarzazate, MOROCCO 978-1-4799-7336-1

**URL:** <Go to ISI>://WOS:000380510400027

**Reference Type: Journal Article****Record Number:** 115**Author:** Guerrouache, M. Mahouche-Chergui, S. Mekhalif, T. Dao, T. T. H. Chehimi, M. M. Carbonnier, B.**Year:** 2014**Title:** Engineering the surface chemistry of porous polymers by click chemistry and evaluating the interface properties by Raman spectroscopy and electrochromatography**Journal:** Surface and Interface Analysis**Volume:** 46**Issue:** 10-11**Pages:** 1009-1013**Date:** Oct-Nov**Short Title:** Engineering the surface chemistry of porous polymers by click chemistry and evaluating the interface properties by Raman spectroscopy and electrochromatography**ISSN:** 0142-2421**DOI:** 10.1002/sia.5493**Accession Number:** WOS:000344987400075

**Abstract:** This manuscript is intended to summarize strategies developed to chemically functionalize the surface of porous polymeric materials using the so-called click reactions with the general aim of developing chromatographic stationary phases with well-defined interfacial characteristics. The preparation pathway starts with the synthesis of polymeric materials with micrometre-sized channel-like pores providing enhanced permeability and fast mass transfer. Such monolithic structure is obtained by solvent-induced phase separation occurring in the course of the free radical polymerization of functional monomers and crosslinkers mixture. The presence of functional groups on the monolith surface allows its further functionalization through click chemistry. Herein, implementation of Huisgen, thiol-ene, thiol-yne and diels-alder click-type reactions is discussed for the grafting of molecular and oligomeric selectors. This work undoubtedly highlights click-surface chemistry as a powerful surface modification strategy for tuning, at the molecular level, the chemical nature of pores surface. Copyright (C) 2014 John Wiley & Sons, Ltd.

**Notes:** Guerrouache, Mohamed Mahouche-Chergui, Samia Mekhalif, Tahar Thi Thu Hien Dao Chehimi, Mohamed M. Carbonnier, Benjamin**URL:** <Go to ISI>://WOS:000344987400075

**Reference Type: Journal Article****Record Number:** 116**Author:** Guittoum, A. Lamrani, S. Bourzami, A. Hemmous, M. Souami, N. Weber, W.**Year:** 2014**Title:** Elaboration, structure, microstructure and magnetic properties of soft Fe<sub>80</sub>Ni<sub>20</sub> nanomaterials elaborated by high energy ball milling**Journal:** European Physical Journal-Applied Physics**Volume:** 65**Issue:** 3**Date:** Mar**Short Title:** Elaboration, structure, microstructure and magnetic properties of soft Fe<sub>80</sub>Ni<sub>20</sub> nanomaterials elaborated by high energy ball milling**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2014130247**Article Number:** 30401**Accession Number:** WOS:000333668000007

**Abstract:** The aim of the present work is to elaborate nanocrystalline soft Fe<sub>80</sub>Ni<sub>20</sub> powders and to study the relationship between their magnetic behaviour and structural changes after different milling times. A series of Fe<sub>80</sub>Ni<sub>20</sub> powders were elaborated by the mechanical alloying process for milling time ranging from 3 to 25 h. X-ray diffraction results showed that nickel dissolved in the iron lattice and formed a complete cubic centered (bcc) solid solution after 10 h of milling time. As the milling time increases from 0 to 25 h, the lattice parameter increases from 0.28610 nm for pure Fe to 0.28670 nm, the grain size decreases from 75 to 11 nm, while the mean level of strain increases from 0.09% to 0.5%. It is found that the saturation magnetization increases while the coercivity decreases when the milling time increases. The increase of saturation magnetization and decrease of coercivity are attributed to the decrease of the grain size with milling time. We have shown that nanocrystalline Fe<sub>80</sub>Ni<sub>20</sub> powders exhibit a soft magnetic behaviour.

**Notes:** Guittoum, Abderrahim Lamrani, Sabrina Bourzami, Abdelkader Hemmous, Messaoud Souami, Nassim Weber, Wolfgang

**URL:** <Go to ISI>://WOS:000333668000007

**Reference Type: Journal Article****Record Number:** 117**Author:** Hadji, R. Limani, Y. Boumazbeur, A. E. Demdoug, A. Zighmi, K. Zahri, F. Chouabi, A.**Year:** 2014**Title:** Climate change and its influence on shrinkage-swelling clays susceptibility in a semi-arid zone: a case study of Souk Ahras municipality, NE-Algeria**Journal:** Desalination and Water Treatment**Volume:** 52**Issue:** 10-12**Pages:** 2057-2072**Date:** Mar**Short Title:** Climate change and its influence on shrinkage-swelling clays susceptibility in a semi-arid zone: a case study of Souk Ahras municipality, NE-Algeria**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2013.812989**Accession Number:** WOS:000333998000030

**Abstract:** Dry summers and irregular rainfall have been affecting our daily life in the last decades. These climatic changes influence the susceptibility of shrinking and swelling phenomenon of clay and marl formations. Clay soils are found in many areas in north Algeria, but they are more common in the sub-arid highlands belt. By combining intrinsic factors that influence shrink-swell behavior as well as the climatic data, a susceptibility map has been established for Souk Ahras municipality. This map shows sensitive areas, which are going to become the future extension territories, toward shrink and swell phenomenon. The adopted methodology begins with the establishment of a synoptic map of clay and marl formations. This procedure allowed the identification of 17 argillaceous formations. Then, they were subjected to a hierarchy in terms of their susceptibility to the phenomenon. The classification was established by a combination of lithological, mineralogical, and geotechnical criteria. The use of GIS technology has permitted the combination of several predisposing and triggering factors such as the annual average rainfall, the evapotranspiration, the land use, and the orography. The result of the adopted approach was a shrink-swell susceptibility map, which can be used as a regulatory tool in land use and planning procedures.

**Notes:** Hadji, Riheb Limani, Yacine Boumazbeur, Abd Errahmane Demdoug, Abdeslem Zighmi, Karim Zahri, Farid Chouabi, Abdelmadjid**URL:** <Go to ISI>://WOS:000333998000030

**Reference Type: Journal Article****Record Number:** 118**Author:** Hadji, R. Limani, Y. Demdoun, A.**Year:** 2014**Title:** Using multivariate approach and GIS applications to predict slope instability hazard Case study of Machrouha municipality, NE Algeria**Journal:** 2014 1st International Conference on Information and Communication Technologies for Disaster Management (Ict-Dm)**Pages:** 31-40**Short Title:** Using multivariate approach and GIS applications to predict slope instability hazard Case study of Machrouha municipality, NE Algeria**Accession Number:** WOS:000365611500006

**Abstract:** Landslides have caused severe damages in the northeastern Algeria mountain region during the last decades. The present research use a raster-based GIS and statistical processing with a probabilistic method (multiple logistic regression approach, LR) for landslides hazard assessment and mapping in Machrouha municipality. Data included digitized geology, slopes, exposure, elevations, forests, roads, settlement, streams; precipitations and past events, etc. was manipulated under a GIS platform using 'Arcgis 9.3' software. Landslides location was defined from a stereoscopic interpretation of satellite images completed by a field survey. The distribution of 104 landslides events occurred between (1987 2012) was compared with 12 causal factors. LR relates predictor variables to the occurrence or nonoccurrence of landslides within geographic cells. This operation shows a strong correlation between these dependent and independent variables. Different classes were assigned for each thematic layer; a corresponding weighting and rating values were attributed for each data class, subclasses and layer in this GIS processing. By applying LR approach, landslides hazard areas were assessed and mapped into four ranks using the correspondence between landslides occurrence and permanent factor maps. The accuracy of the probabilistic model was verified by the overlaying of a new collected landslides pack location with the final landslides hazard map.

**Notes:** Hadji, Riheb Limani, Yacine Demdoun, Abdeslem Ouksel, AM NoualiTaboudjemat, N 1st International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) Mar 24-25, 2014 Algiers, ALGERIA IEEE, IEEE Algeria Subsect, RSdT, ATRST, ARPT, Algerie Telecom, Mobilis, Sonelgaz, Bull, Sonatrach, Naftal, Cerist 978-1-4799-4767-6

**URL:** <Go to ISI>://WOS:000365611500006

**Reference Type: Journal Article****Record Number:** 119**Author:** Hadji, S. Gaubert, J. P. Krim, F.**Year:** 2014**Title:** Experimental analysis of genetic algorithms based MPPT for PV systems**Journal:** 2014 International Renewable and Sustainable Energy Conference (Irsec)**Pages:** 7-12**Short Title:** Experimental analysis of genetic algorithms based MPPT for PV systems**Accession Number:** WOS:000380510400147

**Abstract:** This paper presents experimental analysis of Genetic Algorithms (GAs) based Maximum Power Point Tracking (MPPT) for photovoltaic (PV) systems. This method, presented by another paper [1], uses GAs to track the maximum power point (MPP) of PV panels. Comparison with the famous Perturb and Observe (P&O) and Incremental Conductance (Inc-Cond) are given, we tested stability (power oscillation) with real panels (Conergy PowerPlus 214P), to compare response time (rapidity) we used a PV emulator [2] so we can inject the same irradiance profile and see output PV power evolution. The response time, of P&O and Inc-Cond, and the PV power oscillation varies with the duty cycle increment step; with a small step, we get less power oscillation but this needs an important time response, we can improve system rapidity with a bigger duty increment step but important power oscillation will result. With GAs based MPPT we can get more stability with rapid response time. The results obtained show better stability and less oscillation around the MPP with the new method.

**Notes:** Hadji, Slimane Gaubert, Jean-Paul Krim, Fateh Essaaidi, M Zaz, Y International Renewable and Sustainable Energy Conference (IRSEC) Oct 17-19, 2014 Ouarzazate, MOROCCO 978-1-4799-7336-1

**URL:** <Go to ISI>://WOS:000380510400147

**Reference Type: Journal Article****Record Number:** 120**Author:** Hadjou, A. Cheriet, F. Djenane, A. M.**Year:** 2014**Title:** Evaluating the "preference effect" of the Algerian diaspora in France for "terroir" products**Journal:** New Medit**Volume:** 13**Issue:** 3**Pages:** 13-22**Date:** Sep**Short Title:** Evaluating the "preference effect" of the Algerian diaspora in France for "terroir" products**ISSN:** 1594-5685**Accession Number:** WOS:000345605800002

**Abstract:** The purpose of this paper is to evaluate consumer preferences of the Algerian diaspora in France towards Algerian local products. Many research works show that Diaspora consumers affect exports from their country of origin. The methodology applied consisted in comparing the import and export elasticities determined by the gravity model to assess whether the preference effect is more or less high. We took into account a category of products (local products) not yet investigated by international economic research. These products deserve much attention since they are becoming increasingly important in international trade. Indeed, they represent on average 31% of the total agricultural/agro-food products exported by Algeria. In this study we carried out a questionnaire-based survey focussing on consumers of Algerian Diaspora, to evaluate their preferences towards the products from their country of origin. Our results showed a clear preference effect of Diaspora consumers on local products.

**Notes:** Hadjou, Alamara Cheriet, Foued Djenane, Abdel-Madjid**URL:** <Go to ISI>://WOS:000345605800002

**Reference Type: Journal Article****Record Number:** 121**Author:** Hamani, H. Douadi, T. Al-Noaimi, M. Issaadi, S. Daoud, D. Chafaa, S.**Year:** 2014**Title:** Electrochemical and quantum chemical studies of some azomethine compounds as corrosion inhibitors for mild steel in 1 M hydrochloric acid**Journal:** Corrosion Science**Volume:** 88**Pages:** 234-245**Date:** Nov**Short Title:** Electrochemical and quantum chemical studies of some azomethine compounds as corrosion inhibitors for mild steel in 1 M hydrochloric acid**ISSN:** 0010-938X**DOI:** 10.1016/j.corsci.2014.07.044**Accession Number:** WOS:000342530200025

**Abstract:** The corrosion inhibition effect of new azomethine compounds: PhN=N-C(COCH<sub>3</sub>)=NC<sub>6</sub>H<sub>4</sub>Y {Y = OCH<sub>3</sub> (SB1), CH<sub>3</sub> (SB2), H (SB3), Br (SB4) and Y = Cl (SB5)} on mild steel in 1 M HCl, was investigated using potentiodynamic polarization, electrochemical impedance spectroscopy (EIS) and quantum chemistry analysis. It has been found that the inhibition efficiency increased with increasing inhibitor concentration. The polarization curves showed that these Schiff bases function as mixed inhibitors. The adsorption of studied compounds on mild steel surface was found to follow the Langmuir isotherm. Molecular modeling was used to correlate corrosion inhibition properties and calculated quantum chemical parameters. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Hamani, Hanane Douadi, Tahar Al-Noaimi, Mousa Issaadi, Saifi Daoud, Djamel Chafaa, Salah

**URL:** <Go to ISI>://WOS:000342530200025

**Reference Type: Journal Article****Record Number:** 122**Author:** Hamed, Y. Ahmadi, R. Demdoun, A. Bouri, S. Gargouri, I. Ben Dhia, H. Al-Gamal, S. Laouar, R. Choura, A.**Year:** 2014**Title:** Use of geochemical, isotopic, and age tracer data to develop models of groundwater flow: A case study of Gafsa mining basin-Southern Tunisia**Journal:** Journal of African Earth Sciences**Volume:** 100**Pages:** 418-436**Date:** Dec**Short Title:** Use of geochemical, isotopic, and age tracer data to develop models of groundwater flow: A case study of Gafsa mining basin-Southern Tunisia**ISSN:** 1464-343X**DOI:** 10.1016/j.jafrearsci.2014.07.012**Accession Number:** WOS:000345473200031

**Abstract:** Hydro-(major and trace elements: Cd, F and Sr), isotope (O-18, H-2, H-3 and C-13) geochemistry and radiogenic carbon (C-14) of dissolved inorganic carbon (DIC) were used to investigate the sources of groundwater contamination and the hydrodynamic functioning of the multilayer aquifer system in the mining Gafsa basin (Southwestern Tunisia). The groundwater of the study area is subject to intense exploitation to accommodate all the water demands of this arid area. The Gafsa basin contains a multi-layered aquifer with four principal levels: Upper Zebbag (Cenomanian-Turonian), Abiod (Campanien-Maastrichian), Beglia (Miocene) and Segui (Plio-Quaternary) Formations. The hydrogeology of this system is largely affected by tectonics (Gafsa-Tebessa, Sehib, Negrine-Tozeur, Tabeddit and Metlaoui faults...). The groundwater of these aquifers undergoes a significant decline in water level (approximate to 0.5 m y<sup>-1</sup>), increasing salinity (TDS increase from 400 to 800-6000 mg l<sup>-1</sup>): generally, TDS increases from the mountainous regions towards the discharge area) due to a long time of aridity, irregular rainfall and overexploitation (irrigation and industrial activities). Groundwater pumped from the semi-confined Complex Terminal (C.T) aquifers (Cretaceous and Mio-Plio-Quaternary: MPQ) and from the confined Continental Intercalaire (C.I) aquifers is an important production factor in irrigated oases agriculture and phosphate washing in Southwestern Tunisia. A rise in the groundwater salinity has been observed as a consequence of increasing abstraction from the aquifer during the last few decades. The salinization phenomena in the region are complex. Several possible causes for salinization exist: (1) the upwelling of saline and "fossil" water from the underlying, confined "C.I" aquifer; (2) as well as the backflow of agricultural drainage water; (3) phosphate and domestic wastewater; (4) brine intrusion from the salt lake (Sebkha/Garaat); (5) evaporate meteoric water dams (El Khangua and El Oudei); (6) reduced rainfall and (7) land and air alterations. The isotopic study of waters establishes that the deep groundwater is "fossil" water (6000-37,000 years) recharged probably during the late Pleistocene and the early Holocene periods. The relatively recent water in the MPQ aquifer is composed of mixed waters resulting presumably from upward leakage from the deeper groundwater. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Hamed, Younes Ahmadi, Riadh Demdoun, Abdeslam Bouri, Salem Gargouri, Imed Ben Dhia, Hamed Al-Gamal, Samir Laouar, Rabah Choura, Abedjabar**URL:** <Go to ISI>://WOS:000345473200031

**Reference Type: Journal Article****Record Number:** 123**Author:** Hamed, Y. Ahmadi, R. Hadji, R. Mokadem, N. Ben Dhia, H. Ali, W.**Year:** 2014**Title:** Groundwater evolution of the Continental Intercalaire aquifer of Southern Tunisia and a part of Southern Algeria: use of geochemical and isotopic indicators**Journal:** Desalination and Water Treatment**Volume:** 52**Issue:** 10-12**Pages:** 1990-1996**Date:** Mar**Short Title:** Groundwater evolution of the Continental Intercalaire aquifer of Southern Tunisia and a part of Southern Algeria: use of geochemical and isotopic indicators**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2013.806221**Accession Number:** WOS:000333998000022

**Abstract:** The expansion of irrigated agriculture and the overexploitation of groundwater aquifers are leading to saltwater intrusion, severe deterioration of groundwater quality and soil subsidence at arid areas. The geochemical processes taking place along an 800 km flow line in the non-carbonate Continental Intercalaire aquifer (CI) in North Africa are described using chemical (major and trace element) and isotopic indicators. The aquifer is hydraulically continuous from the Atlas Mountains in Algeria to the Chotts of Tunisia and the geochemical evidence corroborates this. The CI aquifer of North Africa is one of the largest confined aquifers in the world. The aquifer is hydraulically continuous from the Atlas Mountains in Algeria (recharge area) to the Chotts of Tunisia (discharge area) and the geochemical evidence corroborates this. The isotopic study ( $\Delta(18)\text{O}$ ,  $\Delta(2)\text{H}$ ) permits classifying groundwater into three groups. The first group is characterized by low H-3 concentrations, low C-14 activities and depleted stable isotope contents. It corresponds to an old end-member in relation with palaeoclimatic recharge which occurred during the Late Pleistocene and the Early Holocene humid periods. The second group is distinguished by high to moderate H-3 concentrations, high C-14 activities and enriched heavy isotope signatures. It corresponds to a modern end-member originating from a mixture of post-nuclear and present-day recharge in relation to return flow of irrigation. The third group is characterized by an average composition of stable and radiogenic isotope signatures. It provides evidence for the mixing between the upward moving palaeoclimatic end-member and the downward moving present-day end-member. Rainfall, originating from a mixture of Atlantic and Mediterranean air masses.

**Notes:** Hamed, Younes Ahmadi, Riadh Hadji, Rihab Mokadem, Naziha Ben Dhia, Hamed Ali, Wassim

**URL:** <Go to ISI>://WOS:000333998000022

**Reference Type: Journal Article****Record Number:** 124**Author:** Hamidatou, L. Slamene, H. Akhal, T. Boulegane, A.**Year:** 2014**Title:** Trace and essential elements determination in baby formulas milk by INAA and k (0)-INAA techniques**Journal:** Journal of Radioanalytical and Nuclear Chemistry**Volume:** 301**Issue:** 3**Pages:** 659-666**Date:** Sep**Short Title:** Trace and essential elements determination in baby formulas milk by INAA and k (0)-INAA techniques**ISSN:** 0236-5731**DOI:** 10.1007/s10967-014-3213-z**Accession Number:** WOS:000340491000004

**Abstract:** As a part of the food analysis program executed at Es-Salam research reactor by neutron activation analysis laboratory, the concentration of As, Ba, Br, Ca, Fe, K, La, Rb and Zn in baby formulas milk have been determined by using INAA and k (0)-NAA techniques. It was found that the concentration of all elements obtained by both techniques was relatively identical for the three brands of the 0-6 and 6-12 months of analyzed samples. In addition, the analytical results have been compared with those given by producers.

**Notes:** Hamidatou, Lylia Slamene, Hocine Akhal, Tarik Boulegane, Alaa**URL:** <Go to ISI>://WOS:000340491000004

**Reference Type: Journal Article****Record Number:** 125**Author:** Harrouche, F. Felkaoui, A.**Year:** 2014**Title:** Automation of fault diagnosis of bearing by application of fuzzy inference system (FIS)**Journal:** Mechanics & Industry**Volume:** 15**Issue:** 6**Pages:** 477-485**Short Title:** Automation of fault diagnosis of bearing by application of fuzzy inference system (FIS)**ISSN:** 2257-7777**DOI:** 10.1051/meca/2014059**Accession Number:** WOS:000347912600002

**Abstract:** This work deals with the application of the fuzzy logic to automate diagnosis of bearing defects in rotating machines based on vibration signals. The classification tool used is a fuzzy inference system (FIS) of Mamdani type. The vector form of input contains parameters extracted from the signals collected from the test bench studied. The output vector contains the classes for the different operating modes of the experimental study. The results show that; pretreatment data (filtering, decimation,...), the choice of parameters of fuzzy inference system (input variables and output, types and parameters of membership functions associated with different input and output variables of the system, the generation of fuzzy inference rules,...) are of major importance for the performance of fuzzy inference system used as a tool for fault diagnosis of rotating machinery.

**Notes:** Harrouche, Fateh Felkaoui, Ahmed**URL:** <Go to ISI>://WOS:000347912600002

**Reference Type: Journal Article****Record Number:** 126**Author:** Hemmous, M. Layadi, A. Guittoum, A. Souami, N. Mebarki, M. Menni, N.**Year:** 2014**Title:** Structure, surface morphology and electrical properties of evaporated Ni thin films: Effect of substrates, thickness and Cu underlayer**Journal:** Thin Solid Films**Volume:** 562**Pages:** 229-238**Date:** Jul**Short Title:** Structure, surface morphology and electrical properties of evaporated Ni thin films: Effect of substrates, thickness and Cu underlayer**ISSN:** 0040-6090**DOI:** 10.1016/j.tsf.2014.04.066**Accession Number:** WOS:000340658100036

**Abstract:** Series of Ni thin films have been deposited by thermal evaporation onto glass, Si(111), Cu, mica and Al<sub>2</sub>O<sub>3</sub> substrates with and without a Cu underlayer. The Ni thicknesses,  $t$ , are in the 4 to 163 nm range. The Cu underlayer has also been evaporated with a Cu thickness equal to 27, 52 and 90 nm. The effects of substrate, the Ni thickness and the Cu underlayer on the structural and electrical properties of Ni are investigated. Rutherford Backscattering Spectroscopy was used to probe the Ni/Substrate and Ni-Cu underlayer interfaces and to measure both Ni and Cu thicknesses. The texture, the strain and the grain size values were derived from X-ray diffraction experiments. The surface morphology is studied by means of a Scanning Electron Microscope. The electrical resistivity is measured by the four point probe. The Ni films grow with the  $\langle 111 \rangle$  texture on all substrates. The Ni grain sizes  $D$  increase with increasing thickness for the glass, Si and mica substrates and decrease for the Cu one. The strain  $\epsilon$  is positive for low thickness, decreases in magnitude and becomes negative as  $t$  increases. With the Cu underlayer, the growth mode goes through two phases: first, the stress (grain size) increases (decreases) up to a critical thickness  $t(\text{Cr})$ , then stress is relieved and grain size increases. All these results will be discussed and correlated. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Hemmous, M. Layadi, A. Guittoum, A. Souami, N. Mebarki, M. Menni, N.**URL:** <Go to ISI>://WOS:000340658100036

**Reference Type: Journal Article****Record Number:** 127**Author:** Issaadi, S. Douadi, T. Chafaa, S.**Year:** 2014**Title:** Adsorption and inhibitive properties of a new heterocyclic furan Schiff base on corrosion of copper in HCl 1 M: Experimental and theoretical investigation**Journal:** Applied Surface Science**Volume:** 316**Pages:** 582-589**Date:** Oct**Short Title:** Adsorption and inhibitive properties of a new heterocyclic furan Schiff base on corrosion of copper in HCl 1 M: Experimental and theoretical investigation**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2014.08.050**Accession Number:** WOS:000343329100079

**Abstract:** new corrosion inhibitor namely (NE)-N-(furan-2-ylmethylidene)-4-({4-[E)-(furan-2-ylmethylidene) amino] phenyl} ethyl) aniline (SB) has been synthesized and its influence on corrosion inhibition of copper in 1 M hydrochloric acid solution has been studied by both electrochemical impedance spectroscopy (EIS) and Tafel polarization measurements. The investigated inhibitor has shown good inhibition efficiency in 1 M HCl. Adsorption of SB on copper surface follows the Langmuir isotherm. Copper surface characterization was performed using scanning electron microscopy (SEM) and Fourier transform infrared spectroscopy (FT-IR). Quantum chemical calculations show that SB has large negative charge in nitrogen and oxygen atoms, which facilitates the adsorption of SB on the copper surface. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Issaadi, S. Douadi, T. Chafaa, S.**URL:** <Go to ISI>://WOS:000343329100079

**Reference Type: Journal Article****Record Number:** 128**Author:** Izerrouken, M. Djouadi, Y. Zirour, H.**Year:** 2014**Title:** Annealing process of F- and F+-centers in Al<sub>2</sub>O<sub>3</sub> single crystal induced by fast neutrons irradiation**Journal:** Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms**Volume:** 319**Pages:** 29-33**Date:** Jan**Short Title:** Annealing process of F- and F+-centers in Al<sub>2</sub>O<sub>3</sub> single crystal induced by fast neutrons irradiation**ISSN:** 0168-583X**DOI:** 10.1016/j.nimb.2013.11.009**Accession Number:** WOS:000331427900006

**Abstract:** F and F<sup>+</sup> centers were produced in Al<sub>2</sub>O<sub>3</sub> single crystal by fast neutrons (E-n > 1.2 MeV) irradiation at low fluence (4.4 x 10<sup>16</sup> n cm<sup>-2</sup>). The evolution of defects intensity as a function of temperature and of time at 493, 623 and 823 K was investigated by UV-visible spectrophotometry technique. It can be concluded from the analysis of isochronal and isothermal annealing data, that the F- and F+-centers annealing process is complex. At low annealing temperature (<473 K), only F- to F+-center conversion process takes place. At higher temperature (>493 K) the annealing is due to the superposition of several mechanisms with different activation energies. According to our results, the activation energies needed for both F- and F+-centers elimination are 0.2, 0.3 and 0.03 eV for temperature range of 300-673 K, 673-873 K and >873 K, respectively. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Izerrouken, M. Djouadi, Y. Zirour, H.**URL:** <Go to ISI>://WOS:000331427900006

**Reference Type:** Journal Article

**Record Number:** 129

**Author:** Jafari, H. Kadem, A. Baleanu, D.

**Year:** 2014

**Title:** Variational Iteration Method for a Fractional-Order Brusselator System

**Journal:** Abstract and Applied Analysis

**Short Title:** Variational Iteration Method for a Fractional-Order Brusselator System

**ISSN:** 1085-3375

**DOI:** 10.1155/2014/496323

**Article Number:** 496323

**Accession Number:** WOS:000333600400001

**Abstract:** This paper presents approximate analytical solutions for the fractional-order Brusselator system using the variational iteration method. The fractional derivatives are described in the Caputo sense. This method is based on the incorporation of the correction functional for the equation. Two examples are solved as illustrations, using symbolic computation. The numerical results show that the introduced approach is a promising tool for solving system of linear and nonlinear fractional differential equations.

**Notes:** Jafari, H. Kadem, Abdelouahab Baleanu, D.

**URL:** <Go to ISI>://WOS:000333600400001

**Reference Type: Journal Article****Record Number:** 130**Author:** Kada, M. O. Seddik, T. Sayede, A. Khenata, R. Bouhemadou, A. Deligoz, E. Alahmed, Z. A. Bin Omran, S. Rached, D.**Year:** 2014**Title:** ELASTIC, ELECTRONIC AND THERMODYNAMIC PROPERTIES OF Rh<sub>3</sub>X ( X = Zr, Nb and Ta) INTERMETALLIC COMPOUNDS**Journal:** International Journal of Modern Physics B**Volume:** 28**Issue:** 3**Date:** Jan**Short Title:** ELASTIC, ELECTRONIC AND THERMODYNAMIC PROPERTIES OF Rh<sub>3</sub>X ( X = Zr, Nb and Ta) INTERMETALLIC COMPOUNDS**ISSN:** 0217-9792**DOI:** 10.1142/s0217979214500064**Article Number:** 1450006**Accession Number:** WOS:000330643000005

**Abstract:** Structural, electronic, elastic and thermodynamic properties of Rh<sub>3</sub>X ( X = Zr, Nb, Ta) intermetallic compounds are investigated in the framework of density functional theory (DFT). The exchange-correlation (XC) potential is treated with the generalized gradient approximation (GGA) and local density approximation (LDA). The computed ground state properties agree well with the available theoretical and experimental values. The elastic constants are obtained by calculating the total energy versus volume conserving strains using Mehl model. The electronic and bonding properties are discussed from the calculations of band structures (BSs), densities of states and electron charge densities. The volume and bulk modulus at high pressure and temperature are investigated. Additionally, thermodynamic properties such as the heat capacity, thermal expansion and Debye temperature at high pressures and temperatures are also analyzed.

**Notes:** Kada, M. Ould Seddik, T. Sayede, A. Khenata, R. Bouhemadou, A. Deligoz, E. Alahmed, Z. A. Bin Omran, S. Rached, D.

**URL:** <Go to ISI>://WOS:000330643000005

**Reference Type: Journal Article****Record Number:** 131**Author:** Kadem, A. Kirane, M. Kirk, C. M. Olmstead, W. E.**Year:** 2014**Title:** Blowing-up solutions to systems of fractional differential and integral equations with exponential non-linearities**Journal:** Ima Journal of Applied Mathematics**Volume:** 79**Issue:** 6**Pages:** 1077-1088**Date:** Dec**Short Title:** Blowing-up solutions to systems of fractional differential and integral equations with exponential non-linearities**ISSN:** 0272-4960**DOI:** 10.1093/imamat/hxt005**Accession Number:** WOS:000346035700002

**Abstract:** We consider two separate systems of fractional differential equations with exponential non-linearities. We also consider the corresponding systems of non-linear Volterra integral equations. We present results on the non-existence of global solutions for each system. Bounds on the blow-up time for each system are provided along with the asymptotic growth near blow-up. Each system can be regarded as a model for the interaction of two weakly diffusive media subjected to Arrhenius-type reactions. Our results indicate that a thermal blow-up cannot be avoided under such conditions.

**Notes:** Kadem, A. Kirane, M. Kirk, C. M. Olmstead, W. E.**URL:** <Go to ISI>://WOS:000346035700002

**Reference Type: Journal Article****Record Number:** 132**Author:** Kahoul, A. Aylikci, V. Deghfel, B. Aylikci, N. K. Nekkab, M.**Year:** 2014**Title:** New empirical formulae for calculation of average M-shell fluorescence yields**Journal:** Journal of Quantitative Spectroscopy & Radiative Transfer**Volume:** 145**Pages:** 205-213**Date:** Sep**Short Title:** New empirical formulae for calculation of average M-shell fluorescence yields**ISSN:** 0022-4073**DOI:** 10.1016/j.jqsrt.2014.05.009**Accession Number:** WOS:000338821700018

**Abstract:** We have calculated and reviewed in a table form the average bulk M-shell fluorescence yield previously measured by different groups covering the period from 1955 to 2005. We have interpolated the weighted and unweighted mean values of the experimental data by using the analytical function  $\frac{\overline{\omega(M)}}{1-\overline{\omega(M)}}^{1/4}$  as a function of the atomic number (Z) to deduce the empirical average M-shell fluorescence yield in the atomic range of  $70 \leq Z \leq 92$ . Also, we used the famous formula  $\overline{\omega(M)} = A(Z-13)^4$  to generalize the average M-shell fluorescence yield for elements with  $19 \leq Z \leq 100$ . The results have been compared with other theoretical, experimental and empirical values reported in the literature and a reasonable agreement has been obtained. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Kahoul, A. Aylikci, V. Deghfel, B. Aylikci, N. Kup Nekkab, M.**URL:** <Go to ISI>://WOS:000338821700018

**Reference Type: Journal Article****Record Number:** 133**Author:** Kamel, S. Ziyad, B. Naguib, H. M. Mouloud, A. Mohamed, R. Ieee,**Year:** 2014**Title:** An Indirect Adaptive Type-2 Fuzzy Sliding Mode PSS Design to Damp Power System Oscillations**Journal:** 2015 7th International Conference on Modelling, Identification and Control (ICMIC)**Pages:** 768-773**Short Title:** An Indirect Adaptive Type-2 Fuzzy Sliding Mode PSS Design to Damp Power System Oscillations**Accession Number:** WOS:000380540900143

**Abstract:** This paper introduces a new indirect adaptive type-2 fuzzy sliding mode controller as a power system stabilizer (PSS) that used to damp out the low frequency oscillations in power systems. The proposed controller design is based on the integration of sliding mode control (SMC) and Adaptive type-2 fuzzy control. The type-2 fuzzy logic system is used to approximate the unknown system function and PI control term is used to eliminate chattering action in the design of sliding mode control. Using Lyapunov stability theory, the adaptation laws are developed to make the controller adaptive to take care of the changes due to the different operating conditions occurring in the power system and guarantees stability converge. The robustness of the proposed stabilizer has been tested on a single machine infinite bus model. Nonlinear simulation studies show the better performance of the proposed stabilizer and confirm the superiority over adaptive type-2 fuzzy synergetic (AFSPSS), adaptive type-2 fuzzy (AFPSS) and the conventional (CPSS) stabilizers.

**Notes:** Kamel, Saoudi Ziyad, Bouchama Naguib, Harmas Mohamed Mouloud, Ayad Mohamed, Rezki 7th International Conference on Modelling, Identification and Control (ICMIC) Dec 18-20, 2015 Sousse, TUNISIA Comp Appl Techn, Modelling Identificat & Control, Sci & Culture Dev Cent, Int Publisher & C O, IEEE 978-0-9567157-5-3

**URL:** <Go to ISI>://WOS:000380540900143

**Reference Type: Journal Article****Record Number:** 134**Author:** Karkar, N. Benmhammed, K. Bartil, A.**Year:** 2014**Title:** Parameter Estimation of Planar Robot Manipulator Using Interval Arithmetic Approach**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 6**Pages:** 5289-5295**Date:** Jun**Short Title:** Parameter Estimation of Planar Robot Manipulator Using Interval Arithmetic

Approach

**ISSN:** 1319-8025**DOI:** 10.1007/s13369-014-1199-z**Accession Number:** WOS:000338199100080

**Abstract:** Parameter and state estimation problems are encountered when modeling processes that involve uncertain quantities to be estimated from measurements. The aim of this paper was to show the interval arithmetic approach as the suitable tool to solve problems of estimating the parameters of nonlinear systems in a bounded-error context. Perturbations are assumed bounded but otherwise unknown. This approach computes outer (or inner) approximations of the set of all parameters. An example of planar robot manipulator is presented to illustrate the effectiveness and potential of an interval approach in parameter's estimation. A simulation is conducted to compare these estimates in terms of mean squared.

**Notes:** Karkar, N. Benmhammed, K. Bartil, A.**URL:** <Go to ISI>://WOS:000338199100080

**Reference Type: Journal Article****Record Number:** 135**Author:** Kessal, A. Rahmani, L.**Year:** 2014**Title:** Ga-Optimized Parameters of Sliding-Mode Controller Based on Both Output voltage and Input Current With an Application in the PFC of AC/DC Converters**Journal:** Ieee Transactions on Power Electronics**Volume:** 29**Issue:** 6**Pages:** 3159-3165**Date:** Jun**Short Title:** Ga-Optimized Parameters of Sliding-Mode Controller Based on Both Output voltage and Input Current With an Application in the PFC of AC/DC Converters**ISSN:** 0885-8993**DOI:** 10.1109/tpel.2013.2274200**Accession Number:** WOS:000331554000050

**Abstract:** In this work, analysis and optimization of sliding-mode controller parameters are treated, in order to govern a static power converter. In this case, an ac-dc boost power factor corrector is used; generally, these kinds of converters are applied to obtain a power factor near to unity. Advantage that the designed controller can give is the improvement of dynamic and static performances in cases of large disturbances. Simple sliding surface contains, in most cases, only one variable; in this study, analyzed surface includes two variables, which are continuous output voltage and rectified sinusoidal input current; the benefit of this surface is getting react against various disturbances, as be at the input power parameters, or the value of the load. The whole controller and converter is tested by simulation and experimentally for steady-state and transient responses.

**Notes:** Kessal, Abdelhalim Rahmani, Lazhar**URL:** <Go to ISI>://WOS:000331554000050

**Reference Type: Journal Article****Record Number:** 136**Author:** Ketfi-cherif, A. Ziadi, A.**Year:** 2014**Title:** Global descent method for constrained continuous global optimization**Journal:** Applied Mathematics and Computation**Volume:** 244**Pages:** 209-221**Date:** Oct**Short Title:** Global descent method for constrained continuous global optimization**ISSN:** 0096-3003**DOI:** 10.1016/j.amc.2014.06.089**Accession Number:** WOS:000342265700019

**Abstract:** In this paper, we consider the problem of constrained global optimization of a continuous multivariable function. We propose a global descent function technique which requires an easily adjustable single parameter. The characteristic property of the proposed function is that each of its local minimizers verifying constraints is a better local minimizer of the objective function, or at less, an approximated local minimizer with a given tolerance. Several other properties of the new function are investigated, in order to establish a corresponding optimization algorithm. We have performed numerical experiments on a set of standard test problems using this algorithm; the results illustrate the efficiency of our approach. (C) 2014 Elsevier Inc. All rights reserved.

**Notes:** Ketfi-cherif, Amine Ziadi, Abdelkader**URL:** <Go to ISI>://WOS:000342265700019

**Reference Type: Journal Article****Record Number:** 137**Author:** Khaber, L. Beniaiche, A. Hachemi, A.**Year:** 2014**Title:** Electronic and optical properties of SrTiO<sub>3</sub> under pressure effect: Ab initio study**Journal:** Solid State Communications**Volume:** 189**Pages:** 32-37**Date:** Jul**Short Title:** Electronic and optical properties of SrTiO<sub>3</sub> under pressure effect: Ab initio study**ISSN:** 0038-1098**DOI:** 10.1016/j.ssc.2014.03.018**Accession Number:** WOS:000336436400007

**Abstract:** We present an investigation on hydrostatic pressure dependence of electronic and optical properties of the perovskite SrTiO<sub>3</sub> in cubic and tetragonal structures, including band structure, density of states, dielectric function, refractive index, absorption coefficient, reflectivity and electron energy-loss function. Calculations are performed using ab initio pseudopotential density functional method with the generalized gradient approximation. The cubic structure is optimized at zero pressure while the tetragonal structure is optimized under its structural phase transition pressure, which is previously calculated to be 6.0 GPa. Comparison between electronic and optical properties of the considered structures has been done. We find that the electronic and optical properties of the cubic phase are quite different from those of the tetragonal one. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Khaber, L. Beniaiche, A. Hachemi, A.**URL:** <Go to ISI>://WOS:000336436400007

**Reference Type: Journal Article****Record Number:** 138**Author:** Khaniche, B. Benamrani, H. Zouaoui, A. Zegadi, A.**Year:** 2014**Title:** Preparation and properties of the composite material silicon/polypyrrole-copper for electronic devices applications**Journal:** Materials Science in Semiconductor Processing**Volume:** 27**Pages:** 689-694**Date:** Nov**Short Title:** Preparation and properties of the composite material silicon/polypyrrole-copper for electronic devices applications**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2014.07.027**Accession Number:** WOS:000345644000092

**Abstract:** The paper presents the results of the elaboration of new composites materials (Si/PPy-Cu) by incorporation of copper in polypyrrole Films. Polymer films have been deposited on silicon electrode surfaces by electrochemical oxidation of the monomer in an organic solution. The incorporation of copper particles in the polymer Film has First been conducted by the immersion of the modified electrode in a copper solution, thereafter; it has been reduced electrochemically in an aqueous solution to disperse metallic particles in the polymer film. The results obtained from cyclic voltammetry and impedance spectroscopy of the films before and after copper incorporation show differences in the electrochemical behavior of the modified films which suggest that Cu particles have been incorporated in the polymer. This has also been confirmed by the electrical resistivity, XRD, SEM and EDX measurements. For a possible application, current-voltage characteristics of the heterostructure devices (Si/PPy-Cu) have indicated a diode behavior similar of power semiconductor diodes. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Khaniche, Brahim Benamrani, Hassen Zouaoui, Ahmed Zegadi, Ameer**URL:** <Go to ISI>://WOS:000345644000092

**Reference Type: Journal Article****Record Number:** 139**Author:** Khaoukha, G. Ben Jemia, M. Amira, S. Laouer, H. Bruno, M. Scandolera, E. Senatore, F.**Year:** 2014**Title:** Characterisation and antimicrobial activity of the volatile components of the flowers of *Magydaris tomentosa* (Desf.) DC. collected in Sicily and Algeria**Journal:** Natural Product Research**Volume:** 28**Issue:** 15**Pages:** 1152-1158**Short Title:** Characterisation and antimicrobial activity of the volatile components of the flowers of *Magydaris tomentosa* (Desf.) DC. collected in Sicily and Algeria**ISSN:** 1478-6419**DOI:** 10.1080/14786419.2014.919289**Accession Number:** WOS:000339097500005

**Abstract:** The essential oils of the flowers of *Magydaris tomentosa* (Desf.) DC. (Apiaceae) collected in Sicily (MSi) and Algeria (MAI), respectively, were obtained by hydrodistillation, and their compositions were analysed. The analyses allowed the identification and quantification of 23 components in MSi and 60 compounds in MAI, respectively, showing a very different profile in the composition of the two populations. The main components of MSi were cembrene (28.2%), -springene (17.5%) and -springene (14.8%), also present in MAI but in lesser amount (0.4%, 1.8% and 0.9%, respectively), whereas the principal constituents of MAI were (E)-nerolidol (35.4%), -costol (13.3%) and -costol (6.8%). Both MSi and MAI exhibited a significant antibacterial activity against *Staphylococcus epidermidis* (minimum inhibitory concentration=25 and 12.5g/mL, respectively). The chemotaxonomy markers of the species were identified.

**Notes:** Khaoukha, Guesmia Ben Jemia, Mariem Amira, Smain Laouer, Hocine Bruno, Maurizio Scandolera, Elia Senatore, Felice

**URL:** <Go to ISI>://WOS:000339097500005

**Reference Type: Journal Article****Record Number:** 140**Author:** Kharchouche, F. Savary, E. Thuault, A. Marinel, S. d'Astorg, S. Rguiti, M. Belkhiat, S. Courtois, C. Leriche, A.**Year:** 2014**Title:** Effects of microwave sintering on intrinsic defects concentrations in ZnO-based varistors**Journal:** Ceramics International**Volume:** 40**Issue:** 8**Pages:** 13697-13701**Date:** Sep**Short Title:** Effects of microwave sintering on intrinsic defects concentrations in ZnO-based varistors**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2014.04.142**Accession Number:** WOS:000340321300138

**Abstract:** Nowadays the most important part of varistors is made from doped ZnO. The typical varistor microstructure consists in a large number of n-p-n junctions. ZnO grains are intrinsic n-type semiconductors because of the displacement of zinc atoms in interstitial positions and the formation of oxygen vacancies. The addition of some dopants (for instance bismuth and antimony oxides) allows creating a p-type semiconduction at the grain boundaries. In our study, ZnO-based varistor with standard composition was sintered by microwave and in a conventional furnace with the same sintering temperatures and dwell times. Electrical characterizations after direct microwave sintering showed that these samples presented a high electrical conductivity which avoids getting a good current voltage non-linearity. This high conductivity could be due to higher concentrations in interstitial zinc and oxygen vacancies after the microwave process. It is assumed that microwaves cause a displacement of the equilibria of those reactions leading to a partial reduction of the samples. A post thermal treatment in a conventional furnace at 650 degrees C for 24 h under oxygen atmosphere was realized so as to reach the thermodynamic equilibrium. After this treatment the electrical conductivity drastically decreased supporting the idea that the defects concentrations have also decreased. (C) 2014 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Kharchouche, Faical Savary, Etienne Thuault, Anthony Marinel, Sylvain d'Astorg, Sophie Rguiti, Mohamed Belkhiat, Saad Courtois, Christian Leriche, Anne B**URL:** <Go to ISI>://WOS:000340321300138

**Reference Type: Journal Article****Record Number:** 141**Author:** Kharmouche, A.**Year:** 2014**Title:** Magnetic properties of obliquely evaporated Co thin films**Journal:** European Physical Journal-Applied Physics**Volume:** 68**Issue:** 1**Date:** Oct**Short Title:** Magnetic properties of obliquely evaporated Co thin films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2014140148**Article Number:** 10301**Accession Number:** WOS:000343091800006

**Abstract:** The magnetic properties of Co thin films obliquely evaporated under silicon and glass substrates are investigated using alternating gradient field magnetometer (AGFM) and magnetic force microscopy (MFM) techniques. The effects of the magnetic layer thickness and the deposition angle are studied. As results, it is found a decrease of the coercive field from 250 Oe, for  $t = 20$  nm, to 95 Oe, for  $t = 400$  nm, and a decrease of the anisotropy field from 1.6 kOe for 20 nm Co thick film, to 0.95 kOe for 200 nm Co thick film. An increase of these fields with the increase of the deposition angle is also found. The easy axis of the saturation magnetization lies in the film plane, whatever is the substrate nature. MFM images reveal well-defined stripe patterns, particularly for the thickest films, where the magnetocrystalline anisotropy is dominant. These results, and others, are presented and discussed.

**Notes:** Kharmouche, Ahmed**URL:** <Go to ISI>://WOS:000343091800006

**Reference Type: Journal Article****Record Number:** 142**Author:** Khellaf, N. Kebiche, K.**Year:** 2014**Title:** Geometric and Material Nonlinear Analysis of Square-Based Tensegrity Ring Structures**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 8**Pages:** 5979-5989**Date:** Aug**Short Title:** Geometric and Material Nonlinear Analysis of Square-Based Tensegrity Ring Structures**ISSN:** 1319-8025**DOI:** 10.1007/s13369-014-1196-2**Accession Number:** WOS:000339807800012

**Abstract:** Modeling with a combined geometric and material nonlinear analysis is described in this paper and applied to tensegrity rings representing the last generation of the tensegrity systems. The resulting algorithm model is new; it takes into account slackening and yielding of cables. The usual Newton-Raphson iterative method is used, but in an updated Lagrangian formulation. The response of an isolated and an assembly of several square-based ring cells subjected to different types of loads has been investigated by means of nodal displacements. It is shown that the tensegrity rings are less flexible as compared to the classical tensegrity systems. Special attention is paid to the influence of the slackening and yielding of cables on the total nonlinear behavior. It has been found that their combination in a nonlinear analysis model is important for a better understanding of the response of tensegrity rings.

**Notes:** Khellaf, N. Kebiche, K.**URL:** <Go to ISI>://WOS:000339807800012

**Reference Type: Journal Article****Record Number:** 143**Author:** Khenfer, R. Mostefai, M. Benahdoug, S. Eddiai, A.**Year:** 2014**Title:** Detection and analysis of degradation in the physical and electrical parameters in the PV cell**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 16**Issue:** 7-8**Pages:** 842-848**Date:** Jul-Aug**Short Title:** Detection and analysis of degradation in the physical and electrical parameters in the PV cell**ISSN:** 1454-4164**Accession Number:** WOS:000340578000013

**Abstract:** In this paper, we propose a method of analysis and detection degradation of physical and electrical parameters in photovoltaic cell. This method incorporates the stages of detection, localization and identification. For modeling PV panels, we used the two-diode model. Concerning the detection and localization, we used a limited number of voltage sensors. Also for the identification, we use the method of analysis of the I-V curve of the PV cell. By using this method, we can identify degradation due to climatic conditions as a partial shade, and the increase in the series resistance due to the corrosion or bad contact between cells, with examination of the presence of inflection points and calculate the second derivative of the error between the I-V characteristic with and without defects. The obtained simulation results showed the effectiveness of the proposed diagnosis method and the model used.

**Notes:** Khenfer, R. Mostefai, M. Benahdoug, S. Eddiai, A.**URL:** <Go to ISI>://WOS:000340578000013

**Reference Type: Journal Article****Record Number:** 144**Author:** Khenfer, R. Mostefai, M. Benahdoug, S. Maddad, M.**Year:** 2014**Title:** Faults Detection in a Photovoltaic Generator by Using Matlab Simulink and the chipKIT Max32 Board**Journal:** International Journal of Photoenergy**Short Title:** Faults Detection in a Photovoltaic Generator by Using Matlab Simulink and the chipKIT Max32 Board**ISSN:** 1110-662X**DOI:** 10.1155/2014/350345**Article Number:** 350345**Accession Number:** WOS:000337453400001

**Abstract:** This paper presents a laboratory with equipment and an algorithm for teaching graduate students the monitoring and the diagnosis of PV arrays. The contribution is the presentation of an algorithm to detect and localize the fault, in photovoltaic generator when a limited number of voltage sensors are used. An I-V curve tracer using a capacitive load is exploited to measure the I-V characteristics of PV arrays. Such measurement allows characterization of PV arrays on-site, under real operating conditions, and provides also information for the detection of potential array anomalies. This I-V curve tracer is based on a microcontroller board family called chipKIT Max32 which is a popular platform for physical computing. A user program can be developed visually on a PC side via the graphical user interface (GUI) in Matlab Simulink, where the chipKIT Max32 of Digilent which is a low-cost board is designed for use with the Arduinompid software. The obtained results from the partial shade default showed the effectiveness of the proposed diagnosis method and the good functioning of this board with the Matlab/Simulink environment.

**Notes:** Khenfer, Riadh Mostefai, Mohamed Benahdoug, Seddik Maddad, Mounir**URL:** <Go to ISI>://WOS:000337453400001

**Reference Type: Journal Article****Record Number:** 145**Author:** Kolli, M. Laouamri, H. Zaboub, M. Bouaouadja, N.**Year:** 2014**Title:** Improvement of the properties of sandblasted glass by acrylic coatings**Journal:** Glass Technology-European Journal of Glass Science and Technology Part A**Volume:** 55**Issue:** 5**Pages:** 146-152**Date:** Oct**Short Title:** Improvement of the properties of sandblasted glass by acrylic coatings**ISSN:** 1753-3546**Accession Number:** WOS:000344838600002

**Abstract:** The aim of this work is to investigate the effect of acrylic coatings on the optical and mechanical properties of sandblasted soda-lime-silica glass. The results show that sandblasting causes a considerable drop in the optical transmission of soda-lime-silica glass (T similar to 15%) and alters its visibility. The glass strength decreases from 80 to about 24 MPa. The photovoltaic efficiency of a solar cell covered with a sandblasted glass drops below 90%. With use of an acrylic coating, significant improvements in optical transmission (87%) and photovoltaic efficiency (98%) were recorded and a clear enhancement of visibility was noticed. The mechanical strength improvement obtained with the coating was, however, better on samples previously etched with hydrofluoric acid (HF). Impact fatigue resistance tests showed that sandblasting causes a decrease from 13 to three cycles (number of strikes leading to fracture) and an increase up to similar to 28 cycles with HF-etching. After depositing an acrylic coating, a significant improvement of the impact fatigue resistance was achieved (similar to 129 cycles and similar to 198 cycles with a single and a double layer coating, respectively).

**Notes:** Kolli, Mostafa Laouamri, Hind Zaboub, Monsef Bouaouadja, Nouredine**URL:** <Go to ISI>://WOS:000344838600002

**Reference Type: Journal Article****Record Number:** 146**Author:** Laggoun, A. Guittoum, A. Bahamida, S. Boudissa, M. Fnidiki, A.**Year:** 2014**Title:** Structural and Mossbauer studies of evaporated Fe<sub>100-x</sub>Pdx thin films**Journal:** European Physical Journal-Applied Physics**Volume:** 68**Issue:** 2**Date:** Nov**Short Title:** Structural and Mossbauer studies of evaporated Fe<sub>100-x</sub>Pdx thin films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2014140195**Accession Number:** WOS:000344614900003

**Abstract:** In order to study the influence of palladium atom on structural and hyperfine properties, Fe<sub>100-x</sub>Pdx films ( $x = 15, 20$  and  $36$  at.%) were deposited by evaporation method onto a Si (1 0 0) substrate. They were then characterized by scanning electron microscopy (SEM), X-ray diffraction (XRD) and conversion electron Mossbauer spectroscopy (CEMS). X-ray diffraction analysis shows the presence of supersaturated solid solution with bcc structure for Pd concentration of 15% and 20%. However, for 36% of Pd, in addition to the supersaturated alpha-FePd (bcc) phase, another disordered FePd<sub>3</sub> phase with fcc structure is present. The grain size did not change with Pd concentration and was about 11 nm, and the lattice parameter increased from 0.287 angstrom to 0.290 angstrom with an increasing Pd concentration. The adjustment of Mossbauer spectra confirms the results obtained by X-ray diffraction. Moreover, the Mossbauer spectra have shown that a magnetic texture is present for samples with 20 and 36%. For these Pd concentrations, we believe that a development of an out-of plane magnetic anisotropy occurs in our films.

**Notes:** Laggoun, Ali Guittoum, Abderrahim Bahamida, Saida Boudissa, Mokhtar Fnidiki, Abdesslem

**URL:** <Go to ISI>://WOS:000344614900003

**Reference Type: Journal Article****Record Number:** 147**Author:** Laghrib, S. Hamici, M. Gagou, Y. Roca, L. V. Saint-Gregoire, P.**Year:** 2014**Title:** Synthesis of  $\text{In}_2\text{S}_3(1-x)\text{O}_3x$  thin films by oxidation of  $\text{In}_2\text{S}_3$  film and influence of film microstructure**Journal:** Physica Status Solidi a-Applications and Materials Science**Volume:** 211**Issue:** 12**Pages:** 2865-2870**Date:** Dec**Short Title:** Synthesis of  $\text{In}_2\text{S}_3(1-x)\text{O}_3x$  thin films by oxidation of  $\text{In}_2\text{S}_3$  film and influence of film microstructure**ISSN:** 1862-6300**DOI:** 10.1002/pssa.201431123**Accession Number:** WOS:000347182700032

**Abstract:**  $\text{In}_2\text{S}_3(1-x)\text{O}_3(x)$  is known from preceding studies to have a bandgap varying continuously as a function of  $x$ , which is the reason why this solid solution is potentially interesting in the field of photovoltaics. In this work, we present results on oxidation of  $\text{In}_2\text{S}_3$  by heating in air atmosphere to obtain the desired material. The oxidation is accompanied by a mass loss due to the substitution of S by O atoms that is studied by means of thermogravimetric analysis. It appears that the temperature region in which the oxidation occurs is strongly dependent on the microstructure of deposited films. As-grown films deposited by chemical bath deposition are subjected to nano-oxidation occurring at lower temperature than oxidation of materials that are characterized by a better crystallinity and larger crystallite size. X-ray diffraction and scanning electron microscopy (including energy dispersive X-ray spectroscopy (EDX)) were used to get information on the compounds and the microstructure of films. The main conclusion of the paper opens the perspective of practical applications for producing layers for solar cells. (C) 2014 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Laghrib, S. Hamici, M. Gagou, Y. Vaillant Roca, L. Saint-Gregoire, P.**URL:** <Go to ISI>://WOS:000347182700032

**Reference Type: Journal Article****Record Number:** 148**Author:** Laincer, F. Laribi, R. Tamendjari, A. Arrar, L. Rovellini, P. Venturini, S.**Year:** 2014**Title:** Olive oils from Algeria: Phenolic compounds, antioxidant and antibacterial activities**Journal:** Grasas Y Aceites**Volume:** 65**Issue:** 1**Date:** Jan-Mar**Short Title:** Olive oils from Algeria: Phenolic compounds, antioxidant and antibacterial activities**ISSN:** 0017-3495**DOI:** 10.3989/gya.035713**Article Number:** e001**Accession Number:** WOS:000343278600001

**Abstract:** The phenolic compositions, antioxidant and antimicrobial activities against six bacteria of phenolic extracts of olive oil varieties from eleven Algerian varieties were investigated. The antioxidant activity was assessed by determining the scavenging effect on the DPPH and ABTS(+) radicals. The antimicrobial activity was measured as a zone of inhibition and minimum inhibitory concentration (MIC) on human harmful and foodborne pathogens. The results show that total phenols was significantly ( $p < 0.05$ ) correlated with DPPH ( $r = 0.72$ ) and ABTS + radicals ( $r = 0.76$ ). Among the bacteria tested, *S. aureus* and to a lesser extent *B. subtilis* showed the highest sensitivity; the MIC varied from 0.6 to 1.6 mg.mL<sup>-1</sup> and 1.2 to 1.8 mg.mL<sup>-1</sup>, respectively. The results reveal that Algerian olive oils may constitute a good source of antioxidant and antimicrobial agents.

**Notes:** Laincer, F. Laribi, R. Tamendjari, A. Arrar, L. Rovellini, P. Venturini, S.**URL:** <Go to ISI>://WOS:000343278600001

**Reference Type: Journal Article****Record Number:** 149**Author:** Laissaoui, D. Bencherif-Madani, A.**Year:** 2014**Title:** A limit theorem for local time and application to random sets**Journal:** Statistics & Probability Letters**Volume:** 88**Pages:** 107-117**Date:** May**Short Title:** A limit theorem for local time and application to random sets**ISSN:** 0167-7152**DOI:** 10.1016/j.spl.2014.01.025**Accession Number:** WOS:000334983400015

**Abstract:** For a broad class of Markov processes, we give a new intrinsic limit theorem for local time at a point  $x(0)$ . We suitably normalize the number of dyadic time boxes where the process passes through  $x(0)$  before  $t > 0$ . We discuss the relation with other normalizations. We apply this result to the theory of random sets using tools from fractal theory. Our construction of the local time is well suited to Monte-Carlo simulations. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Laissaoui, Diffalah Bencherif-Madani, Abdelatif**URL:** <Go to ISI>://WOS:000334983400015

**Reference Type: Journal Article****Record Number:** 150**Author:** Lallemand, L. Garnier, V. Bonnefont, G. Marouani, A. Fantozzi, G. Bouaouadja, N.**Year:** 2014**Title:** Effect of solid particle impact on light transmission of transparent ceramics: Role of the microstructure**Journal:** Optical Materials**Volume:** 37**Pages:** 352-357**Date:** Nov**Short Title:** Effect of solid particle impact on light transmission of transparent ceramics: Role of the microstructure**ISSN:** 0925-3467**DOI:** 10.1016/j.optmat.2014.06.025**Accession Number:** WOS:000345181600061

**Abstract:** Sand erosion was done on soda lime glass and transparent ceramics such as alumina and magnesium-aluminate spinel with different microstructures. Surface roughness and optical transmission were measured before and after erosion. The increase of surface roughness depends on both the hardness and grain size of the material. Nearly no surface degradation occurs on polycrystalline samples with HV3 > 15 GPa. The decrease of the real in-line transmittance (RIT) after sand blasting is linked to the increase of surface roughness. We have found that this RIT decrease is correlated to three parameters: incident light wavelength, nature of the material (mechanical properties like hardness) and material microstructure. The influence of these will be discussed. finally, for all polycrystalline ceramics and single crystals, the RIT is only slightly or not altered after sand blasting either at IR or visible wavelengths. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Lallemand, Lucile Garnier, Vincent Bonnefont, Guillaume Marouani, Abdelhak Fantozzi, Gilbert Bouaouadja, Nouredine**URL:** <Go to ISI>://WOS:000345181600061

**Reference Type: Journal Article****Record Number:** 151**Author:** Lamia, Z. Farid, D. Fabien, N.**Year:** 2014**Title:** Technique of Coaxial Frame in Reflection for the Characterization of Single and Multilayer Materials with Correction of Air Gap**Journal:** International Journal of Antennas and Propagation**Short Title:** Technique of Coaxial Frame in Reflection for the Characterization of Single and Multilayer Materials with Correction of Air Gap**ISSN:** 1687-5869**DOI:** 10.1155/2014/324727**Article Number:** 324727**Accession Number:** WOS:000340176900001

**Abstract:** Techniques based on fixture probes in reflection are used in microwave reflectometry as a novel diagnostic tool for detection of skin cancers, for complex permittivity measurements on liquid samples and oil shale, and for complex dielectric permittivity of animals' organs and tissues measurements in microwave band for the needs of modern veterinary medicine. In this work, we have developed a technique to characterize multilayer materials in a broadband frequency range. A coaxial probe in reflection has been specially developed for microelectronic substrate. Using SMA connector, loss tangent of  $10^{-4}$  and relative permittivity have been measured with an error of 0.145%. The extension of the coaxial probe in reflection technique to multilayer substrates such as Delrin and Teflon permitted to measure bilayer material provided the good knowledge of electrical parameters and dimensions of one layer. In the coaxial transmission line method, a factor that greatly influences the accuracy of the results is the air gaps between the material under test and the coaxial test fixture. In this paper, we have discussed the influence of the air gaps (using samples of 0.5 mm air gaps) and the measures that can be taken to minimize that influence when material is measured. The intrinsic values thus determined have been experimentally verified. We have described the structure of the test fixture, its calibration issues, and the experimental results. Finally, electromagnetism simulations showed that the best results can be obtained.

**Notes:** Lamia, Zarral Farid, Djahli Fabien, Ndagijimana**URL:** <Go to ISI>://WOS:000340176900001

**Reference Type: Journal Article****Record Number:** 152**Author:** Lashab, M. Zebiri, C. Benabdelaziz, F. Jan, N. A. Abd-Alhameed, R. A. Ieee,**Year:** 2014**Title:** Horn Antennas Loaded with Metamaterial For Ku band Application**Journal:** 2014 International Conference on Multimedia Computing and Systems (Icmcs)**Pages:** 1372-1375**Short Title:** Horn Antennas Loaded with Metamaterial For Ku band Application**Accession Number:** WOS:000366999600243

**Abstract:** A Split Ring Resonator (SRR) as Metamaterial has been loaded on pyramidal horn antennas for Ku band or satellite application. The aim of this work is to exhibit the advantage of metamaterial (SRR) use inside horn antenna; this is mainly enhancement of the bandwidth towards lower frequency and improvement of the radiation pattern gain. The horn antenna is feed by a monopole antenna of optimized length. The obtained results from HFSS simulation concerning the constitutive parameters of the (SRR), show that there is a DNG (Double Negative) permeability and permittivity in the frequency of interest. In this work the operating bandwidth of the proposed antenna (notched band) is in the range of 9.80 GHz to 10.30 GHz, and 10.80 GHz to 11.20 GHz as Ku or satellite application.

**Notes:** Lashab, Mohamed Zebiri, C. Benabdelaziz, F. Jan, Naeem Ahmad Abd-Alhameed, R. A. International Conference on Multimedia Computing and Systems (ICMCS) Apr 14-16, 2014 Marrakech, MOROCCO 978-1-4799-3824-7

**URL:** <Go to ISI>://WOS:000366999600243

**Reference Type: Journal Article****Record Number:** 153**Author:** Litimein, F. Khenata, R. Gupta, S. K. Murtaza, G. Reshak, A. H. Bouhemadou, A. Bin Omran, S. Yousaf, M. Jha, P. K.**Year:** 2014**Title:** Structural, electronic, and optical properties of orthorhombic and triclinic BiNbO<sub>4</sub> determined via DFT calculations**Journal:** Journal of Materials Science**Volume:** 49**Issue:** 22**Pages:** 7809-7818**Date:** Nov**Short Title:** Structural, electronic, and optical properties of orthorhombic and triclinic BiNbO<sub>4</sub> determined via DFT calculations**ISSN:** 0022-2461**DOI:** 10.1007/s10853-014-8491-x**Accession Number:** WOS:000341419900019

**Abstract:** We performed ab initio calculations using the FP-LM method with the local density approximation (LDA) implemented in the WIEN2k code for the orthorhombic (alpha) and triclinic (beta) phases of BiNbO<sub>4</sub>. The modified Becke-Johnson exchange potential (mBJ)-LDA approach was also used to improve the electronic properties. The lattice constants calculated for both structures using the LDA are in good agreement with the experimental values. For the band structure calculations, the mBJ-LDA approach provides reasonable agreement for the band gap value compared with the LDA. The estimated (mBJ)-LDA band gap values are 2.89 eV (3.73 eV) and 2.62 eV (3.15 eV) for the alpha and beta phases of BiNbO<sub>4</sub>, respectively. Significant optical anisotropy is clearly observed in the visible-light region. We also calculated and evaluated the electron energy loss spectrum for BiNbO<sub>4</sub>. This work provides the first quantitative theoretical prediction of optical properties and electron energy loss spectra for both the orthorhombic and triclinic phases of BiNbO<sub>4</sub>.

**Notes:** Litimein, F. Khenata, R. Gupta, Sanjeev K. Murtaza, G. Reshak, Ali. H. Bouhemadou, A. Bin Omran, S. Yousaf, Masood Jha, Prafulla K.**URL:** <Go to ISI>://WOS:000341419900019

**Reference Type: Journal Article****Record Number:** 154**Author:** Mansouri, D. Mille, A. Hamdi-Cherif, A.**Year:** 2014**Title:** Adaptive Delivery of Trainings Using Ontologies and Case-Based Reasoning**Journal:** Arabian Journal for Science and Engineering**Volume:** 39**Issue:** 3**Pages:** 1849-1861**Date:** Mar**Short Title:** Adaptive Delivery of Trainings Using Ontologies and Case-Based Reasoning**ISSN:** 1319-8025**DOI:** 10.1007/s13369-013-0761-4**Accession Number:** WOS:000331977800030

**Abstract:** The delivery of trainings to diversified and constantly changing audiences is expensive and time consuming. We propose a computational approach addressing this issue by providing an adaptive training delivery framework. The approach relies on case-based reasoning (CBR) as a problem-solving method whereby cases are used rather than a prohibitive number of rules to store knowledge, i.e., experience. CBR is indeed accepted as one of the mainstream paradigms in artificial intelligence since it represents both knowledge and reasons about it. This choice is further motivated by the fact that the process of adaptation to different audiences is built on the traces left by previous learning tasks and practices that can be stored and automatically retrieved. Moreover, to address the crucial and pending issue of case indexing in CBR, we use ontologies to model and index the learning objects that represent the trainings core, thus reducing the retrieval process and improving search. Substantially, we develop an adaptation algorithm responsible for the required corrective actions in the adaptive delivery of trainings destined to diversified and heterogeneous learners.

**Notes:** Mansouri, Dounia Mille, Alain Hamdi-Cherif, Aboubekeur**URL:** <Go to ISI>://WOS:000331977800030

**Reference Type: Journal Article****Record Number:** 155**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2014**Title:** New Approach for Stability Enhancement of Superconducting Generator with High Response Excitation**Journal:** 2014 17th Ieee Mediterranean Electrotechnical Conference (Melecon)**Pages:** 531-535**Short Title:** New Approach for Stability Enhancement of Superconducting Generator with High Response Excitation**Accession Number:** WOS:000355672900096

**Abstract:** Superconducting generators (SCGs) are recently expected to substitute conventional machines in modern power systems. They are known for their many advantages such as light weight, small size and high efficiency. Self-excited SCGs, with high response excitation effect, have supplementary property that may be used for enhancing transient power system stability. Hence, the control of this type of generators becomes increasingly important. Because of the long time constant of the SCG, the control of excitation only is not sufficient. In this paper, we study the enhancement of power system stability by implementing power system stabilizer (PSS) into excitation (EPSS) and/or turbine governor (GPSS) systems of the SCG with high response excitation. Non-linear simulation results of a single machine infinite-bus power system, under different operating conditions, show the effectiveness of using exciter-based stabilizer in conjunction with the governor stabilizer (EGPSS).

**Notes:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. 17th IEEE Mediterranean Electrotechnical Conference (MELECON) Apr 13-16, 2014 Beirut, LEBANON Ieee 978-1-4799-2337-3**URL:** <Go to ISI>://WOS:000355672900096

**Reference Type: Journal Article****Record Number:** 156**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2014**Title:** A New Coordinated Fuzzy Controller for Exciter and Governor Systems of a SMIB Power System**Journal:** 2014 14th International Conference on Environment and Electrical Engineering (Eeeic)**Pages:** 397-401**Short Title:** A New Coordinated Fuzzy Controller for Exciter and Governor Systems of a SMIB Power System**Accession Number:** WOS:000343491900076

**Abstract:** In a previous work, a conventional power system stabilizer (PSS) has been employed simultaneously in excitation and governor systems (EGPSS) for stability improvement of a Single Machine Infinite-Bus (SMIB) power system. In order to more enhance stability and overcome the drawbacks of conventional PSS, we have studied in this paper, implementation's effect of fuzzy logic controller (FLC) into excitation and/or turbine governor systems (FLCE, FLCG, FLCEG). Obtained results, by nonlinear simulation using Matlab/Simulink of a SMIB power system, show the effectiveness of using Fuzzy logic controller both in excitation and governor loops (FLCEG) for large and small disturbances. Our results concern: rotor angle ( $\delta$ ), terminal voltage (V-t), electrical torque (T-e) and speed deviation ( $\Delta\omega$ ) for the four cases: simultaneous conventional PSS (EGPSS), FLCE, FLCG and FLCEG.

**Notes:** Mayouf (Adjeroud), F. Djahli, F. Mayouf, A. Devers, T. 14th International Conference on Environment and Electrical Engineering (EEEIC) May 10-12, 2014 Krakow, POLAND 978-1-4799-4660-0

**URL:** <Go to ISI>://WOS:000343491900076

**Reference Type: Journal Article****Record Number:** 157**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2014**Title:** A New Hybrid Controller for Superconducting Machine in a SMIB power System**Journal:** 2014 14th International Conference on Environment and Electrical Engineering (Eeeic)**Pages:** 454-458**Short Title:** A New Hybrid Controller for Superconducting Machine in a SMIB power System**Accession Number:** WOS:000343491900087

**Abstract:** In previous works, we have employed in both excitation and turbine governor systems a conventional coordinated exciter-governor stabilizer (EGPSS) and a coordinated fuzzy logic controller (FLCEG) for improving stability of a Single Machine Infinite-Bus power system (SMIB). This paper describes a new hybrid controller for superconducting machine, that we have denoted (FLC+PSS)EG, based on simultaneous implementation of conventional (EGPSS) and fuzzy (FLCEG) stabilizers. Obtained results, by nonlinear simulation of a SMIB power system containing superconducting machine, prove the effectiveness of adding fuzzy logic and conventional stabilizers in excitation and governor systems (FLC+PSS)EG for large and small disturbances. To show the robustness of the proposed hybrid stabilizer (FLC+PSS)EG, we have compared the obtained results with those of other cases: EGPSS and FLCEG for the two types of disturbances.

**Notes:** Mayouf (Adjeroud), F. Djahli, F. Mayouf, A. Devers, T. 14th International Conference on Environment and Electrical Engineering (EEEIC) May 10-12, 2014 Krakow, POLAND 978-1-4799-4660-0

**URL:** <Go to ISI>://WOS:000343491900087

**Reference Type: Journal Article****Record Number:** 158**Author:** Mebarki, M. Layadi, A. Kerkache, L. Benabbas, A. Tiercelin, N. Preobrazhensky, V. Pernod, P.**Year:** 2014**Title:** Effect of Thickness and Deposition Rate on the Structural and Magnetic Properties of Evaporated Fe/Al Thin Films**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 27**Issue:** 8**Pages:** 1951-1957**Date:** Aug**Short Title:** Effect of Thickness and Deposition Rate on the Structural and Magnetic Properties of Evaporated Fe/Al Thin Films**ISSN:** 1557-1939**DOI:** 10.1007/s10948-014-2552-x**Accession Number:** WOS:000339882200025

**Abstract:** We report experimental results on the structural and magnetic properties of Fe thin films deposited by thermal evaporation onto polycrystalline Al substrates. The effect of thickness  $t$  (in the 76 to 431 nm range) and deposition rate are investigated. The texture, the strain, and the grain size values were derived from X-ray diffraction (XRD) experiments. The thinner film (76 nm) has no texture, while all other samples have a  $\langle 110 \rangle$  texture. The strain values  $\epsilon$  are small and negative (compressive stress) and equal to -0.1 % for films with  $t$  less than 100 nm, it decreases (in absolute value) to -0.07 % and then remains constant for  $t$  greater than 100 nm. The grain size values  $D$  are found to be between 44 and 73 nm. The grain size decreases with increasing deposition rate regardless of  $t$ . Hysteresis curves, inferred from the vibrating sample magnetometer (VSM), show an in-plane magnetic anisotropy for all samples. The squareness  $S$  increases and the coercive field  $H_c$  (C) decreases with increasing  $D$  up to  $D = 55$  nm, then they remain constant beyond this grain size value. Higher deposition rates led to smaller grain, smaller remnant magnetization, and higher coercive field. For  $t = 99$  nm, the decrease of the temperature  $T$  from room temperature to -130 A degrees C led to 20 and 5 % increases in  $H_c$  (C) and  $S$ , respectively.

**Notes:** Mebarki, M. Layadi, A. Kerkache, L. Benabbas, A. Tiercelin, N. Preobrazhensky, V. Pernod, P.**URL:** <Go to ISI>://WOS:000339882200025

**Reference Type: Journal Article****Record Number:** 159**Author:** Mebarkia, K. Bekka, R. E. Reffad, A. Disselhorst-Klug, C.**Year:** 2014**Title:** Fuzzy MUAP recognition in HSR-EMG detection basing on morphological features**Journal:** Journal of Electromyography and Kinesiology**Volume:** 24**Issue:** 4**Pages:** 473-487**Date:** Aug**Short Title:** Fuzzy MUAP recognition in HSR-EMG detection basing on morphological features**ISSN:** 1050-6411**DOI:** 10.1016/j.jelekin.2014.04.006**Accession Number:** WOS:000339756200004

**Abstract:** The idea of 'besides the MU properties and depending on the recording techniques, MUAPs can have unique pattern' was adopted. The aim of this work was to recognise whether a Laplacian-detected MUAP is isolated or overlapped basing on novel morphological features using fuzzy classifier. Training data set was constructed to elaborate and test the 'if-then' fuzzy rules using signals provided by three muscles: the abductor pollicis brevis (APB), the first dorsal interosseous (FDI) and the biceps brachii (BB) muscles of 11 healthy subjects. The proposed fuzzy classier recognized automatically the isolated MUAPs with a performance of 95.03% which was improved to 97.8% by adjusting the certainty grades of rules using genetic algorithms (GA). Synthetic signals were used as reference to further evaluate the performance of the elaborated classifier. The recognition of the isolated MUAPs depends largely on noise level and is acceptable down to the signal to noise ratio of 20 dB with a detection probability of 0.96. The recognition of overlapped MUAPs depends slightly on the noise level with a detection probability of about 0.8. The corresponding misrecognition is caused principally by the synchronisation and the small overlapping degree. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Mebarkia, Kamel Bekka, Rais El'hadi Reffad, Aicha Disselhorst-Klug, Catherine**URL:** <Go to ISI>://WOS:000339756200004

**Reference Type: Journal Article****Record Number:** 160**Author:** Meddad, M. Eddiai, A. Cherif, A. Hajjaji, A. Boughaleb, Y.**Year:** 2014**Title:** Model of piezoelectric self powered supply for wearable devices**Journal:** Superlattices and Microstructures**Volume:** 71**Pages:** 105-116**Date:** Jul**Short Title:** Model of piezoelectric self powered supply for wearable devices**ISSN:** 0749-6036**DOI:** 10.1016/j.spmi.2014.03.038**Accession Number:** WOS:000337930000011

**Abstract:** With the development in a few latter years, of micros electromechanical technology (MEMS), the demand in wearable electronics and in cordless detectors is more and more important. These wearable devices have needed more of autonomy and independence in energy. Materials piezoelectric (often called intelligent materials) can be employed like mechanisms to convert the mechanical energy, due to vibration usually ambient, in energy electric. This one can be stored and used in place of conventional battery which presents certain disadvantages such as lasted limited life as well as congestion. In this article, one presents a power analytical model generated by a smart structure of type PZT that can be used as supply energy for electronic device. This model allows the determination of suitable sizes and vibration levels of piezoelectric material for to generate an optimal energy supply for a mobile phone. Two types of vibration mode have been compared as a function of characteristics and piezoelectric ceramic sizes. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Meddad, M. Eddiai, A. Cherif, A. Hajjaji, A. Boughaleb, Y.**URL:** <Go to ISI>://WOS:000337930000011

**Reference Type: Journal Article****Record Number:** 161**Author:** Meddad, M. Eddiai, A. Hajjaji, A. Boughaleb, Y. Guyomar, D. Fliyou, M.**Year:** 2014**Title:** Optimization of the energy harvested by the effect of strain and frequency on an electrostrictive polymer composite**Journal:** Synthetic Metals**Volume:** 188**Pages:** 72-76**Date:** Feb**Short Title:** Optimization of the energy harvested by the effect of strain and frequency on an electrostrictive polymer composite**ISSN:** 0379-6779**DOI:** 10.1016/j.synthmet.2013.11.022**Accession Number:** WOS:000331504500011

**Abstract:** The harvesting of energy from ambient environments is an emerging technology with potential for numerous applications, including portable electronic devices for renewable energy. Most of the current research activities refer to classical piezoelectric ceramic materials but more recently the development of electrostrictive polymers has generated novel opportunities for high-strain actuators. At present, the investigation of using electrostrictive polymers for energy harvesting (a conversion of mechanical to electrical energy) is beginning to show potential for this application. Basically, the relative energy gain depends on the current induced by the mechanical strain and frequency. The aim of this work was to determine the optimum operating range for improved electro-mechanical conversion efficiency of electrostrictive polymer composite by the effect of mechanical parameters (mechanical frequency and the amplitude strain) that leads to an increase in the generated current and improve the output power in relation to the injected power. It was also found that the trend of the experimental data is in good accordance with that of the theoretical prediction. Finally, the results indicated that the frequency and the amplitude of mechanical excitation were the critical parameters for the best electromechanical conversion. (C) 2013 Elsevier B.V. All rights reserved.

**Notes:** Meddad, Mounir Eddiai, Adil Hajjaji, Abdelwahed Boughaleb, Yahia Guyomar, Daniel Fliyou, Mohamed**URL:** <Go to ISI>://WOS:000331504500011

**Reference Type: Journal Article****Record Number:** 162**Author:** Meddouri, M. Djouadi, D. Chelouche, A. Touam, T. Chergui, A.**Year:** 2014**Title:** Effect of co-solvent on structural and morphological properties of ZnO aerogel prepared by a modified sol-gel process**Journal:** European Physical Journal-Applied Physics**Volume:** 66**Issue:** 1**Date:** Apr**Short Title:** Effect of co-solvent on structural and morphological properties of ZnO aerogel prepared by a modified sol-gel process**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2014140061**Article Number:** 10402**Accession Number:** WOS:000336644500009

**Abstract:** Nanocrystalline zinc oxide (ZnO) aerogel powders were synthesized using a modified sol-gel process. Ethanol, acetone and methanol were used as supercritical drying fluids. Effects of co-solvent on morphological and structural properties were investigated. The as prepared powders were characterized by means of X-ray diffraction (XRD), scanning electron microscopy (SEM) and Fourier transform infrared spectroscopy (FTIR). The XRD results show that drying in solvents mixture affects the crystalline quality and acts as a compression agent by exerting stress on the lattice parameters. SEM micrographs demonstrate that co-solvent plays a key role in controlling ZnO nucleation and favors the particles agglomeration with increasing the pressure and the temperature. The EDAX analysis shows that the obtained ZnO nanopowder with ethanol and acetone as co-solvent is pure with different stoichiometries (an excess of oxygen (O) with ethanol and zinc (Zn) atoms with acetone). However, when methanol is used as supercritical drying fluid, the obtained nanopowder contains an excess of carbon (C) atoms. FTIR absorption bands are more intense for aerogel synthesized by drying in methanol indicating the presence of more C-H bonds responsible of the low rate agglomeration of the ZnO crystallites.

**Notes:** Meddouri, Malaaz Djouadi, Djamel Chelouche, Azeddine Touam, Tahar Chergui, Abdelhamid

**URL:** <Go to ISI>://WOS:000336644500009

**Reference Type: Journal Article****Record Number:** 163**Author:** Megherbi, H. Megherbi, A. C. Megherbi, N. Benmahammed, K.**Year:** 2014**Title:** Design and robustness enhancement of sectorial fuzzy controller via evolutionary algorithm**Journal:** Journal of Intelligent & Fuzzy Systems**Volume:** 27**Issue:** 6**Pages:** 2757-2773**Short Title:** Design and robustness enhancement of sectorial fuzzy controller via evolutionary algorithm**ISSN:** 1064-1246**DOI:** 10.3233/ifs-141160**Accession Number:** WOS:000345981600006

**Abstract:** This paper presents an evolution search methodology to automatically design a sectorial fuzzy controller (SFC). The evolution search methodology is an integer-coded evolutionary algorithm (EA) which involves two stages. At first stage, the proposed EA optimises the SFC for disturbance-free model of the plant to be controlled. The principal aim of the second stage is the robustness enhancement of the evolved SFC resulting from the former stage. Specifically, the proposed EA looks in the vicinity of the best SFC found in the first stage for a SFC that provide the best compromise between the control performance for a disturbance-free model and for disturbed model. The sectorial properties were accommodated in the evolutionary search through a special parameterization of the fuzzy rule base (FRB) and the membership functions (MFs) of the SFC, repairing operator and special initialization of FRB chromosome part. Simulations were performed for direct-drive DC motor. The evolved SFC with the proposed design methodology found to provide very satisfactory performance under different types of disturbances. The trade-off between the accuracy performance and the robustness performance is also analysed during the evolution process.

**Notes:** Megherbi, Hassina Megherbi, Ahmed Chauki Megherbi, Najla Benmahammed, Khier**URL:** <Go to ISI>://WOS:000345981600006

**Reference Type: Journal Article**

**Record Number: 164**

**Author: Mehenni, T. Moussaoui, A.**

**Year: 2014**

**Title: Data mining from multiple heterogeneous relational databases using decision tree classification (vol 33, pg 1768, 2012)**

**Journal: Pattern Recognition Letters**

**Volume: 40**

**Pages: 136-136**

**Date: Apr**

**Short Title: Data mining from multiple heterogeneous relational databases using decision tree classification (vol 33, pg 1768, 2012)**

**ISSN: 0167-8655**

**DOI: 10.1016/j.patrec.2013.12.001**

**Accession Number: WOS:000333105600018**

**Notes: Mehenni, Tahar Moussaoui, Abdelouahab**

**URL: <Go to ISI>://WOS:000333105600018**

**Reference Type: Journal Article****Record Number:** 165**Author:** Merabet, S. Boudissa, R. Slimani, S. Bayadi, A.**Year:** 2014**Title:** Optimisation of the Dielectric Strength of a Non-Uniform Electric Field Electrode System under Positive DC Voltage By Insertion Of Multiple Barriers**Journal:** Ieee Transactions on Dielectrics and Electrical Insulation**Volume:** 21**Issue:** 1**Pages:** 74-79**Date:** Feb**Short Title:** Optimisation of the Dielectric Strength of a Non-Uniform Electric Field Electrode System under Positive DC Voltage By Insertion Of Multiple Barriers**ISSN:** 1070-9878**DOI:** 10.1109/tdei.2013.003800**Accession Number:** WOS:000332038700009

**Abstract:** The main objective of this work is the study of the flashover voltage evolution of the air gap of two non-uniform electric field systems as a function of the number of screens inserted in the gap, their position, their isolation and their surface conductivity. The results from this analysis show that in the case of clean and dry atmosphere, Dual-screen isolation systems with rod-rod and rod-plane configurations is respectively 50 % and 19 % higher than the case of one screen of the same size. Above this value, no further improvement in dielectric strength is found. The isolation of the two barriers by a solid insulating shield, in contact with each other and a conductive grounded base wall, led economically to an important reduction of insertion device size and technically, its optimum withstand voltage remains the same as that obtained in the case of an air isolation layer of the same size. For low conductivity of the polluting solution, uniformly covering both screens of the rod-rod system, the minimum disruptive voltage value is reduced by over 50 % compared to that obtained under clean atmosphere, so that these polluted insulating screens barriers had become conductive. So if no cleaning of them is expected in polluted sites, the improvement of isolation provided by adding a second screen to the base system will be completely lost during a low contamination of these barriers and we can add that a single screen system is 24 % more rigid than dual-screen system under the same pollution conditions.

**Notes:** Merabet, Samira Boudissa, Rabah Slimani, Samia Bayadi, Abdelhafid**URL:** <Go to ISI>://WOS:000332038700009

**Reference Type: Journal Article****Record Number:** 166**Author:** Merabiha, O. Seddik, T. Khenata, R. Murtaza, G. Bouhemadou, A. Takagiwa, Y. Bin Omran, S. Rached, D.**Year:** 2014**Title:** The effects of 5f localization on the electronic and magnetic properties of the hexagonal U<sub>3</sub>ZrSb<sub>5</sub>**Journal:** Journal of Alloys and Compounds**Volume:** 586**Pages:** 529-535**Date:** Feb**Short Title:** The effects of 5f localization on the electronic and magnetic properties of the hexagonal U<sub>3</sub>ZrSb<sub>5</sub>**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2013.10.120**Accession Number:** WOS:000329856800084

**Abstract:** Structural, magnetic, electronic and thermodynamic properties of the hexagonal U<sub>3</sub>ZrSb<sub>5</sub> are theoretically investigated by using the full potential linearized augmented plane wave plus local orbital's (FP-LAPW + lo) method. The exchange-correlation potential was treated with the generalized gradient approximation GGA of Wu and Cohen. Moreover, the GGA + U approximation (where U is the Hubbard correlation terms) is employed to treat the f electrons properly. The calculated structural parameters are in good agreement with the experimental data. The magnetic study reveals that U<sub>3</sub>ZrSb<sub>5</sub> is a ferromagnetic material. Furthermore, we present a comparative study between the band structures, electronic structures, total and partial densities of states and local moments calculated within both GGA and GGA + U schemes. Our band structure calculations show the metallic behavior of this ferromagnetic compound. The thermodynamic properties are predicted through the quasi-harmonic Debye model, in which the lattice vibrations are taken into account. The variation of relative change in volume, heat capacities and the Debye temperature with temperature and pressure are successfully achieved. (C) 2013 Elsevier B. V. All rights reserved.

**Notes:** Merabiha, O. Seddik, T. Khenata, R. Murtaza, G. Bouhemadou, A. Takagiwa, Y. Bin Omran, S. Rached, D.**URL:** <Go to ISI>://WOS:000329856800084

**Reference Type: Journal Article****Record Number:** 167**Author:** Merahi, F. Berkouk, E. Mekhilef, S.**Year:** 2014**Title:** New management structure of active and reactive power of a large wind farm based on multilevel converter**Journal:** Renewable Energy**Volume:** 68**Pages:** 814-828**Date:** Aug**Short Title:** New management structure of active and reactive power of a large wind farm based on multilevel converter**ISSN:** 0960-1481**DOI:** 10.1016/j.renene.2014.03.007**Accession Number:** WOS:000335706800087

**Abstract:** This paper proposes a system of supervision and operation of a new structure wherein a large wind farm is connected to an electrical grid. The farm is managed in such a manner that it can produce the power needed by the grid system. The supervision algorithm is used to distribute the active and reactive power references to the wind turbines proportionally. Based on the aerodynamic power and wind speed of each turbine, the active and reactive power references are produced individually. By using the vector field oriented control, each doubly fed induction generator is controlled through the rotor, which is connected to the two-level pulse width modulation converter. The close loop control is used to provide a constant DC voltage using a five-level neutral point clamped converter. The five-level neutral point clamped converter allows also the adaptation of the voltage level to the electrical grid with better resolution waveform. The analysis of the simulation results shows the effectiveness of the proposed system. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Merahi, Farid Berkouk, El Madjid Mekhilef, Saad**URL:** <Go to ISI>://WOS:000335706800087

**Reference Type: Journal Article****Record Number:** 168**Author:** Meriane, D. Genta-Jouve, G. Kaabeche, M. Michel, S. Boutefnouchet, S.**Year:** 2014**Title:** Rapid Identification of Antioxidant Compounds of *Genista saharae* Coss. & Dur. by Combination of DPPH Scavenging Assay and HPTLC-MS**Journal:** *Molecules***Volume:** 19**Issue:** 4**Pages:** 4369-4379**Date:** Apr**Short Title:** Rapid Identification of Antioxidant Compounds of *Genista saharae* Coss. & Dur. by Combination of DPPH Scavenging Assay and HPTLC-MS**ISSN:** 1420-3049**DOI:** 10.3390/molecules19044369**Accession Number:** WOS:000336087800034

**Abstract:** *Genista* species are sources of antioxidant phenolic compounds such as O- and C-glycosylflavonoids and isoflavonoids. A combination of a DPPH scavenging assay with HPTLC-MS, a fast and efficient method for identification of bioactive compounds, has been applied for evaluation of the radical scavenging activity of metabolites from *Genista saharae* Coss. & Dur. Different organs collected at various periods have been compared. Identification of antioxidant compounds was obtained by elution of the major DPPH-inhibition zones. The resulting HPTLC-MS analysis under moderately polar conditions, coupled to the DPPH results led to the putative identification of two antioxidant isoflavone aglycones: 3',4',5,7-tetrahydroxyisoflavone (1) and flicisoflavone (3), whereas polar migration conditions led to the identification of the glycosides 5-methoxy-4',7-trihydroxy-8-glucopyranosylisoflavone (4) and 4',5-dihydroxy-7-methoxyisoflavone-4'-O-beta-D-glucopyranoside (5). Evaluation of percentage of inhibition of DPPH radical by the purified isoflavone 4 from the root extract showed that it affords a moderate contribution to the total radical scavenging activity of the extract.

**Notes:** Meriane, Djamila Genta-Jouve, Gregory Kaabeche, Mohamed Michel, Sylvie Boutefnouchet, Sabrina

**URL:** <Go to ISI>://WOS:000336087800034

**Reference Type: Journal Article****Record Number:** 169**Author:** Messalti, S. Gherbi, A. Belkhiat, S. Ieee,**Year:** 2014**Title:** Assessment of Power System Transient Stability Using Shunt FACTS Devices : SVC and TCBR**Journal:** 2014 International Conference on Electrical Sciences and Technologies in Maghreb (Cistem)**Short Title:** Assessment of Power System Transient Stability Using Shunt FACTS Devices : SVC and TCBR**Accession Number:** WOS:000380387800107**Abstract:** This paper presents comparative study for power system transient stability improvement using Static Var Compensator (SVC) and Thyristor Control Breaking Resistor (TCBR). To show the effectiveness of the dynamic oscillation, relative rotor angles criterion is used for power system transient stability assessment. The proposed method is tested on the WSCC3 nine-bus system in the case of three-phase short circuit fault in one transmission line. Simulation results and comparative study comparison are presented in this paper.**Notes:** Messalti, Sabir Gherbi, Ahmed Belkhiat, Saad International Conference on Electrical Sciences and Technologies in Maghreb (CISTEM 2014) Dec 03-06, 2014 Tunis, TUNISIA 978-1-4799-7300-2**URL:** <Go to ISI>://WOS:000380387800107

**Reference Type: Journal Article****Record Number:** 170**Author:** Missoum, A. Seddik, T. Murtaza, G. Khenata, R. Bouhemadou, A. Al-Douri, Y. Abdiche, A. Meradji, H. Baltache, H.**Year:** 2014**Title:** Ab initio study of the structural and optoelectronic properties of the half-Heusler CoCrZ (Z = Al, Ga)**Journal:** Canadian Journal of Physics**Volume:** 92**Issue:** 10**Pages:** 1105-1112**Date:** Oct**Short Title:** Ab initio study of the structural and optoelectronic properties of the half-Heusler CoCrZ (Z = Al, Ga)**ISSN:** 0008-4204**DOI:** 10.1139/cjp-2013-0474**Accession Number:** WOS:000343124800006

**Abstract:** To study the structural, electronic, and optical properties of the half-Heusler CoCrZ (Z = Al, Ga), we have performed ab initio calculations using the full-potential with the mixed basis (APW + lo) method within the generalized gradient approximation. The structural properties as well as the band structures, and total and atomic projected densities of states are computed. From electronic band structures we have found that both compounds have a semimetallic nature. We also studied the evolution of electronic structure of CoCrAl under external hydrostatic pressure. It is found that the pseudo gap around the Fermi level increases continuously with increasing pressure, while the electronic density of states at the Fermi level does not change significantly. Furthermore, the optical properties, such as the dielectric function and refractive index were evaluated and discussed under pressure up to 20 GPa, and the electrical conductivity and electron energy loss were calculated for radiation up to 30 eV. The same way, we have studied the magnetic properties of CoCrAl for lattice expansion up to  $a = 1.1a(0)$  where a transition from the paramagnetic phase to the half-metallic phase is expected.

**Notes:** Missoum, A. Seddik, T. Murtaza, G. Khenata, R. Bouhemadou, A. Al-Douri, Y. Abdiche, A. Meradji, H. Baltache, H.**URL:** <Go to ISI>://WOS:000343124800006

**Reference Type: Journal Article****Record Number:** 171**Author:** Mokeddem, D. Khellaf, A.**Year:** 2014**Title:** Modeling and multi-criteria optimization of an industrial process for continuous lactic acid production**Journal:** Bioprocess and Biosystems Engineering**Volume:** 37**Issue:** 6**Pages:** 1141-1150**Date:** Jun**Short Title:** Modeling and multi-criteria optimization of an industrial process for continuous lactic acid production**ISSN:** 1615-7591**DOI:** 10.1007/s00449-013-1085-1**Accession Number:** WOS:000335666100017

**Abstract:** The key feature of this paper is the optimization of an industrial process for continuous production of lactic acid. For this, a two-stage fermentor process integrated with cell recycling has been mathematically modeled and optimized for overall productivity, conversion, and yield simultaneously. Non-dominated sorting genetic algorithm (NSGA-II) was applied to solve the constrained multi-objective optimization problem as it is capable of finding multiple Pareto-optimal solutions in a single run, thereby avoiding the need to use a single-objective optimization several times. Compared with traditional methods, NSGA-II could find most of the solutions in the true Pareto-front and its simulation is also very direct and convenient. The effects of operating variables on the optimal solutions are discussed in detail. It was observed that we can make higher profit with an acceptable compromise in a two-stage system with greater efficiency.

**Notes:** Mokeddem, Diab Khellaf, Abdelhafid**URL:** <Go to ISI>://WOS:000335666100017

**Reference Type: Journal Article****Record Number:** 172**Author:** Moussaoui, A. Semchedine, F. Boukerram, A.**Year:** 2014**Title:** A link-state QoS routing protocol based on link stability for Mobile Ad hoc Networks**Journal:** Journal of Network and Computer Applications**Volume:** 39**Pages:** 117-125**Date:** Mar**Short Title:** A link-state QoS routing protocol based on link stability for Mobile Ad hoc Networks**ISSN:** 1084-8045**DOI:** 10.1016/j.jnca.2013.05.014**Accession Number:** WOS:000331987800011

**Abstract:** In this paper, we propose a new mechanism to establish stable and sustainable paths between all pairs of nodes in a Mobile Ad hoc Network. In this mechanism, we use a stability function as the main path selection criterion based on the calculation of the mobility degree of a node relative to its neighbor. We applied this mechanism on the OLSR protocol (Optimized Link State Routing Protocol) to elect stable and sustainable MPR (Multipoint relays) nodes and topology. This mechanism significantly minimizes the recalculation of MPR and the routing tables recalculation process. Moreover, it guarantees other QoS (Quality of Service) metrics such as the packet loss and the response time. The simulation results show the effectiveness of our mechanism and encourage further investigations to extend it in order to guarantee other QoS requirements. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Moussaoui, Ali Semchedine, Fouzi Boukerram, Abdallah**URL:** <Go to ISI>://WOS:000331987800011

**Reference Type: Journal Article****Record Number:** 173**Author:** Ourari, A. Aggoun, D. Ouahab, L.**Year:** 2014**Title:** Poly(pyrrole) films efficiently electrodeposited using new monomers derived from 3-bromopropyl-N-pyrrol and dihydroxyacetophenone Electro catalytic reduction ability towards bromocyclopentane**Journal:** Colloids and Surfaces a-Physicochemical and Engineering Aspects**Volume:** 446**Pages:** 190-198**Date:** Apr**Short Title:** Poly(pyrrole) films efficiently electrodeposited using new monomers derived from 3-bromopropyl-N-pyrrol and dihydroxyacetophenone Electro catalytic reduction ability towards bromocyclopentane**ISSN:** 0927-7757**DOI:** 10.1016/j.colsurfa.2014.01.047**Accession Number:** WOS:000333488200025

**Abstract:** Three monomers 6-[3'-N-pyrrolpropoxy]-2-hydroxyacetophenone (1), 5-(3'-N-pyrrolpropoxy)-2-hydroxyacetophenone (2) and 4-(3'-N-pyrrolpropoxy)-2-hydroxyacetophenone (3) were synthesized and their poly(pyrrole) films were electrodeposited on glassy carbon (GC) and Indium tin oxide (ITO) conductive electrodes by anodic oxidation in acetonitrile solutions containing n-Bu(4)N+ClO4- (TBAP 0.1 M). These films, currently called modified electrodes (noted ME), were obtained by the successive cycling at the appropriate potentials. These films contain chelating sites such as carbonyl group bearing the phenolic function which could play an important role in coordination chemistry. The electrodeposited poly(pyrrole) films on the ITO conductive glass electrodes offer some analytical advantages as the optical and electronic properties. Consequently, these new materials of electrodes were characterized by cyclic voltammetry while the morphology of these films was studied by FT-IR spectroscopy, scanning electron microscopy (SEM), dispersive energy X-ray spectroscopy and atomic force microscopy (AFM). The AFM studies show that the morphology of polypyrrole (PPy) films, electrodeposited on ITO surface, depends on the specific structure of the compound deriving from the monoalkylated dihydroxyacetophenone 1,2 and 3. The coordination of copper was performed by electroreduction reaction in presence of ligand (3) and copper acetate salt. The resulting electrode material was tested towards the electrocatalytic activity in the reduction of bromocyclopentane. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Ourari, Ali Aggoun, Djouhra Ouahab, Lahcene**URL:** <Go to ISI>://WOS:000333488200025

**Reference Type: Journal Article****Record Number:** 174**Author:** Ourari, A. Flilissa, A. Boutahala, M. Ilikti, H.**Year:** 2014**Title:** Removal of Cetylpyridinium Bromide by Adsorption onto Maghnite: Application to Paper Deinking**Journal:** Journal of Surfactants and Detergents**Volume:** 17**Issue:** 4**Pages:** 785-793**Date:** Jul**Short Title:** Removal of Cetylpyridinium Bromide by Adsorption onto Maghnite: Application to Paper Deinking**ISSN:** 1097-3958**DOI:** 10.1007/s11743-013-1557-y**Accession Number:** WOS:000338119700023

**Abstract:** The removal of cetylpyridinium bromide (CPB) from aqueous solutions was investigated using a mineral adsorbent called Maghnite (a bentonite obtained from Maghnia, West Algeria). The adsorption kinetics of CPB on Maghnite is pseudo-second order and the adsorption isotherm follows essentially the model of Redlich-Peterson. The results obtained show that CPB is adsorbed on Maghnite with an adsorption capacity of 0.438 mmol/g (168.4 mg/g). Physical data indicate that CPB is efficient for the deinking of newspaper solutions, only when the natural Maghnite is associated to CPB. These results are of practical interest, since CPB shows a double action-to protect and to optimize aquatic environment.

**Notes:** Ourari, Ali Flilissa, Abdenacer Boutahala, Mokhtar Ilikti, Hocine**URL:** <Go to ISI>://WOS:000338119700023

**Reference Type: Journal Article****Record Number:** 175**Author:** Ourari, A. Ouennoughi, Y. Aggoun, D. Mubarak, M. S. Pasciak, E. M. Peters, D. G.**Year:** 2014**Title:** Synthesis, characterization, and electrochemical study of a new tetradentate nickel(II)-Schiff base complex derived from ethylenediamine and 5'-(N-methyl-N-phenylaminomethyl)-2'-hydroxyacetophenone**Journal:** Polyhedron**Volume:** 67**Pages:** 59-64**Date:** Jan**Short Title:** Synthesis, characterization, and electrochemical study of a new tetradentate nickel(II)-Schiff base complex derived from ethylenediamine and 5'-(N-methyl-N-phenylaminomethyl)-2'-hydroxyacetophenone**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2013.08.056**Accession Number:** WOS:000329557200008

**Abstract:** A tetradentate Schiff base ligand (3) has been synthesized via the reaction of 5'-(N-methyl-N-phenylaminomethyl)-2'-hydroxyacetophenone (2) with a stoichiometric amount of ethylenediamine in absolute ethanol. Compound 2 was prepared by reaction of 5'-chloromethyl-2'-hydroxyacetophenone (1) with N-methylaniline, in the presence of sodium bicarbonate in tetrahydrofuran. Compound 1, on the other hand, was obtained through a reaction between a hydrochloric acid-formaldehyde mixture and 2'-hydroxyacetophenone. Refluxing a mixture of the Schiff base (3) and a stoichiometric amount of nickel(II) acetate tetrahydrate in absolute ethanol at 50 degrees C under a nitrogen atmosphere afforded the expected tetradentate nickel(II)-Schiff base coordination compound (4). Compounds 1-4 have been characterized with the aid of a number of techniques: UV-Vis spectrophotometry; FT-IR, H-1 NMR, C-13 NMR, and mass spectrometry; and elemental analysis. Cyclic voltammetry has been employed to investigate the redox behavior of compound 4 as well as the ability of the electrogenerated nickel(I) form of 4 to catalyze the reduction of 1-iodooctane. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Ourari, Ali Ouennoughi, Yasmina Aggoun, Djouhra Mubarak, Mohammad S. Pasciak, Erick M. Peters, Dennis G.**URL:** <Go to ISI>://WOS:000329557200008

**Reference Type: Journal Article****Record Number:** 176**Author:** Radjai, T. Rahmani, L. Mekhilef, S. Gaubert, J. P.**Year:** 2014**Title:** Implementation of a modified incremental conductance MPPT algorithm with direct control based on a fuzzy duty cycle change estimator using dSPACE**Journal:** Solar Energy**Volume:** 110**Pages:** 325-337**Date:** Dec**Short Title:** Implementation of a modified incremental conductance MPPT algorithm with direct control based on a fuzzy duty cycle change estimator using dSPACE**ISSN:** 0038-092X**DOI:** 10.1016/j.solener.2014.09.014**Accession Number:** WOS:000347579100033

**Abstract:** Maximum power point tracking (MPPT) is a necessary function in all photovoltaic (PV) systems. The classic incremental conductance (IC) MPPT algorithm is widely used in the literature. However, when large changes occur in the irradiance, the performance of this algorithm is degraded. To eliminate all of the disadvantages of the classic IC algorithm, we developed a new IC controller based on a fuzzy duty cycle change estimator with direct control. A fuzzy logic estimator (FLE) is used to estimate the new duty cycle used to track the PV array maximum power point. Compared with the fixed step IC MPPT method with direct control, the proposed algorithm reaches the MPP more accurately and faster during dynamic and steady-state conditions. A controlled Cuk DC-DC converter was implemented and connected to a SunTech STP085B PV panel to verify the accuracy of the proposed method. Matlab/Simulink was used for the simulation studies. Additionally, the algorithms were digitally implemented on the dSPACE ACE1104 platform. The results obtained confirm the advantages of the proposed algorithm. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Radjai, Tawfik Rahmani, Lazhar Mekhilef, Saad Gaubert, Jean Paul**URL:** <Go to ISI>://WOS:000347579100033

**Reference Type: Journal Article****Record Number:** 177**Author:** Rahma, A. Khemliche, M. Ieee,**Year:** 2014**Title:** Combined approach between FLC and PSO to find the best MFs to improve the performance of PV system**Journal:** 2014 International Conference on Electrical Sciences and Technologies in Maghreb (Cistem)**Short Title:** Combined approach between FLC and PSO to find the best MFs to improve the performance of PV system**Accession Number:** WOS:000380387800131**Abstract:** During designing of fuzzy logic controller (FLC), an expert knowledge of the process to be controlled can be used to determine the membership functions (MFs) and the rules.

However there is no general procedure for designing a FLC seen that many of errors may be encountered in its implementation, and these FLC can not be adapted to other applications. The difficulties encountered in the design of CLF have guided researchers to move towards the optimization of these controllers. The present paper proposes an approach combined from FLC and particle swarm optimization algorithm (PSO) used to finding the optimum membership functions (MFs) of a fuzzy system with the aim of achieving the accurate and acceptable desired results. For improving and optimizing the performance of a photovoltaic system to deliver the maximum power available. It is clearly proved that the optimized MFs provided better performance than a fuzzy model for the same system, when the MFs were heuristically defined.

**Notes:** Rahma, Ayat Khemliche, Mabrouk International Conference on Electrical Sciences and Technologies in Maghreb (CISTEM 2014) Dec 03-06, 2014 Tunis, TUNISIA 978-1-4799-7300-2**URL:** <Go to ISI>://WOS:000380387800131

**Reference Type: Journal Article****Record Number:** 178**Author:** Rahmoune, H. Boutrid, N. Bioud, B.**Year:** 2014**Title:** Risk of Celiac Disease According to HLA Haplotype and Country**Journal:** New England Journal of Medicine**Volume:** 371**Issue:** 11**Pages:** 1073-1073**Date:** Sep**Short Title:** Risk of Celiac Disease According to HLA Haplotype and Country**ISSN:** 0028-4793**DOI:** 10.1056/NEJMc1409252**Accession Number:** WOS:000341382800021**Notes:** Rahmoune, Hakim Boutrid, Nada Bioud, Belkacem**URL:** <Go to ISI>://WOS:000341382800021

**Reference Type: Journal Article****Record Number:** 179**Author:** Redjechta, A. Loucif, K. Mentar, L. Khelladi, M. R. Beniaiche, A.**Year:** 2014**Title:** ELECTRODEPOSITION AND CHARACTERIZATION OF Cu-Zn ALLOY FILMS OBTAINED FROM A SULFATE BATH**Journal:** Materiali in Tehnologije**Volume:** 48**Issue:** 2**Pages:** 221-226**Date:** Mar-Apr**Short Title:** ELECTRODEPOSITION AND CHARACTERIZATION OF Cu-Zn ALLOY FILMS OBTAINED FROM A SULFATE BATH**ISSN:** 1580-2949**Accession Number:** WOS:000333795400010

**Abstract:** In this work, we report the influence of the deposition potential on the electrodeposition process, current efficiency, surface morphology and microstructure of Cu-Zn alloys deposited on a Ru substrate from a sulfate solution with an addition of EDTA. The study was carried out by means of cyclic voltammetry (CV), chronoamperometry, atomic force microscopy (AFM) and X-ray diffraction (XRD) techniques analyzing the electrochemical behavior, surface morphology and structural characterization, respectively. The experimental results show that the electrochemical behavior of Cu-Zn electrodeposits varied with the deposition potential. The AFM measurement showed that the Cu-Zn thin films obtained at all the potentials are homogenous in appearance being of a small crystallite size, and a variation in the film roughness with deposition potentials is established. An analysis of X-ray diffraction patterns indicates that the electrodeposited Cu-Zn alloys exhibit beta- and gamma-phases.

**Notes:** Redjechta, Abdelouahab Loucif, Kzmel Mentar, Loubna Khelladi, Mohamed Redha Beniaiche, Abdelkrim

**URL:** <Go to ISI>://WOS:000333795400010

**Reference Type: Journal Article****Record Number:** 180**Author:** Reffad, A. Mebarkia, K. Vieira, T. M. M. Disselhorst-Klug, C.**Year:** 2014**Title:** Effect of contraction force and knee joint angle on the spatial representation of soleus activity using high-density surface EMG**Journal:** Biomedical Engineering-Biomedizinische Technik**Volume:** 59**Issue:** 5**Pages:** 399-411**Date:** Oct**Short Title:** Effect of contraction force and knee joint angle on the spatial representation of soleus activity using high-density surface EMG**ISSN:** 0013-5585**DOI:** 10.1515/bmt-2013-0072**Accession Number:** WOS:000343183700004

**Abstract:** The meaningful use of surface electromyographic signals (sEMG) is to find an electrode position and orientation in which the sEMG signals can be detected reliably. This becomes more challenging when muscles with pinnate fiber architecture are investigated. In this study, the effects of contraction force and knee inclination on the spatial representation of the soleus muscle activity on the skin surface have been investigated by using two-dimensional electrode grids. Four differently oriented bipolar leads have been calculated to identify not only a proper electrode location but also an adequate orientation of the bipolar lead. Relative measures have been introduced to compare changes in the spatial RMS distribution. It has been shown that in the case of the soleus muscle, bipolar electrodes should be placed on the lateral side.

Additionally, the location of the electrodes should be rather proximal than distal, and the orientation of the bipolar lead should be 45 degrees to the lateral side with respect to a line connecting the insertion of the Achilles tendon and the junction between both gastrocnemius heads. Our results have been used to identify adequate electrode locations and orientations in a muscle with such a complex architecture like the soleus muscle. Additionally, new parameters have been introduced, helping to analyze the resulting information about the spatial activation pattern in the soleus muscle.

**Notes:** Reffad, Aicha Mebarkia, Kamel Vieira, Taian M. M. Disselhorst-Klug, Catherine**URL:** <Go to ISI>://WOS:000343183700004

**Reference Type: Journal Article****Record Number:** 181**Author:** Reffas, M. Bouhemadou, A. Haddadi, K. Bin-Omran, S. Louail, L.**Year:** 2014**Title:** Ab initio prediction of the structural, electronic, elastic and thermodynamic properties of the tetragonal ternary intermetallics  $\text{XCu}_2\text{Si}_2$  ( $X = \text{Ca}, \text{Sr}$ )**Journal:** European Physical Journal B**Volume:** 87**Issue:** 12**Date:** Dec**Short Title:** Ab initio prediction of the structural, electronic, elastic and thermodynamic properties of the tetragonal ternary intermetallics  $\text{XCu}_2\text{Si}_2$  ( $X = \text{Ca}, \text{Sr}$ )**ISSN:** 1434-6028**DOI:** 10.1140/epjb/e2014-50526-1**Article Number:** 283**Accession Number:** WOS:000345629300003

**Abstract:** Structural parameters, electronic structure, elastic constants and thermodynamic properties of the tetragonal ternary intermetallics  $\text{CaCu}_2\text{Si}_2$  and  $\text{SrCu}_2\text{Si}_2$  are investigated theoretically for the first time using the plane-wave ultra-soft pseudopotential method based on the density functional theory. The calculated equilibrium structural parameters agree well with the existing experimental data. Pressure dependence of the structural parameters is also explored. Analysis of the band structure, total and site-projected l-decomposed densities of states and valence charge distributions reveals the conducting character of both considered materials with a mixture of ionic-covalent chemical bonding character. Pressure dependences of the single-crystal elastic constants  $C_{ij}$  for  $\text{CaCu}_2\text{Si}_2$  and  $\text{SrCu}_2\text{Si}_2$  are explored. The elastic wave velocities propagating along the principal crystallographic directions are numerically estimated. The elastic anisotropy is estimated and further illustrated by 3D-direction-dependent of the Young's modulus. A set of some macroscopic elastic moduli, including the bulk, Young's and shear moduli, Poisson's coefficient, average elastic wave velocities and Debye temperature, were calculated for polycrystalline  $\text{CaCu}_2\text{Si}_2$  and  $\text{SrCu}_2\text{Si}_2$  from the  $C_{ij}$  via the Voigt-Reuss-Hill approximations. Through the quasiharmonic Debye model, which takes into account the phonon effects, the temperature and pressure dependencies of the bulk modulus, unit cell volume, volume thermal expansion coefficient, Debye temperature and volume constant and pressure constant heat capacities of  $\text{CaCu}_2\text{Si}_2$  and  $\text{SrCu}_2\text{Si}_2$  are explored systematically in the ranges of 0-40 GPa and 0-1400 K.

**Notes:** Reffas, Mounir Bouhemadou, Abdelmadjid Haddadi, Khelifa Bin-Omran, Saad Louail, Layachi**URL:** <Go to ISI>://WOS:000345629300003

**Reference Type: Journal Article****Record Number:** 182**Author:** Rouabah, F. Bouguettoucha, A. Ibos, L. Haddaoui, N.**Year:** 2014**Title:** EFFECT OF THE QUENCHING TEMPERATURE ON THE IZOD IMPACT STRENGTH OF POLYCARBONATE: EXPERIMENTAL DATA AND EMPIRICAL MODELING**Journal:** Materiali in Tehnologije**Volume:** 48**Issue:** 3**Pages:** 315-319**Date:** May-Jun**Short Title:** EFFECT OF THE QUENCHING TEMPERATURE ON THE IZOD IMPACT STRENGTH OF POLYCARBONATE: EXPERIMENTAL DATA AND EMPIRICAL MODELING**ISSN:** 1580-2949**Accession Number:** WOS:000336828700001

**Abstract:** In this study, the development of a mathematical model of the effects of free quenching on the Izod impact strength of polycarbonate (PC) has been investigated. Three different thermal treatments were used: the first quenching from the melt state to different temperatures, the second quenching from  $T_g + 15$  degrees C and, finally, the annealing. The results have shown that an improvement in the impact strength can be obtained after the second quenching at 40 degrees C. The impact tests experimentally performed on the molding prototypes yield useful data for a particular structural and impact-loading case. But, it is generally not practical, in terms of time and cost, to experimentally characterize the effects of a wide range of design variables. A successful numerical model for the Izod impact strength of polymers can provide convenient and useful guidelines on product design and, therefore, decrease the disadvantages arising from purely experimental trial and error. It is expensive to prepare the samples for the tests. Therefore, it is necessary to develop a mathematical model that will predict the fracture toughness of polycarbonate as a function of the quenching temperature. Mathematical models for the mechanical properties like the tensile strength, Young's modulus and Izod impact strength as functions of the quenching temperature are not available. There is no sign that they can be built up from a simple theory; a polynomial interpolation was, therefore, used to generate a fracture-toughness model using the data obtained from the experiments. The shifted model represents the Izod impact of the samples as a function of the first- and second-quenching temperatures.

**Notes:** Rouabah, Farid Bouguettoucha, Abdallah Ibos, Laurent Haddaoui, Nacerddine**URL:** <Go to ISI>://WOS:000336828700001

**Reference Type: Journal Article****Record Number:** 183**Author:** Rouabah, F. Dadache, D. Fois, M. Haddaoui, N.**Year:** 2014**Title:** Effect of the quenching temperature on the mechanical and thermophysical properties of polycarbonate pigmented with titanium dioxide**Journal:** Journal of Polymer Engineering**Volume:** 34**Issue:** 7**Pages:** 657-663**Date:** Sep**Short Title:** Effect of the quenching temperature on the mechanical and thermophysical properties of polycarbonate pigmented with titanium dioxide**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2014-0021**Accession Number:** WOS:000341686100012

**Abstract:** This work deals with the effect of the quenching temperature on the mechanical and thermophysical properties of polycarbonate (PC) pigmented with titanium dioxide (TiO<sub>2</sub>). The thermal conductivity, thermal diffusivity, Izod impact strength and density measurements were measured. The thermal conductivity and diffusivity of the composites were measured using a periodic measurement method. It was found that an additional second quenching involved an increase in the value of the Izod impact strength near 35 degrees C and a decrease in the values of the density, the thermal conductivity and the thermal diffusivity. A transition in these properties which is located at around 35 degrees C has also been observed and linked to the beta(1) relaxation mode of PC.

**Notes:** Rouabah, Farid Dadache, Derradji Fois, Magali Haddaoui, Nacceredine**URL:** <Go to ISI>://WOS:000341686100012

**Reference Type: Journal Article****Record Number:** 184**Author:** Rouabhi, A. Hafsi, M. Kebiche, M.**Year:** 2014**Title:** Assessment of the farming transformation in a rural region of Setif province in Algeria**Journal:** New Medit**Volume:** 13**Issue:** 2**Pages:** 38-46**Date:** Jun**Short Title:** Assessment of the farming transformation in a rural region of Setif province in Algeria**ISSN:** 1594-5685**Accession Number:** WOS:000340081000005

**Abstract:** The main aim of this paper is to elaborate a typology and to assess the transformations of agricultural activities in the northern part of Setif province in Algeria. During the nineties, the country experienced a period of insecurity and terrorism, which seriously disrupted the socio-economic situation of the farming system. The study area is predominantly rural; it includes nine municipalities and is one of the areas affected by this scourge. After a decade of instability, normal conditions were recovering again with the launch of a national program of agricultural aid in 2000, namely "Plan National de Developpement Agricole" (PNDA). This change will impact farming dynamics. The analysis of agricultural practices through nonlinear methods, namely the CATegorical Principal Components Analysis (CATPCA), aims to assess the behavior of farmers across time, which will be used as a decision-making tool for assessing and reorienting the government agricultural aid programs. The results showed two typologies: the first one consists of large-scale farming combining field crops (cereals) under rainfed regime and livestock; the second one consists of small farms practicing intensive irrigated crops such as arboriculture and market gardening. However, the economic performance of farms seems to be associated with two different criteria: the size of the farm and farming system as arboriculture and market gardening.

**Notes:** Rouabhi, Amar Hafsi, Miloud Kebiche, Mustapha**URL:** <Go to ISI>://WOS:000340081000005

**Reference Type: Journal Article****Record Number:** 185**Author:** Saida, T. Fouad, L. Ismahen, O. Messaouda, K. Ieee,**Year:** 2014**Title:** Study Of The Temperature Distribution In Diode-End-Pumped Solid State-Lasers**Journal:** 2014 International Conference Laser Optics**Short Title:** Study Of The Temperature Distribution In Diode-End-Pumped Solid State-Lasers**Accession Number:** WOS:000360494300077

**Abstract:** The main problem of bulk crystals for the realization of powerful lasers is their poor management of thermal effects. Optical pumping is associated with the heat generation in solid state laser materials. Moving of heat toward the surrounding medium which is mostly designed for the cooling management causes thermal gradient inside the medium. This is the main reason of appearance of unwanted thermal effects on laser operation. Thermal lensing, thermal stress fracture limit, are some examples of thermal effects. In this work an investigation of heat generation inside the rod crystal during optical pumping was carried out. The Finite Difference Method (FDM) was used to resolve the heat differential equation in order to calculate the temperature generated in Yb:YAG with diode-end-pumped configuration. The effect of the conductance was studied by using two methods of the cooling system. In the first method the crystal is directly in contact with water. In the second method the crystal is surrounding by a copper to keep the cylindrical surface at the define temperature. The temperature generated reduced to half by using the second method and we can conclude that it is the best choice for high power end pumping system.

**Notes:** Saida, Tabet Fouad, Lakhdari Ismahen, Osmani Messaouda, Khammar International Conference on Laser Optics Jun 30-jul 04, 2014 St Petersburg, RUSSIA

**URL:** <Go to ISI>://WOS:000360494300077

**Reference Type: Journal Article****Record Number:** 186**Author:** Saker, R. Bouras, N. Zitouni, A. Ghoul, M. Rohde, M. Schumann, P. Sproer, C. Sabaou, N. Klenk, H. P.**Year:** 2014**Title:** *Mzabimyces algeriensis* gen. nov., sp nov., a halophilic filamentous actinobacterium isolated from a Saharan soil, and proposal of *Mzabimycetaceae* fam. nov**Journal:** Antonie Van Leeuwenhoek International Journal of General and Molecular Microbiology**Volume:** 106**Issue:** 5**Pages:** 1021-1030**Date:** Nov**Short Title:** *Mzabimyces algeriensis* gen. nov., sp nov., a halophilic filamentous actinobacterium isolated from a Saharan soil, and proposal of *Mzabimycetaceae* fam. nov**ISSN:** 0003-6072**DOI:** 10.1007/s10482-014-0271-8**Accession Number:** WOS:000343179900017**Abstract:** Three halophilic mycelium-forming actinobacteria, strains H195(T), H150 and H151, were isolated from a Saharan soil sample collected from Beni-issuen in the Mزاب region (Ghardaia, South of Algeria) and subjected to a polyphasic taxonomic characterisation. These strains were observed to show an aerial mycelium differentiated into coccoid spore chains and fragmented substrate mycelium. Comparative analysis of the 16S rRNA gene sequences revealed that the highest sequence similarities were to *Saccharopolyspora qijiaojingensis* YIM 91168(T) (92.02 % to H195(T)). Phylogenetic analyses showed that the strains H195(T), H150 and H151 represent a distinct phylogenetic lineage. The cell-wall hydrolysate was found to contain meso-diaminopimelic acid, and the diagnostic whole-cell sugars were identified as arabinose and galactose. The major cellular fatty acids were identified as iso-C-15:0, iso-C-16:0, iso-C-17:0 and anteiso-C-17:0. The diagnostic phospholipid detected was phosphatidylcholine and MK-9 (H-4) was found to be the predominant menaquinone. The genomic DNA G+C content of strain H195(T) was 68.2 mol%. On the basis of its phenotypic features and phylogenetic position, we propose that strain H195(T) represents a novel genus and species, *Mzabimyces algeriensis* gen. nov., sp. nov., within a new family, *Mzabimycetaceae* fam. nov. The type strain of *M. algeriensis* is strain H195(T) (= DSM 46680(T) = MTCC 12101(T)).**Notes:** Saker, Rafika Bouras, Nouredine Zitouni, Abdelghani Ghoul, Mostefa Rohde, Manfred Schumann, Peter Sproer, Cathrin Sabaou, Nasserddine Klenk, Hans-Peter**URL:** <Go to ISI>://WOS:000343179900017

**Reference Type: Journal Article****Record Number:** 187**Author:** Salhi, A. Naimi, D. Bouktir, T.**Year:** 2014**Title:** Resolution of Economic Dispatch Problem considering Wind Power Penetration Planning**Journal:** 2014 International Renewable and Sustainable Energy Conference (Irsec)**Pages:** 395-400**Short Title:** Resolution of Economic Dispatch Problem considering Wind Power Penetration Planning**Accession Number:** WOS:000380510400171

**Abstract:** This paper presents a new resolution approach of Economic Dispatch (ED) problem considering wind power penetration planning with specified wind farm locations. Firstly, the total fuel cost of conventional generating units is optimized with a wind power contribution. When the optimal wind power penetration for each wind farm location is specified, a planning process is performed to get the total number and the total cost of wind generators. Three levels of the total wind power penetration are examined, which are 25%, 30% and 35%. The Wind Power Planning (WPP) is effected based on the practical weather report for each wind farm location. The ED problem is solved taking in the account the valve point effects of thermal generating units and using Time Varying Acceleration Coefficients (TVAC) based Particle Swarm Optimization method (PSO) due to its effectiveness overcoming the conventional PSO. The model is applied on the well known IEEE 30 bus test system.

**Notes:** Salhi, Ahmed Naimi, Djemai Bouktir, Tarek Essaaidi, M Zaz, Y International Renewable and Sustainable Energy Conference (IRSEC) Oct 17-19, 2014 Ouarzazate, MOROCCO 978-1-4799-7336-1

**URL:** <Go to ISI>://WOS:000380510400171

**Reference Type: Journal Article****Record Number:** 188**Author:** Saoudi, K. Harmas, M. N.**Year:** 2014**Title:** Enhanced design of an indirect adaptive fuzzy sliding mode power system stabilizer for multi-machine power systems**Journal:** International Journal of Electrical Power & Energy Systems**Volume:** 54**Pages:** 425-431**Date:** Jan**Short Title:** Enhanced design of an indirect adaptive fuzzy sliding mode power system stabilizer for multi-machine power systems**ISSN:** 0142-0615**DOI:** 10.1016/j.ijepes.2013.07.034**Accession Number:** WOS:000325831600042

**Abstract:** This paper presents an enhanced indirect adaptive fuzzy sliding mode based power system stabilizer for damping local and inter-area modes of oscillations for multi-machine power systems. The proposed controller design is based on an adaptive fuzzy control combining a proportional integral controller with a sliding mode controller. Generator speed deviation and its derivative are selected as input signals to a fuzzy logic system that approximates unknown power system functions and a proportional integral regulator is used to eliminate the undesirable sliding mode chattering. Using Lyapunov synthesis, adaptation laws are developed in an enhanced indirect adaptive fuzzy scheme which closely tracks changes in power system operating conditions. Performance of the proposed stabilizer is evaluated for a two-area four-machine power system subjected to different types of disturbances. Simulation results are compared to those obtained with a conventional PSS, with a fuzzy logic based stabilizer and with an adaptive fuzzy PSS clearly showing the effectiveness and robustness of the proposed approach. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Saoudi, K. Harmas, M. N.**URL:** <Go to ISI>://WOS:000325831600042

**Reference Type: Journal Article****Record Number:** 189**Author:** Saoudi, K. Harmas, M. N. Bouchama, Z.**Year:** 2014**Title:** Design of a Robust and Indirect Adaptive Fuzzy Sliding Mode Power System Stabilizer Using Particle Swarm Optimization**Journal:** Energy Sources Part a-Recovery Utilization and Environmental Effects**Volume:** 36**Issue:** 15**Pages:** 1670-1680**Short Title:** Design of a Robust and Indirect Adaptive Fuzzy Sliding Mode Power System Stabilizer Using Particle Swarm Optimization**ISSN:** 1556-7036**DOI:** 10.1080/15567036.2011.557687**Accession Number:** WOS:000338047400006

**Abstract:** This work presents an indirect adaptive fuzzy sliding mode power system stabilizer that is used to damp out the low frequency oscillations in power systems. The proposed controller design is based on an adaptive fuzzy control combining a proportional integral control and sliding mode control. The fuzzy logic system is used to approximate the unknown system function and using the particle swarm optimization technique to optimize parameters proportional integral control to eliminate the chattering action in the sliding mode control. Using Lyapunov synthesis, adaptation laws are developed to make the controller adaptive to changes in operating conditions of the power system. The nonlinear simulation studies show the successful performance of the proposed stabilizer.

**Notes:** Saoudi, K. Harmas, M. N. Bouchama, Z.**URL:** <Go to ISI>://WOS:000338047400006

**Reference Type: Journal Article****Record Number:** 190**Author:** Sayah, S. Hamouda, A. Bekrar, A.**Year:** 2014**Title:** Efficient hybrid optimization approach for emission constrained economic dispatch with nonsmooth cost curves**Journal:** International Journal of Electrical Power & Energy Systems**Volume:** 56**Pages:** 127-139**Date:** Mar**Short Title:** Efficient hybrid optimization approach for emission constrained economic dispatch with nonsmooth cost curves**ISSN:** 0142-0615**DOI:** 10.1016/j.ijepes.2013.11.001**Accession Number:** WOS:000332498900013

**Abstract:** Power plants usually operate on the strategy of economic dispatch (ED) regardless of emissions produced. Environmental considerations have become one of the major management concerns. Under these circumstances, the alternative strategy of environmental/economic dispatch (EED) is becoming more and more desirable for not only resulting in great economical benefit, but also reducing the pollutants emission. Based on the literature survey, few attempts have been made at considering valve-point effects for the realistic environmental/economic dispatch (EED) problem. This paper proposes a new efficient hybrid differential evolution algorithm with harmony search (DE-HS) to solve the multiobjective environmental/ economic dispatch (EED) problems that feature nonsmooth cost curves. The proposed approach combines in the most effective way the properties of differential evolution (DE) and harmony search (HS) algorithms. To enhance the local search capability of the original DE method, the fresh individual generation mechanism of the HS is utilized. Numerical results for three case studies have been presented to illustrate the performance and applicability of the proposed hybrid method. The comparative results with some of the most recently published methods confirm the effectiveness of the proposed strategy to find accurate and feasible optimal solutions for practical EED problems. (C) 2013 Elsevier Ltd. All rights reserved.

**Notes:** Sayah, Samir Hamouda, Abdellatif Bekrar, Abdelghani**URL:** <Go to ISI>://WOS:000332498900013

**Reference Type: Journal Article****Record Number:** 191**Author:** Sbiaai, K. Eddiai, A. Boughaleb, Y. Mazroui, M. Raty, J. Y. Meddad, M. Kara, A.**Year:** 2014**Title:** Diffusion processes of trimers on missing row surfaces: and**Journal:** Optical and Quantum Electronics**Volume:** 46**Issue:** 1**Pages:** 15-22**Date:** Jan**Short Title:** Diffusion processes of trimers on missing row surfaces: and**ISSN:** 0306-8919**DOI:** 10.1007/s11082-013-9691-3**Accession Number:** WOS:000329322800003

**Abstract:** A semi-empirical potential according to the embedded atom, has been applied to investigate the diffusion of trimers by computing the energy barriers for different mechanisms. Our attention was more focused on the leapfrog process which is likely to occur on missing row surfaces. The activation barriers of this mechanism are calculated using drag method at 0K. These barriers are found to be 0.64 and 0.68 eV for hopping out the channel for (110) respectively. While for hopping down at the other side they are about 0.42 and 0.32 eV. Moreover, a deep metastable position is observed during leapfrog diffusion leading to some spectacular trimer motion. At high temperature and essentially for (110), we also observed a competition between leapfrog process and concerted jump mechanism with a deformation of trimer geometry. Implications of these findings are briefly discussed.

**Notes:** Sbiaai, Khalid Eddiai, Adil Boughaleb, Yahia Mazroui, M'hammed Raty, Jean-Yves Meddad, Mounir Kara, Abdelkader Si

**URL:** <Go to ISI>://WOS:000329322800003

**Reference Type: Journal Article****Record Number:** 192**Author:** Schoffler, M. S. Kim, H. K. Chuluunbaatar, O. Houamer, S. Galstyan, A. G. Titze, J. N. Jahnke, T. Schmidt, L. P. H. Schmidt-Bocking, H. Dorner, R. Popov, Y. V. Bulychev, A. A.**Year:** 2014**Title:** Transfer excitation reactions in fast proton-helium collisions**Journal:** Physical Review A**Volume:** 89**Issue:** 3**Date:** Mar**Short Title:** Transfer excitation reactions in fast proton-helium collisions**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.89.032707**Article Number:** 032707**Accession Number:** WOS:000333179100012

**Abstract:** Continuing previous work, we have measured the projectile scattering-angle dependency for transfer excitation of fast protons (300-1200 keV/u) colliding with helium ( $p + \text{He} \rightarrow \text{H} + \text{He}^{+*}$ ). Our high-resolution fully differential data are accompanied by calculations, performed in the plane-wave first Born approximation and the eikonal wave Born approximation. Experimentally, we find a deep minimum in the differential cross section around 0.5 mrad. The comparison with our calculations shows that describing the scattering-angle dependence of transfer excitation in fast collisions requires us to go beyond the first Born approximation and in addition to use the initial-state wave function, which contains some degree of angular correlations.

**Notes:** Schoeffler, M. S. Kim, H. -K. Chuluunbaatar, O. Houamer, S. Galstyan, A. G. Titze, J. N. Jahnke, T. Schmidt, L. Ph H. Schmidt-Boecking, H. Doerner, R. Popov, Yu V. Bulychev, A. A.

**URL:** <Go to ISI>://WOS:000333179100012

**Reference Type: Journal Article****Record Number:** 193**Author:** Sebaa, H. Guerriche, K. R. Bouktir, T.**Year:** 2014**Title:** Optimal Sizing and placement of Renewable energy Source in large scale Power System using ABC technique in presence of UPFC**Journal:** 2014 International Renewable and Sustainable Energy Conference (Irsec)**Pages:** 294-299**Short Title:** Optimal Sizing and placement of Renewable energy Source in large scale Power System using ABC technique in presence of UPFC**Accession Number:** WOS:000380510400172**Abstract:** This paper presents an effective method for optimal sizing and placement of renewable energy source in a standard IEEE 30 bus system by using Artificial Bee Colony method, The total generation cost as well as the total loss of the entire system can be reduced by proper allocation of more clean sources. Artificial Bee Colony ABC is employed for optimization purposes. For more improved performances of the power system Unified Power Flow Controller (UPFC) installed in a waked line [11], in addition to wind farm optimal placement are considered in this paper. Results for optimization of total cost with and without installation of wind farms as well as UPFC location and sizing are investigated in this paper.**Notes:** Sebaa, Haddi Guerriche, Khaled Ras Bouktir, Tarek Essaaidi, M Zaz, Y International Renewable and Sustainable Energy Conference (IRSEC) Oct 17-19, 2014 Ouarzazate, MOROCCO 978-1-4799-7336-1**URL:** <Go to ISI>://WOS:000380510400172

**Reference Type: Journal Article****Record Number:** 194**Author:** Seid, L. Chouder, D. Maouche, N. Bakas, I. Barka, N.**Year:** 2014**Title:** Removal of Cd(II) and Co(II) ions from aqueous solutions by polypyrrole particles: Kinetics, equilibrium and thermodynamics**Journal:** Journal of the Taiwan Institute of Chemical Engineers**Volume:** 45**Issue:** 6**Pages:** 2969-2974**Date:** Nov**Short Title:** Removal of Cd(II) and Co(II) ions from aqueous solutions by polypyrrole particles: Kinetics, equilibrium and thermodynamics**ISSN:** 1876-1070**DOI:** 10.1016/j.jtice.2014.08.030**Accession Number:** WOS:000347742300016

**Abstract:** In this work, electroactive polypyrrole (PPy) particles obtained by oxidative polymerization of pyrrole in acetonitrile were used to remove cadmium and cobalt ions from aqueous solutions. FTIR, cyclic voltammetry (CV), X-ray diffraction (XRD), atomic force microscopy (AFM) and conductivity measurements were applied to analyze cadmium and cobalt interaction with the synthesized polymer. Kinetic data were properly fitted with the pseudo-first-order kinetic model. The equilibrium data fitted very well to the Langmuir model with a maximum monolayer capacity of 71.4 and 70.04 mg/g, respectively for cadmium(II) and cobalt(II) ions. The metals uptake increases with an increase in solution temperature. Indeed we noted that, the polypyrrole particles plays two beneficial roles: (1) to remove heavy metals from aqueous solutions and (2) this latter served as doping agent for the polypyrrole particles. (C) 2014 Taiwan Institute of Chemical Engineers. Published by Elsevier B.V. All rights reserved.

**Notes:** Seid, Lamria Chouder, Dalila Maouche, Naima Bakas, Idriss Barka, Nouredine**URL:** <Go to ISI>://WOS:000347742300016

**Reference Type: Journal Article****Record Number:** 195**Author:** Sellimi, S. Kadri, N. Barragan-Montero, V. Laouer, H. Hajji, M. Nasri, M.**Year:** 2014**Title:** Fucans from a Tunisian brown seaweed *Cystoseira barbata*: Structural characteristics and antioxidant activity**Journal:** International Journal of Biological Macromolecules**Volume:** 66**Pages:** 281-288**Date:** May**Short Title:** Fucans from a Tunisian brown seaweed *Cystoseira barbata*: Structural characteristics and antioxidant activity**ISSN:** 0141-8130**DOI:** 10.1016/j.ijbiomac.2014.02.041**Accession Number:** WOS:000335201900037

**Abstract:** Sulfated polysaccharides from brown seaweeds are known to be a topic of numerous studies, due to their beneficial biological properties including antioxidant activity. Fucans were isolated from the brown seaweed *Cystoseira barbata* harvested in Tunisia. ATR-FTIR and <sup>1</sup>H-NMR spectroscopies demonstrated that *C. barbata* sulfated polysaccharides (CBSPs) consisted mainly of 3-linked- $\alpha$ -L-fucopyranosyl backbone, acetylated and mostly sulfated at C-4. Molar degrees of sulfation and acetylation of CBSPs were 0.79 and 0.27, respectively. Neutral sugars analysis determined by gas chromatography-mass spectrometry (GC-MS) showed that CBSPs were mainly composed of fucose (44.6%) and galactose (34.32%) with few amounts of other sugars such as glucose (7.55%), rhamnose (6.41%), xylose (4.21%) and mannose (2.91%). CBSPs were examined for in vitro antioxidant properties using various antioxidant assays. CBSPs exhibited important DPPH radical-scavenging activity (100% inhibition at a concentration of 1.5 mg/ml) and considerable ferric reducing potential (24.62 mg ascorbic acid equivalents). Effective chelating activity and significant protection activity against hydroxyl radical induced DNA breakage were also recorded for CBSPs. However, in the linoleate-beta-carotene system, CBSPs exerted moderate antioxidant activity (62% inhibition at a concentration of 1.5 mg/ml). Therefore, CBSPs can be used as a potent natural antioxidant in food industry or in the pharmaceutical field. (C) 2014 Published by Elsevier B.V.

**Notes:** Sellimi, Sabine Kadri, Nabil Barragan-Montero, Veronique Laouer, Hocine Hajji, Mohamed Nasri, Moncef

**URL:** <Go to ISI>://WOS:000335201900037

**Reference Type: Journal Article****Record Number:** 196**Author:** Selloum, D. Abou Chaaya, A. Bechelany, M. Rouessac, V. Miele, P. Tingry, S.**Year:** 2014**Title:** A highly efficient gold/electrospun PAN fiber material for improved laccase biocathodes for biofuel cell applications**Journal:** Journal of Materials Chemistry A**Volume:** 2**Issue:** 8**Pages:** 2794-2800**Short Title:** A highly efficient gold/electrospun PAN fiber material for improved laccase biocathodes for biofuel cell applications**ISSN:** 2050-7488**DOI:** 10.1039/c3ta14531j**Accession Number:** WOS:000331247500044

**Abstract:** We explore for the first time the ability of a three-dimensional polyacrylonitrile/gold material prepared by a low-cost and scalable synthesis method, based on the combination of electrospinning and sputtering, as a new material with large surface area to provide high loadings of enzymes to enhance the electrochemical performances of enzyme electrodes in biofuel cells (BFCs). An ethanol/O<sub>2</sub> BFC has been developed based on enzymatic reactions performed at both the cathode and anode with immobilization of the respective enzymes and mediators on the three-dimensional nanostructured electrodes. The power density delivered is 1.6 mW cm<sup>-2</sup> at 0.75 V, which is five times the power density delivered by the BFC built on flat bioelectrodes. The greatly improved performance of these synthesized nanostructured electrodes makes them exciting materials for their implantation in biofuel cell applications.

**Notes:** Selloum, D. Abou Chaaya, A. Bechelany, M. Rouessac, V. Miele, P. Tingry, S.**URL:** <Go to ISI>://WOS:000331247500044

**Reference Type: Journal Article****Record Number:** 197**Author:** Selloum, D. Tingry, S. Lecher, V. Renaud, L. Innocent, C. Zouaoui, A.**Year:** 2014**Title:** Optimized electrode arrangement and activation of bioelectrodes activity by carbon nanoparticles for efficient ethanol microfluidic biofuel cells**Journal:** Journal of Power Sources**Volume:** 269**Pages:** 834-840**Date:** Dec**Short Title:** Optimized electrode arrangement and activation of bioelectrodes activity by carbon nanoparticles for efficient ethanol microfluidic biofuel cells**ISSN:** 0378-7753**DOI:** 10.1016/j.jpowsour.2014.07.052**Accession Number:** WOS:000340975200102

**Abstract:** This work presents the construction of an ethanol microfluidic biofuel cell based on a biocathode and a bioanode, and operating in a Y-shaped microfluidic channel. At the anode, ethanol was oxidized by alcohol dehydrogenase, whereas at the cathode, the oxygen was reduced by laccase. Fuel and oxidant streams moved in parallel laminar flow without turbulent mixing into a microchannel fabricated using soft lithography methods. The enzymes were immobilized in the presence of reactive species at gold electrode surfaces. Bioelectrocatalytic processes were enhanced by combination of enzymes and carbon nanoparticles, attributed to appropriate electron transport and high amount enzyme loading. The benefit of the nanoparticles with higher surface porosity was explained by the high porous structure that offered a closer proximity to the reactive species and improved diffusion of the substrates within the enzyme films. The microfluidic BFC was optimized as function of electrode patterns, showing that higher current and power densities were achieved for shorter and wider electrodes that allow for thinner boundary layer depletion at the electrodes surface resulting in efficient catalytic consumption of fuel and oxidant. This miniaturized device generated maximum power density of  $90 \mu\text{W cm}^{-2}$  at 0.6 V for a flow rate  $16 \mu\text{L min}^{-1}$ . (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Selloum, D. Tingry, S. Lecher, V. Renaud, L. Innocent, C. Zouaoui, A.**URL:** <Go to ISI>://WOS:000340975200102

**Reference Type: Journal Article****Record Number:** 198**Author:** Setifi, F. Milin, E. Charles, C. Thetiot, F. Triki, S. Gomez-Garcia, C. J.**Year:** 2014**Title:** Spin Crossover Iron(II) Coordination Polymer Chains: Syntheses, Structures, and Magnetic Characterizations of  $\text{Fe}(\text{aqin})_2(\mu_2)\text{-M}(\text{CN})_4$  ( $\text{M} = \text{Ni}(\text{II}), \text{Pt}(\text{II})$ ,  $\text{aqin} = \text{Quinolin-8-amine}$ )**Journal:** Inorganic Chemistry**Volume:** 53**Issue:** 1**Pages:** 97-104**Date:** Jan**Short Title:** Spin Crossover Iron(II) Coordination Polymer Chains: Syntheses, Structures, and Magnetic Characterizations of  $\text{Fe}(\text{aqin})_2(\mu_2)\text{-M}(\text{CN})_4$  ( $\text{M} = \text{Ni}(\text{II}), \text{Pt}(\text{II})$ ,  $\text{aqin} = \text{Quinolin-8-amine}$ )**ISSN:** 0020-1669**DOI:** 10.1021/ic401721x**Accession Number:** WOS:000329529800019

**Abstract:** New Fe(II) coordination polymeric neutral chains of formula  $[\text{Fe}(\text{aqin})_2(\mu_2)\text{-M}(\text{CN})_4]$  ( $\text{M} = \text{Ni-II}$  (1) and  $\text{Pt-II}$  (2)) ( $\text{aqin} = \text{Quinolin-8-amine}$ ) have been synthesized and characterized by infrared spectroscopy, X-ray diffraction, and magnetic measurements. The crystal structure determinations of 1-2 reveal in both cases a one-dimensional structure in which the planar  $[\text{M}(\text{CN})_4]^{2-}$  ( $\text{M} = \text{Ni-II}$  (1) and  $\text{Pt-II}$  (2)) anion acts as a  $\mu_2$ -bridging ligand, and the two  $\text{aqin}$  molecules as chelating coligands. Examination of the intermolecular contacts in the two compounds reveals that the main contacts are ascribed to hydrogen bonding interactions involving the amine groups of the  $\text{aqin}$  chelating ligands and the nitrogen atoms of the two non bridging CN groups of the  $[\text{M}(\text{CN})_4]^{2-}$  ( $\text{M} = \text{Ni-II}$  (1) and  $\text{Pt-II}$  (2)) anion. The average values of the six Fe-N distances observed respectively at room temperature (293 K) and low temperature (120 K), that is, 2.142(3) and 2.035(2) angstrom for 1, and 2.178(3) and 1.990(2) angstrom for 2, and the thermal variation of the cell parameters (performed on 2) are indicative of the presence of an abrupt HS-LS spin crossover (SCO) transition in both compounds. The thermal dependence of the product of the molar magnetic susceptibility times the temperature ( $\chi T_m$ ), in cooling and warming modes, confirms the SCO behavior at about 145 and 133 K in 1 and 2, respectively, and reveals the presence of a small thermal hysteresis of about 2 K for each compound.

**Notes:** Setifi, Fatima Milin, Eric Charles, Catherine Thetiot, Franck Triki, Smail Gomez-Garcia, Carlos J.

**URL:** <Go to ISI>://WOS:000329529800019

**Reference Type: Journal Article****Record Number:** 199**Author:** Setifi, Z. Boutebdja, M. Setifi, F. Merazig, H. Glidewell, C.**Year:** 2014**Title:** Coordination polymer chains built from Cu-II and adipate ions linked by hydrogen bonds to form a three-dimensional framework structure**Journal:** Acta Crystallographica Section C-Structural Chemistry**Volume:** 70**Date:** Jul**Short Title:** Coordination polymer chains built from Cu-II and adipate ions linked by hydrogen bonds to form a three-dimensional framework structure**ISSN:** 0108-2701**DOI:** 10.1107/s205322961401359x**Accession Number:** WOS:000339013000015

**Abstract:** In the title compound, catena-poly[bis[(2,2'-bipyridine-kappa(2) N, N')-(1,1,3,3-tetracyano-2-ethoxypropenido-kappa N)copper(II)]-mu(4)-hexanedioato-kappa O-6(1),O-1': O-1:O-6,O-6':O-6], [Cu-2(C<sub>9</sub>H<sub>5</sub>N<sub>4</sub>O)(2)(C<sub>6</sub>H<sub>8</sub>O<sub>4</sub>)-(C<sub>10</sub>H<sub>8</sub>N<sub>2</sub>)(2)](n), the adipate (hexanedioate) dianion lies across a centre of inversion in the space group P (1) over bar. The Cu-II centre adopts a distorted form of axially elongated (4+2) coordination, and the Cu-II and adipate components form a onedimensional coordination polymer from which the 2,2'-bipyridine and 1,1,3,3-tetracyano-2-ethoxypropenide components are pendent, and where each adipate dianion is bonded to four different Cu-II centres. The coordination polymer chains are linked into a three-dimensional framework structure by a combination of C-H center dot center dot center dot N and C-H center dot center dot center dot O hydrogen bonds, augmented by a pi-pi stacking interaction.

**Notes:** Setifi, Zouaoui Boutebdja, Mehdi Setifi, Fatima Merazig, Hocine Glidewell, Christopher 7

**URL:** <Go to ISI>://WOS:000339013000015

**Reference Type: Journal Article****Record Number:** 200**Author:** Setifi, Z. Lehchili, F. Setifi, F. Beghidja, A. Ng, S. W. Glidewell, C.**Year:** 2014**Title:** 1,1'-Diethyl-4,4'-bipyridine-1,1'-dium bis(1,1,3,3-tetracyano-2-ethoxypropenide): multiple C-H center dot center dot center dot N hydrogen bonds form a complex sheet structure**Journal:** Acta Crystallographica Section C-Crystal Structure Communications**Volume:** 70**Pages:** 338-U321**Date:** Mar**Short Title:** 1,1'-Diethyl-4,4'-bipyridine-1,1'-dium bis(1,1,3,3-tetracyano-2-ethoxypropenide): multiple C-H center dot center dot center dot N hydrogen bonds form a complex sheet structure**ISSN:** 0108-2701**DOI:** 10.1107/s2053229614004379**Accession Number:** WOS:000332221900020**Abstract:** In the title salt, C<sub>14</sub>H<sub>18</sub>N<sub>22</sub>+center dot 2C(9)H(5)N(4)O(-), the 1,1'-diethyl-4,4'-bipyridine-1,1'-dium dication lies across a centre of inversion in the space group P2(1)/c. In the 1,1,3,3-tetracyano-2-ethoxypropenide anion, the two independent -C(CN)(2) units are rotated, in conrotatory fashion, out of the plane of the central propenide unit, making dihedral angles with the central unit of 16.0 (2) and 23.0 (2)degrees. The ionic components are linked by C-H center dot center dot center dot N hydrogen bonds to form a complex sheet structure, within which each cation acts as a sixfold donor of hydrogen bonds and each anion acts as a threefold acceptor of hydrogen bonds.**Notes:** Setifi, Zouaoui Lehchili, Fouzia Setifi, Fatima Beghidja, Adel Ng, Seik Weng Glidewell, Christopher 3**URL:** <Go to ISI>://WOS:000332221900020

**Reference Type: Journal Article****Record Number:** 201**Author:** Setifi, Z. Setifi, F. Boughzala, H. Beghidja, A. Glidewell, C.**Year:** 2014**Title:** Tris(2,2'-bipyridine)iron(II) bis(1,1,3,3-tetracyano-2-ethoxypropenide) dihydrate: chiral hydrogen-bonded frameworks interpenetrate in three dimensions**Journal:** Acta Crystallographica Section C-Structural Chemistry**Volume:** 70**Pages:** 465-U174**Date:** May**Short Title:** Tris(2,2'-bipyridine)iron(II) bis(1,1,3,3-tetracyano-2-ethoxypropenide) dihydrate: chiral hydrogen-bonded frameworks interpenetrate in three dimensions**ISSN:** 0108-2701**DOI:** 10.1107/s2053229614008092**Accession Number:** WOS:000336066200011**Abstract:** In the title compound, [Fe(C<sub>10</sub>H<sub>8</sub>N<sub>2</sub>)(3)](C<sub>9</sub>H<sub>5</sub>N<sub>4</sub>O)(2)center dot 2H(2)O, the chiral cations lie across twofold rotation axes in the space group C<sub>2</sub>/c. The anions and the water molecules are linked by two independent O-H center dot center dot center dot N hydrogen bonds to form C-2(2)(8) chains, and these chains are linked by the cations via C-H center dot center dot center dot N and C-H center dot center dot center dot O hydrogen bonds to form two interpenetrating three-dimensional frameworks, each of which contains only one enantiomeric form of the chiral cation.**Notes:** Setifi, Zouaoui Setifi, Fatima Boughzala, Habib Beghidja, Adel Glidewell, Christopher 5**URL:** <Go to ISI>://WOS:000336066200011

**Reference Type: Journal Article****Record Number:** 202**Author:** Setifi, Z. Setifi, F. El Ammari, L. El-Ghozzi, M. Santos, J. S. D. Merazig, H. Glidewell, C.**Year:** 2014**Title:** Poly chlorido(1,10-phenanthroline-kappa N-2,N ')copper(II) -mu(3)-1,1,3,3-tetracyano-2-ethoxypropenido-kappa N-3:N ':N " : coordination polymer sheets linked into bilayers by hydrogen bonds**Journal:** Acta Crystallographica Section C-Structural Chemistry**Volume:** 70**Pages:** 19-+**Date:** Jan**Short Title:** Poly chlorido(1,10-phenanthroline-kappa N-2,N ')copper(II) -mu(3)-1,1,3,3-tetracyano-2-ethoxypropenido-kappa N-3:N ':N " : coordination polymer sheets linked into bilayers by hydrogen bonds**ISSN:** 0108-2701**DOI:** 10.1107/s2053229613032804**Accession Number:** WOS:000331291400006**Abstract:** In the title compound, [Cu(C<sub>9</sub>H<sub>5</sub>N<sub>4</sub>O)Cl(C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>)](n) or [Cu(tcnoet)Cl(phen)](n), where phen is 1,10-phenanthroline and tcnoet is 1,1,3,3-tetracyano-2-ethoxypropenide, the axially elongated (4 + 2) coordination polyhedron around the Cu-II centre contains N atoms from three different tcnoet ligands. The resulting coordination polymer takes the form of sheets which are linked in pairs by a single C-H center dot center dot center dot N hydrogen bond to form bilayers. The bond lengths provide evidence for significant bond fixation in the phen ligand and extensive electronic delocalization in the tcnoet ligand, where the two -C(CN)<sub>2</sub> units are rotated, in conrotatory fashion, out of the plane of the central C3O fragment.**Notes:** Setifi, Zouaoui Setifi, Fatima El Ammari, Lahcen El-Ghozzi, Malika Santos, Jana Sopkova-de Oliveira Merazig, Hocine Glidewell, Christopher 1**URL:** <Go to ISI>://WOS:000331291400006

**Reference Type: Journal Article****Record Number:** 203**Author:** Setifi, Z. Setifi, F. Ghazzali, M. El-Ghozzi, M. Avignant, D. Perez, O. Reedijk, J.**Year:** 2014**Title:** Adipate as a tetradentate bridging ligand: Synthesis, structure and properties of Cu(II) and Ni(II) compounds with 2,2'-dipyridylamine as a terminal co-ligand**Journal:** Polyhedron**Volume:** 75**Pages:** 68-72**Date:** Jun**Short Title:** Adipate as a tetradentate bridging ligand: Synthesis, structure and properties of Cu(II) and Ni(II) compounds with 2,2'-dipyridylamine as a terminal co-ligand**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2014.03.014**Accession Number:** WOS:000336777400009

**Abstract:** The synthesis, characterization, single crystal structures and physical properties of the compounds  $[\text{Cu}-2(\text{dpa})(2)(\text{adp})(2)](\text{H}_2\text{O})(2)$  (1) and  $[\text{Ni}-2(\text{dpa})(2)(\text{adp})]\text{Cl}-2$  (2), in which dpa = 2,2'-dipyridylamine; adp = adipate(2-) anion, are presented. In both dinuclear compounds the dpa is chelating bidentately, whereas adipate acts as a tetradentate bridge between the 2 metal ions, using both carboxylate oxygen atoms as a chelate. The Cu(II) compound has 2 bridging adipate dianions, whereas the Ni(II) compound has a single bridging adipate(2-); in the latter case the charge of the dinuclear unit is compensated by 2 lattice chloride anions. The N-H of the dpa donates an intermolecular H bond to neighboring molecules; i.e. to the carboxylates for the Cu compound and to the lattice chlorides for the Ni one. In both compounds the metal ions are in a distorted octahedral geometry, and diffuse reflectance spectra agree with this geometry. The Ni center dot center dot center dot Ni contact distance is very long (1089.3 pm). The EPR spectrum of the Cu(II) compound shows a broad signal, and no hyperfine signals are resolved; also no spin = 1 signals are seen, which is in agreement with the very long dinuclear Cu center dot center dot center dot Cu contact distance (831.7 pm). Magnetic susceptibility measurements of the Cu compound down to 5 K show a very weak ferromagnetic coupling with a magnetic moment (per Cu) increasing from 1.73 B.M. (room T) to 1.88 B.M. (at 5 K). (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Setifi, Zouaoui Setifi, Fatima Ghazzali, Mohamed El-Ghozzi, Malika Avignant, Daniel Perez, Olivier Reedijk, Jan

**URL:** <Go to ISI>://WOS:000336777400009

**Reference Type: Journal Article****Record Number:** 204**Author:** Setifi, Z. Setifi, F. Saadi, M. Rouag, D. A. Glidewell, C.**Year:** 2014**Title:** catena-Poly 4-amino-3,5-bis(pyridin-2-yl)-4H-1,2,4-triazole-kappa N-2(1),N-5 (dicyanamido-kappa N)copper(II) -mu(2)-dicyan-amido-kappa N-2:N ' : coordination polymer chains linked into a bilayer by hydrogen bonds and pi-pi stacking interactions**Journal:** Acta Crystallographica Section C-Structural Chemistry**Volume:** 70**Pages:** 359-+**Date:** Apr**Short Title:** catena-Poly 4-amino-3,5-bis(pyridin-2-yl)-4H-1,2,4-triazole-kappa N-2(1),N-5 (dicyanamido-kappa N)copper(II) -mu(2)-dicyan-amido-kappa N-2:N ' : coordination polymer chains linked into a bilayer by hydrogen bonds and pi-pi stacking interactions**ISSN:** 0108-2701**DOI:** 10.1107/s205322961400504x**Accession Number:** WOS:000334050600004**Abstract:** In the title compound, [Cu(C<sub>2</sub>N<sub>3</sub>)(<sub>2</sub>)(C<sub>12</sub>H<sub>10</sub>N<sub>6</sub>)](n) or [Cu(dca)(<sub>2</sub>)(abpt)](n), where abpt is 4-amino-3,5-bis(pyridin-2-yl)-4H-1,2,4-triazole and dca is the dicyanamide anion, the Cu-II centre is five-coordinate with an approximately square-pyramidal geometry. One of the two dicyanamide ligands is a terminal ligand, but the other one acts as a mu(1,5)-bridging ligand between pairs of Cu-II centres, so generating a one-dimensional coordination polymer. A combination of N-H center dot center dot center dot N and C-H center dot center dot center dot N hydrogen bonds, augmented by pi-pi stacking interactions, links the coordination polymer chains into a bilayer structure. Comparisons are made with some related Cu-II complexes containing dca ligands and heteroaromatic coligands.**Notes:** Setifi, Zouaoui Setifi, Fatima Saadi, Mohamed Rouag, Djamil-Azzeddine Glidewell, Christopher 4**URL:** <Go to ISI>://WOS:000334050600004

**Reference Type: Journal Article****Record Number:** 205**Author:** Slimani, S. Sahraoui, M. Bennadji, A. Ladjouze-Rezig, A.**Year:** 2014**Title:** A paraneoplastic Sharp syndrome reversible after resection of a benign schwannoma: A paraneoplastic syndrome?**Journal:** Neurochirurgie**Volume:** 60**Issue:** 4**Pages:** 194-196**Date:** Aug**Short Title:** A paraneoplastic Sharp syndrome reversible after resection of a benign schwannoma: A paraneoplastic syndrome?**ISSN:** 0028-3770**DOI:** 10.1016/j.neuchi.2014.03.006**Accession Number:** WOS:000341678800011

**Abstract:** Paraneoplastic syndromes commonly occur in malignancies and often precede the first symptoms of the tumor. By definition, paraneoplastic syndromes are only associated with malignancies although some exceptions have been reported, occurring with benign tumors. We report a patient presenting with a clinical and serological Sharp syndrome, followed a few months later by a cervical schwannoma. Curative surgical resection of the mass resulted in a clinical and serological healing from the Sharp syndrome. To our knowledge, this is the first report of a benign schwannoma complicated by a possible paraneoplastic Sharp syndrome. (C) 2014 Elsevier Masson SAS. All rights reserved.

**Notes:** Slimani, S. Sahraoui, M. Bennadji, A. Ladjouze-Rezig, A.**URL:** <Go to ISI>://WOS:000341678800011

**Reference Type: Journal Article**

**Record Number: 206**

**Author: Slimani, W. Beniaiche, A.**

**Year: 2014**

**Title: Improving Software Implementation of Computer Generated Holograms**

**Journal: Arabian Journal for Science and Engineering**

**Volume: 39**

**Issue: 7**

**Pages: 5791-5797**

**Date: Jul**

**Short Title: Improving Software Implementation of Computer Generated Holograms**

**ISSN: 2193-567X**

**DOI: 10.1007/s13369-014-1128-1**

**Accession Number: WOS:000339807100047**

**Abstract:** It is difficult to produce diffractive optical elements as a computer generated hologram (CGH) of a complex transfer function, because the amplitude and phase vary in a complicated manner. To perform operations on images it is required to intervene on optical spatial frequency which is the field implementation of a CGH. In this paper, synthesizing such an element by a performed software on binary aspect is described and optimal parameters for improving are determined. The sensitivity of the reconstruction quality of image at high and low frequencies due to the sampling and the quantization process is identified.

**Notes: Slimani, Wahiba Beniaiche, Abdelkrim**

**URL: <Go to ISI>://WOS:000339807100047**

**Reference Type: Journal Article****Record Number:** 207**Author:** Tanto, A. Vincent, D. Chergui, A.**Year:** 2014**Title:** Microstrip ring resonators applied to ferrite material (YIG) characterization in microwave frequency bands**Journal:** European Physical Journal-Applied Physics**Volume:** 67**Issue:** 3**Date:** Sep**Short Title:** Microstrip ring resonators applied to ferrite material (YIG) characterization in microwave frequency bands**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2014140113**Article Number:** 30601**Accession Number:** WOS:000343090800008

**Abstract:** Microstrip ring resonator (MSRR) is an efficient technique for electromagnetic material characterization in microwave bands. Ferrites constitute important class of materials for microwave devices, especially for RF passive components. The aim of the work was to characterize ferrite materials using the frequency response of MSRRs. A theoretical analysis of the problem has been developed to find a relation between the ring resonance frequencies and the electromagnetic properties of ferrite such as effective permittivity and permeability. The measurements made on YIG (101) from 1 to 30 GHz are found to be in good agreement with the theoretical results. And the MSRR technique applied on ferrite materials has been validated.

**Notes:** Tanto, Amel Vincent, Didier Chergui, Abdelhamid**URL:** <Go to ISI>://WOS:000343090800008

**Reference Type: Journal Article****Record Number:** 208**Author:** Tellouche-Derafa, G. Hoummada, K. Derafa, A. Blum, I. Portavoce, A. Mangelinck, D.**Year:** 2014**Title:** Kinetics of growth and consumption of Ni rich phases**Journal:** Microelectronic Engineering**Volume:** 120**Pages:** 146-149**Date:** May**Short Title:** Kinetics of growth and consumption of Ni rich phases**ISSN:** 0167-9317**DOI:** 10.1016/j.mee.2013.12.015**Accession Number:** WOS:000336697300024

**Abstract:** In situ X-ray diffraction measurements performed during isothermal annealing show that the life time of theta-Ni<sub>2</sub>Si depends on the initial Ni thickness. A slow kinetic of consumption of theta-Ni<sub>2</sub>Si is observed during the reaction of 50 nm Ni with Si substrate, while a fast rate of consumption of theta-Ni<sub>2</sub>Si is observed when theta-Ni<sub>2</sub>Si is a transient phase. The kinetics of growth and consumption of Ni-rich phases is discussed. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Tellouche-Derafa, G. Hoummada, K. Derafa, A. Blum, I. Portavoce, A. Mangelinck, D.**URL:** <Go to ISI>://WOS:000336697300024

**Reference Type: Journal Article****Record Number:** 209**Author:** Terrab, H. Bayadi, A.**Year:** 2014**Title:** Experimental Study Using Design of Experiment of Pollution Layer Effect on Insulator Performance Taking into Account the Presence of Dry Bands**Journal:** Ieee Transactions on Dielectrics and Electrical Insulation**Volume:** 21**Issue:** 6**Pages:** 2486-2495**Date:** Dec**Short Title:** Experimental Study Using Design of Experiment of Pollution Layer Effect on Insulator Performance Taking into Account the Presence of Dry Bands**ISSN:** 1070-9878**DOI:** 10.1109/tdei.2014.004542**Accession Number:** WOS:000349675500010

**Abstract:** Performance of outdoor insulator under polluted conditions depends specially in the contamination layer configuration and conductivity, which makes important to take them into account during the conception and the design of new insulator. This paper presents an experimental study of the flashover voltage of polluted insulator as a function of pollution layer parameters such as; conductivity, layer length, position, number and width of dry bands. Many configurations of pollution distribution are studied using design of experiment methodology. Parameters effects and their interactions have been investigated and evaluated using ANOVA variance analysis statistical technique. The relationship between pollution parameters and the flashover voltage are modeled and analyzed using response surface methodology. Results show how much the flashover voltage of non-uniformly polluted surface is mainly influenced by length of contamination layer and conductivity. Moreover, the obtained statistical models of flashover voltage are adequate with experimentation results. Such information can be exploited to optimize the design of glass insulator used in polluted areas, by making suitable design to create much and wider dry bands in the middle of the insulator surface.

**Notes:** Terrab, Hocine Bayadi, Abdelhafid**URL:** <Go to ISI>://WOS:000349675500010

**Reference Type: Journal Article****Record Number:** 210**Author:** Toumi, L. Moussaoui, A. Ugur, A.**Year:** 2014**Title:** Particle swarm optimization for bitmap join indexes selection problem in data warehouses**Journal:** Journal of Supercomputing**Volume:** 68**Issue:** 2**Pages:** 672-708**Date:** May**Short Title:** Particle swarm optimization for bitmap join indexes selection problem in data warehouses**ISSN:** 0920-8542**DOI:** 10.1007/s11227-013-1058-9**Accession Number:** WOS:000335559500007

**Abstract:** Data warehouses are very large databases usually designed using the star schema. Queries defined on data warehouses are generally complex due to join operations involved. The performance of star schema queries in data warehouses is highly critical and its optimization is hard in general. Several query performance optimization methods exist, such as indexes and table partitioning. In this paper, we propose a new approach based on binary particle swarm optimization for solving the bitmap join index selection problem in data warehouses. This approach selects the optimal set of bitmap join indexes based on a mathematical cost model. Several experiments are performed to demonstrate the effectiveness of the proposed method on the bitmap join index selection problem. Further testing of the method is performed using a database environment specific cost function. The binary particle swarm optimization is found to be more effective than both the genetic algorithm and data mining based approaches.

**Notes:** Toumi, Lyazid Moussaoui, Abdelouahab Ugur, Ahmet**URL:** <Go to ISI>://WOS:000335559500007

**Reference Type: Journal Article****Record Number:** 211**Author:** Wall, B. L. Amsbaugh, J. F. Beglarian, A. Bergmann, T. Bichsel, H. C. Bodine, L. I. Boyd, N. M. Burritt, T. H. Chaoui, Z. Corona, T. J. Doe, P. J. Enomoto, S. Harms, F. Harper, G. C. Howe, M. A. Martin, E. L. Parno, D. S. Peterson, D. A. Petzold, L. Renschler, P. Robertson, R. G. H. Schwarz, J. Steidl, M. van Wechel, T. D. Vandevender, B. A. Wustling, S. Wierman, K. J. Wilkerson, J. F.**Year:** 2014**Title:** Dead layer on silicon p-i-n diode charged-particle detectors**Journal:** Nuclear Instruments & Methods in Physics Research Section a-Accelerators Spectrometers Detectors and Associated Equipment**Volume:** 744**Pages:** 73-79**Date:** Apr**Short Title:** Dead layer on silicon p-i-n diode charged-particle detectors**ISSN:** 0168-9002**DOI:** 10.1016/j.nima.2013.12.048**Accession Number:** WOS:000333786500012

**Abstract:** Semiconductor detectors in general have a dead layer at their surfaces that is either a result of natural or induced passivation, or is formed during the process of making a contact. Charged particles passing through this region produce ionization that is incompletely collected and recorded, which leads to departures from the ideal in both energy deposition and resolution. The silicon p-i-n diode used in the KATRIN neutrino-mass experiment has such a dead layer. We have constructed a detailed Monte Carlo model for the passage of electrons from vacuum into a silicon detector, and compared the measured energy spectra to the predicted ones for a range of energies from 12 to 20 keV. The comparison provides experimental evidence that a substantial fraction of the ionization produced in the "dead" layer evidently escapes by diffusion, with 46% being collected in the depletion zone and the balance being neutralized at the contact or by bulk recombination. The most elementary model of a thinner dead layer from which no charge is collected is strongly disfavored. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Wall, B. L. Amsbaugh, J. F. Beglarian, A. Bergmann, T. Bichsel, H. C. Bodine, L. I. Boyd, N. M. Burritt, T. H. Chaoui, Z. Corona, T. J. Doe, P. J. Enomoto, S. Harms, F. Harper, G. C. Howe, M. A. Martin, E. L. Parno, D. S. Peterson, D. A. Petzold, L. Renschler, P. Robertson, R. G. H. Schwarz, J. Steidl, M. van Wechel, T. D. vanDevender, B. A. Wuestling, S. Wierman, K. J. Wilkerson, J. F.**URL:** <Go to ISI>://WOS:000333786500012

**Reference Type: Journal Article****Record Number:** 212**Author:** Zaghouane-Boudiaf, H. Boutahala, M. Sahnoun, S. Tiar, C. Gomri, F.**Year:** 2014**Title:** Adsorption characteristics, isotherm, kinetics, and diffusion of modified natural bentonite for removing the 2,4,5-trichlorophenol**Journal:** Applied Clay Science**Volume:** 90**Pages:** 81-87**Date:** Mar**Short Title:** Adsorption characteristics, isotherm, kinetics, and diffusion of modified natural bentonite for removing the 2,4,5-trichlorophenol**ISSN:** 0169-1317**DOI:** 10.1016/j.clay.2013.12.030**Accession Number:** WOS:000333791200012

**Abstract:** Adsorption of the 2,4,5 trichlorophenol (TCP) from aqueous solution onto the surface of organo-bentonites was investigated spectrophotometrically. Natural bentonite was activated with sulfuric acid at 90 degrees C and exchanged with a set of 4 alkyltrimethylammonium bromides (alkyl = C12, C14, C16 and C18) to evaluate the effect of carbon chain length on the TCP adsorption. X-ray diffraction was used to study the change in the structural properties of the samples. The basal spacing of the activated-bentonite (AB) increased from 13.4 to 21.5 angstrom by intercalation of the cationic surfactants in the interlayer space of the clays. The intercalated cationic surfactants were characterized by Fourier transform infrared spectroscopy (FTIR). The surface areas of organo-bentonites were found to be much lower than that of AB. The contact time on the adsorption process was studied and the adsorption of TCP onto organo-bentonites followed pseudo-second-order kinetics. Adsorption isotherms were established and found to correlate with the Langmuir model with correlation coefficient of 0.998. Adsorption capacity of organo-bentonite increased with increasing the alkyl chain length. Results showed that TCP strongly interacted with AB exchanged with octadecyltrimethylammonium bromide (C18). (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Zaghouane-Boudiaf, H. Boutahala, Mokhtar Sahnoun, Sousna Tiar, Chafia Gomri, Fatima**URL:** <Go to ISI>://WOS:000333791200012

**Reference Type: Journal Article**

**Record Number: 213**

**Author: Zaidi, Z. Hamdicherif, M.**

**Year: 2014**

**Title: INCIDENCE, MORTALITY AND SURVIVAL TRENDS OF SMOKING-RELATED CANCERS IN WOMEN IN SETIF, ALGERIA, 1990-2009**

**Journal: Asia-Pacific Journal of Clinical Oncology**

**Volume: 10**

**Pages: 132-132**

**Date: Dec**

**Short Title: INCIDENCE, MORTALITY AND SURVIVAL TRENDS OF SMOKING-RELATED CANCERS IN WOMEN IN SETIF, ALGERIA, 1990-2009**

**ISSN: 1743-7555**

**Accession Number: WOS:000346343700398**

**Notes: Zaidi, Zoubida Hamdicherif, Mokhtar 9 Si**

**URL: <Go to ISI>://WOS:000346343700398**

**Reference Type: Journal Article****Record Number:** 214**Author:** Zaidi, Z. Mahnane, A. Laouamri, S. Hamdicherif, M.**Year:** 2014**Title:** THE DESCRIPTIVE EPIDEMIOLOGY OF LUNG CANCER: AN INTERNATIONAL COMPARISON OF INCIDENCE AND MORTALITY**Journal:** Journal of Thoracic Oncology**Volume:** 9**Issue:** 4**Pages:** S17-S17**Date:** Apr**Short Title:** THE DESCRIPTIVE EPIDEMIOLOGY OF LUNG CANCER: AN INTERNATIONAL COMPARISON OF INCIDENCE AND MORTALITY**ISSN:** 1556-0864**Accession Number:** WOS:000341688500034**Notes:** Zaidi, Z. Mahnane, A. Laouamri, S. Hamdicherif, M. 1**URL:** <Go to ISI>://WOS:000341688500034

**Reference Type: Journal Article****Record Number:** 215**Author:** Zeraib, A. Ramdani, M. Boudjedjou, L. Chalard, P. Figuredo, G.**Year:** 2014**Title:** Characterization and chemosystematics of Algerian thuriferous juniper (*Juniperus thurifera* L.)**Journal:** Journal of Applied Botany and Food Quality**Volume:** 87**Pages:** 249-255**Short Title:** Characterization and chemosystematics of Algerian thuriferous juniper (*Juniperus thurifera* L.)**ISSN:** 1439-040X**DOI:** 10.5073/jabfq.2014.087.035**Accession Number:** WOS:000346927700024

**Abstract:** Leaf essential oils (EO) of *Juniperus thurifera* L. collected at six locates from Aures Mountains in Algeria, were analyzed by gas chromatography (GC) and gas chromatography-mass spectrometry (GC/MS). The main components identified were: sabinene (5.2-19.78 %), terpinene-4-ol (5.43-9.37 %), elemol (0.69-7.61 %), Delta-cadinene (3.26-6.11 %). Terpenoids data of our samples and those reported in other works realized by various authors were subjected to Principal Component Analysis (PCA), and Unweighted Pair Group Method with Arithmetic means (UPGMA) cluster was carried. This analysis revealed significant differences between *Juniperus thurifera* populations, and confirmed the clear separation of Algerian populations to the European and Moroccan populations. Algerian thuriferous juniper is more similar to *J. thurifera* from Moroccan populations, and different from that of essential oils obtained from European populations.

**Notes:** Zeraib, Azzeddine Ramdani, Messaoud Boudjedjou, Lamia Chalard, Pierre Figuredo, Gille

**URL:** <Go to ISI>://WOS:000346927700024

**Reference Type: Journal Article****Record Number:** 216**Author:** Zouai, F. Bouhelal, S. Cagiao, M. E. Benabid, F. Z. Benachour, D. Calleja, F. J. B.**Year:** 2014**Title:** Study of nanoclay blends based on poly(ethylene terephthalate)/poly(ethylene naphthalene 2,6-dicarboxylate) prepared by reactive extrusion**Journal:** Journal of Polymer Engineering**Volume:** 34**Issue:** 5**Pages:** 431-439**Date:** Jul**Short Title:** Study of nanoclay blends based on poly(ethylene terephthalate)/poly(ethylene naphthalene 2,6-dicarboxylate) prepared by reactive extrusion**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2013-0244**Accession Number:** WOS:000338998500005

**Abstract:** The success of processing compatible blends, based on poly(ethylene terephthalate) (PET)/poly(ethylene naphthalene 2,6-dicarboxylate) (PEN)/clay nanocomposites in one step by reactive melt extrusion is described. Untreated clay was first purified and functionalized "in situ" with a compound based on an organic peroxide/sulfur mixture and (tetramethylthiuram disulfide) as the activator for sulfur. The PET and PEN materials were first separately mixed in the molten state with functionalized clay. The PET/4 wt% clay and PEN/7.5 wt% clay compositions showed total exfoliation. These compositions, denoted nPET and nPEN, respectively, were used to prepare new nPET/nPEN nanoblends in the same mixing batch. The nPET/nPEN nanoblends were compared to neat PET/PEN blends. The blends and nanocomposites were characterized using various techniques. Microstructural and nanostructural properties were investigated. Fourier transform infrared spectroscopy (FTIR) results showed that the exfoliation of tetrahedral clay nanolayers is complete and the octahedral structure totally disappears. It was shown that total exfoliation, confirmed by wide angle X-ray scattering (WAXS) measurements, contributes to the enhancement of impact strength and tensile modulus. In addition, WAXS results indicated that all samples are amorphous. The differential scanning calorimetry (DSC) study indicated the occurrence of one glass transition temperature  $T_g$ , one crystallization temperature  $T_c$  and one melting temperature  $T_m$  for every composition. This was evidence that both PET/PEN and nPET/nPEN blends are compatible in the entire range of compositions. In addition, the nPET/nPEN blends showed lower  $T_c$  and higher  $T_m$  values than the corresponding neat PET/PEN blends. In conclusion, the results obtained indicate that nPET/nPEN blends are different from the pure ones in nanostructure and physical behavior.

**Notes:** Zouai, Foued Bouhelal, Said Esperanza Cagiao, M. Benabid, Fatma Zohra Benachour, Djafer Balta Calleja, Francisco J.**URL:** <Go to ISI>://WOS:000338998500005

**Reference Type: Book Section****Record Number: 1****Author:** Adel, A. Laborie, S. Roose, P.**Year:** 2014**Title:** Semantic Context-aware Adaptation Platform Architecture**Editor:** Shakshuki, E. Yasar, A.**Book Title:** 5th International Conference on Ambient Systems, Networks and Technologies**Volume:** 32**Pages:** 959-964**Series Title:** Procedia Computer Science**Short Title:** Semantic Context-aware Adaptation Platform Architecture**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2014.05.518**Accession Number:** WOS:000361562600125

**Abstract:** This paper describes some adaptation issues related to context-aware assembly of heterogeneous transformation services within a wide variety of mobile devices (laptops, smartphones and tablets). A reconfiguration platform named Kalimucho has been used on top of a peer-to-peer layer to carry on the whole (re)-deployment process. More importantly, we propose to use this platform which is mainly composed of P2P reconfiguration facilities in order to support conflicts detections, semantic and social-based assembly of relevant adaptation services and customization of quality adaptation paths. These facilities are analyzed and evaluated according to local and remote experimentations. Results show the efficiency and the effectiveness of our approach. (C) 2014 Published by Elsevier B.V.

**Notes:** Adel, Alt Laborie, Sebastien Roose, Philippe Ant-2014 5th International Conference on Ambient Systems, Networks and Technologies (ANT) / 4th International Conference on Sustainable Energy Information Technology (SEIT) Jun 02-05, 2014 Hasselt, BELGIUM

**URL:** <Go to ISI>://WOS:000361562600125

**Reference Type: Book Section****Record Number:** 2**Author:** Bakhti, H. Bouzit, N. Sgem,**Year:** 2014**Title:** EXPERIMENTAL STUDY OF DIELECTRIC AND FUNCTIONAL PROPERTIES OF POLYMER MATRIX/Cu<sub>2</sub>O/BaTiO<sub>3</sub> HETEROGENEOUS COMPOSITES IN BROAD BAND FREQUENCY**Book Title:** Geoconference on Nano, Bio and Green - Technologies for a Sustainable Future, Vol II**Pages:** 169-176**Series Title:** International Multidisciplinary Scientific GeoConference-SGEM**Short Title:** EXPERIMENTAL STUDY OF DIELECTRIC AND FUNCTIONAL PROPERTIES OF POLYMER MATRIX/Cu<sub>2</sub>O/BaTiO<sub>3</sub> HETEROGENEOUS COMPOSITES IN BROAD BAND FREQUENCY**ISBN:** 1314-2704 978-619-7105-21-6**Accession Number:** WOS:000366135800022

**Abstract:** In this work, we present an experimental study on a novel ternary composite material. In this case, several samples with barium titanate (BaTiO<sub>3</sub>) and copper oxide (Cu<sub>2</sub>O) particles in powder form in various amounts dispersed in a host matrix of epoxy resin (Re/BT/Cu<sub>2</sub>O) are carried out and sintered at 150 degrees C. Their dielectric constants spectra were measured in the frequency range DC-3GHz by time domain spectroscopy (TDS). Low frequency has also been performed throughout this work, and it has primarily concentrated on conductivity behaviour which may be attributed to the effects of a percolation process. Experimental data were analyzed by means of dielectric permittivity and electric modulus formalisms. The functionality of the composite systems is related to the abrupt variation of the real part of permittivity, and to the relaxation process of the Cu<sub>2</sub>O particles. In addition, the behaviour obtained experimentally has been validated by the random mixture law of Lichtenecker in order to predict the electromagnetic behaviour of such composite material.

**Notes:** Bakhti, Haddi Bouzit, Nacerdine Sgem 2014 14th International Multidisciplinary Scientific Geoconference (SGEM) Jun 17-26, 2014 Albena, BULGARIA

**URL:** <Go to ISI>://WOS:000366135800022

**Reference Type: Book Section****Record Number:** 3**Author:** Belkaid, A. Gaubert, J. P. Gherbi, A. Rahmani, L. Ieee,**Year:** 2014**Title:** Maximum Power Point Tracking for Photovoltaic Systems with Boost Converter Sliding Mode Control**Book Title:** 2014 Ieee 23rd International Symposium on Industrial Electronics**Pages:** 556-561**Series Title:** Proceedings of the IEEE International Symposium on Industrial Electronics**Short Title:** Maximum Power Point Tracking for Photovoltaic Systems with Boost Converter Sliding Mode Control**ISBN:** 2163-5137 978-1-4799-2399-1**Accession Number:** WOS:000346705600091

**Abstract:** Tracking the Maximum Power Point (MPP) of the photovoltaic array is very difficult due to the non linearity of its I-V characteristic which is dependent to the temperature and irradiation conditions. In this paper we propose a new method called sliding mode control (SMC) to maximize the PV array output power. With this method, the PV array output power is used to directly control the dc/dc converter, thus reducing the complexity of the system. The Boost-type dc/dc converter is controlled by the DS1104 R&D controller board. This method has several advantages in comparison to others conventional methods such as best accuracy, good convergence speed and high efficiency. The proposed controller is robust to weather condition changes. Simulation and experimental results are shown.

**Notes:** Belkaid, Abdelhakim Gaubert, Jean-Paul Gherbi, Ahmed Rahmani, Lazhar Isie IEEE 23rd International Symposium on Industrial Electronics (ISIE) Jun 01-04, 2014 Istanbul, TURKEY Inst Elect & Elect Engineers, IEEE Ind Elect Soc, Bogazici Univ

**URL:** <Go to ISI>://WOS:000346705600091

**Reference Type: Book Section****Record Number:** 4**Author:** Bentoumi, M. Chikouche, D. Bakhti, H. Sgem,**Year:** 2014**Title:** A WAVELET APPROACH FOR DETECTION AND LOCATION OF LEAKS IN WATER DISTRIBUTION NETWORKS**Book Title:** Geoconference on Water Resources, Forest, Marine and Ocean Ecosystems, Vol I**Pages:** 19-26**Series Title:** International Multidisciplinary Scientific GeoConference-SGEM**Short Title:** A WAVELET APPROACH FOR DETECTION AND LOCATION OF LEAKS IN WATER DISTRIBUTION NETWORKS**ISBN:** 1314-2704 978-619-7105-13-1**Accession Number:** WOS:000371595200003

**Abstract:** Leak detection of water distribution networks is a problem that arouses the responsible authorities for distribution all around the world. The reason, which involved researchers representing various disciplines to try to find a solution to the problem by implementing efficient devices in this field. Distributions networks are being degraded over time, which can cause leakage. To detect a leak equipment and techniques are needed. They are constant progress with the development of technology. In this paper, the CWT (continuous wavelet transform) was suggested as a technique for detecting and locating leaks in water distribution networks. The treatment using the CWT technique was found as the best solution for confirmation of the presence of a leak after trying different signal analysis tools such as transforms (FFT, STFT, etc ...). The application was carried out in the laboratory with a short channel hybrid prototype (a part of steel followed by a part in PVC). Validation tests have shown the effectiveness of the method.

**Notes:** Bentoumi, Miloud Chikouche, Djamel Bakhti, Haddi Sgem 2014 14th International Multidisciplinary Scientific Geoconference (SGEM) Jun 17-26, 2014 Albena, BULGARIA Bulgarian Acad Sci, Acad Sci Czech Repub, Latvian Acad Sci, Polish Acad Sci, Russian Acad Sci, Serbian Acad Sci & Arts, Slovak Acad Sci, Natl Acad Sci Ukraine, Inst Water Problem & Hydropower NAS KR, Natl Acad Sci Armenia, Sci Council Japan, World Acad Sci, European Acad Sci Arts & Letters, Acad Sci Moldova, Montenegrin Acad Sci & Arts, Croatian Acad Sci & Arts, Georgian Natl Acad Sci, Acad Fine Arts & Design Bratislava, Turkish Acad Sci, Bulgarian Ind Assoc, Bulgarian Minist Environ & Water

**URL:** <Go to ISI>://WOS:000371595200003

**Reference Type: Book Section****Record Number: 5****Author:** Djeghloul, F. Ibrahim, F. Cantoni, M. Bowen, M. Joly, L. Boukari, S. Ohresser, P. Bertran, F. Le Fevre, P. Thakur, P. Scheurer, F. Miyamachi, T. Mattana, R. Seneor, P. Jaafar, A. Rinaldi, C. Javaid, S. Arabski, J. Kappler, J. P. Wulfhekel, W. Brookes, N. B. Bertacco, R. Taleb-Ibrahimi, A. Alouani, M. Beaurepaire, E. Weber, W.**Year:** 2014**Title:** Direct observation of a highly spin-polarized organic spinterface at room temperature**Editor:** Drouhin, H. J. Wegrowe, J. E. Razeghi, M.**Book Title:** Spintronics Vii**Volume:** 9167**Series Title:** Proceedings of SPIE**Short Title:** Direct observation of a highly spin-polarized organic spinterface at room temperature**ISBN:** 0277-786X 978-1-62841-194-2**DOI:** 916713 10.1117/12.2060367**Accession Number:** WOS:000343860800021

**Abstract:** Toward the design of large-scale electronic circuits that are entirely spintronics-driven, organic semiconductors have been identified as a promising medium to transport information using the electron spin. This requires a ferromagnetic metal-organic interface that is highly spin-polarized at and beyond room temperature, but this key building block is still lacking. We show how the interface between Co and phthalocyanine molecules constitutes a promising candidate. In fact, spin-polarized direct and inverse photoemission experiments reveal a high degree of spin polarization at room temperature at this interface.

**Notes:** Djeghloul, F. Ibrahim, F. Cantoni, M. Bowen, M. Joly, L. Boukari, S. Ohresser, P. Bertran, F. Le Fevre, P. Thakur, P. Scheurer, F. Miyamachi, T. Mattana, R. Seneor, P. Jaafar, A. Rinaldi, C. Javaid, S. Arabski, J. Kappler, J. -P. Wulfhekel, W. Brookes, N. B. Bertacco, R. Taleb-Ibrahimi, A. Alouani, M. Beaurepaire, E. Weber, W. Spintronics VII Aug 17-21, 2014 San Diego, CA Spie

**URL:** <Go to ISI>://WOS:000343860800021

**Reference Type: Book Section****Record Number:** 6**Author:** Guechi, A. Chegaar, M. Merabet, A.**Year:** 2014**Title:** Influence of solar radiation on the performance of organic solar cell**Editor:** Godlewski, M. Zakrzewski, A.**Book Title:** Physica Status Solidi C: Current Topics in Solid State Physics, Vol 11, No 9-10**Volume:** 11**Series Volume:** 9-10**Pages:** 1408-1411**Series Title:** Physica Status Solidi C-Current Topics in Solid State Physics**Short Title:** Influence of solar radiation on the performance of organic solar cell**ISBN:** 1862-6351**DOI:** 10.1002/pssc.201300594**Accession Number:** WOS:000343809200006

**Abstract:** The electrical current generated by the solar cells is very sensitive to the incident spectral distribution and intensity. This distribution varies greatly during the day due to changes in the sun's position or weather conditions. This work investigates the feasibility of using a solar spectral radiation model SMARTS2 to estimate the global solar irradiance and assess the influence of solar spectrum on the conversion efficiency of the organic thin film solar cells (PBDTTT) (poly[4,8-bis-substituted-benzo[1,2b: 4,5-b0] dithiophene-2,6-diyl-alt-4-substituted-thieno[3, 4-b]thiophene-2,6-diyl]). The variation of the common performance indicators such as short circuit current, fill factor, open circuit voltage, and efficiency are shown and discussed for each month. The results show that the variations in the solar spectrum affect the different materials to different extent. The maximum efficiency is obtained in the summer months; however the lower efficiency is obtained during winter. (C) 2014 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Guechi, Abla Chegaar, Mohamed Merabet, Abdelali Fall Meeting Symposium on Novel Materials for Electronic, Optoelectronic, Photovoltaic and Energy Saving Applications (E-MRS) Sep 16-20, 2013 Warsaw, POLAND

**URL:** <Go to ISI>://WOS:000343809200006

**Reference Type: Book Section****Record Number:** 7**Author:** Hamzaoui, D. Vuong, T. P. Djahli, F. Kiani, G. I. Ieee,**Year:** 2014**Title:** Novel Compact Dual-Band Artificial Magnetic Conductors for Wi-Fi Applications**Book Title:** 2014 8th European Conference on Antennas and Propagation**Pages:** 2397-2400**Series Title:** Proceedings of the European Conference on Antennas and Propagation**Short Title:** Novel Compact Dual-Band Artificial Magnetic Conductors for Wi-Fi Applications**ISBN:** 2164-3342 978-88-907018-4-9**Accession Number:** WOS:000361548802133

**Abstract:** Dual-band compact artificial magnetic conductors AMC have been presented for Wi-Fi frequency bands. The periodicity of both the structure is less than  $0,13 \lambda(0)$ , where  $\lambda(0)$  is the free space wavelength of the lower resonant frequency, making it very compact. The structures act as AMC for 2.5 and 5.5 GHz WLAN bands providing good frequency stability for both TE and TM polarizations when the angle of incidence is varied from 0 to 60 degrees. A comparison between the two designs i.e. one with via and other without via has been presented and these are compared with a third AMC given in literature. The proposed AMCs have increased bandwidth performance, better frequency stability at oblique incidence and are ultra compact for practical communication application.

**Notes:** Hamzaoui, D. Vuong, T. P. Djahli, F. Kiani, G. I. Eucap 8th European Conference on Antennas and Propagation (EuCAP) Apr 06-11, 2014 Hague, NETHERLANDS

**URL:** <Go to ISI>://WOS:000361548802133

**Reference Type: Book Section****Record Number:** 8**Author:** Heraguemi, K. E. Kamel, N. Drias, H.**Year:** 2014**Title:** Association Rule Mining Based on Bat Algorithm**Editor:** Pan, L. Paun, G. PerezJimenez, M. J. Song, T.**Book Title:** Bio-Inspired Computing - Theories and Applications, Bic-Ta 2014**Volume:** 472**Pages:** 182-186**Series Title:** Communications in Computer and Information Science**Short Title:** Association Rule Mining Based on Bat Algorithm**ISBN:** 1865-0929 978-3-662-45048-2**Accession Number:** WOS:000349707200029

**Abstract:** In this paper, we propose a bat-based algorithm (BA) for association rule mining (ARM Bat). Our algorithm aims to maximize the fitness function to generate the best rules in the defined dataset starting from a specific minimum support and minimum confidence. The efficiency of our proposed algorithm is tested on several generic datasets with different number of transactions and items. The results are compared to FPgrowth algorithm results on the same datasets. ARM bat algorithm perform better than the FPgrowth algorithm in term of computation speed and memory usage

**Notes:** Heraguemi, Kamel Eddine Kamel, Nadjat Drias, Habiba 9th International Conference on Bio-Inspired Computing - Theories and Applications (BIC-TA) Oct 16-19, 2014 Wuhan, PEOPLES R CHINA Natl Nat Sci Fdn China, Huazhong Univ Sci & Technol, Zhengzhou Univ Light Ind

**URL:** <Go to ISI>://WOS:000349707200029

**Reference Type: Book Section****Record Number:** 9**Author:** Khalfallah, N. Boukerram, A. Traxler, J.**Year:** 2014**Title:** Declarative Approach for Adaptivity and Personalization in Mobile Learning: An Algerian Perspective**Editor:** Kalz, M. Bayyurt, Y. Specht, M.**Book Title:** Mobile as Mainstream-Towards Future Challenges in Mobile Learning, Mlearn 2014**Volume:** 479**Pages:** 15-28**Series Title:** Communications in Computer and Information Science**Short Title:** Declarative Approach for Adaptivity and Personalization in Mobile Learning: An Algerian Perspective**ISBN:** 1865-0929 978-3-319-13415-4**Accession Number:** WOS:000348500300002

**Abstract:** In this paper we present how mobile learning (mLearning) can be personalized/adaptive via the use of the declarative approach in order to be adapted with the Algerian context. The background to this work is mLearning progress in Algerian society, based on several areas such as the socio-cultural, institutional, historical, epistemological, pedagogic, linguistic, infrastructural and demographic context. This context allows us to think about introducing the mLearning concept to Algerians, especially students, by developing a mLearning platform after the arrival of 3G technology in 2013. We have chosen PBL as an active pedagogical strategy to be implemented with a mLearning platform. In Algeria, due to the diversity known in many fields, the personalization of the PBL model has become indispensable and vital. That is why we propose in this study an architecture that shows the relationship between the adaptivity, mobile ontology (mOntology) and the reuse of declarativity approach results in order to design an Adaptive/Personalized Virtual Document (AVD) for an institutional strategy model (the PBL model) based on the diversity of the Algerian context (learners, learning needs, languages, cultures, society constraints, infrastructure needs ...).

**Notes:** Khalfallah, Nadia Boukerram, Abdellah Traxler, John 13th World Conference on Mobile and Contextual Learning (mLearn) Nov 03-05, 2014 Istanbul, TURKEY Qualcomm Inc, Bogazici Univ, Kadir Has Univ

**URL:** <Go to ISI>://WOS:000348500300002

**Reference Type: Book Section****Record Number:** 10**Author:** Kharmouche, A.**Year:** 2014**Title:** Magnetic properties of Co thin films evaporated under normal and oblique incidence**Editor:** Ovchinnikov, S. Samardak, A.**Book Title:** Trends in Magnetism: Nanomagnetism**Volume:** 215**Pages:** 288-291**Series Title:** Solid State Phenomena**Short Title:** Magnetic properties of Co thin films evaporated under normal and oblique incidence**ISBN:** 1012-0394 978-3-03835-054-5**DOI:** 10.4028/www.scientific.net/SSP.215.288**Accession Number:** WOS:000348048400057

**Abstract:** We have evaporated series of Co thin films under vacuum onto silicon and glass substrates at a perpendicular and oblique incidence. The thickness of the magnetic layer ranges from 20 to 400 nm. The static magnetic properties have been performed by means of magnetic force microscopy (M.F.M.) and Alternating Gradient Field Magnetometer (A.G.F.M.) techniques. The influence of the magnetic layer thickness and the deposition angle are studied. As results, it is found a decrease of the coercive field from 250 Oe, for  $t = 20$  nm, to 95 Oe, for  $t = 400$  nm. These H-c values for obliquely evaporated cobalt films are larger than those measured for cobalt films evaporated at normal incidence, found to be equal to a few Oe. It is also found a decrease of the anisotropy field, from 1.6 kOe for the 20 nm Co thick film to 0.95 kOe for the 200 nm Co thick film. Furthermore, an increase of these fields with the increase of the deposition angle is found, as well. The easy axis of the saturation magnetization lies in the film plane, irrespective of the substrate nature. The MFM observations were performed after in-plane ac demagnetization and stripe domains are observed, particularly for the thickest films, where the magnetocrystalline anisotropy is dominant, showing well-defined stripe patterns, inferring the weaker perpendicular anisotropies. These results, and others, are presented and discussed.

**Notes:** Kharmouche, A. 5th Euro-Asian Symposium on Trends in MAGnetism - Nanomagnetism (EASTMAG) Sep 15-21, 2013 Vladivostok, RUSSIA Far Eastern Fed Univ, Russian Fdn Basic Res, Dynasty Fdn, Far Eastern Branch Russian Acad Sci, TechnoInfo Ltd Co

**URL:** <Go to ISI>://WOS:000348048400057

**Reference Type: Book Section****Record Number:** 11**Author:** Laamari, M. A. Kamel, N.**Year:** 2014**Title:** A Hybrid Bat Based Feature Selection Approach for Intrusion Detection**Editor:** Pan, L. Paun, G. PerezJimenez, M. J. Song, T.**Book Title:** Bio-Inspired Computing - Theories and Applications, Bic-Ta 2014**Volume:** 472**Pages:** 230-238**Series Title:** Communications in Computer and Information Science**Short Title:** A Hybrid Bat Based Feature Selection Approach for Intrusion Detection**ISBN:** 1865-0929 978-3-662-45048-2**Accession Number:** WOS:000349707200038

**Abstract:** Intrusion detection Systems (IDS) are used for detecting malicious and abnormal behaviors, but they suffer from many issues like high resource consumption, high false alarm rate and many others. In this paper, we present a new algorithm to improve intrusion detection and reduce resource consumption. The proposed HBA-SVM IDS combines a hybrid Bat meta-heuristic Algorithm with a support vector machine (SVM) classifier for simultaneous feature and optimal SVM parameters selection, to reduce data dimensionality and to improve IDS detection. To evaluate our system, we used the NSL-KDD dataset and compare against a standard SVM and a PSO-SVM algorithm. Compared to these algorithms experimental result show that our system reduces the number of features needed for intrusion detection by 62% and achieves higher detection rate and lower false alarm rate.

**Notes:** Laamari, Mohamed Amine Kamel, Nadjat 9th International Conference on Bio-Inspired Computing - Theories and Applications (BIC-TA) Oct 16-19, 2014 Wuhan, PEOPLES R CHINA Natl Nat Sci Fdn China, Huazhong Univ Sci & Technol, Zhengzhou Univ Light Ind

**URL:** <Go to ISI>://WOS:000349707200038

**Reference Type: Book Section****Record Number:** 12**Author:** Mami, N. A.**Year:** 2014**Title:** GOOD PRACTICE EXCHANGE IN THE ALGERIAN HIGHER EDUCATION COOPERATION POLICY**Editor:** Chova, L. G. Martinez, A. L. Torres, I. C.**Book Title:** Iceri2014: 7th International Conference of Education, Research and Innovation**Pages:** 5680-5684**Series Title:** ICERI Proceedings**Short Title:** GOOD PRACTICE EXCHANGE IN THE ALGERIAN HIGHER EDUCATION COOPERATION POLICY**ISBN:** 2340-1095 978-84-617-2484-0**Accession Number:** WOS:000367082905106

**Abstract:** Algeria has been one of the pioneering countries to introduce the Bologna Process as a system of instruction in Higher Education since the year 2004-2005. One among the objectives of the LMD reform was to enhance cooperation at international level and to encourage mobility and research. As a matter of fact, practitioners and decision-makers worked in accordance with the exigencies set at an international level in order to actively take part to the Erasmus Mundus and Erasmus + programmes. Erasmus Mundus was meant to promote the career prospects of students, and, thus, to promote intercultural understanding through cooperation with third countries. Following the objective of the European Union's foreign policy with regard to sustainable development of third countries in Higher Education, the Algerian universities have adhered to three main actions namely: Action 1. Erasmus Mundus joint programmes with scholarships for Masters and Doctorates; Action 2. Erasmus Mundus partnerships with former external scholarships; Action 3. Erasmus Mundus project attractiveness. On the other hand, Algeria is taking part to other projects like Tempus and Horizon 2020 with new Erasmus + actions. With a number of such projects, I attempt to share my experience in the field of international cooperation and bring some ideas of how to better innovate within the new capacity-building strategy. The concept of good practice exchange and how this has been applied in the Algerian Higher Education institutions will be further explained in this paper.

**Notes:** Mami, Naouel Abdellatif 7th International Conference of Education, Research and Innovation (ICERI) Nov 17-19, 2014 Seville, SPAIN

**URL:** <Go to ISI>://WOS:000367082905106

**Reference Type: Book Section****Record Number:** 13**Author:** Merahi, F. Mekhilef, S. Berkouk, E. Ieee,**Year:** 2014**Title:** DC-Voltage Regulation of a Five Levels Neutral Point Clamped Cascaded Converter for Wind Energy Conversion System**Book Title:** 2014 International Power Electronics Conference**Pages:** 560-566**Series Title:** International Conference on Power Electronics**Short Title:** DC-Voltage Regulation of a Five Levels Neutral Point Clamped Cascaded Converter for Wind Energy Conversion System**ISBN:** 2150-6078 978-1-4799-2705-0**Accession Number:** WOS:000347109200081

**Abstract:** Multilevel converters are widely recognized as a suitable solution for directly interfacing different types of power sources and energy storage systems to the medium voltage grids, due to their ability in high-voltage and high-power applications. The DC-voltage regulation of a five-level neutral-point clamped (NPC) in closed loop is presented. It consists to regulate the average value of the DC-voltage by using one loop instead of four loops. The modeling and the control of the different components of the wind energy conversion system are presented. The wind turbine is controlled using the maximum power point tracking algorithm (MPPT) based on the wind speed estimation. The vector control of active and reactive power is used to control the doubly fed induction generator (DFIG) through the rotor. The dynamic behavior of the global system is simulated in MATLAB/Simulink interface programming. The results are shown to validate the effectiveness of the proposed system.

**Notes:** Merahi, Farid Mekhilef, Saad Berkouk, El Madjid Ipec-hiroshima 2014 - ecce-asia International Power Electronics Conference (IPEC-ECCE-ASIA) May 18-21, 2014 Hiroshima, JAPAN IEEJ Ind Applicat Soc, IEEE Power Elect Soc, European Power Elect & Drives Assoc

**URL:** <Go to ISI>://WOS:000347109200081

**Reference Type: Book Section****Record Number:** 14**Author:** Messaadi, S. Daamouche, M. Medouer, H.**Year:** 2014**Title:** Electrodeposited Ni100-XFex Thin Films On Copper Substrates**Editor:** Hristoforou, E. Vlachos, D. S.**Book Title:** Materials and Applications for Sensors and Transducers Iii**Volume:** 605**Pages:** 665-668**Series Title:** Key Engineering Materials**Short Title:** Electrodeposited Ni100-XFex Thin Films On Copper Substrates**ISBN:** 1013-9826 978-3-03835-051-4**DOI:** 10.4028/www.scientific.net/KEM.605.665**Accession Number:** WOS:000348035600164

**Abstract:** Due to their soft operational capacity and magnetic properties, Iron Nickel alloys are of great commercial interest. A simple and inexpensive technique for the production of Nickel-Iron thin films is electrodeposition. A lot of physical and chemical parameters (substrates, concentration, current density, potential, temperature, pH, agents of addition.....) can significantly influence the physical properties, such as homogeneity, bright, structure and morphology of the Ni-Fe deposits. This paper presents a study into some characteristics of Ni-Fe deposits on Copper substrates. All the electrochemical experiments were performed in a three electrode cell in which the volume of the bath was 150ml. Electrodeposition of Ni-Fe was carried out potentiostatically from a Brenner type electrolytic bath in [0.1M] aqueous solutions of Ni-Fe. The applied potential is -1.20V and the deposition time varies from 10 min to 30 min for all experiments.

**Notes:** Messaadi, S. Daamouche, M. Medouer, H. 3rd International Conference on Materials and Applications for Sensors and Transducers (IC-MAST) Sep 13-17, 2013 Prague, CZECH REPUBLIC

**URL:** <Go to ISI>://WOS:000348035600164

**Reference Type: Book Section****Record Number:** 15**Author:** Messous, A. Bouloufa, A. Djessas, K. Bouchama, I.**Year:** 2014**Title:** Structural, electrical and optical properties of CuGaTe<sub>2</sub> absorber for thin-film solar cells**Editor:** Godlewski, M. Zakrzewski, A.**Book Title:** Physica Status Solidi C: Current Topics in Solid State Physics, Vol 11, No 9-10**Volume:** 11**Series Volume:** 9-10**Pages:** 1443-1446**Series Title:** Physica Status Solidi C-Current Topics in Solid State Physics**Short Title:** Structural, electrical and optical properties of CuGaTe<sub>2</sub> absorber for thin-film solar cells**ISBN:** 1862-6351**DOI:** 10.1002/pssc.201300657**Accession Number:** WOS:000343809200014

**Abstract:** Near-stoichiometry composition CuGaTe<sub>2</sub> (CGT) thin films prepared by close-spaced vapour transport (CSVT) with copper excess in the source has been investigated and was confirmed by energy dispersive spectroscopy. The influence of temperature substrate on structural properties of CGT was studied, with the optimal substrate temperature at 480 degrees C. Morphological and structural analyses allowed identifying the type of crystallites. Crystalline phases of the films were examined using X-ray diffraction. A strong (112) orientation perpendicular to substrate plane was observed and additional reflections planes were also detected. The electrical resistivity was determined using the four probe method and lies in the 0.127-0.271 Omega cm range. The direct bandgap is about 1.7 eV and resistivity showed a low value. (C) 2014 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Messous, Ammar Bouloufa, Abdesselam Djessas, Kamal Bouchama, Idris Fall Meeting Symposium on Novel Materials for Electronic, Optoelectronic, Photovoltaic and Energy Saving Applications (E-MRS) Sep 16-20, 2013 Warsaw, POLAND

**URL:** <Go to ISI>://WOS:000343809200014

**Reference Type: Book Section****Record Number:** 16**Author:** Radjai, T. Gaubert, J. P. Rahmani, L. Ieee,**Year:** 2014**Title:** The New FLC-Variable Incremental Conductance MPPT with Direct Control Method Using Cuk Converter**Book Title:** 2014 Ieee 23rd International Symposium on Industrial Electronics**Pages:** 2508-2513**Series Title:** Proceedings of the IEEE International Symposium on Industrial Electronics**Short Title:** The New FLC-Variable Incremental Conductance MPPT with Direct Control Method Using Cuk Converter**ISBN:** 2163-5137 978-1-4799-2399-1**Accession Number:** WOS:000346705600407

**Abstract:** Maximum power point tracking (MPPT) is a necessary function for all photovoltaic (PV) systems. The classical incremental conductance (IncCond) maximum power point tracking (MPPT) with direct control is widely applied in many papers. The IncCond algorithm is prone to failure during high changes in the irradiance. This paper deals with a new algorithm based on variable step size to eliminate all drawbacks of the classical IncCond algorithm with direct control. We use fuzzy logic controller to adjust the duty cycle change, therefore, the reach of MPP is quick and accurate simultaneously during the dynamic and steady state conditions compared to conventional IncCond MPPT with direct control method, a controlled Cuk dc-dc converter was used and connected to a SunTech STP085B in order to verify the results. We used Matlab Simulink for simulation, the results clearly indicate the improvement of the proposed method

**Notes:** Radjai, Tawfik Gaubert, Jean Paul Rahmani, Lazhar Isie IEEE 23rd International Symposium on Industrial Electronics (ISIE) Jun 01-04, 2014 Istanbul, TURKEY Inst Elect & Elect Engineers, IEEE Ind Elect Soc, Bogazici Univ

**URL:** <Go to ISI>://WOS:000346705600407

**Reference Type: Book Section****Record Number:** 17**Author:** Sahli, Z. Hamouda, A. Bekrar, A. Trentesaux, D. Ieee,**Year:** 2014**Title:** Hybrid PSO-tabu search for the Optimal Reactive Power Dispatch Problem**Book Title:** 40th Annual Conference of the Ieee Industrial Electronics Society**Pages:** 3536-3542**Series Title:** IEEE Industrial Electronics Society**Short Title:** Hybrid PSO-tabu search for the Optimal Reactive Power Dispatch Problem**ISBN:** 1553-572X 978-1-4799-4032-5**Accession Number:** WOS:000369916403064

**Abstract:** This paper presents a new approach to solve the optimal reactive power dispatch (ORPD) problem based on hybridizing Particle Swarm Optimization (PSO) and Tabu-Search (TS) meta-heuristics (PSO-TS). The ORPD problem is formulated as a nonlinear constrained single-objective optimization problem where the real power loss is to be minimized. The proposed approach is used to find the settings of the control variables such as generator voltages, tap positions of tap changing transformers and the amount of reactive compensation devices, to optimize power transmission loss. The study was implemented on IEEE 30-bus systems, and the results were compared with non-hybridized PSO and TS and other evolutionary algorithms reported in the literature.

**Notes:** Sahli, Zahir Hamouda, Abdelatif Bekrar, Abdelghani Trentesaux, Damien Iecon 2014 40th Annual Conference of the IEEE-Industrial-Electronics-Society (IECON) Oct 30-nov 01, 2014 Dallas, TX Inst Elect & Elect Engineers, IEEE Ind Elect Soc

**URL:** <Go to ISI>://WOS:000369916403064

**Reference Type: Book**

**Record Number: 1**

**Author:** Abderezak, D. Edine, B. A.

**Year:** 2014

**Title:** CSR, sustainable development and urban impacts- Case of the Entreprise Portuaire de Bejaia (EPB)

**Series Editor:** Soliman, K. S.

**Series Title:** Crafting Global Competitive Economies: 2020 Vision Strategic Planning & Smart Implementation, Vols I-Iv

**Number of Pages:** 2271-2281

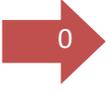
**Short Title:** CSR, sustainable development and urban impacts- Case of the Entreprise Portuaire de Bejaia (EPB)

**ISBN:** 978-0-9860419-3-8

**Accession Number:** WOS:000360509300228

**Notes:** Abderezak, Djemili Edine, Belkhiri Aimad 24th International-Business-Information-Management-Association Conference Nov 06-07, 2014 Milan, ITALY Int Business Informat Management Assoc

**URL:** <Go to ISI>://WOS:000360509300228



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# PRODUCTION SCIENTIFIQUE ANNEE 2015

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1

**Reference Type: Journal Article**

**Record Number: 1**

**Author:** Abaci, S. Nessark, B.

**Year:** 2015

**Title:** Characterization and corrosion protection properties of composite material (PANI+TiO<sub>2</sub>) coatings on A304 stainless steel

**Journal:** Journal of Coatings Technology and Research

**Volume:** 12

**Issue:** 1

**Pages:** 107-120

**Date:** Jan

**Short Title:** Characterization and corrosion protection properties of composite material (PANI+TiO<sub>2</sub>) coatings on A304 stainless steel

**ISSN:** 1945-9645

**DOI:** 10.1007/s11998-014-9611-x

**Accession Number:** WOS:000350242100008

**Abstract:** This work presents the corrosion protection behavior of A304 stainless steel in an acidic medium by using coatings based on polyaniline+TiO<sub>2</sub> composite material. The influence of parameters such as concentration of aniline, TiO<sub>2</sub> content, and pH of the solution were investigated. The coatings which had been deposited by cyclic voltammetry on substrates of A304 steel were then characterized by electrochemical impedance spectroscopy. The cyclic voltammograms showed three redox couples characteristic of the different oxidation and reduction states of the produced polymer. PANI+TiO<sub>2</sub> composite material was observed to exhibit higher corrosion resistance and better properties. The effectiveness of coatings in preventing corrosion was tested by potentiodynamic polarization studies and scanning electron microscopy was used to characterize the morphology of the coatings. The results showed that PANI+TiO<sub>2</sub> coatings offer good anticorrosion protection to steel in 1 M H<sub>2</sub>SO<sub>4</sub> solutions. The micrograph taken at the coatings surface showed that (PANI+TiO<sub>2</sub>)/A304 composite was uniform in nature and TiO<sub>2</sub> particles were uniformly covered by PANI. After immersion into a corrosive solution for 45 min, no aggressive effect was observed and the coating films were still present. Moreover, the formation of PANI+TiO<sub>2</sub> composite was also confirmed by EDX. Furthermore, it was found that the presence of a low amount of TiO<sub>2</sub> in PANI coatings afforded the best protection due to the formation of a coating layer on the metallic surface which behaved like a physical barrier against the aggressive medium attack.

**Notes:** Abaci, Souhila Nessark, Belkacem

**URL:** <Go to ISI>://WOS:000350242100008

**Reference Type: Journal Article****Record Number: 2****Author:** Abderazek, H. Ferhat, D. Atanasovska, I. Boualem, K.**Year:** 2015**Title:** A differential evolution algorithm for tooth profile optimization with respect to balancing specific sliding coefficients of involute cylindrical spur and helical gears**Journal:** Advances in Mechanical Engineering**Volume:** 7**Issue:** 9**Date:** Sep**Short Title:** A differential evolution algorithm for tooth profile optimization with respect to balancing specific sliding coefficients of involute cylindrical spur and helical gears**ISSN:** 1687-8140**DOI:** 10.1177/1687814015605008**Accession Number:** WOS:000362293200014

**Abstract:** Profile shift has an immense effect on the sliding, load capacity, and stability of involute cylindrical gears. Available standards such as ISO/DIS 6336 and BS 436 DIN/3990 currently give the recommendation for the selection of profile shift coefficients. It is, however, very approximate and usually given in the form of implicit graphs or charts. In this article, the optimal selection values of profile shift coefficients for cylindrical involute spur and helical gears are described, using a differential evolution algorithm. The optimization procedure is developed specifically for exact balancing specific sliding coefficients at extremes of contact path and account for gear design constraints. The obtained results are compared with those of standards and research of other authors. They demonstrate the effectiveness and robustness of the applied method. A substantial improvement in balancing specific sliding coefficients is found in this work.

**Notes:** Abderazek, Hammoudi Ferhat, Djeddou Atanasovska, Ivana Boualem, Keskes**URL:** <Go to ISI>://WOS:000362293200014

**Reference Type: Journal Article****Record Number: 3****Author:** Abderrezek, H. Harmas, M. N. Ieee,**Year:** 2015**Title:** Comparison Study Between the terminal Sliding Mode Control and the terminal Synergetic control Using PSO for DC-DC Converter**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 172-+**Short Title:** Comparison Study Between the terminal Sliding Mode Control and the terminal Synergetic control Using PSO for DC-DC Converter**Accession Number:** WOS:000380457200009

**Abstract:** DC-DC converters are widely used as reliable power source for many industrial and military applications, computers and electronic devices. Several control methods were developed for DCDC converters control mostly with asymptotic convergence. Sliding mode, synergetic control are a proven robust controllers approach and will be used here in a so called terminal scheme to achieve finite time convergence thus enhancing the already established technique robustness. Lyapounov synthesis is adopted to assure controlled system stability. Furthermore, a PSO algorithm will be used to optimize controller's parameters using an ITAE criterion. Simulation of terminal synergetic control of a DC-DC converter is carried out for different operating conditions and results are compared to terminal sliding mode control performance, that which demonstrate the effectiveness and feasibility of the proposed control method.

**Notes:** Abderrezek, Hadjer. Harmas, M. N. 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200009

**Reference Type: Journal Article****Record Number:** 4**Author:** Abderrezek, M. Fathi, M. Mekhilef, S. Djahli, F.**Year:** 2015**Title:** Effect of Temperature on the GaInP/GaAs Tandem Solar Cell Performances**Journal:** International Journal of Renewable Energy Research**Volume:** 5**Issue:** 2**Pages:** 629-634**Short Title:** Effect of Temperature on the GaInP/GaAs Tandem Solar Cell Performances**ISSN:** 1309-0127**Accession Number:** WOS:000366421000034

**Abstract:** GaInP and GaAs being promising materials for large scale photovoltaic applications, the effect of temperature on the electrical parameters of a GaInP/GaAs tandem solar cell has been investigated in this paper. The top GaInP and the bottom GaAs tandem cells were separately simulated using the one dimensional solar simulator SCAPS-1D. The temperature dependency of the solar cell's characteristics was investigated in the temperature range from 25 to 80 degrees C. The simulation results show that voltage losses within the tandem cell are additive (Top cell and Bottom cell), while the short circuit current density depends smoothly on temperature, and the efficiency reduction is about (-0.038), (-0.035) and (-0.054 % /degrees C) for the bottom, top and tandem cells respectively. The matching current becomes dependent on the top cell, since this last has smaller variation compared with the bottom cell.

**Notes:** Abderrezek, Mahfoud Fathi, Mohamed Mekhilef, Saad Djahli, Farid**URL:** <Go to ISI>://WOS:000366421000034

**Reference Type: Journal Article****Record Number: 5****Author:** Achache, M.**Year:** 2015**Title:** Complexity analysis of an interior point algorithm for the semidefinite optimization based on a kernel function with a double barrier term**Journal:** Acta Mathematica Sinica-English Series**Volume:** 31**Issue:** 3**Pages:** 543-556**Date:** Mar**Short Title:** Complexity analysis of an interior point algorithm for the semidefinite optimization based on a kernel function with a double barrier term**ISSN:** 1439-8516**DOI:** 10.1007/s10114-015-1314-4**Accession Number:** WOS:000349627200012**Abstract:** In this paper, we establish the polynomial complexity of a primal-dual path-following interior point algorithm for solving semidefinite optimization (SDO) problems. The proposed algorithm is based on a new kernel function which differs from the existing kernel functions in which it has a double barrier term. With this function we define a new search direction and also a new proximity function for analyzing its complexity. We show that if  $q(1) > q(2) > 1$ , the algorithm has and complexity results for large- and small-update methods, respectively.**Notes:** Achache, Mohamed**URL:** <Go to ISI>://WOS:000349627200012

**Reference Type: Journal Article**

**Record Number: 6**

**Author: Achache, M. Goutali, M.**

**Year: 2015**

**Title: Complexity analysis and numerical implementation of a full-Newton step interior-point algorithm for LCCO**

**Journal: Numerical Algorithms**

**Volume: 70**

**Issue: 2**

**Pages: 393-405**

**Date: Oct**

**Short Title: Complexity analysis and numerical implementation of a full-Newton step interior-point algorithm for LCCO**

**ISSN: 1017-1398**

**DOI: 10.1007/s11075-014-9955-4**

**Accession Number: WOS:000361819600010**

**Abstract:** In this paper, we present a primal-dual interior point algorithm for linearly constrained convex optimization (LCCO). The algorithm uses only full-Newton step to update iterates with an appropriate proximity measure for controlling feasible iterations near the central path during the solution process. The favorable polynomial complexity bound for the algorithm with short-step method is obtained, namely  $O(\sqrt{n} \log n/\epsilon)$  which is as good as the linear and convex quadratic optimization analogue. Numerical results are reported to show the efficiency of the algorithm.

**Notes:** Achache, Mohamed Goutali, Moufida

**URL:** <Go to ISI>://WOS:000361819600010



**Reference Type: Journal Article**

**Record Number: 7**

**Author:** Achouri, F. Achouri, I. Khamliche, M. Ieee,

**Year:** 2015

**Title:** Protection of 25Kv Electrified railway system

**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)

**Pages:** 91-96

**Short Title:** Protection of 25Kv Electrified railway system

**Accession Number:** WOS:000380457200011

**Abstract:** improving a reliability of electrified railway operation system requires protection against overvoltage, particularly those of atmospheric origin. The most serious threat to the traction system is lightning when it strike the mast or conductors. to protect a system from this phenomenon, the ZnO arrester are used. In the present investigation the system under study is developed and each element is represented by a model corresponding in EMTP Program.

Protective effect of the surge arrester and discharge current which passes through it is analyzed and discussed in case lightning strikes a mast. The simulation results have shown that the surge arrester reduce overvoltage in primary power transformer traction below 150KV under critical conditions.

**Notes:** Achouri, Farid Achouri, Imed Khamliche, Mabrouk 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200011

**Reference Type: Journal Article****Record Number:** 8**Author:** Addala, A. Setifi, F. Kottrup, K. G. Glidewell, C. Setifi, Z. Smith, G. Reedijk, J.**Year:** 2015**Title:** The synthesis, characterization, X-ray structure and magnetism of dinuclear-based bis  $\mu$ -(1,1,3,3-tetracyano-2-ethoxypropenido-kappa N-2,N') (1,1,3,3-tetracyano-2-ethoxypropenido-kappa N)(2,2'-bipyridine)copper(II) organized in alternating chains via semi-coordinating Cu-N distances**Journal:** Polyhedron**Volume:** 87**Pages:** 307-310**Date:** Feb**Short Title:** The synthesis, characterization, X-ray structure and magnetism of dinuclear-based bis  $\mu$ -(1,1,3,3-tetracyano-2-ethoxypropenido-kappa N-2,N') (1,1,3,3-tetracyano-2-ethoxypropenido-kappa N)(2,2'-bipyridine)copper(II) organized in alternating chains via semi-coordinating Cu-N distances**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2014.11.023**Accession Number:** WOS:000353316800040**Abstract:** The monoanionic ligand 1,1,3,3-tetracyano-2-ethoxypropenide (tcnoet) is reported with its Cu-II-bpy complex of formula  $[\text{Cu}_2(\mu\text{-tcnoet})(2)(\text{tcnoet})(2)(\text{bpy})(2)]$ . The structure has been determined using X-ray diffraction and features an alternating chain with bridging tcnoet ligands. One ligand acts as a bidentate, dinucleating ligand with one short Cu-N and one medium Cu-N bond, whereas the other tcnoet is largely monodentate, albeit with a very weak interdimer Cu-N bond. Despite the arrangement in dinuclear units, further arranged into linear chains through the non-bridging tcnoet ligand, the compound shows no significant magnetic exchange, as deduced from magnetic susceptibility down to 4 K. Ligand-field, IR and EPR spectra in the solid state and in frozen solution are reported and are consistent with the overall structure. (C) 2014 Elsevier Ltd. All rights reserved.**Notes:** Addala, Abderezak Setifi, Fatima Kottrup, Konstantin G. Glidewell, Christopher Setifi, Zouaoui Smith, Graham Reedijk, Jan**URL:** <Go to ISI>://WOS:000353316800040

**Reference Type: Journal Article****Record Number:** 9**Author:** Adjerouda, F. M. Djahli, F. Mayouf, A. Devers, T.**Year:** 2015**Title:** A coordinated genetic based type-2 fuzzy stabilizer for conventional and superconducting generators**Journal:** Electric Power Systems Research**Volume:** 129**Pages:** 51-61**Date:** Dec**Short Title:** A coordinated genetic based type-2 fuzzy stabilizer for conventional and superconducting generators**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2015.07.014**Accession Number:** WOS:000362137900006

**Abstract:** This paper presents a new coordinated genetic interval type-2 fuzzy stabilizer for enhancing stability of a single machine infinite-bus (SMIB) power system including conventional or superconducting generators. Its principle is based on a coordination done by implementing simultaneously, interval type-2 fuzzy controllers, into excitation and turbine governor systems. Optimal adjustment of scaling factors has been carried out using genetic algorithms (GAs). Type-2 fuzzy controller provides improvement in comparison with type-1 controller in terms of modeling and minimizing the effect of uncertainties. Furthermore, governor control helps in damping oscillations enhancement especially in case of superconducting machine when excitation control alone is not sufficient. Non-linear simulation results of a SMIB power system, under different operating conditions, prove the effectiveness and the robustness of the proposed optimized type-2 fuzzy stabilizer (GFLC2EG) for both conventional and superconducting generators. In order to validate the robust performance of the proposed stabilizer, a comparative study is presented showing its superiority over other types of stabilizers. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Adjerouda, F. Mayouf Djahli, F. Mayouf, A. Devers, T.**URL:** <Go to ISI>://WOS:000362137900006

**Reference Type: Journal Article****Record Number:** 10**Author:** Afghoul, H. Krim, F. Chikouche, D. Beddar, A.**Year:** 2015**Title:** Design and real time implementation of fuzzy switched controller for single phase active power filter**Journal:** Isa Transactions**Volume:** 58**Pages:** 614-621**Date:** Sep**Short Title:** Design and real time implementation of fuzzy switched controller for single phase active power filter**ISSN:** 0019-0578**DOI:** 10.1016/j.isatra.2015.07.008**Accession Number:** WOS:000364255600056

**Abstract:** This paper proposes a novel fuzzy switched controller (FSC) integrated in direct current control (DCC) algorithm for single phase active power filter (SPAPF). The controller under study consists of conventional PI controller, fractional order PI controller (FO-PI) and fuzzy decision maker (FDM) that switches between them using reduced fuzzy logic control. The proposed controller offers short response time with low damping and deals efficiently with the external disturbances while preserving the robustness properties. To fulfill the requirements of power quality, unity power factor and harmonics limitations in active power filtering an experimental test bench has been built using dSPACE 1104 to demonstrate the feasibility and effectiveness of the proposed controller. The obtained results present high performance in steady and transient states. (C) 2015 ISA. Published by Elsevier Ltd. All rights reserved.

**Notes:** Afghoul, Hamza Krim, Fateh Chikouche, Djamel Beddar, Antar**URL:** <Go to ISI>://WOS:000364255600056

**Reference Type: Journal Article****Record Number: 11****Author:** Afghoul, H. Krim, F. Chikouche, D. Beddar, A. Ieee,**Year:** 2015**Title:** Fractional order direct current control algorithm for three-phase grid-connected PV system**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Fractional order direct current control algorithm for three-phase grid-connected PV system**Accession Number:** WOS:000380433000025

**Abstract:** This paper integrates a suitable controller in DC-bus voltage regulation loop of the direct current control (DCC) algorithm for three-phase grid-connected PV system. The proposed controller named fractional order PI (FO-PI) controller adjust the integration order from integer to real value. The FOPI controller provides a faster settling time and stands the parameters variation and the external disturbances. Thus, the improved algorithm (FO-DCC) ensures a smooth injection of appropriate energy from the PV system (PV emulator, boost converter and P&O MPPT) to the electrical grid with high power quality and unity power factor. The validity of the FO-DCC algorithm has been investigated through real time bench. The obtained results confirm the high performances in static and dynamic regimes. Thus, the proposed algorithm (FO-DCC) could be an interesting alternative solution to grid-connected PV systems.

**Notes:** Afghoul, H. Krim, F. Chikouche, D. Beddar, A. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000025

**Reference Type: Journal Article****Record Number:** 12**Author:** Ahmad, M. Naeemullah, Murtaza, G. Khenata, R. Bin Omran, S. Bouhemadou, A.**Year:** 2015**Title:** Structural, elastic, electronic, magnetic and optical properties of RbSrX (C, Si, Ge) half-Heusler compounds**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 377**Pages:** 204-210**Date:** Mar**Short Title:** Structural, elastic, electronic, magnetic and optical properties of RbSrX (C, Si, Ge) half-Heusler compounds**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2014.10.108**Accession Number:** WOS:000345683200035

**Abstract:** In this study we present investigations pertaining to structural, elastic, electronic, magnetic and optical properties of RbSrC, RbSrSi and RbSrGe half-Heusler compounds. To carry out this study, full potential (FP) linearized augmented plane wave (LAPW), a scheme of calculations developed within the framework of [density functional theory (DFT), is employed. To incorporate the exchange correlation (XC) energy and corresponding potential into the total energy calculations, generalized gradient approximation (GGA) parameterized by Wu-Cohen is taken into account. Analysis of band structures and densities of states (DOS) profiles illustrate the concluding nature in spin down state and the semiconducting nature in spin up state. The bonding nature discussed via electron charge density plot reveals strong ionic bonding character of these compounds. At ambient conditions, calculations for elastic constants (C-ij) and their related elastic moduli are also performed which point to their brittle character. The compounds are found to be ferromagnetic with 1  $\mu_B$ . The magnetic moment decreases from its integer value at high pressures for these compounds. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Ahmad, Mukhtar Naeemullah Murtaza, G. Khenata, R. Bin Omran, S. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000345683200035

**Reference Type: Journal Article****Record Number: 13****Author:** Aissou, M. Said, H. A. Nouri, H. Zebboudj, Y.**Year:** 2015**Title:** Effect of relative humidity on current-voltage characteristics of monopolar DC wire-to-plane system**Journal:** Journal of Electrostatics**Volume:** 76**Pages:** 108-114**Date:** Aug**Short Title:** Effect of relative humidity on current-voltage characteristics of monopolar DC wire-to-plane system**ISSN:** 0304-3886**DOI:** 10.1016/j.elstat.2015.05.019**Accession Number:** WOS:000359960000017

**Abstract:** This paper deals with the DC monopolar corona discharge in wire-to-plane geometry under variable humid air conditions. The classical formulas of Townsend commonly used for the current voltage characteristics were used to determine the various corona parameters for the both polarities of the corona discharge. A circular biased probe has been adapted to the plane and is used to measure the ground plane current density and electric field during the monopolar corona discharge. A new approach to the problem of corona discharge in transmission system has been described in this paper. The effect of varying the humidity and wires diameter is also investigated. The values of the electric field and the current density are maximum beneath the corona wire and decrease when moving away from them and the current voltage characteristics follow the quadratic Townsend's law. The experimental results show that the monopolar corona discharge is strongly affected by the air humidity. The current density and the electric field are measured and compared with the computed values. The agreement between the calculated values and those obtained experimentally is satisfactory. The per unit electric field and current density are also represented by a unique function. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Aissou, Massinissa Said, Hakim Ait Nouri, Hamou Zebboudj, Youcef**URL:** <Go to ISI>://WOS:000359960000017

**Reference Type: Journal Article****Record Number:** 14**Author:** Al-Douri, Y. Hashim, U. Bouhemadou, A. Ameri, M.**Year:** 2015**Title:** Zinc Effect on Quantum Dots Potential of PbI<sub>2</sub> Nanostructures**Journal:** Journal of Nanoelectronics and Optoelectronics**Volume:** 10**Issue:** 5**Pages:** 705-710**Date:** Oct**Short Title:** Zinc Effect on Quantum Dots Potential of PbI<sub>2</sub> Nanostructures**ISSN:** 1555-130X**DOI:** 10.1166/jno.2015.1811**Accession Number:** WOS:000360540500020

**Abstract:** The structural properties of undoped and Zn-doped lead iodide (PbI<sub>2</sub>) nanostructures of different dopants weights have been investigated. Undoped and different Zn-doped PbI<sub>2</sub> were grown successfully by thermal evaporation method using substrate of glass at room temperature. The dislocation density and particle size are elaborated in addition to energy band gap. The quantum dots potential, refractive index and optical dielectric constant are calculated, this leads to investigate nanoelectronics of quantum dots for solar cells applications. A careful analysis of the absorption coefficients has indicated the band gap. The obtained results are in good agreement with experimental and theoretical data.

**Notes:** Al-Douri, Y. Hashim, U. Bouhemadou, A. Ameri, M.**URL:** <Go to ISI>://WOS:000360540500020

**Reference Type: Journal Article****Record Number:** 15**Author:** Al-Douri, Y. Hashim, U. Khenata, R. Reshak, A. H. Ameri, M. Bouhemadou, A. Ruslinda, A. R. Arshad, M. K. M.**Year:** 2015**Title:** Ab initio method of optical investigations of CdS<sub>1-x</sub>Te<sub>x</sub> alloys under quantum dots diameter effect**Journal:** Solar Energy**Volume:** 115**Pages:** 33-39**Date:** May**Short Title:** Ab initio method of optical investigations of CdS<sub>1-x</sub>Te<sub>x</sub> alloys under quantum dots diameter effect**ISSN:** 0038-092X**DOI:** 10.1016/j.solener.2015.02.024**Accession Number:** WOS:000355043600004

**Abstract:** The indirect energy gap ( $\Gamma$ -X) is calculated using density functional theory (DFT) of the full potential-linearized augmented plane wave (FP-LAPW) method as implemented in WIEN2K code. The Engel-Vosko generalized gradient approximation (E-V-GGA) formalism is used to optimize the corresponding potential for energetic transition and optical properties calculations of CdS<sub>1-x</sub>Te<sub>x</sub> alloys as a function of quantum dot diameter and is used to test the validity of our model of quantum dot potential. The refractive index and optical dielectric constant are investigated to explore best applications for solar cells. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Al-Douri, Y. Hashim, U. Khenata, R. Reshak, A. H. Ameri, M. Bouhemadou, A. Ruslinda, A. Rahim Arshad, M. K. Md**URL:** <Go to ISI>://WOS:000355043600004

**Reference Type: Journal Article****Record Number:** 16**Author:** Al-Douri, Y. Khachai, H. Khenata, R. Bouhemadou, A.**Year:** 2015**Title:** First-principles calculations for optical investigations of PbX (X = S, Te) compounds under quantum dots diameter effect**Journal:** Canadian Journal of Physics**Volume:** 93**Issue:** 12**Pages:** 1490-1494**Date:** Dec**Short Title:** First-principles calculations for optical investigations of PbX (X = S, Te) compounds under quantum dots diameter effect**ISSN:** 0008-4204**DOI:** 10.1139/cjp-2015-0145**Accession Number:** WOS:000367613700009

**Abstract:** The full potential-linearized augmented plane wave (FP-LAPW) method is implemented in WIEN2K code to calculate the indirect energy gap (Gamma-X) using density functional theory. The Engel-Vosko generalized gradient approximation (EVGGA) and modified Becke-Johnson (mBJ) formalisms are used to optimize the corresponding potential for energetic transition and optical properties calculations of PbS and PbTe compounds as a function of quantum dot diameter and are used to test the validity of our model of quantum dot potential. The refractive index and optical dielectric constant are investigated to explore best applications for solar cells. The calculated results are in agreement with other experimental and theoretical data.

**Notes:** Al-Douri, Y. Khachai, H. Khenata, R. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000367613700009

**Reference Type: Journal Article****Record Number:** 17**Author:** Amara, S. Bouafia, M.**Year:** 2015**Title:** Investigation on optical, structural and electrical properties of annealed AZO/Al/AZO multilayer structures deposited by DC magnetron sputtering**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 26**Issue:** 3**Pages:** 1763-1769**Date:** Mar**Short Title:** Investigation on optical, structural and electrical properties of annealed AZO/Al/AZO multilayer structures deposited by DC magnetron sputtering**ISSN:** 0957-4522**DOI:** 10.1007/s10854-014-2605-8**Accession Number:** WOS:000350223700067

**Abstract:** In this research paper, a transparent conducting Al doped ZnO (AZO) monolayer and AZO/Al/AZO trilayer films have been successfully deposited on non-ferrous glass substrates by DC magnetron sputtering. The effects of Al film thickness and annealing temperature on resistivity and optical transmittance are characterized and discussed. The annealing treatment of the AZO (50 nm)/Al (10 nm)/AZO (50 nm) structure presents the best photo-electric performances, improves significantly the resistivity and the transmittance. The maximum figure of merit value achieved is  $(15.2 \times 10^{-4}) \Omega^{-1}$  corresponding at the temperature of 400 degrees C.

**Notes:** Amara, Saad Bouafia, Mohamed**URL:** <Go to ISI>://WOS:000350223700067

**Reference Type: Journal Article****Record Number:** 18**Author:** Ammar, T. H. Benabderrahmane, B. Drabla, S.**Year:** 2015**Title:** Mixed finite element approximation for a contact problem in electro-elasticity**Journal:** Kuwait Journal of Science**Volume:** 42**Issue:** 1**Pages:** 31-54**Date:** Jan**Short Title:** Mixed finite element approximation for a contact problem in electro-elasticity**ISSN:** 2307-4108**Accession Number:** WOS:000350904800003

**Abstract:** The present paper is concerned with the frictionless contact problem between two electroelastic bodies in a bidimensional context. We consider a mixed formulation in which the unknowns are the displacement field, the electric potential field and the contact pressure. We use the mixed finite element method to approximate the solutions. Error estimates are derived on the approximative solutions from which the convergence of the algorithm is deduced under suitable regularity conditions on the exact solution.

**Notes:** Ammar, Tedjani Hadj Benabderrahmane, Benyattou Drabla, Salah**URL:** <Go to ISI>://WOS:000350904800003

**Reference Type: Journal Article****Record Number:** 19**Author:** Amor, B. Lacheheb, D. E. Z. Bouchahm, Y.**Year:** 2015**Title:** Improvement of Thermal Comfort Conditions in an Urban Space (Case Study: The Square of Independence, Setif, Algeria)**Journal:** European Journal of Sustainable Development**Volume:** 4**Issue:** 2**Pages:** 407-416**Short Title:** Improvement of Thermal Comfort Conditions in an Urban Space (Case Study: The Square of Independence, Setif, Algeria)**ISSN:** 2239-5938**Accession Number:** WOS:000359065200045

**Abstract:** Several studies all around the world were conducted on the phenomenon of the urban heat island, and referring to the results obtained, one of the most important factors that influence this phenomenon is the mineralization of the cities which means the reducing of evaporative urban surfaces, replacing vegetation and wetlands with concrete and asphalt. The use of vegetation and water can change the urban environment and improve comfort, thus reduce the heat island. The trees act as a mask to the sun, wind, and sound, and also as a source of humidity which reduces air temperature and surrounding surfaces. Water also acts as a buffer to noise; it is also a source of moisture and regulates temperature not to mention the psychological effect on humans. Our main objective in this paper is to determine the impact of vegetation, ponds and fountains on the urban microclimate in general and on the thermal comfort of people along the Independence square in the Algerian city of Setif, which is a semi-arid climate, in particular. In order to reach this objective, a comparative study between different scenarios has been done; the use of the Envi-met program enabled us to model the urban environment of the Independence Square and to study the possibility of improving the conditions of comfort by adding an amount of vegetation and water ponds. After studying the results obtained (temperature, relative humidity, PMV and PPD indicators), the efficiency of the additions we've made on the square was confirmed and this is what helped us to confirm our assumptions regarding the terms of comfort in the studied site, and in the end we are trying to develop recommendations and solutions which may contribute to improve the conditions for greater comfort in the Independence square.

**Notes:** Amor, Ballout Lacheheb, Dhia Eddine Zakaria Bouchahm, Yasmina**URL:** <Go to ISI>://WOS:000359065200045

**Reference Type: Journal Article****Record Number:** 20**Author:** Amrane, F. Chaiba, A. Ieee,**Year:** 2015**Title:** A Hybrid Intelligent Control based on DPC for grid-connected DFIG with a Fixed Switching Frequency using MPPT Strategy**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 46-49**Short Title:** A Hybrid Intelligent Control based on DPC for grid-connected DFIG with a Fixed Switching Frequency using MPPT Strategy**Accession Number:** WOS:000380457200018

**Abstract:** In this paper Neuro-Fuzzy control for doubly fed induction generator (DFIG) based Direct power control with a fixed switching frequency is proposed for wind generation application using MPPT strategy. First, a mathematical model of the doubly-fed induction generator written in an appropriate d-q reference frame. In order to control the DFIG, active and reactive power controllers and space-vector modulation (SVM) are combined to replace the hysteresis controllers used in the original DPC drive, a control law is synthesized using PID controllers. The performance of Neuro-Fuzzy control which is based on the DPC algorithm are investigated and compared to those obtained from the PID controller. Results obtained in Matlab/Simulink (R) environment show that the Neuro-fuzzy controller is more robust by using robustness test, superior dynamic performance for the high performance drive applications.

**Notes:** Amrane, F. Chaiba, A. 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200018

**Reference Type: Journal Article****Record Number: 21**

**Author:** Amsbaugh, J. F. Barrett, J. Beglarian, A. Bergmann, T. Bichsel, H. Bodine, L. I. Bonn, J. Boyd, N. M. Burritt, T. H. Chaoui, Z. Chilingaryan, S. Corona, T. J. Doe, P. J. Dunmore, J. A. Enomoto, S. Formaggio, J. A. Frankle, F. M. Furse, D. Gemmeke, H. Gluck, F. Harms, F. Harper, G. C. Hartmann, J. Howe, M. A. Kaboth, A. Kelsey, J. Knauer, M. Kopmann, A. Leber, M. L. Martin, E. L. Middleman, K. J. Myers, A. W. Oblath, N. S. Parno, D. S. Peterson, D. A. Petzold, L. Phillips, D. G. Renschler, P. Robertson, R. G. H. Schwarz, J. Steidl, M. Tcherniakhovski, D. Thummler, T. Van Wechel, T. D. VanDevender, B. A. Vocking, S. Wall, B. L. Wierman, K. L. Wilkerson, J. F. Wustling, S.

**Year:** 2015**Title:** Focal-plane detector system for the KATRIN experiment**Journal:** Nuclear Instruments & Methods in Physics Research Section a-Accelerators Spectrometers Detectors and Associated Equipment**Volume:** 778**Pages:** 40-60**Date:** Apr**Short Title:** Focal-plane detector system for the KATRIN experiment**ISSN:** 0168-9002**DOI:** 10.1016/j.nima.2014.12.116**Accession Number:** WOS:000349468900007

**Abstract:** The local plane detector system for the KARLSRUHE TRITium Neutrino (KATRIN) experiment consists of a multi-pixel silicon p-i-n-diode array, custom readout electronics, two superconducting solenoid magnets, an ultra high vacuum system, a high vacuum system, calibration and monitoring devices, a scintillating veto, and a custom data-acquisition system. It is designed to detect the low-energy electrons selected by the KATRIN main spectrometer. We describe the system and summarize its performance after its final installation. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Amsbaugh, J. F. Barrett, J. Beglarian, A. Bergmann, T. Bichsel, H. Bodine, L. I. Bonn, J. Boyd, N. M. Burritt, T. H. Chaoui, Z. Chilingaryan, S. Corona, T. J. Doe, P. J. Dunmore, J. A. Enomoto, S. Formaggio, J. A. Fraenkle, F. M. Furse, D. Gemmeke, H. Glueck, F. Harms, F. Harper, G. C. Hartmann, J. Howe, M. A. Kaboth, A. Kelsey, J. Knauer, M. Kopmann, A. Leber, M. L. Martin, E. L. Middleman, K. J. Myers, A. W. Oblath, N. S. Parno, D. S. Peterson, D. A. Petzold, L. Phillips, D. G., II Renschler, P. Robertson, R. G. H. Schwarz, J. Steidl, M. Tcherniakhovski, D. Thuemmler, T. Van Wechel, T. D. VanDevender, B. A. Voecking, S. Wall, B. L. Wierman, K. L. Wilkerson, J. F. Wuestling, S.

**URL:** <Go to ISI>://WOS:000349468900007

**Reference Type: Journal Article****Record Number:** 22**Author:** Antar, B. Hassen, B. Babes, B. Afghoul, H. Ieee,**Year:** 2015**Title:** Fractional order PI controller for grid connected wind energy conversion system**Journal:** 2015 4th International Conference on Electrical Engineering (Ieee)**Pages:** 126-+**Short Title:** Fractional order PI controller for grid connected wind energy conversion system**Accession Number:** WOS:000380457200030

**Abstract:** This paper proposes control of a grid connected variable speed wind energy conversion using fractional calculus. The global system contains a wind turbine emulator and PMSG connected to the grid via two back-to-back converters. The control system under study is composed of two parts, a current vector control with fractional order PI controller (FOPI) on the speed loop to ensure maximum power extraction and a direct power control (DPC) to guarantee a unity power factor. The fractional order PI controllers are designed using the isodamping feature, which desensitizes the phase frequency variations, by means a flat phase around a gain crossover frequency. This increases the robustness of a fractional order control system against uncertainties. The proposed control scheme improves the tracking performance and system robustness. To investigate the efficiency and the accuracy of the proposed controller, an experimental bench is built. The experimental results demonstrate the superiority of the proposed controller over integer order controllers by realizing maximum power extraction and improving the grid-side power factor for a wide range of wind speeds.

**Notes:** Antar, Beddar Hassen, Bouzekri Babes, Badreddine Afghoul, Hamza 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200030

**Reference Type: Journal Article****Record Number:** 23**Author:** Aouachria, K. Massardier-Nageote, V. Belhaneche-Bensemra, N.**Year:** 2015**Title:** Thermal stability and Kinetic Study of rigid and plasticized Poly(vinyl chloride)/Poly(methylmethacrylate) blends**Journal:** Journal of Vinyl & Additive Technology**Volume:** 21**Issue:** 2**Pages:** 102-110**Date:** Jun**Short Title:** Thermal stability and Kinetic Study of rigid and plasticized Poly(vinyl chloride)/Poly(methylmethacrylate) blends**ISSN:** 1083-5601**DOI:** 10.1002/vnl.21372**Accession Number:** WOS:000354290700004

**Abstract:** The thermal stability and kinetic parameters for degradation of rigid and plasticized poly(vinyl chloride)/poly (methylmethacrylate) blends have been investigated by using nonisothermal thermogravimetry in a flowing atmosphere of air. For that purpose, blends of variable composition from 0 to 100 wt% were prepared in the presence (15, 30, and 50 wt%) and in the absence of di-(-2-ethyl hexyl) phthalate as plasticizer. Measurements were carried out in the temperature range of 30-550 degrees C and at various heating rates (5, 10, 20, and 40 degrees C/min). The kinetic parameters (E-a and A) were determined by applying the integral Kissinger method. Results indicate that these parameters and the thermal stability of the blends are dependent on the blend composition and the amount of plasticizer present. J. VINYL ADDIT. TECHNOL., 21:102-110, 2015. (c) 2014 Society of Plastics Engineers

**Notes:** Aouachria, K. Massardier-Nageote, V. Belhaneche-Bensemra, N.**URL:** <Go to ISI>://WOS:000354290700004

**Reference Type: Journal Article****Record Number:** 24**Author:** Arar, R. Ouahrani, T. Varshney, D. Khenata, R. Murtaza, G. Rached, D. Bouhemadou, A. Al-Douri, Y. Bin Omran, S. Reshak, A. H.**Year:** 2015**Title:** Structural, mechanical and electronic properties of sodium based fluoroperovskites NaXF<sub>3</sub> (X=Mg, Zn) from first-principle calculations**Journal:** Materials Science in Semiconductor Processing**Volume:** 33**Pages:** 127-135**Date:** May**Short Title:** Structural, mechanical and electronic properties of sodium based fluoroperovskites NaXF<sub>3</sub> (X=Mg, Zn) from first-principle calculations**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.01.040**Accession Number:** WOS:000351652400018

**Abstract:** The structural stability, mechanical, electronic and thermodynamic properties of the cubic sodium based fluoro-perovskite NaXF<sub>3</sub> (X=Mg, Zn) have been studied using density functional theory (DFT). The generalized gradient approximation of Perdew-Burke and Ernzerhof (GGA-PBE) is used for modeling exchange-correlation effects. In addition, the alternative form of the GGA proposed by Engel and Vosko (GGA-EV) is also used to improve the electronic band structure calculations. The results show that both compounds are stable in the cubic Pm3m structure. From Poisson's ratio, it is inferred that cubic anti-perovskite NaXF<sub>3</sub> are ductile in nature and that bonding is predominantly of ionic in nature. The electronic band structure calculations and bonding properties show that antiperovskites have an indirect energy band gap (M-Gamma) with a dominated ionic character. The thermal effects on thermal expansion coefficient, Debye temperature and Gruneisen parameter were predicted using the quasi-harmonic Debye model, in which the lattice vibrations are taken into account. The calculations are found to be in good agreement with other results. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Arar, R. Ouahrani, T. Varshney, D. Khenata, R. Murtaza, G. Rached, D. Bouhemadou, A. Al-Douri, Y. Bin Omran, S. Reshak, A. H.**URL:** <Go to ISI>://WOS:000351652400018

**Reference Type: Journal Article****Record Number:** 25**Author:** Assali, A. Bouslama, M. Abid, H. Zerroug, S. Ghaffour, M. Saidi, F. Bouzaiene, L. Boulenouar, K.**Year:** 2015**Title:** Optoelectronic properties of cubic  $B_xIn_yGa_{1-x-y}N$  alloys matched to GaN for designing quantum well Lasers: First-principles study within mBJ exchange potential**Journal:** Materials Science in Semiconductor Processing**Volume:** 36**Pages:** 192-203**Date:** Aug**Short Title:** Optoelectronic properties of cubic  $B_xIn_yGa_{1-x-y}N$  alloys matched to GaN for designing quantum well Lasers: First-principles study within mBJ exchange potential**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.03.033**Accession Number:** WOS:000355363600027

**Abstract:** A Full-Potential Linearized Augmented Plane Wave calculation within density functional theory is performed to investigate the electronic and optical properties of cubic  $B_xIn_yGa_{1-x-y}N$  alloys matched to GaN with low-Boron content ( $x \leq 0.187$ ). The exchange-correlation potential is treated by the local density approximation (LDA) to calculate the structural properties. The band structure and density of states of these compounds are well predicted by modified Becke-Johnson (mBJ) exchange potential compared to LDA and generalized gradient approximation (GGA). Also, the optical properties are calculated by the mBJ exchange potential. The computed structural parameters are found to be in good agreement with experimental and theoretical data. The  $B_xIn_yGa_{1-x-y}N$  alloy is expected to be lattice matched to GaN substrate for ( $x=0.125, y=0.187$ ). The incorporation of B and In into GaN substrate allows the reduction of the band gap energy. The real and imaginary parts of the dielectric function, refractive index, reflectivity and absorption coefficient are discussed on the basis on the energy band structure and the calculated density of states. The optical properties of  $B_xIn_yGa_{1-x-y}N$  depend on the incorporated Boron content (with  $y=0.187$ ). This means that  $B_xIn_yGa_{1-x-y}N$  could constitute an active layer in single quantum well for the design of high-efficiency solar cells and optoelectronic devices as Laser Diodes operating in the UV spectral region. (c) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Assali, A. Bouslama, M. Abid, H. Zerroug, S. Ghaffour, M. Saidi, F. Bouzaiene, L. Boulenouar, K.**URL:** <Go to ISI>://WOS:000355363600027

**Reference Type: Journal Article****Record Number:** 26**Author:** Attia, M. F. Anton, N. Bouchaala, R. Didier, P. Arntz, Y. Messaddeq, N. Klymchenko, A. S. Mely, Y. Vandamme, T. F.**Year:** 2015**Title:** Functionalization of nano-emulsions with an amino-silica shell at the oil-water interface**Journal:** Rsc Advances**Volume:** 5**Issue:** 91**Pages:** 74353-74361**Short Title:** Functionalization of nano-emulsions with an amino-silica shell at the oil-water interface**ISSN:** 2046-2069**DOI:** 10.1039/c5ra12676b**Accession Number:** WOS:000361116500027

**Abstract:** Nano-emulsions are very promising nano-carriers with high potential for loading lipophilic drugs. However, the surface of oil nano-droplets is a dynamic oil/water interface stabilized by surfactants, and its chemical modification to graft ligands is highly challenging. In this study we developed a new protocol for modification of the nano-droplets surface through a silica shell terminated by amine functions. It enabled preparation of nanocapsules of 65, 85 and 120 nm diameters with a surface coverage of ca. 2 amino groups per nm<sup>2</sup>. The nanocapsule surface was then functionalized (41% efficiency) by a model fluorescent ligand (coumarin blue) with a carboxylic function. The evidence for the successful grafting was provided by spectrofluorometry, Forster resonance energy transfer, atomic force microscopy coupled with fluorescence imaging and fluorescence correlation spectroscopy. This simple protocol for surface functionalization of the liquid/liquid interface of lipid droplets may constitute a real advance regarding potential applications that need efficient decoration of droplets with ligands.

**Notes:** Attia, Mohamed F. Anton, Nicolas Bouchaala, Redouane Didier, Pascal Arntz, Youri Messaddeq, Nadia Klymchenko, Andrey S. Mely, Yves Vandamme, Thierry F.**URL:** <Go to ISI>://WOS:000361116500027

**Reference Type: Journal Article****Record Number:** 27**Author:** Aylikci, V. Kahoul, A. Aylikci, N. K. Tirasoglu, E. Karahan, I. H.**Year:** 2015**Title:** Empirical, Semi-Empirical and Experimental Determination of K X-Ray Fluorescence Parameters of Some Elements in the Atomic Range  $21 \leq Z \leq 30$ **Journal:** Spectroscopy Letters**Volume:** 48**Issue:** 5**Pages:** 331-342**Short Title:** Empirical, Semi-Empirical and Experimental Determination of K X-Ray Fluorescence Parameters of Some Elements in the Atomic Range  $21 \leq Z \leq 30$ **ISSN:** 0038-7010**DOI:** 10.1080/00387010.2014.881381**Accession Number:** WOS:000346265000004

**Abstract:** In this study, the semi-empirical and empirical calculations of K X-ray intensity ratios, K-shell fluorescence yields, and vacancy transfer probabilities have been performed for 3d transition elements. Also,  $\sigma(K\alpha)$ ,  $\sigma(K\beta)$  production cross-sections, K-beta/K-alpha intensity ratios,  $\omega(K)$  fluorescence yields, and  $\eta(KL)$  vacancy transfer probabilities of 3d transition elements have been measured. The samples were excited by 59.5 keV gamma-rays from a Am-241 annular radioactive source. K X-rays emitted by samples were counted by an Ultra-LEGe detector with a resolution of 150 eV at 5.9 keV.

**Notes:** Aylikci, V. Kahoul, A. Aylikci, N. Kup Tirasoglu, E. Karahan, I. H.**URL:** <Go to ISI>://WOS:000346265000004

**Reference Type: Journal Article****Record Number:** 28**Author:** Aylikci, V. Kahoul, A. Aylikci, N. K. Tirasoglu, E. Karahan, I. H. Abassi, A. Dogan, M.**Year:** 2015**Title:** Empirical and semi-empirical interpolation of L X-ray fluorescence parameters for elements in the atomic range  $50 \leq Z \leq 92$ **Journal:** Radiation Physics and Chemistry**Volume:** 106**Pages:** 99-125**Date:** Jan**Short Title:** Empirical and semi-empirical interpolation of L X-ray fluorescence parameters for elements in the atomic range  $50 \leq Z \leq 92$ **ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2014.06.030**Accession Number:** WOS:000344422400018**Abstract:** In this study, interpolations (empirical and semi-empirical) of L sub-shell fluorescence yield and L shell Coster-Kronig transition probability values and the measured L X-ray production cross-sections, intensity ratios and L sub-shell fluorescence yield values of elements have been performed in the range of  $50 \leq Z \leq 92$ . In this experimental setup, two sources (50 mCi Fe-55 and 50 mCi Am-241) were used. L X-rays emitted by samples were counted by an Ultra-LEGe detector with a resolution of 150 eV at 5.9 keV. (C) 2014 Elsevier Ltd. All rights reserved.**Notes:** Aylikci, V. Kahoul, A. Aylikci, N. Kup Tirasoglu, E. Karahan, I. H. Abassi, A. Dogan, M.**URL:** <Go to ISI>://WOS:000344422400018

**Reference Type: Journal Article**

**Record Number: 29**

**Author: Azizi, I. Radjeai, H. Ieee,**

**Year: 2015**

**Title: A bidirectional DC-DC converter fed DC motor for electric vehicle application**

**Journal: 2015 4th International Conference on Electrical Engineering (Icee)**

**Pages: 402-U133**

**Short Title: A bidirectional DC-DC converter fed DC motor for electric vehicle application**

**Accession Number: WOS:000380457200022**

**Abstract:** this work presents a digital simulation of an operation of a small electric vehicle. The traction chain consists of a battery, a bidirectional DC-DC converter and DC motor. The vehicle dynamics which represents the load torque applied on the motor shaft is taken into account. The two modes of operation; motor and regenerative braking mode are explained and the simulation model can simulate the two modes simultaneously. The energy resulted in the braking phase is stored in the battery, thus permits to increase the autonomy of the vehicle.

**Notes:** Azizi, Idris Radjeai, Hammoud 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200022

**Reference Type: Journal Article****Record Number:** 30**Author:** Azli, T. Chaoui, Z. E.**Year:** 2015**Title:** Performance revaluation of a N-type coaxial HPGe detector with front edges crystal using MCNPX**Journal:** Applied Radiation and Isotopes**Volume:** 97**Pages:** 106-112**Date:** Mar**Short Title:** Performance revaluation of a N-type coaxial HPGe detector with front edges crystal using MCNPX**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2014.12.027**Accession Number:** WOS:000350520500018

**Abstract:** The MCNPX code was used to determine the efficiency of a N-type HPGe detector after two decades of operation. Accounting for the roundedness of the crystal's front edges and an inhomogeneous description of the detector's dead layers were shown to achieve better agreement between measurements and simulation efficiency determination. The calculations were experimentally verified using point sources in the energy range from 50 keV to 1400 keV, and an overall uncertainty less than 2% was achieved. In order to use the detector for different matrices and geometries in radioactivity, the suggested model was validated by changing the counting geometry and by using multi-gamma disc sources. The introduced simulation approach permitted the revaluation of the performance of an HPGe detector in comparison of its initial condition, which is a useful tool for precise determination of the thickness of the inhomogeneous dead layer. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Azli, Tarek Chaoui, Zine-El-Abidine**URL:** <Go to ISI>://WOS:000350520500018

**Reference Type: Journal Article****Record Number:** 31**Author:** Azzem, S. M. Bouamama, L. Simoens, S. Osten, W.**Year:** 2015**Title:** Two beams two orthogonal views particle detection**Journal:** Journal of Optics**Volume:** 17**Issue:** 4**Date:** Apr**Short Title:** Two beams two orthogonal views particle detection**ISSN:** 2040-8978**DOI:** 10.1088/2040-8978/17/4/045301**Article Number:** 045301**Accession Number:** WOS:000352033800012

**Abstract:** This paper presents a new technique for recording the two views off-axis digital holography using only two beams, each one acting as an object beam for its proper view and as a reference for the other view. This technique allows one to obtain two orthogonal views of the same volume simultaneously using only two beams. This leads one to avoid the large focusing distance inherent to off-axis digital holography and gives the real position of any object in the working volume by crossing the two view data. Furthermore, the lateral resolution should be the same as the vertical one. The proposed technique was improved experimentally using a metallic wire in an L shape and four moving particles.

**Notes:** Azzem, S. Mebarek Bouamama, L. Simoens, S. Osten, W.**URL:** <Go to ISI>://WOS:000352033800012

**Reference Type: Journal Article****Record Number:** 32**Author:** Baka, O. Mentar, L. Khelladi, M. R. Azizi, A.**Year:** 2015**Title:** Growth and Properties of Electrodeposited Transparent Al-doped ZnO Nanostructures**Journal:** Journal of the Korean Physical Society**Volume:** 67**Issue:** 12**Pages:** L2011-L2014**Date:** Dec**Short Title:** Growth and Properties of Electrodeposited Transparent Al-doped ZnO

Nanostructures

**ISSN:** 0374-4884**DOI:** 10.3938/jkps.67.2011**Accession Number:** WOS:000367745600001

**Abstract:** Al-doped zinc oxide (AZO) nanostructures were fabricated on fluorine-doped tin-oxide (FTO)-coated glass substrates by using electrodeposition. The effects of the doping concentration of Al on the morphological, microstructural, electrical and optical properties of the nanostructures were investigated. From the field emission scanning electron microscopy (FE-SEM) observation, when the amount of Al was increased in the solution, the grains size was observed to decrease. The observed changes in the morphology indicate that Al acts as nucleation centers in the vacancy sites of ZnO and destroys the crystalline structure at high doping level. Effectively, the X-ray diffraction (XRD) analysis indicated that the undoped and the doped ZnO nanostructures have a polycrystalline nature and a hexagonal wurtzite structure with a (002) preferential orientation. The photoluminescence (PL) room-temperature measurements showed that the incorporation of Al in the Zn lattice can improve the intensity of ultraviolet (UV) emission, thus suggesting its greater prospects for use in UV optoelectronic devices.

**Notes:** Baka, O. Mentar, L. Khelladi, M. R. Azizi, A.**URL:** <Go to ISI>://WOS:000367745600001

**Reference Type: Journal Article****Record Number:** 33**Author:** Bazid, S. El Kolli, M. Medjahed, A. Doufnoune, R.**Year:** 2015**Title:** The interaction of sodium carboxymethylcellulose with gelatin in the absence and presence of NaCl, CaCl<sub>2</sub> and glucose**Journal:** Journal of Polymer Engineering**Volume:** 35**Issue:** 1**Pages:** 89-98**Date:** Jan**Short Title:** The interaction of sodium carboxymethylcellulose with gelatin in the absence and presence of NaCl, CaCl<sub>2</sub> and glucose**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2014-0080**Accession Number:** WOS:000347473200010

**Abstract:** The behavior of gelatin/sodium carboxymethylcellulose (NaCMC) mixtures in an aqueous medium was investigated as a function of the pH, the protein to polysaccharide weight ratio and the total biopolymer concentration. The polydispersity of these solutions was investigated by measuring the UV-vis absorbance of the mixture at 650 nm. The change in the absorbance at 650 nm for all gelatin/NaCMC/water dispersions showed that the most significant interaction by this technique was at a pH of 4.2. Increasing the total concentration of biopolymers greatly increased the interaction between gelatin and NaCMC. It was also found that at this value of pH, and at a remarkable value of the protein to polysaccharide weight ratio of 1: 1, the electrostatic interactions between gelatin and NaCMC were maximum. It was demonstrated that the addition of an anionic polysaccharide such as NaCMC can affect the behavior of gelatin in solution. In addition to the pH of the solution, other factors such as the presence of NaCl, CaCl<sub>2</sub> and glucose may affect the rate of helicity and the scattering power of the gelatin. This has been confirmed by infrared spectroscopy as well as polarimetry.

**Notes:** Bazid, Sihem El Kolli, Meriem Medjahed, Aicha Doufnoune, Rachida**URL:** <Go to ISI>://WOS:000347473200010

**Reference Type: Journal Article****Record Number:** 34**Author:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**Year:** 2015**Title:** Multiphase Composites Obtained by Sintering Reaction of Boehmite and Zircon Part I: Development and Microstructural Characterization (Retraction of vol 46, pg 291, 2014)**Journal:** Science of Sintering**Volume:** 47**Issue:** 1**Pages:** 115-115**Date:** Jan-Apr**Short Title:** Multiphase Composites Obtained by Sintering Reaction of Boehmite and Zircon Part I: Development and Microstructural Characterization (Retraction of vol 46, pg 291, 2014)**ISSN:** 0350-820X**DOI:** 10.2298/sos150330002e**Accession Number:** WOS:000355226700001**Notes:** Belhouchet, H. Makri, H. Hamidouche, M. Bouaouadja, N. Garnier, V. Fantozzi, G.**URL:** <Go to ISI>://WOS:000355226700001

**Reference Type: Journal Article****Record Number:** 35**Author:** Belhouchet, K. Bayadi, A. Bendib, M. E. Ieee,**Year:** 2015**Title:** Artificial Neural Networks (ANN) and Genetic Algorithm Modeling and Identification of arc parameter in Insulators Flashover Voltage and leakage Current**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 326-+**Short Title:** Artificial Neural Networks (ANN) and Genetic Algorithm Modeling and Identification of arc parameter in Insulators Flashover Voltage and leakage Current**Accession Number:** WOS:000380457200034

**Abstract:** Flashover phenomenon in polluted insulators has not yet been described accurately through a mathematical model. The main difficulty lies in the definition of arc constants, which is formed in the dry bands when the voltage exceeds its critical value. We have present an optimization method based on genetic algorithms and Artificial Neural Networks (ANN) experimental data from artificially polluted insulators for the determination of the arc constants and Dielectric properties in the surface. In this work a pollution flashover generalized model is used. The obtained results show that the mathematical model with optimized arc constants simulates accurately the experimental data and Corroborate the inverse Relationship between flashover voltage and pre-flashover leakage current. For this purpose, an ANN was constructed in MATLAB and has been trained with several MATLAB training functions, while tests regarding the number of neurons, the number of epochs and the value of learning rate have taken place, in order to find which net architecture and which value of the other parameters give the best result.

**Notes:** Belhouchet, K. Bayadi, A. Bendib, M. Elhadi 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1**URL:** <Go to ISI>://WOS:000380457200034

**Reference Type: Journal Article****Record Number:** 36**Author:** Belkaid, A. Gaubert, J. P. Gherbi, A.**Year:** 2015**Title:** A fast and accurate maximum power point tracking for photovoltaic power generation system**Journal:** Optoelectronics and Advanced Materials-Rapid Communications**Volume:** 9**Issue:** 3-4**Pages:** 520-524**Date:** Mar-Apr**Short Title:** A fast and accurate maximum power point tracking for photovoltaic power generation system**ISSN:** 1842-6573**Accession Number:** WOS:000354074800041

**Abstract:** This paper concentrates on the modeling and control of an autonomous photovoltaic power electricity generation system. The system consists of a PV cell, a DC-DC Buck-boost converter used for Maximum Power Point Tracking (MPPT). As a consequence, the PV cell itself cannot maintain a constant DC voltage and function as a DC voltage power supply source. To overcome this problem, a DC-DC converter with the nonlinear control scheme, sliding mode control (SMC) may be used. The DC/DC Buck-boost converter controlled by using the sliding mode approach is used for tracking the maximum power point MPP. The proposed controller is robust to environment changes, load variations and it can be implemented effectively and economically.

**Notes:** Belkaid, A. Gaubert, J. P. Gherbi, A.**URL:** <Go to ISI>://WOS:000354074800041

**Reference Type: Journal Article****Record Number:** 37**Author:** Belkhiat, D. E. C. Chouaba, S. E. A. Fourati, H. Jabri, D. Ieee,**Year:** 2015**Title:** Design of a Robust Observer-Based FDI Scheme For a Class of Switched Systems Subject to Sensor Faults**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Design of a Robust Observer-Based FDI Scheme For a Class of Switched Systems Subject to Sensor Faults**Accession Number:** WOS:000380433000047**Abstract:** This paper concerns the Fault Detection and Isolation (FDI) problem for a class of Switched Linear Systems (SLS) subject to sensor faults and unknown bounded disturbances. The main work is based on the design of a generalized switched observer scheme. The FDI problems have been solved by using a robust control techniques. A suitable trade-off between the robustness to disturbances and the sensitivity to sensor faults was obtained. The main results are reformulated by using Linear Matrix Inequality (LMI) formulation. An example is included to illustrate the efficiency of the proposed approach.**Notes:** Belkhiat, D. E. C. Chouaba, S. E. A. Fourati, H. Jabri, D. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4**URL:** <Go to ISI>://WOS:000380433000047

**Reference Type: Journal Article****Record Number:** 38**Author:** Belkhiat, D. Jabri, D. Kilani, I.**Year:** 2015**Title:** Fault Tolerant Control for a Class of Switched Linear Systems using Generalized Switched Observer Scheme**Journal:** Control Engineering and Applied Informatics**Volume:** 17**Issue:** 4**Pages:** 90-101**Date:** Dec**Short Title:** Fault Tolerant Control for a Class of Switched Linear Systems using Generalized Switched Observer Scheme**ISSN:** 1454-8658**Accession Number:** WOS:000367859200011

**Abstract:** This paper concerns the design of a new active fault tolerant control framework for a class of switched linear systems subject to sensor faults and unknown bounded disturbances. The framework herein proposed ensures the fault tolerance capabilities by means of the interaction between three main blocks called generalized switched observer scheme, pre-designed multiple controllers and reconfiguration block. The fault detection and isolation problem has been solved by minimization of the H-infinity -norm and maximization of the H<sub>2</sub> index. Then, a suitable trade-off between the robustness to disturbances and the sensitivity to sensor faults has been obtained. The main results are reformulated by using linear matrix inequality formulation. An example is included to illustrate the design procedure.

**Notes:** Belkhiat, Djamel Jabri, Dale Kilani, Ilhem**URL:** <Go to ISI>://WOS:000367859200011

**Reference Type: Journal Article****Record Number:** 39**Author:** Belouadah, Z. Ati, A. Rokbi, M.**Year:** 2015**Title:** Characterization of new natural cellulosic fiber from *Lygeum spartum* L**Journal:** Carbohydrate Polymers**Volume:** 134**Pages:** 429-437**Date:** Dec**Short Title:** Characterization of new natural cellulosic fiber from *Lygeum spartum* L**ISSN:** 0144-8617**DOI:** 10.1016/j.carbpol.2015.08.024**Accession Number:** WOS:000364255800053

**Abstract:** Integration of new natural fibers in polymer composites field can contribute to increase the production of natural reinforcements and expand their use into new applications. In the present work, new cellulosic fibers were extracted from *Lygeum spartum* L. plant using an eco-friendly method. The morphological, physico-chemical, thermal and mechanical properties of *L. spartum* L. fibers were reported for the first time in this paper. The stem anatomy and fiber SEM micrographs showed a strong presence of fiber cells. ATR-FTIR and X-ray analysis proved that these fibers are rich in cellulose content with crystallinity index of 46.19%. The thermogravimetric analysis indicates that the *L. spartum* fibers are thermally stable until 220 degrees C with apparent activation energy of 68.77 kJ/mol. Young's modulus, tensile strength and strain at failure were determined from the single fiber tensile test as 13.2 GPa, 280 MPa, and 3.7% respectively. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Belouadah, Z. Ati, A. Rokbi, M.**URL:** <Go to ISI>://WOS:000364255800053

**Reference Type: Journal Article****Record Number:** 40**Author:** Benabdallah, H. Gharzouli, K.**Year:** 2015**Title:** Effects of flavone on the contractile activity of the circular smooth muscle of the rabbit middle colon in vitro**Journal:** European Journal of Pharmacology**Volume:** 760**Pages:** 20-26**Date:** Aug**Short Title:** Effects of flavone on the contractile activity of the circular smooth muscle of the rabbit middle colon in vitro**ISSN:** 0014-2999**DOI:** 10.1016/j.ejphar.2015.04.007**Accession Number:** WOS:000355664200003

**Abstract:** The circular smooth muscles of the middle colon of the rabbit generate giant contractions of high amplitude and low frequency. Flavone, at various concentrations, reduces the giant contractions and the tonic contraction induced by 10  $\mu$  M carbachol and 80 mM KCl. The contractions induced by dequalinium and tetraethylammonium are reduced by flavone (30  $\mu$  M). At 100  $\mu$  M, flavone decreases the contraction induced by 100  $\mu$  M methylene blue and 1 mM orthovanadate. These results suggest that flavone inhibit the giant contractions by (1) inhibition of voltage-dependent  $Ca^{2+}$  channels, (2) activation of guanyl cyclase, (3) opening of  $K^{+}$  channels and (4) inhibition of tyrosines kinases. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Benabdallah, Hassiba Gharzouli, Kamel**URL:** <Go to ISI>://WOS:000355664200003

**Reference Type: Journal Article****Record Number:** 41**Author:** Benabid, F. Z. Rong, L. X. Benachour, D. Cagiao, M. E. Poncot, M. Zouai, F. Bouhelal, S. Calleja, F. J. B.**Year:** 2015**Title:** Nanostructural characterization of poly (vinylidene fluoride)-clay nanocomposites prepared by a one-step reactive extrusion process**Journal:** Journal of Polymer Engineering**Volume:** 35**Issue:** 2**Pages:** 181-190**Date:** Mar**Short Title:** Nanostructural characterization of poly (vinylidene fluoride)-clay nanocomposites prepared by a one-step reactive extrusion process**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2014-0113**Accession Number:** WOS:000350678300011

**Abstract:** Poly (vinylidene fluoride) (PVDF)-untreated clay nanocomposites were successfully prepared using an innovative one-step reactive melt extrusion process. Through specific temperature and shear conditions, the chemical reactions took place between the polymer matrix, the inorganic clay particles, and three main reactive agents: an organic peroxide, sulfur, and a specific activator led finally to the PVDF-clay nanocomposites. The materials were formulated with various amounts of clay in order to identify the best conditions, enabling to obtain the optimal particle exfoliation in the polymer matrix at the nanometric scale. The microstructure and nanostructure modifications were characterized by Fourier transform infrared (FTIR) spectroscopy, differential scanning calorimetry (DSC), and wide- and small-angle X-ray scattering (WAXS and SAXS). The relationship between nanostructure and mechanical behavior was investigated by tensile experiments, impact tests, and microhardness measurements. The FTIR results suggest that there is a chemical interaction between the clay and the polymer. Furthermore, the WAXS study shows that no intercalation step takes place in any composition. In addition to this, the sample with 2.5 wt.% clay could present a total exfoliation of the clay particles. The PVDF matrix is found to be exclusively of the a-form in all compositions. The final microhardness slightly increases with both nanoclay content and degree of crystallinity.

**Notes:** Benabid, Fatma-Zohra Rong, Lixia Benachour, Djafer Esperanza Cagiao, M. Poncot, Marc Zouai, Foued Bouhelal, Said Balta Calleja, Francisco J.**URL:** <Go to ISI>://WOS:000350678300011

**Reference Type: Journal Article****Record Number:** 42**Author:** Benabid, F. Z. Zouai, F. Douibi, A.**Year:** 2015**Title:** Spectroscopic study of poly (vinylidene fluoride)/poly (methyl methacrylate) (PVDF/PMMA) blend**Journal:** Journal of New Technology and Materials**Volume:** 5**Issue:** 2**Pages:** 28-32**Date:** Dec**Short Title:** Spectroscopic study of poly (vinylidene fluoride)/poly (methyl methacrylate) (PVDF/PMMA) blend**ISSN:** 2170-161X**Accession Number:** WOS:000371153000004

**Abstract:** Poly (Poly (vinylidene fluoride)/poly (methyl methacrylate) blends casted in DMF could be used in the conservation of historic structures (monuments) exposed to atmospheric agents or as a coating to replace and maintain parts or missing pieces. This study deals with the effect of blending PVDF to PMMA to enhance their properties using FTIR and UV visible spectroscopy. In FTIR spectra, it was found that PVDF/PMMA blend casted in the Dimethylformamide (DMF) showed the superposition of the spectra of all compositions, with the exclusion of any chemical reaction between two polymers or the presence of the double bonds characteristic of PVDF dehydrofluorination. The UV-visible spectroscopy before and after exposure to artificial weathering, showed that the PVDF is very stable (the invariant absorbance values at 200nm wavelength after the equivalent of two years of aging). In contrast, the absorbance of PMMA has changed at the same wavelength explaining its tendency of degradation.

**Notes:** Benabid, F. Z. Zouai, F. Douibi, A.**URL:** <Go to ISI>://WOS:000371153000004

**Reference Type: Journal Article****Record Number:** 43**Author:** Benahmed, M. Selatnia, I. Achouri, A. Laouer, H. Gherraf, N. Akkal, S.**Year:** 2015**Title:** Steel Corrosion Inhibition by Bupleurum lancifolium (Apiaceae) Extract in Acid Solution**Journal:** Transactions of the Indian Institute of Metals**Volume:** 68**Issue:** 3**Pages:** 393-401**Date:** Jun**Short Title:** Steel Corrosion Inhibition by Bupleurum lancifolium (Apiaceae) Extract in Acid Solution**ISSN:** 0972-2815**DOI:** 10.1007/s12666-014-0466-8**Accession Number:** WOS:000354396200007

**Abstract:** The ethyl acetate extract of the aerial parts of Bupleurum lancifolium (Apiaceae) is tested as corrosion inhibitor of carbon steel (API 5L Gr B) in 1.0 M HCl and 0.5 M H<sub>2</sub>SO<sub>4</sub> solutions using weight loss measurement, electrochemical impedance spectroscopy and potentiodynamic polarization techniques. The results revealed that the corrosion inhibition efficiency increases with increasing extract concentration. Potentiodynamic polarization curves indicated that the plant extract behaves as a mixed-type inhibitor. The adsorption of inhibitor on carbon steel surface was found to follow Langmuir isotherm. The effect of temperature on the corrosion behavior of API 5L Gr B steel in acid solutions with and without plant extract was studied in the range 293-333 K. Surface analyses via scanning electron microscope shows a significant improvement on the surface morphology of the steel.

**Notes:** Benahmed, M. Selatnia, I. Achouri, A. Laouer, H. Gherraf, N. Akkal, S.**URL:** <Go to ISI>://WOS:000354396200007

**Reference Type: Journal Article****Record Number:** 44**Author:** Benaiche, G. Belattar, N. Trifunnovic, S. Vukovic, N. Todorovic, D. Todorovic, M. Baskic, D. Vukic, M.**Year:** 2015**Title:** Isolation of Alkaloids and Anti-tumor Activity of the Crude Methanolic Extract of Algerian *Cytisus purgans***Journal:** Oriental Journal of Chemistry**Volume:** 31**Issue:** 4**Pages:** 1943-1948**Date:** Dec**Short Title:** Isolation of Alkaloids and Anti-tumor Activity of the Crude Methanolic Extract of Algerian *Cytisus purgans***ISSN:** 0970-020X**Accession Number:** WOS:000369553900011**Abstract:** In this study, two known quinolizidine alkaloids which are sparteine and lupanine were isolated from the methanolic extract of the plant *Cytisus purgans* of Algerian flora by open column chromatography. These two compounds were identified on the basis of their spectral data (GC/MS, IR, MS, H-1 and C-13). The anti-tumor activity of the crude methanolic extract of the aerial parts of the plant was also evaluated invitro against human breast cancer (MDA-MB-231) and human lung cancer (A549) cell lines using MTT assay.**Notes:** Benaiche, Ghania Belattar, Nouredine Trifunnovic, Srecko Vukovic, Nenad Todorovic, Danijela Todorovic, Milos Baskic, Dejan Vukic, Milena**URL:** <Go to ISI>://WOS:000369553900011

**Reference Type: Journal Article**

**Record Number: 45**

**Author:** Benaissa, L. Guediri, H.

**Year:** 2015

**Title:** PROPERTIES OF DUAL TOEPLITZ OPERATORS WITH APPLICATIONS TO HAPLITZ PRODUCTS ON THE HARDY SPACE OF THE POLYDISK

**Journal:** Taiwanese Journal of Mathematics

**Volume:** 19

**Issue:** 1

**Pages:** 31-49

**Date:** Feb

**Short Title:** PROPERTIES OF DUAL TOEPLITZ OPERATORS WITH APPLICATIONS TO HAPLITZ PRODUCTS ON THE HARDY SPACE OF THE POLYDISK

**ISSN:** 1027-5487

**Accession Number:** WOS:000348590700002

**Abstract:** In this paper, we introduce dual Toeplitz operators on the orthogonal complement of the Hardy space of the polydisk and establish their main algebraic properties using an auxiliary transformation of operators. As a byproduct, we exploit this mysterious transformation in the investigation of boundedness and compactness of Hankel products and mixed Toeplitz-Hankel products on the Hardy space of the polydisk.

**Notes:** Benaissa, Lakhdar Guediri, Hocine

**URL:** <Go to ISI>://WOS:000348590700002

**Reference Type: Journal Article****Record Number:** 46**Author:** Benaouda, N. Mostefai, M.**Year:** 2015**Title:** A New Two-Level Clustering Scheme for Partitioning in Distributed Wireless Sensor Networks**Journal:** International Journal of Distributed Sensor Networks**Short Title:** A New Two-Level Clustering Scheme for Partitioning in Distributed Wireless Sensor Networks**ISSN:** 1550-1329**DOI:** 10.1155/2015/435048**Article Number:** 435048**Accession Number:** WOS:000355482300001

**Abstract:** Partitioning has always been a challenge in the design of distributed applications. It allows optimizing the intercommunication between the system components and so increasing the lifetime of the network. Graph theory methods have often been used to perform partitioning in classic distributed systems but seem to be not efficient in ad hoc or wireless sensor networks (WSN). The main reason is related to the topology of these kinds of networks and the presence of multihop communication. In this paper, we propose a new self-organisation of the WSN based on the optimization of the number of jumps between any sensor and the sink. The network is based on a two-level hierarchy structure and organised as a set of clusters with one cluster-head by cluster and a super-leader for the entire network. The optimisation process has been performed and validated by introducing some parameters, baptized cohesion parameters. The simulation of our approach compared to existing and previously developed protocols shows the efficiency of the method. The results are very interesting and allow projecting several perspectives to improve performances by using other metrics.

**Notes:** Benaouda, Nacera Mostefai, Mohammed**URL:** <Go to ISI>://WOS:000355482300001

**Reference Type: Journal Article****Record Number:** 47**Author:** Bendib, B. Belmili, H. Krim, F.**Year:** 2015**Title:** A survey of the most used MPPT methods: Conventional and advanced algorithms applied for photovoltaic systems**Journal:** Renewable & Sustainable Energy Reviews**Volume:** 45**Pages:** 637-648**Date:** May**Short Title:** A survey of the most used MPPT methods: Conventional and advanced algorithms applied for photovoltaic systems**ISSN:** 1364-0321**DOI:** 10.1016/j.rser.2015.02.009**Accession Number:** WOS:000351963400048

**Abstract:** Maximum Power Point Tracking (MPPT) methods are used in photovoltaic (PV) systems to continually maximize the PV array output power which generally depends on solar radiation and cell temperature. MPPT methods can be roughly classified into two categories: there are conventional methods, like the Perturbation and Observation (P&O) method and the Incremental Conductance (IncCond) method and advanced methods, such as, fuzzy logic (FL) based MPPT method. This paper presents a survey of these methods in order to analyze, simulate, and evaluate a PV power supply system under varying meteorological conditions. Simulation results, obtained using MATLAB/Simulink, show that static and dynamic performances of fuzzy MPPT controller are better than those of conventional techniques based controller. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Bendib, Boualem Belmili, Hocine Krim, Fateh**URL:** <Go to ISI>://WOS:000351963400048

**Reference Type: Journal Article****Record Number:** 48**Author:** Bendib, M. Belhouchat, K. Hachemi, M. Ieee,**Year:** 2015**Title:** 3D Finite Element Analyses and Design Optimization of AFPM for Flywheel Energy Storage System**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** 3D Finite Element Analyses and Design Optimization of AFPM for Flywheel Energy Storage System**Accession Number:** WOS:000380433000097

**Abstract:** This paper presents the optimization design and analysis of axial flux permanent-magnet (AFPM) machine (internal stator external rotor) used in flywheel energy storage system (FESS). The main idea of design is reduce the pressure and friction acting on the lower bearing system, thus reducing the bearing losses and, therefore, the self-discharge of the stored energy during the standby mode. Due to the unconventional flux path distribution of this machine, a 3-D finite element (Maxwell 12) method was used to analyses the design, of course including its electromagnetic torque and axial force performances. The effects of the rotor permanent magnet (PM) and slots skew angles on the cogging torque and the axial force have been studied. It is found that an optimum skew angle is effective in reducing the overall cogging torque with negligible effect on the static axial force. The latter is essential as it can be utilized to minimize the axial bearing pressure in FESS application.

**Notes:** Bendib, M. Belhouchat, K. Hachemi, M. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000097

**Reference Type: Journal Article****Record Number:** 49**Author:** Bendjedi, A. Deghfel, B. Kahoul, A. Derradj, I. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**Year:** 2015**Title:** L shell fluorescence yields and total ionization and x-ray production cross sections for elements with  $40 \leq Z \leq 92$ **Journal:** Radiation Physics and Chemistry**Volume:** 117**Pages:** 128-134**Date:** Dec**Short Title:** L shell fluorescence yields and total ionization and x-ray production cross sections for elements with  $40 \leq Z \leq 92$ **ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2015.08.008**Accession Number:** WOS:000363080300021

**Abstract:** Existing experimental compilation (till 2014) for a wide range of elements ( $40 \leq Z \leq 92$ ) by proton impact (up to 10.0 MeV) is used to deduce empirical ionization and x-ray production cross sections. The reliability of the obtained cross sections is then exploited to derive new values of L shell average fluorescence yield. This was based on the fact that ratio of ionization to x-ray production cross sections is independent of the excitation energy of proton ranging from 0.02 to 10.0 MeV, for a given element. The obtained values are compared with earlier theoretical and experimental results, where a good agreement is observed for all elements under investigation. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Bendjedi, A. Deghfel, B. Kahoul, A. Derradj, I. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**URL:** <Go to ISI>://WOS:000363080300021

**Reference Type: Journal Article****Record Number:** 50**Author:** Bendjedid, A. Seddik, T. Khenata, R. Baltache, H. Murtaza, G. Bouhemadou, A. Bin Omran, S. Azam, S. Khan, S. A.**Year:** 2015**Title:** GGA plus U study on phase transition, optoelectronic and magnetic properties of AmO<sub>2</sub> with spin-orbit coupling**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 396**Pages:** 190-197**Date:** Dec**Short Title:** GGA plus U study on phase transition, optoelectronic and magnetic properties of AmO<sub>2</sub> with spin-orbit coupling**ISSN:** 0304-8853**DOI:** 10.1010/j.jmmm.2015.08.020**Accession Number:** WOS:000360652700030

**Abstract:** In this work, we have investigated the structural, phase transition, optoelectronic and magnetic properties of AmO<sub>2</sub> using the full potential linearized augmented plane wave plus local orbital (FP-LAPW + lo) method. The exchange correlation potential was treated with the generalized gradient approximation (GGA). Moreover, the GGA + U approximation (where U denotes the Hubbard Coulomb energy U term) is employed to treat the f electrons properly. The structurally stable AmO<sub>2</sub> compound is the Fm3m phase and at a pressure between 40 and 60 GPa underwent a phase transition to the Primo phase. Our present calculations have considered ferromagnetic and simple antiferromagnetic ground states and the AF state is favored. However, the experimental situation suggests a complex magnetic structure, perhaps involving multipolar ordering. Our band structure calculation with GGA and GGA + U predicted the metallic behavior of AmO<sub>2</sub>; however, with the spin orbit coupling (SOC) added to the Coulomb energy U term, semiconducting ground states with antiferromagnetism is correctly predicted. The projected density of states from the energy-band structure indicates that the band gap opening is governed by the partially filled Am "5f" state, and the calculated gap is approximately 1.29 eV. Moreover, the optical properties reveal strong response of AmO<sub>2</sub> in the UV region. (C) 2015 Elsevier B.V. All rights reserved

**Notes:** Bendjedid, A. Seddik, T. Khenata, R. Baltache, H. Murtaza, G. Bouhemadou, A. Bin Omran, S. Azam, Sikander Khan, Saleem Ayaz**URL:** <Go to ISI>://WOS:000360652700030

**Reference Type: Journal Article****Record Number:** 51**Author:** Benelli, G. Bedini, S. Flamini, G. Cosci, F. Cioni, P. L. Amira, S. Benchikh, F. Laouer, H. Di Giuseppe, G. Conti, B.**Year:** 2015**Title:** Mediterranean essential oils as effective weapons against the West Nile vector *Culex pipiens* and the Echinostoma intermediate host *Physella acuta*: what happens around? An acute toxicity survey on non-target mayflies**Journal:** Parasitology Research**Volume:** 114**Issue:** 3**Pages:** 1011-1021**Date:** Mar**Short Title:** Mediterranean essential oils as effective weapons against the West Nile vector *Culex pipiens* and the Echinostoma intermediate host *Physella acuta*: what happens around? An acute toxicity survey on non-target mayflies**ISSN:** 0932-0113**DOI:** 10.1007/s00436-014-4267-0**Accession Number:** WOS:000350039600022

**Abstract:** Mosquitoes (Diptera: Culicidae) represent a threat for millions of people worldwide, since they act as vectors for important pathogens, including malaria, yellow fever, dengue and West Nile. Second to malaria as the world's most widespread parasitic disease, infection by trematodes is a devastating public health problem. In this study, we proposed two essential oils from plants cultivated in Mediterranean regions as effective chemicals against mosquitoes and freshwater snails vectors of Echinostoma trematodes. Chemical composition of essential oils from *Achillea millefolium* (Asteraceae) and *Haplophyllum tuberculatum* (Rutaceae) was investigated. Acute toxicity was evaluated against larvae of the West Nile vector *Culex pipiens* (Diptera: Culicidae) and the invasive freshwater snail *Physella acuta* (Mollusca: Physidae), an important intermediate host of many parasites, including *Echinostoma revolutum* (Echinostomidae). Acute toxicity of essential oils was assessed also on a non-target aquatic organism, the mayfly *Cloeon dipterum* (Ephemeroptera: Baetidae). *Achillea millefolium* and *H. tuberculatum* essential oils were mainly composed by oxygenated monoterpenes (59.3 and 71.0 % of the whole oil, respectively). Chrysanthenone and borneol were the two major constituents of *Achillea millefolium* essential oil (24.1 and 14.2 %, respectively). Major compounds of *H. tuberculatum* essential oil were *cis-p-menth-2-en-1-ol* and *trans-p-menth-2-en-1-ol* (22.9 and 16.1 %, respectively). In acute toxicity assays, *C. pipiens* LC50 was 154.190 and 175.268 ppm for *Achillea millefolium* and *H. tuberculatum*, respectively. *P. acuta* LC50 was 112.911 and 73.695 ppm for *Achillea millefolium* and *H. tuberculatum*, respectively, while the same values were 198.116 and 280.265 ppm for *C. dipterum*. Relative median potency analysis showed that both tested essential oils were more toxic to *P. acuta* over *C. dipterum*. This research adds knowledge on plant-borne chemicals toxic against invertebrates of medical importance, allowing us to propose the tested oils as effective candidates to develop newer and safer vector control tools.

**Notes:** Benelli, Giovanni Bedini, Stefano Flamini, Guido Cosci, Francesca Cioni, Pier Luigi Amira, Smain Benchikh, Fatima Laouer, Hocine Di Giuseppe, Graziano Conti, Barbara**URL:** <Go to ISI>://WOS:000350039600022

**Reference Type: Journal Article****Record Number:** 52**Author:** Benguerba, Y. Amer, J. Ernst, B.**Year:** 2015**Title:** CFD modeling of the H-2/N-2 separation with a nickel/alpha-alumina microporous membrane**Journal:** Chemical Engineering Science**Volume:** 123**Pages:** 527-535**Date:** Feb**Short Title:** CFD modeling of the H-2/N-2 separation with a nickel/alpha-alumina microporous membrane**ISSN:** 0009-2509**DOI:** 10.1016/j.ces.2014.11.048**Accession Number:** WOS:000348034500053

**Abstract:** A theoretical model simulating gas mixture separation using a composite inorganic membrane for high temperatures ( $T > 400$  degrees C) is proposed. This model simulates operation of membrane described as three layers: metal, metal-support and support. The intermediate layer is considered to take into account the part of support with a few amounts of metal where the pore diameter is reduced due to the deposited metal on the wall of the pores. The computational fluid dynamics (CFD) approach is used. The simulation is based on the numerical solution of the three-dimensional (3D) Navier-Stokes equations coupled with the species governing equations on the three dimensional domain representing quite closely the selected module geometry. The permeability fluxes are calculated at different temperature and transmembrane pressures and compared with the experimental data. The simulation predictions show fairly good agreement with the measured permeation data. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Benguerba, Yacine Amer, Jamal Ernst, Barbara**URL:** <Go to ISI>://WOS:000348034500053

**Reference Type: Journal Article****Record Number:** 53**Author:** Benguerba, Y. Dehimi, L. Virginie, M. Dumas, C. Ernst, B.**Year:** 2015**Title:** Numerical investigation of the optimal operative conditions for the dry reforming reaction in a fixed-bed reactor: role of the carbon deposition and gasification reactions**Journal:** Reaction Kinetics Mechanisms and Catalysis**Volume:** 115**Issue:** 2**Pages:** 483-497**Date:** Aug**Short Title:** Numerical investigation of the optimal operative conditions for the dry reforming reaction in a fixed-bed reactor: role of the carbon deposition and gasification reactions**ISSN:** 1878-5190**DOI:** 10.1007/s11144-015-0849-9**Accession Number:** WOS:000358170200006**Abstract:** The effect of the reaction parameters on the catalytic activity and the carbon deposition over 33 % Ni/Al<sub>2</sub>O<sub>3</sub> catalyst was investigated. The kinetics of the CO<sub>2</sub> reforming of methane was considered in the temperature range 450-650A degrees C at atmospheric pressure with a 1:1:8 mixture of CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>. The reactor model for the dry reforming of methane used the Richardson and Paripatyadar kinetics and the Snoeck et al. kinetics for the coke deposition and the gasification reactions. The results led to the conclusion of the influence of CH<sub>4</sub>/CO<sub>2</sub> ratio and temperature on the conversion/yield.**Notes:** Benguerba, Yacine Dehimi, Lila Virginie, Mirella Dumas, Christine Ernst, Barbara**URL:** <Go to ISI>://WOS:000358170200006

**Reference Type: Journal Article****Record Number:** 54**Author:** Benguerba, Y. Dehimi, L. Virginie, M. Dumas, C. Ernst, B.**Year:** 2015**Title:** Modelling of methane dry reforming over Ni/Al<sub>2</sub>O<sub>3</sub> catalyst in a fixed-bed catalytic reactor**Journal:** Reaction Kinetics Mechanisms and Catalysis**Volume:** 114**Issue:** 1**Pages:** 109-119**Date:** Feb**Short Title:** Modelling of methane dry reforming over Ni/Al<sub>2</sub>O<sub>3</sub> catalyst in a fixed-bed catalytic reactor**ISSN:** 1878-5190**DOI:** 10.1007/s11144-014-0772-5**Accession Number:** WOS:000348121300008

**Abstract:** The dry reforming of CH<sub>4</sub> in a fixed-bed catalytic reactor for the production of hydrogen at different temperatures over supported Ni catalyst has been studied. In the simulation of the reactor, a one-dimensional heterogeneous model is applied. Temperature and concentration gradients are accounted for in the axial direction only. The reactor model for the dry reforming of methane used the Richardson and Paripatyadar kinetics and the Snoeck et al. kinetics for the coke-deposition and gasification reactions. The effect of using different temperatures on the performance of the reactor was analyzed. The amounts of each species consumed or/and produced were calculated and compared with the experimental determined ones. It was shown that the Richardson and Paripatyadar-Snoeck et al. kinetics gave a good fit and accurately predicted the experimental observed profiles from the fixed bed reactor, and thus the degree of conversion of CH<sub>4</sub> and CO<sub>2</sub>.

**Notes:** Benguerba, Yacine Dehimi, Lila Virginie, Mirella Dumas, Christine Ernst, Barbara**URL:** <Go to ISI>://WOS:000348121300008

**Reference Type: Journal Article****Record Number: 55****Author:** Benhouria, A. Islam, M. A. Zaghouane-Boudiaf, H. Boutahala, M. Hameed, B. H.**Year:** 2015**Title:** Calcium alginate-bentonite-activated carbon composite beads as highly effective adsorbent for methylene blue**Journal:** Chemical Engineering Journal**Volume:** 270**Pages:** 621-630**Date:** Jun**Short Title:** Calcium alginate-bentonite-activated carbon composite beads as highly effective adsorbent for methylene blue**ISSN:** 1385-8947**DOI:** 10.1016/j.ccej.2015.02.030**Accession Number:** WOS:000353729100071

**Abstract:** Three adsorbents, namely, bentonite-alginate beads, activated carbon-alginate beads, and activated carbon-bentonite-alginate beads (ABA) were prepared for the adsorption of methylene blue (MB). The effects of solution pH (3-11), temperature (30, 40, and 50 degrees C), initial concentration (25-500 mg/L), and contact time were investigated. Results showed that the maximum monolayer adsorption capacity of ABA beads for the adsorption of MB was 756.97 mg/g at 30 degrees C. Furthermore, the adsorption kinetics illustrated the suitability of employing the pseudo-second-order kinetic model. The equilibrium adsorption data fitted the Freundlich isotherm well. In addition, the ABA composite exhibited more than 70% adsorption uptake capacity after six regeneration cycles. The outcomes of this study suggest the potential of ABA composite for cationic dye removal. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Benhouria, Assia Islam, Md. Azharul Zaghouane-Boudiaf, H. Boutahala, M. Hameed, B. H.**URL:** <Go to ISI>://WOS:000353729100071

**Reference Type: Journal Article****Record Number:** 56**Author:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Maabed, S. Khenata, R. Bin-Omran, S.**Year:** 2015**Title:** Structural, elastic, electronic and optical properties of KAlQ(2) (Q = Se, Te): A DFT study**Journal:** Solid State Sciences**Volume:** 48**Pages:** 72-81**Date:** Oct**Short Title:** Structural, elastic, electronic and optical properties of KAlQ(2) (Q = Se, Te): A DFT study**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2015.07.006**Accession Number:** WOS:000363347800013

**Abstract:** First-principles calculations in the framework of density functional theory have been conducted to explore the structural, elastic, electronic and optical properties of two layered ternary compounds chalcogenides of aluminum KAlSe(2) and KAlTe(2). We have calculated all of the equilibrium structural parameters; the lattice parameters (a, b and c), angle beta and twenty three internal atomic coordinates. The obtained results are in excellent agreement with the available experimental data. We have predicted the single-crystal elastic constants  $C_{ij}$  of the title materials using stress-strain approach and then derived the elastic moduli of the polycrystalline aggregates and related properties via the Voigt-Reuss-Hill approximations. The band structure and density of states diagrams have been calculated and analyzed. Both compounds demonstrate semiconducting behavior with direct band gap. The linear optical properties, namely the frequency-dependent dielectric function, absorption coefficient, refractive index, extinction coefficient, reflectivity and energy-loss function, have been calculated and analyzed in a wide energy range up to 20 eV. (C) 2015 Elsevier Masson SAS. All rights reserved.

**Notes:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Maabed, S. Khenata, R. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000363347800013

**Reference Type: Journal Article****Record Number:** 57**Author:** Benoraira, A. Benmahammed, K. Boucenna, N.**Year:** 2015**Title:** Blind image watermarking technique based on differential embedding in DWT and DCT domains**Journal:** Eurasip Journal on Advances in Signal Processing**Date:** Jul**Short Title:** Blind image watermarking technique based on differential embedding in DWT and DCT domains**ISSN:** 1687-6180**DOI:** 10.1186/s13634-015-0239-5**Article Number:** 55**Accession Number:** WOS:000360576300001

**Abstract:** This paper presents a new blind and robust image watermarking scheme based on discrete wavelet transform (DWT) and discrete cosine transform (DCT). Two DCT-transformed sub-vectors are used to embed the bits of the watermark sequence in a differential manner. The original sub-vectors are obtained by the sub-sampling of the approximation coefficients of the DWT transform of the host image. During the extraction stage, the simple difference between the corresponding sub-vectors of the watermarked image, gives directly the embedded watermark sequence. Experimental results demonstrate that the proposed technique successfully fulfills the requirement of imperceptibility and provides high robustness against a number of image-processing attacks, such as JPEG compression, noise adding, low-pass filtering, sharpening, and bit-plane removal. Our scheme exhibits also an acceptable to good performance against some geometrical attacks such as resizing and cropping.

**Notes:** Benoraira, Ali Benmahammed, Khier Boucenna, Noureddine**URL:** <Go to ISI>://WOS:000360576300001

**Reference Type: Journal Article****Record Number:** 58**Author:** Benramdane, R. Benghanem, F. Ourari, A. Keraghel, S. Bouet, G.**Year:** 2015**Title:** Synthesis and characterization of a new Schiff base derived from 2,3-diaminopyridine and 5-methoxysalicylaldehyde and its Ni(II), Cu(II) and Zn(II) complexes. Electrochemical and electrocatalytical studies**Journal:** Journal of Coordination Chemistry**Volume:** 68**Issue:** 3**Pages:** 560-572**Short Title:** Synthesis and characterization of a new Schiff base derived from 2,3-diaminopyridine and 5-methoxysalicylaldehyde and its Ni(II), Cu(II) and Zn(II) complexes. Electrochemical and electrocatalytical studies**ISSN:** 0095-8972**DOI:** 10.1080/00958972.2014.994514**Accession Number:** WOS:000349388100016**Abstract:** We describe the synthesis and characterization of a new tetradentate Schiff base ligand obtained from 2,3-diaminopyridine and 5-methoxysalicylaldehyde. This ligand (H<sub>2</sub>L) reacted with nickel(II), copper(II), and zinc(II) acetates to give complexes. The ligand and its metal complexes were characterized using analytical, spectral data (UV-vis, IR, and mass spectroscopy), and cyclic voltammetry (CV). The crystal structure of the copper complex was elucidated by X-ray diffraction studies. The electrochemical behavior of these compounds, using CV, revealed that metal centers were distinguished by their intrinsic redox systems, e.g. Ni(II)/Ni(I), Cu(II)/Cu(I), and Zn(II)/Zn(I). Moreover, the electrocatalytic reactions of Ni(II) and Cu(II) complexes catalyze the oxidation of methanol and benzylic alcohol.**Notes:** Benramdane, Razika Benghanem, Fatiha Ourari, Ali Keraghel, Saida Bouet, Gilles**URL:** <Go to ISI>://WOS:000349388100016

**Reference Type: Journal Article**

**Record Number: 59**

**Author:** Bentouhami, A. Keskes, B.

**Year:** 2015

**Title:** EXPERIMENTAL ANALYSIS AND MODELING OF THE BUCKLING OF A LOADED HONEYCOMB SANDWICH COMPOSITE

**Journal:** Materiali in Tehnologije

**Volume:** 49

**Issue:** 2

**Pages:** 235-242

**Date:** Mar-Apr

**Short Title:** EXPERIMENTAL ANALYSIS AND MODELING OF THE BUCKLING OF A LOADED HONEYCOMB SANDWICH COMPOSITE

**ISSN:** 1580-2949

**Accession Number:** WOS:000353936700011

**Abstract:** Sandwich panels have the best stiffness-to-lightness ratio, which is what makes them very useful in industrial applications. This paper is focused on a study of the buckling capacities of the core components under uniaxial compression. The critical buckling loads for various core densities and materials of honeycomb panels were experimentally and numerically investigated. The specimens under lateral loading showed three zones: zone 1 is the initial elastic state, followed by the plateau region in zone 2, while zone 3 shows a monotonically stiffening region, associated with the densification of the material. The effect of the core density and its materials on the behavior and the damage was highlighted. From the experiment it is clear that the buckling load of the specimens increases as the core density is increasing. In terms of stiffness and load at failure, the honeycomb sandwich panel had better mechanical characteristics than its components. The study also calculated the numerical buckling loads of the panels using the ABAQUS finite-element analysis program. The achieved experimental and numerical results were compared with each other. In conclusion, a good correlation between theory and experiment was found.

**Notes:** Bentouhami, Abderrahmane Keskes, Boualem

**URL:** <Go to ISI>://WOS:000353936700011

**Reference Type: Journal Article****Record Number:** 60**Author:** Bentoumi, M. Bouzid, D. Hervas, I. Iost, A.**Year:** 2015**Title:** Comparative study by indentation test of the mechanical characteristics of soda-lime and ceramic glasses ground and polished by bound abrasive grains**Journal:** Materiaux & Techniques**Volume:** 103**Issue:** 6**Short Title:** Comparative study by indentation test of the mechanical characteristics of soda-lime and ceramic glasses ground and polished by bound abrasive grains**ISSN:** 0032-6895**DOI:** 10.1051/mattech/2015060**Article Number:** 611**Accession Number:** WOS:000372190700011

**Abstract:** In this work, indentation toughness of 4 optical glasses (Crown K5, Heavy flint, Float glass and Zerodur (R)) was analyzed regarding its surface quality. Despite the large number of the involved technological parameters, polishing of brittle materials by abrasive bonded grains shows a high efficiency and a better surface quality compared to polishing by free abrasive grains. This method has allowed obtaining roughness parameters, Ra and Rq, about 30-40 nm. Instrumented indentation tests were performed by varying the load from 5 to 300 N. A good reproducibility was achieved. Pop-in in glass ceramic was observed from 50 N, whereas it only appears from 100 N on heavy flint and float glasses and they are not highlighted on crown glass. Indentation toughness was calculated by means of the cracks length using different relationships based on hypotheses concerning the cracks geometry. Anstis, Tanaka, Niihara and Laugier equations were employed. Finally, the results obtained from these equations and their dispersions are compared.

**Notes:** Bentoumi, Mohamed Bouzid, Djamel Hervas, Isabel Iost, Alain**URL:** <Go to ISI>://WOS:000372190700011

**Reference Type: Journal Article****Record Number:** 61**Author:** Benzid, K. Muller, D. Turek, P. Tribollet, J.**Year:** 2015**Title:** Spin wave free spectrum and magnetic field gradient of nanopatterned planes of ferromagnetic cobalt nanoparticles: key properties for magnetic resonance based quantum computing**Journal:** European Physical Journal B**Volume:** 88**Issue:** 3**Date:** Mar**Short Title:** Spin wave free spectrum and magnetic field gradient of nanopatterned planes of ferromagnetic cobalt nanoparticles: key properties for magnetic resonance based quantum computing**ISSN:** 1434-6028**DOI:** 10.1140/epjb/e2015-50768-3**Article Number:** 58**Accession Number:** WOS:000351141900002

**Abstract:** We present a study by ferromagnetic resonance at microwave Q band of two sheets of cobalt nanoparticles obtained by annealing SiO<sub>2</sub> layers implanted with cobalt ions. This experimental study is performed as a function of the applied magnetic field orientation, temperature, and dose of implanted cobalt ions. We demonstrate that each of those magnetic sheet of cobalt nanoparticles can be well modelled by a nearly two dimensional ferromagnetic sheet having a reduced effective saturation magnetization, compared to a regular thin film of cobalt. The nanoparticles are found superparamagnetic above around 210 K and ferromagnetic below this blocking temperature. Magnetostatic calculations show that a strong magnetic field gradient of around 0.1 G/nm could be produced by a ferromagnetic nanostripe patterned in such magnetic sheet of cobalt nanoparticles. Such a strong magnetic field gradient combined with electron paramagnetic resonance may be relevant for implementing an intermediate scale quantum computer based on arrays of coupled electron spins, as previously reported [J. Tribollet, Eur. Phys. J. B 87, 183 (2014)]. However, this new approach only works if no additional spin decoherence is introduced by the spin waves excitations of the ferromagnetic nanostructure. We thus suggest theoretically some possible magnetic anisotropy engineering of cobalt nanoparticles that could allow to suppress the electron spin qubit decoherence induced by the collective magnetic excitation of those nanoparticles.

**Notes:** Benzid, Khalif Muller, Dominique Turek, Philippe Tribollet, Jerome**URL:** <Go to ISI>://WOS:000351141900002

**Reference Type: Journal Article****Record Number:** 62**Author:** Berri, S.**Year:** 2015**Title:** First-principles study on half-metallic properties of the Sr<sub>2</sub>GdReO<sub>6</sub> double perovskite**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 385**Pages:** 124-128**Date:** Jul**Short Title:** First-principles study on half-metallic properties of the Sr<sub>2</sub>GdReO<sub>6</sub> double perovskite**ISSN:** 0304-8853**DOI:** 10.1016/j.mmm.2015.03.025**Accession Number:** WOS:000352489100019

**Abstract:** A first-principles approach is used to study the structural, electronic and magnetic properties of Sr<sub>2</sub>GdReO<sub>6</sub>, using full-potential linearized augmented plane wave (FP-LAPW) method within the spin density functional theory. At the equilibrium lattice constant, our calculations predict that Sr<sub>2</sub>GdReO<sub>6</sub> is half-metallic (HM) with a magnetic moment of 9  $\mu(B)/fu$  and HM flip gap of 1.82 eV. In addition, the ferromagnetic phase is found to be energetically more favorable than paramagnetic phase. Therefore, the Sr<sub>2</sub>GdReO<sub>6</sub> compound is a promising material for future spintronic application. (C) 2015 Elsevier B.V. All rights reserved

**Notes:** Berri, Saadi**URL:** <Go to ISI>://WOS:000352489100019

**Reference Type: Journal Article****Record Number:** 63**Author:** Berri, S. Kouriche, A. Maouche, D. Zerarga, F. Attallah, M.**Year:** 2015**Title:** Ab initio study of electronic structure and magnetic properties in ferromagnetic Sr<sub>1-x</sub>(Mn, Cr)<sub>x</sub>O alloys**Journal:** Materials Science in Semiconductor Processing**Volume:** 38**Pages:** 101-106**Date:** Oct**Short Title:** Ab initio study of electronic structure and magnetic properties in ferromagnetic Sr<sub>1-x</sub>(Mn, Cr)<sub>x</sub>O alloys**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.04.016**Accession Number:** WOS:000357839800014

**Abstract:** A first-principles approach is used to study the structural, electronic and magnetic properties of Sr<sub>1-x</sub>(Mn, Cr)<sub>x</sub>O alloys. The investigation was done using the (FP-LAPW) scheme within the generalized gradient approximation by Wu and Cohen (GGA-WC), GGA+U and LSDA+U. At ambient conditions our calculated results of band structures reveal that for Sr<sub>1-x</sub>(Mn, Cr)<sub>x</sub>O (for x=0.25 and 0.75) has a half-metallic (HM) band structure profile showing 100% spin polarization at the Fermi level. Therefore, the Sr<sub>1-x</sub>(Mn, Cr)<sub>x</sub>O (for x=0.25 and 0.75) is a candidate material for future spintronic/magnetoelectronics applications. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Berri, Saadi Kouriche, Athmane Maouche, Djamel Zerarga, Fares Attallah, Mourad**URL:** <Go to ISI>://WOS:000357839800014

**Reference Type: Journal Article****Record Number:** 64**Author:** Bessine, K. Nehar, A. Cherroun, H. Moussaoui, A. Ieee,**Year:** 2015**Title:** XCLSC: Structure and Content-based Clustering of XML Documents**Journal:** 2015 12th IEEE International Conference on Programming and Systems (ISPS)**Pages:** 221-227**Short Title:** XCLSC: Structure and Content-based Clustering of XML Documents**Accession Number:** WOS:000380619200036

**Abstract:** This paper proposes a novel Clustering approach for XML documents that combines both their content and structure information using tree structural-content summaries in order to reduce the size of the document. This reduction has twofold purpose. First, it reduces the size of the XML tree by eliminating redundant nodes. Second, it gathers similaire content. The clustering is performed according to a similarity measure that takes into account the structure and the content between levels. Several experiments are performed to explore the effectiveness of using tree structural summaries and constrained content in the clustering process. Empirical analysis reveals that the designed clustering approach using content within structure and tree structural summaries gives a better solution for XML clustering while improving runtime. It is very suitable when we deal with big data sets.

**Notes:** Bessine, Karima Nehar, Attia Cherroun, Hadda Moussaoui, Abdelouahab 12th IEEE International Conference on Programming and Systems (ISPS) Apr 28-30, 2015 Algiers, ALGERIA IEEE, IEEE Algeria Subsection, USTHB, RSDT, Cerist, SDA, IRIA, MOVEP, BADR Bank, Arpt, CMR, ANVEREDET, Air Algerie 978-1-4799-7700-0

**URL:** <Go to ISI>://WOS:000380619200036

**Reference Type: Journal Article****Record Number:** 65**Author:** Betka, A. Bentabet, A. Azbouche, A. Fenineche, N. Adjiri, A. Dib, A.**Year:** 2015**Title:** 131 iodine gamma dose determination in the thyroid gland using two geometrical shapes: a comparative study**Journal:** Physica Scripta**Volume:** 90**Issue:** 5**Date:** May**Short Title:** 131 iodine gamma dose determination in the thyroid gland using two geometrical shapes: a comparative study**ISSN:** 0031-8949**DOI:** 10.1088/0031-8949/90/5/055002**Article Number:** 055002**Accession Number:** WOS:000356498700017

**Abstract:** In order to study the internal gamma dose, we used a Monte Carlo code 'Penelope' simulation with two geometrical models (cylindrical and spherical). The deposited energy was determined via the loss of energy calculated from the quantum theory for inelastic collisions based on the first-order (plane-wave) Born approximation for charged particles with individual atoms and molecules. Our results show that the cylindrical geometry is more suitable for carrying out such a study. Moreover, we developed an analytical expression for the 131 iodine gamma dose (the energy deposited per photon absorbed dose). This latter could be considered as an important tool for evaluating the gamma dose without going through stochastic models.

**Notes:** Betka, A. Bentabet, A. Azbouche, A. Fenineche, N. Adjiri, A. Dib, A.**URL:** <Go to ISI>://WOS:000356498700017

**Reference Type: Journal Article****Record Number:** 66**Author:** Bidoli, E. Serraino, D. Mahnane, A. Laouamri, S. Zaidi, Z. Boukharouba, H. Kara, L. Birri, S. De Paoli, P. Cherif, M. H.**Year:** 2015**Title:** Implementation of secondary prevention programs in Setif, Algeria**Journal:** European Journal of Cancer Care**Volume:** 24**Pages:** 27-28**Date:** Jun**Short Title:** Implementation of secondary prevention programs in Setif, Algeria**ISSN:** 0961-5423**Accession Number:** WOS:000355736600072**Notes:** Bidoli, Ettore Serraino, Diego Mahnane, Abbas Laouamri, Slimane Zaidi, Zoubida Boukharouba, Hafida Kara, Lamia Birri, Silvia De Paoli, Paolo Cherif, Mokhtar Hamdi 1 Si**URL:** <Go to ISI>://WOS:000355736600072

**Reference Type: Journal Article****Record Number:** 67**Author:** Bir, A. Yakhlef, H. Madani, T.**Year:** 2015**Title:** Evaluating the feed autonomy of dairy cattle farms found in the semi-arid Setif region of Algeria**Journal:** Fourrages**Issue:** 221**Pages:** 85-91**Date:** Mar**Short Title:** Evaluating the feed autonomy of dairy cattle farms found in the semi-arid Setif region of Algeria**ISSN:** 0429-2766**Accession Number:** WOS:000353433600010

**Abstract:** For technical, economic, and product marketing reasons, farmers aim for greater self-sufficiency in feeding their livestock (i.e., feed autonomy). 128 dairy cattle farms in the semi-arid Setif region (Algeria) were surveyed to gauge their level of autonomy. Nine criteria were used: for thy matter (DM), energy, and protein, overall autonomy as well as fodder autonomy and concentrate autonomy were determined. Farms demonstrated low levels of overall autonomy (33% for DM, 26% for energy, and 29% for protein); however, they were more autonomous in their use of fodder (61% for DM) than in their use of concentrates (6% for DM). Four different types of farming systems were identified, but farming system type had a minimal effect on feed autonomy. In general, large farms (those producing grains and livestock) were more autonomous overall. System-specific differences in autonomy were explained by variables related to farming intensity.

**Notes:** Bir, A. Yakhlef, H. Madani, T.**URL:** <Go to ISI>://WOS:000353433600010

**Reference Type: Journal Article****Record Number:** 68**Author:** Bouafass, A. Rahmani, L. Mekhilef, S.**Year:** 2015**Title:** Design and real time implementation of single phase boost power factor correction converter**Journal:** Isa Transactions**Volume:** 55**Pages:** 267-274**Date:** Mar**Short Title:** Design and real time implementation of single phase boost power factor correction converter**ISSN:** 0019-0578**DOI:** 10.1016/j.isatra.2014.10.004**Accession Number:** WOS:000352678200027

**Abstract:** This paper presents a real time implementation of the single-phase power factor correction (PFC) AC-DC boost converter. A combination of higher order sliding mode controller based on super twisting algorithm and predictive control techniques are implemented to improve the performance of the boost converter. Due to the chattering effects, the higher order sliding mode control (HOSMC) is designed. Also, the predictive technique is modified taking into account the large computational delays. The robustness of the controller is verified conducting simulation in MATLAB, the results show good performances in both steady and transient states. An experiment is conducted through a test bench based on dSPACE 1104. The experimental results proved that the proposed controller enhanced the performance of the converter under different parameters variations. (C) 2014 ISA. Published by Elsevier Ltd. All rights reserved.

**Notes:** Bouafass, Amar Rahmani, Lazhar Mekhilef, Saad**URL:** <Go to ISI>://WOS:000352678200027

**Reference Type: Journal Article****Record Number:** 69**Author:** Bouafassa, A. Rahmani, L. Babes, B. Bayindir, R. Ieee,**Year:** 2015**Title:** Experimental Design of a Finite State model Predictive Control for Improving Power Factor of Boost Rectifier**Journal:** 2015 Ieee 15th International Conference on Environment and Electrical Engineering (Ieee Eeeic 2015)**Pages:** 1556-1561**Short Title:** Experimental Design of a Finite State model Predictive Control for Improving Power Factor of Boost Rectifier**Accession Number:** WOS:000366654400264

**Abstract:** this paper proposes a simple, low-cost, and powerful controller based on finite state model predictive controller (FS-MPC) for a single-phase boost power factor correction (PFC). The proposed controller can achieve high static and dynamic performances under different loads or DC link voltage variations. The proposed method works in the discrete time domain with a minimum time delay and capable of achieving a unity power factor in AC current. Moreover, in order to examine and evaluate the merits of the proposed method in real-time, an experimental test bench has been built around dSPACE 1104. The obtained results are very significant and much better compared to latest works.

**Notes:** Bouafassa, Amar Rahmani, Lazhar Babes, Badreddine Bayindir, Ramazan IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC) Jun 10-13, 2015 Rome, ITALY IEEE, EMC Soc, IEEE Ind Applicat Soc, IEEE Power & Energy Soc 978-1-4799-7992-9

**URL:** <Go to ISI>://WOS:000366654400264

**Reference Type: Journal Article****Record Number:** 70**Author:** Bouafia, M. Hamimid, S. Guellal, M.**Year:** 2015**Title:** Non-Boussinesq convection in a square cavity with surface thermal radiation**Journal:** International Journal of Thermal Sciences**Volume:** 96**Pages:** 236-247**Date:** Oct**Short Title:** Non-Boussinesq convection in a square cavity with surface thermal radiation**ISSN:** 1290-0729**DOI:** 10.1016/j.ijthermalsci.2015.04.017**Accession Number:** WOS:000361163800021

**Abstract:** The interaction of natural convection with surface radiation in a differentially heated square cavity filled with air is considered under large temperature differences. The study has been investigated by direct numerical simulations with a two-dimensional finite volume numerical code solving the time-dependent Navier-Stokes equations under the Low Mach Number (LMN) approximation. Calculations were performed for cases with strong non-Boussinesq effects. The results reveal that the fluid flow and heat transfer are influenced significantly by the surface radiation. At steady state, the top wall is cooled and the bottom wall is heated compared to the case without radiation. The air flow is reinforced near the horizontal walls and the thermal stratification at the core is reduced. The surface radiation reduces the convection heat transfer at the hot wall and increases it on the cold wall. Transition from steady to unsteady flow has also been investigated. By comparing the solutions in pure convection, the results in combined convection-radiation show that the radiation promotes the occurrence of instabilities leading to an early transition to the unsteadiness and contributes to the modification of the physical mechanism responsible for their onset. (C) 2015 Elsevier Masson SAS. All rights reserved.

**Notes:** Bouafia, M. Hamimid, S. Guellal, M.**URL:** <Go to ISI>://WOS:000361163800021

**Reference Type: Journal Article****Record Number:** 71**Author:** Bouaziz, S. Rekkal, K. Ieee,**Year:** 2015**Title:** A PAPR Reduction for STBC MIMO-OFDM Systems in 4G Wireless Communications using PTS Scheme**Journal:** 2015 First International Conference on New Technologies of Information and Communication (Ntic)**Short Title:** A PAPR Reduction for STBC MIMO-OFDM Systems in 4G Wireless Communications using PTS Scheme**Accession Number:** WOS:000380529300008

**Abstract:** Orthogonal Frequency Division Multiplexing (OFDM) is of great interest for researchers and research laboratories all over the world. OFDM is widely used in contemporary communication systems for its good robustness in multipath environment, and its high spectral efficiency. The capacity of wireless system can be increased dramatically by employing Multiple Input Multiple Output, (MIMO) antennas. The combination of MIMO and OFDM system is found to be very beneficial. A major drawback of OFDM-MIMO System is its high Peak to Average Power Ratio (PAPR) Reduction. The peak power of a signal is a critical design factor for band limited communication systems, and it is necessary to reduce it as much as possible. Many PAPR reduction techniques have been used to reduce PAPR. Partial transmit sequence (PTS) is one of the most well-known peak-to-average power ratio (PAPR) reduction techniques proposed for MIMO-OFDM systems. However the computational complexity of traditional PTS method is tremendous. In this paper a new partial transmit sequence (PTS) technique, based on C-A-PTS technique, for two antennas STBC MIMO-OFDM system, is proposed which can achieve better PAPR performance at much less complexity. The main idea behind this is to separate the input data vector, generated by Alamouti algorithm, into real and imaginary parts and separately multiplied with phase factors. The optimum weighting coefficient of antenna two can be directly obtained by appropriating mapping from that of antenna one which leads further to reducing complexity computation. Simulation results show that the proposed approach can reduce computationally complexity and achieve a better PAPR reduction and bit error rate performances compared to C-A-PTS.

**Notes:** Bouaziz, Samir Rekkal, Kahina 1st International Conference on New Technologies of Information and Communication NTIC Nov 08-09, 2015 Mathematics and Informatics Department, Institute of Science and Technolog, Algeria, ALGERIA Mathematics and Informatics Deparment, Institute of Science and Technology of Abdelhafid Boussouf University Center of Mila Algeria, MELILAB Laboratory Mathematics 978-1-4673-6685-4

**URL:** <Go to ISI>://WOS:000380529300008

**Reference Type: Journal Article****Record Number:** 72**Author:** Bouaziz, Z. Issa, S. Gentili, J. Gratz, A. Bollacke, A. Kassack, M. Jose, J. Herfindal, L. Gausdal, G. Doskeland, S. O. Mullie, C. Sonnet, P. Desgrouas, C. Taudon, N. Valdameri, G. Di Pietro, A. Baitiche, M. Le Borgne, M.**Year:** 2015**Title:** Biologically active carbazole derivatives: focus on oxazinocarbazoles and related compounds**Journal:** Journal of Enzyme Inhibition and Medicinal Chemistry**Volume:** 30**Issue:** 2**Pages:** 180-188**Date:** Apr**Short Title:** Biologically active carbazole derivatives: focus on oxazinocarbazoles and related compounds**ISSN:** 1475-6366**DOI:** 10.3109/14756366.2014.899594**Accession Number:** WOS:000352274500002

**Abstract:** Four series of carbazole derivatives, including N-substituted-hydroxycarbazoles, oxazinocarbazoles, isoxazolocarbazolequinones, and pyridocarbazolequinones, were studied using diverse biological test methods such as a CE-based assay for CK2 activity measurement, a cytotoxicity assay with IPC-81 cell line, determination of MIC of carbazole derivatives as antibacterial agents, a Plasmodium falciparum susceptibility assay, and an ABCG2-mediated mitoxantrone assay. Two oxazinocarbazoles Ib and Ig showed CK2 inhibition with IC<sub>50</sub> = 8.7 and 14.0  $\mu$ M, respectively. Further chemical syntheses were realized and the 7-isopropyl oxazinocarbazole derivative 2 displayed a stronger activity against CK2 (IC<sub>50</sub> = 1.40  $\mu$ M). Oxazinocarbazoles Ib, Ig, and 2 were then tested against IPC-81 leukemia cells and showed the ability to induce leukemia cell death with IC<sub>50</sub> values between 57 and 62  $\mu$ M. Further investigations were also reported on antibacterial and antiplasmodial activities. No significant inhibitory activity on ABCG2 efflux pump was detected.

**Notes:** Bouaziz, Zouhair Issa, Samar Gentili, Jacques Gratz, Andreas Bollacke, Andre Kassack, Matthias Jose, Joachim Herfindal, Lars Gausdal, Gro Doskeland, Stein Ove Mullie, Catherine Sonnet, Pascal Desgrouas, Camille Taudon, Nicolas Valdameri, Glaucio Di Pietro, Attilio Baitiche, Milad Le Borgne, Marc

**URL:** <Go to ISI>://WOS:000352274500002

**Reference Type: Journal Article****Record Number:** 73**Author:** Boubaaya Naciera, B.**Year:** 2015**Title:** The price of fame acquired by transgression**Journal:** Voix Plurielles**Volume:** 12**Issue:** 2**Pages:** 297-309**Short Title:** The price of fame acquired by transgression**ISSN:** 1925-0614**Accession Number:** WOS:000376561600027**Notes:** Boubaaya Naciera, Belfar**URL:** <Go to ISI>://WOS:000376561600027

**Reference Type: Journal Article****Record Number:** 74**Author:** Bouchakour, M. Derouiche, Y. Boubberka, Z. Beyens, C. Mechernene, L. Riahi, F. Maschke, U.**Year:** 2015**Title:** Optical properties of electron beam- and UV-cured polypropyleneglycoldiacrylate/liquid crystal E7 systems**Journal:** Liquid Crystals**Volume:** 42**Issue:** 11**Pages:** 1527-1536**Date:** Nov**Short Title:** Optical properties of electron beam- and UV-cured polypropyleneglycoldiacrylate/liquid crystal E7 systems**ISSN:** 0267-8292**DOI:** 10.1080/02678292.2015.1044579**Accession Number:** WOS:000364228400003

**Abstract:** This contribution focuses on a detailed investigation of the relationship between the method of polymerisation/cross-linking, such as slow and rapid UV radiation, and high voltage accelerated electron beam (EB), and the obtained physical properties including phase diagrams, polymerisation and phase separation kinetics, morphologies and electro-optic responses of polypropyleneglycoldiacrylate (PPGDA) monomers, in the presence of the nematic liquid crystal E7. The longer the spacing between double bonds, the more rapid was the photopolymerisation under both UV systems; however, the reverse was proved under EB. More homogenous and regular morphologies were obtained under EB curing. The electro-optical responses of various polymer dispersed liquid crystals (PDLCs) systems exhibited remarkable differences between the UV-cured samples and those cured by the EB technique. It was found that the threshold and saturation voltages considerably increased in the case of the UV-cured systems. Other results involving the contrast ratio, which is higher for EB-cured systems, confirm their higher quality, although the rapid photopolymerisation UV source was employed, which slightly improved the electro-optical responses. Moreover, EB curing leads to high enough conversions without a photoinitiator, which may act as an impurity that might have a strong impact on the electro-optical performance of the obtained PDLCs.

**Notes:** Bouchakour, Mohammed Derouiche, Yazid Boubberka, Zohra Beyens, Christophe Mechernene, Lahcene Riahi, Farid Maschke, Ulrich**URL:** <Go to ISI>://WOS:000364228400003

**Reference Type: Journal Article****Record Number:** 75**Author:** Bouchama, A. Yahiaoui, M. Chiter, C. Setifi, Z. Simpson, J.**Year:** 2015**Title:** Crystal structure of (Z)-2- (E)-2-benzylidenehydrazin-1-ylidene -1,2-diphenylethanone**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** 35-+**Date:** Jan**Short Title:** Crystal structure of (Z)-2- (E)-2-benzylidenehydrazin-1-ylidene -1,2-diphenylethanone**ISSN:** 2056-9890**DOI:** 10.1107/s2056989014026358**Accession Number:** WOS:000369968500058

**Abstract:** The title compound, C<sub>21</sub>H<sub>16</sub>N<sub>2</sub>O, has an almost planar (r.m.s. deviation = 0.0074 angstrom) 1,2-dibenzylidenehydrazine backbone with an approximately orthogonal almost planar (r.m.s. deviation = 0.0368 angstrom) phenylethanone substituent on one of the imine C atoms. The dihedral angle between the two mean planes is 76.99 (4)degrees. In the crystal, molecules are linked via C-H center dot center dot center dot O hydrogen bonds and C-H center dot center dot center dot pi contacts, forming a three-dimensional structure with molecules stacked along the a-axis direction.

**Notes:** Bouchama, Abdelaziz Yahiaoui, Messaoud Chiter, Chaabane Setifi, Zouaoui Simpson, Jim 1

**URL:** <Go to ISI>://WOS:000369968500058

**Reference Type: Journal Article****Record Number:** 76**Author:** Boudjabi, S. Kribaa, M. Chenchouni, H.**Year:** 2015**Title:** GROWTH, PHYSIOLOGY AND YIELD OF DURUM WHEAT (TRITICUM DURUM) TREATED WITH SEWAGE SLUDGE UNDER WATER STRESS CONDITIONS**Journal:** Excli Journal**Volume:** 14**Pages:** 320-334**Short Title:** GROWTH, PHYSIOLOGY AND YIELD OF DURUM WHEAT (TRITICUM DURUM) TREATED WITH SEWAGE SLUDGE UNDER WATER STRESS CONDITIONS**ISSN:** 1611-2156**Accession Number:** WOS:000352243200018

**Abstract:** In arid and semi-arid areas, low soil fertility and water deficit considerably limit crop production. The use of sewage sludge as an organic amendment could contribute to the improvement of soil fertility and hence the agronomic production. The study aims to highlight the behaviour of durum wheat to the application of sewage sludge associated with water stress. The assessment focused on morphophysiological parameters of the wheat plant and yield. Under greenhouse conditions, the variety Mohamed Ben Bachir was treated by four water stress levels (100 %, 80 %, 50 % and 30 %). Each stress level comprised five fertilizer treatments: 20, 50 and 100 t/ha of dry sludge, 35 kg/ha of urea, and a control with no fertilization. Results revealed a significant loss in water content and chlorophyll a in leaves. Water stress negatively affected the development of wheat plants by reducing significantly seed yield, leaf area and biomass produced. Plant's responses to water stress manifested by an accumulation of proline and a decrease in total phosphorus. However, the increasing doses of sewage sludge limited the effect of water stress. Our findings showed an increase in the amount of chlorophyll pigments, leaf area, total phosphorus, biomass and yield. In addition, excessive accumulation of proline (1.11 +/- 1.03  $\mu\text{g/g DM}$ ) was recorded as a result of the high concentration of sludge (100 t/ha DM). The application of sewage sludge is beneficial for the wheat crop, but the high accumulation of proline in plants treated with high dose of sludge suggests to properly consider this fact. The application of sludge should be used with caution in soils where water is limited. Because the combined effect of these two factors could result in a fatal osmotic stress to crop development.

**Notes:** Boudjabi, Sonia Kribaa, Mohammed Chenchouni, Haroun**URL:** <Go to ISI>://WOS:000352243200018

**Reference Type: Journal Article****Record Number:** 77**Author:** Boudjemai, A. Hocine, R. Guerionne, S.**Year:** 2015**Title:** Space Environment Effect on Earth Observation Satellite Instruments**Journal:** 2015 7th International Conference on Recent Advances in Space Technologies (Rast)**Pages:** 627-634**Short Title:** Space Environment Effect on Earth Observation Satellite Instruments**Accession Number:** WOS:000381627000104

**Abstract:** The interaction of a space system with its orbital environment is a major consideration in the design of any space system, since a variety of hazards are associated with the operation of spacecraft in the harsh space environment. In this paper, several types of hazards to the imaging instruments of Earth-orbiting spacecraft are discussed: spacecraft temperature effect, radiation hazards to spacecraft instruments, with emphasis on the natural environmental factors and interactions which contribute to these hazards. Environmental factors including trapped and transient radiation, solar and galactic cosmic rays, which can profoundly damage spacecraft electronics, are presented. Some effects such as debris and oxygen atomic are also briefly mentioned.

**Notes:** Boudjemai, A. Hocine, R. Guerionne, S. Hacioglu, A Ince, F Kaynak, O Unal, MF Basturk, S 7th International Conference on Recent Advances in Space Technologies (RAST) Jun 16-19, 2015 Istanbul, TURKEY IEEE, AIAA, URSI, AESS, GRSS, EARSeL, ISPRS, Turkish Air Force Acad, Istanbul Tech Univ, Bogazici Univ, Middle E Tech Univ, Yildiz Tech Univ, Roketsan, Havelsan, Turksat, Aselsan, TAI, Tusas Engine Ind Inc, Petlas, ALP Havacilik, Mitsubishi Elect, Space & Defence Technologies, ThalesAlenia Space, Savunma Havacilik, MSI 978-1-4799-7697-3

**URL:** <Go to ISI>://WOS:000381627000104

**Reference Type: Journal Article****Record Number:** 78**Author:** Boudrifa, O. Bouhemadou, A. Guechi, N. Bin-Omran, S. Al-Douri, Y. Khenata, R.**Year:** 2015**Title:** First-principles prediction of the structural, elastic, thermodynamic, electronic and optical properties of Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub> quaternary nitride**Journal:** Journal of Alloys and Compounds**Volume:** 618**Pages:** 84-94**Date:** Jan**Short Title:** First-principles prediction of the structural, elastic, thermodynamic, electronic and optical properties of Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub> quaternary nitride**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2014.08.143**Accession Number:** WOS:000344208800015

**Abstract:** Structural parameters, elastic constants, thermodynamic properties, electronic structure and optical properties of the monoclinic Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub> quaternary nitride are investigated theoretically for the first time using the pseudopotential plane-wave based first-principles calculations. The calculated structural parameters are in excellent agreement with the experimental data. This serves as a proof of reliability of the used theoretical method and gives confidence in the predicted results on aforementioned properties of Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub>. The predicted elastic constants C<sub>ij</sub> reveal that Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub> is mechanically stable but anisotropic. The elastic anisotropy is further illustrated by the direction-dependent of the linear compressibility and Young's modulus. Macroscopic elastic parameters, including the bulk and shear moduli, the Young's modulus, the Poisson ratio, the velocities of elastic waves and the Debye temperature are numerically estimated. The pressure and temperature dependence of the unit cell volume, isothermal bulk modulus, volume expansion coefficient, specific heat and Debye temperature are investigated through the quasiharmonic Debye model. The band structure and the density of states of Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub> are analyzed, which reveals the semiconducting character of Li<sub>4</sub>Sr<sub>3</sub>Ge<sub>2</sub>N<sub>6</sub>. The complex dielectric function, refractive index, extinction coefficient, absorption coefficient, reflectivity and electron energy-loss function are calculation for incident radiation polarized along the crystallographic directions and for energy up to 40 eV. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Boudrifa, O. Bouhemadou, A. Guechi, N. Bin-Omran, S. Al-Douri, Y. Khenata, R.**URL:** <Go to ISI>://WOS:000344208800015

**Reference Type: Journal Article****Record Number:** 79**Author:** Bouguettoucha, A. Chebli, D. Mekhalef, T. Noui, A. Amrane, A.**Year:** 2015**Title:** The use of a forest waste biomass, cone of *Pinus brutia* for the removal of an anionic azo dye Congo red from aqueous medium**Journal:** Desalination and Water Treatment**Volume:** 55**Issue:** 7**Pages:** 1956-1965**Date:** Aug**Short Title:** The use of a forest waste biomass, cone of *Pinus brutia* for the removal of an anionic azo dye Congo red from aqueous medium**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2014.928235**Accession Number:** WOS:000359847700026

**Abstract:** Cone biomass of *Pinus brutia*, a novel low-cost adsorbent prepared from forest waste has been utilized as an adsorbent for the removal of Congo red (CR) dye from an aqueous solution. The adsorbate concentration, pH, time, and temperature were examined in batch tests. Maximum biosorption capacity was 102.8 mg/g, showing that cone biomass of *P. brutia* was more efficient than most of the other adsorbents. Experimental data were analyzed by Langmuir, Freundlich, and Sips adsorption isotherms models and showed that the adsorption process followed a Sips model. Pseudo-first-order, pseudo-second-order, and intraparticle diffusion models were used to fit experimental data, showing that the adsorption of CR could be described by a pseudo-second-order equation and that intraparticle diffusion was not the only rate-limiting mechanism for the biosorption of CR. Thermodynamic parameters such as  $\Delta G^{\circ}$ ,  $\Delta H^{\circ}$ , and  $\Delta S^{\circ}$  were also evaluated and it was found that the sorption process was feasible, spontaneous, and endothermic in nature. These results indicated that cone biomass of *P. brutia* is promising as a low-cost alternative compared to other commercial adsorbents for the removal of dyes from wastewater.

**Notes:** Bouguettoucha, Abdallah Chebli, Derradji Mekhalef, Tahar Noui, Amine Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000359847700026

**Reference Type: Journal Article****Record Number:** 80**Author:** Bouhemadou, A. Allali, D. Bin-Omran, S. Al Safi, E. M. A. Khenata, R. Al-Douri, Y.**Year:** 2015**Title:** Elastic and thermodynamic properties of the SiB<sub>2</sub>O<sub>4</sub> (B=Mg, Zn and Cd) cubic spinels: An ab initio FP-LAPW study**Journal:** Materials Science in Semiconductor Processing**Volume:** 38**Pages:** 192-202**Date:** Oct**Short Title:** Elastic and thermodynamic properties of the SiB<sub>2</sub>O<sub>4</sub> (B=Mg, Zn and Cd) cubic spinels: An ab initio FP-LAPW study**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.04.021**Accession Number:** WOS:000357839800028

**Abstract:** The structural, elastic and thermodynamic properties of the SiB<sub>2</sub>O<sub>4</sub> (B=Mg, Zn and Cd) cubic spinels have been investigated through ab initio full-potential linearized augmented plane wave calculations. The calculated structural parameters are in good agreement with the available experimental and theoretical data. The single crystal elastic constants are numerically estimated using total energy-strain approach with two different sets of distortions. The polycrystalline aggregate elastic parameters are calculated from the single crystal elastic constants via the Voigt-Reuss-Hill approximations. Mechanical stability, sound velocities, ductility/brittleness, elastic anisotropy, Debye temperature and pressure dependence of the elastic constants of the title compounds are also assessed. The temperature dependence of the lattice parameter, bulk modulus, volume thermal expansion coefficient, isochoric and isobaric heat capacity and Debye temperature in a wide temperature interval at some different fixed pressures is predicted through the quasi-harmonic Debye model. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Bouhemadou, A. Allali, D. Bin-Omran, S. Al Safi, E. Muhammad Abud Khenata, R. Al-Douri, Y.**URL:** <Go to ISI>://WOS:000357839800028

**Reference Type: Journal Article****Record Number:** 81**Author:** Bouhemadou, A. Bin-Omran, S. Allali, D. Al-Otaibi, S. M. Khenata, R. Al-Douri, Y. Chegaar, M. Reshak, A. H.**Year:** 2015**Title:** Electronic and optical properties of the LiCdX (X= N, P, As and Sb) filled-tetrahedral compounds with the Tran-Blaha modified Becke-Johnson density functional**Journal:** Materials Research Bulletin**Volume:** 64**Pages:** 337-346**Date:** Apr**Short Title:** Electronic and optical properties of the LiCdX (X= N, P, As and Sb) filled-tetrahedral compounds with the Tran-Blaha modified Becke-Johnson density functional**ISSN:** 0025-5408**DOI:** 10.1016/j.materresbull.2015.01.003**Accession Number:** WOS:000349878900057

**Abstract:** The structural, electronic and optical properties of the LiCdN, LiCdP, LiCdAs and LiCdSb filled-tetrahedral compounds have been explored from first-principles. The calculated structural parameters are consistent with the available experimental results. Since DFT with the common LDA and GGA underestimates the band gap, we use a new developed functional able to accurately describe the electronic structure of semiconductors, namely the Tran-Blaha-modified Becke-Johnson potential. The four investigated compounds demonstrate semiconducting behavior with direct band gap ranging from about 0.32 to 1.65 eV. The charge-carrier effective masses are evaluated at the topmost valence band and at the bottommost conduction band. The evolution of the value and nature of the energy band gap under pressure effect is also investigated. The frequency-dependent complex dielectric function and some macroscopic optical constants are estimated. The microscopic origins of the structures in the optical spectra are determined in terms of the calculated energy band structures. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Bouhemadou, A. Bin-Omran, S. Allali, D. Al-Otaibi, S. M. Khenata, R. Al-Douri, Y. Chegaar, M. Reshak, A. H.**URL:** <Go to ISI>://WOS:000349878900057

**Reference Type: Journal Article****Record Number:** 82**Author:** Bouhemadou, A. Haddadi, K. Bin-Omran, S. Khenata, R. Al-Douri, Y. Maabed, S.**Year:** 2015**Title:** Structural, elastic, electronic and optical properties of the quaternary nitridogallate LiCaGaN<sub>2</sub>: First-principles study**Journal:** Materials Science in Semiconductor Processing**Volume:** 40**Pages:** 64-76**Date:** Dec**Short Title:** Structural, elastic, electronic and optical properties of the quaternary nitridogallate LiCaGaN<sub>2</sub>: First-principles study**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.06.021**Accession Number:** WOS:000363344600009

**Abstract:** First-principles density functional theory calculations were performed to predict some of the not yet explored physical properties of the monoclinic quaternary nitridogallate LiCaGaN<sub>2</sub>. The calculated lattice parameters, including the lattice constants, angle beta and internal atomic coordinates, are in excellent agreement with the corresponding measured ones, proving the reliability of the chosen theoretical approach. The equation of state, pressure dependence of the lattice constants, unit cell volume, angle beta and bond-lengths were explored in detail. The single-crystal and polycrystalline elastic constants and their pressure dependence were numerically-estimated. The mechanical stability, ductility/brittleness, average elastic wave velocity, Debye temperature and elastic anisotropy were also assessed. The electronic structure and its evolution with external applied hydrostatic pressure were explored. The bonding character was demonstrated by calculating the site-projected density of states, charge density and effective Mulliken charges of all ions. The effective masses of the charge-carriers were numerically estimated. The complex dielectric function, refractive index, extinction coefficient, absorption coefficient, reflectivity and electron energy-loss function spectra were calculated for different polarizations of the incident light. Pressure dependence of the static dielectric constant, static refractive index and static reflectivity are also reported. To the best of our knowledge, this is the first attempt to explore the aforementioned physical properties for the title material. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Bouhemadou, A. Haddadi, K. Bin-Omran, S. Khenata, R. Al-Douri, Y. Maabed, S.**URL:** <Go to ISI>://WOS:000363344600009

**Reference Type: Journal Article****Record Number:** 83**Author:** Bouhemadou, A. Khenata, R. Bin-Omran, S. Murtaza, G. Al-Douri, Y.**Year:** 2015**Title:** Structural, elastic, electronic and optical properties of new layered semiconductor BaGa<sub>2</sub>P<sub>2</sub>**Journal:** Optical Materials**Volume:** 46**Pages:** 122-130**Date:** Aug**Short Title:** Structural, elastic, electronic and optical properties of new layered semiconductor BaGa<sub>2</sub>P<sub>2</sub>**ISSN:** 0925-3467**DOI:** 10.1016/j.optmat.2015.03.059**Accession Number:** WOS:000357350700022

**Abstract:** We report the results of a detailed first-principles based density functional theory study of the structural, elastic, electronic and optical properties of a recently synthesized layered semiconductor BaGa<sub>2</sub>P<sub>2</sub>. The optimized structural parameters are in excellent agreement with the experimental structural findings, which validates the used theoretical method. The single crystal and polycrystalline elastic constants are numerically estimated using the strain stress method and Voigt-Reuss-Hill approximations. Predicted values of the elastic constants suggest that the considered material is mechanically stable, brittle and very soft material. The three-dimensional surface and its planar projections of Young's modulus are visualized to illustrate the elastic anisotropy. It is found that Young's modulus of BaGa<sub>2</sub>P<sub>2</sub> show strong dependence on the crystallographic directions. Band structure calculation reveals that BaGa<sub>2</sub>P<sub>2</sub> is a direct energy band gap semiconductor. The effective masses of electrons and holes at the minimum of the conduction band and maximum of the valence band are numerically estimated. The density of state, charge density distribution and charge transfers are calculated and analyzed to determine the chemical bonding nature. Dielectric function, refractive index, extinction coefficient, absorption coefficient, reflectivity and electron-loss energy function spectra are computed for a wide photon energy range up to 20 eV. Calculated optical spectra exhibit a noticeable anisotropy. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Bouhemadou, A. Khenata, R. Bin-Omran, S. Murtaza, G. Al-Douri, Y.**URL:** <Go to ISI>://WOS:000357350700022

**Reference Type: Journal Article****Record Number:** 84**Author:** Boukherroub, N. Guittoum, A. Laggoun, A. Hemmous, M. Martinez-Blanco, D. Blanco, J. A. Souami, N. Gorria, P. Bourzami, A. Lenoble, O.**Year:** 2015**Title:** Microstructure and magnetic properties of nanostructured  $(\text{Fe}_{0.8}\text{Al}_{0.2})(100-x)\text{Si}_x$  alloy produced by mechanical alloying**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 385**Pages:** 151-159**Date:** Jul**Short Title:** Microstructure and magnetic properties of nanostructured  $(\text{Fe}_{0.8}\text{Al}_{0.2})(100-x)\text{Si}_x$  alloy produced by mechanical alloying**ISSN:** 0304-8853**DOI:** 10.1016/j.mmm.2015.03.011**Accession Number:** WOS:000352489100024

**Abstract:** We report on how the microstructure and the silicon content of nanocrystalline ternary  $(\text{Fe}_{0.8}\text{Al}_{0.2})(100-x)\text{Si}_x$  powders ( $x=0, 5, 10, 15$  and  $20$  at%) elaborated by high energy ball milling affect the magnetic properties of these alloys. The formation of a single-phase alloy with body centred cubic (bcc) crystal structure is completed after 72 h of milling time for all the compositions. This bcc phase is in fact a disordered  $\text{Fe}(\text{Al},\text{Si})$  solid solution with a lattice parameter that reduces its value almost linearly as the Si content is increased, from about 2.9 angstrom in the binary  $\text{Fe}_{50}\text{Al}_{20}$  alloy to 2.85 angstrom in the powder with  $x=20$ . The average nanocrystalline grain size also decreases linearly down to 10 nm for  $x=20$ , being roughly half of the value for the binary alloy, while the microstrain is somewhat enlarged. Mossbauer spectra show a sextet thus suggesting that the disordered  $\text{Fe}(\text{Al},\text{Si})$  solid solution is ferromagnetic at room temperature. However, the average hyperfine field diminishes from 27T ( $x=0$ ) to 16T ( $x=20$ ), and a paramagnetic doublet is observed for the powders with higher Si content. These results together with the evolution of both the saturation magnetization and the coercive field are discussed in terms of intrinsic and extrinsic properties. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Boukherroub, N. Guittoum, A. Laggoun, A. Hemmous, M. Martinez-Blanco, D. Blanco, J. A. Souami, N. Gorria, P. Bourzami, A. Lenoble, O.**URL:** <Go to ISI>://WOS:000352489100024

**Reference Type: Journal Article****Record Number:** 85**Author:** Boukortt, K. N. Saidi-Ouahrani, N. Boukerzaza, B. Ouhaibi-Djellouli, H. Hachmaoui, K. Benaissa, F. Z. Taleb, L. Drabla-Ouahrani, H. Deba, T. Ouledhamou, S. A. Mehtar, N. Boudjema, A.**Year:** 2015**Title:** Association analysis of the IL-1 gene cluster polymorphisms with aggressive and chronic periodontitis in the Algerian population**Journal:** Archives of Oral Biology**Volume:** 60**Issue:** 10**Pages:** 1463-1470**Date:** Oct**Short Title:** Association analysis of the IL-1 gene cluster polymorphisms with aggressive and chronic periodontitis in the Algerian population**ISSN:** 0003-9969**DOI:** 10.1016/j.archoralbio.2015.06.018**Accession Number:** WOS:000361778800001

**Abstract:** Objective: There is strong evidence that genetic as well as environmental factors affect the development of periodontitis. Various studies suggest that genetic polymorphisms of the interleukin-1 (IL-1) genes are associated with an increased risk of developing the pathogenesis. The aim of the present study was to investigate the possible relationship between two polymorphisms of IL-1 gene cluster IL-1B (C + 3954T) (rs1143634) and IL-1A (C - 889T) (rs1800587) SNPs and the aggressive and chronic periodontitis risk in a case control study in Algerian population. Methods: 279 subjects were recruited and received a periodontal examination: 128 healthy controls and 151 cases. From cases, 91 patients were having a chronic disease whereas 60 subjects with aggressive form. All these subjects were genotyped for IL-1A (C - 889) and IL-1B (C + 3954T) polymorphisms using TaqMan real time PCR technology. Frequencies of IL-1 alleles, genotypes and the haplotypes were also examined. Results: Significant differences were found in the carriage rate of both minor alleles of the IL-1A (C - 889T) and IL-1B (C + 3954T) polymorphisms of aggressive periodontitis cases compared with healthy controls (OR [95% CI] = 1.61 [1.03-2.49], p = 0.03), (OR [95% CI] = 1.69 [1.09-2.63], p = 0.01), respectively. The result did not reach significance with the chronic form. Conclusion: The studied polymorphisms of the IL-1 genes appear to be associated with susceptibility to aggressive periodontitis (AgP) in the Algerian population. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Boukortt, Kawther Nourelhouda Saidi-Ouahrani, Nadjia Boukerzaza, Boubaker Ouhaibi-Djellouli, Hadjira Hachmaoui, Khalida Benaissa, Fatima Zohra Taleb, Leila Drabla-Ouahrani, Hayet Deba, Tahria Ouledhamou, Sid Ahmed Mehtar, Nadhera Boudjema, Abdellah

**URL:** <Go to ISI>://WOS:000361778800001

**Reference Type: Journal Article**

**Record Number: 86**

**Author:** Boumaiza, S. Bouharati, S.

**Year:** 2015

**Title:** Health Effects of Electromagnetic Pollution Modeling Using Fuzzy Inference System

**Journal:** Faseb Journal

**Volume:** 29

**Date:** Apr

**Short Title:** Health Effects of Electromagnetic Pollution Modeling Using Fuzzy Inference System

**ISSN:** 0892-6638

**Accession Number:** WOS:000361722702384

**Notes:** Boumaiza, Souad Bouharati, Saddek Experimental Biology Meeting Mar 28-apr 01, 2015 Boston, MA Amer Assoc Anatomists, Amer Physiol Soc, Amer Soc Biochem & Mol Biol, ASIP, ASN, ASPET 1

**URL:** <Go to ISI>://WOS:000361722702384

**Reference Type: Journal Article****Record Number:** 87**Author:** Bouras, S. Ghebouli, B. Benkerri, M. Ghebouli, M. A. Choutri, H. Louail, L. Chihi, T. Fatmi, M. Bouhemadou, A. Khenata, R. Khachai, H.**Year:** 2015**Title:** Theoretical characterization of quaternary iridium based hydrides NaAeIrH(6) (Ae = Ca, Ba and Sr)**Journal:** Materials Chemistry and Physics**Volume:** 149**Pages:** 87-93**Date:** Jan**Short Title:** Theoretical characterization of quaternary iridium based hydrides NaAeIrH(6) (Ae = Ca, Ba and Sr)**ISSN:** 0254-0584**DOI:** 10.1016/j.matchemphys.2014.09.040**Accession Number:** WOS:000347576900013

**Abstract:** The quaternary iridium based hydrides NaAeIrH(6) (Ae = Ca, Ba and Sr) are promising candidates as hydrogen storage materials. We have studied the structural, elastic, electronic, optical and thermodynamic properties of NaAeIrH(6) (Ae = Ca, Ba and Sr) within the generalized gradient approximation, the local density approximation (LDA) and mBj in the frame of density functional perturbation theory. These alloys have a large indirect Gamma-X band gap. The thermodynamic functions were computed using the phonon density of states. The origin of the possible transitions from valence band to conduction band was illustrated. By using the complex dielectric function, the optical properties such as absorption, reflectivity, loss function, refractive index and optical conductivity have been obtained. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Bouras, S. Ghebouli, B. Benkerri, M. Ghebouli, M. A. Choutri, H. Louail, L. Chihi, T. Fatmi, M. Bouhemadou, A. Khenata, R. Khachai, H.**URL:** <Go to ISI>://WOS:000347576900013

**Reference Type: Journal Article****Record Number:** 88**Author:** Bourdim, S. Hemsas, K. E. Harbouche, Y. Azib, T. Ieee,**Year:** 2015**Title:** Multi Phases Stator Short-Circuits Faults Diagnosis & Classification In DFIG Using Wavelet & Fuzzy Based Technique**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Multi Phases Stator Short-Circuits Faults Diagnosis & Classification In DFIG Using Wavelet & Fuzzy Based Technique**Accession Number:** WOS:000380433000111

**Abstract:** in this article we present new results using hybrid method carried out three Dimensions (3-D) Continuous Wavelet Transform (CWT) and fuzzy inference system (FIS) to investigate the detectability and classification of of multi phases stator inter turn short circuit faults in proposed dynamic model of DFIG developed by [1], and to overcome the limitation of classical Fourier Transform (FT). This approach is successfully used with Motor Current Signature Analysis (MCSA) and suitable developed model of DFIG in healthy and faulty mode using Matlab environment. As first step we performed new results using 3-D plot CWT to extract the discriminating features. The features extracted from the wavelet transformed signal are the second most predominant frequency, the time range at which it occurs and the corresponding wavelet coefficients. Then as second and last step a fuzzy Inference system is designed and implemented using Matlab software with these three features extracted from the wavelet transformed signal as inputs and generates an output that classifies the fault and no fault conditions. It is observed that the results are particularly powerful.

**Notes:** Bourdim, Samia Hemsas, Kamel-Eddine Harbouche, Youcef Azib, Toufik International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000111

**Reference Type: Journal Article****Record Number:** 89**Author:** Boussahel, S. Speciale, A. Dahamna, S. Amar, Y. Bonaccorsi, I. Cacciola, F. Cimino, F. Donato, P. Ferlazzo, G. Harzallah, D. Cristani, M.**Year:** 2015**Title:** Flavonoid profile, antioxidant and cytotoxic activity of different extracts from Algerian *Rhamnus alaternus* L. bark**Journal:** Pharmacognosy Magazine**Volume:** 11**Issue:** 42**Pages:** S102-S109**Date:** May**Short Title:** Flavonoid profile, antioxidant and cytotoxic activity of different extracts from Algerian *Rhamnus alaternus* L. bark**ISSN:** 0973-1296**DOI:** 10.4103/0973-1296.157707**Accession Number:** WOS:000356600100013

**Abstract:** Background: *Rhamnus alaternus* (Rhamnaceae) L. has been traditionally used for treatment of many diseases. Objective: In this study, we determined the antioxidant/free radical scavenger properties, the flavonoid profile and the cytotoxicity of aqueous and methanolic extracts obtained by maceration from Algerian *R. alaternus* bark, like also of aqueous extract prepared by decoction according to the traditional method. This to estimate the usefulness of the drug traditional preparation and compare it with those made in the laboratory. Materials and Methods: The antioxidant activity of the extracts was evaluated using five different redox-based assays, all involving one redox reaction with the oxidant. High-performance liquid chromatography/diode array detection/electrospray ionization mass spectrometry analysis was used to identify and quantify the flavonoids content. Cytotoxicity on human monocytic leukemia cells (U937) was also carried out. Results: All the extracts tested showed a good antioxidant/free radical scavenger activity and a similar flavonoid fingerprint. However, the methanolic one presented the best antioxidant activity that can be due to the highest flavonoid amount and significantly reduced the proliferation of leukemia cells. The results confirm that the extract prepared by decoction contains efficient antioxidant compounds and this justifies in part the therapeutic and preventive usefulness. Moreover, the methanolic extract exerted excellent cytotoxicity on U937 that could be attributed to kaempferol and rhamnocitrin glycosides.

**Notes:** Boussahel, Soulef Speciale, Antonio Dahamna, Saliha Amar, Yacine Bonaccorsi, Irene Cacciola, Francesco Cimino, Francesco Donato, Paola Ferlazzo, Guido Harzallah, Daoud Cristani, Mariateresa 1

**URL:** <Go to ISI>://WOS:000356600100013

**Reference Type: Journal Article****Record Number:** 90**Author:** Chaibi, S. Benachour, D. Merbah, M. Cagiao, M. E. Calleja, F. J. B.**Year:** 2015**Title:** The role of crosslinking on the physical properties of gelatin based films**Journal:** Colloid and Polymer Science**Volume:** 293**Issue:** 10**Pages:** 2741-2752**Date:** Oct**Short Title:** The role of crosslinking on the physical properties of gelatin based films**ISSN:** 0303-402X**DOI:** 10.1007/s00396-015-3660-2**Accession Number:** WOS:000361568400002

**Abstract:** The crosslinking of gelatin using crosslinking agents based on condensation of the aldehyde groups and epsilon-amine groups present in lysine and hydroxylysine rests is a very attractive method reported recently. The present work deals with different films prepared from commercial gelatin of type B and animal origin, aiming at an improvement of physical properties. These films were modified by two plasticizing agents (glycerol, GLY, and poly (vinyl alcohol), PVA) and/or crosslinked by glutaraldehyde (GTA). The number of epsilon-amino groups present in the gelatin chains, before and after modification, was determined by the method of protein dosage using 2,4,6-trinitro benzene sulfonic acid (TNBS). The addition of the plasticizing and/or crosslinking agents induced a decrease in the number of epsilon-amino-groups due to the fact that these groups are involved in the physical and/or chemical crosslinking reactions occurring among the different components. The variation of the crosslinking ratio was studied as a function of formulation type, crosslinking nature and GTA concentration. The use of microhardness (H) in this study emphasizes the effect of the crosslinking on the improvement of the micromechanical properties. The study of differential scanning calorimetry reveals that crosslinking induces a drastic decrease of crystallinity in the samples.

**Notes:** Chaibi, Samira Benachour, Djafer Merbah, Meriem Esperanza Cagiao, M. Balta Calleja, Francisco J.

**URL:** <Go to ISI>://WOS:000361568400002

**Reference Type: Journal Article****Record Number:** 91**Author:** Charef, N. Sebti, F. Arrar, L. Djarmouni, M. Boussoualim, N. Baghiani, A. Khennouf, S. Ourari, A. AlDamen, M. A. Mubarak, M. S. Peters, D. G.**Year:** 2015**Title:** Synthesis, characterization, X-ray structures, and biological activity of some metal complexes of the Schiff base 2,2'-(((azanediylbis (propane-3,1-diyl))bis(azanylylidene))bis(methanylylidene))diphenol**Journal:** Polyhedron**Volume:** 85**Pages:** 450-456**Date:** Jan**Short Title:** Synthesis, characterization, X-ray structures, and biological activity of some metal complexes of the Schiff base 2,2'-(((azanediylbis (propane-3,1-diyl))bis(azanylylidene))bis(methanylylidene))diphenol**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2014.09.006**Accession Number:** WOS:000347582900056

**Abstract:** A pentadentate Schiff base, 2,2'-(((azanediylbis(propane-3,1-diyl))bis(azanylylidene))bis(methanylylidene))diphenol (1), has been synthesized via the reaction of salicylaldehyde with N-1-(3-aminopropyl)propane-1,3-diamine [HN(C<sub>3</sub>H<sub>6</sub>NH<sub>2</sub>)(<sub>2</sub>)] in absolute ethanol. Refluxing a mixture of 1 with the hydrated acetate salts of nickel(II), zinc(II), iron(II), and copper(II) affords each of the expected M(II)-Schiff base complexes. These complexes have been characterized by means of FT-IR, H-1 NMR, C-13 NMR, and mass spectrometry as well as UV-Vis spectrophotometry and elemental analysis. In addition, the molecular structures of the copper(II) and nickel(II) complexes were determined by means of X-ray crystallography. Antioxidant and antibacterial activities of 1 and its complexes were evaluated in vitro. Highest DPPH radical-scavenging activity was observed for Fe(II)-1 with an IC<sub>50</sub> of 0.39 mg mL<sup>-1</sup>, followed by 1 (IC<sub>50</sub> = 3.38 ± 0.01 mg mL<sup>-1</sup>). Use of the beta-carotene-linoleic acid bleaching assay revealed that 1 has the highest antioxidant activity and has significant inhibition of lipid peroxidation with 1% of 94.21 ± 0.003%, followed by Fe(II)-1 and Ni(II)-1 with I% of 34.29 ± 2.08% and 30.77 ± 1.91%, respectively. Antibacterial activity of 1 and its transition-metal complexes was investigated by use of disk diffusion assay; Zn(II)-1 and Ni(II)-1 exert a high inhibition of the growth of all bacterial strains with inhibition diameters ranging from 8 to 14 mm. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Charef, Noureddine Sebti, Fouzia Arrar, Lekhmici Djarmouni, Meriem Boussoualim, Naouel Baghiani, Abderrahmane Khennouf, Seddik Ourari, Ali AlDamen, Murad A. Mubarak, Mohammad S. Peters, Dennis G.

**URL:** <Go to ISI>://WOS:000347582900056

**Reference Type: Journal Article****Record Number:** 92**Author:** Chebli, D. Bouguettoucha, A. Mekhalef, T. Nacef, S. Amrane, A.**Year:** 2015**Title:** Valorization of an agricultural waste, *Stipa tenassicima* fibers, by biosorption of an anionic azo dye, Congo red**Journal:** Desalination and Water Treatment**Volume:** 54**Issue:** 1**Pages:** 245-254**Date:** Apr**Short Title:** Valorization of an agricultural waste, *Stipa tenassicima* fibers, by biosorption of an anionic azo dye, Congo red**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2014.880154**Accession Number:** WOS:000350678100010

**Abstract:** The removal of Congo red dye (CR) from aqueous solutions using a novel low-cost biological adsorbent, *Stipa tonassicima* fibers, has been investigated in this paper. Batch experiments were conducted to examine the effect of the main parameters, such as the initial CR concentration, the pH, and the temperature on the sorption of the dye. Maximum adsorption removal was observed at pH 4 and biosorption capacity of *S. tenassicima* was enhanced by increasing the temperature. Rate constants of pseudo-first order, pseudo-second order, and intraparticle diffusion coefficient were calculated to analyze the dynamic of the sorption process; they showed that sorption kinetics followed an intraparticle diffusion model, while the two straight lines describing experimental data indicated that intraparticle diffusion was the limiting step for biosorption. Among the tested isotherm models, the Sips isotherm was found to be the most relevant to describe CR sorption onto *S. tenassicima* fibers. Thermodynamic parameters, such as changes in standard free energy, enthalpy, and entropy, were also evaluated and the results suggested that the sorption reaction was spontaneous and endothermic in nature. The potential of *S. tenassicima* fibers, an easily available and low-cost material, to be used as an alternative biosorbent material for the removal of a dye, CR, from aqueous solutions was therefore confirmed.

**Notes:** Chebli, Derradji Bouguettoucha, Abdallah Mekhalef, Tahar Nacef, Saci Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000350678100010

**Reference Type: Journal Article****Record Number:** 93**Author:** Cherif, S. Medjahed, A. Mohammed, S. K. Rahmani, M.**Year:** 2015**Title:** EFFECT OF PINHOLE SIZE IN PHASE-SHIFTING POINT DIFFRACTION INTERFEROMETER TO CREATE A PERFECT REFERENCE BEAM FROM ABERRATED INCIDENT BEAM**Journal:** M2d2015: Proceedings of the 6th International Conference on Mechanics and Materials in Design**Pages:** 1137-1138**Short Title:** EFFECT OF PINHOLE SIZE IN PHASE-SHIFTING POINT DIFFRACTION INTERFEROMETER TO CREATE A PERFECT REFERENCE BEAM FROM ABERRATED INCIDENT BEAM**Accession Number:** WOS:000378595500203

**Abstract:** Interferometric inspection of optical surfaces and wavefronts requires permanently increasing accuracy. Therefore interferometric equipment is being improved and improved continuously. Phase-shifting point diffraction interferometer (PS/PDI) with an "inbuilt" reference wavefront originating from light diffraction by a pinhole aperture are potentially capable to produce the highest possible accuracy of a surface figure or wavefront characterization. The (PS/PDI) provide two outgoing wavefronts - test and reference ones - with phase shifts of one wavefront relative to the other. Such interferometer provides measuring conditions similarly to interferometers which are in common use. Pinhole is a key component of (PS/PDI); therefore the size of pinhole will affect the detection accuracy of interferometer seriously. Our work consists in studying the effect of pinhole diameter to create a perfect reference beam from incident beam with optical aberration, we propose to use Gaussian incident beam with spherical aberration.

**Notes:** Cherif, Sabah Medjahed, Aicha Mohammed, Soumaya Kara Rahmani, Mahdi Gomes, JFS Meguid, SA 6th International Conference on Mechanics and Materials in Design (M2D) Jul 26-30, 2015 P Delgada, PORTUGAL Univ Porto, Unit Toronto, Univ Azores, Univ Porto, Faculdade Engn, Univ Toronto, Mech & Aerosp Design Lab, Univ Azores, DCDT, Governo Reg Acores, Portuguese Assoc Experimental Mech, European Soc Experimental Mech, Amer Soc Experimental Mech, British Soc Strain Measurement, Japanese Soc Mech Engn, Int Measurement Confederat, Assoc Francaise Mecanique, European Assoc Dynam Mat, Inst Engn Mecanica Gestao Ind, Laboratorio Biomecanica Porto, Fundacao Ciencia Tecnologia, Profess Congress Org 978-989-98832-3-9

**URL:** <Go to ISI>://WOS:000378595500203

**Reference Type: Journal Article****Record Number:** 94**Author:** Chihi, T. Fatmi, M. Ghebouli, B. Ghebouli, M. A. Bouhemadou, A.**Year:** 2015**Title:** Theoretical Prediction of Structural, Elastic and Electronic Properties of  $M_5Si_3$  (M=Ti, Zr) Compounds**Journal:** Brazilian Journal of Physics**Volume:** 45**Issue:** 3**Pages:** 302-307**Date:** Jun**Short Title:** Theoretical Prediction of Structural, Elastic and Electronic Properties of  $M_5Si_3$  (M=Ti, Zr) Compounds**ISSN:** 0103-9733**DOI:** 10.1007/s13538-015-0321-3**Accession Number:** WOS:000357359800006

**Abstract:** Structural, elastic, electronic and mechanical properties of the  $M_5Si_3$  (M=Ti, Zr) compounds with (Mn $_5$ Si $_3$ ) 16H crystal structure have been studied with respect to pressure. Our computational method is based on a pseudo-potential plane-wave (PP-PW) method. The exchange correlation has been treated using the generalized gradient approximation (GGA) in order to work out the densities of states. Ground-state quantities, such as lattice parameter and bulk modulus, have been evaluated, as well as elastic constants and their pressure derivative. Elastic constants and their pressure dependence have been calculated. Also, bulk and shear moduli, Young's modulus and Poisson's ratio for ideal polycrystalline phases have been derived.

**Notes:** Chihi, T. Fatmi, M. Ghebouli, B. Ghebouli, M. A. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000357359800006

**Reference Type: Journal Article****Record Number:** 95**Author:** Chihi, T. Reffas, M. Fatmi, M. Bouhemadou, A. Ghebouli, B. Ghebouli, M. A.**Year:** 2015**Title:** Brittle to Ductile Transition Dependence upon the Transition Pressure of MB<sub>2</sub> (M = Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W) Compounds**Journal:** Chinese Journal of Physics**Volume:** 53**Issue:** 5**Date:** Oct**Short Title:** Brittle to Ductile Transition Dependence upon the Transition Pressure of MB<sub>2</sub> (M = Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W) Compounds**ISSN:** 0577-9073**DOI:** 10.6122/cjp.20150703**Article Number:** 100802**Accession Number:** WOS:000365814100014

**Abstract:** First principles calculations were performed to investigate the electronic and elastic properties of the group IV to group VI transition metal borides. As a result, the electronic bands and the density of states (DOS) at the Fermi level were obtained, also the independent elastic constants ( $C_{ij}$ ) of hexagonal MB<sub>2</sub> (M= Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W) at zero pressure, the bulk moduli (B), the shear moduli (G), and the B/G ratio were also obtained. The brittle/ductile behavior of the group IV to group VI transition metal borides were evaluated and analyzed in comparison with the available data. The Debye temperature for ZrB<sub>2</sub> was calculated from the average elastic wave velocity obtained from the shear and bulk moduli. The calculated elastic properties are found to be in good agreement with the experimental values. The volume expansion coefficient  $\alpha$  versus temperature and pressure for ZrB<sub>2</sub> are discussed. The dependencies of the bulk, shear, Young's modulus, Poisson's ratio, and sound velocities  $V_l$ ,  $V_t$  on the pressure P for ZrB<sub>2</sub> were also analyzed.

**Notes:** Chihi, T. Reffas, M. Fatmi, M. Bouhemadou, A. Ghebouli, B. Ghebouli, M. A.**URL:** <Go to ISI>://WOS:000365814100014

**Reference Type: Journal Article****Record Number:** 96**Author:** Chikouche, I. Sahari, A. Zouaoui, A. Tingry, S.**Year:** 2015**Title:** Enhancement of electric properties of polypyrrole by copper electrodeposition**Journal:** Canadian Journal of Chemical Engineering**Volume:** 93**Issue:** 6**Pages:** 1076-1080**Date:** Jun**Short Title:** Enhancement of electric properties of polypyrrole by copper electrodeposition**ISSN:** 0008-4034**DOI:** 10.1002/cjce.22197**Accession Number:** WOS:000354542000011

**Abstract:** Polypyrrole films (0.2-1.0m thick) were electrosynthesized in organic media by potentiodynamic electropolymerization on silicon surfaces. To improve the electronic conductivity of the polypyrrole films, elemental copper was electrodeposited directly on the film surface by simple electrolysis from a copper chloride bath. Copper electrodeposited onto the surface of the polypyrrole film was characterized by X-ray diffraction and consisted only of Cu-fcc phase. The presence of copper on the PPy surface did not greatly affect the overall electronic conductivity of the material. However, immersion of polypyrrole films in Cu<sup>2+</sup> solution for a period of time caused Cu<sup>2+</sup> ions to enter the polypyrrole matrix. The reduction of the Cu(2+) after insertion into the polypyrrole template formed a polypyrrole/Cu composite with high electrical conductivity; this conductivity was higher for longer steeping (immersion) time. Raman spectroscopy shows much greater peak intensities when copper was present in the polypyrrole matrix. Scanning electron microscopy and cross-sectional analysis showed clear differences in the appearance of the films with copper deposited onto the polypyrrole surface and copper inserted into the polypyrrole matrix.

**Notes:** Chikouche, Imene Sahari, Ali Zouaoui, Ahmed Tingry, Sophie**URL:** <Go to ISI>://WOS:000354542000011

**Reference Type: Journal Article****Record Number:** 97**Author:** Chikouche, M. D. L. Merrouche, A. Azizi, A. Rokbi, M. Walter, S.**Year:** 2015**Title:** Influence of alkali treatment on the mechanical properties of new cane fibre/polyester composites**Journal:** Journal of Reinforced Plastics and Composites**Volume:** 34**Issue:** 16**Pages:** 1329-1339**Date:** Aug**Short Title:** Influence of alkali treatment on the mechanical properties of new cane fibre/polyester composites**ISSN:** 0731-6844**DOI:** 10.1177/0731684415591093**Accession Number:** WOS:000358733000006

**Abstract:** In recent years, natural fibres have been experimented to replace glass fibres in reinforcing thermosetting polymer. Since the interfacial adhesion between the raw natural fibres and the polymer matrix are often not adapted to the intended applications, the fibre surface most often requires a preliminary chemical modification. The fibres which were extracted from the *Arundo donax* L. Plant (called cane fibres), are little studied in the literature of fibre/polymer composites. In the present work, the cane fibres have been treated at constant soaking time with 2-8% NaOH aqueous solutions for 24h. The composite reinforced by 6% NaOH-treated cane fibres, exhibited maximum improvements in tensile and flexural strength by 57% and 45% respectively. A combination of Fourier transform infrared, scanning electron microscopy, X-ray diffraction and moisture absorption techniques has been used for material characterisation. The crystallinity index yields information about fibre modification by NaOH. Such cane fibre composites could become an alternative to existing materials, with interesting tensile and flexural strengths, low cost and less ecological impact.

**Notes:** Chikouche, M. Dj Ladghem Merrouche, A. Azizi, A. Rokbi, M. Walter, S.**URL:** <Go to ISI>://WOS:000358733000006

**Reference Type: Journal Article****Record Number:** 98**Author:** Chouaba, S. E. A. Belkhiat, D. E. C. Sari, B. Felix-Herran, L. C. Ieee,**Year:** 2015**Title:** Fuzzy Quasi LPV Model for a cross flow heat exchanger**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Fuzzy Quasi LPV Model for a cross flow heat exchanger**Accession Number:** WOS:000380433000061

**Abstract:** This paper presents a new dynamic model called fuzzy quasi LPV model which simulate accurately the temperature and flow transients in a cross flow heat exchanger (CFHX). Motivated by the ability of fuzzy tools to approximate and management of nonlinearities, and based on the interpretation of parameters in Takagi-Sugeno (TS) models, we present a new procedure for identifying nonlinear models of linear parameter varying type. The fuzzy quasi LPV model is compared to a numerical model of a cross flow heat exchanger. Comparisons indicate that the developed fuzzy quasi LPV model is capable of predicting the transient performance of the heat exchangers satisfactorily.

**Notes:** Chouaba, S. E. A. Belkhiat, D. E. C. Sari, B. Felix-Herran, L. C. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000061

**Reference Type: Journal Article****Record Number:** 99**Author:** Chouia, F. Belhouchet, H. Sahnoune, F. Bouzrara, F.**Year:** 2015**Title:** Reaction sintering of kaolin-natural phosphate mixtures**Journal:** Ceramics International**Volume:** 41**Issue:** 6**Pages:** 8064-8069**Date:** Jul**Short Title:** Reaction sintering of kaolin-natural phosphate mixtures**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2015.03.003**Accession Number:** WOS:000354140300115

**Abstract:** Low-cost materials based on hydroxyapatite (HAp), anorthite and mullite were prepared from mixtures of Algerian kaolin (DD2) and natural phosphate (NP). Three different compositions (20 K, 50 K and 80 K) with 20, 50 and 80 wt% Kaolin were studied. In the 20 K samples (with 80% natural phosphate), HAp based ceramics were obtained by the solid-state reaction (SSR). Anorthite HAp composites were formed at 1100 degrees C in the 50 K samples remaining stable up to 1300 degrees C. The primary mullitization occurred by SSR in the 80 K sample at 1000 C followed by formation of anorthite from the phosphate dissolution. These results show that the reaction sintering of kaolin/phosphate mixtures is a feasible route to obtain HAp, anorthite materials that can be used in electronics industry, industrial heat exchangers and biomedical applications. (C) 2015 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Chouia, F. Belhouchet, H. Sahnoune, F. Bouzrara, F.**URL:** <Go to ISI>://WOS:000354140300115

**Reference Type: Journal Article****Record Number:** 100**Author:** Daili, Y. Gaubert, J. P. Rahmani, L.**Year:** 2015**Title:** New control strategy for fast-efficient maximum power point tracking without mechanical sensors applied to small wind energy conversion system**Journal:** Journal of Renewable and Sustainable Energy**Volume:** 7**Issue:** 4**Date:** Jul**Short Title:** New control strategy for fast-efficient maximum power point tracking without mechanical sensors applied to small wind energy conversion system**ISSN:** 1941-7012**DOI:** 10.1063/1.4923394**Article Number:** 043102**Accession Number:** WOS:000360655500021

**Abstract:** This paper proposes a new Perturb and Observe (P&O) Maximum Power Point Tracking (MPPT) algorithm for Small Wind Energy Conversion Systems to overcome the rapidity-efficiency trade-off and wrong behavior problems of the conventional P&O technique. The proposed algorithm works in two separate modes. The first mode is activated when the wind speed changes slowly. Under a rapid change of the wind speed, the second mode is switched to avoid the divergence of the system. The proposed algorithm requires only the measurement of the dc-link voltage and the dc current to realize the MPPT control, so no rotor speed measurement is needed, reducing the complexity of the overall system. The performance and the validity of the new MPPT algorithm have been proved by both simulation and experimental results. (C) 2015 AIP Publishing LLC.

**Notes:** Daili, Yacine Gaubert, Jean-Paul Rahmani, Lazhar**URL:** <Go to ISI>://WOS:000360655500021

**Reference Type: Journal Article****Record Number:** 101**Author:** Daili, Y. Gaubert, J. P. Rahmani, L.**Year:** 2015**Title:** Implementation of a new maximum power point tracking control strategy for small wind energy conversion systems without mechanical sensors**Journal:** Energy Conversion and Management**Volume:** 97**Pages:** 298-306**Date:** Jun**Short Title:** Implementation of a new maximum power point tracking control strategy for small wind energy conversion systems without mechanical sensors**ISSN:** 0196-8904**DOI:** 10.1016/j.enconman.2015.03.062**Accession Number:** WOS:000353751700030

**Abstract:** This paper proposes a modified perturbation and observation maximum power point tracking algorithm for small wind energy conversion systems to overcome the problems of the conventional perturbation and observation technique, namely rapidity/efficiency trade-off and the divergence from peak power under a fast variation of the wind speed. Two modes of operation are used by this algorithm, the normal perturbation and observation mode and the predictive mode. The normal perturbation and observation mode with small step-size is switched under a slow wind speed variation to track the true maximum power point with fewer fluctuations in steady state. When a rapid change of wind speed is detected, the algorithm tracks the new maximum power point in two phases: in the first stage, the algorithm switches to the predictive mode in which the step-size is auto-adjusted according to the distance between the operating point and the estimated optimum point to move the operating point near to the maximum power point rapidly, and then the normal perturbation and observation mode is used to track the true peak power in the second stage. The dc-link voltage variation is used to detect rapid wind changes. The proposed algorithm does not require either knowledge of system parameters or of mechanical sensors. The experimental results confirm that the proposed algorithm has a better performance in terms of dynamic response and efficiency compared with the conventional perturbation and observation algorithm. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Daili, Yacine Gaubert, Jean-Paul Rahmani, Lazhar**URL:** <Go to ISI>://WOS:000353751700030

**Reference Type: Journal Article****Record Number:** 102**Author:** Dal Cappello, C. Menas, F. Houamer, S. Popov, Y. V. Roy, A. C.**Year:** 2015**Title:** A study of the turn-up effect in the electron momentum spectroscopy**Journal:** Journal of Physics B-Atomic Molecular and Optical Physics**Volume:** 48**Issue:** 20**Date:** Oct**Short Title:** A study of the turn-up effect in the electron momentum spectroscopy**ISSN:** 0953-4075**DOI:** 10.1088/0953-4075/48/20/205201**Article Number:** 205201**Accession Number:** WOS:000362421800011

**Abstract:** Recently, a number of electron momentum spectroscopy measurements for the ionization of atoms and molecules have shown that the triple differential cross section (TDCS) has an unexpected higher intensity in a low momentum regime (Brunger M J, Braidwood S W, Mc Carthy I E and Weigold E 1994 J. Phys. B: At. Mol. Opt. Phys. 27 L597, Hollebne B P, Neville J J, Zheng Y, Brion C E, Wang Y and Davidson E R 1995 Chem. Phys. 196 13, Brion C E, Zheng Y, Rolke J, Neville J J, McCarthy I E and Wang J 1998 J. Phys. B: At. Mol. Opt. Phys. 31 L223, Ren X G, Ning C G, Deng J K, Zhang S F, Su G L, Huang F and Li G Q 2005 Phys. Rev. Lett. 94 163201, Deng J K, et al 2001 J. Chem. Phys. 114 882, Ning C G, Ren X G, Deng J K, Su G L, Zhang S F and Li G Q 2006 Phys. Rev. A 73 022704). This surprising result is now called the turn-up effect. Our aim is to investigate such an effect by studying the case of the ionization of atomic hydrogen in an excited state using the 3C model (Brauner M, Briggs J S and Klar H 1989 J. Phys. B: At. Mol. Opt. Phys. 22 2265) which is able to describe all the measured results of the single ionization of atomic hydrogen in its ground state for an incident energy beyond 200 eV. A comparison is also made of the findings of the present method with those of the plane wave impulse approximation and distorted wave models.

**Notes:** Dal Cappello, C. Menas, F. Houamer, S. Popov, Yu V. Roy, A. C.**URL:** <Go to ISI>://WOS:000362421800011

**Reference Type: Journal Article****Record Number:** 103**Author:** Daoud, D. Douadi, T. Hamani, H. Chafaa, S. Al-Noaimi, M.**Year:** 2015**Title:** Corrosion inhibition of mild steel by two new S-heterocyclic compounds in 1 M HCl: Experimental and computational study**Journal:** Corrosion Science**Volume:** 94**Pages:** 21-37**Date:** May**Short Title:** Corrosion inhibition of mild steel by two new S-heterocyclic compounds in 1 M HCl: Experimental and computational study**ISSN:** 0010-938X**DOI:** 10.1016/j.corsci.2015.01.025**Accession Number:** WOS:000352670200003

**Abstract:** The inhibition ability of a new S-heterocyclic Schiff base (SB) and the corresponding amine (DBTDA) towards mild steel corrosion in HCl solution was studied at various concentrations and temperatures using weight loss, polarization curves, electrochemical impedance spectroscopy (EIS) and scanning electron microscope (SEM) methods. The experimental results reveal that SB and DBTDA are efficient mixed type corrosion inhibitors, and their inhibition efficiencies increase with increasing concentration. The adsorption of these inhibitors on mild steel surface obeys Langmuir isotherm. Quantum chemical parameters are calculated using the Density Functional Theory method (DM). Correlation between theoretical and experimental results is discussed. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Daoud, Djamel Douadi, Tahar Hamani, Hanane Chafaa, Salah Al-Noaimi, Mousa**URL:** <Go to ISI>://WOS:000352670200003

**Reference Type: Journal Article****Record Number:** 104**Author:** Daoud, D. Douadi, T. Hamani, H. Ghobrini, D. Aiboud, K. Ieee,**Year:** 2015**Title:** Experimental and theoretical study of a new synthesized Quinoline derivative as Greene inhibitor of corrosion for the cooling circuits in desalinated water**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Experimental and theoretical study of a new synthesized Quinoline derivative as Greene inhibitor of corrosion for the cooling circuits in desalinated water**Accession Number:** WOS:000380433000053

**Abstract:** Quinoline and their derivatives extracted from biodiesel are often used for designing of many synthetic compounds with diverse pharmacological and medicinal proprieties. These kinds of compounds have a wide variety of applications in many fields. They serve as intermediates in certain enzymatic reactions and their use as environmentally safe corrosion inhibitors reveal their importance. The aim of this work is to investigate the corrosion inhibition of cooling circuits in desalinated water by new environment-friendly Quinoline Schiff base. This examination has been determined by potentiodynamic polarization and electrochemical impedance spectroscopy measurements. Results obtained of these methods consistently identify this compound as efficient inhibitor. Those corrosion parameters were determined from current-potential curves; it was found that corrosion rates decrease and percentage inhibition efficiency, surface coverage degree and polarization resistance increase with increasing additive concentration. Impedance measurements confirm these results where it was observed, that the effect of inhibitor addition appears by an increase in the charge transfer resistance and by a decrease in the capacity of interface. The results obtained from the Potentiodynamic polarization measurements are in good agreement with those obtained from the electrochemical method. Quantum chemical parameters are calculated using the Density Functional Theory method (DFT). Correlation between theoretical and experimental results is discussed.

**Notes:** Daoud, Djamel Douadi, Tahar Hamani, Hanane Ghobrini, Djillali Aiboud, Kamal International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000053

**Reference Type: Journal Article****Record Number:** 105**Author:** Daoud, S. Bioud, N. Bouarissa, N.**Year:** 2015**Title:** Structural phase transition, elastic and thermal properties of boron arsenide: Pressure-induced effects**Journal:** Materials Science in Semiconductor Processing**Volume:** 31**Pages:** 124-130**Date:** Mar**Short Title:** Structural phase transition, elastic and thermal properties of boron arsenide: Pressure-induced effects**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2014.11.024**Accession Number:** WOS:000350513500017

**Abstract:** The phase transition of boron arsenide (BAs) has been studied by means of a density-functional theory calculation. Features such as structural phase stability, elastic properties, sound velocity, Debye temperature and melting temperature have been obtained at zero and high pressures. The transition pressure (P-t) of the material of interest from zinc-blende to NaCl phase has been determined and found to agree well with experiment. At pressures lower than P-t the zinc-blende phase is found to be thermodynamically and mechanically more stable than the NaCl phase. The mechanical behavior has been studied in terms of ductility and brittleness by means of different methods and found to differ only on the exact border between the two types of mechanical behaviors. The behavior of the longitudinal sound velocity under pressure indicated the softening of its corresponding phonons. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Daoud, Salah Bioud, Nadhira Bouarissa, Nadir**URL:** <Go to ISI>://WOS:000350513500017

**Reference Type: Journal Article****Record Number:** 106**Author:** Daoudi, S. Kahoul, A. Sahnoune, Y. Deghfel, B. Kasri, Y. Khalfallah, F. Aylikci, V. Aylikci, N. K. Medjadi, D. E. Nekkab, M.**Year:** 2015**Title:** New K-shell fluorescence yields curve for elements with  $3 \leq Z \leq 99$ **Journal:** Journal of the Korean Physical Society**Volume:** 67**Issue:** 9**Pages:** 1537-1543**Date:** Nov**Short Title:** New K-shell fluorescence yields curve for elements with  $3 \leq Z \leq 99$ **ISSN:** 0374-4884**DOI:** 10.3938/jkps.67.1537**Accession Number:** WOS:000365103800008

**Abstract:** The measured K-shell fluorescence-yield values reported in the literature from 1934 to 2015 (about 737 new measurements) were used to deduce new empirical K-shell fluorescence yields for elements in the atomic range 3 a parts per thousand currency sign Z a parts per thousand currency sign 99. In order to deduce the empirical K-shell fluorescence yield, the experimental data were fitted using the quantity  $(\omega(K)/(1 - \omega(K)))^{1/4}$  with respect to the atomic number Z. The results were compared to other theoretical, semi-empirical and experimental values reported in the literature. Reasonable agreement was obtained between our result and those of other works.

**Notes:** Daoudi, Salim Kahoul, Abdelhalim Sahnoune, Yassine Deghfel, Bahri Kasri, Yazid. Khalfallah, Farid Aylikci, Volkan Aylikci, Nuray Kup Medjadi, Djamel Edine Nekkab, Mohammed

**URL:** <Go to ISI>://WOS:000365103800008

**Reference Type: Journal Article****Record Number:** 107**Author:** De Chatellus, H. G. Lacot, E. Hugon, O. Jacquin, O. Khebbache, N. Azana, J.**Year:** 2015**Title:** Phases of Talbot patterns in angular self-imaging**Journal:** Journal of the Optical Society of America a-Optics Image Science and Vision**Volume:** 32**Issue:** 6**Pages:** 1132-1139**Date:** Jun**Short Title:** Phases of Talbot patterns in angular self-imaging**ISSN:** 1084-7529**DOI:** 10.1364/josaa.32.001132**Accession Number:** WOS:000355633300016

**Abstract:** The original Talbot (self-imaging) effect is observed in the vicinity of a grating of slits shined with a plane wave, and results in periodic images of the initial diffraction pattern (integer Talbot effect) and the appearance of images with a periodicity reduced by an integer factor (fractional Talbot effect). Most of the studies on Talbot effect so far have focused on the distribution of the intensity of the diffracted light. However, the phases of the Talbot images, obtained in both the integer and fractional self-imaging cases, can be calculated in a closed form and display interesting auto-correlation properties. This paper reports what is, to the best of our knowledge, the first experimental investigation of the phases of Talbot images beyond the integer self-imaging case. We address the problem of experimental measurement of the phases of the Talbot images in the equivalent frame of the angular Talbot effect, a recently reported manifestation of the Talbot effect in the far field. The phases of the Talbot images are measured by far-field holography, and the obtained results are in excellent agreement with theoretical calculations. They also suggest the possibility of using the scheme for a precise "fractional ruler" aimed at distances' measurements. (C) 2015 Optical Society of America

**Notes:** De Chatellus, Hugues Guillet Lacot, Eric Hugon, Olivier Jacquin, Olivier Khebbache, Naima Azana, Jose

**URL:** <Go to ISI>://WOS:000355633300016

**Reference Type: Journal Article****Record Number:** 108**Author:** De Falco, M. de Giovanni, F. Musella, C. Trabelsi, N.**Year:** 2015**Title:** Groups of infinite rank with finite conjugacy classes of subnormal subgroups**Journal:** Journal of Algebra**Volume:** 431**Pages:** 24-37**Date:** Jun**Short Title:** Groups of infinite rank with finite conjugacy classes of subnormal subgroups**ISSN:** 0021-8693**DOI:** 10.1016/j.jalgebra.2015.01.031**Accession Number:** WOS:000353178900002

**Abstract:** A group is called a V-group if it has finite conjugacy classes of subnormal subgroups. It is proved here that if  $G$  is a periodic soluble group in which every subnormal subgroup of infinite rank has finitely many conjugates, then  $G$  is a V-group, provided that its Hirsch-Plotkin radical has infinite rank. Corresponding results for periodic soluble groups in which every subnormal subgroup of infinite rank has finite index in its normal closure and for those in which every subnormal subgroup of infinite rank is finite over its core, are also obtained. Moreover, it is shown that the assumption on the Hirsch-Plotkin radical can be avoided in the case of periodic groups with nilpotent commutator subgroup. (C) 2015 Elsevier Inc. All rights reserved.

**Notes:** De Falco, M. de Giovanni, F. Musella, C. Trabelsi, N.**URL:** <Go to ISI>://WOS:000353178900002

**Reference Type: Journal Article****Record Number:** 109**Author:** Deghfel, B. Khalfallah, F. Kahoul, A. Nekkab, M.**Year:** 2015**Title:** Empirical M X-ray production cross sections for heavy elements by proton impact within Z-dependence analysis**Journal:** Turkish Journal of Physics**Volume:** 39**Issue:** 3**Pages:** 302-308**Short Title:** Empirical M X-ray production cross sections for heavy elements by proton impact within Z-dependence analysis**ISSN:** 1300-0101**DOI:** 10.3906/fiz-1412-10**Accession Number:** WOS:000371610700010

**Abstract:** New empirical M-shell X-ray production cross sections have been deduced by introducing the dependence of the universal trend of the experimental data on the atomic number of the target, noted as "Z-dependence" for semiempirical cross sections in our previous work. For this effect, the updated experimental data (from 1980 to 2009) are used to calculate the empirical cross sections for heavy elements with  $60 \leq Z \leq 90$  by proton impact. Finally, a comparison is made between the deduced results and other earlier works.

**Notes:** Deghfel, Bahri Khalfallah, Farid Kahoul, Abdelhalim Nekkab, Mohammed**URL:** <Go to ISI>://WOS:000371610700010

**Reference Type: Journal Article****Record Number:** 110**Author:** Demdoum, A. Hamed, Y. Feki, M. Hadji, R. Djebbar, M.**Year:** 2015**Title:** Multi-tracer investigation of groundwater in El Eulma Basin (northwestern Algeria), North Africa**Journal:** Arabian Journal of Geosciences**Volume:** 8**Issue:** 5**Pages:** 3321-3333**Date:** May**Short Title:** Multi-tracer investigation of groundwater in El Eulma Basin (northwestern Algeria), North Africa**ISSN:** 1866-7511**DOI:** 10.1007/s12517-014-1377-z**Accession Number:** WOS:000354609000069

**Abstract:** The hydrogeochemical and isotopic compositions of groundwaters of the Mio-Plio-Quaternary (MPQ) aquifer of the El Eulma area, Northeast Algeria were examined to determine the main factors controlling groundwater chemistry and salinity as well as its hydrogeochemical evolution. Groundwater occurs in different water-bearing formations belonging to Quaternary, Neogene, Upper Cretaceous and Jurassic age. Different geochemical interpretation methods were used to identify the geochemical characteristics. Groundwater of the MPQ aquifer has the highest salinity values ( $564.5 \leq \text{total dissolved solids} \leq 2,333 \text{ mg/L}$ ) in the study area due to the impact of saltwater of Chotts and/or Sebkh "Bazar" and agricultural activities. Plotting data in a Piper diagram showed that Cl and SO<sub>4</sub> are the dominant anions, whereas Na is the most dominant cation, although sometimes replaced by Ca and/or Mg in the groundwaters. Dissolution of carbonate and sulphate minerals in the aquifer matrices and recharge areas as well as cation exchange is shown to modify the concentration of ions in groundwater. Groundwater-mineral equilibria showed the prevailing dissolution-precipitation reactions in the groundwater. The groundwaters are depleted in H-2 and O-18 and display an isotopic signature close to that of meteoric water with d-excess values indicating present-day precipitation over the region and reflect the contribution of vapour masses from Mediterranean Sea and Atlantic origin. The isotopic features suggest that most of the groundwaters at the study area result from mixing between recent recharge and an older component recharged under climatic conditions cooler than at present.

**Notes:** Demdoum, Abdeslam Hamed, Younes Feki, Moncef Hadji, Rihab Djebbar, Mounira**URL:** <Go to ISI>://WOS:000354609000069

**Reference Type: Journal Article****Record Number:** 111**Author:** Dilmi, A. Trabelsi, N.**Year:** 2015**Title:** Groups whose proper subgroups are (locally finite)-by-(locally nilpotent)**Journal:** Publicationes Mathematicae-Debrecen**Volume:** 87**Issue:** 1-2**Pages:** 209-219**Short Title:** Groups whose proper subgroups are (locally finite)-by-(locally nilpotent)**ISSN:** 0033-3883**DOI:** 10.5486/pmd.2015.7162**Accession Number:** WOS:000366464000014

**Abstract:** If  $X$  is a class of groups, then a group  $G$  is called a minimal non- $X$ group if it is not an  $X$ -group but all its proper subgroups belong to  $X$ . Let  $\pi$  be a set of primes and let  $X$  be a quotient and subgroup closed class of locally nilpotent groups such that every infinite locally graded minimal non- $X$ -group is a countable  $p$ -group for some prime  $p$ . Our main result in the present paper states that  $G$  is an infinitely generated minimal non- $(Lf(\pi))X$ -group if and only if there exists a prime  $p$  is not an element of  $\pi$  such that  $G$  is an infinitely generated minimal non- $X$   $p$ -group; where  $Lf(\pi)$ , denotes the class of locally finite  $\pi$ -groups.

**Notes:** Dilmi, Amel Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000366464000014

**Reference Type: Journal Article****Record Number:** 112**Author:** Djaout, A. Afri-Bouzebda, F. Bouzebda, Z. Routel, D. Benidir, M. Belkhiri, Y.**Year:** 2015**Title:** Morphological characterization of the Rembi sheep population in the Tiaret area (West of Algeria)**Journal:** Indian Journal of Animal Sciences**Volume:** 85**Issue:** 4**Pages:** 386-391**Date:** Apr**Short Title:** Morphological characterization of the Rembi sheep population in the Tiaret area (West of Algeria)**ISSN:** 0367-8318**Accession Number:** WOS:000354232100014

**Abstract:** Morphological characterization of Rembi breed was carried out from the study of 3 representative herds. Ewes (41) and rams (13) with an average age of 4.30 +/- 1.48 years were recorded for their live weight and 21 morphological measures with qualitative characters. Differences between sexes were revealed for several measures, whereas no differences were revealed between regions. A factorial analysis of multiple correspondences was performed on the morphological measures and revealed two main principal components accounting for 36.85 and 18.63 % of the inertia, being related to the color of the head (face and neck), neck and legs, the presence and absence of horns and sex. The cluster analysis allowed establishing differences with relevant implications to be taken into account for the breed conservation programme.

**Notes:** Djaout, A. Afri-Bouzebda, F. Bouzebda, Z. Routel, D. Benidir, M. Belkhiri, Y.**URL:** <Go to ISI>://WOS:000354232100014

**Reference Type: Journal Article****Record Number:** 113**Author:** Djazia, K. Krim, F. Chaoui, A. Sarra, M.**Year:** 2015**Title:** Active Power Filtering Using the ZDPC Method under Unbalanced and Distorted Grid Voltage Conditions**Journal:** Energies**Volume:** 8**Issue:** 3**Pages:** 1584-1605**Date:** Mar**Short Title:** Active Power Filtering Using the ZDPC Method under Unbalanced and Distorted Grid Voltage Conditions**ISSN:** 1996-1073**DOI:** 10.3390/en8031584**Accession Number:** WOS:000351942000003

**Abstract:** In this paper, we propose a new Zero Direct Power Control (ZDPC) technique for active compensation of harmonics and reactive power, using shunt active power filter (SAPF), based on cancellation of instantaneous active and reactive power disturbances by comparison with their zero references. To separate harmonic and fundamental components of the line voltage and current a highly selective filter (HSF) has been used. Depending on the power errors and line voltage vector position, a switching table produces the appropriate control vectors leading to the active and reactive power variation required to reach the zero power references, even under grid voltage unbalanced and distorted conditions. The experimental validation of the proposed ZDPC has been performed. The results are compared to other recent techniques to demonstrate the superiority and feasibility of the proposed strategy.

**Notes:** Djazia, Kamel Krim, Fateh Chaoui, Abdelmadjid Sarra, Mustapha**URL:** <Go to ISI>://WOS:000351942000003

**Reference Type: Journal Article****Record Number:** 114**Author:** Djeddi, N. Benahmed, M. Akkal, S. Laouer, H. Makhloufi, E. Gherraf, N.**Year:** 2015**Title:** Study on methylene dichloride and butanolic extracts of *Reutera lutea* (Desf.) Maire (Apiaceae) as effective corrosion inhibitions for carbon steel in HCl solution**Journal:** Research on Chemical Intermediates**Volume:** 41**Issue:** 7**Pages:** 4595-4616**Date:** Jul**Short Title:** Study on methylene dichloride and butanolic extracts of *Reutera lutea* (Desf.) Maire (Apiaceae) as effective corrosion inhibitions for carbon steel in HCl solution**ISSN:** 0922-6168**DOI:** 10.1007/s11164-014-1555-3**Accession Number:** WOS:000356608700046

**Abstract:** Methylene dichloride extract (MDE) and n-butanolic extract (BE) of *Reutera lutea* (Desf.) Maire were investigated as corrosion inhibitors for carbon steel (CS) in 1.0 M HCl using weight loss and potentiodynamic polarization measurements, electrochemical impedance spectroscopy, and scanning electron microscopy techniques. The effect of temperature on the corrosion behavior of CS was studied in the range of 293-323 K. The experimental results show that MDE and BE are good corrosion inhibitors and the protection efficiency increased with increasing concentration of the extracts, but decreased with rise in temperature. The extracts behaved as mixed-type corrosion inhibitors with highest inhibition at 700 and 800 mg L<sup>-1</sup> for MDE and BE, respectively. The adsorption of extracts on the CS surface was found to follow the Freundlich isotherm, and the adsorption mode was found to be physisorption. The free energies, enthalpies, and entropies for the adsorption process and the apparent energies, enthalpies, and entropies of the dissolution process are explained in detail.

**Notes:** Djeddi, N. Benahmed, M. Akkal, S. Laouer, H. Makhloufi, E. Gherraf, N.**URL:** <Go to ISI>://WOS:000356608700046

**Reference Type: Journal Article****Record Number:** 115**Author:** Djellali, S. Sadoun, T. Haddaoui, N. Bergeret, A.**Year:** 2015**Title:** Viscosity and viscoelasticity measurements of low density polyethylene/poly(lactic acid) blends**Journal:** Polymer Bulletin**Volume:** 72**Issue:** 5**Pages:** 1177-1195**Date:** May**Short Title:** Viscosity and viscoelasticity measurements of low density polyethylene/poly(lactic acid) blends**ISSN:** 0170-0839**DOI:** 10.1007/s00289-015-1331-6**Accession Number:** WOS:000351435400015

**Abstract:** The rheological properties and the viscoelastic behaviour of blends of polyethylene with different percentages of poly(lactic acid), ranging from 0 to 100 wt%, were studied. In a first part, all blends were examined under steady conditions using a capillary rheometer (at 180, 190 and 200 A degrees C) and dynamic conditions using a parallel plate rheometer. The results showed that all blends behaved like pseudoplastic fluids, with the power-law index values varying between those of polyethylene and polylactide (0.45-0.75 at 180 A degrees C, 0.49-0.77 at 190 A degrees C and 0.54-0.81 at 200 A degrees C). It was also observed that at low shear rate, pure poly(lactic acid) and polyethylene possessed, respectively, the highest and the lowest flow activation energy (66.9 and 48.3 kJ/mol); however, at high shear rate, the greater the content of poly(lactic acid), the lower the activation energy. In addition, poly(lactic acid) exhibited lower viscosity and lower melt elasticity than either polyethylene or the blends. The dynamic rheological study demonstrated that all formulations displayed shear thinning behaviour and only virgin poly(lactic acid) exhibited a clear Newtonian plateau. Also, mainly at low frequencies, polyethylene had the higher values of storage modulus (325 Pa), loss modulus (937 Pa) and complex viscosity (9,740 Pa.s). However, blends had values lying between those of the two homopolymers without any improvement in the storage modulus, loss modulus or complex viscosity. In a second part, the viscoelastic characteristics were investigated using dynamic mechanical thermal analysis (DMTA). DMTA spectra showed an increase in the storage modulus with the increase of poly(lactic acid) content but the opposite was observed for the loss modulus. A cold crystallization of poly(lactic acid) is observed around 87-100 A degrees C and the temperature of glass transition of poly(lactic acid) did not depend on the composition of the blend. These results indicate that LDPE and PLA are immiscible in all proportions either in the melt state or in the solid state.

**Notes:** Djellali, Souad Sadoun, Tahar Haddaoui, Nacereddine Bergeret, Anne**URL:** <Go to ISI>://WOS:000351435400015

**Reference Type: Journal Article****Record Number:** 116**Author:** Djerboua, Y. Zhang, X. P. Amrani, N. Boucenna, A. Ren, Z. Z.**Year:** 2015**Title:** Systematical law of (n, gamma) reaction cross sections of odd-A nuclei**Journal:** Nuclear Physics A**Volume:** 938**Pages:** 14-21**Date:** Jun**Short Title:** Systematical law of (n, gamma) reaction cross sections of odd-A nuclei**ISSN:** 0375-9474**DOI:** 10.1016/j.nuclphysa.2015.02.003**Accession Number:** WOS:000353084100002

**Abstract:** A formula for neutron radiative capture cross section is derived within the framework of compound nucleus hypothesis for incident neutron energy ( $E_n$ ) above the resonance region up to MeV. Based on this formula, we find a linear relationship between the logarithm of an (n, gamma) cross section at fixed  $E_n$  divided by  $A(1.4)$  and the relative neutron excess of the target nucleus, and new systematics are established between the (n, gamma) reaction cross section and the energy level density of a compound nucleus. The calculated (n, gamma) cross sections for odd-A target nuclei from this relationship are in good agreement with the experimental data, which suggests that this new systematical law is helpful to analyze the experimental data. It would be helpful in estimating the (n, gamma) cross sections of neighboring odd-A isotopes for which no experimental data are available. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Djerboua, Y. Zhang, Xiaoping Amrani, N. Boucenna, A. Ren, Zhongzhou**URL:** <Go to ISI>://WOS:000353084100002

**Reference Type: Journal Article****Record Number:** 117**Author:** Djerfaf, F. Vincent, D. Robert, S. Merzouki, A.**Year:** 2015**Title:** Determination of thickness and permeability tensor using the combination (models-neural networks)**Journal:** European Physical Journal-Applied Physics**Volume:** 70**Issue:** 2**Date:** May**Short Title:** Determination of thickness and permeability tensor using the combination (models-neural networks)**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2015140333**Article Number:** 20601**Accession Number:** WOS:000355615400005**Abstract:** The purpose of this paper is to describe an improved microwave method for predicting the material's thickness and the saturation magnetization and the damping factor through the neural networks. These characteristics provide the permeability tensor components using the combination between theoretical models and neural network. Neural networks learn the relationship between the scattering parameters and the outputs. The networks' performances result from both simulation and measurement thin ferrite samples.**Notes:** Djerfaf, Fatima Vincent, Didier Robert, Stephane Merzouki, Abdelaziz**URL:** <Go to ISI>://WOS:000355615400005

**Reference Type: Journal Article****Record Number:** 118**Author:** Djied, A. Seddik, T. Merabiha, O. Murtaza, G. Khenata, R. Ahmed, R. Bin-Omran, S. Ugur, S. Bouhemadou, A.**Year:** 2015**Title:** Structural phase transition and opto-electronic properties of NaZnAs**Journal:** Journal of Alloys and Compounds**Volume:** 622**Pages:** 812-818**Date:** Feb**Short Title:** Structural phase transition and opto-electronic properties of NaZnAs**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2014.10.173**Accession Number:** WOS:000345749500125

**Abstract:** In this study, we predict the structural phase transitions as well as opto-electronic properties of the filled-tetrahedral (Nowotny-Juza) NaZnAs compound. Calculations employ the full potential (FP) linearized augmented plane wave (LAPW) plus local orbitals (lo) scheme. The exchange-correlation potential is treated within the generalized gradient approximation of Perdew-Burke and Ernzerhof (GGA-PBE). In addition, Tran and Blaha (TB) modified Becke-Johnson (mBJ) potential is also used to obtain more accurate optoelectronic properties. Geometry optimization is performed to obtain reliable total energies and other structural parameters for each NaZnAs phase. In our study, the sequence of the structural phase transition on compression is Cu<sub>2</sub>Sb-type → beta → alpha phase. NaZnAs is a direct (Gamma-Gamma) band gap semiconductor for all the structural phases. However, compared to PBE-GGA, the mBJ approximation reproduces better fundamental band gaps. Moreover, for insight into its potential for photovoltaic applications, different optical parameters are studied. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Djied, A. Seddik, T. Merabiha, O. Murtaza, G. Khenata, R. Ahmed, R. Bin-Omran, S. Ugur, S. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000345749500125

**Reference Type: Journal Article****Record Number:** 119**Author:** Dogan, M. Tirasoglu, E. Karahan, I. H. Aylikci, N. K. Aylikci, V. Kahoul, A. Cetinkara, H. A. Serifoglu, O.**Year:** 2015**Title:** Alloying effect on K X-ray intensity ratio and production cross section values of Zn and Cr in Zn-Cr alloys (vol 87, pg 6, 2013)**Journal:** Radiation Physics and Chemistry**Volume:** 110**Pages:** 126-126**Date:** May**Short Title:** Alloying effect on K X-ray intensity ratio and production cross section values of Zn and Cr in Zn-Cr alloys (vol 87, pg 6, 2013)**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2014.06.022**Accession Number:** WOS:000350932400019**Notes:** Dogan, M. Tirasoglu, E. Karahan, I. H. Aylikci, N. Kup Aylikci, V. Kahoul, A. Cetinkara, H. A. Serifoglu, O.**URL:** <Go to ISI>://WOS:000350932400019

**Reference Type: Journal Article****Record Number:** 120**Author:** El Mir, R. Casagrande, E. M. S. Naja, A. Dal Cappello, C. Houamer, S. El Omar, F.**Year:** 2015**Title:** Triple differential cross sections for the ionization of the valence states of NH<sub>3</sub> by electron impact**Journal:** Journal of Physics B-Atomic Molecular and Optical Physics**Volume:** 48**Issue:** 17**Date:** Sep**Short Title:** Triple differential cross sections for the ionization of the valence states of NH<sub>3</sub> by electron impact**ISSN:** 0953-4075**DOI:** 10.1088/0953-4075/48/17/175202**Article Number:** 175202**Accession Number:** WOS:000359610000018**Abstract:** We report new experimental and theoretical triple differential cross sections for the electron impact ionization of the three valence states of ammonia in an intermediate energy regime. Measurements are performed in an asymmetric coplanar geometry under kinematics which have been unexplored to date. The data are compared to predictions from the first order approaches and BBK model. The experimental cross sections exhibit a very large recoil scattering, which is not predicted by the theory.**Notes:** El Mir, R. Casagrande, E. M. Staicu Naja, A. Dal Cappello, C. Houamer, S. El Omar, F. Si**URL:** <Go to ISI>://WOS:000359610000018

**Reference Type: Journal Article****Record Number:** 121**Author:** Fizi, Y. Mebdoua, Y. Lahmar, H. Djeraj, S. Benbahouche, S.**Year:** 2015**Title:** Adhesion of FeCrNiBSi-(W-Ti)C wire-arc deposited coatings onto carbon steel substrates determined by indentation measurements and modeling**Journal:** Surface & Coatings Technology**Volume:** 268**Pages:** 310-316**Date:** Apr**Short Title:** Adhesion of FeCrNiBSi-(W-Ti)C wire-arc deposited coatings onto carbon steel substrates determined by indentation measurements and modeling**ISSN:** 0257-8972**DOI:** 10.1016/j.surfcoat.2014.11.004**Accession Number:** WOS:000353735300046

**Abstract:** Wire-arc-sprayed coatings are widely used to protect industrial parts mainly from wear and erosion. The present work combines experimental measurements performed by instrumented indentation and their modeling in order to determine the elastic-plastic behavior of a wire-arc sprayed FeCrNiBSi-(W-Ti)C using Metco 8297 cored wire as feedstock material. The coating was sprayed onto low carbon steel (05) substrate after cleaning and grit blasting. The elastic-plastic behavior law optimized from instrumented indentation tests allowed calculating the coating adhesion. The effect of the displacement velocity of the tensile test on the fracture resistance was also investigated. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Fizi, Yazid Mebdoua, Yamina Lahmar, Hadj Djeraj, Sofiane Benbahouche, Saci**URL:** <Go to ISI>://WOS:000353735300046

**Reference Type: Journal Article****Record Number:** 122**Author:** Foudia, M. Matrakova, M. Zerroual, L.**Year:** 2015**Title:** Effect of a mineral additive on the electrical performances of the positive plate of lead acid battery**Journal:** Journal of Power Sources**Volume:** 279**Pages:** 146-150**Date:** Apr**Short Title:** Effect of a mineral additive on the electrical performances of the positive plate of lead acid battery**ISSN:** 0378-7753**DOI:** 10.1016/j.jpowsour.2015.01.008**Accession Number:** WOS:000350919600015

**Abstract:** The objective of this work is to improve the performance of the positive electrode of lead-acid battery. The use of the additive in the positive paste is to increase the capacity and cycle life of the positive active material. Mineral porous additives, dispersed uniformly in the PAM, may act as acid reservoirs and favor the ionic diffusion. The results show that the addition of mineral additive in the paste before oxidation influences the composition and the crystal size of the PAM after oxidation. We observe a remarkable improvement of the discharge capacity of the PAM for an amount of additive ranging between 1 and 5%. Nano-sized particles of PbO<sub>2</sub> with amorphous character are obtained. XRD, TG and DSC, SEM, and galvanostatic discharge were used as techniques of investigation. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Foudia, M. Matrakova, M. Zerroual, L. 9th International Conference on Lead-Acid Batteries (LABAT) Jun 10-13, 2014 Albena, BULGARIA

**URL:** <Go to ISI>://WOS:000350919600015

**Reference Type: Journal Article****Record Number:** 123**Author:** Gadri, L. Hadji, R. Zahri, F. Benghazi, Z. Boumezbeur, A. Laid, B. M. Rais, K.**Year:** 2015**Title:** The quarries edges stability in opencast mines: a case study of the Jebel Onk phosphate mine, NE Algeria**Journal:** Arabian Journal of Geosciences**Volume:** 8**Issue:** 11**Pages:** 8987-8997**Date:** Nov**Short Title:** The quarries edges stability in opencast mines: a case study of the Jebel Onk phosphate mine, NE Algeria**ISSN:** 1866-7511**DOI:** 10.1007/s12517-015-1887-3**Accession Number:** WOS:000363719600003

**Abstract:** The experience which accumulated over many years on problems of slope instability in quarries and opencast mines led to the development of several reliable methodologies for predicting discontinuities and selecting related consolidation works. Sloped bench faces that compose the overall slope in the studied case in this paper are evaluated from the stability prospective by applying a variety of stability analysis methods such as stereographic projection and software methods. The adopted approach is based on laboratory tests on understudied samples to designate the mechanical parameters and numerical modeling by implementing the finite element method. The latter, a vital tool to the quantitative determination of deformation mechanisms in large slope instabilities, is used to unravel the uncertainty of mechanical homogeneity properties of the involved materials at the level of discrete meshes in numerical computations that type of application proposes a procedural combination of an assortment of calculation stability methods through three steps. The first step is to quantify the alteration and fracturing conditions and to determine the mechanical parameters of Kef Essenoun rock mass by using slope mass rating (SMR) classification scheme, developed by Romana, to depict the strength of an individual rock slope. This system is based on the rock mass rating (RMR) geo-mechanical classification system of rocks, developed by Bieniawski, who refurbished that system with quantitative guidelines to get the rate of influence of adverse joint orientations. The second step is to uses the abacus method to estimate the stability of open-pit mines. The last step is to use a numerical modeling by applying Plaxis 8.2 calculation code.

**Notes:** Gadri, Larbi Hadji, Riheb Zahri, Farid Benghazi, Zied Boumezbeur, Abderrahmen Laid, Boukelloul Mohammed Rais, Khaled

**URL:** <Go to ISI>://WOS:000363719600003

**Reference Type: Journal Article****Record Number:** 124**Author:** Gadri, S. Moussaoui, A. Ieee,**Year:** 2015**Title:** Information Retrieval: A New Multilingual Stemmer Based on a Statistical Approach**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Information Retrieval: A New Multilingual Stemmer Based on a Statistical Approach**Accession Number:** WOS:000380433000134

**Abstract:** Stemming is a technique used to reduce inflected and derived words to their basic forms (stem or root). It is a very important step of pre-processing in text mining, and generally used in many areas of research such as: Natural language Processing NLP, Text Categorization TC, Text Summarizing TS, Information Retrieval IR, and other tasks in text mining. Stemming is frequently useful in text categorization to reduce the size of terms vocabulary, and in information retrieval to improve the search effectiveness and then gives us relevant results. In this paper, we propose a new multilingual stemmer based on the extraction of word root and in which we use the technique of n-grams. We validated our stemmer on three languages which are: Arabic, French and English.

**Notes:** Gadri, Said Moussaoui, Abdelouahab International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000134

**Reference Type: Journal Article****Record Number:** 125**Author:** Ghebouli, B. Fatmi, M. Ghebouli, M. A. Choutri, H. Louail, L. Chihi, T. Bouhemadou, A. Bin-Omran, S.**Year:** 2015**Title:** Theoretical study of the structural, elastic, electronic and optical properties of  $\text{XCaF}_3$  (X = K and Rb)**Journal:** Solid State Sciences**Volume:** 43**Pages:** 9-14**Date:** May**Short Title:** Theoretical study of the structural, elastic, electronic and optical properties of  $\text{XCaF}_3$  (X = K and Rb)**ISSN:** 1293-2558**DOI:** 10.1016/j.solidstatesciences.2015.03.009**Accession Number:** WOS:000352958200002

**Abstract:** The PLANE WAVE pseudo-potential method within density functional theory (DFT) has been used to investigate the structural, elastic, electronic and optical properties of  $\text{XCaF}_3$  (X = K and Rb) insulating. The studied compounds show a weak resistance to shear deformation compared to the resistance to the unidirectional compression.  $\text{KCaF}_3$  and  $\text{RbCaF}_3$  are considered ductile. The elastic constants and related parameters were predicted. The stiffness is more important in  $\text{KCaF}_3$ , whereas, the lateral expansion is more important in  $\text{RbCaF}_3$ .  $\text{KCaF}_3$  and  $\text{RbCaF}_3$  have R- Gamma indirect band gap. The main peaks in the imaginary part of the dielectric function correspond to the transition from the occupied state  $F_p$  to the unoccupied states Ca: s or K, Rb: p. At lower energies,  $\text{KCaF}_3$  and  $\text{RbCaF}_3$  show the same optical properties. Under pressure effect, the peaks of imaginary part of dielectric function were shifted toward high energy. (C) 2015 The Authors. Published by Elsevier Masson SAS.

**Notes:** Ghebouli, B. Fatmi, M. Ghebouli, M. A. Choutri, H. Louail, L. Chihi, T. Bouhemadou, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000352958200002

**Reference Type: Journal Article****Record Number:** 126**Author:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Louail, L. Chihi, T. Bouhemadou, A.**Year:** 2015**Title:** First-principles calculations of structural, electronic, elastic and thermal oproperties of phase M<sub>2</sub>SiC (M=Ti, V, Cr, Zr, Nb, Mo, Hf, Ta and W)**Journal:** Transactions of Nonferrous Metals Society of China**Volume:** 25**Issue:** 3**Pages:** 915-925**Date:** Mar**Short Title:** First-principles calculations of structural, electronic, elastic and thermal oproperties of phase M<sub>2</sub>SiC (M=Ti, V, Cr, Zr, Nb, Mo, Hf, Ta and W)**ISSN:** 1003-6326**DOI:** 10.1016/s1003-6326(15)63680-9**Accession Number:** WOS:000352451700029

**Abstract:** The structural, electronic and elastic properties of the M<sub>2</sub>SiC phases were studied, where M are 3d, 4d, and 5d early transition metals. The valence electron concentration (VEC) effect of Ti, V, Cr, Zr, Nb, Mo, Hf, Ta and W on these properties was examined. The C-44 saturates for a VEC value in surrounding of 8.5 for each serie. Hf-s, Ta-s and W-s electrons mainly contribute to the density of states at the Fermi level, and should be involved in the conduction properties. The distortion increases with increasing VEC and decreasing k(c)/k(a) factor except for the series M=Ti, V and Cr, where it is lower at the VEC value of 8.5 (it follows a parabolic variation). The M<sub>2</sub>SiC was characterized by a profound anisotropy for the shear planes (10 (1) over bar0) and compressibility in the direction is higher than that along the cone except for W<sub>2</sub>SiC, where it is lower.

**Notes:** Ghebouli, B. Ghebouli, M. A. Fatmi, M. Louail, L. Chihi, T. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000352451700029

**Reference Type: Journal Article****Record Number:** 127**Author:** Gheraibia, Y. Moussaoui, A. Azevedo, L. S. Parker, D. Papadopoulos, Y. Walker, M. Ieee,**Year:** 2015**Title:** Can Aquatic Flightless Birds Allocate Automotive Safety Requirements?**Journal:** 2015 Ieee Seventh International Conference on Intelligent Computing and Information Systems (Icicis)**Pages:** 1-6**Short Title:** Can Aquatic Flightless Birds Allocate Automotive Safety Requirements?**Accession Number:** WOS:000380470400023

**Abstract:** Many emerging safety standards use the concept of Safety Integrity Levels (SILs) for guiding designers on how to specify system safety requirements and then allocate these requirements to elements of the system architecture. These standards include the new automotive safety standard ISO 26262 in which SILs are called automotive SILs (or ASILs) and these will be used to illustrate the application of the techniques presented in this paper. In this paper, we propose a new approach in which the allocation of ASILs is performed by a new nature-inspired metaheuristic known as Penguins Search Optimisation Algorithm (PeSOA). PeSOA mimics the collaborative hunting strategy of penguins, using the metaphor of oxygen reserves as a search intensification operator. This allows the penguins to preserve energy, consuming it only in areas of the search space that are rich in good solutions. The performance of the approach is evaluated by applying it to a benchmark hybrid braking system case study, demonstrating performance that is an improvement to those reported in the literature.

**Notes:** Gheraibia, Youcef Moussaoui, Abdelouahab Azevedo, Luis S. Parker, David Papadopoulos, Yiannis Walker, Martin IEEE Seventh International Conference on Intelligent Computing and Information Systems (ICICIS) Dec 12-14, 2015 Cairo, egypt 978-1-5090-1949-6

**URL:** <Go to ISI>://WOS:000380470400023

**Reference Type: Journal Article****Record Number:** 128**Author:** Gherbi, C. Aliouat, Z. Benmohammed, M. Ieee,**Year:** 2015**Title:** Distributed Energy Efficient Adaptive Clustering Protocol with Data Gathering for Large Scale Wireless Sensor Networks**Journal:** 2015 12th IEEE International Conference on Programming and Systems (ISPS)**Pages:** 57-63**Short Title:** Distributed Energy Efficient Adaptive Clustering Protocol with Data Gathering for Large Scale Wireless Sensor Networks**Accession Number:** WOS:000380619200015

**Abstract:** Hierarchical routing is an efficient way to lower energy consumption within a cluster, performing data aggregation and fusion in order decrease the number of transmitted messages to the BS. In this paper, a novel hierarchical approach called distributed energy efficient adaptive clustering protocol with Data Gathering (DEACP) is proposed for Wireless sensor network. Since nodes in a sensor network have limited energy, prolonging the network lifetime and improving scalability become important. we have proposed (DEACP) approach to reach the following objectives: reduce the overall network energy consumption, balance the energy consumption among the sensors and extend the lifetime of the network, the clustering must be completely distributed, the clustering should be efficient in complexity of message and time, the cluster-heads should be well-distributed across the network, the load balancing should be done well, the clustered WSN should be fully-connected. As a result transmission power of the node is reduce which subsequently reduces the energy consumption of the node. Our proposed work is simulated through Network Simulator (NS-2). We consider the problem of conserving energy in a single node in a wireless sensor network by turning off the node's radio for periods of a fixed time length. While packets may continue to arrive at the node's buffer during the sleep periods, the node cannot transmit them until it wakes up. The objective is to design sleep control laws that minimize the expected value of a cost function representing both energy consumption costs and holding costs for backlogged packets. The network scenario is established by considering 1000 X 1000 area and displaying randomly moving nodes using TCL. The resource reservation is used to decompose the total simulation time of network into smaller time slots depending upon number of nodes in the network using TDMA technique. Simulations show that (DEACP) clusters have good performance characteristics.

**Notes:** Gherbi, Chirihane Aliouat, Zibouda Benmohammed, Mohammed 12th IEEE International Conference on Programming and Systems (ISPS) Apr 28-30, 2015 Algiers, ALGERIA IEEE, IEEE Algeria Subsection, USTHB, RSdT, Cerist, SDA, IRIA, MOVEP, BADR Bank, Arpt, CMR, ANVEREDET, Air Algerie 978-1-4799-7700-0

**URL:** <Go to ISI>://WOS:000380619200015

**Reference Type: Journal Article****Record Number:** 129**Author:** Graine, R. Chemam, R. Gasmi, F. Z. Muller, D. Schmerber, G.**Year:** 2015**Title:** Structural and phonon properties of InN synthesized by ion implantation in SiO<sub>2</sub>**Journal:** Thin Solid Films**Volume:** 595**Pages:** 108-112**Date:** Nov**Short Title:** Structural and phonon properties of InN synthesized by ion implantation in SiO<sub>2</sub>**ISSN:** 0040-6090**DOI:** 10.1016/j.tsf.2015.10.060**Accession Number:** WOS:000365812400018

**Abstract:** Ion-implantation is a powerful technique for the formation of compound semiconductor nanocrystal precipitates in a host medium. The aim is to elaborate quantum dots for device technology purposes. High dose ( $5.2 \times 10^{16}$  ions/cm<sup>2</sup>) implantations of Indium (In) and Nitrogen (N) ions have been performed in a 206 nm thick SiO<sub>2</sub> layer thermally grown on < 111 > silicon. The implantation energies have been chosen from 12 to 180 keV to produce 5-10 at.% profiles overlapping at a mean depth of about 100 nm. Thermal treatments between 500 degrees C and 900 degrees C for different annealing times lead to the formation of InN nanometric precipitates and to cure the oxide defects. In addition, the In<sub>2</sub>O<sub>3</sub> and metallic indium phases have been observed. Their sizes, crystalline structures and depth distributions have been studied as a function of annealing temperature using grazing incidence X-ray diffraction, transmission electron microscopy, Rutherford back scattering spectrometry and Raman spectroscopy. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Graine, R. Chemam, R. Gasmi, F. Z. Muller, D. Schmerber, G. A**URL:** <Go to ISI>://WOS:000365812400018

**Reference Type: Journal Article****Record Number:** 130**Author:** Graine, R. Chemam, R. Gasmi, F. Z. Nouri, R. Meradji, H. Khenata, R.**Year:** 2015**Title:** First principles calculations of structural, electronic and optical properties of InN compound**Journal:** International Journal of Modern Physics B**Volume:** 29**Issue:** 5**Date:** Feb**Short Title:** First principles calculations of structural, electronic and optical properties of InN compound**ISSN:** 0217-9792**DOI:** 10.1142/s0217979215500289**Article Number:** 1550028**Accession Number:** WOS:000350492900008

**Abstract:** We carried out ab initio calculations of structural, electronic and optical properties of Indium nitride (InN) compound in both zinc blende and wurtzite phases, using the full-potential linearized augmented plane wave method (FP-LAPW), within the framework of density functional theory (DFT). For the exchange and correlation potential, local density approximation (LDA) and generalized gradient approximation (GGA) were used. Moreover, the alternative form of GGA proposed by Engel and Vosko (EV-GGA) and modified Becke-Johnson schemes (mBJ) were also applied for band structure calculations. Ground state properties such as lattice parameter, bulk modulus and its pressure derivative are calculated. Results obtained for band structure of these compounds have been compared with experimental results as well as other first principle computations. Our results show good agreement with the available data. The calculated band structure shows a direct band gap  $\Gamma \rightarrow \Gamma$ . In the optical properties section, several optical quantities are investigated; in particular we have deduced the interband transitions from the imaginary part of the dielectric function.

**Notes:** Graine, R. Chemam, R. Gasmi, F. Z. Nouri, R. Meradji, H. Khenata, R.**URL:** <Go to ISI>://WOS:000350492900008

**Reference Type: Journal Article**

**Record Number: 131**

**Author: Grar, H. Benterki, D.**

**Year: 2015**

**Title: NEW EFFECTIVE PROJECTION METHOD FOR VARIATIONAL INEQUALITIES PROBLEM**

**Journal: Rairo-Operations Research**

**Volume: 49**

**Issue: 4**

**Pages: 805-820**

**Date: Oct-Dec**

**Short Title: NEW EFFECTIVE PROJECTION METHOD FOR VARIATIONAL INEQUALITIES PROBLEM**

**ISSN: 0399-0559**

**DOI: 10.1051/ro/2015006**

**Accession Number: WOS:000354294200009**

**Abstract:** Among the most used methods to solve the variational inequalities problem (VIP), there exists an important class known as projection methods, these last are based primarily on the fixed point reformulation. The first proposed methods of projection suffered from major theoretical and algorithmic difficulties. Several studies were completed, in particular, those of Iusem, Solodov and Svaiter and that of Wang et al. with an aim to overcome these difficulties. Consequently, many developments were brought to improve the algorithmic behavior of this type of methods. In the same form of the algorithms of projection presented by the authors quoted above and under the same convergence hypotheses, we propose in this paper a new algorithm with a new displacement step which must satisfy a certain condition, this last ensures a faster convergence towards a solution. The algorithm is well defined and the theoretical results of convergence are suitably established. A comparative numerical study is carried out between the two algorithms (the algorithm of Solodov and Svaiter, the algorithm Wang et al.) and the new one. The results obtained by the new algorithm were very encouraging and show clearly the impact of our modifications.

**Notes:** Grar, Hassina Benterki, Djamel

**URL:** <Go to ISI>://WOS:000354294200009

**Reference Type: Journal Article****Record Number:** 132**Author:** Guechi, A. Merabet, A. Chegaar, M. Bouhemadou, A. Guechi, N.**Year:** 2015**Title:** Pressure effect on the structural, elastic, electronic and optical properties of the Zintl phase KAsSn, first principles study**Journal:** Journal of Alloys and Compounds**Volume:** 623**Pages:** 219-228**Date:** Feb**Short Title:** Pressure effect on the structural, elastic, electronic and optical properties of the Zintl phase KAsSn, first principles study**ISSN:** 0925-8388**DOI:** 10.1016/j.jallcom.2014.10.114**Accession Number:** WOS:000345750600034

**Abstract:** In this work, a first-principles study of ternary Zintl phase KAsSn compound using density-functional theory (DFT) method within the generalized gradient approximation developed by Wu-Cohen (GGA-Wc) has been performed. Based on the optimized structural parameter, the electronic structure, elastic and optical properties have been investigated. The calculated lattice constants agree reasonably with the previous results. The effect of high pressure on the structural parameters has been shown. The elastic constants were calculated and satisfy the stability conditions for hexagonal crystal. These indicate that this compound is stable in the studied pressure regime. The single crystal elastic constants ( $C_{ij}$ ) and related properties are calculated using the static finite strain technique, moreover the polycrystalline elastic moduli such as bulk modulus, shear modulus, micro-hardness parameter  $H_v$ , Young's modulus and Poisson's ratio were estimated using Voigt, Reuss and Hill's (VRH) approximations. The elastic anisotropy of the KAsSn was also analyzed. On another hand the Debye temperature was obtained from the average sound velocity. Electronic properties have been studied throughout the calculation of band structure, density of states and charge densities. It is shown that this crystal belongs to the semiconductors with a pseudo gap of about 0.34 eV. Furthermore, in order to clarify the optical transitions of this compound, linear optical functions including the complex dielectric function, refractive index, extinction coefficient, optical reflectivity, absorption coefficient and loss function were performed and discussed. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Guechi, A. Merabet, A. Chegaar, M. Bouhemadou, A. Guechi, N.**URL:** <Go to ISI>://WOS:000345750600034

**Reference Type: Journal Article****Record Number:** 133**Author:** Gueddim, A. Zerroug, S. Bouarissa, N.**Year:** 2015**Title:** Composition dependence of the optical properties and band structure of the zinc-blende ZnS<sub>1-x</sub>O<sub>x</sub>: a first principles study**Journal:** Philosophical Magazine**Volume:** 95**Issue:** 24**Pages:** 2627-2638**Date:** Aug**Short Title:** Composition dependence of the optical properties and band structure of the zinc-blende ZnS<sub>1-x</sub>O<sub>x</sub>: a first principles study**ISSN:** 1478-6435**DOI:** 10.1080/14786435.2015.1073401**Accession Number:** WOS:000360648100003

**Abstract:** We present first principles calculations of structural, electronic and optical properties of ZnS<sub>1-x</sub>O<sub>x</sub> in the zinc-blende phase. We employ the full potential linearized augmented plane wave method within the density functional theory in the generalized gradient approximation and Engel-Vosko generalized gradient approximation. Features such as the lattice constant, the bulk modulus and its pressure derivative are reported. The agreement between our calculated results and available experimental and theoretical data is generally good. Direct and indirect energy band gaps as a function of the oxygen composition in the material of interest are presented and discussed. The material under investigation is found to remain a direct band gap semiconductor over all the alloy composition range (0-1). Furthermore, the optical properties such as the dielectric function, the refractive index, the reflectivity and the electron loss energy have also been reported and analysed.

**Notes:** Gueddim, A. Zerroug, S. Bouarissa, N.**URL:** <Go to ISI>://WOS:000360648100003

**Reference Type: Journal Article****Record Number:** 134**Author:** Hachana, A. Abdelaziz, M. Ieee,**Year:** 2015**Title:** H-infinity controller design for Blood Glucose Regulation in Diabetes Patients in the Presence of Uncertain parameters**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** H-infinity controller design for Blood Glucose Regulation in Diabetes Patients in the Presence of Uncertain parameters**Accession Number:** WOS:000380433000057

**Abstract:** This paper presents deals with uncertain description of a system for a type I diabetes mellitus patient under an intensive insulin treatment. The control algorithm employs a robust H-infinity controller to regulate the blood glucose level in diabetic patients. Diabetes mellitus is a kind of chronic metabolic diseases in which body's blood glucose regulatory system doesn't function properly. In this study, Bergman's minimal model has been used as a base model, to increase the functionalities of the glucose minimal model, some additions could be done. One of the additions is the exercise model and since it is hard to derive exact value of parameters in most biological systems, all parameters of the model has been considered uncertain and therefore parametric uncertainty has been exploited in control design. The control scheme is based on closed-loop feedback strategy. The behavior of the obtained controller was analyzed on ability to track a normoglycemic set point of 81mg/dl in presence of disturbance and course tracking of the closed loop with the nominal system and the system with perturbed parameters. The designed controller proved effective in achieving normoglycaemic and robust to meal and exercise disturbances.

**Notes:** Hachana, Aicha Abdelaziz, Mourad International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4**URL:** <Go to ISI>://WOS:000380433000057

**Reference Type: Journal Article****Record Number:** 135**Author:** Hachana, O. Hemsas, K. E. Tina, G. M. Ieee,**Year:** 2015**Title:** Fault Diagnosis of Building Integrated PV Generator: a Metaheuristic Technique**Journal:** 2015 6th International Renewable Energy Congress (IREC)**Short Title:** Fault Diagnosis of Building Integrated PV Generator: a Metaheuristic Technique**Accession Number:** WOS:000380548500058

**Abstract:** BIPV systems are usually small-medium PV systems spread out over the territory, and whose technical and installation characteristics can be very different. This makes difficult a cost-effective procedure for monitoring and diagnostics. As a consequence, many problems affecting BIPV systems go undetected. In order to carry out an effective automatic fault detection procedures, we need a software tool that is reliable, cost effective and that can be applied on many PV systems. To reduce the probability of happening of such events, a fault diagnosis is an important tool at least to detect and prevent the critical defects. The well-known equivalent circuit one diode model will be used to develop a PV emulator by means of a new metaheuristic technique called ABC-DE either at normal or abnormal operating conditions to remove the damaging cells scenario at the investigation moment under artificial defects creation. After the emulator experimental validation a fault diagnosis technique is introduced to detect and to identify certain defects based on the power losses and the parameters extracted from ABC-DE technique selected on a reference table.

**Notes:** Hachana, Oussama Hemsas, Kamel Eddine Tina, Giuseppe Marco 6th International Renewable Energy Congress (IREC) Mar 24-26, 2015 Sousse, TUNISIA 978-1-4799-7947-9

**URL:** <Go to ISI>://WOS:000380548500058

**Reference Type: Journal Article****Record Number:** 136**Author:** Haddadi, K. Bouhemadou, A. Bin-Omran, S. Maabed, S. Khenata, R.**Year:** 2015**Title:** An ab initio study of the structural, elastic, electronic and optical properties of the newly synthesized nitridoaluminate LiCaAlN<sub>2</sub>**Journal:** Philosophical Magazine**Volume:** 95**Issue:** 1**Pages:** 41-63**Date:** Jan**Short Title:** An ab initio study of the structural, elastic, electronic and optical properties of the newly synthesized nitridoaluminate LiCaAlN<sub>2</sub>**ISSN:** 1478-6435**DOI:** 10.1080/14786435.2014.992490**Accession Number:** WOS:000346846700004

**Abstract:** The structural parameters, elastic constants, electronic structure and optical properties of the recently reported monoclinic quaternary nitridoaluminate LiCaAlN<sub>2</sub> are investigated in detail using the ab initio plane-wave pseudopotential method within the generalized gradient approximation. The calculated equilibrium structural parameters are in excellent agreement with the experimental data, which validate the reliability of the applied theoretical method. The chemical and structural stabilities of LiCaAlN<sub>2</sub> are confirmed by calculating the cohesion energy and enthalpy of formation. Chemical band stiffness is calculated to explain the pressure dependence of the lattice parameters. Through the band structure calculation, LiCaAlN<sub>2</sub> is predicted to be an indirect band gap of 2.725 eV. The charge-carrier effective masses are estimated from the band structure dispersions. The frequency-dependent dielectric function, absorption coefficient, refractive index, extinction coefficient, reflectivity coefficient and electron energy loss function spectra are calculated for polarized incident light in a wide energy range. Optical spectra exhibit a noticeable anisotropy. Single-crystal and polycrystalline elastic constants and related properties, including isotropic sound velocities and Debye temperatures, are numerically estimated. The calculated elastic constants and elastic compliances are used to analyse and visualize the elastic anisotropy of LiCaAlN<sub>2</sub>. The calculated elastic constants demonstrate the mechanical stability and brittle behaviour of the considered material.

**Notes:** Haddadi, K. Bouhemadou, A. Bin-Omran, S. Maabed, S. Khenata, R.**URL:** <Go to ISI>://WOS:000346846700004

**Reference Type: Journal Article****Record Number:** 137**Author:** Haddou, A. Murtaza, G. Khachai, H. Khenata, R. Bin Omran, S. Ullah, N. Varshney, D. Bouhemadou, A.**Year:** 2015**Title:** Structural, Elastic, Electronic Optical and Thermodynamic Properties of ZnAl<sub>2</sub>S<sub>4</sub>**Journal:** International Journal of Thermophysics**Volume:** 36**Issue:** 10-11**Pages:** 2940-2952**Date:** Nov**Short Title:** Structural, Elastic, Electronic Optical and Thermodynamic Properties of ZnAl<sub>2</sub>S<sub>4</sub>**ISSN:** 0195-928X**DOI:** 10.1007/s10765-015-1941-0**Accession Number:** WOS:000365521300038

**Abstract:** The structural, elastic, electronic, optical, and thermodynamic properties of the compound are calculated in the frame work of the density functional theory where the calculated structural parameters are found to be in good agreement with the experimental data and other theoretical calculations. The calculations show that the material is elastically stable and isotropic. Furthermore, the calculated band gap is observed to be wide and direct and is comparable with earlier experimental data as well as with other theoretical calculations; hence, it is an optically active material for optoelectronic applications. In addition, the compound is found to have mixed ionic and covalent bonding nature. The optical nature of the compound is described in terms of the complex dielectric function, complex refractive index, reflectivity, and energy loss function. On the other hand, variation of the unit cell volume, bulk modulus, heat capacity, and Debye temperature are described as a function of temperature at different pressures for the compound.

**Notes:** Haddou, A. Murtaza, G. Khachai, H. Khenata, R. Bin Omran, S. Ullah, Naeem Varshney, Dinesh Bouhemadou, A. 10th Asia Thermophysical Properties Conference Sep 29-oct 03, 2013 Jeju, SOUTH KOREA

**URL:** <Go to ISI>://WOS:000365521300038

**Reference Type: Journal Article****Record Number:** 138**Author:** Hamadou, A.**Year:** 2015**Title:** Analytical investigation of the dynamics behaviors of quantum cascade laser**Journal:** Optics Communications**Volume:** 335**Pages:** 271-278**Date:** Jan**Short Title:** Analytical investigation of the dynamics behaviors of quantum cascade laser**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2014.09.043**Accession Number:** WOS:000345641500047

**Abstract:** In this paper, we investigate analytically and numerically the transient dynamics of the mid infrared quantum cascade laser operating in a single mode. The approach is based on using adiabatic elimination in the rate equations model. Analytical solutions are derived for steady-state and time-dependent number of electrons in the various levels, population inversion and number of photons in the cavity. In addition, the equation that allows for the determination of time for steady-state establishment is derived within the premises of our analytical model in the most general case. The results are compared with numerical calculations. The dependence of the buildup time on current injection is also examined and compared with our other existing model. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Hamadou, A.**URL:** <Go to ISI>://WOS:000345641500047

**Reference Type: Journal Article**

**Record Number:** 139

**Author:** Hamimid, S. Guellal, M. Bouafia, M.

**Year:** 2015

**Title:** Numerical Simulation of Combined Natural Convection Surface Radiation for Large Temperature Gradients

**Journal:** Journal of Thermophysics and Heat Transfer

**Volume:** 29

**Issue:** 3

**Pages:** 637-646

**Date:** Jul

**Short Title:** Numerical Simulation of Combined Natural Convection Surface Radiation for Large Temperature Gradients

**ISSN:** 0887-8722

**DOI:** 10.2514/1.t4437

**Accession Number:** WOS:000357940400023

**Notes:** Hamimid, Saber Guellal, Messaoud Bouafia, Madiha

**URL:** <Go to ISI>://WOS:000357940400023

**Reference Type: Journal Article****Record Number:** 140**Author:** Hamma, A. Kaci, M. Ishak, Z. A. M. Ceccato, R. Pegoretti, A.**Year:** 2015**Title:** Starch-grafted-polypropylene/kenaf fibres composites. Part 2: thermal stability and dynamic-mechanical response**Journal:** Journal of Reinforced Plastics and Composites**Volume:** 34**Issue:** 24**Pages:** 2045-2058**Date:** Dec**Short Title:** Starch-grafted-polypropylene/kenaf fibres composites. Part 2: thermal stability and dynamic-mechanical response**ISSN:** 0731-6844**DOI:** 10.1177/0731684415609792**Accession Number:** WOS:000363423700005

**Abstract:** Kenaf fibres of different aspect ratios (L/D=30 and 160) were melt compounded in an internal mixer with two types of starch-grafted-polypropylene matrices (G906PF and G906PJ) at various loadings, i.e. 10, 20 and 30wt%. The compound was then compression-moulded into plaques of 1-mm thickness. Thermal, rheological and dynamic mechanical properties of the composite samples were investigated by several techniques involving differential scanning calorimetry, thermogravimetric analysis, melt flow index, Vicat softening point and dynamic mechanical thermal analysis. The results indicated that both thermal and mechanical properties of the composites were remarkably improved by kenaf fibres. Loss modulus and loss factor showed a shift of peak transitions to higher temperatures. Finally, the properties of the investigated composite materials were not affected by the fibre aspect ratio.

**Notes:** Hamma, A. Kaci, M. Ishak, Z. A. Mohd Ceccato, R. Pegoretti, A.**URL:** <Go to ISI>://WOS:000363423700005

**Reference Type: Journal Article****Record Number:** 141**Author:** Hammami, N. Bedda, M. Farah, N. Mansouri, S.**Year:** 2015**Title:** /r/-Letter Disorder Diagnosis (/r/-LDD): Arabic Speech Database Development for Automatic Diagnosis of Childhood Speech Disorders (Case Study)**Journal:** 2015 Intelligent Systems and Computer Vision (Iscv)**Short Title:** /r/-Letter Disorder Diagnosis (/r/-LDD): Arabic Speech Database Development for Automatic Diagnosis of Childhood Speech Disorders (Case Study)**Accession Number:** WOS:000380409900008

**Abstract:** In light of the scarcity of both published and free Acoustic Arabic databases, we propose in this paper Acoustic Arabic database to be a reference in the field of automatic Arabic speech recognition, this database is the result of a case study that has been developed to contribute to the automatic diagnosis of speech disorders in Arabic speaking children, the field work was in collaboration with experts in communication and relying on some multinational Arabic schools to record samples of various Arabic speech dialects in normal circumstances. The letter "R" has been selected as the most common letters that children suffer from. In this paper we will explain the mechanism of the development and design of this database, which is divided into three sub databases: the first is for diagnosis of the disorder in a letter "R" when its position is in the beginning of the word and the second when it is in the middle of the word the last one when it is at end of the word, each sub database contains speech recordings for 60 children; 30 males and 30 females, each child repeats the voice disorder five times. We hope that this acoustic database will be considered challenge for working more and to be a reference for future researches as the identification of Arabic speech in general and especially for the automatic diagnosis and treatment of speech disorders for children.

**Notes:** Hammami, Nacereddine Bedda, Mouldi Farah, Nadir Mansouri, Sihem Boumhidi, J Nfaoui, EH Intelligent Systems and Computer Vision (ISCV) Mar 25-26, 2015 Fez, MOROCCO Ieee, ieee comp soc, fac sci 978-1-4799-7511-2

**URL:** <Go to ISI>://WOS:000380409900008

**Reference Type: Journal Article****Record Number:** 142**Author:** Hamou, N. Massinissa, A. Hakim, A. Youcef, Z.**Year:** 2015**Title:** Finite element method investigation of electrostatic precipitator performance**Journal:** International Journal of Numerical Modelling-Electronic Networks Devices and Fields**Volume:** 28**Issue:** 2**Pages:** 138-154**Date:** Mar-Apr**Short Title:** Finite element method investigation of electrostatic precipitator performance**ISSN:** 0894-3370**DOI:** 10.1002/jnm.1992**Accession Number:** WOS:000348852400002

**Abstract:** This paper aims at analysis of the monopolar ionized field in electrostatic precipitator. A numerical model for simulating precipitation of particles in electrostatic precipitator is discussed in this paper. It includes all essential phenomena affecting the process. An iterative finite-element technique is used to solve Poisson's equation. We proposed the introduction of a potential corresponding to the critical minimum ionization field directly in the finite element formulation as a Dirichlet condition. The theoretical migration velocity is obtained by balancing the drag force with the Coulomb force or electrostatic force acting on a particle. We used the model introduced by Cochet for predicting a particle charge. The model assumes that a particle of the same size attains an equivalent maximum amount of charge for a charging time equal to infinity. Particles influence the electrical field, flow field, electrical migration velocity, gas discharge, particle charge and collection efficiency. Copyright (c) 2014 John Wiley & Sons, Ltd.

**Notes:** Hamou, Nouri Massinissa, Aissou Hakim, Aitsaid Youcef, Zebboudj**URL:** <Go to ISI>://WOS:000348852400002

**Reference Type: Journal Article****Record Number:** 143**Author:** Hannachi, D. Ouddai, N. Arotcarena, M. Chermette, H.**Year:** 2015**Title:** Addition-fragmentation reaction of thionoesters compounds in free-radical polymerisation (methyl, cyanomethyl and styryl): a theoretical interpretation**Journal:** Molecular Physics**Volume:** 113**Issue:** 13-14**Pages:** 1541-1550**Date:** Jul**Short Title:** Addition-fragmentation reaction of thionoesters compounds in free-radical polymerisation (methyl, cyanomethyl and styryl): a theoretical interpretation**ISSN:** 0026-8976**DOI:** 10.1080/00268976.2014.985275**Accession Number:** WOS:000357933400004

**Abstract:** A joint experimental and theoretical study has been carried out on reversible addition-fragmentation chain transfer polymerisation (RAFT). We have performed density functional theory calculations at the (Perdew-Burke-Ernzerhof) PBE/triple zeta plus polarisation level to analyse the RAFT mechanisms corresponding to these compounds. Global and local reactivity indices have been calculated to investigate the effect of the addition of methyl, cyanomethyl and styryl radicals on the double bond C=S of thionoester compounds producing an adduct radical. This mechanism is shown to be difficult when the cyanomethyl is used contrarily to the methyl and styryl radicals, in agreement with experimental results. The activation barrier of fragmentation of adduct radicals does not correlate well with the length of fragmented bond (O-C-alpha). The bond topological analysis of radical adduct predicts that the distance between the oxygen and a critical point (O-CP) in the fragment bond is a good parameter to estimate the activation energy of the fragmentation mechanism. It is shown that the nature of the free radicals is more selective than that of the thionoester compounds. With an overall large agreement with experiments, these theoretical results afford an explanation of the efficiency for the RAFT mechanism.

**Notes:** Hannachi, Douniazed Ouddai, Nadia Arotcarena, Michel Chermette, Henry Si**URL:** <Go to ISI>://WOS:000357933400004

**Reference Type: Journal Article****Record Number:** 144**Author:** Harfouche, N. Nessark, B. Perrin, F. X.**Year:** 2015**Title:** Electrochemical and surface characterization of composite material: Polyaniline/LiMn<sub>2</sub>O<sub>4</sub>**Journal:** Journal of Electroanalytical Chemistry**Volume:** 756**Pages:** 179-185**Date:** Nov**Short Title:** Electrochemical and surface characterization of composite material:Polyaniline/LiMn<sub>2</sub>O<sub>4</sub>**ISSN:** 1572-6657**DOI:** 10.1016/j.jelechem.2015.08.031**Accession Number:** WOS:000364272400023

**Abstract:** The preparation of polyaniline/LiMn<sub>2</sub>O<sub>4</sub> composite films by electropolymerization of aniline in the presence of LiMn<sub>2</sub>O<sub>4</sub> is reported. Cyclic voltammetry shows three redox couples characteristic of the different oxidation and reduction states of produced polyaniline/LiMn<sub>2</sub>O<sub>4</sub> composite. It was shown by electrochemical impedance spectroscopy that the presence of LiMn<sub>2</sub>O<sub>4</sub> particles enhanced the conductivity of polyaniline films. The morphology and structure of the composites were characterized by FTIR, UV-vis, scanning electron microscopy and X-ray diffraction. The surface morphology of the PANI/LiMn<sub>2</sub>O<sub>4</sub> composite films revealed a coarser structural morphology compared to pure PANI. To obtain additional information about the surface characteristics of the PANI films, their roughness was investigated. X-ray diffraction, EDS and FTIR analysis confirmed the incorporation of LiMn<sub>2</sub>O<sub>4</sub> in the composite films. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Harfouche, Nesrine Nessark, Belkacem Perrin, Francois Xavier**URL:** <Go to ISI>://WOS:000364272400023

**Reference Type: Journal Article****Record Number:** 145**Author:** Harrag, A. Messalti, S.**Year:** 2015**Title:** Variable step size modified P&O MPPT algorithm using GA-based hybrid offline/online PID controller**Journal:** Renewable & Sustainable Energy Reviews**Volume:** 49**Pages:** 1247-1260**Date:** Sep**Short Title:** Variable step size modified P&O MPPT algorithm using GA-based hybrid offline/online PID controller**ISSN:** 1364-0321**DOI:** 10.1016/j.rser.2015.05.003**Accession Number:** WOS:000357141900098

**Abstract:** This paper presents a new modified Perturbation and Observation (P&O) maximum power point tracking algorithm with adaptive duty cycle step using PID controller based on genetic algorithm. The classical P&O MPPT algorithm is widely used in several applications due to its simplicity; however, P&O prone to failure especially when high changes in irradiance, oscillation around the MPP and the convergence speed. To face this challenge and in order to overcome the drawbacks of the classical P&O MPPT, a new method based on variable-step size of modified P&O MPPT method using PID controller tuned by genetic algorithm is presented. The efficiency of the proposed method has been studied successfully using a boost converter connected to a Solarex MSX-60 model Analysis and comparison with the classical fixed step size P&O and that developed genetic variable step size are presented. The efficiency and improvements of the proposed algorithm in transient, steady-state and dynamic responses, especially under rapidly changing atmospheric conditions, related to ripple, overshoot and response time have been demonstrated. Algorithm robustness was verified using different schemes for temperature and insolation proving its ability to track the maximum power point in case of random and fast changing atmospheric conditions. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Harrag, Abdelghani Messalti, Sabir**URL:** <Go to ISI>://WOS:000357141900098

**Reference Type: Journal Article****Record Number:** 146**Author:** Harrag, A. Messalti, S. Ieee,**Year:** 2015**Title:** Extraction of solar cell parameters using genetic algorithm**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 369-+**Short Title:** Extraction of solar cell parameters using genetic algorithm**Accession Number:** WOS:000380457200101

**Abstract:** In this paper, we propose a new technique based on genetic algorithm for the extraction of electrical parameters (the saturation current, the serial resistance, the parallel resistance and the ideality factor). The models with five and seven parameters respectively are considered. The genetic algorithm is used as a tool for optimization to increase the probability of reaching the global minimum solutions in a short time with a very good accuracy based on the minimization of the quadratic error between experimental and theoretical characteristics. The simulation results show that the accuracy of the heuristic approach is effective for modeling in the case of solar modules. The values of squared errors are around zero ( $5.8297 \times 10^{-8}$ ) and  $3.0751 \times 10^{-7}$  for the five parameter and seven parameters models respectively). On the other hand, the results were obtained after only seven generations which can be considered very fast for a nonlinear optimization problem with many physical constraints. The results prove that the GA is very suitable for estimating electrical parameters needed for modeling the PV array.

**Notes:** Harrag, Abdelghani Messalti, Sabir 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200101

**Reference Type: Journal Article****Record Number:** 147**Author:** Hassani, M. Chabou, M. C. Hamoudi, M. Guettouche, M. S.**Year:** 2015**Title:** Index of extraction of water surfaces from Landsat 7 ETM+ images**Journal:** Arabian Journal of Geosciences**Volume:** 8**Issue:** 6**Pages:** 3381-3389**Date:** Jun**Short Title:** Index of extraction of water surfaces from Landsat 7 ETM+ images**ISSN:** 1866-7511**DOI:** 10.1007/s12517-014-1475-y**Accession Number:** WOS:000355336800002

**Abstract:** The aim of this study was to develop an index of water surfaces (IWS) for separating the water surfaces from other types of land use, by using the images of Landsat 7 ETM+. The index was applied on four areas characterized by different types of land use from different regions in Algeria. The first is from the center of Algeria (Landsat ETM+ scene: 195-36 acquired March 24, 2001); the second is from the east of Algeria (Landsat ETM+ scene: 193-35 acquired March 24, 2000); the third is from the west of Algeria (Landsat ETM+ scene: 197-36 acquired February 16, 2000); and the fourth is from the south of Algeria (Landsat ETM + scene: 197-43 acquired February 16, 2000). The results showed that the application of the IWS on the different tested areas can distinguish clearly the surface water from the other land use (basin dams, wadis, Sebkh, and Chott). These findings indicated that this index can be used in the mapping of the water surfaces.

**Notes:** Hassani, Mohamed Chabou, Moulley Charaf Hamoudi, Mohamed Guettouche, Mohand Said

**URL:** <Go to ISI>://WOS:000355336800002

**Reference Type: Journal Article****Record Number:** 148**Author:** Hemmous, M. Layadi, A. Kerkache, L. Tiercelin, N. Preobrazhensky, V. Pernod, P.**Year:** 2015**Title:** Magnetic Properties of Evaporated Ni Thin Films: Effect of Substrates, Thickness, and Cu Underlayer**Journal:** Metallurgical and Materials Transactions a-Physical Metallurgy and Materials Science**Volume:** 46A**Issue:** 9**Pages:** 4143-4149**Date:** Sep**Short Title:** Magnetic Properties of Evaporated Ni Thin Films: Effect of Substrates, Thickness, and Cu Underlayer**ISSN:** 1073-5623**DOI:** 10.1007/s11661-015-3018-x**Accession Number:** WOS:000358939600040

**Abstract:** Ni thin films have been deposited by thermal evaporation onto glass, Si, Cu, mica, and Al<sub>2</sub>O<sub>3</sub> substrates with and without a Cu underlayer. The Ni thicknesses,  $t$ , are in the 4 to 163 nm range. The Cu underlayer has also been evaporated with a Cu thickness equal to 27, 52, and 90 nm. The effects of substrate, Ni thickness, and the Cu underlayer on the magnetic properties of Ni are investigated. Magnetic properties were inferred from the vibrating sample magnetometer (VSM) set-up. The substrates induce not only different coercive field  $H_c$  values but also the origins of the  $H_c$  values are different. The squareness  $S$  depends on substrate and  $t$  and seems to be relatively large in Ni/glass and Ni/Cu, and small in Ni/Si and Ni/mica. The Cu underlayer leads to an overall increase of  $H_c$  and the saturation  $H_s$  and to a decrease in the remnant magnetization; the increase in  $H_s$  may be related to a stress-induced anisotropy in Ni/Cu/substrates.

**Notes:** Hemmous, M. Layadi, A. Kerkache, L. Tiercelin, N. Preobrazhensky, V. Pernod, P.**URL:** <Go to ISI>://WOS:000358939600040

**Reference Type: Journal Article****Record Number:** 149**Author:** Hemmous, M. Layadi, A. Guittoum, A. Kerkache, L. Tiercelin, N. Klimov, A. Preobrazhensky, V. Pernod, P.**Year:** 2015**Title:** Structural and magnetic properties of Ni/Cu bilayers evaporated on CuZn substrate**Journal:** European Physical Journal-Applied Physics**Volume:** 70**Issue:** 1**Date:** Apr**Short Title:** Structural and magnetic properties of Ni/Cu bilayers evaporated on CuZn substrate**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2015140297**Article Number:** 10301**Accession Number:** WOS:000354786500005

**Abstract:** In this present work we examine the effect of the Ni thickness  $t$  ( $t$  ranges from 4 to 67 nm) and of the Cu underlayer (with  $t(\text{Cu}) = 27, 52$  and 90 nm) on the structural and magnetic properties of Ni/Cu bilayers deposited onto CuZn substrate. The Ni films and the Cu underlayer have been deposited by thermal evaporation. The structural properties were derived from X-ray diffraction experiments. The texture, the strain  $\epsilon$  and the grain size  $D$  are studied as a function of Ni thickness. The surface morphology is studied by means of a scanning electron microscope (SEM). The magnetic properties were studied by means of the vibrating sample magnetometer (VSM) and the magneto-optic Kerr effect (MOKE) technique in the longitudinal configuration. The coercive field, the squareness and the saturation field are investigated as a function of Ni thickness. All these results will be discussed and correlated.

**Notes:** Hemmous, Messaoud Layadi, Abdelhamid Guittoum, Abderrahim Kerkache, Laid Tiercelin, Nicolas Klimov, Alexey Preobrazhensky, Vladimir Pernod, Philippe

**URL:** <Go to ISI>://WOS:000354786500005

**Reference Type: Journal Article****Record Number:** 150**Author:** Henni, A. Merrouche, A. Telli, L. Walter, S. Azizi, A. Fenineche, N.**Year:** 2015**Title:** Effect of H<sub>2</sub>O<sub>2</sub> concentration on electrochemical growth and properties of vertically oriented ZnO nanorods electrodeposited from chloride solutions**Journal:** Materials Science in Semiconductor Processing**Volume:** 40**Pages:** 585-590**Date:** Dec**Short Title:** Effect of H<sub>2</sub>O<sub>2</sub> concentration on electrochemical growth and properties of vertically oriented ZnO nanorods electrodeposited from chloride solutions**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.07.046**Accession Number:** WOS:000363344600083

**Abstract:** In this work, ZnO nanostructures are electrodeposited on a transparent conducting glass from chloride baths. The influence of H<sub>2</sub>O<sub>2</sub> concentration on the electrochemical characteristics has been studied using cyclic voltammetry (CV) and chronoamperometry (CA) techniques. From the analysis of the current transients on the basis of the Scharifker-Hills model, it is found that nucleation mechanism is progressive with a typical three-dimensional (3D) nucleation and growth process; independently with the concentration of H<sub>2</sub>O<sub>2</sub>. However, the nucleation rate of the ZnO changes with the increase of H<sub>2</sub>O<sub>2</sub> concentration. The Mott-Schottky measurements demonstrate an n-type semiconductor character for all samples with a carrier density varying between  $5.14 \times 10^{18} \text{ cm}^{-3}$  and  $1.47 \times 10^{18} \text{ cm}^{-3}$ . Scanning electron microscopy (SEM) observations show arrays of vertically aligned ZnO nanorods (NRs) with good homogeneity. The X-ray diffraction (XRD) patterns show that the ZnO deposited crystallises according to a hexagonal Wurtzite-type structure and with the c-axis perpendicular to the electrode surface. The directional growth along (002) crystallographic plane is very important for deposits obtained at 5 and 7 mM of H<sub>2</sub>O<sub>2</sub>. The high optical properties of the ZnO NRs with a low density of deep defects was checked by UV-vis transmittance analyses, the band gap energy of films varies between 3.23 and 3.31 eV with transparency around 80-90%. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Henni, A. Merrouche, A. Telli, L. Walter, S. Azizi, A. Fenineche, N.**URL:** <Go to ISI>://WOS:000363344600083

**Reference Type: Journal Article****Record Number:** 151**Author:** Henni, A. Merrouche, A. Telli, L. Azizi, A. Nechache, R.**Year:** 2015**Title:** Effect of potential on the early stages of nucleation and properties of the electrochemically synthesized ZnO nanorods**Journal:** Materials Science in Semiconductor Processing**Volume:** 31**Pages:** 380-385**Date:** Mar**Short Title:** Effect of potential on the early stages of nucleation and properties of the electrochemically synthesized ZnO nanorods**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2014.12.011**Accession Number:** WOS:000350513500053

**Abstract:** The zinc oxide nanostructured were synthesized on Indium doped tin oxide substrate using cathodic reduction of H<sub>2</sub>O<sub>2</sub> and ZnCl<sub>2</sub> from chloride aqueous electrolyte under different applied potentials. The effects of this potential on the nucleation of ZnO seeds were investigated by performing transient current measurements and using model based on Scharifker-Hills equations. The results suggest that the nucleation mechanism of ZnO is progressive with a three-dimensional growth of the hemispherical nuclei. The XRD patterns show that the ZnO crystallizes in a hexagonal Wurtzite-type structure with a phase preferentially orientated along c-axis. The structural analysis evidences a strong relationship between the directional growth along (0 0 2) crystallographic plane and the applied potentials. ZnO crystallizes in hexagonal nanorods (NRs) with diameters in the ranges of 160-250 nm. Photoelectrochemical study indicates that the obtained films have n-type semiconducting behaviour, and generate high photocurrents up to 40  $\mu$  A/cm<sup>2</sup> at -1.0 and -1.1 V. The transmittance spectra indicate that the films exhibit a good optical quality with low defects density with an averaged band gap of similar to 3.31 eV. (C) 2014 Elsevier Ltd. All rights reserved.

**Notes:** Henni, A. Merrouche, A. Telli, L. Azizi, A. Nechache, R.**URL:** <Go to ISI>://WOS:000350513500053

**Reference Type: Journal Article****Record Number:** 152**Author:** Heraguemi, K. E. Kamel, N. Drias, H.**Year:** 2015**Title:** Association Rule Mining Based on Bat Algorithm**Journal:** Journal of Computational and Theoretical Nanoscience**Volume:** 12**Issue:** 7**Pages:** 1195-1200**Date:** Jul**Short Title:** Association Rule Mining Based on Bat Algorithm**ISSN:** 1546-1955**DOI:** 10.1166/jctn.2015.3873**Accession Number:** WOS:000356207200016

**Abstract:** Data mining is the process of extracting useful knowledge from a large database by using software and tools to look for discrimination and expressive patterns. This process helps companies to focus on important information in their historical databases to make decisions. Association rule mining is one of the most important domain in data mining. It aims to extract correlations, frequent pattern and associations between the items in databases In this paper, we propose a bat-based algorithm (BA) for association rule mining (ARM Bat). Our algorithm aims to maximize the fitness function to generate the best rules in the defined dataset starting from specific minimum support and minimum confidence. The efficiency of our proposed algorithm is tested on several generic datasets with different number of transactions and items. The results are compared to FPGrowth algorithm results on the same datasets. ARM bat algorithm perform better than the FPGrowth algorithm in term of computation speed and memory usage.

**Notes:** Heraguemi, Kamel Eddine Kamel, Nadjet Drias, Habiba Si**URL:** <Go to ISI>://WOS:000356207200016

**Reference Type: Journal Article****Record Number:** 153**Author:** Home, P. Baik, S. H. Galvez, G. G. Malek, R. Nikolajsen, A.**Year:** 2015**Title:** An analysis of the cost-effectiveness of starting insulin detemir in insulin-naive people with type 2 diabetes**Journal:** Journal of Medical Economics**Volume:** 18**Issue:** 3**Pages:** 230-240**Date:** Mar**Short Title:** An analysis of the cost-effectiveness of starting insulin detemir in insulin-naive people with type 2 diabetes**ISSN:** 1369-6998**DOI:** 10.3111/13696998.2014.985788**Accession Number:** WOS:000350545300007

**Abstract:** Aims: There is limited evidence with respect to the cost-effectiveness of starting insulin in people with diabetes outside the 'western' world. The aim of this study was to assess the cost-effectiveness of starting basal insulin treatment with insulin detemir in people with type 2 diabetes (T2D) inadequately controlled on oral glucose-lowering drugs (OGLDs) in Mexico, South Korea, India, Indonesia, and Algeria. Methods: The IMS CORE Diabetes Model was used to project clinical and cost outcomes over a 30-year time horizon. Clinical outcomes, baseline characteristics and health state utility data were taken from the A(1)chieve study. A 1-year analysis was also conducted based on treatment costs and quality-of-life data. Incremental cost-effectiveness ratios (ICERs) were expressed as a fraction of GDP per capita, and WHO-CHOICE recommendations (ICER<3.0) used to define cost-effectiveness. Results: Starting insulin detemir was associated with a projected increase in life expectancy ( $\geq 1$  year) and was considered cost-effective in all of the studied populations with ICERs of -0.02 (Mexico), 0.00 (South Korea), 0.48 (India), 0.12 (Indonesia), and 0.88 (Algeria) GDP/quality-adjusted life-year. Cost-effectiveness was maintained after conducting sensitivity analyses in the 30-year and 1-year analyses. A projected increase in treatment costs was partially offset by a reduction in complications. The difference in overall costs between insulin detemir and OGLDs alone was USD518, 1431, 3510, 15, and 5219, respectively. Conclusion: Changes in clinical outcomes associated with starting insulin detemir in insulin-naive individuals with T2D resulted in health gains that made the intervention cost-effective in five countries with distinct healthcare resources.

**Notes:** Home, Philip Baik, Sei Hyun Gonzalez Galvez, Guillermo Malek, Rachid Nikolajsen, Annie**URL:** <Go to ISI>://WOS:000350545300007

**Reference Type: Journal Article****Record Number:** 154**Author:** Idris, B. Rafik, Z. Kamal, D. Abdessalam, B. Faouzi, G. Ieee,**Year:** 2015**Title:** Size and Grain-Boundary Effects on the Performance of Polycrystalline CIGS-Based Solar Cells**Journal:** 2015 6th International Renewable Energy Congress (IREC)**Short Title:** Size and Grain-Boundary Effects on the Performance of Polycrystalline CIGS-Based Solar Cells**Accession Number:** WOS:000380548500067

**Abstract:** This work reviews the effect of Geometrical, physical and electrical parameters of the polycrystalline CIGS thin film used as absorber materials in substrate  $\text{CuIn}_{0.7}\text{Ga}_{0.3}\text{Se}_2$  (CIGS) solar cells. Two-dimensional device simulator Atlas SILVACO-TCAD was employed to study the performances of ZnO:Al/CdS/CIGS/Metal solar cell structure. The impacts of the grain sizes and the grain boundaries (GBs) in the polycrystalline p-CIGS absorber layer have been investigated. The variation of grain sizes in the CIGS bulk was studied and the corresponding design optimization was provided. The best energy conversion efficiencies have been obtained with large grain sizes higher than  $2 \mu\text{m}$  for  $3 \mu\text{m}$ -CIGS thick. The simulation results predict a strong detrimental effect of GBs recombination, which is enhanced by the presence of small width in the direction that attracts minority carriers. An efficiency of 17.1% (with  $V_{oc}$  approximate to 0.68 V,  $J_{sc}$  approximate to 34  $\text{mA}/\text{cm}^2$ ) and FF approximate to 0.77) has been achieved with small width at about 3 nm. The presence of the valence-band offset in the absorber layer is benign to solar cell performance by limit the carriers recombination. The valence-band offset is predicted to be 0.4 eV in magnitude and localized to a very thin layer at the grain surface in which the surface reconstruction takes place. All these simulation results give some important indication to lead a higher efficiency of polycrystalline CIGS solar cells for feasible fabrication.

**Notes:** Idris, Bouchama Rafik, Zouache Kamal, Djessas Abdessalam, Bouloufa Faouzi, Ghribi 6th International Renewable Energy Congress (IREC) Mar 24-26, 2015 Sousse, TUNISIA 978-1-4799-7947-9

**URL:** <Go to ISI>://WOS:000380548500067

**Reference Type: Journal Article**

**Record Number: 155**

**Author:** Imane, M. Nadjat, K. Ieee,

**Year:** 2015

**Title:** Bat Algorithm for Overlapping Community Detection

**Journal:** 2015 Sai Intelligent Systems Conference (Intellisys)

**Pages:** 664-667

**Short Title:** Bat Algorithm for Overlapping Community Detection

**Accession Number:** WOS:000378642300092

**Abstract:** In social network, a group of elements sharing common interests is called community. To know the structure of these communities, many works have been proposed with different techniques; we can cite node based methods and link based methods. This structure is complex where communities overlap every time. In this paper we use bat algorithm to discover overlapping communities. Bat algorithm is a novel metaheuristic characterized by the echolocation behavior of bats. The algorithm we propose in this paper is based on the links of the network. The objective function evaluates the link density which is convenient for overlapping communities. Experiment on real networks show that the communities discovering with our approach have a higher density.

**Notes:** Imane, Messaoudi Nadjat, Kamel SAI Intelligent Systems Conference (IntelliSys) Nov 10-11, 2015 Sci & Informat Org, London, ENGLAND HPC Syst, nVIDIA, SIEMENS, IEEE, Inst Engn & Technol, BigML, Stratified Med, HERE 978-1-4673-7606-8

**URL:** <Go to ISI>://WOS:000378642300092

**Reference Type: Journal Article****Record Number:** 156**Author:** Islam, M. A. Benhouria, A. Asif, M. Hameed, B. H.**Year:** 2015**Title:** Methylene blue adsorption on factory-rejected tea activated carbon prepared by conjunction of hydrothermal carbonization and sodium hydroxide activation processes**Journal:** Journal of the Taiwan Institute of Chemical Engineers**Volume:** 52**Pages:** 57-64**Date:** Jul**Short Title:** Methylene blue adsorption on factory-rejected tea activated carbon prepared by conjunction of hydrothermal carbonization and sodium hydroxide activation processes**ISSN:** 1876-1070**DOI:** 10.1016/j.jtice.2015.02.010**Accession Number:** WOS:000357246300007

**Abstract:** The hydrochar from factory-rejected tea (FRT) was prepared by hydrothermal carbonization and was used as precursor for activated carbon and later activated by NaOH to remove methylene blue (MB) as model dye from aqueous solution. The hydrochar of FRT introduced carbon-rich materials with different functional groups on the surface. This surface functionality was enhanced when chemical modification of NaOH was conducted. The batch adsorption study was performed to remove MB from the aqueous solution using the selected adsorbent. The influences of different adsorption parameters, such as solution pH (3-13), initial concentration (25 mg/L to 500 mg/L), and contact time (0.5-25 h), were investigated. Adsorption kinetics was better described by the pseudo-second-order model and adsorption isotherm was well defined by the Langmuir isotherm. The maximum monolayer adsorption capacity of the selected adsorbent for MB dye was 487.4 mg/g at 30 degrees C, which has great potential for the removal of organic dye from aqueous solution. This study suggests that the hydrothermal carbonization is a very promising way to produce quality adsorbents for wastewater treatment. (C) 2015 Taiwan Institute of Chemical Engineers. Published by Elsevier B.V. All rights reserved.

**Notes:** Islam, M. Azharul Benhouria, A. Asif, M. Hameed, B. H.**URL:** <Go to ISI>://WOS:000357246300007

**Reference Type: Journal Article****Record Number:** 157**Author:** Islam, M. A. Tan, I. A. W. Benhouria, A. Asif, M. Hameed, B. H.**Year:** 2015**Title:** Mesoporous and adsorptive properties of palm date seed activated carbon prepared via sequential hydrothermal carbonization and sodium hydroxide activation**Journal:** Chemical Engineering Journal**Volume:** 270**Pages:** 187-195**Date:** Jun**Short Title:** Mesoporous and adsorptive properties of palm date seed activated carbon prepared via sequential hydrothermal carbonization and sodium hydroxide activation**ISSN:** 1385-8947**DOI:** 10.1016/j.cej.2015.01.058**Accession Number:** WOS:000353729100022

**Abstract:** Mesoporous activated carbon (AC) was prepared via sodium hydroxide (NaOH) activation of hydrochar from the hydrothermal carbonization (HTC) of palm date seed (PDS). The textural, morphological, and chemical properties of the produced hydrochar AC were investigated. NaOH activation enhanced the porosity and surface functionality of the hydrochar. Batch equilibration methods were performed to explore the process parameters that affected the adsorption of the prepared AC on methylene blue (MB), including initial concentration, contact time, solution pH and temperature. The Freundlich isotherm model better depicted the equilibrium data compared with the Langmuir isotherm model. Temperature was found to negatively affect the adsorption capacity of the prepared AC, which exhibited 612.1, 464.3 and 410.0 mg/g maximum MB adsorption capacities at 30, 40 and 50 degrees C, respectively. The pseudo-second order kinetic model best described the kinetic data. HTC and NaOH activation was proven to be an effective method in preparing highly porous AC from PDS, with good potential for cationic dye removal from liquid phase. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Islam, Md. Azharul Tan, I. A. W. Benhouria, A. Asif, M. Hameed, B. H.**URL:** <Go to ISI>://WOS:000353729100022

**Reference Type: Journal Article****Record Number:** 158**Author:** Kaabi, I. Sibous, L. Douadi, T. Chafaa, S.**Year:** 2015**Title:** X-ray structure of a new ligand: Di (4-phenylimino) 4-diethyl salicylaldehyde ether and electrochemical study of its copper (II) and cobalt (II) complexes**Journal:** Journal of Molecular Structure**Volume:** 1084**Pages:** 216-222**Date:** Mar**Short Title:** X-ray structure of a new ligand: Di (4-phenylimino) 4-diethyl salicylaldehyde ether and electrochemical study of its copper (II) and cobalt (II) complexes**ISSN:** 0022-2860**DOI:** 10.1016/j.molstruc.2014.12.023**Accession Number:** WOS:000350090000027

**Abstract:** The present work deals with the synthesis of a new tetradentate Schiff base ligand: di[(4-phenylimino) 4-diethyl salicylaldehyde] ether (H<sub>2</sub>L) which is used to coordinate copper (II) and cobalt (II) leading to bi- and mono-nuclear complexes [Cu<sub>2</sub>L (Cl center dot H<sub>2</sub>O)] and [Co (H<sub>2</sub>L) Cl-2] respectively. In addition to the X-ray diffraction of H<sub>2</sub>L, these compounds were characterized by the means of elemental and thermal analyses, infrared, electronic and H-1 NMR spectra. The cyclic voltammograms of the ligand H<sub>2</sub>L as well as its complexes in DMF are also discussed. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Kaabi, Ilhem Sibous, Lakhdar Douadi, Tahar Chafaa, Salah**URL:** <Go to ISI>://WOS:000350090000027

**Reference Type: Journal Article****Record Number:** 159**Author:** Kahia, B. Bouafia, A. Chaoui, A. Ieee,**Year:** 2015**Title:** Direct Power Control of Three-level PWM Rectifier under Unbalanced and harmonically Distorted Grid Voltage Conditions**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 384-+**Short Title:** Direct Power Control of Three-level PWM Rectifier under Unbalanced and harmonically Distorted Grid Voltage Conditions**Accession Number:** WOS:000380457200109**Abstract:** A modified direct power control (DPC) strategy for three-level neutral point clamped (NPC) converters under unbalanced and harmonically distorted grid voltage conditions is proposed in the paper. The modified (DPC) strategy is implemented in the stationary reference frame without the necessity of either the space vector modulation or the synchronous speed d-q transformation. A compensation method is adopted in the conventional DPC to eliminate the negative and harmonic sequence components of grid current for the purpose of obtaining the symmetrical and sinusoidal grid current. Finally, simulation results based on matlab validate the availability of the proposed DPC strategy.**Notes:** Kahia, B. Bouafia, A. Chaoui, A. 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1**URL:** <Go to ISI>://WOS:000380457200109

**Reference Type: Journal Article****Record Number:** 160**Author:** Kaibi, A. Guittoum, A. Oksuzoglu, R. M. Yagci, A. M. Boudissa, M. Kechouane, M.**Year:** 2015**Title:** Structure, microstructure and magnetic properties of Ni<sub>75</sub>Fe<sub>25</sub> films elaborated by evaporation from nanostructured powder**Journal:** Applied Surface Science**Volume:** 350**Pages:** 50-56**Date:** Sep**Short Title:** Structure, microstructure and magnetic properties of Ni<sub>75</sub>Fe<sub>25</sub> films elaborated by evaporation from nanostructured powder**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2015.02.050**Accession Number:** WOS:000359166600011

**Abstract:** We report on the structural, microstructural and magnetic properties of Ni<sub>75</sub>Fe<sub>25</sub> permalloy (Py) thin films. Py thin films with different thicknesses were deposited by vacuum evaporation from nanocrystalline powder onto Si (111) substrate. The thickness varies from 16 nm to 250 nm. From grazing X-ray diffraction patterns (GIXRD), we have shown the presence of a strong (200) texture for the lowest thickness (16 nm). For the 52 nm and 84 nm thick samples, a strong < 111 > preferred orientation is developed. However, for higher thicknesses, a polycrystalline structure is present. From the Scanning Electron Microscopy observations (SEM), we have shown that the surface seems to be very dense with many fine grains. The analysis of EDX spectra revealed that the sample composition is close to the starting Ni<sub>75</sub>Fe<sub>25</sub> powder. A more accurate investigation of the morphology was performed with the atomic force microscopy (AFM). We have shown the existence of nanosized grains with a uniform distribution. The mean diameter of the grains increases from 27 nm to 40 nm when the thickness increases. From magnetic measurements, we have shown the existence of a uniaxial magnetic anisotropy with an easy axis parallel to the film plane. The coercive field, H-C was found to decrease with increasing thickness. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Kaibi, A. Guittoum, A. Oksuzoglu, R. M. Yagci, A. M. Boudissa, M. Kechouane, M. Conference and Exhibition on Science and Applications of Thin Films (SATF) Sep 15-19, 2014 Cesme, TURKEY

**URL:** <Go to ISI>://WOS:000359166600011

**Reference Type: Journal Article****Record Number:** 161**Author:** Kaibi, A. Guittoum, A. Oksuzoglu, R. M. Yavru, C. Ozgun, S. Boudissa, M. Kechouane, M. Ieee,**Year:** 2015**Title:** MICROSTRUCTURE EVOLUTION AND MAGNETIC PROPERTIES OF NANOCRYSTALLINE NI75FE25 THIN FILMS: EFFECTS OF SUBSTRATE AND THICKNESS**Journal:** 2015 42nd Ieee International Conference on Plasma Sciences (Icops)**Short Title:** MICROSTRUCTURE EVOLUTION AND MAGNETIC PROPERTIES OF NANOCRYSTALLINE NI75FE25 THIN FILMS: EFFECTS OF SUBSTRATE AND THICKNESS**Accession Number:** WOS:000380482200495**Notes:** Kaibi, A. Guittoum, A. Oksuzoglu, R. M. Yavru, C. Ozgun, S. Boudissa, M. Kechouane, M. IEEE International Conference on Plasma Sciences (ICOPS) May 24-28, 2015 Belek, TURKEY Ieee npss, ieee, plazamatek 978-1-4799-6974-6**URL:** <Go to ISI>://WOS:000380482200495

**Reference Type: Journal Article****Record Number:** 162**Author:** Kenane, E. H. Djahli, F. Dumond, C. Ieee,**Year:** 2015**Title:** A Novel Modified Invasive Weeds Optimization for Linear Array Antennas Nulls Control**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 281-+**Short Title:** A Novel Modified Invasive Weeds Optimization for Linear Array Antennas Nulls Control**Accession Number:** WOS:000380457200108

**Abstract:** In this paper, a novel modified invasive weeds optimization (MIWO) is used for the synthesis of linear array antennas. The synthesis problem discussed in this paper is to find the amplitude excitation of the antenna array elements that are optimum to provide radiation pattern with symmetric wide nulls in both sides of the main beam. The Dynamic Range Ratio (DRR) is taken into account in this study. Unlike other simple algorithms, the Modified Invasive Weeds Optimization (MIWO) uses the mutation in the calculation of standard deviation, which changes the step of search in many directions and positions, from the parent plant, to produce new seeds. This proposed algorithm improves the performance greatly and allows to achieve a maximum reduction in side lobe level in band Nulls and with an acceptable DRR value. To show the performance of the proposed method, our results are compared to other results in the literature. They are also compared to a uniform excited linear.

**Notes:** Kenane, El-Hadi Djahli, Farid Dumond, Christophe 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200108

**Reference Type: Journal Article****Record Number:** 163**Author:** Kenane, E. H. Djahli, F. Bartil, A.**Year:** 2015**Title:** Synthesis of Cosecant Linear Antenna Array Pattern Using a Novel Modified Invasive Weeds Optimization**Journal:** Elektronika Ir Elektrotechnika**Volume:** 21**Issue:** 5**Pages:** 86-89**Short Title:** Synthesis of Cosecant Linear Antenna Array Pattern Using a Novel Modified Invasive Weeds Optimization**ISSN:** 1392-1215**DOI:** 10.5755/j01.eee.21.5.13332**Accession Number:** WOS:000362967700017

**Abstract:** In this paper, a new modified method is presented for the synthesis of a linear antenna array to obtain a desired array pattern (shaped or pencil) with low side lobe level. Based on the original invasive weeds optimization (IWO), our modified IWO (MIWO) uses the process of mutation for the calculation of standard deviation. The shaped beam pattern is synthesized by respecting a desired cosecant pattern and suppressing side lobe level to -25 dB. To achieve the desired pattern, both amplitude and phase of each element in the array are optimized when the spacing between the elements is fixed to the half wavelength. For the desired pencil beam pattern, the inter-element spacing's are controlled while maintaining uniform excitations. Selected examples, for both shaped and pencil beam, are presented to show the effectiveness and flexibility of the proposed method.

**Notes:** Kenane, El Hadi Djahli, Farid Bartil, Arres**URL:** <Go to ISI>://WOS:000362967700017

**Reference Type: Journal Article****Record Number:** 164**Author:** Kezrane, M. Guittoum, A. Hemmous, M. Lamrani, S. Bourzami, A. Weber, W.**Year:** 2015**Title:** Elaboration, Microstructure, and Magnetic Properties of Nanocrystalline Fe<sub>90</sub>Ni<sub>10</sub> Powders**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 28**Issue:** 8**Pages:** 2473-2481**Date:** Aug**Short Title:** Elaboration, Microstructure, and Magnetic Properties of Nanocrystalline Fe<sub>90</sub>Ni<sub>10</sub> Powders**ISSN:** 1557-1939**DOI:** 10.1007/s10948-015-3059-9**Accession Number:** WOS:000357460600032

**Abstract:** Nanocrystalline Fe<sub>90</sub>Ni<sub>10</sub> alloys were synthesized by mechanical alloying, starting from a powder mixture of elemental Fe and Ni. The phase evolution and magnetic properties were investigated, as a function of milling time, using the X-ray diffraction (XRD), the vibrating sample magnetometer (VSM), and the Fe-57 Mossbauer spectroscopy. From XRD results, we concluded the formation, after 13 h of milling, of a disordered phase alpha-Fe(Ni) (bcc). It has been shown that the increase of milling time decreases the crystallites size and increases the microstrains and the lattice parameter. When the crystallites size decreases, the coercive field, H<sub>c</sub>, decreases first, then increases and finally reaches a constant value of about 26 Oe. During the periode of the alloy formation, the saturation magnetization, M<sub>s</sub>, increases with decreasing crystallite size and reaches the highest value of 212 emu/g after 27 h of milling, then, M<sub>s</sub> remains constant up to 48 h of milling. The adjustment of Mossbauer spectra revealed that the fraction of the (bcc) alpha-Fe(Ni) phase increased with milling time. After 13 h of milling, only the (bcc) alpha-Fe(Ni) phase is observed.

**Notes:** Kezrane, Mohamed Guittoum, Abderrahim Hemmous, Messaoud Lamrani, Sabrina Bourzami, Abdelkader Weber, Wolfgang

**URL:** <Go to ISI>://WOS:000357460600032

**Reference Type: Journal Article****Record Number:** 165**Author:** Khaled, F. Bouloufa, A. Djessas, K. Mahamdi, R. Bouchama, I.**Year:** 2015**Title:** Aluminum doped zinc oxide wide band-gap n-type optical window for mu c-Si superstrate solar cell**Journal:** Vacuum**Volume:** 120**Pages:** 14-18**Date:** Oct**Short Title:** Aluminum doped zinc oxide wide band-gap n-type optical window for mu c-Si superstrate solar cell**ISSN:** 0042-207X**DOI:** 10.1016/j.vacuum.2015.06.026**Accession Number:** WOS:000361405300004

**Abstract:** ZnO:Al thin films were deposited onto glass substrates by RF-magnetron sputtering system. The crystallographic orientation of the films, determined using an X-ray diffractometer (XRD), had a high c-axis orientated crystalline structure along (002) plane. The grains are densely packed as shown in the surface micrograph. The electrical parameters were carried out using Hall Effect measurements. The optical band-gap of the films was estimated based on the thickness and the optical transmittance data and is about 3.78 eV for 50 W RF-power. All parameters obtained were used to simulate a new solar cell structure based on p-type microcrystalline silicon as an absorber and n-ZnO:Al as an optical window. The excellent optical properties of this layer result in a high light trapping yielding to efficiencies about 19%. In order to improve efficiency, we have used a p(+)-mu c-Si thin layer highly doped as a back surface field which minimizes significantly the impact of rear surface recombination velocity on voltage and current leading to a high efficiency of 22%. Optoelectronic parameters were determined using the current density-voltage (J-V) curve by means of an AMPS-1D device simulator. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Khaled, F. Bouloufa, A. Djessas, K. Mahamdi, R. Bouchama, I. Conference and Exhibition on Science and Applications of Thin Films (SATF) Sep 15-19, 2014 Cesme, TURKEY Si B

**URL:** <Go to ISI>://WOS:000361405300004

**Reference Type: Journal Article****Record Number:** 166**Author:** Khalissa, B. Djamila, Z. Khier, B. Ahmed, A. T. Ieee,**Year:** 2015**Title:** Fuzzy Adaptive Backstepping Sliding Mode Control of the Cart-Pendulum System**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Fuzzy Adaptive Backstepping Sliding Mode Control of the Cart-Pendulum System**Accession Number:** WOS:000380433000202

**Abstract:** A novel adaptive backstepping sliding mode control (ABSMC) law with fuzzy monitoring strategy is proposed for the tracking control of a cart-pendulum system. The proposed ABSMC scheme combining the sliding mode control and the backstepping technique, ensure that the occurrence of the sliding motion in finite time and the trajectory of the tracking error converge to equilibrium point. Furthermore, we introduce fuzzy monitoring strategy to approximate the unknown nonlinear functions of the system model and moreover to approximate the switching control term of the sliding control in order to resolve the chattering problem. The convergence and stability of the proposed control scheme are proved using Lyapunov's method. Finally many simulation results for the cart-Pendulum system are given to illustrate the good tracking performances.

**Notes:** Khalissa, Behih Djamila, Zehar Khier, Benmahammed Ahmed, Abdelmalik Taleb International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000202

**Reference Type: Journal Article****Record Number:** 167**Author:** Kharfi, F. Yahiaoui, M. L. Boussahoul, F.**Year:** 2015**Title:** X-ray computed tomography system for laboratory small-object imaging: Enhanced tomography solutions**Journal:** Applied Radiation and Isotopes**Volume:** 101**Pages:** 33-39**Date:** Jul**Short Title:** X-ray computed tomography system for laboratory small-object imaging: Enhanced tomography solutions**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2015.03.016**Accession Number:** WOS:000355889000006

**Abstract:** A portable X-ray tomography system has been installed and actually being tested at our medical imaging laboratory. This tomography system employs a combination of scintillator screen and CCD camera as image detector. The limit of spatial resolution of 290  $\mu\text{m}$  of this imaging system is determined by the establishment of its modulation transfer function (MTF). In this work, we present attempts to address some issues such as limited resolution and low contrast through the development of affordable post-acquisition solutions based on the application of super-resolution method (projection onto convex sets, POCS) to create new projections set enabling the reconstruction of an improved 3D image in terms of contrast, resolution and noise. In addition to small-object examination, this tomography system is used for hands-on training activities involving students and scientists. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Kharfi, F. Yahiaoui, M. L. Boussahoul, F.**URL:** <Go to ISI>://WOS:000355889000006

**Reference Type: Journal Article****Record Number:** 168**Author:** Khebbache, N. Djabi, S. Ferria, K.**Year:** 2015**Title:** Numerical studies of phase for the angular Talot effect**Journal:** Ukrainian Journal of Physical Optics**Volume:** 16**Issue:** 4**Pages:** 165-170**Short Title:** Numerical studies of phase for the angular Talot effect**ISSN:** 1609-1833**Accession Number:** WOS:000363485300003**Abstract:** We provide a numerical study of phase observed at the angular Talbot effect for both one- and two-dimensional gratings. The effect allows for fractional self-imaging in the vicinity of the grating which is illuminated by the wave with a spherical front at different Talbot distances.**Notes:** Khebbache, N. Djabi, S. Ferria, K.**URL:** <Go to ISI>://WOS:000363485300003

**Reference Type: Journal Article****Record Number:** 169**Author:** Kouidri, W. T. Letaim, F. Boucenna, A. Boulhaouchet, M. H.**Year:** 2015**Title:** Safety analysis of reactivity insertion accidents in a heavy water nuclear research reactor core using coupled 3D neutron kinetics thermal-hydraulic system code technique**Journal:** Progress in Nuclear Energy**Volume:** 85**Pages:** 384-390**Date:** Nov**Short Title:** Safety analysis of reactivity insertion accidents in a heavy water nuclear research reactor core using coupled 3D neutron kinetics thermal-hydraulic system code technique**ISSN:** 0149-1970**DOI:** 10.1016/j.pnucene.2015.07.014**Accession Number:** WOS:000363349100035

**Abstract:** Nuclear power plant Safety analysis using coupled 3D neutron kinetics/thermal-hydraulic codes technique is increasingly used nowadays. Actually, the use of this technique allows getting less conservatism and more realistic simulations of the physical phenomena. The challenge today is oriented toward the application of this technique to the operating conditions of nuclear research reactors. In the current study, a three-Dimensional Neutron Kinetics and best estimate Thermal-Hydraulic model based upon the coupled PARCS/RELAP5 codes has been developed and applied for a heavy water research reactor. The objective is to perform safety analysis related to design accidents of this reactor types. In the current study two positive reactivity insertion transients are considered, SCRAM protected and self-limiting power excursion cases. The results of the steady state calculations were compared with results obtained from conventional diffusion codes, while transient calculations were assessed using the point kinetic model of the RELAP5 code. Through this study, the applicability and the suitability of using the coupled code technique with respect to the classical models are emphasized and discussed. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Kouidri, W. Titouche Letaim, F. Boucenna, A. Boulhaouchet, M. H.**URL:** <Go to ISI>://WOS:000363349100035

**Reference Type: Journal Article****Record Number:** 170**Author:** Kouriche, A. Maouche, D. Berri, S. Ibrir, M.**Year:** 2015**Title:** Ab initio prediction of structural, electronic, magnetic and optical properties of Ba<sub>2</sub>GdSbO<sub>6</sub>**Journal:** Materials Science in Semiconductor Processing**Volume:** 40**Pages:** 58-63**Date:** Dec**Short Title:** Ab initio prediction of structural, electronic, magnetic and optical properties of Ba<sub>2</sub>GdSbO<sub>6</sub>**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.06.036**Accession Number:** WOS:000363344600008

**Abstract:** A first-principles approach is used to study the structural, electronic, optic and magnetic properties of Ba<sub>2</sub>GdSbO<sub>6</sub>, using full-potential linearized augmented plane wave (FP-LAPW) scheme within GGA+U approach. Features such as the lattice constant, bulk modulus and its pressure derivative are reported. The calculated band structure and density of states show that the material under load has an indirect energy band gap L → X for majority-spin direction and Gamma → X for the minority spin channel. The analysis charge densities show that bonding character as a mixture of covalent and ionic nature. The optical properties are analyzed and the origin of some peaks in the spectra is described. Besides, the dielectric function, refractive index and extinction coefficient for radiation up to 14 eV have also been reported. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Kouriche, Athmane Maouche, Djamel Berri, Saadi Ibrir, Miloud**URL:** <Go to ISI>://WOS:000363344600008

**Reference Type: Journal Article****Record Number:** 171**Author:** Laabassi, A. Harzallah, D. Boudehane, A.**Year:** 2015**Title:** PERFORMANCES OF A CONSTRUCTED WETLAND TREATING PLANTED WITH EMERGENT AND FLOATING MACROPHYTES UNDER ALGERIAN SEMI-ARID CLIMATE**Journal:** Carpathian Journal of Earth and Environmental Sciences**Volume:** 10**Issue:** 4**Pages:** 65-74**Date:** Nov**Short Title:** PERFORMANCES OF A CONSTRUCTED WETLAND TREATING PLANTED WITH EMERGENT AND FLOATING MACROPHYTES UNDER ALGERIAN SEMI-ARID CLIMATE**ISSN:** 1842-4090**Accession Number:** WOS:000363495300007

**Abstract:** Constructed wetlands (CWs) have been successfully used to remove pollutants from wastewater. This research uses two aquatic plant species, *Phragmites australis* an emergent macrophyte (EM) and *Salvinia natans* a floating macrophyte (FM) in separate or mixed culture to investigate whether the CW systems using EM and FM are effective for the treatment of domestic wastewater. In order to evaluate the water purification performance several chemical and biochemical parameters were measured. Mixed plant culture recorded the highest and significant removal potential with 97.3% of biochemical oxygen demand (BOD<sub>5</sub>), 95% of chemical oxygen demand (COD), 93% of total Kjeldahl nitrogen (TKN), 87.9% of ammonium-nitrogen (NH<sub>4</sub>-N), 52.8% of nitrite-nitrogen (NO<sub>2</sub>-N) and 40% of phosphate-phosphorus (PO<sub>4</sub>-P). Our results suggest that the mixed culture of *P. australis* and *S. natans* is a simple and low-cost technique for effective removal of organic (BOD<sub>5</sub> and COD) and inorganic (TKN, NH<sub>4</sub>-N and PO<sub>4</sub>-P) pollutants from domestic wastewater.

**Notes:** Laabassi, Ayache Harzallah, Daoud Boudehane, Asma**URL:** <Go to ISI>://WOS:000363495300007

**Reference Type: Journal Article****Record Number:** 172**Author:** Lalaoui, L. Mohamadi, T. Djaalab, A.**Year:** 2015**Title:** New Method for Image Segmentation**Journal:** World Conference on Technology, Innovation and Entrepreneurship**Pages:** 1971-1980**Short Title:** New Method for Image Segmentation**DOI:** 10.1016/j.sbspro.2015.06.210**Accession Number:** WOS:000380509900238

**Abstract:** in this paper we describe a modified segmentation method applied to image. An EM algorithm is developed to estimate parameters of the Gaussian mixtures. Recently, researchers are focusing more on the study of expectation of maximization (EM) due to its useful applications in a number of areas, such as multimedia, image processing, pattern recognition and bioinformatics. The human visual system can often correctly interpret images that are of quality that they contain insufficient explicit information to do so. The difficulty is mainly due to variable brain structures, various MRI artifacts and restrictive body scanning methods. The IBSR image segmentation data set is used to compare and evaluate the proposed methods. In this paper, we propose a modified expectation of maximization (MEM) based on the properties of likelihood, while reducing number of iteration for a sick of fast converge to the center of cluster and your application to image segmentation. The experiments on real images show that: (1) our proposed approach can reduce the number of iterations, which leads to a significant reduction in the computational cost while attaining similar levels of accuracy. (2) The approach also works well when applied to image segmentation. A methodology for calculate is presented for making use the error between the ground truth, human-segmented image data sets to compare, develop and optimize image segmentation algorithms. This error measure is based on object-by-object comparisons of a segmented image and a ground-truth (reference) image. Experimental results for segmented images demonstrate the good segmentation performance of the proposed approach. (C) 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Notes:** Lalaoui, Lahouaoui Mohamadi, Tayeb Djaalab, Abdelhak Sener, S Saridogan, E Staub, S World Conference on Technology, Innovation and Entrepreneurship May 28-30, 2015 Istanbul, TURKEY

**URL:** <Go to ISI>://WOS:000380509900238

**Reference Type: Journal Article****Record Number:** 173**Author:** Lalaoui, L. Mohamadi, T. Djaalab, A. Abdelghani, H.**Year:** 2015**Title:** A Modified Expectation of Maximization Method and its Application to Image Segmentation**Journal:** Current Medical Imaging Reviews**Volume:** 11**Issue:** 2**Pages:** 132-137**Short Title:** A Modified Expectation of Maximization Method and its Application to Image Segmentation**ISSN:** 1573-4056**Accession Number:** WOS:000356886100011

**Abstract:** In this paper we describe a modified segmentation method applied to image. An EM algorithm is developed to estimate parameters of the Gaussian mixtures. Recently, researchers are focusing more on the study of expectation of maximization (EM) due to its useful applications in a number of areas, such as multimedia, image processing, pattern recognition and bioinformatics. The human visual system can often correctly interpret images that are of quality that they contain insufficient explicit information to do so. The difficulty is mainly due to variable brain structures, various MRI artifacts and restrictive body scanning methods. The IBSR image segmentation data set is used to compare and evaluate the proposed methods. In this paper, we propose a modified expectation of maximization (MEM) based on the properties of likelihood, while reducing number of iteration for a sick of fast converge to the center of cluster and your application to image segmentation. The experiments on real images show that: (1) our proposed approach can reduce the number of iterations, which leads to a significant reduction in the computational cost while attaining similar levels of accuracy. (2) The approach also works well when applied to image segmentation. A methodology for calculate is presented for making use the error between the ground truth, human-segmented image data sets to compare, develop and optimize image segmentation algorithms. This error measure is based on object-by-object comparisons of a segmented image and a ground-truth (reference) image. Experimental results for segmented images demonstrate the good segmentation performance of the proposed approach.

**Notes:** Lalaoui, Lahouaoui Mohamadi, Tayeb Djaalab, Abdelhak Abdelghani, Harag**URL:** <Go to ISI>://WOS:000356886100011

**Reference Type: Journal Article****Record Number:** 174**Author:** Larbi, G. Mostapha, T. Hocine, O. Alaoui, A. E.**Year:** 2015**Title:** A practical note for SHPB test with new algorithms for delimiting pulses**Journal:** Composite Structures**Volume:** 126**Pages:** 145-158**Date:** Aug**Short Title:** A practical note for SHPB test with new algorithms for delimiting pulses**ISSN:** 0263-8223**DOI:** 10.1016/j.compstruct.2015.02.061**Accession Number:** WOS:000353425600013

**Abstract:** Data processing in split Hopkinson pressure bar technique is known to be sensitive to limits and durations of the incident, reflected and transmitted strain pulses. The dynamic stress-strain curves were found to be affected by dispersion and shifting of elastic strain pulses traveling the elastic bars. In this study, a practical note was given for split Hopkinson pressure bar test with describing new iterative algorithms that we developed for delimiting SHPB strain pulses. The developed algorithms were validated through typical in-plane dynamic compressive loading tests on [ $\pm 55$  degrees](20) E-Glass/Epoxy aged laminates tested in the range of 560-1025 s(-1). Representative stress-strain curves were reported in this paper. The strain rate was found to be linearly pressure dependent. The dynamic modulus was found to be strain rate dependent however there was a threshold effect for the ultimate strength and strain at ultimate strength. Failure mechanisms were characterized through optical and scanning microscopy. Data for dynamic properties were fitted in empirical models. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Larbi, Gueraiche Mostapha, Tarfaoui Hocine, Osmani Alaoui, Aboughit El Malki**URL:** <Go to ISI>://WOS:000353425600013

**Reference Type: Journal Article****Record Number:** 175**Author:** Lashab, M. Jan, N. A. Chemss, Eddine Benabdelaziz, F. Abd-Alhameed, R. A. Ieee,**Year:** 2015**Title:** The I shape Antenna Loaded With ZOR For WLAN and WiMax Application**Journal:** 2015 Loughborough Antennas & Propagation Conference (Lapc)**Short Title:** The I shape Antenna Loaded With ZOR For WLAN and WiMax Application**Accession Number:** WOS:000380511100036

**Abstract:** In this paper the I shape antenna considered as CPW-Fed antenna type is loaded with zero order resonator (ZOR) for miniaturization effect, the antenna contains one slot as monopole bar related to the I shape antenna, the antenna is loaded with zigzag resonator (ZR) inserted between the two parts of the I shape antenna, an inter-digital capacitor is incorporated inside the lower part of the antenna. The aim of this work is to exhibit the miniaturization effect with an improvement of the gain and the bandwidth by zero order resonator insertion. The obtained results from HFSS simulation concerning CPW loaded with the zero order resonator show that the operating bandwidth is a (tri band) in the range of 1.85 GHz to 2.2 GHz as WLAN band, and 5.8 GHz to 6.2 GHz as Wifi and Wimax and 6.8 GHz to 8.2 GHz application.

**Notes:** Lashab, Mohamed Jan, Naeem Ahmed Chemss-Eddine Benabdelaziz, Fatiha Abd-Alhameed, R. A. Loughborough Antennas & Propagation Conference (LAPC) Nov 02-03, 2015 Loughborough, UNITED KINGDOM 978-1-4799-8943-0

**URL:** <Go to ISI>://WOS:000380511100036

**Reference Type: Journal Article****Record Number:** 176**Author:** Latreche, A. Ouennoughi, Z.**Year:** 2015**Title:** New study of the abnormal behavior of the low temperature dependence of the current in inhomogeneous Schottky diode**Journal:** International Journal of Numerical Modelling-Electronic Networks Devices and Fields**Volume:** 28**Issue:** 2**Pages:** 231-238**Date:** Mar-Apr**Short Title:** New study of the abnormal behavior of the low temperature dependence of the current in inhomogeneous Schottky diode**ISSN:** 0894-3370**DOI:** 10.1002/jnm.2002**Accession Number:** WOS:000348852400010

**Abstract:** In this study, we show clearly why unexpected observations have been reported in the current-voltage curves of Schottky diodes, containing barrier inhomogeneities generated by using the analytical results based on a Gaussian distribution model of barrier heights. The Chand's calculations have shown that the current (saturation current) at low temperatures may exceed the current (saturation current) at high temperatures when the effective barrier height is calculated from an appropriate integral with integration limits - and +. In this new study, we show that the method followed by Chand to remove these anomalies is not accurate enough. We prove that the origin of these anomalies stems from the nature of a proper function  $f(\phi)$  that moves to the negative barrier heights and takes large value of the integral at low temperatures than at high temperatures when it has large standard deviation ( $\sigma$ ) and the discrepancies are not due to the integration limits as Chand concluded. In order to obtain results consistent with the thermionic emission-diffusion theory, the standard deviation must have lower values. Copyright (c) 2014 John Wiley & Sons, Ltd.

**Notes:** Latreche, Abdelhakim Ouennoughi, Zahir**URL:** <Go to ISI>://WOS:000348852400010

**Reference Type: Journal Article****Record Number:** 177**Author:** Latreche, S. Mostefai, M. Khemliche, M. Badoud, A. Ieee,**Year:** 2015**Title:** Implementation of a MPPT algorithm and Supervision of a Shading on Photovoltaic Panel**Journal:** 2015 6th International Renewable Energy Congress (Irec)**Short Title:** Implementation of a MPPT algorithm and Supervision of a Shading on Photovoltaic Panel**Accession Number:** WOS:000380548500063**Abstract:** This paper presents an implementation of the maximum power point tracking algorithm based on the real time measurements and model based simulation. For the supervision of a photovoltaic panel, different cases of shading are used. We want to focus our attention on the advanced control for the supervision of a photovoltaic system in accordance with the need to maximize the energy output of the photovoltaic systems. The experimental results have verified the performance and the feasibility of the proposed system.**Notes:** Latreche, Samia Mostefai, Mohammed Khemliche, Mabrouk Badoud, Abd Essalam 6th International Renewable Energy Congress (IREC) Mar 24-26, 2015 Sousse, TUNISIA 978-1-4799-7947-9**URL:** <Go to ISI>://WOS:000380548500063

**Reference Type: Journal Article****Record Number:** 178**Author:** Layadi, A.**Year:** 2015**Title:** A theoretical investigation of Ferromagnetic Resonance Linewidth and damping constants in coupled trilayer and spin valve systems**Journal:** Aip Advances**Volume:** 5**Issue:** 5**Date:** May**Short Title:** A theoretical investigation of Ferromagnetic Resonance Linewidth and damping constants in coupled trilayer and spin valve systems**ISSN:** 2158-3226**DOI:** 10.1063/1.4920940**Article Number:** 057113**Accession Number:** WOS:000355568100033

**Abstract:** The ferromagnetic resonance intrinsic field linewidth  $\Delta H$  is investigated for a multilayer system such as a coupled trilayer and a spin valve structure. The magnetic coupling between two ferromagnetic layers separated by a nonmagnetic interlayer will be described by the bilinear  $J(1)$  and biquadratic  $J(2)$  coupling parameters. The interaction at the interface of the first ferromagnetic layer with the antiferromagnetic one is account for by the exchange anisotropy field,  $H-E$ . A general formula is derived for the intrinsic linewidth  $\Delta H$ . The explicit dependence of  $\Delta H$  with  $H-E$ ,  $J(1)$  and  $J(2)$  will be highlighted. Analytical expressions for each mode field linewidth are found in special cases. Equivalent damping constants will be discussed. (C) 2015 Author(s). All article content, except where otherwise noted, is licensed under a Creative Commons Attribution 3.0 Unported License.

**Notes:** Layadi, A.**URL:** <Go to ISI>://WOS:000355568100033

**Reference Type: Journal Article****Record Number:** 179**Author:** Layadi, T. M. Champenois, G. Mostefai, M.**Year:** 2015**Title:** Modeling and Design Optimization of an Autonomous Multisource System Under a Permanent Power-Supply Constraint**Journal:** Ieee Transactions on Sustainable Energy**Volume:** 6**Issue:** 3**Pages:** 872-880**Date:** Jul**Short Title:** Modeling and Design Optimization of an Autonomous Multisource System Under a Permanent Power-Supply Constraint**ISSN:** 1949-3029**DOI:** 10.1109/tste.2015.2408622**Accession Number:** WOS:000356461100022

**Abstract:** In this paper, we aim to optimize the sizing of an autonomous multisource system in order to minimize the cost of the installation and to improve the dynamic behavior of the whole system. The multisource system comprises a solar generator, a wind generator (WG), a diesel generator (DG), and a lead-acid battery bank. The modeling of such a system is done by using the power model to describe the behavior of each subsystem. The cost of the multisource system is estimated by implementing the embodied energy (EE) concept. A dynamic simulator (DS) has been developed. Due to the complexity of the multisource system in terms of input variables and meteorological data, the simulation becomes difficult, requiring high-performance computing and moreover, the determination of the optimal configuration is not assured. Therefore, we propose to simplify the model by introducing the design of experiment (DOE) approach. The obtained model has been validated and used to perform a single-objective optimization. This model allows us to ensure the simulation of the multisource system efficiently and faster. An optimal configuration has been determined.

**Notes:** Layadi, Toufik Madani Champenois, Gerard Mostefai, Mohammed**URL:** <Go to ISI>://WOS:000356461100022

**Reference Type: Journal Article****Record Number:** 180**Author:** Layadi, T. M. Champenois, G. Mostefai, M. Abbes, D.**Year:** 2015**Title:** Lifetime estimation tool of lead-acid batteries for hybrid power sources design**Journal:** Simulation Modelling Practice and Theory**Volume:** 54**Pages:** 36-48**Date:** May**Short Title:** Lifetime estimation tool of lead-acid batteries for hybrid power sources design**ISSN:** 1569-190X**DOI:** 10.1016/j.simpat.2015.03.001**Accession Number:** WOS:000352544800003

**Abstract:** Generally, battery lifespan depends on the number of cycles and depth of discharge (DOD). Nevertheless, in a renewable hybrid power system, charge and discharge cycles are random and not regular. Therefore, it is important to develop an aging model suitable to this case. Thus, in this paper, a pertinent way for aging lead-acid batteries connected to a stand-alone multi-source renewable system has been developed. It is based on the Rain Flow method for counting cycles and considers instantaneous DOD and average temperature. In fact, for each functioning year, a classification of the number of cycles according to the DOD is done. Then, based on these data, the battery degradation rate is estimated so that it is possible to draw conclusions about battery lifespan. The method has been successfully applied to a multi-source power system simulated dynamically under Matlab/Simulink. This last takes into account with good accuracy several inputs and elements such as sun irradiation, wind speed, load profile, photovoltaic generator, wind turbine, and diesel generator. Results show the influence of the DOD and the batteries nominal capacity on their lifespan. A mean of eight years' life is detected. Finally, a reasonable over-sizing may favor battery longevity. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Layadi, Toufik Madani Champenois, Gerard Mostefai, Mohammed Abbes, Dhaker**URL:** <Go to ISI>://WOS:000352544800003

**Reference Type: Journal Article****Record Number:** 181**Author:** Lemmouchi, M. Hannachi, D. Ouddai, N.**Year:** 2015**Title:** Comparative study of the lanthanide (Ln) and actinide (An) triflate complexes M(OTf)(n)**Journal:** Journal of Structural Chemistry**Volume:** 56**Issue:** 8**Pages:** 1495-1504**Date:** Dec**Short Title:** Comparative study of the lanthanide (Ln) and actinide (An) triflate complexes M(OTf)(n)**ISSN:** 0022-4766**DOI:** 10.1134/s0022476615080065**Accession Number:** WOS:000369060800006

**Abstract:** Theoretical studies on the lanthanide and actinide triflate complexes M(OTf) (n) where M = La, Ce, Gd, Yb, Lu, Th, U, Np, Pu, Am, Cm, Bk, and No; n = 3 and 4, are carried out using functional density theory (DFT). The study of An(OTf)(3) complexes showed that the three OTf groups are bidentate, generating a trigonal prism (TP). Two limiting structures of TP are observed; the most distorted is the thorium triflate Th(OTf)(3) and the ideal one is U(OTf)(3). The highest population contribution of 5d orbital compared to 5f orbital in Th-O bond of Th(OTf)(3) explains the distortion. The intramolecular rearrangement of the OTf ligands in Ln(OTf)(3) generates two conformers. In Yb(OTf)(3), the pseudo-eclipsed and the staggered conformations are stable and can be isolated.

**Notes:** Lemmouchi, M. Hannachi, D. Ouddai, N.**URL:** <Go to ISI>://WOS:000369060800006

**Reference Type: Journal Article****Record Number:** 182**Author:** Maamache, M.**Year:** 2015**Title:** Periodic pseudo-Hermitian Hamiltonian: Nonadiabatic geometric phase**Journal:** Physical Review A**Volume:** 92**Issue:** 3**Date:** Sep**Short Title:** Periodic pseudo-Hermitian Hamiltonian: Nonadiabatic geometric phase**ISSN:** 1050-2947**DOI:** 10.1103/PhysRevA.92.032106**Article Number:** 032106**Accession Number:** WOS:000360882700005

**Abstract:** It is well known that Hermitian operators have real eigenvalues while non-Hermitian ones may have complex eigenvalues. Recently, numerical and analytical results indicated that the spectra of many non-Hermitian Hamiltonians  $H$  are indeed real if they are invariant under the combined action of self-adjoint parity  $P$  and time reversal  $T$ . The concept of a pseudo-Hermitian operator showed that the remarkable spectral properties of the  $PT$ -symmetric Hamiltonians follow from their pseudo-Hermiticity. It is possible to explain these observations by the concept of pseudo-Hermitian operators and to formulate completeness and orthonormality relations. Most of the effort has been devoted to study time-independent non-Hermitian systems. In this paper, we study the exactly solvable time-dependent periodic pseudo-Hermitian Hamiltonians. The method introduced, to make the reality of eigenvalues and phases, is based on a Floquet decomposition of the evolution operator  $U_H(t) = Z(H)(t) \exp(iM(H)t)$  associated with the periodic pseudo-hermitian Hamiltonian  $H(t) = H(t + T)$ . One of the results found in this paper concerns a calculation of Berry's phase for periodic, but not necessarily adiabatic, pseudo-Hermitian Hamiltonians. A two-level pseudo-Hermitian system is discussed as an illustrative example.

**Notes:** Maamache, M.**URL:** <Go to ISI>://WOS:000360882700005

**Reference Type: Journal Article****Record Number:** 183**Author:** Maati, A. Tabourot, L. Balland, P. Ouakdi, E. H. Vautrot, M. Ksiksi, N.**Year:** 2015**Title:** Constitutive modelling effect on the numerical prediction of springback due to a stretch-bending test applied on titanium T40 alloy**Journal:** Archives of Civil and Mechanical Engineering**Volume:** 15**Issue:** 4**Pages:** 836-846**Date:** Sep**Short Title:** Constitutive modelling effect on the numerical prediction of springback due to a stretch-bending test applied on titanium T40 alloy**ISSN:** 1644-9665**DOI:** 10.1016/j.acme.2015.05.009**Accession Number:** WOS:000362462600007

**Abstract:** Nowadays, numerical simulation by finite element analysis is an essential tool that allows performing virtually sheet metal forming processes, and therefore to reproduce various phenomena such as springback (SB) and necking that are generated by plastic deformation. However, the quality of the model used to represent the mechanical behaviour is a determining factor for the realism of numerical simulations. To perform well, the model must reproduce all the properties of the material such as the anisotropy and the strain hardening induced by plastic deformation. The main purpose of this work is to show, by means of numerical simulations, the influence of constitutive modelling on the prediction of the degree of SB in the case of a stretch bending test. Tests have been carried out on titanium sheets which have a wide range of applications for high tech industries because of specific mechanical and physical properties. At the same time, we have investigated the dependence of some process parameters such as the clamping force on SB. In order to prove the accuracy and reliability of the proposed finite element model, experimental data were used to compare with the numerical results. (C) 2015 Politechnika Wroclawska. Published by Elsevier Sp. z o.o. All rights reserved.

**Notes:** Maati, A. Tabourot, L. Balland, P. Ouakdi, E. H. Vautrot, M. Ksiksi, N.**URL:** <Go to ISI>://WOS:000362462600007

**Reference Type: Journal Article****Record Number:** 184**Author:** Mabrek, A. H. Hemsas, K. E. Ieee,**Year:** 2015**Title:** Transient Operation Modeling Of Induction Machine**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 375-+**Short Title:** Transient Operation Modeling Of Induction Machine**Accession Number:** WOS:000380457200130

**Abstract:** The mathematical models of the induction machine (IM) developed on the basis of the experimental frequency-response characteristics at standstill condition (SSFR) are proposed in this paper. At zero speed the transfer function of (IM) is used to obtain an exact linear parametric model. The latter ones are recommended for investigating the transient processes occurring at connections of (IM) to the electrical system. The identification of the equivalent circuit and its validation are carried out experimentally for a 0.25-kW (IM).

**Notes:** Mabrek, A. H. Hemsas, K. E. 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200130

**Reference Type: Journal Article****Record Number:** 185**Author:** Madani, A. Maouche, N. Riahi, F. Chehimi, M. M.**Year:** 2015**Title:** One-step generated poly(3-methylthiophene)/CdSe nanocomposite thin films: redox, impedance and enhanced photoelectrochemical properties**Journal:** Ionics**Volume:** 21**Issue:** 7**Pages:** 2031-2037**Date:** Jul**Short Title:** One-step generated poly(3-methylthiophene)/CdSe nanocomposite thin films: redox, impedance and enhanced photoelectrochemical properties**ISSN:** 0947-7047**DOI:** 10.1007/s11581-015-1382-6**Accession Number:** WOS:000356724600027

**Abstract:** Poly(3-methylthiophene)-cadmium selenide (PMeT-CdSe)-modified electrode was galvanostatically prepared in CH<sub>3</sub>CN/LiClO<sub>4</sub> in the presence of 3-methylthiophene and nanoparticles of CdSe. The synthesized composites were characterized by the UV-vis spectroscopy, scanning electronic microscopy, Fourier Transform infrared spectroscopy (FTIR) and energy-dispersive X-ray (EDX) techniques. Cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS) were used to investigate the electrochemical behaviour of the resulting materials. This study showed that the presence of CdSe nanoparticles in the poly(3-methylthiophene) film improves the optical properties of PMeT via a simple preparation method and shows that these films could be used in photoelectrochemical applications such as the photovoltaic cells.

**Notes:** Madani, Ahmed Maouche, Naima Riahi, Farid Chehimi, Mohamed M.**URL:** <Go to ISI>://WOS:000356724600027

**Reference Type: Journal Article****Record Number:** 186**Author:** Madani, L. Belkhiat, S. Berrag, A. Nemdili, S.**Year:** 2015**Title:** Investigation of dielectric behavior of water and thermally aged of XLPE/BaTiO<sub>3</sub> composites in the low-frequency range**Journal:** International Journal of Modern Physics B**Volume:** 29**Issue:** 27**Date:** Oct**Short Title:** Investigation of dielectric behavior of water and thermally aged of XLPE/BaTiO<sub>3</sub> composites in the low-frequency range**ISSN:** 0217-9792**DOI:** 10.1142/s0217979215501866**Article Number:** 1550186**Accession Number:** WOS:000363733900005

**Abstract:** Cross-Linked Polyethylene (XLPE) is widely used as insulation in electrical engineering, especially as cable insulation sheaths. In order to improve the dielectric properties susceptible to be modified under the effects of thermal aging and water in an absorption environment, polymers are mixed with ceramics. In this paper, the influence of barium titanate (BaTiO<sub>3</sub>), on the dielectric properties of XLPE has been studied. Dielectric parameters have been measured using an impedance analyzer RLC (WAYNE KERR 6420 type). Fourier transform infrared (FTIR) spectroscopy, scanning electron microscopy and X-ray diffraction were used as characterization techniques. The study has been carried out on two samples of XLPE. A pure sample of each were studied as a unloaded samples to be compared with samples of 5% wt, 10% wt, 15% wt and 20% wt. BaTiO<sub>3</sub> loaded XLPE. Afterwards, the composites were subject to humidity and to thermal aging. The incorporation of BaTiO<sub>3</sub> 1 degrees C does not modify the crystallinity and morphology of the XLPE and 2 degrees C reduces the space charges therefore the dielectric losses. tg delta, epsilon r and loss index are measured. Frequency response analysis has been followed in the frequency range (20-300 Hz). Experimental results show well that BaTiO<sub>3</sub> as nano-filler improves the dielectric properties of XLPE but in excessive content can drive to the cracking and therefore to absorption of water.

**Notes:** Madani, Lakhdar Belkhiat, Saad Berrag, Amine Nemdili, Saad**URL:** <Go to ISI>://WOS:000363733900005

**Reference Type: Journal Article****Record Number:** 187**Author:** Maiza, M. Benaniba, M. T. Quintard, G. Massardier-Nageotte, V.**Year:** 2015**Title:** Biobased additive plasticizing Polylactic acid (PLA)**Journal:** Polimeros-Ciencia E Tecnologia**Volume:** 25**Issue:** 6**Pages:** 581-590**Date:** Nov-Dec**Short Title:** Biobased additive plasticizing Polylactic acid (PLA)**ISSN:** 0104-1428**DOI:** 10.1590/0104-1428.1986**Accession Number:** WOS:000367741900010

**Abstract:** Polylactic acid (PLA) is an attractive candidate for replacing petrochemical polymers because it is from renewable resources. In this study, a specific PLA 2002D was melt-mixed with two plasticizers: triethyl citrate (TEC) and acetyl tributyl citrate (ATBC). The plasticized PLA with various concentrations were analyzed by differential scanning calorimetry (DSC), dynamic mechanical analysis (DMA), melt flow index (MFI), thermogravimetric analysis (TGA), X-ray diffraction (XRD), UV-Visible spectroscopy and plasticizer migration test. Differential scanning calorimetry demonstrated that the addition of TEC and ATBC resulted in a decrease in glass transition temperature (T-g), and the reduction was the largest with the plasticizer having the lowest molecular weight (TEC). Plasticizing effect was also shown by decrease in the dynamic storage modulus and viscosity of plasticized mixtures compared to the treated PLA. The TGA results indicated that ATBC and TEC promoted a decrease in thermal stability of the PLA. The X-ray diffraction showed that the PLA have not polymorphic crystalline transition. Analysis by UV-Visible spectroscopy showed that the two plasticizers: ATBC and TEC have no effect on the color change of the films. The weight loss plasticizer with heating time and at 100 degrees C is lesser than at 135 degrees C. Migration of TEC and ATBC results in cracks and changed color of material. We have concluded that the higher molecular weight of citrate in the studied exhibited a greater plasticizing effect to the PLA.

**Notes:** Maiza, Mounira Benaniba, Mohamed Tahar Quintard, Guilhem Massardier-Nageotte, Valerie

**URL:** <Go to ISI>://WOS:000367741900010

**Reference Type: Journal Article****Record Number:** 188**Author:** Makni-Maalej, K. Marzaioli, V. Boussetta, T. Belambri, S. A. Gougerot-Pocidallo, M. A. Hurtado-Nedelec, M. Dang, P. M. C. El-Benna, J.**Year:** 2015**Title:** TLR8, but not TLR7, induces the priming of the NADPH oxidase activation in human neutrophils**Journal:** Journal of Leukocyte Biology**Volume:** 97**Issue:** 6**Pages:** 1081-1087**Date:** Jun**Short Title:** TLR8, but not TLR7, induces the priming of the NADPH oxidase activation in human neutrophils**ISSN:** 0741-5400**DOI:** 10.1189/jlb.2A1214-623R**Accession Number:** WOS:000354880500009

**Abstract:** Neutrophils play a key role in host defense against invading pathogens by releasing toxic agents, such as ROS and antimicrobial peptides. Human neutrophils express several TLRs that recognize a variety of microbial motifs. The interaction between TLR and their agonists is believed to help neutrophils to recognize and to kill pathogens efficiently by increasing their activation, a process called priming. However, excessive activation can induce tissue injury and thereby, contribute to inflammatory disorders. Agonists that activate TLR7 and TLR8 induce priming of neutrophil ROS production; however, which receptor is involved in this process has not been elucidated. In this study, we show that the selective TLR8 agonist, CL075 (3M002), induced a dramatic increase of fMLF-stimulated NOX2 activation, whereas the selective TLR7 agonist, loxoribine, failed to induce any priming effect. Interestingly, CL075, but not loxoribine, induced the phosphorylation of the NOX2 cytosolic component p47phox on several serines and the phosphorylation of p38MAPK and ERK1/2. The inhibitor of p38MAPK completely blocked CL075-induced phosphorylation of p47phox Ser345. Moreover, CL075, but not loxoribine, induced the activation of the proline isomerase Pin1, and juglone, a Pin1 inhibitor, prevented CL075-mediated priming of fMLF-induced superoxide production. These results indicate that TLR8, but not TLR7, is involved in priming of human neutrophil ROS production by inducing the phosphorylation of p47phox and p38MAPK and that Pin1 is also involved in this process.

**Notes:** Makni-Maalej, Karama Marzaioli, Viviana Boussetta, Tarek Belambri, Sahra Amel Gougerot-Pocidallo, Marie-Anne Hurtado-Nedelec, Margarita Pham My-Chan Dang El-Benna, Jamel

**URL:** <Go to ISI>://WOS:000354880500009

**Reference Type: Journal Article****Record Number:** 189**Author:** Makri, H. Belhouchet, H. Hamidouche, M. Fantozzi, G.**Year:** 2015**Title:** Zirconia transformation in multi-phases ceramic composites**Journal:** Journal of the Australian Ceramic Society**Volume:** 51**Issue:** 1**Pages:** 60-72**Short Title:** Zirconia transformation in multi-phases ceramic composites**ISSN:** 0004-881X**Accession Number:** WOS:000348986600009

**Abstract:** Low cost composite ceramics based on zircon-mullite-zirconia-alumina phases were prepared by reaction sintering of boehmite ( $\text{AlOOH}$ ) and zircon ( $\text{ZrSiO}_4$ ) powders. Boehmite to zircon weight ratios of the starting powders were varied (10 to 90 wt. %). The green compacts were made by uniaxial pressing at 7 MPa followed by cold isostatic pressing at 250 MPa. A reactive sintering in air of these compacts was made at different temperatures between 1400 and 1600 degrees C during 2 hours. A quantitative evaluation of the present phases was based on XRD. Dilatometric tests on the reaction-sintered composites were carried out in order to study the zirconia phase's transformations and their thermal expansion coefficient ( $\alpha$ ). In addition, the effects of both boehmite/zircon ratios and sintering conditions on the mechanical properties (Hardness Hv, Elastic modulus E and fracture toughness K-IC) of the obtained composites were characterized by Vickers indentation.

**Notes:** Makri, H. Belhouchet, H. Hamidouche, M. Fantozzi, G.**URL:** <Go to ISI>://WOS:000348986600009

**Reference Type: Journal Article****Record Number:** 190**Author:** Malek, R. Ajili, F. Assaad-Khalil, S. H. Shinde, A. Chen, J. W. Van den Berg, E.**Year:** 2015**Title:** Similar glucose control with basal bolus regimen of insulin detemir plus insulin aspart and thrice-daily biphasic insulin aspart 30 in insulin-naïve patients with type 2 diabetes: Results of a 50-week randomized clinical trial of stepwise insulin intensification**Journal:** Diabetes & Metabolism**Volume:** 41**Issue:** 3**Pages:** 223-230**Date:** Jun**Short Title:** Similar glucose control with basal bolus regimen of insulin detemir plus insulin aspart and thrice-daily biphasic insulin aspart 30 in insulin-naïve patients with type 2 diabetes: Results of a 50-week randomized clinical trial of stepwise insulin intensification**ISSN:** 1262-3636**DOI:** 10.1016/j.diabet.2014.11.002**Accession Number:** WOS:000357247700007

**Abstract:** Objective. This study aimed to demonstrate the non-inferiority of 50-week treatment with stepwise insulin intensification of basal bolus insulin analogues [insulin detemir (IDet) and aspart (IAsp)] versus biphasic insulin aspart 30 (BIAsp30) in insulin-naïve type 2 diabetes mellitus (T2DM) patients not controlled by oral glucose-lowering drugs (OGLDs). Research design and methods. In this open-label multicentre, multinational, randomized, parallel-arm treat-to-target trial, 403 insulin-naïve patients with T2DM in four African countries were randomized to either an IDet + IAsp (n=200) or BIAspl-2-3 (n=203) treatment group. Stepwise insulin intensification was performed at the end of 14, 26 and 38 weeks, depending on HbA(1c) values. The primary endpoint was change in HbA(1c) after 50 weeks of treatment. Safety variables were hypoglycaemia incidence, occurrence of adverse events and weight gain. Results. Non-inferiority of the IDet + IAsp versus BIAspl-2-3 treatment regimen was demonstrated by their similar HbA(1c) levels at the end of trial (IDet + IAsp: baseline 8.6%, 50 weeks 7.4%; BIAspl-2-3: baseline 8.7%, 50 weeks 7.3%; full analysis set difference: 0.1% [95% CI: 0.1, 0.3]; per protocol: 0.2% [95% CI: 0.1, 0.4]). At week 50, 40.3 and 44.9% of patients achieved HbA(1c) <7.0% with IDet + IAsp and BIAspl-2-3, respectively. The rate of overall hypoglycaemia during the trial was also similar in both groups (IDet + IAsp: 9.4 events/patient-year; BIAspl-2-3: 9.8 events/patient-year). Conclusion. Insulin initiation and intensification using IDet + IAsp was not inferior to BIAspl-2-3 in insulin-naïve patients with T2DM not controlled by OGLDs. Both regimens led to similar reductions in HbA(1c) values after 50 weeks of treatment. (C) 2014 Elsevier Masson SAS. All rights reserved.

**Notes:** Malek, R. Ajili, F. Assaad-Khalil, S. H. Shinde, A. Chen, J. W. Van den Berg, E.**URL:** <Go to ISI>://WOS:000357247700007

**Reference Type: Journal Article****Record Number:** 191**Author:** Mansouri, H. Badache, N. Aliouat, M. Pathan, A. S. K.**Year:** 2015**Title:** A New Efficient Checkpointing Algorithm for Distributed Mobile Computing**Journal:** Control Engineering and Applied Informatics**Volume:** 17**Issue:** 2**Pages:** 43-54**Date:** Jun**Short Title:** A New Efficient Checkpointing Algorithm for Distributed Mobile Computing**ISSN:** 1454-8658**Accession Number:** WOS:000357361500005

**Abstract:** Mobile networks have been quickly adopted by many companies and individuals. However, multiple factors such as mobility and limited resources often constrain availability and thus cause instability of the wireless environment. Such instability poses serious challenge for fault tolerant distributed mobile applications. Therefore, the classical checkpointing techniques, which make the applications more failure-resistant, are not always compatible with the mobile context. In fact, it is necessary now to think about other techniques or at least adapt those to devise effective and well suited techniques for the mobile environment. Considering this issue, the contribution in this paper is a proposal of a new checkpointing algorithm suitable for mobile computing systems. This algorithm is characterized by its efficiency and optimization in terms of incurred time-space overhead during checkpointing process and normal application running period.

**Notes:** Mansouri, Housseem Badache, Nadjib Aliouat, Makhlouf Pathan, Al-Sakib Khan**URL:** <Go to ISI>://WOS:000357361500005

**Reference Type: Journal Article****Record Number:** 192**Author:** Maouche, N. Ktari, N. Bakas, I. Fourati, N. Zerrouki, C. Seydou, M. Maurel, F. Chehimi, M. M.**Year:** 2015**Title:** A surface acoustic wave sensor functionalized with a polypyrrole molecularly imprinted polymer for selective dopamine detection**Journal:** Journal of Molecular Recognition**Volume:** 28**Issue:** 11**Pages:** 667-678**Date:** Nov**Short Title:** A surface acoustic wave sensor functionalized with a polypyrrole molecularly imprinted polymer for selective dopamine detection**ISSN:** 0952-3499**DOI:** 10.1002/jmr.2482**Accession Number:** WOS:000362906400004

**Abstract:** A surface acoustic wave sensor operating at 104MHz and functionalized with a polypyrrole molecularly imprinted polymer has been designed for selective detection of dopamine (DA). Optimization of pyrrole/DA ratio, polymerization and immersion times permitted to obtain a highly selective sensor, which has a sensitivity of 0.55 degrees/mM (approximate to 550Hz/mM) and a detection limit of approximate to 10nM. Morphology and related roughness parameters of molecularly imprinted polymer surfaces, before and after extraction of DA, as well as that of the non imprinted polymer were characterized by atomic force microscopy. The developed chemosensor selectively recognized dopamine over the structurally similar compound 4-hydroxyphenethylamine (referred as tyramine), or ascorbic acid, which co-exists with DA in body fluids at a much higher concentration. Selectivity tests were also carried out with dihydroxybenzene, for which an unexpected phase variation of order of 75% of the DA one was observed. Quantum chemical calculations, based on the density functional theory, were carried out to determine the nature of interactions between each analyte and the PPy matrix and the DA imprinted PPy polypyrrole sensing layer in order to account for the important phase variation observed during dihydroxybenzene injection. Copyright (c) 2015 John Wiley & Sons, Ltd.

**Notes:** Maouche, Naima Ktari, Nadia Bakas, Idriss Fourati, Najla Zerrouki, Chouki Seydou, Mahamadou Maurel, Francois Chehimi, Mohammed Mehdi**URL:** <Go to ISI>://WOS:000362906400004

**Reference Type: Journal Article****Record Number:** 193**Author:** Marouani, A. Bouaouadja, N. Castro, Y. Duran, A.**Year:** 2015**Title:** Repair and Restoration of the Optical Properties of Sandblasted Glasses By Silica-Based Sol-Gel Coatings**Journal:** International Journal of Applied Glass Science**Volume:** 6**Issue:** 1**Pages:** 94-102**Date:** Mar**Short Title:** Repair and Restoration of the Optical Properties of Sandblasted Glasses By Silica-Based Sol-Gel Coatings**ISSN:** 2041-1286**DOI:** 10.1111/ijag.12088**Accession Number:** WOS:000350656600011

**Abstract:** The damage provoked by sand storms in Sahara desert to windscreen of vehicles and solar mirrors is a problem. Different solutions have been proposed, one of them is the application of polymeric coatings, but they rapidly degrade. In this work, we have deposited silica-based sol-gel coatings including silica nanoparticles onto sandblasted glasses. The glasses were eroded by sandblasting varying the projected sand mass and the incidence angle to obtain different surface states. The eroded samples were coated by dipping with a silica layer to correct the defects induced by sandblasting and restore the optical transmission. The damage increases with increasing projected mass and the impact angle. The optical transmission decreases with increasing damage. In extreme conditions, optical transmission falls from 91.5% to 68.6%. The deposition of silica-based layers containing SiO<sub>2</sub> colloidal nanoparticles promotes the repairing of sandblasting defects. A strong decrease of roughness to values similar to those of as-received glass is related with the increasing of the optical transmission up to levels permitting of windscreens and solar mirrors. Transmittance measurements showed a remarkable improvement in all cases, whatever the projected sand mass or the impact angle. For highly degraded samples, the transmission increases from 68.6% to 91.4%, an improvement of near 23%.

**Notes:** Marouani, Abdelhak Bouaouadja, Nourredine Castro, Yolanda Duran, Alicia Si**URL:** <Go to ISI>://WOS:000350656600011

**Reference Type: Journal Article****Record Number:** 194**Author:** Mayouf, F. Djahli, F. Mayouf, A. Devers, T. Ieee,**Year:** 2015**Title:** Optimization of a Hybrid Coordinated Power System Stabilizer for superconducting Generator Using Genetic Algorithm**Journal:** 2015 Ieee 15th International Conference on Environment and Electrical Engineering (Ieee Eeeic 2015)**Pages:** 1193-1197**Short Title:** Optimization of a Hybrid Coordinated Power System Stabilizer for superconducting Generator Using Genetic Algorithm**Accession Number:** WOS:000366654400202**Abstract:** In this paper, the optimal tuning of a hybrid coordinated stabilizer for a superconducting generator is carried out using genetic algorithm (GA). Parameters of this hybrid stabilizer (HEGPSS), which is based on a simultaneous implementation of conventional fixed (EGPSS) and fuzzy logic (FLCEG) stabilizers in both exciter and governor systems, are adjusted using GA. The proposed approach is applied to optimize time constants and scaling factors of conventional and fuzzy coordinated stabilizers. Obtained results of a SMIB power system demonstrate the effectiveness of the proposed genetic hybrid stabilizer (GA-HEGPSS) to damp oscillations for large and small disturbances. To show its superiority, the system performance with the proposed stabilizer is compared with other stabilizers.**Notes:** Mayouf (Adjeroud), F. Djahli, F. Mayouf, A. Devers, T. IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC) Jun 10-13, 2015 Rome, ITALY IEEE, EMC Soc, IEEE Ind Applicat Soc, IEEE Power & Energy Soc 978-1-4799-7992-9**URL:** <Go to ISI>://WOS:000366654400202

**Reference Type: Journal Article****Record Number:** 195**Author:** Mebarki, M. Layadi, A. Kerkache, L. Tiercelin, N. Preobrazhensky, V. Pernod, P.**Year:** 2015**Title:** Surface morphology and magnetic properties of evaporated Fe/Si and Fe/glass thin films**Journal:** Applied Physics a-Materials Science & Processing**Volume:** 120**Issue:** 1**Pages:** 97-104**Date:** Jul**Short Title:** Surface morphology and magnetic properties of evaporated Fe/Si and Fe/glass thin films**ISSN:** 0947-8396**DOI:** 10.1007/s00339-015-9173-5**Accession Number:** WOS:000355860400013

**Abstract:** A series of Fe thin films have been deposited by thermal evaporation onto glass and Si substrates. The Fe thicknesses,  $t$ , are in the 76-431 nm range. We report experimental results on the surface morphology and the magnetic properties of these samples. The surface morphology has been studied by means of the atomic force microscopy technique. Hysteresis curves were obtained by means of the vibrating sample magnetometer (VSM) setup. The VSM experiments were done at two temperatures (room temperature and -130 A degrees C). We investigated the effect of thickness  $t$ , substrates and deposition rate  $v$  (0.3-13.7 /s) on the surface roughness, the coercive field and the squareness. A correlation between the structural and the magnetic properties is established.

**Notes:** Mebarki, M. Layadi, A. Kerkache, L. Tiercelin, N. Preobrazhensky, V. Pernod, P.**URL:** <Go to ISI>://WOS:000355860400013

**Reference Type: Journal Article****Record Number:** 196**Author:** Medjmadj, S. Diallo, D. Mostefai, M. Delpha, C. Arias, A.**Year:** 2015**Title:** PMSM Drive Position Estimation: Contribution to the High-Frequency Injection Voltage Selection Issue**Journal:** Ieee Transactions on Energy Conversion**Volume:** 30**Issue:** 1**Pages:** 349-358**Date:** Mar**Short Title:** PMSM Drive Position Estimation: Contribution to the High-Frequency Injection Voltage Selection Issue**ISSN:** 0885-8969**DOI:** 10.1109/tec.2014.2354075**Accession Number:** WOS:000352056300037

**Abstract:** High-frequency injection (HFI) is an alternative method to estimate permanent magnet synchronous motor (PMSM) rotor position using magnetic saliency. Once the maximum fundamental electrical frequency and the power converter switching frequency are set, the HFI voltage amplitude tuning is generally based on trial and error. This paper proposes a methodology to select the appropriate high-frequency signal injection voltage amplitude for rotor position estimation. The technique is based on an analytical model taking into account the noise in the voltage supply to derive the resulting currents containing the information on the rotor position. This model allows setting the injection voltage amplitude that leads to the maximum acceptable position error for a given signal-to-noise ratio and a speed range. The approach is validated with the analytical and the global drive models through extensive simulations.

Experimental results on a 1-kW PMSM drive confirm the interest of the proposed solution.

**Notes:** Medjmadj, Slimane Diallo, Demba Mostefai, Mohammed Delpha, Claude Arias, Antoni**URL:** <Go to ISI>://WOS:000352056300037

**Reference Type: Journal Article****Record Number:** 197**Author:** Mehennaoui, N. Merzouki, A. Slimani, D. Ieee,**Year:** 2015**Title:** 2D-FDTD- UPML Simulation of Wave Propagation on Dispersive Media**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** 2D-FDTD- UPML Simulation of Wave Propagation on Dispersive Media**Accession Number:** WOS:000380433000055

**Abstract:** As one of the major computational electromagnetic tools, the finite-difference time-domain (FDTD) method finds widespread use as a solver for a variety of electromagnetic problems. In this paper we are interested in the implementation of a two-dimensional time-domain numerical scheme for simulation of wave propagation, on dispersive and inhomogeneous media with conductive loss which are based on Debye model and incorporated into the FDTD scheme by using the auxiliary differential equation (ADE) technique. The uniaxial perfectly matched layer (UPML) is used as an absorbing boundary condition to simulate an open space.

**Notes:** Mehennaoui, N. Merzouki, Az. Slimani, D. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000055

**Reference Type: Journal Article****Record Number:** 198**Author:** Mekhalfi, H. Chelali, N. Benhamimid, S. Laib, O. Nessark, B. Bahloul, A.**Year:** 2015**Title:** Recycling of Manganese Dioxide from Spent Zn-MnO<sub>2</sub> Cells**Journal:** Russian Journal of Applied Chemistry**Volume:** 88**Issue:** 5**Pages:** 879-884**Date:** May**Short Title:** Recycling of Manganese Dioxide from Spent Zn-MnO<sub>2</sub> Cells**ISSN:** 1070-4272**DOI:** 10.1134/s1070427215050249**Accession Number:** WOS:000359747600024

**Abstract:** The resulted material after a discharge of Zn-MnO<sub>2</sub> cell is a mixture of various oxide and hydroxide. The recycling of spent batteries cathodic materials from them is of great scientific and economic interest. In this work, the MnO<sub>2</sub> was recycled by chemical methods, the MnO<sub>2</sub> was oxidized using hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) at neutral pH, the obtained materials were characterized by different methods including cyclic voltammetry, impedance spectroscopy, atomic absorption spectroscopy and X-ray diffraction. The preliminary results demonstrated that by chemical oxidation with hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) is a suitable method for recuperation of a pure MnO<sub>2</sub> and it could be used in a plant for recycling batteries.

**Notes:** Mekhalfi, H. Chelali, N. Benhamimid, S. Laib, O. M. Nessark, B. Bahloul, A.**URL:** <Go to ISI>://WOS:000359747600024

**Reference Type: Journal Article****Record Number:** 199**Author:** Mekroud, A. Benachour, D. Bensaad, S.**Year:** 2015**Title:** Influence of organoclay filler on the properties of polystyrene/low-density polyethylene blend**Journal:** Composite Interfaces**Volume:** 22**Issue:** 9**Pages:** 809-822**Date:** Nov**Short Title:** Influence of organoclay filler on the properties of polystyrene/low-density polyethylene blend**ISSN:** 0927-6440**DOI:** 10.1080/09276440.2015.1063951**Accession Number:** WOS:000360619400001

**Abstract:** The present work deals with the study of nanocomposites based on polystyrene (PS)/low-density polyethylene (LDPE) blend and an organophilic clay (Bentone 38 (B38)). Different PS/LDPE/B38 mixtures were prepared via melt intercalation process using a two-roll mixer and a single-screw extruder. Analysis of the nanocomposites by means of X-ray diffraction showed that the characteristic peak of the clay appears only at 3% wt. content, indicating an intercalated structure of PS/LDPE/3% B38 nanocomposite. The mechanical properties of the nanocomposites reflected the effect of the addition of the filler as well as the state of interfacial adhesion between the polymer blend matrix and the filler. The incorporation of the clay into PS/LDPE blend resulted in a relative increase (particularly at 0.5%wt.) of the stress at break and microhardness owing to the interfacial interactions developed between the PS/LDPE matrix and the clay and between the two blend phases. This is in good agreement with PS/LDPE/B38 nanocomposites rheological behavior which revealed an increased maximum torque most pronounced at 0.5% clay weight. Scanning electron microscopy micrographs showed, for this same clay content, the compatibilization effect of the clay between PS and LDPE. This was also confirmed by the atomic force microscopy images and by differential scanning calorimetry analyses.

**Notes:** Mekroud, A. Benachour, D. Bensaad, S.**URL:** <Go to ISI>://WOS:000360619400001

**Reference Type: Journal Article****Record Number:** 200**Author:** Menouar, S. Choi, J. R.**Year:** 2015**Title:** Quantization of time-dependent singular potential systems in one-dimension by using the Nikiforov-Uvarov method**Journal:** Journal of the Korean Physical Society**Volume:** 67**Issue:** 7**Pages:** 1127-1132**Date:** Oct**Short Title:** Quantization of time-dependent singular potential systems in one-dimension by using the Nikiforov-Uvarov method**ISSN:** 0374-4884**DOI:** 10.3938/jkps.67.1127**Accession Number:** WOS:000363042300006

**Abstract:** The technique for quantizing simple static systems can be extended to more generalized systems that involve time-dependent parameters. In this work, a particle with linearly increasing mass that is bound by a time-dependent singular potential, which is composed of an inverse quadratic potential and a Coulomb-like potential, is quantized by using the Nikiforov-Uvarov method together with the invariant operator method and the unitary transformation method. The Nikiforov-Uvarov method is an alternative method for solving the Schrodinger equation on the basis of a particular mathematical technique that reduces second-order differential equations to generalized hypergeometric ones. The exact wave functions of the system are identified, and their properties are addressed in detail.

**Notes:** Menouar, Salah Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000363042300006

**Reference Type: Journal Article****Record Number:** 201**Author:** Menouar, S. Choi, J. R.**Year:** 2015**Title:** A hybrid approach for quantizing complicated motion of a charged particle in time-varying magnetic field**Journal:** Annals of Physics**Volume:** 353**Pages:** 307-316**Date:** Feb**Short Title:** A hybrid approach for quantizing complicated motion of a charged particle in time-varying magnetic field**ISSN:** 0003-4916**DOI:** 10.1016/j.aop.2014.11.014**Accession Number:** WOS:000353070200023

**Abstract:** Quantum characteristics of a charged particle subjected to a singular oscillator potential under an external magnetic field is investigated via  $SU(1,1)$  Lie algebraic approach together with the invariant operator and the unitary transformation methods. The system we managed is somewhat complicated since we considered not only the time-variation of the effective mass of the system but also the dependence of the external magnetic field on time in an arbitrary fashion. In this case, the system is a kind of time-dependent Hamiltonian systems which require more delicate treatment when we study it. The complete wave functions are obtained without relying on the methods of perturbation and/or approximation, and the global phases of the system are identified. To promote the understanding of our development, we applied it to a particular case, assuming that the effective mass slowly varies with time under a time-dependent magnetic field. (C) 2014 Elsevier Inc. All rights reserved.

**Notes:** Menouar, Salah Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000353070200023

**Reference Type: Journal Article****Record Number:** 202**Author:** Mentar, L. Baka, O. Khelladi, M. R. Azizi, A. Velumani, S. Schmerber, G. Dinia, A.**Year:** 2015**Title:** Effect of nitrate concentration on the electrochemical growth and properties of ZnO nanostructures**Journal:** Journal of Materials Science-Materials in Electronics**Volume:** 26**Issue:** 2**Pages:** 1217-1224**Date:** Feb**Short Title:** Effect of nitrate concentration on the electrochemical growth and properties of ZnO nanostructures**ISSN:** 0957-4522**DOI:** 10.1007/s10854-014-2528-4**Accession Number:** WOS:000349439500082

**Abstract:** Zinc oxide (ZnO) nanostructures were deposited under potentiostatic control on indium tin oxide coated glass substrate from an aqueous solution containing zinc nitrates. Voltammograms were recorded to determine the optimal potential region for the deposition of ZnO. The deposition was carried out at various concentrations of Zn<sup>2+</sup> and constant bath temperature (65 degrees C). The nucleation and growth kinetics at the initial stages of ZnO studied by current transients indicated a 3D island growth (Volmer-Weber). It is characterized by an instantaneous nucleation mechanism followed by diffusion-limited growth. The Mott-Schottky measurements, the flat band potential and the donor density for the ZnO nanostructures were determined. The morphological, structural, and optical properties of the nanostructures have been investigated. Scanning electron microscopy images showed different sizes and morphologies of the nanostructures which depends on the concentrations of Zn<sup>2+</sup>. X-ray diffraction study confirms the wurtzite phase of the ZnO nanostructures with high crystallinity. UV-visible spectra showed a significant optical transmission (up to 90 %), which decreased with Zn<sup>2+</sup> concentrations. The energy band gap values have been estimated to be in the range 3.36-3.54 eV.

**Notes:** Mentar, L. Baka, O. Khelladi, M. R. Azizi, A. Velumani, S. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000349439500082

**Reference Type: Journal Article****Record Number:** 203**Author:** Merah, H. Slimani, D. Alsharekh, M. F. Ieee,**Year:** 2015**Title:** PAPR reduction in SFBC-MIMO-MC-CDMA systems using Method of Attenuation Complex Chips**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** PAPR reduction in SFBC-MIMO-MC-CDMA systems using Method of Attenuation Complex Chips**Accession Number:** WOS:000380433000121

**Abstract:** The combination of Multi-Carrier Code Division Multiple Access (MC-CDMA) with Multiple-Input Multiple-Output (MIMO) is a technology of one of the most promising systems for broadband modern wireless communications. However, MC-CDMA signals have a high peak-to-average power ratio (PAPR), which causes signal distortion because of the use of a high-power amplifier (HPA) in the transmitter. In our work, we propose a PAPR reduction scheme for space-frequency block coding MIMO-MC-CDMA downlink transmissions using method of attenuating complex chips, by multiplying every complex chip by real decreasing values. Simulation results prove that the proposed method showed a significant improvement in PAPR reduction performance, with a low computational complexity and without side information. Additionally, the attenuating complex chips is compared to P-SLM at the term of bit-error-rate (BER) and PAPR reduction using once the linear amplifier (SSPA) and another time without its presence.

**Notes:** Merah, Hocine Slimani, Djamel Alsharekh, Mohammed F. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000121

**Reference Type: Journal Article****Record Number:** 204**Author:** Merdas, A. Fiorio, B. Chikh, N. E.**Year:** 2015**Title:** Aspects of bond behavior for concrete beam strengthened with carbon fibers reinforced polymers-near surface mounted**Journal:** Journal of Reinforced Plastics and Composites**Volume:** 34**Issue:** 6**Pages:** 463-478**Date:** Mar**Short Title:** Aspects of bond behavior for concrete beam strengthened with carbon fibers reinforced polymers-near surface mounted**ISSN:** 0731-6844**DOI:** 10.1177/0731684415573814**Accession Number:** WOS:000352196900003

**Abstract:** The near surface mounted technique has been used in recent years for the strengthening of reinforced concrete beams. It involves the insertion of strips or rods of carbon fibers reinforced polymers in grooves made previously in the concrete cover of corresponding surfaces, filled with epoxy adhesive for fixation. A parametric study was carried out based on pullout-bending tests in order to evaluate the influence of bond strength, concrete strength, bond length, type and configuration of strengthening on the pullout load, bonding stress, stiffness and failure mode. The influences of these parameters on the bond behavior between the three materials (concrete, epoxy adhesive and carbon fibers reinforced polymer) were evidenced and discussed.

**Notes:** Merdas, Abdelghani Fiorio, Bruno Chikh, Nasr-Eddine**URL:** <Go to ISI>://WOS:000352196900003

**Reference Type: Journal Article****Record Number:** 205**Author:** Merkache, R. Fechete, I. Maamache, M. Bernard, M. Turek, P. Al-Dalama, K. Garin, F.**Year:** 2015**Title:** 3D ordered mesoporous Fe-KIT-6 catalysts for methylcyclopentane (MCP) conversion and carbon dioxide (CO<sub>2</sub>) hydrogenation for energy and environmental applications**Journal:** Applied Catalysis a-General**Volume:** 504**Pages:** 672-681**Date:** Sep**Short Title:** 3D ordered mesoporous Fe-KIT-6 catalysts for methylcyclopentane (MCP) conversion and carbon dioxide (CO<sub>2</sub>) hydrogenation for energy and environmental applications**ISSN:** 0926-860X**DOI:** 10.1016/j.apcata.2015.03.032**Accession Number:** WOS:000362604200073

**Abstract:** The direct hydrothermal synthesis of Fe-KIT-6 mesoporous materials with Ia3d symmetry and high iron loadings is reported for the first time. The Fe-KIT-6 mesoporous materials were characterized by XRD, N<sub>2</sub> adsorption/desorption isotherms, SEM, FT-IR, XPS and EPR spectroscopy. The physico-chemical characterization results show that all of the samples have well-ordered cubic mesostructures and that the structural integrity is preserved for n(Si)/n(Fe) ratios as high as 10. It was found that most of the iron ions exist as isolated framework species, but for Fe-KIT-6 with an n(Si)/n(Fe) ratio of 10, the presence of extra-framework species/small iron oxide clusters cannot be excluded. The catalytic performances of these materials were tested for carbon dioxide (CO<sub>2</sub>) hydrogenation and methylcyclopentane (MCP) conversion. The catalytic results show that their catalytic activity increases significantly with increasing iron content. For the MCP conversion, the ring-opening selectivity can be improved by increasing the density of isolated iron atom sites at low reaction temperatures. For the CO<sub>2</sub> hydrogenation, the methanation selectivity can be improved by increasing the iron active site density and employing a high reaction temperature. Specifically, the high density of iron sites at high catalyst loadings promotes the methanation reaction at the expense of the RWGS (reverse water gas shift) reaction. Thus, the Fe-KIT-6 materials appear to be suitable catalysts for MCP conversion at low temperatures and CO<sub>2</sub> hydrogenation at high temperatures. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Merkache, R. Fechete, I. Maamache, M. Bernard, M. Turek, P. Al-Dalama, K. Garin, F. Si**URL:** <Go to ISI>://WOS:000362604200073

**Reference Type: Journal Article**

**Record Number: 206**

**Author: Merouani, B. Boufenouche, R.**

**Year: 2015**

**Title: TRIGONOMETRIC SERIES ADAPTED FOR THE STUDY OF DIRICHLET BOUNDARY-VALUE PROBLEMS OF LAME SYSTEMS**

**Journal: Electronic Journal of Differential Equations**

**Date: Jul**

**Short Title: TRIGONOMETRIC SERIES ADAPTED FOR THE STUDY OF DIRICHLET BOUNDARY-VALUE PROBLEMS OF LAME SYSTEMS**

**ISSN: 1072-6691**

**Article Number: 181**

**Accession Number: WOS:000357955500001**

**Abstract:** Several authors have used trigonometric series for describing the solutions to elliptic equations in a plane sector; for example, the study of the biharmonic operator with different boundary conditions, can be found in [2, 9, 101]. The main goal of this article is to adapt those techniques for the study of Lamé systems in a sector.

**Notes:** Merouani, Boubakeur Boufenouche, Razika

**URL:** <Go to ISI>://WOS:000357955500001

**Reference Type: Journal Article****Record Number:** 207**Author:** Messai, M. L. Seba, H. Aliouat, M.**Year:** 2015**Title:** A lightweight key management scheme for wireless sensor networks**Journal:** Journal of Supercomputing**Volume:** 71**Issue:** 12**Pages:** 4400-4422**Date:** Dec**Short Title:** A lightweight key management scheme for wireless sensor networks**ISSN:** 0920-8542**DOI:** 10.1007/s11227-015-1534-5**Accession Number:** WOS:000365185400005

**Abstract:** The use of wireless sensor networks (WSNs) in any real-world application requires a certain level of security. To provide security of operations such as message exchange, key management schemes have to be well adapted to the particularities of WSNs. This paper proposes a novel key management scheme called SKM for sequence-based key management in WSNs. In SKM, sensor nodes are pre-distributed with the first term and the recursive formula of a numerical sequence. This two tiny pre-distributed information will ensure the establishment of pairwise keys to each sensor node with its neighbors after its deployment with a small amount of computation. The security analysis of SKM shows its efficiency. Simulation results confirm that SKM is lightweight in term of node's resources and has a good resilience against node compromising attacks compared to the main existing schemes.

**Notes:** Messai, Mohamed-Lamine Seba, Hamida Aliouat, Makhoulf**URL:** <Go to ISI>://WOS:000365185400005

**Reference Type: Journal Article****Record Number:** 208**Author:** Messaoudi, N. Bekka, R. E. Ieee,**Year:** 2015**Title:** Simulated Surface EMG Signal as a Function of Physiological and Non physiological Parameters: Analyze and Interpretation**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 52-+**Short Title:** Simulated Surface EMG Signal as a Function of Physiological and Non physiological Parameters: Analyze and Interpretation**Accession Number:** WOS:000380457200125

**Abstract:** The purpose of this study was to estimate the effects of some anatomical, physiological and detection system parameters on the root mean square (RMS) and the total power (TTP) of simulated surface electromyographic (EMG) signals generated in a cylindrical multilayer volume conductor represents the limb muscle. These signals were detected by the longitudinal single differential (LSD), transversal double Differential (TDD), maximum kurtosis filter (MKF) and the three rings (3RGs) spatial filters. The investigated parameters were: the skin and fat thicknesses, the mean motor unit (MU) diameters, the mean MU firing rates, the inter-electrode distance and the radius of the circular electrode. Our results showed that, the RMS and the TTP of the detected surface EMG signals decrease with the increase of the skin and fat layer thicknesses and the radius of the circular electrode. But, they increase with the increase of the mean MU diameters, and the mean MU firing rates and the inter-electrode distance. Especially with the MKF filter, the RMS and TTP values increase until the distance between the electrodes reach 15 mm and then they start to decrease.

**Notes:** Messaoudi, Nouredine Bekka, Rais El'hadi 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200125

**Reference Type: Journal Article****Record Number:** 209**Author:** Mezzah, I. Chemali, H. Mezzah, S. Kermia, O. Abdelmalek, O. Ieee,**Year:** 2015**Title:** MCIP: High Configurable 8-bit Microcontroller IP-Core**Journal:** 2015 Science and Information Conference (Sai)**Pages:** 1387-1390**Short Title:** MCIP: High Configurable 8-bit Microcontroller IP-Core**Accession Number:** WOS:000380448800200

**Abstract:** Intellectual Property (IP) cores represent the heart of the most advanced controller designed systems. In this work, a well-structured microcontroller IP-core named MCIP for "Microcontroller IP" is developed to provide not only major functionalities and features of a powerful microcontroller but to serve as a versatile tool for developing and validating new design research techniques with complex configurations and environment. MCIP is fully compatible with Microchip PIC18 family; it is presented as a configurable core which supports a variety of program and data memory sizes, easily adapted to any PIC18 device, and executes any developed program on assembly code or high level language. Performed evaluations have shown that MCIP is the fastest among evaluated 8-bit microcontrollers. In addition, the design was downloaded and tested on different FPGA platforms. Then through the MCIP versatile configuration features, the two main RFID components, tag and reader, have been developed and evaluated on Digilent Genesys Virtex-5 and Avnet Spartan-6 boards.

**Notes:** Mezzah, Ibrahim Chemali, Hamimi Mezzah, Samia Kermia, Omar Abdelmalek, Omar Proceedings of the Science and Information Conference (SAI) Jul 28-30, 2015 Science and Information Organization, London, ENGLAND Nvidia, IEEE, The Future & Emerging Technol FET at the European Comm, EUREKA, Cambridge Wireless, British Comp Soc, Digital Catapult, Springer, Media Partner for this conference 978-1-4799-8547-0

**URL:** <Go to ISI>://WOS:000380448800200

**Reference Type: Journal Article****Record Number:** 210**Author:** Mohammed, N. B. Mahammed, S. B.**Year:** 2015**Title:** Space radiation environment of ALSAT-2 and its degradation effect on InGaP/InGaAs/Ge solar cells**Journal:** African Journal of Science Technology Innovation & Development**Volume:** 7**Issue:** 6**Pages:** 475-479**Date:** Nov**Short Title:** Space radiation environment of ALSAT-2 and its degradation effect on InGaP/InGaAs/Ge solar cells**ISSN:** 2042-1338**DOI:** 10.1080/20421338.2015.1096673**Accession Number:** WOS:000367067300011

**Abstract:** Surrounding the earth, and throughout outer space, significant levels of radiation particles exist. These particles include protons, electrons, heavy ions, and other forms of radiation. Different regions are known to contain different amounts of various types of particles with different energies, all having different effects on electronic devices. Therefore, when designing a space-based system, it is important to understand the environment in which the electronic system will operate and the radiation hazards that can be expected. In this paper we present an analysis of the radiation environment for the ALSAT-2 Algerian satellite that was launched in 2010, using Space ENVironment Information System (SPENVIS). The impact of the radiation on InGaP/InGaAs/Ge Emcore ATJ solar cells is investigated by calculating the degradation. Finally, the End of Life (EOL) performance of the solar cells is predicted.

**Notes:** Mohammed, Nadjima Benkara Mahammed, Souaad Benkara**URL:** <Go to ISI>://WOS:000367067300011

**Reference Type: Journal Article****Record Number:** 211**Author:** Mohguen, W. Bekka, R. E. Ieee,**Year:** 2015**Title:** Improvement of Ensemble Empirical Mode Decomposition by a Band-Limited White Noise**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 397-+**Short Title:** Improvement of Ensemble Empirical Mode Decomposition by a Band-Limited White Noise**Accession Number:** WOS:000380457200138

**Abstract:** The empirical mode decomposition (EMD) was a tool proposed for analysis of nonlinear and non-stationary signals and was successfully used in various applications. However, one of the major drawbacks of the EMD is the appearance of mode mixing when the signal consists of widely disparate scales. The EEMD was developed to solve the mode-mixing with the assistance of added white noises which produced the residue noise in the signal reconstructed. The effect of the added white noise can be reduced to a negligibly small level by increasing the number of ensemble trials of a few hundred, to the detriment of increased computing time. A modified EEMD, termed MEEMD, was proposed to improve the EEMD computational efficiency substantially by replacing the white noise by a band-limited noise. But, the MEEMD did not specify the type of filter used and its characteristics. In this study, we showed that the right choice of the filter type and its order improved appreciably the computational efficiency of the MEEMD.

**Notes:** Mohguen, Wahiba Bekka, Rais El'hadi 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200138

**Reference Type: Journal Article****Record Number:** 212**Author:** Monir, M. E. A. Baltache, H. Khenata, R. Murtaza, G. Azam, S. Bouhemadou, A. Al-Douri, Y. Bin Omran, S. Ali, R.**Year:** 2015**Title:** First-principles calculations of a half-metallic ferromagnet zinc blende  $Zn_{1-x}V_xTe$ **Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 378**Pages:** 41-49**Date:** Mar**Short Title:** First-principles calculations of a half-metallic ferromagnet zinc blende  $Zn_{1-x}V_xTe$ **ISSN:** 0304-8853**Accession Number:** WOS:000346856100007

**Abstract:** First principles calculations have been used to study the structural, elastic, electronic, magnetic and thermal properties of zinc blende  $Zn_{1-x}V_xTe$  for  $x=0, 0.25, 0.50, 0.75$  and  $1$  using the full potential linearized augmented plane wave method (FP-LAPW) based on spin polarized density functional theory (DFT). The electronic exchange correlation potential is approached using the spin generalized gradient approximation (spin-GGA). The structural properties of the  $Zn_{1-x}V_xTe$  alloys ( $x=0, 0.25, 0.50, 0.75$  and  $1$ ) are given for the lattice constants and the bulk moduli and their pressure derivatives. The elastic constants  $C_{11}, C_{12}$  and  $C_{44}$  are calculated using numerical first-principles calculations implemented in the WIEN2k package. An analysis of the band structures and the densities of states reveals that  $Zn_{0.50}V_{0.50}Te$  and  $Zn_{0.75}V_{0.25}Te$  exhibit a half-metallic character, while  $Zn_{0.25}V_{0.75}Te$  is nearly half-metallic. The band structure calculations are used to estimate the spin-polarized splitting energies  $\Delta(x)(d)$  and  $\Delta(x)(pd)$  produced by the  $V(3d)$ -doped and  $s(p)$ - $d$  exchange constants  $N_0 \alpha$  (conduction band) and  $N_0 \beta$  (valence band). The  $p$ - $d$  hybridization reduces the magnetic moment of  $V$  from its atomic charge value of  $3(\mu_B)$  and creates small local magnetic moments on the nonmagnetic  $Zn$  and  $Te$  sites. Finally, we present the thermal effect on the macroscopic properties of these alloys, such as the thermal expansion coefficient, heat capacity and Debye temperature, based on the quasi-harmonic Debye model. (C) 2014 Elsevier B.V. All rights reserved

**Notes:** Monir, M. El Amine Baltache, H. Khenata, R. Murtaza, G. Azam, Sikander Bouhemadou, A. Al-Douri, Y. Bin Omran, S. Ali, Roshan**URL:** <Go to ISI>://WOS:000346856100007

**Reference Type: Journal Article****Record Number:** 213**Author:** Monir, M. E. A. Baltache, H. Murtaza, G. Khenata, R. Ahmed, W. K. Bouhemadou, A. Omran, B. Seddik, T.**Year:** 2015**Title:** Spin-polarized structural, elastic, electronic and magnetic properties of half-metallic ferromagnetism in V-doped ZnSe**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 374**Pages:** 50-60**Date:** Jan**Short Title:** Spin-polarized structural, elastic, electronic and magnetic properties of half-metallic ferromagnetism in V-doped ZnSe**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2014.08.014**Accession Number:** WOS:000344949000007

**Abstract:** Based on first principles spin-polarized density functional theory, the structural, elastic electronic and magnetic properties of  $Zn_{1-x}V_xSe$  (for  $x=0.25, 0.50, 0.75$ ) in zinc blende structure have been studied. The investigation was done using the full-potential augmented plane wave method as implemented in WIEN2k code. The exchange-correlation potential was treated with the generalized gradient approximation PBE-GGA for the structural and elastic properties. Moreover, the PBE-GGA + U approximation (where U is the Hubbard correlation terms) is employed to treat the "d" electrons properly. A comparative study between the band structures, electronic structures, total and partial densities of states and local moments calculated within both GGA and GGA+U schemes is presented. The analysis of spin-polarized band structure and density of states shows the half-metallic ferromagnetic character and are also used to determine s(p)-d exchange constants  $N-0$  alpha (conduction band) and  $N-0$  beta (valence band) due to Se(4p)-V(3d) hybridization. It has been clearly evidence that the magnetic moment of V is reduced from its free space charge value of  $3 \mu(B)$  and the minor atomic magnetic moment on Zn and Se are generated. (c) 2014 Elsevier B.V. All rights reserved

**Notes:** Monir, M. El Amine. Baltache, H. Murtaza, G. Khenata, R. Ahmed, Waleed K. Bouhemadou, A. Omran, Bin Seddik, T.**URL:** <Go to ISI>://WOS:000344949000007

**Reference Type: Journal Article****Record Number:** 214**Author:** Monir, M. E. A. Khenata, R. Baltache, H. Murtaza, G. Abu-Jafar, M. S. Bouhemadou, A. Bin Omran, S. Rached, D.**Year:** 2015**Title:** Study of structural, electronic and magnetic properties of CoFeIn and Co<sub>2</sub>FeIn Heusler alloys**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 394**Pages:** 404-409**Date:** Nov**Short Title:** Study of structural, electronic and magnetic properties of CoFeIn and Co<sub>2</sub>FeIn Heusler alloys**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2015.06.077**Accession Number:** WOS:000360025800061

**Abstract:** The structural, electronic and magnetic properties of half-Heusler CoFeIn and full-Heusler Co<sub>2</sub>FeIn alloys have been investigated by using the state of the art full-potential linearized augmented plane wave (FP-LAPW) method. The exchange-correlation potential was treated with the generalized gradient approximation (PBE-GGA) for the calculation of the structural properties, whereas the PBE-GGA + U approximation (where U is the Hubbard Coulomb energy term) is applied for the computation of the electronic and magnetic properties in order to treat the "d" electrons. The structural properties have been calculated in the paramagnetic and ferromagnetic phases where we have found that both the CoFeIn and Co<sub>2</sub>FeIn alloys have a stable ferromagnetic phase. The obtained results of the spin-polarized band structure and the density of states show that the CoFeIn alloy is a metal and the Co<sub>2</sub>FeIn alloy has a complete half-metallic nature. Through the obtained values of the total spin magnetic moment, we conclude that in general, the Co<sub>2</sub>FeIn alloy is half-metallic ferromagnet material whereas the CoFeIn alloy has a metallic nature. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Monir, M. El Amine Khenata, R. Baltache, H. Murtaza, G. Abu-Jafar, M. S. Bouhemadou, A. Bin Omran, S. Rached, D.**URL:** <Go to ISI>://WOS:000360025800061

**Reference Type: Journal Article****Record Number:** 215**Author:** Monir, M. E. Khenata, R. Murtaza, G. Baltache, H. Bouhemadou, A. Al-Douri, Y. Azam, S. Bin Omran, S. Din, H. U.**Year:** 2015**Title:** Half-metallic ferromagnetism in  $\text{Be}_{1-x}\text{V}_x\text{Te}$  alloys: an Ab-initio study**Journal:** Indian Journal of Physics**Volume:** 89**Issue:** 12**Pages:** 1251-1263**Date:** Dec**Short Title:** Half-metallic ferromagnetism in  $\text{Be}_{1-x}\text{V}_x\text{Te}$  alloys: an Ab-initio study**ISSN:** 0973-1458**DOI:** 10.1007/s12648-015-0696-6**Accession Number:** WOS:000368420700004

**Abstract:** First-principles calculations of the structural, elastic, electronic, magnetic and thermodynamic properties of zinc blende  $\text{Be}_{1-x}\text{V}_x\text{Te}$  alloys ( $x = 0, 0.25, 0.50, 0.75$  and  $1$ ) based on spin-polarized density functional theory are performed using full-potential augmented plane wave method, within the spin generalized gradient approximation for the exchange-correlation potential. The equilibrium structural parameters such as lattice constant ( $a(0)$ ), bulk modulus ( $B_0$ ) and first pressure derivative of bulk modulus ( $B'$ ) are optimized for all alloys. The elastic constants  $C_{11}$ ,  $C_{12}$ ,  $C_{44}$  and anisotropy coefficients are also estimated. The calculations of the band structure and the density of states demonstrate that all  $\text{Be}_{1-x}\text{V}_x\text{Te}$  ( $x = 0.25, 0.50, 0.75$  and  $1$ ) alloys are complete half-metals. The investigation of the band structure and the density of states demonstrate that  $\text{Be}_{0.75}\text{V}_{0.25}\text{Te}$  alloy is entirely half-metal, whereas  $\text{Be}_{0.50}\text{V}_{0.50}\text{Te}$  and  $\text{Be}_{0.25}\text{V}_{0.75}\text{Te}$  alloys are nearly half-metal. The estimation of the  $s(p)$ - $d$  exchange splitting constants  $N_0\alpha$  (conduction band) and  $N_0\beta$  (valence band), as obtained through the density of states, have been used to indicate the magnetic behavior of the compounds. From the total magnetic moment, it is observed that the  $p$ - $d$  hybridization reduces the local magnetic moment of V atom from its free space charge of  $3\mu_B$  and generates small local magnetic moments on the nonmagnetic Be and Te sites. Lastly, based on the quasi-harmonic Debye model, the obtained macroscopic thermodynamic properties, such as thermal expansion coefficient, heat capacities and Debye temperature, are presented in detail.

**Notes:** Monir, M. El Amine Khenata, R. Murtaza, G. Baltache, H. Bouhemadou, A. Al-Douri, Y. Azam, S. Bin Omran, S. Din, H. U.**URL:** <Go to ISI>://WOS:000368420700004

**Reference Type: Journal Article**

**Record Number:** 216

**Author:** Mouassa, S. Bouktir, T.

**Year:** 2015

**Title:** Artificial Bee Colony Algorithm for Discrete Optimal Reactive Power Dispatch

**Journal:** 2015 International Conference on Industrial Engineering and Systems Management (Iesm)

**Pages:** 654-662

**Short Title:** Artificial Bee Colony Algorithm for Discrete Optimal Reactive Power Dispatch

**Accession Number:** WOS:000380454700083

**Abstract:** In this paper one of the reliable and effective optimization algorithms called "artificial bee colony" algorithm (ABC) for solving the optimal reactive power dispatch (ORPD) problem with the discrete and continuous control variables in an electric power system is presented. In this work ABC algorithm is used to find the settings of control variables such as generator voltages, tap positions of tap changing transformers and the number of capacitors banks to be switched, for optimal reactive power dispatch. The original ABC algorithm designed for the continuous nature of optimization problems, cannot be used for discrete cases; but the real ORPD problem has two different nature types of control variables (discrete and continuous), for this reasons a simple rounding operator is included in the main steps of original ABC algorithm to ensure the discretization process. Then, the feasibility and performance of the proposed algorithm are verified by the serial simulations on the IEEE 14-bus, IEEE 30-bus and IEEE 57-bus power systems. The numerical results are compared to those yielded by the other recently published evolutionary optimization algorithms in the literature. This comparison shows that the ABC algorithm is superior to the other mentioned algorithms and can be efficiently used for solving the discrete ORPD problem.

**Notes:** Mouassa, Souhil Bouktir, Tarek Framinan, JM Gonzalez, PP Artiba, A International Conference on Industrial Engineering and Systems Management Oct 21-23, 2015 Seville, SPAIN I4e2, Univ Valenciennes Hainaut Cambresis, GDR macs, CNRS, LAMIH, IFSTTAR, RAILENIUM, Endesa, TUSSAM, NODO Ayuntamiento Sevilla, Univ Sevilla, Cisit, Junta Andalucia, Consejeria Econ Innovat Ciencia Empleo, Organizac Ind, Turismo Provincia Diputac Sevilla, Invest Andalucia Spain, Escuela Tecn Super Ingn, Springer, IEEE, IEEE Secc Espana 978-2-9600532-6-5

**URL:** <Go to ISI>://WOS:000380454700083

**Reference Type: Journal Article****Record Number:** 217**Author:** Mourad, B. Sabah, M.**Year:** 2015**Title:** Comparison between static nonlinear and time history analysis using flexibility-based model for an existing structure and effect of taking into account soil using Domain Reduction Method for a single media**Journal:** Ksce Journal of Civil Engineering**Volume:** 19**Issue:** 3**Pages:** 651-663**Date:** Mar**Short Title:** Comparison between static nonlinear and time history analysis using flexibility-based model for an existing structure and effect of taking into account soil using Domain Reduction Method for a single media**ISSN:** 1226-7988**DOI:** 10.1007/s12205-015-0351-y**Accession Number:** WOS:000350059500022

**Abstract:** This work is divided into two parts; the first one presents the nonlinear methods of analyses for seismic design of structures. The first method is the nonlinear pushover procedure, which is based on the N2 method. The second method is the classical nonlinear time history analysis. The objective of this paper is to make a comparative study of an existing reinforced concrete building in Bonafro, Italy between static nonlinear analysis and time history analysis using flexibility-based finite element, and the sensitivity of the time history analyses to the seismic parameters. The second part presents an elegant method called Domain Reduction Method, which takes into account a small adjacent part of subsoil including structure. With this way the size of the problem to be solved is substantially reduced. All this through Z\_Soil; engineering software based on the finite-element method.

**Notes:** Mourad, Belgasmia Sabah, Moussaoui**URL:** <Go to ISI>://WOS:000350059500022

**Reference Type: Journal Article****Record Number:** 218**Author:** Nancib, A. Nancib, N. Boubendir, A. Boudrant, J.**Year:** 2015**Title:** The use of date waste for lactic acid production by a fed-batch culture using *Lactobacillus casei* subsp *rhamnosus***Journal:** Brazilian Journal of Microbiology**Volume:** 46**Issue:** 3**Pages:** 893-902**Date:** Jul-Sep**Short Title:** The use of date waste for lactic acid production by a fed-batch culture using *Lactobacillus casei* subsp *rhamnosus***ISSN:** 1517-8382**DOI:** 10.1590/s1517-838246320131067**Accession Number:** WOS:000360074700035

**Abstract:** The production of lactic acid from date juice by *Lactobacillus casei* subsp. *rhamnosus* in batch and fed-batch cultures has been investigated. The fed-batch culture system gave better results for lactic acid production and volumetric productivity. The aim of this work is to determine the effects of the feeding rate and the concentration of the feeding medium containing date juice glucose on the cell growth, the consumption of glucose and the lactic acid production by *Lactobacillus casei* subsp. *rhamnosus* in fed-batch cultures. For this study, two concentrations of the feeding medium (62 and 100 g/L of date juice glucose) were tested at different feeding rates (18, 22, 33, 75 and 150 mL/h). The highest volumetric productivity (1.3 g/L.h) and lactic acid yield (1.7 g/g) were obtained at a feeding rate of 33 mL/h and a date juice glucose concentration of 62 g/L in the feeding medium. As a result, most of the date juice glucose was completely utilised (residual glucose 1 g/L), and a maximum lactic acid production level (89.2 g/L) was obtained.

**Notes:** Nancib, Aicha Nancib, Nabil Boubendir, Abdelhafid Boudrant, Joseph**URL:** <Go to ISI>://WOS:000360074700035

**Reference Type: Journal Article****Record Number:** 219**Author:** Nehaoua, S. Houamer, S. Dal Cappello, C. Chinoune, M. Galstyan, A. Roy, A. C.**Year:** 2015**Title:** Effect of orthogonalization on total ionization cross sections by electron impact: application to small molecules**Journal:** European Physical Journal D**Volume:** 69**Issue:** 3**Date:** Mar**Short Title:** Effect of orthogonalization on total ionization cross sections by electron impact: application to small molecules**ISSN:** 1434-6060**DOI:** 10.1140/epjd/e2015-60005-0**Article Number:** 86**Accession Number:** WOS:000351866000003

**Abstract:** Total ionization cross sections by electron impact are calculated for H<sub>2</sub>O, NH<sub>3</sub> and CH<sub>4</sub> molecules by using an improved first Born approximation which has been previously applied for atomic targets by Bartlett and Stelbovics [P.L. Bartlett, A.T. Stelbovics, Phys. Rev. A 66, 012707 (2002)]. In this model a full orthogonalization of the final state to the initial state has been performed to evaluate the cross sections. One center wave functions are employed to describe the molecular orbitals. It is shown that the results obtained in the present model are immensely improved when compared with the first Born model without orthogonalization. Furthermore, an overall agreement is also observed when a comparison is made with the experimental data.

**Notes:** Nehaoua, Samra Houamer, Salim Dal Cappello, Claude Chinoune, Mehdi Galstyan, Alexander Roy, Amulya Chandra

**URL:** <Go to ISI>://WOS:000351866000003

**Reference Type: Journal Article****Record Number:** 220**Author:** Nettari, Y. Harmas, M. N. Ieee,**Year:** 2015**Title:** Genetic Algorithm Based Adaptive Fuzzy Terminal Synergetic DC-DC Converter Control**Journal:** 3rd International Conference on Control, Engineering & Information Technology (Ceit 2015)**Short Title:** Genetic Algorithm Based Adaptive Fuzzy Terminal Synergetic DC-DC Converter Control**Accession Number:** WOS:000380433000129

**Abstract:** this paper presents a novel terminal synergetic control for DC-DC buck converters. Since buck converters have high nonlinearity and uncertainty, an indirect adaptive control is developed based on recently developed synergetic control methodology. Fuzzy systems are used in an adaptive scheme to approximate the system using a nonlinear model while synergetic control guarantees robustness and the use of a chatter free continuous control law which makes the controller easy to implement. In addition the controller parameters are optimized using GA approach. Simulation of severe operating conditions of a power system is conducted to validate the effectiveness of the proposed approach while stability is guaranteed via Lyapunov synthesis.

**Notes:** Nettari, Y. Harmas, M. N. International conference on control engineering & information technology (ceit) May 25-27, 2015 Tlemcen, ALGERIA 978-1-4799-8213-4

**URL:** <Go to ISI>://WOS:000380433000129

**Reference Type: Journal Article****Record Number:** 221**Author:** Noufel, K. Bouzid, A. Chelali, N. Zerroual, L.**Year:** 2015**Title:** Electrochemical performance of gamma MnO<sub>2</sub> prepared from the active mass of used batteries**Journal:** Russian Journal of Applied Chemistry**Volume:** 88**Issue:** 10**Pages:** 1711-1717**Date:** Oct**Short Title:** Electrochemical performance of gamma MnO<sub>2</sub> prepared from the active mass of used batteries**ISSN:** 1070-4272**DOI:** 10.1134/s1070427215100249**Accession Number:** WOS:000369256400024

**Abstract:** We prepared MnO<sub>2</sub> by electrolysis of manganese sulfate solution recovered from used batteries and commercial manganese sulfate solution. The comparative study of the two samples using electrochemical techniques in alkaline solution shows that the two samples exhibit the same behavior. From XRD, we identified and indexed both samples by gamma MnO<sub>2</sub> orthorhombic structure. We estimated the proton diffusion coefficient using galvanostatic intermittent titration technique (GITT). Our calculated data are in good agreement with theoretical values for both samples. In addition TG analysis shows the same thermal profile for both samples.

**Notes:** Noufel, K. Bouzid, A. Chelali, N. Zerroual, L.**URL:** <Go to ISI>://WOS:000369256400024

**Reference Type: Journal Article****Record Number:** 222**Author:** Osmani, N. Boucenna, A. Cheriet, A. Ieee,**Year:** 2015**Title:** Neutron irradiation and annealing temperature effects of CZ- Silicon**Journal:** 2015 World Symposium on Mechatronics Engineering & Applied Physics (WSMEAP)**Short Title:** Neutron irradiation and annealing temperature effects of CZ- Silicon**Accession Number:** WOS:000380534500011

**Abstract:** In the present work, we have irradiated p-type CZ-silicon at two different neutron fluences,  $1.98 \times 10^{18}$  and  $3.96 \times 10^{18}$  n/cm<sup>2</sup>. The optical properties and irradiation damage have been investigated using Fourier Transform Infrared spectroscopy (FTIR) and UV-VIS spectrophotometer technique at room temperature. The results show that the density of the vacancy-oxygen complex VO center (830 cm<sup>-1</sup>) increases with increasing neutron fluence. Further, the creation of the divacancy defect (1.8  $\mu$ m) concentration and the near edge absorption was formed after irradiation. The results from annealing indicate that near-edge absorption, VO defects disappear at 550 degrees C. However, another band around 825 cm<sup>-1</sup> was formed at the same temperature. The near-edge absorption and the band of 1.8  $\mu$ m have not been detected at 550 degrees C, and new bands near 1.4 and 1.7  $\mu$ m appeared. It is reasonable to assume that the two bands may be due to the divacancy consisting one or more lithium impurity atoms. The existence of these bands confirms that the transmutation of the boron to the lithium atoms can be attained in the neutron fluences available at the reactor Es Salem. It was concluded that the cluster defects induced by the neutron irradiation can be attributed to the vacancy-rich region which reordered after annealing treatment.

**Notes:** Osmani, Nadjat Boucenna, Ahmed Cheriet, Abdelhak World Symposium on Mechatronics Engineering & Applied Physics Jun 11-13, 2015 Sousse, TUNISIA IEEE Tunisia Sect, IEEE Xplore Digital Lib, Future Technol & Innovation 978-1-4673-6584-0

**URL:** <Go to ISI>://WOS:000380534500011

**Reference Type: Journal Article****Record Number:** 223**Author:** Ouari, K.**Year:** 2015**Title:** Crystal structure of 4-bromo-2-(1H-imidazo 4,5-b pyridin-2-yl) phenol**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** O991-+**Date:** Dec**Short Title:** Crystal structure of 4-bromo-2-(1H-imidazo 4,5-b pyridin-2-yl) phenol**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015022197**Accession Number:** WOS:000370762300085

**Abstract:** In the title compound, C<sub>12</sub>H<sub>8</sub>BrN<sub>3</sub>O, the 4-bromo-phenol ring is coplanar with the planar imidazo[4,5-b]pyridine moiety (r.m.s deviation = 0.015 Å), making a dihedral angle of 1.8 (2) degrees. There is an intra-molecular O-H...N hydrogen bond forming an S(6) ring motif. In the crystal, molecules are linked via N-H...N and O-H...Br hydrogen bonds, forming undulating sheets parallel to (10 (2) over bar). The sheets are linked by pi-pi inter-actions [inter-centroid distance = 3.7680 (17) Å], involving inversion-related molecules, forming a three-dimensional structure.

**Notes:** Ouari, Kamel 12**URL:** <Go to ISI>://WOS:000370762300085

**Reference Type: Journal Article****Record Number:** 224**Author:** Ouari, K. Bendia, S. Weiss, J. Bailly, C.**Year:** 2015**Title:** Spectroscopic, crystal structural and electrochemical studies of zinc(II)-Schiff base complex obtained from 2,3-diaminobenzene and 2-hydroxy naphthaldehyde**Journal:** Spectrochimica Acta Part a-Molecular and Biomolecular Spectroscopy**Volume:** 135**Pages:** 624-631**Date:** Jan**Short Title:** Spectroscopic, crystal structural and electrochemical studies of zinc(II)-Schiff base complex obtained from 2,3-diaminobenzene and 2-hydroxy naphthaldehyde**ISSN:** 1386-1425**DOI:** 10.1016/j.saa.2014.07.034**Accession Number:** WOS:000343337700077**Abstract:** Mononuclear zinc(II) complex, [Zn(II)L], where L is a dianionic ligand, has been synthesized and characterized by elemental analysis, electronic, IR and NMR [<sup>1</sup>H-1, <sup>13</sup>C-13, DEPT, H-1-H-1 COSY, ROESY, HSQC and HMBC] spectroscopic techniques. Structural analysis of the complex by single crystal X-ray crystallography shows the presence of a distorted square planar coordination geometry (NNOO) of the metal center. The crystal of the title complex C<sub>28</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>Zn belongs to the orthorhombic system with space group Pmn2(1).

Electrochemical behavior of the Zn(II)L complex has been investigated by cyclic voltammetry on glassy carbon and platinum electrodes in DMF at 100 mV/s scan rate. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Ouari, Kamel Bendia, Sabrina Weiss, Jean Bailly, Corinne**URL:** <Go to ISI>://WOS:000343337700077

**Reference Type: Journal Article****Record Number:** 225**Author:** Ouari, K. Bendia, S. Merzougui, M. Bailly, C.**Year:** 2015**Title:** 1,1 '-{(Hexane-1,6-diyl)bis (azaniumylylidene)methanylylidene } bis(naphthalen-2-olate)**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** O51-+**Date:** Jan**Short Title:** 1,1 '-{(Hexane-1,6-diyl)bis (azaniumylylidene)methanylylidene } bis(naphthalen-2-olate)**ISSN:** 2056-9890**DOI:** 10.1107/s2056989014027236**Accession Number:** WOS:000369968500040

**Abstract:** The whole molecule of the title Schiff base compound, C<sub>28</sub>H<sub>28</sub>N<sub>2</sub>O<sub>2</sub>, is generated by inversion symmetry. It is formed from two units of ortho-hydroxynaphthaldehyde bridged with 1,6-diaminohexane. The N atoms are protonated and, thus, the structure is a bis-zwitterionic compound in the solid state. The zwitterion shows strong intramolecular N-H center dot center dot center dot O hydrogen bonds between the iminium N and the naphthalenolate O atoms.

**Notes:** Ouari, Kamel Bendia, Sabrina Merzougui, Moufida Bailly, Corinne 1**URL:** <Go to ISI>://WOS:000369968500040

**Reference Type: Journal Article****Record Number:** 226**Author:** Ouari, K. Merzougui, M. Karmazin, L.**Year:** 2015**Title:** Crystal structure of 1,10-{(pentane-1,5-diyl)bis (azaniumylidene)methanylylidene }bis(napht halen-2-olate)**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** 1010-+**Date:** Sep**Short Title:** Crystal structure of 1,10-{(pentane-1,5-diyl)bis (azaniumylidene)methanylylidene }bis(napht halen-2-olate)**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015014437**Accession Number:** WOS:000370079100052**Abstract:** The whole molecule of the title compound, C<sub>27</sub>H<sub>26</sub>N<sub>2</sub>O<sub>2</sub>, is generated by twofold rotational symmetry, with the central C atom of the pentyl chain located on the twofold rotation axis. The compound crystallizes as a bis- zwitterion, and there are two intramolecular N-H center dot center dot center dot O hydrogen bonds generating S(6) ring motifs. In the crystal, molecules are linked by pairs of C-H center dot center dot center dot O hydrogen bonds, forming ribbons propagating along [001], and enclosing R-2(2) (22) ring motifs.**Notes:** Ouari, Kamel Merzougui, Moufida Karmazin, Lydia 9**URL:** <Go to ISI>://WOS:000370079100052

**Reference Type: Journal Article****Record Number:** 227**Author:** Ouari, K. Merzougui, M. Bendia, S. Bailly, C.**Year:** 2015**Title:** Crystal structure of 1,1' -{(dodecane-1,12-diyl)bis (azaniumylidene)methanylylidene }bis(naphth alen-2-olate)**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** O351-+**Date:** May**Short Title:** Crystal structure of 1,1' -{(dodecane-1,12-diyl)bis (azaniumylidene)methanylylidene }bis(naphth alen-2-olate)**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015007938**Accession Number:** WOS:000369977900061**Abstract:** The title compound, C<sub>34</sub>H<sub>40</sub>N<sub>2</sub>O<sub>2</sub>, exists in an extended conformation and has crystallographically imposed centrosymmetry. The crystal packing can be described as being composed of parallel layers stacked along [010]. The zwitterionic structure is stabilized by an intramolecular N-H center dot center dot center dot O hydrogen-bond interaction.**Notes:** Ouari, Kamel Merzougui, Moufida Bendia, Sabrina Bailly, Corinne 5**URL:** <Go to ISI>://WOS:000369977900061

**Reference Type: Journal Article****Record Number:** 228**Author:** Ouennoughi, Z. Toumi, S. Weiss, R.**Year:** 2015**Title:** Study of barrier inhomogeneities using I-V-T characteristics of Mo/4H Schottky diode**Journal:** Physica B-Condensed Matter**Volume:** 456**Pages:** 176-181**Date:** Jan**Short Title:** Study of barrier inhomogeneities using I-V-T characteristics of Mo/4H Schottky diode**ISSN:** 0921-4526**DOI:** 10.1016/j.physb.2014.08.031**Accession Number:** WOS:000346841200032

**Abstract:** In the present work we investigate the forward current voltage (I-V) characteristics, over a wide temperature range 298-498 K, of Mo/4H-SiC Schottky diode for which aluminum ion implantation was used to create the high resistivity layer forming the guard ring. The (I-V) analysis based on Thermionic Emission (TE) theory shows a decrease of the barrier height  $\phi(B)$  and an increase of the ideality factor  $n$  when the temperature decreases. These anomalies are mainly due to the barrier height inhomogeneities at the metal/semiconductor interlace as we get a Gaussian distribution of the barrier heights when we plot the apparent barrier height  $\phi(ap)$  versus  $q/2kT$ . The mean barrier height and the standard deviation obtained values are  $(\phi) \text{ over bar } (B0) = 1.160 \text{ eV}$  and  $(\sigma(0) = 88.049 \text{ mV}$ , respectively. However, by means of the modified Richardson plot  $\ln(I-s/T^2)-(q(2)/\sigma(2)(0)/2k(2)T(2)$  versus  $q/kT$ , the mean barrier height and the Richardson constant values obtained are  $(\phi) \text{ over bar } (B0) = 1.139 \text{ eV}$  and  $A^* = 129.425 \text{ A/cm}^2 \text{ K}^{-2}$ , respectively. The latter value of  $(\phi) \text{ over bar } (B0)$  matches very well with the mean barrier height obtained from the plot of  $\phi(ap)$  versus  $q/2kT$ . The Richardson constant is much closer to the theoretical value of  $146 \text{ A/cm}^2 \text{ K}^{-2}$ . The series resistance  $R-s$  is also estimated from the forward current-voltage characteristics of Mo/4H-SiC Schottky contact. This parameter shows strong temperature dependence. The T-0 effect is validated for the 298-498 K temperature range for the used Schottky diode and provides a clear evidence for the barrier inhomogeneity at the Mo/4H-SiC interface. Finally, we note the impact of the implantation process as well as the choice of the used ion on the characterized parameters of the Schottky contact. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Ouennoughi, Z. Toumi, S. Weiss, R.**URL:** <Go to ISI>://WOS:000346841200032

**Reference Type: Journal Article****Record Number:** 229**Author:** Ourari, A. Aggoun, D.**Year:** 2015**Title:** Synthesis and spectral analysis of N-substituted pyrrole salicylaldehyde derivatives-electropolymerization of a new nickel(II)-Schiff base complex derived from 6- 3'-N-pyrrolpropoxy -2-hydroxyacetophenone and 1,2-diaminoethane**Journal:** Journal of the Iranian Chemical Society**Volume:** 12**Issue:** 11**Pages:** 1893-1904**Date:** Nov**Short Title:** Synthesis and spectral analysis of N-substituted pyrrole salicylaldehyde derivatives-electropolymerization of a new nickel(II)-Schiff base complex derived from 6- 3'-N-pyrrolpropoxy -2-hydroxyacetophenone and 1,2-diaminoethane**ISSN:** 1735-207X**DOI:** 10.1007/s13738-015-0664-2**Accession Number:** WOS:000361768700001

**Abstract:** Three dihydroxylated acetophenone derivatives 2,6-(1a), 2,5-(2a), and 2,4-dihydroxyacetophenone (3a) were O-monoalkylated at moderate temperature (50 A degrees C) using 3-bromopropyl-N-pyrrole. These monomers 6-(3'-N-pyrrolpropoxy)-2-hydroxyacetophenone (1b), 5-(3'-N-pyrrolpropoxy)-2-hydroxyacetophenone (2b), and 4-(3'-N-pyrrolpropoxy)-2-hydroxy acetophenone (3b) were isolated with acceptable yields (59-70 %). Their characterization was carried out with usual spectroscopic methods such as UV-vis, FTIR, (NMRH)-H-1, C-13, Dept135, and elemental analysis. These pyrrolic compounds were deliberately chosen as electropolymerizable monomers to elaborate poly(pyrrole) films containing metallic centers useful as redox mediators covalently grafted on the surfaces of modified electrodes. Accordingly, we have initiated the synthesis of an original pyrrole-Ni(II)-Schiff base complex derived from 2,6-(1b) and 1,2-diaminoethane. This pyrrolic complex was electropolymerized onto glassy carbon (GC), platinum disk (Pt), and indium tin oxide (ITO) electrode surfaces. This electropolymerization was performed in acetonitrile via anodic oxidation of pyrrolic moieties by cyclic voltammetry. The efficiency of the electrochemical polymerization was investigated as a function of several parameters such as the nature of the electrode material, the number of voltammetric scans, and the scan rate dependence. The electrodeposited poly(pyrrole) films onto ITO surface was characterized by X-ray diffraction (XRD) and atomic force microscopy (AFM). This poly(pyrrole) matrix, containing metallic centers, was found to have good catalytic properties towards the reduction of iodobenzene and carbon dioxide CO<sub>2</sub>.

**Notes:** Ourari, Ali Aggoun, Djouhra**URL:** <Go to ISI>://WOS:000361768700001

**Reference Type: Journal Article****Record Number:** 230**Author:** Ourari, A. Derafa, W. Aggoun, D.**Year:** 2015**Title:** A novel copper(II) complex with an unsymmetrical tridentate-Schiff base: synthesis, crystal structure, electrochemical, morphological and electrocatalytic behaviors toward electroreduction of alkyl and aryl halides**Journal:** Rsc Advances**Volume:** 5**Issue:** 101**Pages:** 82894-82905**Short Title:** A novel copper(II) complex with an unsymmetrical tridentate-Schiff base: synthesis, crystal structure, electrochemical, morphological and electrocatalytic behaviors toward electroreduction of alkyl and aryl halides**ISSN:** 2046-2069**DOI:** 10.1039/c5ra10819e**Accession Number:** WOS:000362438300035

**Abstract:** This work describes the synthesis of a new unsymmetrical tetradentate copper(II) Schiff base complex  $\text{Cu(L)(Py)(ClO}_4\text{)}$  containing N3O donor atoms. The tridentate ligand (HL) has been prepared by condensation of dehydroacetic acid on 1,2-diaminopropane in methanol. The reaction of the ligand with an appropriate amount of copper(II) perchlorate hexahydrate (1 : 1 ratio) in the same solvent and in the presence of an excess of pyridine (Py) yields the title compound. The tridentate ligand (HL) with pyridine act as mixed ligands where three nitrogen and an enolic oxygen atoms were chelated to the copper centre. This complex has been fully characterized by FT-IR, UV-Vis spectrophotometry, and cyclic voltammetry. Single crystal X-ray diffraction of this complex showed that the copper ion was coordinated by one ligand, one pyridine molecule with one perchlorate anion in a square pyramidal geometry. The  $\text{Cu(L)(Py)(ClO}_4\text{)}$  complex crystallizes in an orthorhombic system, space group of (P) over bar cab with  $a = 11.051$ ,  $b = 15.58$ ,  $c = 21.736$  angstrom and  $Z = 8$ . The electrochemical reduction of the copper(II) complex, in N,N-dimethylformamide (DMF) solvent using cyclic voltammetry, produces conducting polymeric films on different electrode substrates, such as glassy carbon (GC), indium tin oxide (ITO) and fluorine tin oxide (FTO). The catalytic activity of this complex in homogeneous and heterogeneous electrocatalytic media seems to be efficient for the electroreduction of bromocyclopentane and iodobenzene.

**Notes:** Ourari, Ali Derafa, Wassila Aggoun, Djouhra**URL:** <Go to ISI>://WOS:000362438300035

**Reference Type: Journal Article****Record Number:** 231**Author:** Ourari, A. Messali, S. Bouzerafa, B. Ouennoughi, Y. Aggoun, D. Mubarak, M. S. Strawsine, L. M. Peters, D. G.**Year:** 2015**Title:** Synthesis, characterization, and electrochemical behavior of a cobalt(II) salen-like complex**Journal:** Polyhedron**Volume:** 97**Pages:** 197-201**Date:** Sep**Short Title:** Synthesis, characterization, and electrochemical behavior of a cobalt(II) salen-like complex**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2015.05.025**Accession Number:** WOS:000361778700022

**Abstract:** A new tetradentate cobalt(II)-Schiff base complex has been synthesized via the reaction of the ligand 2,2'4'((1E,1'E)-(ethane-1,2-diylbis(azanylylidene))bis(ethan-1-yl-1-ylidene))bis(4-((methyl(phenyl)amino)-methyl)phenol) with a stoichiometric amount of cobalt(II) acetate tetrahydrate in absolute ethanol. This cobalt(II) complex has been characterized with the aid of several spectroscopic techniques (FT-IR, UV-Vis, and mass spectrometry) as well as by thermal (TGA and DTA) and elemental analysis. Cyclic voltammetry has been employed to examine the redox behavior of the cobalt(II) complex in dimethylformamide (DMF) containing 0.10 M tetra-n-butylammonium tetrafluoroborate (TBABF(4)). In addition, the electrogenerated cobalt(I) form of the complex has been (a) employed as a catalyst for the reduction of 1-iododecane and (b) compared with the behavior of cobalt(I) salen. Finally, the cobalt(II) complex has been subjected to anodic electropolymerization onto the surface of a glassy carbon electrode in DMF containing 0.10 M tetra-n-butylammonium perchlorate (TBAP). (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Ourari, Ali Messali, Salima Bouzerafa, Brahim Ouennoughi, Yasmina Aggoun, Djouhra Mubarak, Mohammad S. Strawsine, Lauren M. Peters, Dennis G.

**URL:** <Go to ISI>://WOS:000361778700022

**Reference Type: Journal Article****Record Number:** 232**Author:** Ourari, A. Nora, H. Noureddine, C. Djouhra, A.**Year:** 2015**Title:** Elaboration of new electrodes with carbon paste containing polystyrene functionalized by pentadentate nickel(II)-Schiff base complex - Application to the electrooxidation reaction of methanol and its aliphatic analogs**Journal:** Electrochimica Acta**Volume:** 170**Pages:** 311-320**Date:** Jul**Short Title:** Elaboration of new electrodes with carbon paste containing polystyrene functionalized by pentadentate nickel(II)-Schiff base complex - Application to the electrooxidation reaction of methanol and its aliphatic analogs**ISSN:** 0013-4686**DOI:** 10.1016/j.electacta.2015.02.154**Accession Number:** WOS:000355636100038

**Abstract:** Polystyrene functionalized by a Schiff base ligand as N,N'-bis(salicylidenepropylene triamine)-N-para-aminomethylpolystyrene was synthesized from poly(4-chloromethylstyrene) and Schiff base ligand N, N'-bisalicylidenepropylenetriamine. Coordinated with nickel ion, this polystyrene Schiff base gives the expected nickel complex. The modified electrodes obtained from graphite paste and nickel complex covalently grafted onto the polystyrene were prepared in a ratio 70: 30 wt%. Its voltammogram, recorded in alkaline solution, showed a well-defined redox process corresponding to Ni(II)/Ni(III) redox couple. This modified graphite paste electrode showed a good stability. The electrocatalytic activity of the oxidation reaction of some aliphatic alcohols has been studied by cyclic voltammetry with various concentrations and different scan rates. Thus, these electrodes revealed good electrocatalytic activity towards methanol, ethanol and isopropanol alcohols showing that the oxidation current peak increases linearly with alcohol concentration. However, the electrocatalytic current decreases with the increase of the length of the aliphatic chain as expressed by the following sequence:  $i(\text{cata}) (\text{methanol}) > i(\text{cata}) (\text{ethanol}) > i(\text{cata}) (\text{isopropanol})$ . (C) 2015 Published by Elsevier Ltd.

**Notes:** Ourari, Ali Nora, Hellal Noureddine, Charef Djouhra, Aggoun**URL:** <Go to ISI>://WOS:000355636100038

**Reference Type: Journal Article****Record Number:** 233**Author:** Ourari, A. Zoubeidi, C. Bouacida, S. Derafa, W. Merazig, H.**Year:** 2015**Title:** Crystal structure of bis(2-{ (3-bromopropyl)imino methyl}phenolato-kappa N-2,O)-copper(II)**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** M33-+**Date:** Feb**Short Title:** Crystal structure of bis(2-{ (3-bromopropyl)imino methyl}phenolato-kappa N-2,O)-copper(II)**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015001309**Accession Number:** WOS:000369971500010

**Abstract:** In the title compound, [Cu(C<sub>10</sub>H<sub>11</sub>BrNO)(2)], the asymmetric unit consists of one-half of the molecule, the other half being generated by an inversion centre. Hence the Cu-II cation is symmetrically coordinated by two bidentate Schiff base anions in a slightly distorted square-planar environment with Cu-O and Cu-N bond lengths of 1.8786 (19) and 2.009 (2) angstrom, respectively. In the crystal, individual molecules are packed in alternating zigzag layers parallel to (001). Weak C-H center dot center dot center dot pi interactions exist between the molecules.

**Notes:** Ourari, Ali Zoubeidi, Chahinaz Bouacida, Sofiane Derafa, Wassila Merazig, Hocine 2**URL:** <Go to ISI>://WOS:000369971500010

**Reference Type: Journal Article****Record Number:** 234**Author:** Pelletier, F. Saffidine, R. Bensalem, N.**Year:** 2015**Title:** Mobius transformations and the configuration space of a Hilbert snake**Journal:** Bulletin Des Sciences Mathematiques**Volume:** 139**Issue:** 8**Pages:** 847-879**Date:** Dec**Short Title:** Mobius transformations and the configuration space of a Hilbert snake**ISSN:** 0007-4497**DOI:** 10.1016/j.bulsci.2014.12.006**Accession Number:** WOS:000367499900001

**Abstract:** The purpose of this paper is to give a simpler proof to the problem of controllability of a Hilbert snake [13]. Using the action of the Mobius group of the unite sphere on the configuration space, in the context of a separable Hilbert space, we give a generalization of the theorem of accessibility contained in [9] and [14] for articulated arms and snakes in a finite dimensional Hilbert space. (C) 2014 Elsevier Masson SAS. All rights reserved.

**Notes:** Pelletier, F. Saffidine, R. Bensalem, N.**URL:** <Go to ISI>://WOS:000367499900001

**Reference Type: Journal Article****Record Number:** 235**Author:** Radjai, T. Gaubert, J. P. Rahmani, L. Mekhilef, S.**Year:** 2015**Title:** Experimental verification of P&O MPPT algorithm with direct control based on Fuzzy logic control using CUK converter**Journal:** International Transactions on Electrical Energy Systems**Volume:** 25**Issue:** 12**Pages:** 3492-3508**Date:** Dec**Short Title:** Experimental verification of P&O MPPT algorithm with direct control based on Fuzzy logic control using CUK converter**ISSN:** 2050-7038**DOI:** 10.1002/etep.2047**Accession Number:** WOS:000367676900017

**Abstract:** The choice and design of a high efficient maximum power point tracking (MPPT) algorithm is a necessity in the PV system design. Many approaches have been proposed in literature, among them, the methods that are based on perturb and observe (P&O), widely used in commercial products due their simplicity and ease of implementation. In this paper, a new modified P&O (MPPT) method with adaptive duty cycle step size using fuzzy logic controller is proposed. Both, simulation and experimental design are provided in several aspects. The proposed and classical methods are developed and tested successfully using a CUKDC-DC converter, which is connected to a SunTech STP085B model. The proposed method is able to improve the dynamic response and steady-state performance of the PV systems simultaneously and effectively. In addition, analysis and comparison with the conventional fixed step size P&O have been presented. Copyright (C) 2015 John Wiley & Sons, Ltd.

**Notes:** Radjai, Tawfik Gaubert, Jean Paul Rahmani, Lazhar Mekhilef, Saad**URL:** <Go to ISI>://WOS:000367676900017

**Reference Type: Journal Article****Record Number:** 236**Author:** Renaud, L. Selloum, D. Tingry, S.**Year:** 2015**Title:** Xurography for 2D and multi-level glucose/O-2 microfluidic biofuel cell**Journal:** Microfluidics and Nanofluidics**Volume:** 18**Issue:** 5-6**Pages:** 1407-1416**Date:** May**Short Title:** Xurography for 2D and multi-level glucose/O-2 microfluidic biofuel cell**ISSN:** 1613-4982**DOI:** 10.1007/s10404-014-1539-z**Accession Number:** WOS:000353819900060

**Abstract:** This work reports on a simple and original method for constructing a multi-level microfluidic biofuel cell (BFC) by using the xurography technique. Microfluidic BFCs have attractive properties for converting chemical energy into electrical energy via specific enzymes as catalysts and are now considered as microsources able to supply power for portable electronic systems. As a proof-of-concept demonstration, we construct 2D and multi-level microfluidic BFCs that consist of an array of microchannels and gold electrodes designed in series or parallel configuration, and we demonstrate its operation from glucose and oxygen solutions. The fabrication process of the multi-level microfluidic device involves the stacking of alternating layers of double-sided adhesive tape and transparent sheets patterned with holes to provide connections between the channels. This process of stacking provides a reproducible method for building devices with a distribution of the fluids both vertically and laterally without mixing. The efficiency of the multi-level microfluidic device is confirmed in the presence of the enzymes laccase and glucose oxidase in solution. The proposed technique offers an alternative to construct microfluidic BFCs that deliver power output in a minimum volume, favorable to scale-up the manufacture of compact micropower sources.

**Notes:** Renaud, Louis Selloum, Djamel Tingry, Sophie**URL:** <Go to ISI>://WOS:000353819900060

**Reference Type: Journal Article****Record Number:** 237**Author:** Rouag, N. Ouennoughi, Z. Rommel, M. Murakami, K. Frey, L.**Year:** 2015**Title:** Current conduction mechanism of MIS devices using multidimensional minimization system program**Journal:** Microelectronics Reliability**Volume:** 55**Issue:** 7**Pages:** 1028-1034**Date:** Jun**Short Title:** Current conduction mechanism of MIS devices using multidimensional minimization system program**ISSN:** 0026-2714**DOI:** 10.1016/j.microrel.2015.05.001**Accession Number:** WOS:000356983900002

**Abstract:** The present work presents an evaluation approach which enables the in-depth analysis of current voltage (I-V) characteristics of MIS devices to determine their current transport mechanisms using a multidimensional minimization system program. Exemplarily, the current transport mechanisms were determined for a TiN/SiO<sub>2</sub>/p-Si MOS and a TaN/HfSiO/SiO<sub>2</sub>/p-Si MIS structure by fitting the analytical expressions for different current transport mechanisms to experimental I-V data in a wide range of applied biases and temperatures. The considered mechanisms for the investigated samples include temperature dependent Fowler-Nordheim (FN) tunneling and Poole-Frenkel (PF) emission as well as ohmic conduction. The presented approach can easily be extended to account for additional mechanisms such as trap assisted tunneling (TAT) if relevant for different samples. In contrast to typical extraction procedures which determine current conduction mechanism parameters sequentially, in this work, the adjustable fit parameters are extracted in a single operation using the Levenberg-Marquardt algorithm (Nash, 1990) to obtain a least-square fit of the model to measured I-V characteristics. Thus, simultaneously occurring current mechanisms can properly be evaluated which allows to determine the fraction of each conduction mechanism quantitatively for each voltage. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Rouag, N. Ouennoughi, Z. Rommel, M. Murakami, K. Frey, L.**URL:** <Go to ISI>://WOS:000356983900002

**Reference Type: Journal Article****Record Number:** 238**Author:** Rouibah, T. Bayadi, A. Kerroum, K.**Year:** 2015**Title:** Accelerating the frequency-domain response calculation of complex grounding system using wavelet based MBPE technique**Journal:** Electric Power Systems Research**Volume:** 121**Pages:** 287-294**Date:** Apr**Short Title:** Accelerating the frequency-domain response calculation of complex grounding system using wavelet based MBPE technique**ISSN:** 0378-7796**DOI:** 10.1016/j.epsr.2014.11.014**Accession Number:** WOS:000349739500031

**Abstract:** The transient response of grounding systems is essential for their designs and related electromagnetic compatibility problems in power systems. Although the method of moments (MoM) is a popular way to analyze the responses of grounding systems, it is prohibitively slow. In this paper, the model-based parameter estimation (MBPE) technique and wavelet matrix transform (WMT) are combined and applied to the method of moments (MOM). It is expanded on two-steps technique to accelerate solution of electric field integral equations (EFIE). In a first step, the WMT is used to get a sparse matrix equation in wavelet-domain. Then in a second step, the adaptive model-based parameter estimation is used to reduce the number of frequency-domain calculation points required for the evaluation of space time current distribution along a grounding grid. The accuracy of the proposed model is confirmed by comparing the simulation results of several case studies with those obtained using the direct MoM method combined with inverse fast Fourier transform (IFFT). It is shown that considerable computation efficiency is achieved in terms of CPU time without losing accuracy. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Rouibah, Tahar Bayadi, Abdelhafid Kerroum, Kamal**URL:** <Go to ISI>://WOS:000349739500031

**Reference Type: Journal Article****Record Number:** 239**Author:** Saib, S. Gherbi, A. Ieee,**Year:** 2015**Title:** Simulation and Control of hybrid renewable energy system connected to the grid**Journal:** 2015 5th International Youth Conference on Energy (Iyce)**Short Title:** Simulation and Control of hybrid renewable energy system connected to the grid**Accession Number:** WOS:000381549900090

**Abstract:** This paper presents a control and simulation of hybrid renewable energy system connected to the grid. The studied system includes a photovoltaic panel, synchronous permanent magnet generator based wind turbine, and a battery for storage energy. The PV array and wind systems are connected to the common DC bus by a boost converter. The battery is connected by a bi-directional DC/DC converter, and then integrated into the AC utility grid via a common DC/AC inverter. In order to extract the maximum energy, a simulation study has been carried out according to the meteorological conditions (wind speed and variable solar irradiance) while maintaining power quality at a satisfactory level. In order to capture the maximum power, a MPPT algorithm is applied for both wind turbine and photovoltaic panel. The modeling and simulation of the whole system has been performed under Matlab/Simulink environment. The obtained results show that the current and the voltage of grid side are sinusoidal and alternative forms, and the power injected to the grid is around the power produced by the hybrid system.

**Notes:** Saib, S. Gherbi, A. 5th International Youth Conference on Energy (IYCE) May 27-30, 2015 Pisa, ITALY N I N E, Student Assoc Energy 978-1-4673-7172-8

**URL:** <Go to ISI>://WOS:000381549900090

**Reference Type: Journal Article****Record Number:** 240**Author:** Said, H. A. Nouri, H. Zebboudj, Y.**Year:** 2015**Title:** Effect of air flow on corona discharge in wire-to-plate electrostatic precipitator**Journal:** Journal of Electrostatics**Volume:** 73**Pages:** 19-25**Date:** Feb**Short Title:** Effect of air flow on corona discharge in wire-to-plate electrostatic precipitator**ISSN:** 0304-3886**DOI:** 10.1016/j.elstat.2014.10.004**Accession Number:** WOS:000348086300004

**Abstract:** This paper analyses corona discharge in ambient air with laboratory-scaled wire-to-plate electrostatic precipitator (WPESP). The electric field is behind the electro hydrodynamic (EHD) flow in air. Its measurements provide complementary results for the corona discharge study because the classical theory based on the current and voltage data is unsatisfactory. Taking into account the dynamic air flow velocity is perpendicular to the active wires, measurement method of the positive and negative DC corona current density and electric field, has been introduced. It has been shown also that the dynamic air flow velocity modifies the current density and the electric field distributions on the planes surfaces of the WPESP. (C) 2014 Elsevier B.V. All rights reserved.

**Notes:** Said, H. Ait Nouri, H. Zebboudj, Y.**URL:** <Go to ISI>://WOS:000348086300004

**Reference Type: Journal Article**

**Record Number: 241**

**Author: Said, M.**

**Year: 2015**

**Title: PRECISION INSPECTION OF FLATNESS BY MOIRE INTERFEROMETRY**

**Journal: M2d2015: Proceedings of the 6th International Conference on Mechanics and Materials in Design**

**Pages: 1121-1122**

**Short Title: PRECISION INSPECTION OF FLATNESS BY MOIRE INTERFEROMETRY**

**Accession Number: WOS:000378595500200**

**Abstract:** The automation, speed and precision in the quality control of surface shape require the development of control methods suitable for this purpose. The technique proposed in this paper provides a quality control components surface flatness by non-destructive and contactless way, with high resolution and increased sensitivity. The control is done in real time and instantaneously on all inspected surface. The accuracy of components geometry is the one of parameters which influences precision of the function.

**Notes:** Said, Meguellati Gomes, JFS Meguid, SA 6th International Conference on Mechanics and Materials in Design (M2D) Jul 26-30, 2015 P Delgada, PORTUGAL Univ Porto, Unit Toronto, Univ Azores, Univ Porto, Faculdade Engr, Univ Toronto, Mech & Aerosp Design Lab, Univ Azores, DCDT, Governo Reg Acores, Portuguese Assoc Experimental Mech, European Soc Experimental Mech, Amer Soc Experimental Mech, British Soc Strain Measurement, Japanese Soc Mech Engr, Int Measurement Confederat, Assoc Francaise Mecanique, European Assoc Dynam Mat, Inst Engr Mecanica Gestao Ind, Laboratorio Biomecanica Porto, Fundacao Ciencia Tecnologia, Profess Congress Org 978-989-98832-3-9

**URL:** <Go to ISI>://WOS:000378595500200

**Reference Type: Journal Article****Record Number:** 242**Author:** Saker, S. Aliouane, N. Hammache, H. Chafaa, S. Bouet, G.**Year:** 2015**Title:** Tetraphosphonic acid as eco-friendly corrosion inhibitor on carbon steel in 3 % NaCl aqueous solution**Journal:** Ionics**Volume:** 21**Issue:** 7**Pages:** 2079-2090**Date:** Jul**Short Title:** Tetraphosphonic acid as eco-friendly corrosion inhibitor on carbon steel in 3 % NaCl aqueous solution**ISSN:** 0947-7047**DOI:** 10.1007/s11581-015-1377-3**Accession Number:** WOS:000356724600032

**Abstract:** The inhibition activity of a new tetraphosphonic acid (TPA), 2-hydroxy-5-[4-hydroxy-3,5-bis(phosphonomethyl) benzyl]-3-(phosphonomethyl) benzylphosphonic acid, for carbon steel in aerated 3 % NaCl solution, at 1000 rpm, was investigated using open circuit potential (OCP), potentiodynamic polarizations, and electrochemical impedance spectroscopy (EIS) to evaluate the TPA inhibition efficiency. The steel surface was also examined by SEM observations and energy-dispersive X-ray (EDX) analysis. The inhibition efficiency increased with TPA increasing concentration up to  $10^{-3}$  mol L<sup>-1</sup> where the highest inhibition efficiency (88 %) was obtained. The thermodynamic parameters-adsorption equilibrium constant, standard free energy, and activation energy-were calculated to determine the corrosion inhibition mechanism. Results from potentiodynamic polarization and electrochemical impedance spectroscopy revealed the mode of inhibitive action and adsorption of inhibitor molecules. Further, surface morphological examination supports the protective film formation by TPA on carbon steel surface. Inhibitor adsorption was spontaneous ( $\Delta G < 0$ ), supported the physical/chemical adsorption mechanism, and obeyed to the Langmuir adsorption isotherm.

**Notes:** Saker, S. Aliouane, N. Hammache, H. Chafaa, S. Bouet, G.**URL:** <Go to ISI>://WOS:000356724600032

**Reference Type: Journal Article****Record Number:** 243**Author:** Salim, B. Sorya, N.**Year:** 2015**Title:** EFFECTS OF CHEMICAL TREATMENTS ON THE STRUCTURAL, MECHANICAL AND MORPHOLOGICAL PROPERTIES OF POLY(VINYL CHLORIDE)/Spartium junceum FIBER COMPOSITES**Journal:** Cellulose Chemistry and Technology**Volume:** 49**Issue:** 3-4**Pages:** 375-385**Date:** Mar-Apr**Short Title:** EFFECTS OF CHEMICAL TREATMENTS ON THE STRUCTURAL, MECHANICAL AND MORPHOLOGICAL PROPERTIES OF POLY(VINYL CHLORIDE)/Spartium junceum FIBER COMPOSITES**ISSN:** 0576-9787**Accession Number:** WOS:000355159600015

**Abstract:** This study investigates the effects of surface treatments by sodium hydroxide (NaOH) and vinyltrimethoxysilane (VTMS) of Spartium junceum (SJ) fibers on the structural and physical properties of Spartium junceum fibers. Si fibers were characterized by Fourier Transform Infrared (FTIR) spectroscopy, X-ray diffraction (XRD) and optical microscopy. FTIR was performed to see the extent of chemical modification of the fibers, the results obtained from XRD indicated an improvement in the crystallinity index of the Si fibers by treatments. The effects of the treatments on the properties of the prepared SJ fiber reinforced poly(vinyl chloride) (PVC) composites were investigated. Also, the treatments improved notably the mechanical properties of the composites. The observations by scanning electron microscopy (SEM) of fracture surfaces of PVC/SJ composites showed more intimate contact between fibers and PVC matrix after surface modification.

**Notes:** Salim, Bouhank Sorya, Nekkaa**URL:** <Go to ISI>://WOS:000355159600015

**Reference Type: Journal Article**

**Record Number: 244**

**Author: Samia, K. Djamel, B.**

**Year: 2015**

**Title: A RELAXED LOGARITHMIC BARRIER METHOD FOR SEMIDEFINITE PROGRAMMING**

**Journal: Rairo-Operations Research**

**Volume: 49**

**Issue: 3**

**Pages: 555-568**

**Date: Jul-Sep**

**Short Title: A RELAXED LOGARITHMIC BARRIER METHOD FOR SEMIDEFINITE PROGRAMMING**

**ISSN: 0399-0559**

**DOI: 10.1051/ro/2014055**

**Accession Number: WOS:000354292300007**

**Abstract:** Interior point methods applied to optimization problems have known a remarkable evolution in the last decades. They are used with success in linear, quadratic and semidefinite programming. Among these methods, primal-dual central trajectory methods have a polynomial convergence and are credited of a good numerical behavior. In this paper, we propose a new central trajectory method where a relaxation parameter is introduced in order to give more flexibility to the theoretical and numerical aspects of the perturbed problems and accelerate the convergence of the algorithm. This claim is confirmed by numerical tests showing the good behavior of the algorithm which is proposed in this paper.

**Notes: Samia, Kettab Djamel, Benterki**

**URL: <Go to ISI>://WOS:000354292300007**

**Reference Type: Journal Article****Record Number:** 245**Author:** Sebehi, N. Bouamama, K. Djemia, P. Kassali, K.**Year:** 2015**Title:** Structural and elastic properties of ternary silicides ScTSi (T=Co, Ni, Cu, Ru, Rh, Pd, Ir, Pt) and of the equiatomic intermetallic compounds YTX (T=Ni, Ir and X=Si, Ge, Sn, Pb)**Journal:** Physica Status Solidi B-Basic Solid State Physics**Volume:** 252**Issue:** 12**Pages:** 2769-2777**Date:** Dec**Short Title:** Structural and elastic properties of ternary silicides ScTSi (T=Co, Ni, Cu, Ru, Rh, Pd, Ir, Pt) and of the equiatomic intermetallic compounds YTX (T=Ni, Ir and X=Si, Ge, Sn, Pb)**ISSN:** 0370-1972**DOI:** 10.1002/pssb.201552291**Accession Number:** WOS:000366015300020

**Abstract:** ScTSi (T=Co, Ni, Cu, Ru, Rh, Pd, Ir, Pt) and of the equiatomic intermetallic YTX (T=Ni, Ir; X=Si, Ge, Sn, Pb) are studied using the density-functional theory considering the ortho-rhombic TiNiSi crystal structure with space group Pnma. From the calculated formation energy, we obtained the following stability order of: ScCuSi < ScCoSi < ScRuSi < ScNiSi < ScPdSi < ScRhSi < ScIrSi < ScPtSi and YNiPb < YNiSn < YNiGe < YNiSi < YIrSn < YIrGe < YIrPb < YIrSi. The lattice parameters and atomic positions are in good agreement with experiments to similar to 1%. All the alloys are mechanically stable using the Born elastic stability criteria. Ductile behavior inferred from the Pugh ratio, shear over bulk modulus G/B, and the Cauchy pressure, could be observed only for ScTSi (T=Ru, Pd, Pt) and YNiSn compounds and moderately for YIrX (Si, Ge, and Sn) and YNiPb. On the contrary, ScTSi (T=Co, Ni, Cu, Rh, Ir), YNiGe, and YNiSi compounds are covalent or exhibit G/Bn > 0.5, leading to a brittle behavior in accordance with the Poisson ratio value. The Zener anisotropy factor is different from 1, indicating that these compounds are elastically anisotropic materials. A strong correlation is found between G and the Young's modulus E, slightly above G similar to (3/8) E widely found for polycrystalline metals. [GRAPHICS] Correlation trend between the Young's modulus E and the shear modulus G of intermetallic compounds. (C) 2015 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

**Notes:** Sebehi, N. Bouamama, Kh. Djemia, Ph. Kassali, K.**URL:** <Go to ISI>://WOS:000366015300020

**Reference Type: Journal Article****Record Number:** 246**Author:** Sedrati, C. Bouabellou, A. Derafa, A. Boudissa, M. Benazzouz, C. Hammoudi, A.**Year:** 2015**Title:** Formation of  $(\text{Co}_x\text{Ni}_{1-x})\text{Si}_2$  ternary silicide by thermal annealing of evaporated Co/Ni thin films on Si substrate**Journal:** Vacuum**Volume:** 117**Pages:** 4-7**Date:** Jul**Short Title:** Formation of  $(\text{Co}_x\text{Ni}_{1-x})\text{Si}_2$  ternary silicide by thermal annealing of evaporated Co/Ni thin films on Si substrate**ISSN:** 0042-207X**DOI:** 10.1016/j.vacuum.2015.03.031**Accession Number:** WOS:000356114500002

**Abstract:** In this work, we studied the formation and the thermal stability of a ternary silicide  $(\text{Co}_x\text{Ni}_{1-x})\text{Si}_2$ , obtained by thermal annealing. Ni and Co thin films were deposited on Si(100) substrate. The performed annealing of 30 nm-Co/15 nm-Ni/Si(100) samples is carried out by means of a conventional furnace during 20 min and a temperature range 300-800 degrees C. The obtained specimens were investigated using X-ray diffraction (XRD), Raman spectroscopy and Rutherford backscattering spectroscopy (RBS). XRD data showed that the formation temperature of the ternary  $(\text{Co}_x\text{Ni}_{1-x})\text{Si}_2$  phase was relatively lower compared with those of the  $\text{NiSi}_2$  and  $\text{CoSi}_2$  disilicides and it maintained its sheet resistance below 4.5  $\Omega/\text{sq}$ . Furthermore, the formation of this ternary silicide was confirmed by a shift in peaks position in the Raman spectra toward the lowest wavenumbers when the temperature is increased up to 500 degrees C. RBS results indicated that the thickness of the formed  $(\text{Co}_x\text{Ni}_{1-x})\text{Si}_2$  layer was approximately 28-52 nm. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Sedrati, Charafeddine Bouabellou, Abderrahmane Derafa, Achour Boudissa, Mokhtar Benazzouz, Chawki Hammoudi, Abdelhakim**URL:** <Go to ISI>://WOS:000356114500002

**Reference Type: Journal Article****Record Number:** 247**Author:** Selmani, M.**Year:** 2015**Title:** A Frictional Contact Problem Involving Piezoelectric Materials with Long Memory**Journal:** Mediterranean Journal of Mathematics**Volume:** 12**Issue:** 3**Pages:** 1177-1197**Date:** Jul**Short Title:** A Frictional Contact Problem Involving Piezoelectric Materials with Long Memory**ISSN:** 1660-5446**DOI:** 10.1007/s00009-014-0430-1**Accession Number:** WOS:000359272100041

**Abstract:** We consider a mathematical model describing the quasistatic frictional contact between a piezoelectric body and a deformable conductive foundation. The material is electro-viscoelastic with long memory and damage. The contact is modeled with normal compliance, the friction is modeled with a general version of Coulomb's law of dry friction and a regularized electrical conductivity condition. We establish a variational formulation for the model and prove the existence and uniqueness result of the weak solution. The proof is based on elliptic variational inequalities, on parabolic inequalities and fixed point arguments.

**Notes:** Selmani, Mohamed**URL:** <Go to ISI>://WOS:000359272100041

**Reference Type: Journal Article****Record Number:** 248**Author:** Setifi, F. Geiger, D. K. Razak, I. A. Setifi, Z.**Year:** 2015**Title:** Multiple N-H center dot center dot center dot NC, C-H center dot center dot center dot NC and nitrile center dot center dot center dot pi interactions in 4,4'-bipyridine-1,1'-dium bis(1,1,3,3-tetracyano-2-ethoxypropenide): structure determination and DFT calculations of anion center dot center dot center dot pi cation interaction energies**Journal:** Acta Crystallographica Section C-Structural Chemistry**Volume:** 71**Pages:** 658-+**Date:** Aug**Short Title:** Multiple N-H center dot center dot center dot NC, C-H center dot center dot center dot NC and nitrile center dot center dot center dot pi interactions in 4,4'-bipyridine-1,1'-dium bis(1,1,3,3-tetracyano-2-ethoxypropenide): structure determination and DFT calculations of anion center dot center dot center dot pi cation interaction energies**ISSN:** 2053-2296**DOI:** 10.1107/s2053229615012437**Accession Number:** WOS:000359195500004

**Abstract:** Polynitrile anions are important in both coordination chemistry and molecular materials chemistry, and are interesting for their extensive electronic delocalization. The title compound crystallizes with two symmetry-independent half 4,4'-bipyridine-1,1'-dium (bpyH(2)(2+)) cations and two symmetry-independent 1,1,3,3-tetracyano-2-ethoxypropenide (tcnoet(-)) anions in the asymmetric unit. One of the bpyH(2)(2+) ions is located on a crystallographic twofold rotation axis (canted pyridine rings) and the other is located on a crystallographic inversion center (coplanar pyridine rings). The ethyl group of one of the tcnoet(-) anions is disordered over two sites with equal populations. The extended structure exhibits two separate N-H center dot center dot center dot NC hydrogen-bonding motifs, which result in a sheet structure parallel to (010), and weak C-H center dot center dot center dot NC hydrogen bonds form joined rings. Two types of multicenter CN center dot center dot center dot pi interactions are observed between the bpyH(2)(2+) rings and tcnoet(-) anions. An additional CN center dot center dot center dot pi interaction between adjacent tcnoet(-) anions is observed. Using density functional theory, the calculated attractive energy between cation and anion pairs in the tcnoet(-)center dot center dot center dot pi (bipyridinedium) interactions were found to be 557 and 612 kJ mol<sup>-1</sup> for coplanar and canted bpyH(2)(2+) cations, respectively.

**Notes:** Setifi, Fatima Geiger, David K. Razak, Ibrahim Abdul Setifi, Zouaoui 8**URL:** <Go to ISI>://WOS:000359195500004

**Reference Type: Journal Article****Record Number:** 249**Author:** Setifi, Z. Bernes, S. Perez, O. Setifi, F. Rouag, D. A.**Year:** 2015**Title:** Crystal structure of  $\mu$ -cyanido-1:2  $\kappa$  N-2:C-dicyanido-1  $\kappa$  C,2  $\kappa$  C-bis(quinolin-8-amine-1  $\kappa$  N-2,N')-2-silver(I)1-silver(II): rare occurrence of a mixed-valence Ag-I,Ag-II compound**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** 698-+**Date:** Jun**Short Title:** Crystal structure of  $\mu$ -cyanido-1:2  $\kappa$  N-2:C-dicyanido-1  $\kappa$  C,2  $\kappa$  C-bis(quinolin-8-amine-1  $\kappa$  N-2,N')-2-silver(I)1-silver(II): rare occurrence of a mixed-valence Ag-I,Ag-II compound**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015009664**Accession Number:** WOS:000369979300082

**Abstract:** The title dinuclear complex,  $[\text{Ag}_2(\text{CN})_3(\text{C}_9\text{H}_8\text{N}_2)_2]$ , may be considered as an Ag<sub>2</sub> compound with the corresponding metal site coordinated by two bidentate quinolin-8-amine molecules, one cyanide group and one dicyanidoargentate(I) anion,  $[\text{Ag}(\text{CN})_2]$ . Since this latter ligand contains an Ag<sub>I</sub> atom, the complex should be a class 1 or class 2 mixed-valence compound, according to the Robin Day classification. The Ag<sub>I</sub> atom is six -coordinated in a highly distorted octahedral geometry, while the Ag<sub>II</sub> atom displays the expected linear geometry. In the crystal, the amino groups of the quinolin-8-amine ligands form N-H center dot center dot center dot N hydrogen bonds with the N atoms of the non -bridging cyanide ligands, forming a two-dimensional network parallel to (102). The terminal cyanide ligands are not engaged in polymeric bonds and the title compound is an authentic molecular complex. The title molecule is thus a rare example of a stable Ag-I,Ag-III complex, and the first mixed-valence Ag-I,Ag-III molecular complex characterized by X-ray diffraction.

**Notes:** Setifi, Zouaoui Bernes, Sylvain Perez, Olivier Setifi, Fatima Rouag, Djamil-Azzeddine 6**URL:** <Go to ISI>://WOS:000369979300082

**Reference Type: Journal Article****Record Number:** 250**Author:** Setifi, Z. Setifi, F. Francuski, B. M. Novakovic, S. B. Merazig, H.**Year:** 2015**Title:** Crystal structure of tetraaqua 2-(pyridin-2-yl)-1H-imidazole-kappa N-2(2),N-3 iron(II) sulfate**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** 346-+**Date:** Apr**Short Title:** Crystal structure of tetraaqua 2-(pyridin-2-yl)-1H-imidazole-kappa N-2(2),N-3 iron(II) sulfate**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015004417**Accession Number:** WOS:000369975800047

**Abstract:** In the title compound, [Fe(C<sub>8</sub>H<sub>7</sub>N<sub>3</sub>)(H<sub>2</sub>O)<sub>4</sub>]<sub>2</sub>SO<sub>4</sub>, the central Fe-II ion is octahedrally coordinated by two N atoms from the bidentate 2-(pyridin-2-yl)-1H-imidazole ligand and by four O atoms of the aqua ligands. The largest deviation from the ideal octahedral geometry is reflected by the small N-Fe-N bite angle of 76.0 (1)degrees. The Fe-N coordination bonds have markedly different lengths [2.1361 (17) and 2.243 (2) angstrom], with the shorter one to the pyrimidine N atom. The four Fe-O coordination bond lengths vary from 2.1191 (18) to 2.1340 (17) angstrom. In the crystal, the cations and anions are arranged by means of medium-strength O-H center dot center dot center dot O hydrogen bonds into layers parallel to the ab plane. Neighbouring layers further interconnect by N-H center dot center dot center dot O hydrogen bonds involving the imidazole fragment as donor group to one sulfate O atom as an acceptor. The resulting three-dimensional network is consolidated by C-H center dot center dot center dot O, C-H center dot center dot center dot pi and pi-pi interactions.

**Notes:** Setifi, Zouaoui Setifi, Fatima Francuski, Bojana M. Novakovic, Sladjana B. Merazig, Hocine 4

**URL:** <Go to ISI>://WOS:000369975800047

**Reference Type: Journal Article****Record Number:** 251**Author:** Setifi, Z. Valkonen, A. Fernandes, M. A. Nummelin, S. Boughzala, H. Setifi, F. Glidewell, C.**Year:** 2015**Title:** Crystal structures of 2,2'-bipyridin-1-ium 1,1,3,3-tetracyano-2-ethoxyprop-2-en-1-ide and bis(2,2'-bipyridin-1-ium) 1,1,3,3-tetracyano-2-(dicyanomethylene)propane-1,3-diide**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 71**Pages:** 509-+**Date:** May**Short Title:** Crystal structures of 2,2'-bipyridin-1-ium 1,1,3,3-tetracyano-2-ethoxyprop-2-en-1-ide and bis(2,2'-bipyridin-1-ium) 1,1,3,3-tetracyano-2-(dicyanomethylene)propane-1,3-diide**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015007306**Accession Number:** WOS:000369977900093

**Abstract:** In 2,2'-bipyridin-1-ium 1,1,3,3-tetracyano-2-ethoxyprop-2-en-1-ide, C<sub>10</sub>H<sub>9</sub>N<sub>2</sub><sup>+</sup> center dot C<sub>9</sub>H<sub>5</sub>N<sub>4</sub>O<sup>-</sup>, (I), the ethyl group in the anion is disordered over two sets of atomic sites with occupancies 0.634 (9) and 0.366 (9), and the dihedral angle between the ring planes in the cation is 2.11 (7)degrees. The two independent C(CN)<sub>2</sub> groups in the anion make dihedral angles of 10.60 (6) and 12.44 (4)degrees with the central propenide unit, and the bond distances in the anion provide evidence for extensive electronic delocalization. In bis(2,2'-bipyridin-1-ium) 1,1,3,3-tetracyano-2-(dicyanomethylene)propane-1,3-diide [alternative name bis(2,2'-bipyridin-1-ium) tris(dicyanomethylene) methanediide], 2C<sub>10</sub>H<sub>9</sub>N<sub>2</sub><sup>(+)</sup> center dot C<sub>10</sub>N<sub>6</sub><sup>-</sup> (II), the dihedral angles between the ring planes in the two independent cations are 7.7 (2) and 10.92 (17)degrees. The anion exhibits approximate C<sub>3</sub> symmetry, consistent with extensive electronic delocalization, and the three independent C(CN)<sub>2</sub> groups make dihedral angles of 23.8 (2), 27.0 (3) and 27.4 (2)degrees with the central plane. The ions in (I) are linked by an N-H center dot center dot center dot N hydrogen bond and the resulting ion pairs are linked by two independent C-H center dot center dot center dot N hydrogen bonds, forming a ribbon containing alternating R-4(4) (18) and R-4(4) (26) rings, where both ring types are centrosymmetric. The ions in (II) are linked by two independent N-H center dot center dot center dot N hydrogen bonds and the resulting ion triplets are linked by a C-H center dot center dot center dot N hydrogen bond, forming a C-2(1) (7) chain containing anions and only one type of cation, with the other cation linked to the chain by a further C-H center dot center dot center dot N hydrogen bond.

**Notes:** Setifi, Zouaoui Valkonen, Arto Fernandes, Manuel A. Nummelin, Sami Boughzala, Habib Setifi, Fatima Glidewell, Christopher 5**URL:** <Go to ISI>://WOS:000369977900093

**Reference Type: Journal Article****Record Number:** 252**Author:** Smara, M. Aliouat, M. Aliouat, Z. Ieee,**Year:** 2015**Title:** Fault Detection in Component-based Models Using BIP Models**Journal:** 2015 12th IEEE International Conference on Programming and Systems (ISPS)**Pages:** 357-365**Short Title:** Fault Detection in Component-based Models Using BIP Models**Accession Number:** WOS:000380619200053

**Abstract:** in this paper, we will introduce our approach for fault detection in component-based models. We will defend that we can ensure safety property by Fail-Silent components. Fail-silent components are apt for fault detection using an Acceptance test. This later is a logical expression which can validate the component behavior correct or not. We will use BIP Framework for component based design, where the behavior design is based on transition system. In consequence, we can see that we can construct Fail-Silent models from basic BIP models. We will use Producer-FIFO-Consumer model to explain our approach.

**Notes:** Smara, Mounya Aliouat, Makhlouf Aliouat, Zibouda 12th IEEE International Conference on Programming and Systems (ISPS) Apr 28-30, 2015 Algiers, ALGERIA IEEE, IEEE Algeria Subsection, USTHB, RSDT, Cerist, SDA, IRIA, MOVEP, BADR Bank, Arpt, CMR, ANVEREDET, Air Algerie 978-1-4799-7700-0

**URL:** <Go to ISI>://WOS:000380619200053

**Reference Type: Journal Article****Record Number:** 253**Author:** Sofrane, Z. Dupont, S. Christides, J. P. Doumandji, S. Bagneres, A. G.**Year:** 2015**Title:** Revision of the systematics of the genus *Calliptamus* Serville 1831, (Orthoptera: Acrididae: Calliptaminae) in Algeria using morphological, chemical, and genetic data**Journal:** Annales De La Societe Entomologique De France**Volume:** 51**Issue:** 1**Pages:** 78-88**Date:** Jan**Short Title:** Revision of the systematics of the genus *Calliptamus* Serville 1831, (Orthoptera: Acrididae: Calliptaminae) in Algeria using morphological, chemical, and genetic data**ISSN:** 0037-9271**DOI:** 10.1080/00379271.2015.1054647**Accession Number:** WOS:000363664200008

**Abstract:** The genus *Calliptamus* contains swarming orthopterans that cause serious damage in Algerian agricultural systems. However, it remains difficult to identify species within this genus; a thorough understanding of the group's systematics and the utilization of novel taxonomic criteria are needed. We used morphological analysis along with two other methods of species identification - chemotaxonomy with cuticular compounds and DNA barcoding involving the COI gene - to classify 81 individual grasshoppers collected at two different sites in the Setif region (northeastern Algeria). The chemotaxonomic analyses yielded ambiguous results, but DNA barcoding allowed us to differentiate two *Calliptamus* species found in Algeria: *Calliptamus barbarus* (Costa 1836), and *Calliptamus wattenwylanus* (Pantel 1896). Several morphological criteria used in identification keys appear to reflect differences among morphotypes rather than differences between species, and their taxonomic specificity is not supported by the barcoding data. The number of spines on the hind tibia is the only morphological criterion that reflected genetic differences between species; it is thus considered to be a taxonomically useful feature for identifying species in this genus.

**Notes:** Sofrane, Zina Dupont, Simon Christides, Jean Philippe Doumandji, Salaheddine Bagneres, Anne-Genevieve

**URL:** <Go to ISI>://WOS:000363664200008

**Reference Type: Journal Article****Record Number:** 254**Author:** Soualili, Z. Yahia, S. A. Benmahmoud, M. Choutri, H. Achouri, D. Mimoune, M. Haif, A. Nedjar, S. Bechouni, K. Aggoun, S.**Year:** 2015**Title:** SURGERY OF NEPHROBLASTOMA EXPERIENCE OF THE DEPARTMENT OF PEDIATRIC SURGERY IN SETIF, ALGERIA**Journal:** Pediatric Blood & Cancer**Volume:** 62**Pages:** S398-S398**Date:** Nov**Short Title:** SURGERY OF NEPHROBLASTOMA EXPERIENCE OF THE DEPARTMENT OF PEDIATRIC SURGERY IN SETIF, ALGERIA**ISSN:** 1545-5009**Accession Number:** WOS:000361247201497**Notes:** Soualili, Z. Yahia, S. Ait Benmahmoud, M. Choutri, H. Achouri, D. Mimoune, M. Haif, A. Nedjar, S. Bechouni, K. Aggoun, S. 4**URL:** <Go to ISI>://WOS:000361247201497

**Reference Type: Journal Article****Record Number:** 255**Author:** Tebbakh, S. Messaoudi, Y. Azizi, A. Fenineche, N. Schmerber, G. Dinia, A.**Year:** 2015**Title:** The influence of saccharin on the electrodeposition and properties of Co - Ni alloy thin films**Journal:** Transactions of the Institute of Metal Finishing**Volume:** 93**Issue:** 4**Pages:** 196-204**Date:** Jul**Short Title:** The influence of saccharin on the electrodeposition and properties of Co - Ni alloy thin films**ISSN:** 0020-2967**DOI:** 10.1179/0020296715z.000000000247**Accession Number:** WOS:000358787400014

**Abstract:** Co-Ni alloys thin films were electrodeposited on Ru substrates from a chloride-saccharin bath at pH 3.8 and the effects of adding saccharin to the bath on the electrochemical deposition, corrosion resistance, chemical composition, physical and magnetic properties of the deposits were investigated. The analytical techniques of cyclic voltammetry (CV), potentiodynamic polarisation, electrochemical impedance spectroscopy (EIS), atomic absorption spectroscopy (AAS), atomic force microscopy (AFM), X-ray diffraction and hysteresis curves were applied to assess the codeposition process, and determine corrosion resistance, composition, morphology, nanocrystallinity and magnetic properties. Effectively, CV measurements revealed that the addition of saccharin in the electrolytic bath modifies the deposition process and an anomalous codeposition takes place; this enhanced the Co percentage in the Co-Ni deposits. Saccharin addition also increases the double layer capacitance and decreases the charge transfer resistance. On the other hand, the Tafel plots show a higher corrosion resistance for the deposits obtained from a bath with saccharin than those obtained from a bath without it. Furthermore, the presence of the saccharin in the bath also causes notable changes in the morphology and structure characteristics of deposits. In addition, it was found that the additive influences the magnetic properties of Co-Ni alloy thin films. The coercivity and magnetisation saturation are diminished for Co-Ni films prepared from electrolytes with addition of saccharin.

**Notes:** Tebbakh, S. Messaoudi, Y. Azizi, A. Fenineche, N. Schmerber, G. Dinia, A.**URL:** <Go to ISI>://WOS:000358787400014

**Reference Type: Journal Article****Record Number:** 256**Author:** Terrab, H. Bayadi, A. El-Hag, A. H. Ieee,**Year:** 2015**Title:** A Fuzzy Logic Based Approach to Evaluate the Surface Conditions of Ceramic Outdoor Insulators**Journal:** 2015 4th International Conference on Electrical Engineering (Icee)**Pages:** 301-U846**Short Title:** A Fuzzy Logic Based Approach to Evaluate the Surface Conditions of Ceramic Outdoor Insulators**Accession Number:** WOS:000380457200164

**Abstract:** this paper aims to establish criteria for the automatic classification of surface conditions of outdoor insulator based on the leakage current (LC) analysis and fuzzy logic approach. The study is done in an artificial fog chamber and the LC is characterized for different stages; e.g. dry, wetted and presence of early discharge activities. Time-frequency and spectral analysis are adopted to calculate the evolution of LC characteristics that will be used as a classification criteria. The obtained results show that phase angle analysis and Std-MRA present an effective indicator for the surface conditions. A system based on the fuzzy approach is presented to classify the early signs of dry band arcing as an indication for insulation washing.

**Notes:** Terrab, Hocine Bayadi, Abdelhafid El-Hag, Ayman H. 2015 4th International Conference on Electrical Engineering (ICEE) Dec 13-15, 2015 Boumerdes, ALGERIA 978-1-4673-6673-1

**URL:** <Go to ISI>://WOS:000380457200164

**Reference Type: Journal Article****Record Number:** 257**Author:** Thabti, S. Djedouani, A. Rahmouni, S. Touzani, R. Bendaas, A. Mousser, H. Mousser, A.**Year:** 2015**Title:** Synthesis, X-ray crystal structures and catecholase activity investigation of new chalcone ligands**Journal:** Journal of Molecular Structure**Volume:** 1102**Pages:** 295-301**Date:** Dec**Short Title:** Synthesis, X-ray crystal structures and catecholase activity investigation of new chalcone ligands**ISSN:** 0022-2860**DOI:** 10.1016/j.molstruc.2015.08.071**Accession Number:** WOS:000364268300040

**Abstract:** The reaction of dehydroacetic acid DHA carboxaldehyde and RCHO derivatives (R = quinoline-8-; indole-3-; pyrrol-2- and 4-(dimethylamino)phenyl - afforded four new chalcone ligands (4-hydroxy-6-methyl-3-[(2E)-3-quinolin-8-ylprop-2-enoyl]-2H-pyran-2-one) L1, (4-hydroxy-3-[(2E)-3-(1H-indol-3-yl)prop-2-enoyl]-6-methyl-2H-pyran-2-one) L2, (4-hydroxy-6-methyl-3-[(2E)-3-(1H-pyrrol-2-yl)prop-2-enoyl]-2H-pyran-2-one) L3, and (3-{(2E)-3-[4-(dimethylamino)phenyl]prop-2-enoyl}-4-hydroxy-6-methyl-2H-pyran-2-one) L4. L3 and L4 were characterized by X-ray crystallography. Molecules crystallize with four and two molecules in the asymmetric unit, respectively and adopt an E conformation about the C=C bond. Both structures are stabilized by an extended network O-H center dot center dot center dot O. Furthermore, N-H center dot center dot center dot O and C-H center dot center dot center dot O hydrogen bonds are observed in L3 and L4 structures, respectively. The in situ generated copper (II) complexes of the four compounds L1, L2, L3 and L4 were examined for their catalytic activities and were found to catalyze the oxidation reaction of catechol to o-quinone under atmospheric dioxygen. The rates of this oxidation depend on three parameters: ligand, ion salts and solvent nature and the combination L-2[Cu (CH3COO)(2)] leads to the faster catalytic process. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Thabti, Salima Djedouani, Amel Rahmouni, Samra Touzani, Rachid Bendaas, Abderrahmen Mousser, Henia Mousser, Abdelhamid

**URL:** <Go to ISI>://WOS:000364268300040

**Reference Type: Journal Article****Record Number:** 258**Author:** Tinouche, M. Kharmouche, A. Aktas, B. Yildiz, F. Kocbay, A. N.**Year:** 2015**Title:** Magnetic and Structural Properties of Co Thin Films Evaporated on GaAs Substrate**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 28**Issue:** 3**Pages:** 921-925**Date:** Mar**Short Title:** Magnetic and Structural Properties of Co Thin Films Evaporated on GaAs Substrate**ISSN:** 1557-1939**DOI:** 10.1007/s10948-014-2863-y**Accession Number:** WOS:000350360800033

**Abstract:** A series of thin layers of cobalt are deposited on GaAs semiconductor substrate, using thermal heating process, under a pressure of  $10^{-7}$  mbar. The thickness ranges from 18 to 250 nm, values determined by X-ray reflectivity (XRR) technique, and monitored by Rigaku X-ray diffractometer. The hysteresis loops are performed by means of Physical Property Measurement System (PPMS) with Quantum Design Instrument. All the samples are polycrystalline and present a hexagonal close-packed (hcp) structure, some films being under stress. The hysteresis loops display magnetization curves for ferromagnetic samples with the easy axis in the plane of the film. Coercivity seems to depend closely on surface roughness and crystallite size. The lowest value of  $H_c$ , equals to 13 Oe, is related to the smoothest film with a raw mean square (rms) value equal to 0.1 nm, and the smallest stress (0.33 %). Samples with larger crystallites size have larger coercive fields.

**Notes:** Tinouche, M. Kharmouche, A. Aktas, B. Yildiz, F. Kocbay, A. N. Si**URL:** <Go to ISI>://WOS:000350360800033

**Reference Type: Journal Article****Record Number:** 259**Author:** Titouna, C. Aliouat, M. Gueroui, M.**Year:** 2015**Title:** Outlier Detection Approach Using Bayes Classifiers in Wireless Sensor Networks**Journal:** Wireless Personal Communications**Volume:** 85**Issue:** 3**Pages:** 1009-1023**Date:** Dec**Short Title:** Outlier Detection Approach Using Bayes Classifiers in Wireless Sensor Networks**ISSN:** 0929-6212**DOI:** 10.1007/s11277-015-2822-3**Accession Number:** WOS:000365217200024

**Abstract:** Wireless sensor networks (WSN) have become a new information collection and monitoring solution for a variety of applications. Sensor nodes may occasionally produce incorrect measurements due to battery depletion, damage of device and other causes. Those measurements that significantly deviate from the normal pattern of sensed data are considered as outliers. To address the problem of outlier detection in WSN, we propose in this paper a two-level sensor fusion-based outlier detection technique for WSN. The first level of outlier is conducted locally inside the sensor nodes, while the second level is carried out in a level higher (e.g., in a cluster head or gateway). The proposed approach functionality was tested by simulation using a real sensed data obtained from Intel Berkeley Research Lab. The experiment results show that the approach achieved a high-level of detection accuracy and a low percentage of false alarm rate.

**Notes:** Titouna, Chafiq Aliouat, Makhlouf Gueroui, Mourad**URL:** <Go to ISI>://WOS:000365217200024

**Reference Type: Journal Article****Record Number:** 260**Author:** Toumi, A. L. Khelil, A. Bernede, J. C. Mouchaal, Y. Djafri, A. Toubal, K. Hellal, N. Cattin, L.**Year:** 2015**Title:** OPTIMUM COMPROMISE BETWEEN OPTICAL ABSORPTION AND ELECTRICAL PROPERTY OF THE PLANAR MULTI-HETEROJUNCTION ORGANIC SOLAR CELLS BASED WITH NEW THIAZOL DERIVATIVE, THE (2-THIOXO-3-N-(2-METHOXYPHENYL) THIAZOLIDIN-4-ONE), AS ELECTRON DONOR**Journal:** Surface Review and Letters**Volume:** 22**Issue:** 2**Date:** Apr**Short Title:** OPTIMUM COMPROMISE BETWEEN OPTICAL ABSORPTION AND ELECTRICAL PROPERTY OF THE PLANAR MULTI-HETEROJUNCTION ORGANIC SOLAR CELLS BASED WITH NEW THIAZOL DERIVATIVE, THE (2-THIOXO-3-N-(2-METHOXYPHENYL) THIAZOLIDIN-4-ONE), AS ELECTRON DONOR**ISSN:** 0218-625X**DOI:** 10.1142/s0218625x15500250**Article Number:** 1550025**Accession Number:** WOS:000352956700009

**Abstract:** The synthesis of a new thiazol derivative, the (2-thioxo-3-N-(2-methoxyphenyl) thiazolidin-4-one) (called TH-2) is described. After characterization of the TH-2, the cyclic voltammetry study coupled with optical absorbance measurements show that its LUMO and HOMO are -3.5 and -5.5 respectively. Then the TH-2 is used as electron donor (ED) in organic solar cells (OSCs). The anode buffer layer being CuI the devices are based on the planar heterojunction TH-2/fullerene. Homogeneous amorphous films of TH-2 are obtained when it is deposited onto CuI. For an optimum TH-2 thickness of 20 nm, a power conversion efficiency of 0.42% is obtained. Then, in order to broaden the absorption range of the OSCs, it is coupled with the tetraphenyl-dibenzoperiflanthene, whose band structure matches the band structure of TH-2. Such new multilayer structure allows achieving a power conversion efficiency of 0.49%.

**Notes:** Toumi, A. Lakhdar Khelil, A. Bernede, J. C. Mouchaal, Y. Djafri, A. Toubal, K. Hellal, N. Cattin, L.

**URL:** <Go to ISI>://WOS:000352956700009

**Reference Type: Journal Article****Record Number:** 261**Author:** Trabsa, H. Baghiani, A. Boussoualim, N. Krache, I. Khennouf, S. Charef, N. Arrar, L.**Year:** 2015**Title:** Kinetics of Inhibition of Xanthine Oxidase by Lycium arabicum and its Protective Effect against Oxonate-Induced Hyperuricemia and Renal Dysfunction in Mice**Journal:** Tropical Journal of Pharmaceutical Research**Volume:** 14**Issue:** 2**Pages:** 249-256**Date:** Feb**Short Title:** Kinetics of Inhibition of Xanthine Oxidase by Lycium arabicum and its Protective Effect against Oxonate-Induced Hyperuricemia and Renal Dysfunction in Mice**ISSN:** 1596-5996**DOI:** 10.4314/tjpr.v14i2.9**Accession Number:** WOS:000350647000009

**Abstract:** Purpose: To evaluate the in-vitro inhibition of xanthine oxidase (purified from bovine milk) by extracts of Lycium arabicum, as well as its in vivo hypouricemic and renal protective effects. Methods: Four extracts of Lycium arabicum, methanol (CrE), chloroform (ChE), ethyl acetate (EaE) and aqueous (AqE) extracts, were screened for their total phenolics and potential inhibitory effects on purified bovine milk xanthine oxidase (XO) activity by measuring the formation of uric acid or superoxide radical. The mode of inhibition was investigated and compared with the standard drugs, allopurinol, quercetin and catechin. To evaluate their hypouricemic effect, the extracts were administered to potassium oxonate-induced hyperuricemic mice at a dose of 50 mg/kg body weight. Results: The results showed that EaE had the highest content of phenolic compounds and was the most potent inhibitor of uric acid formation ( $IC_{50} = 0.017 \pm 0.001$  mg/mL) and formation of superoxide ( $IC_{50} = 0.035 \pm 0.001$  mg/ml). Lineweaver-Burk analysis showed that CrE and EaE inhibited XO competitively, whereas the inhibitory activities exerted by ChE and AqE were of a mixed type. Intraperitoneal injection of L. arabicum extracts (50 mg/kg) elicited hypouricemic actions in hyperuricemic mice. Hyperuricemic mice presented a serum uric acid concentration of  $4.71 \pm 0.29$  mg/L but this was reduced to  $1.78 \pm 0.11$  mg/L by EaE, which was the most potent hypouricemic extract. Conclusion: L. arabicum fractions have a strong inhibitory effect on xanthine oxidase and also have a significantly lowering effect on serum and liver creatinine and urea levels in hyperuricemic mice.

**Notes:** Trabsa, Hayat Baghiani, Abderrahmane Boussoualim, Naouel Krache, Imane Khennouf, Seddik Charef, Noureddine Arrar, Lekhmici**URL:** <Go to ISI>://WOS:000350647000009

**Reference Type: Journal Article****Record Number:** 262**Author:** Vaillant, L. Vigil, E. Forcade, F. Thami, T. Adnani, H. Yacou, C. Ayrat, A. Saint-Gregoire, P.**Year:** 2015**Title:** On fundamental mechanisms in dye sensitized solar cells through the behaviour of different mesoporous titanium dioxide films**Journal:** European Physical Journal-Applied Physics**Volume:** 72**Issue:** 2**Date:** Nov**Short Title:** On fundamental mechanisms in dye sensitized solar cells through the behaviour of different mesoporous titanium dioxide films**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2015150221**Article Number:** 20404**Accession Number:** WOS:000365864400011

**Abstract:** Understanding mechanisms in DSSCs is fundamental for their improvement; this includes the nanocrystalline semiconducting layer behaviour. Different mesoporous TiO<sub>2</sub> layers are fabricated and analyzed for possible use in DSSC solar cells. The preparations included the addition of P123 triblock copolymer as structuring agent to the synthesized anatase sol. This preparation was also mixed with Degussa P25 TiO<sub>2</sub> nanoparticles in one case and polystyrene latex in another. Mesoporous mixed TiO<sub>2</sub>-SiO<sub>2</sub> thin layers were also analyzed. The diverse morphologies and features are studied by microscopic techniques and by means of spectral quantum efficiency of a photoelectrochemical cell (PEC) that uses as photoelectrode the unsensitized porous TiO<sub>2</sub> layer. Contact angle measurements are also performed. We have found that a very high specific area due to very small nanocrystals and small pores can hinder electrolyte penetration in the pores formed by TiO<sub>2</sub> nanograins, affecting photoelectrodes efficiency.

**Notes:** Vaillant, Lidice Vigil, Elena Forcade, Fresnel Thami, Thierry Adnani, Hania Yacou, Christelle Ayrat, Andre Saint-Gregoire, Pierre

**URL:** <Go to ISI>://WOS:000365864400011

**Reference Type: Journal Article****Record Number:** 263**Author:** Zaibet, W. Laouer, H. Amira, S. Flamini, G. Ramdani, M. Akkal, S.**Year:** 2015**Title:** CHEMICAL COMPOSITION AND BIOLOGICAL ACTIVITIES OF DAUCUS AUREUS ESSENTIAL OILS FROM EASTERN ALGERIA**Journal:** Journal of the Chilean Chemical Society**Volume:** 60**Issue:** 4**Pages:** 2721-2728**Date:** Dec**Short Title:** CHEMICAL COMPOSITION AND BIOLOGICAL ACTIVITIES OF DAUCUS AUREUS ESSENTIAL OILS FROM EASTERN ALGERIA**ISSN:** 0717-9707**Accession Number:** WOS:000373368100017

**Abstract:** The aim of this study was to investigate the chemical composition of the essential oils of three populations of *Daucus aureus* from three sites in Eastern Algeria (Setif, Constantine and Oum Elbouaghi) and to test their antibacterial and antioxidant activities. The essential oils were obtained by hydrodistillation and analyzed by GC and GC/MS. The major components were sabinene (30.6% and 36.2%), n-nonane (8.0% and 7.9%), alpha-pinene (5.5% and 6.3%) and 4-terpineol (4.4% and 6.0%) in *D. aureus* from Setif and Constantine populations essential oils, respectively; whereas, a-pinene (19.4%), beta-pinene (12.0%) and p-cymene (12.2%) were the major components in Oum Elbouaghi essential oil population. The chemical compositions of *D. aureus* from Eastern Algeria are markedly different from those from Western Algeria, and likely represent new chemotypes. The antimicrobial activity of the essential oils was evaluated against four bacteria and one fungus, using the disc-diffusion method and minimal inhibitory concentration (MIC), whereas, the antioxidant activity of the essential oils was evaluated using the DPPH test. The results showed that the oils have an antimicrobial activity against the microorganisms tested, with minimal inhibitory concentration (MIC) values between 0.97 and 3.23 mg/mL and weaker antioxidant and DPPH radical scavenging activities were found in comparison to butylated hydroxyl toluene (BHT).

**Notes:** Zaibet, Wafaa Laouer, Hocine Amira, Smain Flamini, Guido Ramdani, Messaoud Akkal, Salah

**URL:** <Go to ISI>://WOS:000373368100017

**Reference Type: Journal Article****Record Number:** 264**Author:** Zaibi, M. Layadi, T. M. Champenois, G. Roboam, X. Sareni, B. Belhadj, J. Ieee,**Year:** 2015**Title:** A Hybrid Spline Metamodel for Photovoltaic/Wind/Battery Energy Systems**Journal:** 2015 6th International Renewable Energy Congress (IREC)**Short Title:** A Hybrid Spline Metamodel for Photovoltaic/Wind/Battery Energy Systems**Accession Number:** WOS:000380548500056

**Abstract:** This paper proposes a metamodel design for a Photovoltaic/Wind/Battery Energy System. The modeling of a hybrid PV/wind generator coupled with two kinds of storage i.e. electric (battery) and hydraulic (tanks) devices is investigated. A metamodel is carried out by hybrid spline interpolation to solve the relationships between several design variables i.e. the design parameters of different subsystems and their associate response variables i.e. system indicators performance. The developed model has been successfully validated under real test conditions.

**Notes:** Zaibi, Malek Layadi, Toufik Madani Champenois, Gerard Roboam, Xavier Sareni, Bruno Belhadj, Jamel 6th International Renewable Energy Congress (IREC) Mar 24-26, 2015 Sousse, TUNISIA 978-1-4799-7947-9

**URL:** <Go to ISI>://WOS:000380548500056

**Reference Type: Journal Article****Record Number:** 265**Author:** Zaidi, Z. Abdellouche, D. Cherif, M. H.**Year:** 2015**Title:** Incidence, Mortality and Survival Trends of Smoking-Related Cancers in Women in Setif, Algeria 1990-2009**Journal:** International Journal of Epidemiology**Volume:** 44**Pages:** 101-102**Short Title:** Incidence, Mortality and Survival Trends of Smoking-Related Cancers in Women in Setif, Algeria 1990-2009**ISSN:** 0300-5771**Accession Number:** WOS:000376659900237**Notes:** Zaidi, Z. Abdellouche, D. Cherif, M. Hamdi 20th IEA World Congress of Epidemiology (WCE) Aug 17-21, 2014 Anchorage, AK Int Epidemiol Assoc 1**URL:** <Go to ISI>://WOS:000376659900237

**Reference Type: Journal Article****Record Number:** 266**Author:** Zaidi, Z. Cherif, M. H.**Year:** 2015**Title:** Trends in Lung Cancer Survival in Middle East and Africa, 1995-2009**Journal:** Journal of Thoracic Oncology**Volume:** 10**Issue:** 9**Pages:** S730-S731**Date:** Sep**Short Title:** Trends in Lung Cancer Survival in Middle East and Africa, 1995-2009**ISSN:** 1556-0864**Accession Number:** WOS:000370365103455**Notes:** Zaidi, Zoubida Cherif, Mokhtar Hamdi 2**URL:** <Go to ISI>://WOS:000370365103455

**Reference Type: Journal Article****Record Number:** 267**Author:** Zaidi, Z. Cherif, M. H.**Year:** 2015**Title:** The Descriptive Epidemiology of Female Breast Cancer: An International Comparison of Incidence, Survival and Mortality**Journal:** International Journal of Epidemiology**Volume:** 44**Pages:** 115-115**Short Title:** The Descriptive Epidemiology of Female Breast Cancer: An International Comparison of Incidence, Survival and Mortality**ISSN:** 0300-5771**Accession Number:** WOS:000376659900277**Notes:** Zaidi, Z. Cherif, M. Hamdi 20th IEA World Congress of Epidemiology (WCE) Aug 17-21, 2014 Anchorage, AK Int Epidemiol Assoc 1**URL:** <Go to ISI>://WOS:000376659900277

**Reference Type: Journal Article****Record Number:** 268**Author:** Zebar, A. Hamouda, A. Zehar, K.**Year:** 2015**Title:** IMPACT OF THE LOCATION OF FUZZY CONTROLLED STATIC VAR COMPENSATOR ON THE POWER SYSTEM TRANSIENT STABILITY IMPROVEMENT IN PRESENCE OF DISTRIBUTED WIND GENERATION**Journal:** Revue Roumaine Des Sciences Techniques-Serie Electrotechnique Et Energetique**Volume:** 60**Issue:** 4**Pages:** 426-436**Date:** Oct-Dec**Short Title:** IMPACT OF THE LOCATION OF FUZZY CONTROLLED STATIC VAR COMPENSATOR ON THE POWER SYSTEM TRANSIENT STABILITY IMPROVEMENT IN PRESENCE OF DISTRIBUTED WIND GENERATION**ISSN:** 0035-4066**Accession Number:** WOS:000365935800009

**Abstract:** The energy renewal highlights wind energy system the prominent ways to turn down the environment pollution. The integration and penetration of these energy sources in power system have tended to be a dare for network managers, mainly, with wind turbines that do not tighten control of reactive power. In this paper; a fuzzy logic based supplementary controller for static var compensator (SVC) is evolved which is utilized for decreasing the rotor angle oscillations and to patch up the transient stability of the power system involving a distributed wind generation. Generator speed and the electrical power are selected as input signals for the fuzzy logic controller (FLC). Several fault disturbance simulation results are treated to emphasize the effective upshot of the suggested controller in a multi-machine (IEEE 30-bus) power system.

**Notes:** Zebar, Abdelkrim Hamouda, Abdellatif Zehar, Khaled**URL:** <Go to ISI>://WOS:000365935800009

**Reference Type: Journal Article****Record Number:** 269**Author:** Zegadi, A. Rouha, M. Satour, F. Z.**Year:** 2015**Title:** A study on the effect of oxygen implants in CuInSe<sub>2</sub> by photoacoustic spectroscopy**Journal:** Crystal Research and Technology**Volume:** 50**Issue:** 1**Pages:** 49-54**Date:** Jan**Short Title:** A study on the effect of oxygen implants in CuInSe<sub>2</sub> by photoacoustic spectroscopy**ISSN:** 0232-1300**DOI:** 10.1002/crat.201400164**Accession Number:** WOS:000347972100009

**Abstract:** This paper presents the results of an analysis on defect states changes following the irradiation of oxygen in CuInSe<sub>2</sub> single crystals by using photoacoustic spectroscopy. CuInSe<sub>2</sub> samples, n-type conducting, of high quality grown by using the vertical Bridgman technique have been implanted at ambient temperature with O<sup>+</sup> with the energy of 40 keV with doses of 10(15) and 10(16) ions/cm<sup>2</sup>. A theoretical model based on two-layer samples has been used to extract the absorption spectrum of only the implanted layer from that of the bulk. Oxygen is found to create a shallow defect at 31meV and a deep one at 256 +/- 2 meV. It has also led to the disappearance of some other defect levels originally detected in the samples prior to implantation.

**Notes:** Zegadi, Ameer Rouha, Mustapha Satour, Fatima Zohra European-Materials-Research-Society (E-MRS) Spring Meeting May 26-30, 2014 Lille, FRANCE European Mat Res Soc

**URL:** <Go to ISI>://WOS:000347972100009

**Reference Type: Journal Article****Record Number:** 270**Author:** Zemmamouche, R. Vandenrijt, J. F. Medjahed, A. de Oliveira, I. Georges, M. P.**Year:** 2015**Title:** Use of specklegrams background terms for speckle photography combined with phase-shifting electronic speckle pattern interferometry**Journal:** Optical Engineering**Volume:** 54**Issue:** 8**Date:** Aug**Short Title:** Use of specklegrams background terms for speckle photography combined with phase-shifting electronic speckle pattern interferometry**ISSN:** 0091-3286**DOI:** 10.1117/1.oe.54.8.084110**Article Number:** 084110**Accession Number:** WOS:000362507000024

**Abstract:** Electronic speckle pattern interferometry (ESPI) is combined with digital speckle photography (DSP) to measure out-of-plane deformation in the presence of large in-plane translation or rotation. ESPI is used to measure out-of-plane displacements smaller than the speckle diameter. In-plane displacements larger than the speckle size are obtained by DSP using artifacts images computed from the phase-stepped specklegrams. Previous works use the specklegram modulation for that purpose, but we show that this can lead to errors in the case of low modulation. In order to avoid this, a simple averaging of phase-stepped specklegrams allows obtaining the average irradiance, which contains information on the speckled object image. The latter can be used more efficiently than the modulation in DSP and is simpler to compute. We also perform a numerical simulation of specklegrams, which show that the use of background terms is much more stable against some error sources as compared to modulation. We show experimental evidence of this in various experiments combining out-of-plane ESPI measurements with in-plane translations or rotations obtained by our DSP method. The latter has been used efficiently to restore phase loss in out-of-plane ESPI measurements due to large in-plane displacements. (C) 2015 Society of Photo-Optical Instrumentation Engineers (SPIE)

**Notes:** Zemmamouche, Redouane Vandenrijt, Jean-Francois Medjahed, Aicha de Oliveira, Ivan Georges, Marc P.

**URL:** <Go to ISI>://WOS:000362507000024

**Reference Type: Journal Article****Record Number:** 271**Author:** Zerargui, F. Boumerfeg, S. Charef, N. Baghiani, A. Djarmouni, M. Khennouf, S. Arrar, L. Abu Zarga, M. H. Mubarak, M. S.**Year:** 2015**Title:** Antioxidant Potentials and Xanthine Oxidase Inhibitory Effect of Two Furanocoumarins Isolated from *Tamus communis* L**Journal:** Medicinal Chemistry**Volume:** 11**Issue:** 5**Pages:** 506-513**Short Title:** Antioxidant Potentials and Xanthine Oxidase Inhibitory Effect of Two Furanocoumarins Isolated from *Tamus communis* L**ISSN:** 1573-4064**Accession Number:** WOS:000357583400009

**Abstract:** In this investigation, the screening of two furanocoumarins; 5,8-dimethoxypsoralen (1) and heraclinin (2), isolated from the methanol root-extracts of *Tamus communis* L for their antioxidant activity and xanthine oxidase inhibitory effect was carried out, using different assays such as DPPH free radical scavenging effect, beta-carotene / linoleic acid, xanthine oxidase (XO) inhibition and in addition to blood total antioxidant capacity. Results revealed that the two compounds have significant DPPH radical scavenging activity and effective inhibition of linoleic acid oxidation in a dose-dependent manner; 5,8-dimethoxypsoralen exhibited the highest activity with an I% = 72.69 +/- 1.88 %. These results indicate that the isolated compounds inhibit xanthine oxidase activity and scavenge superoxide radicals with heraclinin (2) as the more potent xanthine oxidase inhibitor, and 5,8-dimethoxypsoralen (1) as the more effective on cytochrome c reduction, the two tested compounds can effectively protect erythrocytes against hemolytic injury induced by AAPH. These results are promising for further studies of the biological and pathological effects of these natural products.

**Notes:** Zerargui, Fatima Boumerfeg, Sabah Charef, Nouredine Baghiani, Abderrahmane Djarmouni, Meriem Khennouf, Seddik Arrar, Lekhmici Abu Zarga, Musa H. Mubarak, Mohammad S.

**URL:** <Go to ISI>://WOS:000357583400009

**Reference Type: Journal Article****Record Number:** 272**Author:** Zitouni, S. Chikouche, D. Rouabah, K. Mokrani, K.**Year:** 2015**Title:** Analytical Models of Correlation Functions, DLL Discriminator Outputs and Multipath Envelope Errors for CosBOC(m, n) Modulated Signals in Coherent and Non-coherent Configurations**Journal:** Wireless Personal Communications**Volume:** 82**Issue:** 2**Pages:** 911-951**Date:** May**Short Title:** Analytical Models of Correlation Functions, DLL Discriminator Outputs and Multipath Envelope Errors for CosBOC(m, n) Modulated Signals in Coherent and Non-coherent Configurations**ISSN:** 0929-6212**DOI:** 10.1007/s11277-014-2259-0**Accession Number:** WOS:000353227500015

**Abstract:** This paper focuses on analytically modeling the multipath error effects in the code tracking Delay-Locked-Loop (DLL) with standard and narrow early-late correlators of Global Navigation Satellite System (GNSS) for Cosine Binary Offset Carrier (CosBOC) modulated signal. The latter one will be part of the modernized American Global Positioning System (GPS), the Russian GLONASS (GLObal NAVigation Satellite System in English), the new European Galileo and the Chinese Compass/BeiDou systems, signal plan. The mathematical formalism of the analytical model of the Correlation Function is proposed for any CosBOC modulated signal. Also derived, are the models of the DLL Discriminator Functions and the Multipath Error Envelopes for both coherent and non-coherent configurations. The computer implementations have shown that all the proposed models match closely the numerical ones.

**Notes:** Zitouni, Sihem Chikouche, Djamel Rouabah, Khaled Mokrani, Karim**URL:** <Go to ISI>://WOS:000353227500015

**Reference Type: Journal Article****Record Number:** 273**Author:** Zouache, D. Moussaoui, A.**Year:** 2015**Title:** Quantum-Inspired Differential Evolution with Particle Swarm Optimization for Knapsack Problem**Journal:** Journal of Information Science and Engineering**Volume:** 31**Issue:** 5**Pages:** 1757-1773**Date:** Sep**Short Title:** Quantum-Inspired Differential Evolution with Particle Swarm Optimization for Knapsack Problem**ISSN:** 1016-2364**Accession Number:** WOS:000362464100015

**Abstract:** This paper presents a new hybrid algorithm called QDEPSO (Quantum inspired Differential Evolution with Particle Swarm Optimization) which combines differential evolution (DE), particle swarm optimization method (PSO) and quantum-inspired evolutionary algorithm (QEA) in order to solve the 0-1 optimization problems. In the initialization phase, the QDEPSO uses the concepts of quantum computing as the superposition state of qubits as well as the quantum measurement to represent and generate the diversity of the initial solutions. The second phase is an alternation between the DE operations (mutation, crossover and selection) and the adaptation of update formula of the velocity and the position of PSO algorithm. The effect of this step is to determine the rotation quantum angle to explore search space of solutions. To evaluate the performance of the proposed algorithm, we use the knapsack 0-1 problem as a class of combinatorial optimization NP-hard problems. The obtained results for 0-1 knapsack problem have proven the superior performance of QDEPSO compared to Quantum-inspired Evolutionary algorithm (QEA), Adaptive Quantum-inspired Differential Evolution Algorithm (AQDE), Quantum Swarm Evolutionary algorithm (QSE) and Quantum Inspired Harmony Search Algorithm (QIHSA).

**Notes:** Zouache, Djaafar Moussaoui, Abdelouahab Si**URL:** <Go to ISI>://WOS:000362464100015

**Reference Type: Book Section****Record Number: 1****Author:** Aliouat, Z. Aliouat, M.**Year:** 2015**Title:** Improved WSN Capabilities Through Efficient Duty-Cycle Mechanism**Editor:** Yao, L. Zhang, Q. Yang, L. T. Zomaya, A. Y. Jin, H. Xie, X.**Book Title:** Advances in Services Computing, Apscc 2015**Volume:** 9464**Pages:** 268-277**Series Title:** Lecture Notes in Computer Science**Short Title:** Improved WSN Capabilities Through Efficient Duty-Cycle Mechanism**ISBN:** 0302-9743 978-3-319-26979-5; 978-3-319-26978-8**DOI:** 10.1007/978-3-319-26979-5\_20**Accession Number:** WOS:000375223800020

**Abstract:** A Wireless Sensor Network (WSN) is mission dependent network, deployed in an interesting area in order to collect data about a relevant observable environmental phenomenon and send them to end user through a base station. Due to their potential promising development, WSN increasingly attract researcher's attention in order to ensure them the expected maturity of widespread deployment. However, many obstacles inherent to intrinsic sensor node characteristics may prevent achieving this goal. So, energy depleting is the most important hindering since node initial energy budget is poor. In this paper, we propose new hierarchical routing protocol sensitive to energy consumption and based on nodes duty-cycle management. This protocol improves WSN life time duration and data packets loss rate. The proposal was integrated to the well know LEACH protocol to enhance its performance. Simulation results via NS2 simulator showed that the proposal is convincing and outperforms the classical LEACH capabilities.

**Notes:** Aliouat, Zibouda Aliouat, Makhlouf 9th Asia-Pacific Services Computing Conference (APSCC) Dec 07-09, 2015 Bangkok, THAILAND

**URL:** <Go to ISI>://WOS:000375223800020

**Reference Type: Book Section****Record Number: 2****Author:** Alti, A. Laborie, S. Roose, P. Ieee,**Year:** 2015**Title:** Cloud Semantic-based Dynamic Multimodal Platform for Building mHealth Context-aware Services**Book Title:** 2015 Ieee 11th International Conference on Wireless and Mobile Computing, Networking and Communications**Pages:** 357-364**Series Title:** IEEE International Conference on Wireless and Mobile Computing Networking and Communications-WiMOB**Short Title:** Cloud Semantic-based Dynamic Multimodal Platform for Building mHealth Context-aware Services**ISBN:** 2160-4886 978-1-4673-7701-0**Accession Number:** WOS:000379167000052

**Abstract:** Currently, everybody wish to access to applications from a wide variety of devices (PC, Tablet, Smartphone, Set-top-box, etc.) in situations including various interactions and modalities (mouse, tactile screen, voice, gesture detection, etc.). At home, users interact with many devices and get access to many multimedia oriented documents (hosted on local drives, on cloud storage, online streaming, etc.) in various situations with multiple (and sometimes at the same time) devices. The diversity and heterogeneity of users profiles and service sources can be a barrier to discover the available services sources that can come from anywhere from the home or the city. The objective of this paper is to suggest a meta-level architecture for increasing the high level of context concepts abstracting for heterogeneous profiles and service sources via a top-level ontology. We particularly focus on context-aware mHealth applications and propose an ontologies-based architecture, OntoSmart (a top-ONTOlogy SMART), which provides adapted services that help users to broadcast of multimedia documents and their use with interactive services in order to help in maintaining old people at home and achieving their preferences. In order to validate our proposal, we have used Semantic Web, Cloud and Middlewares by specifying and matching OWL profiles and experiment their usage on several platforms.

**Notes:** Alti, Adel Laborie, Sebastien Roose, Philippe Wimob 11th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) Oct 19-21, 2015 Abu Dhabi, U ARAB EMIRATES Ieee

**URL:** <Go to ISI>://WOS:000379167000052

**Reference Type: Book Section****Record Number:** 3**Author:** Alti, A. Laborie, S. Roose, P.**Year:** 2015**Title:** US SAP : Universal Smart Social Adaptation Platform**Editor:** Shakshuki, E.**Book Title:** 6th International Conference on Ambient Systems, Networks and Technologies**Volume:** 52**Pages:** 670-674**Series Title:** Procedia Computer Science**Short Title:** US SAP : Universal Smart Social Adaptation Platform**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.05.070**Accession Number:** WOS:000361567100085

**Abstract:** This paper presents an approach to enhance users experience through the use of recommendations and social networks for on-the-fly (at runtime) adaptation of multimedia documents. The originality of the dedicated social and context-aware of quality service composition paths is that relies on contextual information collection with history-based service cloud selection and social media analysis technics, for providing the right service to the right user on the right time and on the right place and to deploy customizable services inside one application. We show that our approach successfully and efficiently captures online social experiences in order to improve assembly of potential adaptation services and the effectiveness of our approach. (C) 2015 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of the Conference Program Chairs

**Notes:** Alti, Adel Laborie, Sebastien Roose, Philippe Ant-2015 6th International Conference on Ambient Systems, Networks and Technologies (ANT) / 5th International Conference on Sustainable Energy Information Technology (SEIT) Jun 02-05, 2015 London, ENGLAND

**URL:** <Go to ISI>://WOS:000361567100085

**Reference Type: Book Section****Record Number:** 4**Author:** Arab, F. Assali, A. Grain, R. Kanouni, F.**Year:** 2015**Title:** Optical Properties of GaAs 2D Hexagonal and Cubic Photonic Crystal**Editor:** Oral, A. Y. Bahsi, Z. B. Ozer, M. Sezer, M. Akoz, M. E.**Book Title:** 4th International Congress in Advances in Applied Physics and Materials Science**Volume:** 1653**Series Title:** AIP Conference Proceedings**Short Title:** Optical Properties of GaAs 2D Hexagonal and Cubic Photonic Crystal**ISBN:** 0094-243X 978-0-7354-1295-8**DOI:** 020014 10.1063/1.4914205**Accession Number:** WOS:000362294100014

**Abstract:** In this paper we present our theoretical study of 2D hexagonal and cubic rods GaAs in air, with plan wave expansion (PWE) and finite difference time domain (FDTD) by using BandSOLVE and FullWAVE of Rsoft photonic CAD package. In order to investigate the effect of symmetry and radius, we performed calculations of the band structures for both TM and TE polarization, contour and electromagnetic propagation and transmission spectra. Our calculations show that the hexagonal structure gives a largest band gaps compare to cubic one for a same filling factor.

**Notes:** Arab, F. Assali, A. Grain, R. Kanouni, F. Apmas 2014 4th International Congress in Advances in Applied Physics and Materials Science (APMAS) Apr 24-27, 2014 Fethiye, TURKEY

**URL:** <Go to ISI>://WOS:000362294100014

**Reference Type: Book Section****Record Number: 5****Author:** Bendaoud, A. Chabou, M. C. Kolli, O. Bouzidi, O. Djemai, S. Kaabeche, H.**Year:** 2015**Title:** Use of Website and GIS Databases for Enhancement of Geosites in Algeria**Editor:** Errami, E. Brocx, M. Semeniuk, V.**Book Title:** From Geoheritage to Geoparks: Case Studies from Africa and Beyond**Pages:** 145-156**Series Title:** Geoheritage Geoparks and Geotourism**Short Title:** Use of Website and GIS Databases for Enhancement of Geosites in Algeria**ISBN:** 2363-765X 978-3-319-10708-0; 978-3-319-10707-3**DOI:** 10.1007/978-3-319-10708-0\_10**Accession Number:** WOS:000366930000010

**Abstract:** Algeria is the largest country in the African continent. It contains a large number of sites with geological and geomorphological interest but, so far, the Algerian geological heritage is poorly known and needs to be protected and enhanced for education, tourism and scientific purposes. A "GeoAl" project has been initiated to compile an inventory of those major geosites with exceptional geological features in Algeria, to create a GIS database, and to promote Algerian geoheritage using the new technologies of information and communication. This database will be open access and will be beneficial to the public and researchers. The database also will allow users, through maps, to geologically explore the entirety of Algeria, identifying and investigating important sites with all the available information, including photos and scientific literature. The database will evolve gradually with the inventory and will also be used as a tool for the identification and the promotion of areas with high geological potential that could be managed as geoparks. These later areas constitute one of the most appropriate instruments for both protection of natural resources and creation of economic activities. Ideally, the database will benefit the development and the promotion of geotourism as a means for sustainable development in different remote areas in Algeria, and of craft and small businesses through the creation of activities necessary for the functioning of the concept.

**Notes:** Bendaoud, A. Chabou, M. C. Kolli, O. Bouzidi, O. Djemai, S. Kaabeche, H. 1st International Conference on Geoparks in Africa and the Middle East Nov 20-28, 2011 El Jadida, MOROCCO African Assoc Women Geosciences, African Geoparks Network, UNESCO Cairo Off

**URL:** <Go to ISI>://WOS:000366930000010

**Reference Type: Book Section****Record Number:** 6**Author:** Bouafia, M. Benterki, D. Yassine, A.**Year:** 2015**Title:** A Numerical Implementation of an Interior Point Methods for Linear Programming Based on a New Kernel Function**Editor:** LeThi, H. A. Dinh, T. P. Nguyen, N. T.**Book Title:** Modelling, Computation and Optimization in Information Systems and Management Sciences - Mco 2015, Pt 1**Volume:** 359**Pages:** 357-368**Series Title:** Advances in Intelligent Systems and Computing**Short Title:** A Numerical Implementation of an Interior Point Methods for Linear Programming Based on a New Kernel Function**ISBN:** 2194-5357 978-3-319-18161-5; 978-3-319-18160-8**DOI:** 10.1007/978-3-319-18161-5\_30**Accession Number:** WOS:000377860400030

**Abstract:** In this paper, we define a new barrier function and propose a new primal-dual interior point methods based on this function for linear optimization. The proposed kernel function which yields a low algorithm complexity bound for both large and small-update interior point methods. This purpose is confirmed by numerical experiments showing the efficiency of our algorithm which are presented in the last of this paper.

**Notes:** Bouafia, Mousaab Benterki, Djamel Yassine, Adnan 3rd International Conference on Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO) May 11-13, 2015 Univ Lorraine, FRANCE Univ Lorraine, Lab Theoret & Appl Comp Sci, UFR Mathematique Informatique Mecanique Automatique, Conseil Reg Lorraine, Conseil Gen Moselle, Springer, IEEE France Sect, Mairie Metz, Metz Metropole

**URL:** <Go to ISI>://WOS:000377860400030

**Reference Type: Book Section****Record Number:** 7**Author:** Bouamama, K. Djemia, P. Benhamida, M. Iop,**Year:** 2015**Title:** First-principles calculation of the structural and elastic properties of ternary metal nitrides  $TaxMo_{1-x}N$  and  $TaxW_{1-x}N$ **Book Title:** Xxvi Iupap Conference on Computational Physics**Volume:** 640**Series Title:** Journal of Physics Conference Series**Short Title:** First-principles calculation of the structural and elastic properties of ternary metal nitrides  $TaxMo_{1-x}N$  and  $TaxW_{1-x}N$ **ISBN:** 1742-6588**DOI:** 012022 10.1088/1742-6596/640/1/012022**Accession Number:** WOS:000376508100022

**Abstract:** First-principles pseudo-potentials calculations of the mixing enthalpy, of the lattice constants  $a(0)$  and of the single-crystal elastic constants  $c_{ij}$  for ternary metal nitrides  $TaxMe_{1-x}N$  ( $Me=Mo$  or  $W$ ) alloys considering the cubic B1-rocksalt structure is carried out. For disordered ternary alloys, we employ the virtual crystal approximation VCA in which the alloy pseudo-potentials are constructed within a first-principles VCA scheme. The supercell method SC is also used for ordered structures in order to evaluate clustering effects. We find that the mixing enthalpy still remains negative for  $TaxMe_{1-x}N$  alloys in the whole composition range which implies these cubic  $TaxMo_{1-x}N$  and  $TaxW_{1-x}N$  ordered solid solutions are stable. We investigate the effect of Mo and W alloying on the trend of the mechanical properties of TaN. The effective shear elastic constant  $c_{44}$ , the Cauchy pressure ( $c_{12}-c_{44}$ ), and the shear to bulk modulus  $G/B$  ratio are used to discuss, respectively, the mechanical stability of the ternary structure and the brittle/ductile behavior in reference to TaN, MeN alloys. We determine the onset transition from the unstable structure to the stable one B1-rocksalt from the elastic stability criteria when alloying MeN with Ta. In a second stage, in the frame of anisotropic elasticity, we estimate by one homogenization method the averaged constants  $\langle C_{ij} \rangle$  of the polycrystalline  $TaxMe_{1-x}N$  alloys considering the special case of an isotropic medium with no crystallographic texture.

**Notes:** Bouamama, Kh. Djemia, P. Benhamida, M. Ccp2014 26th IUPAP Conference on Computational Physics (CCP) Aug 11-14, 2014 Boston Univ, George Sherman Union, Boston, MA IUPAP, APS, Boston Coll, Clark Univ, Harvard Univ, Inst Appl Computat Sci, NE Univ, Univ Massachusetts Amherst, Univ Massachusetts Boston, Intel Corp, Cambridge Univ Press, Elsevier, Inst Phys Publishing, Amer Inst Phys Publishing

**URL:** <Go to ISI>://WOS:000376508100022

**Reference Type: Book Section****Record Number:** 8**Author:** Boumaaraf, A. Mohamadi, T. Messai, N.**Year:** 2015**Title:** Improving of the Generation Method of Repeated PWM Based on the Signals Combinations Applied to a PV Pumping system**Editor:** Salame, C. Aillerie, M. Papageorgas, P.**Book Title:** International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability -Tmrees15**Volume:** 74**Pages:** 320-330**Series Title:** Energy Procedia**Short Title:** Improving of the Generation Method of Repeated PWM Based on the Signals Combinations Applied to a PV Pumping system**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2015.07.615**Accession Number:** WOS:000360574400038

**Abstract:** In this paper, we present a new method of the PWM signal generation with repetition of data segments, based on the round robin segment of different amplitudes converters, applied to the photovoltaic water pumping system and the variable frequency variable voltage systems, in order to use the data stored signals to generate other signal amplitudes intermediate to optimize memory usage and reduce the cost of the control board. (C) 2015 The Authors. Published by Elsevier Ltd.

**Notes:** Boumaaraf, Abdelaali Mohamadi, Tayeb Messai, Nadhir International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES) Apr 17-20, 2015 Beirut, LEBANON Euro Mediterranean Inst Sustainable Dev

**URL:** <Go to ISI>://WOS:000360574400038

**Reference Type: Book Section****Record Number:** 9**Author:** Bouriche, H. Moussaoui, S. Meziti, H. Senator, A.**Year:** 2015**Title:** Anti-Inflammatory Activity of Methanolic Extract of *Santolina chamaecyparissus***Editor:** Ghaemghami, J. Cuerrier, A.**Book Title:** International Symposium on Medicinal Plants and Natural Products**Volume:** 1098**Pages:** 23-30**Series Title:** Acta Horticulturae**Short Title:** Anti-Inflammatory Activity of Methanolic Extract of *Santolina chamaecyparissus***ISBN:** 0567-7572 978-94-62610-97-2**Accession Number:** WOS:000378642200002

**Abstract:** *Santolina chamaecyparissus* (*S. chamaecyparissus*) is an aromatic plant widely spread in Mediterranean region. It is used in folk medicine for their analgesic, anti-inflammatory, antiseptic, antispasmodic, bactericidal, digestive and vulnerary properties. In the present study, the anti-inflammatory effect of methanolic extract of the aerial parts of *S. chamaecyparissus* was evaluated using Croton oil-induced ear oedema and carrageenan-induced air pouch. Results showed that the topical application of 2 mg/ear of the extract, simultaneously with the application of the irritant agent exerted 47 and 51% of inhibition after 4 and 6 h, respectively, this effect was less than that obtained with indomethacin, used as a standard anti-inflammatory drug. The topical pre-treatment with 2 mg/ear of the extract 1 h before the induction of inflammation inhibited strongly (90%) the ear oedema. In the same way, the oral administration of 200 mg/kg 1 h before Croton oil application inhibited significantly ( $p < 0.001$ ) the ear oedema with 93%. These results were higher than that of indomethacin. On the other hand, the extract reduced the number of leucocytes migrated into the air pouch induced by carrageenan. The inhibition was 40%, this value is close to that obtained with indomethacin (32%). In conclusion, data show that methanolic extract of *S. chamaecyparissus* exerted anti-inflammatory effects by inhibiting the oedema and leukocyte migration, which support its traditional uses in treatment of some inflammatory disorders.

**Notes:** Bouriche, H. Moussaoui, S. Meziti, H. Senator, A. International Symposium on Medicinal Plants and Natural Products Jun 17-19, 2013 Montreal, CANADA Int Soc Hort Sci

**URL:** <Go to ISI>://WOS:000378642200002

**Reference Type: Book Section****Record Number:** 10**Author:** Boushaki, S. I. Kamel, N. Bendjeghaba, O.**Year:** 2015**Title:** Improved Cuckoo Search Algorithm for Document Clustering**Editor:** Amine, A. Bellatreche, L. Elberrichi, Z. Neuhold, E. J. Wrembel, R.**Book Title:** Computer Science and Its Applications, Ciia 2015**Volume:** 456**Pages:** 217-228**Series Title:** IFIP Advances in Information and Communication Technology**Short Title:** Improved Cuckoo Search Algorithm for Document Clustering**ISBN:** 1868-4238 978-3-319-19578-0; 978-3-319-19577-3**DOI:** 10.1007/978-3-319-19578-0\_18**Accession Number:** WOS:000374240400018

**Abstract:** Efficient document clustering plays an important role in organizing and browsing the information in the World Wide Web. K-means is the most popular clustering algorithms, due to its simplicity and efficiency. However, it may be trapped in local minimum which leads to poor results. Recently, cuckoo search based clustering has proved to reach interesting results. By against, the number of iterations can increase dramatically due to its slowness convergence. In this paper, we propose an improved cuckoo search clustering algorithm in order to overcome the weakness of the conventional cuckoo search clustering. In this algorithm, the global search procedure is enhanced by a local search method. The experiments tests on four text document datasets and one standard dataset extracted from well known collections show the effectiveness and the robustness of the proposed algorithm to improve significantly the clustering quality in term of fitness function, f-measure and purity.

**Notes:** Boushaki, Saida Ishak Kamel, Nadjat Bendjeghaba, Omar 5th IFIP TC 5 International Conference on Computer Science and Its Applications (CIA) May 20-21, 2015 Tahar Moulay Univ Saida, Saida, ALGERIA Int Federat Informat Proc TC 5, Tahar Moulay Univ, GeCoDe Lab, ISAE ENSMA, LIAS Lab, XLIM SIC, ARPT, DG RSdT

**URL:** <Go to ISI>://WOS:000374240400018

**Reference Type: Book Section****Record Number:** 11**Author:** Boussoufa-Lahlah, S. Semchedine, F. Bouallouche-Medjkoune, L.**Year:** 2015**Title:** A position-based routing protocol for vehicular ad hoc networks in a city environment**Editor:** Boubiche, D. E. Hidoussi, F. Cruz, H. T.**Book Title:** International Conference on Advanced Wireless Information and Communication Technologies**Volume:** 73**Pages:** 102-108**Series Title:** Procedia Computer Science**Short Title:** A position-based routing protocol for vehicular ad hoc networks in a city environment**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.12.054**Accession Number:** WOS:000373736100012

**Abstract:** Vehicular Ad Hoc NETWORKS (VANETs) is a form of Mobile Ad hoc NETWORKS (MANETs) which provides a distinguished approach for Intelligent Transport System (ITS). The most challenging task in VANETs is the routing of data. This is due to the high mobility of the vehicles which induces a rapid change in the network topology. Research in the area of VANETs routing protocols have shown that position-based routing is well adapted for highly dynamic environments such as inter-vehicle communication on highway environments. However, position-based routing finds difficulties to deal with two-dimensional scenarios with obstacles (building, tree, etc), which blocked radio transmissions, and voids as it is the case for city environments. Thus, in this paper we propose a position-based routing approach for Vehicular Ad hoc NETWORKS which attempts to deal with obstacles and voids found in a city environment. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Boussoufa-Lahlah, Souaad Semchedine, Fouzi Bouallouche-Medjkoune, Louiza Awict 2015 International Conference on Advanced Wireless Information and Communication Technologies (AWICT) Oct 05-07, 2015 Natl Sch Engineers Sousse, TUNISIA

**URL:** <Go to ISI>://WOS:000373736100012

**Reference Type: Book Section****Record Number:** 12**Author:** Chabou, M. C. Laghouag, M. Y. Bendaoud, A.**Year:** 2015**Title:** Dinosaur Track Sites in Algeria: A Significant National Geological Heritage in Danger**Editor:** Errami, E. Brocx, M. Semeniuk, V.**Book Title:** From Geoheritage to Geoparks: Case Studies from Africa and Beyond**Pages:** 157-166**Series Title:** Geoheritage Geoparks and Geotourism**Short Title:** Dinosaur Track Sites in Algeria: A Significant National Geological Heritage in Danger**ISBN:** 2363-765X 978-3-319-10708-0; 978-3-319-10707-3**DOI:** 10.1007/978-3-319-10708-0\_11**Accession Number:** WOS:000366930000011

**Abstract:** Numerous dinosaur track sites are known in Algeria. Most of them are located in the Saharan Atlas, in addition to one site in the Djurdjura Mountains with small footprints assigned to *Rotodactylus*, one of the earliest members of the dinosaur lineage. Two sites have been known for a long time: (i) the Amoura site, located in the Cenomanian layers at Djebel Bou Kahil, eastern Saharan Atlas; It is one of the oldest known scientific references to dinosaur tracks in the world and contains theropod footprints; and (ii) the Tiout site located at the Triassic-Jurassic boundary layer near Ain Sefra, Ksour Mountains, western Saharan Atlas; this site also contains theropod footprints. Recently, several sites have been discovered in Lower Cretaceous strata in the El Bayadh area (western Saharan Atlas). These sites contain many tracks which include both theropod and sauropod footprints, some of which are exceptionally large and well preserved. Regrettably, this invaluable world geological heritage is now facing dramatic decay if no serious actions are undertaken to protect and conserve it.

**Notes:** Chabou, M. C. Laghouag, M. Y. Bendaoud, A. 1st International Conference on Geoparks in Africa and the Middle East Nov 20-28, 2011 El Jadida, MOROCCO African Assoc Women Geosciences, African Geoparks Network, UNESCO Cairo Off

**URL:** <Go to ISI>://WOS:000366930000011

**Reference Type: Book Section****Record Number:** 13**Author:** Daoui, A. K. Boubir, B. Adouane, A. Demagh, N. Ghomazi, M.**Year:** 2015**Title:** Numerical simulations of the optical gain of crystalline fiber doped by rare earth and transition ion**Editor:** Clarkson, W. A. Shori, R. K.**Book Title:** Solid State Lasers Xxiv: Technology and Devices**Volume:** 9342**Series Title:** Proceedings of SPIE**Short Title:** Numerical simulations of the optical gain of crystalline fiber doped by rare earth and transition ion**ISBN:** 0277-786X 978-1-62841-432-5**DOI:** 93421q 10.1117/12.2075434**Accession Number:** WOS:000353888400046

**Abstract:** A fiber laser is a laser whose gain medium is a doped fiber, although lasers whose cavity is made wholly of fibers have also been called fiber lasers. The gain media in a fiber laser is usually fiber doped with rare-earth ions, such as erbium (Er), neodymium (Nd), ytterbium (Yb), thulium (Tm), or praseodymium (Pr), which is doped into the core of the optical fiber, similar to those used to transmit telecommunications signals. Fiber lasers find many applications in materials processing, including cutting, welding, drilling, and marking metal. To maximize their market penetration, it is necessary to increase their output power. In this work, we present a detailed study based on the numerical simulation using MATLAB, of one of the principal characteristics of a fiber laser doped with rare earth ions and transition ion. The gain depends on several parameters such as the length of the doped fiber, the density, the pump power, noise, etc.). The used program resolves the state equations in this context together with those governing the light propagation phenomena. The developed code can also be used to study the dynamic operating modes of a doped fiber laser.

**Notes:** Daoui, A. K. Boubir, B. Adouane, A. Demagh, N. Ghomazi, M. Conference on Solid State Lasers XXIV - Technology and Devices Feb 08-10, 2015 San Francisco, CA Spie

**URL:** <Go to ISI>://WOS:000353888400046

**Reference Type: Book Section****Record Number:** 14**Author:** Deghfel, B. Kahoul, A. Nekkab, M.**Year:** 2015**Title:** Z-Dependence Analysis of M X-Ray Production Cross Sections for Heavy Elements with  $60 \leq Z \leq 90$  by Protons Impact**Editor:** Oral, A. Y. Bahsi, Z. B. Ozer, M. Sezer, M. Akoz, M. E.**Book Title:** 4th International Congress in Advances in Applied Physics and Materials Science**Volume:** 1653**Series Title:** AIP Conference Proceedings**Short Title:** Z-Dependence Analysis of M X-Ray Production Cross Sections for Heavy Elements with  $60 \leq Z \leq 90$  by Protons Impact**ISBN:** 0094-243X 978-0-7354-1295-8**DOI:** 020031 10.1063/1.4914222**Accession Number:** WOS:000362294100031

**Abstract:** Motivated by the large deviation between the experiment and the predictions of the most often used model of ionization process by a charged particle, namely ECPSSR model, a large database of experimental M-shell X-ray production cross-sections by protons energies varying from 0.1 to 4.0 MeV for elements with atomic number  $60 \leq Z \leq 90$ , is collected from various sources published from 1980 till 2009 to deduce an empirical M x-ray production cross section. This latter is then deduced from the available experimental data as a function of the scaled velocity parameter by using the whole range of elements (collective analysis) or by introducing the dependence of these cross sections on the atomic number of the target, noted as "Z-dependence analysis" in addition to the collective one. The corresponding results and their deviation from the experimental data are presented for selected elements. Also, a comparison is made for selected elements between our results and other theoretical as well as experimental works.

**Notes:** Deghfel, B. Kahoul, A. Nekkab, M. Apmas 2014 4th International Congress in Advances in Applied Physics and Materials Science (APMAS) Apr 24-27, 2014 Fethiye, TURKEY

**URL:** <Go to ISI>://WOS:000362294100031

**Reference Type: Book Section****Record Number:** 15**Author:** Drif, A. Boukerram, A. Slimani, Y.**Year:** 2015**Title:** Community Discovery Topology Construction for Ad Hoc Networks**Editor:** Mumtaz, S. Rodriguez, J. Katz, M. Wang, C. Nascimento, A.**Book Title:** Wireless Internet**Volume:** 146**Pages:** 197-208**Series Title:** Lecture Notes of the Institute for Computer Sciences Social Informatics and Telecommunications Engineering**Short Title:** Community Discovery Topology Construction for Ad Hoc Networks**ISBN:** 1867-8211 978-3-319-18802-7; 978-3-319-18801-0**DOI:** 10.1007/978-3-319-18802-7\_28**Accession Number:** WOS:000377509100028

**Abstract:** One of the most obvious features of ad hoc communication is the analyze of the relationships between the ad hoc network users and their need for communication. On that point, the determination of topologies for efficient broadcast based on property of users of ad hoc networks has attracted a growing interest. In the current work, we propose a method to build a virtual topology that exploits the property of community structure in ad hoc network. The first phase of the proposed method constructs a clustering tree based on structural weight of nodes, while maintaining capacity-efficient links. In the second phase, the algorithm determines a community backbone in order to ensure efficient transmission coverage. Results confirm the generation of a good topology.

**Notes:** Drif, Ahlem Boukerram, Abdallah Slimani, Yacine Wicon 2014 8th International Wireless Internet Conference (WICON) Nov 13-14, 2014 Lisbon, PORTUGAL

**URL:** <Go to ISI>://WOS:000377509100028

**Reference Type: Book Section****Record Number:** 16**Author:** El Mir, R. Casagrande, E. M. S. Dal Cappello, C. Naja, A. Mansoure, A. Kada, I.**Year:** 2015**Title:** Electron impact experimental and theoretical fourfold differential cross section for CH<sub>4</sub>**Editor:** Ancarani, L. U.**Book Title:** International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces**Volume:** 601**Series Title:** Journal of Physics Conference Series**Short Title:** Electron impact experimental and theoretical fourfold differential cross section for CH<sub>4</sub>**ISBN:** 1742-6588**DOI:** 012005 10.1088/1742-6596/601/1/012005**Accession Number:** WOS:000354877300005

**Abstract:** New development of the 3C approximated model describing the fourfold differential cross section for double ionization of CH<sub>4</sub> will be reported. A corrective factor called Ward-Macek will take into account the repulsion between the two ejected electrons instead of the usual Gamow factor. To validate the developed model, we performed the coplanar (e, 3-1e) experiments for the double ionization of the methane target by electron impact at intermediate incident energy and different energy range for the pair of ejected electrons. Some agreement is found for the forward part of the angular distributions. The differences are discussed in terms of double ionization mechanisms.

**Notes:** El Mir, R. Casagrande, E. M. Staicu Dal Cappello, C. Naja, A. Mansoure, A. Kada, I. Mps2014 International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces (MPS) Jul 15-18, 2014 Metz, FRANCE Institut Jean Barriol, Laboratoire SRSMC, Groupement Rech THEMIS, Ville Metz, Metz Metropole, Conseil Gen Moselle, Reg Lorraine

**URL:** <Go to ISI>://WOS:000354877300005

**Reference Type: Book Section****Record Number:** 17**Author:** Fathi, M. Abderrezek, M. Djahli, F. Ayad, M.**Year:** 2015**Title:** Study of thin film solar cells in high temperature condition**Editor:** Salame, C. Aillerie, M. Papageorgas, P.**Book Title:** International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability -Tmrees15**Volume:** 74**Pages:** 1410-1417**Series Title:** Energy Procedia**Short Title:** Study of thin film solar cells in high temperature condition**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2015.07.788**Accession Number:** WOS:000360574400152

**Abstract:** In this paper, we study the effect of temperature on the Copper Indium Gallium Selenide (CIGS) thin film solar cells using the one dimensional solar cells simulator SCAPS-1D (Solar Cell Capacitance Simulator). The dependence of the CIGS solar cells characteristics on temperature was investigated from 25 degrees C to 70 degrees C at intervals of 5 degrees C. We observed an apparent degradation in the open-circuit voltage and conversion efficiency with an increase of temperature from 25 degrees C to 70 degrees C, accompanied with degradation in the maximum power of the cell from 18.55 mW/cm(2) (25 degrees C) to 14.941 mW/cm(2) (70 degrees C). By the using of the luminescent downshifting approach, the conversion efficiency of the CIGS solar cell was enhanced under Standard Test Conditions (STC) at 25 degrees C and in high ambient temperatures test conditions. The coefficient of the voltage variation to temperature  $\Delta V_{oc}/\Delta T$  was reduced from -2 to -1.8 (mV/degrees C). (C) 2015 The Authors.

Published by Elsevier Ltd.

**Notes:** Fathi, Mohamed Abderrezek, Mahfoud Djahli, Farid Ayad, Mohammed International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES) Apr 17-20, 2015 Beirut, LEBANON Euro Mediterranean Inst Sustainable Dev

**URL:** <Go to ISI>://WOS:000360574400152

**Reference Type: Book Section****Record Number:** 18**Author:** Gadri, S. Moussaoui, A.**Year:** 2015**Title:** Arabic Texts Categorization: Features Selection Based on the Extraction of Words' Roots**Editor:** Amine, A. Bellatreche, L. Elberrichi, Z. Neuhold, E. J. Wrembel, R.**Book Title:** Computer Science and Its Applications, Ciia 2015**Volume:** 456**Pages:** 167-180**Series Title:** IFIP Advances in Information and Communication Technology**Short Title:** Arabic Texts Categorization: Features Selection Based on the Extraction of Words' Roots**ISBN:** 1868-4238 978-3-319-19578-0; 978-3-319-19577-3**DOI:** 10.1007/978-3-319-19578-0\_14**Accession Number:** WOS:000374240400014

**Abstract:** One of methods used to reduce the size of terms vocabulary in Arabic text categorization is to replace the different variants (forms) of words by their common root. The search of root in Arabic or Arabic word root extraction is more difficult than other languages since Arabic language has a very different and difficult structure, that is because it is a very rich language with complex morphology. Many algorithms are proposed in this field. Some of them are based on morphological rules and grammatical patterns, thus they are quite difficult and require deep linguistic knowledge. Others are statistical, so they are less difficult and based only on some calculations. In this paper we propose a new statistical algorithm which permits to extract roots of Arabic words using the technique of n-grams of characters without using any morphological rule or grammatical patterns.

**Notes:** Gadri, Said Moussaoui, Abdelouahab 5th IFIP TC 5 International Conference on Computer Science and Its Applications (CIA) May 20-21, 2015 Tahar Moulay Univ Saida, Saida, ALGERIA Int Federat Informat Proc TC 5, Tahar Moulay Univ, GeCoDe Lab, ISAE ENSMA, LIAS Lab, XLIM SIC, ARPT, DG RSdT

**URL:** <Go to ISI>://WOS:000374240400014

**Reference Type: Book Section****Record Number:** 19**Author:** Gherbi, C. Aliouat, Z. Benmohammed, M.**Year:** 2015**Title:** A Load-Balancing and self-adaptation clustering for lifetime prolonging in large scale wireless sensor networks**Editor:** Boubiche, D. E. Hidoussi, F. Cruz, H. T.**Book Title:** International Conference on Advanced Wireless Information and Communication Technologies**Volume:** 73**Pages:** 66-75**Series Title:** Procedia Computer Science**Short Title:** A Load-Balancing and self-adaptation clustering for lifetime prolonging in large scale wireless sensor networks**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.12.050**Accession Number:** WOS:000373736100008

**Abstract:** Hierarchical routing is an efficient way to lower energy consumption within a cluster, performing data aggregation and fusion in order decrease the number of transmitted messages to the BS. In this paper, a novel hierarchical approach called distributed energy efficient adaptive clustering protocol with gathering data (DEACP) is proposed for Wireless sensor network. Since nodes in a sensor network have limited energy, prolonging the network lifetime and improving scalability become important. we have proposed (DEACP) approach to reach the following objectives: reduce the overall network energy consumption, balance the energy consumption among the sensors and extend the lifetime of the network, the clustering must be completely distributed, the clustering should be efficient in complexity of message and time, the cluster-heads should be well-distributed across the network, the load balancing should be done well, the clustered WSN should be fully-connected. As a result transmission power of the node is reduce which subsequently reduces the energy consumption of the node. Our proposed work is simulated through Network Simulator (NS-2). We consider the problem of conserving energy in a single node in a wireless sensor network by turning off the node's radio for periods of a fixed time length. While packets may continue to arrive at the node's buffer during the sleep periods, the node cannot transmit them until it wakes up. The objective is to design sleep control laws that minimize the expected value of a cost function representing both energy consumption costs and holding costs for backlogged packets. The resource reservation is used to decompose the total simulation time of network into smaller time slots depending upon number of nodes in the network using TDMA technique. Simulations show that (DEACP) clusters have good performance characteristics. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Gherbi, Chirihane Aliouat, Zibouda Benmohammed, Mohammed Awict 2015 International Conference on Advanced Wireless Information and Communication Technologies (AWICT) Oct 05-07, 2015 Natl Sch Engineers Sousse, TUNISIA

**URL:** <Go to ISI>://WOS:000373736100008

**Reference Type: Book Section****Record Number:** 20**Author:** Ghomazi, M. Demagh, N. Adouane, A. Boubir, B. Daoui, A. K.**Year:** 2015**Title:** Improved parametric spectroscopic performance of an optical fiber doped with erbium**Editor:** Exarhos, G. J. Gruzdev, V. E. Menapace, J. A. Ristau, D. Soileau, M. J.**Book Title:** Laser-Induced Damage in Optical Materials: 2015**Volume:** 9632**Series Title:** Proceedings of SPIE**Short Title:** Improved parametric spectroscopic performance of an optical fiber doped with erbium**ISBN:** 0277-786X 978-1-62841-832-3**DOI:** 96321g 10.1117/12.2194077**Accession Number:** WOS:000373355700035

**Abstract:** The erbium trivalent ions( $Er^{+3}$ ) were played an important role in the development of optical telecommunications technology in recent years. The emission of ions  $Er^{+3}$  is crucial at 1.53  $\mu m$  for the optical telecommunications because this emission belong to the minimum of attenuation of silica fibers used to transport information. In this work we study and we optimize the populations of the ion states erbium in optical fiber in function of experimental spectroscopic parameters. This study is based on modeling of the effects of doping based on the strength of the signal and the pump used. Indeed, we simulate the transient behavior of the different levels of erbium energy, N1, N2, and N3 respectively by using MATLAB code.

**Notes:** Ghomazi, M. Demagh, N. Adouane, A. Boubir, B. Daoui, A. K. 47th Annual Laser Damage Symposium on Optical Materials for High-Power Lasers Sep 27-30, 2015 Boulder, CO SPIE, Lawrence Livermore Natl Lab, Laser Components GmbH, Spica Technologies Inc, Quantel USA

**URL:** <Go to ISI>://WOS:000373355700035

**Reference Type: Book Section****Record Number:** 21**Author:** Hadji, S. Gaubert, J. P. Krim, F.**Year:** 2015**Title:** Theoretical and experimental analysis of genetic algorithms based MPPT for PV systems**Editor:** Salame, C. Aillerie, M. Papageorgas, P.**Book Title:** International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability -Tmrees15**Volume:** 74**Pages:** 772-787**Series Title:** Energy Procedia**Short Title:** Theoretical and experimental analysis of genetic algorithms based MPPT for PV systems**ISBN:** 1876-6102**DOI:** 10.1016/j.egypro.2015.07.813**Accession Number:** WOS:000360574400085

**Abstract:** This paper presents a theoretical and experimental analysis of Maximum Power Point Tracking (MPPT) method for photovoltaic (PV) systems based on Genetic Algorithms (GAs). The proposed algorithm is based on Genetic Algorithms (GAs) and it can estimate the current ( $I_{mp}$ ) and voltage ( $V_{mp}$ ) at maximum power point by measuring the open circuit voltage ( $V_{oc}$ ) and the short circuit current ( $I_{sc}$ ) without knowing the irradiance and the cell temperature. The principle of GAs is searching for the maximum of fitness function and not for the minimum of power derivation; this gives more stability and minimize oscillation of output power around the maximum power point (MPP). We expose the method with a few tests; then a comparison with the famous Perturb and Observe (P&O) and Incremental Conductance (Inc-Cond) is given. We tested stability (power oscillation) with real panels. To compare response time (rapidity) we used a PV emulator (realized by Kadri et al.), so we can inject the same irradiance profile and see output PV power evolution. The response time of P&O and Inc-Cond, and the PV power oscillation varies with the duty cycle increment step; with a small step, we get less power oscillation but this needs an important time response, we can improve system rapidity with a bigger duty increment step but important power oscillation will result. With GAs based MPPT we can get more stability with rapid response time. The results obtained show better stability and less oscillation around the MPP with the new method. (C) 2015 The Authors. Published by Elsevier Ltd.

**Notes:** Hadji, Slimane Gaubert, Jean-Paul Krim, Fateh International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES) Apr 17-20, 2015 Beirut, LEBANON Euro Mediterranean Inst Sustainable Dev

**URL:** <Go to ISI>://WOS:000360574400085

**Reference Type: Book Section****Record Number:** 22**Author:** Hamzaoui, D. Vuong, T. P. Djahli, F. Kiani, G. I. Ieee,**Year:** 2015**Title:** Metamaterial RFID Tag Designs For Long Read Range**Book Title:** 2015 Ieee International Symposium on Antennas and Propagation & Usnc/Ursi National Radio Science Meeting**Pages:** 1764-1765**Series Title:** IEEE Antennas and Propagation Society International Symposium**Short Title:** Metamaterial RFID Tag Designs For Long Read Range**ISBN:** 1522-3965 978-1-4799-7815-1**Accession Number:** WOS:000371401401426

**Abstract:** A novel high gain metamaterial tag antenna for European UHF RFID is proposed. First a modified dog bone AMC unit cell and a meander dipole antenna are designed separately to operate in 865.6-867.6 MHz frequency band, then the effect of adding an AMC to design is investigated. The realized gain increased from 1.8 dB for the antenna alone to 4.17 dB for the metamaterial antenna constituted of 1 x 2 unit cells. A total efficiency of 90 % is observed at 868 MHz. Then the effect of increasing the number of unit cells of AMC on the performance of the tag antenna in terms of gain, bandwidth and radiation efficiency is studied. By increasing the unit cells to 2x3, the antenna gain increases to 7.66 dB with an efficiency of 95.78 %, hence increasing the read range. The structure is low cost and easy to fabricate.

**Notes:** Hamzaoui, D. Vuong, T. P. Djahli, F. Kiani, G. I. IEEE International Symposium on Antennas and Propagation / USNC/URSI National North American Radio Science Meeting Jul 19-24, 2015 Vancouver, CANADA Inst Elect & Elect Engineers, IEEE Antennas & Propagat Soc, USNC, URSI

**URL:** <Go to ISI>://WOS:000371401401426

**Reference Type: Book Section****Record Number:** 23**Author:** Heraguemi, K. E. Kamel, N. Drias, H.**Year:** 2015**Title:** Multi-population Cooperative Bat Algorithm for Association Rule Mining**Editor:** Nunez, M. Nguyen, N. T. Camacho, D. Trawinski, B.**Book Title:** Computational Collective Intelligence**Volume:** 9329**Pages:** 265-274**Series Title:** Lecture Notes in Artificial Intelligence**Short Title:** Multi-population Cooperative Bat Algorithm for Association Rule Mining**ISBN:** 0302-9743 978-3-319-24069-5; 978-3-319-24068-8**DOI:** 10.1007/978-3-319-24069-5\_25**Accession Number:** WOS:000366126400025

**Abstract:** Association rule mining (ARM) is well-known issue in data mining. It is a combinatorial optimization problem purpose to extract the correlations between items in sizable data-sets. According to the literature study, bio-inspired prove their efficiency in term of time, memory and quality of generated rules. This paper investigates multi-population cooperative version of bat algorithm for association rule mining (BAT-ARM) named MPB-ARM which is based on bat inspired algorithm. The advantage of bat algorithm is the power combination between population-based algorithm and the local search, however, it more powerful in local search. The main factor to judge optimization algorithms is ensuring the interaction between global diverse exploration and local intensive exploitation. To maintain the diversity of bats, in our proposed approach, we introduce a cooperative master-slave strategy between the subpopulations. The experimental results shows that our proposal outperforms other bio-inspired algorithms already exist and cited in the literature including our previous work BAT-ARM.

**Notes:** Heraguemi, Kamel Eddine Kamel, Nadjat Drias, Habiba Iccci 2015 7th International Conference on Computational Collective Intelligence (ICCCI) Sep 21-23, 2015 Madrid, SPAIN Univ Complutense Madrid, Univ Autonama Madrid, Wroclaw Univ Technol

**URL:** <Go to ISI>://WOS:000366126400025

**Reference Type: Book Section****Record Number:** 24**Author:** Houamer, S. Dal Cappello, C. Chinoune, M.**Year:** 2015**Title:** Ionization of atoms and molecules by electron impact: a three body wave treatment**Editor:** Diaz, C. Rabadan, I. Garcia, G. Mendez, L. Martin, F.**Book Title:** Xxix International Conference on Photonic, Electronic, and Atomic Collisions**Volume:** 635**Series Title:** Journal of Physics Conference Series**Short Title:** Ionization of atoms and molecules by electron impact: a three body wave treatment**ISBN:** 1742-6588**DOI:** 052053 10.1088/1742-6596/635/5/052053**Accession Number:** WOS:000366407000300

**Abstract:** Synopsis Triple differential cross section for ionization of atomic and molecular targets by electron impact is calculated using approximate three body waves. The method is an alternative of the well known BBK model where the distortion of the ejected electron is taken into account. Results are compared with available data.

**Notes:** Houamer, S. Dal Cappello, C. Chinoune, M. Icpac2015 29th International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) Jul 22-28, 2015 Toledo, SPAIN Univ Autonoma Madrid, Consejo Super Investigaciones Cient

**URL:** <Go to ISI>://WOS:000366407000300

**Reference Type: Book Section****Record Number:** 25**Author:** Kahoul, A. Deghfel, B. Aylikci, V. Aylikci, N. K. Nekkab, M.**Year:** 2015**Title:** Average M Shell Fluorescence Yields for Elements with  $70 \leq Z \leq 92$ **Editor:** Oral, A. Y. Bahsi, Z. B. Ozer, M. Sezer, M. Akoz, M. E.**Book Title:** 4th International Congress in Advances in Applied Physics and Materials Science**Volume:** 1653**Series Title:** AIP Conference Proceedings**Short Title:** Average M Shell Fluorescence Yields for Elements with  $70 \leq Z \leq 92$ **ISBN:** 0094-243X 978-0-7354-1295-8**DOI:** 020052 10.1063/1.4914243**Accession Number:** WOS:000362294100052

**Abstract:** The theoretical, experimental and analytical methods for the calculation of average M-shell fluorescence yield ( $\omega$ ) over  $\bar{M}$  of different elements are very important because of the large number of their applications in various areas of physical chemistry and medical research. In this paper, the bulk of the average M-shell fluorescence yield measurements reported in the literature, covering the period 1955 to 2005 are interpolated by using an analytical function to deduce the empirical average M-shell fluorescence yield in the atomic range of  $70 \leq Z \leq 92$ . The results were compared with the theoretical and fitted values reported by other authors. Reasonable agreement was typically obtained between our result and other works.

**Notes:** Kahoul, A. Deghfel, B. Aylikci, V. Aylikci, N. K. Nekkab, M. Apmas 2014 4th International Congress in Advances in Applied Physics and Materials Science (APMAS) Apr 24-27, 2014 Fethiye, TURKEY

**URL:** <Go to ISI>://WOS:000362294100052

**Reference Type: Book Section****Record Number:** 26**Author:** Kanouni, F. Brezini, A. Graine, R. Arab, F. Assali, A.**Year:** 2015**Title:** Resonant Tunneling in 2D-Photonic Superlattices**Editor:** Cabrini, S. Lerondel, G. Schwartzberg, A. M. Mokari, T.**Book Title:** Nanophotonic Materials Xii**Volume:** 9545**Series Title:** Proceedings of SPIE**Short Title:** Resonant Tunneling in 2D-Photonic Superlattices**ISBN:** 0277-786X 978-1-62841-711-1**DOI:** 95450v 10.1117/12.2185923**Accession Number:** WOS:000365753300022

**Abstract:** Transmissions and resonant tunneling of two-dimensional (2D) photonic superlattices (PhSLs) are discussed. We consider PhSL composed of two alternating 2D-photonic crystals. The structure is denoted as A/B/A/B ...A/B, where photonic crystals A and B act as photonic wells and barriers, respectively. The transmission coefficient is calculated using the Transfer Matrix Method (TMM) in combination with Bloch theorem. The transmission spectra of the PhSLs indicate that the formation of photonic miniband and minigap inside the wells. The positions and number of the minibands can be artificially tuned by varying the well width. By appropriately choosing the structure parameters, these interesting results can be used to develop new photonic devices

**Notes:** Kanouni, F. Brezini, A. Graine, R. Arab, F. Assali, A. Conference on Nanophotonic Materials XII Aug 12-13, 2015 San Diego, CA Spie

**URL:** <Go to ISI>://WOS:000365753300022

**Reference Type: Book Section****Record Number:** 27**Author:** Lakhdari, F. Osmani, I. Saida, T.**Year:** 2015**Title:** Heat generation and thermo-mechanical effect modeling in longitudinally diode-pumped solid state lasers**Editor:** Mazuray, L. Wartmann, R. Wood, A. P.**Book Title:** Optical Systems Design 2015: Optical Design and Engineering Vi**Volume:** 9626**Series Title:** Proceedings of SPIE**Short Title:** Heat generation and thermo-mechanical effect modeling in longitudinally diode-pumped solid state lasers**ISBN:** 0277-786X 978-1-62841-815-6**DOI:** 96262w 10.1117/12.2191158**Accession Number:** WOS:000366812400082

**Abstract:** Thermal management in solid state laser is a challenge to the high power laser industry's ability to provide continued improvements in device and system performance. In this work an investigation of heat generation and thermo-mechanical effect in a high-power Nd:YAG and Yb:YAG cylindrical-type solid state laser pumped longitudinally with different power by fibre coupled laser diode is carried out by numerical simulation based on the finite element method (FEM). Impact of the dopant concentration on the power conversion efficiency is included in the simulation. The distribution of the temperature inside the lasing material is resolute according to the thermal conductivity. The thermo-mechanical effect is explored as a function of pump power in order to determine the maximum pumping power allowed to prevent the crystal's fracture. The presented simulations are in broad agreement with analytical solutions; provided that the boundary condition of the pump induced heat generation is accurately modelled.

**Notes:** Lakhdari, Fouad Osmani, Ismahane Saida, Tabet Optical Systems Design - Optical Design and Engineering VI Sep 07-10, 2015 Jena, GERMANY Spie

**URL:** <Go to ISI>://WOS:000366812400082

**Reference Type: Book Section****Record Number:** 28**Author:** Mami, N. A.**Year:** 2015**Title:** THE LINGUISTIC BACKGROUND AND ITS IMPACT ON LEARNING ENGLISH AS A FOREIGN LANGUAGE: THE CASE OF THE ALGERIAN LINGUISTIC DIVERSITY ON THE EFL CLASS**Editor:** Chova, L. G. Martinez, A. L. Torres, I. C.**Book Title:** Iceri2015: 8th International Conference of Education, Research and Innovation**Pages:** 17-23**Series Title:** ICERI Proceedings**Short Title:** THE LINGUISTIC BACKGROUND AND ITS IMPACT ON LEARNING ENGLISH AS A FOREIGN LANGUAGE: THE CASE OF THE ALGERIAN LINGUISTIC DIVERSITY ON THE EFL CLASS**ISBN:** 2340-1095 978-84-608-2657-6**Accession Number:** WOS:000377304000003

**Abstract:** Neuroscience has long investigated the brain-functioning in different realms of science. One of the main intrinsic studies which have been worth pinpointing was language acquisition and language learning. Indeed, the child is born with the pre-requisite to learn an unprecedented number of sounds regardless of what language is spoken in his immediate community. Additionally, in a multilingual social background, an infant is capable to grasp meanings and vocabularies that have similar or different connotations. More than that, children have the ability to learn a language in a remarkable speed. Language entities are cracked in the brain, reorganized and memorized in such a mechanical manner to process the information and act upon it. New trends in language learning show that in vocabulary acquisition, the learner takes action in his learning process which makes him an active participant in the give-and-take action. The learner comes to know things according to his experience which requires both genes and the environment. In this context, learning a second or a foreign language depends very much on the social context in which the learner has developed as well as on the linguistic background of his immediate environment. Several studies on language acquisition have shown that the infant's linguistic exposure to languages in his early life make the difference in the manner and the quality of learning languages in the future. Children with parents speaking two different languages at home are more likely to develop learning strategies that enable them to excel with foreign language learning later on. Why children are better learners than adults; this question can also find an answer in the mind's neuroscience theory to language learning. In order to investigate this phenomenon in more depth, we shall lead a study in the Algerian context where the multicultural richness and the sociolinguistic diversity give fertile land to our experiment. In the Algerian society, there cohabitates a population with a plural social and linguistic repertoire. This plurality is mainly characterized by the Arabic-speaking and the Tamazight-speaking communities. Arabic is divided into "standard Arabic" the official national language and the language of instruction. The latter, in fact, cannot be taken as a mother tongue since it is not used in everyday communication, and "Derdja" or colloquial Arabic which is the first dialect the child is exposed to in his early communication act. Derdja has no written form and has wide variations in vocabulary and pronunciation according to the regions. "Tamazight" is a second national language and is spoken by more than thirty percent of the Algerian population mainly known as "Berbere". The Berbere or the Amazigh people are the original inhabitants of Algeria and

Tamazight is their mother tongue. They get to speak Tamazight and Dardja during their first infancy. French, which is officially taken to be the first foreign language, can count a great deal of vocabulary items in the Algerian Dardja as a remnant of the French colonization to Algeria for more than a hundred and thirty-two years. With globalization, however, students are increasingly pushed to learn English. The influence of this pluralistic linguistic background surely opens some questioning as to the impact of the latter on the English Foreign Language Class. In this paper, we shall demonstrate the influence of the linguistic diversity on the EFL class in Algeria.

**Notes:** Mami, Naouel Abdellatif 8th International Conference of Education, Research and Innovation (ICERI) Nov 16-20, 2015 Seville, SPAIN

**URL:** <Go to ISI>://WOS:000377304000003

**Reference Type: Book Section****Record Number:** 29**Author:** Manallah, A. Bouafia, M.**Year:** 2015**Title:** Detection and measurement of surface defects by fringe projection technique**Editor:** Kovacinova, J. Vit, T.**Book Title:** Optics and Measurement Conference 2014**Volume:** 9442**Series Title:** Proceedings of SPIE**Short Title:** Detection and measurement of surface defects by fringe projection technique**ISBN:** 0277-786X 978-1-62841-557-5**DOI:** 94420r 10.1117/12.2086522**Accession Number:** WOS:000349403500026

**Abstract:** The present work aims to analyze and characterize the macro-geometrical defects of surfaces. As a way of characterization an optical method is used, which is the projection of fringes that is a technique of nondestructive measurement. The location, depth and size of surface defects can be determined automatically by projection of four figures of rectilinear fringes shifted in phase on the surface to be tested. An optical mounting of triangulation to project the fringes is then performed. After projection, the projected gratings images are captured by a CCD camera, digitized and stored in computer memory. The application of phase shifting algorithm with four steps is achieved to determine the initial phase that contains the "measurand", which is the difference in shape. Pieces with different forms were tested.

**Notes:** Manallah, Aissa Bouafia, Mohamed Optics and Measurement Conference Oct 07-10, 2014 Liberec, CZECH REPUBLIC Inst Plasma Phys AS CR v v i, TOPTEC, SPIE

**URL:** <Go to ISI>://WOS:000349403500026

**Reference Type: Book Section****Record Number:** 30**Author:** Manallah, A. Bouafia, M. Meguellati, S.**Year:** 2015**Title:** Optical coherence tomography as film thickness measurement technique**Editor:** Tomanek, P. Senderakova, D. Pata, P.**Book Title:** Photonics, Devices, and Systems Vi**Volume:** 9450**Series Title:** Proceedings of SPIE**Short Title:** Optical coherence tomography as film thickness measurement technique**ISBN:** 0277-786X 978-1-62841-566-7**DOI:** 945006 10.1117/12.2061387**Accession Number:** WOS:000349404500005

**Abstract:** Optical coherence tomography (OCT) is a powerful optical method, noninvasive and noncontact diagnostic method. Although it is usually used for medical examinations, particularly in ocular exploration; it can also be used in optical metrology as measure technique. In this work, we use OCT to measure thicknesses of films. In OCT, depth profiles are constructed by measuring the time delay of back reflected light by interferometry measurements. Frequency in k-space is proportional to optical path difference. Then the reflectivity profile is obtained by a Fourier transformation, and the difference between two successive peaks of the resulting spectrum gives the film thickness. Several films, food-type, of different thicknesses were investigated and the results were very accurate.

**Notes:** Manallah, Aissa Bouafia, Mohamed Meguellati, Said 8th International Conference on Photonics, Devices, and System VI Aug 27-29, 2014 Prague, CZECH REPUBLIC Czech & Slovak Soc Photon, Act M Agcy

**URL:** <Go to ISI>://WOS:000349404500005

**Reference Type: Book Section****Record Number:** 31**Author:** Mansouri, A. Khelladi, M. F. Dal Cappello, C.**Year:** 2015**Title:** Double Ionization DNA bases by electron impact**Editor:** Diaz, C. Rabadan, I. Garcia, G. Mendez, L. Martin, F.**Book Title:** Xxix International Conference on Photonic, Electronic, and Atomic Collisions**Volume:** 635**Series Title:** Journal of Physics Conference Series**Short Title:** Double Ionization DNA bases by electron impact**ISBN:** 1742-6588**DOI:** 072072 10.1088/1742-6596/635/7/072072**Accession Number:** WOS:000366407000417

**Abstract:** (e,3e) fivefold differential cross sections for the DNA bases are studied. The molecular wave functions are obtained by the multicenter wave functions from the Gaussain 03 program. To describe the correlations between ejected electron in the exit channel, we use the Ward-Macek method. The first order mechanisms involving the reaction are identified.

**Notes:** Mansouri, A. Khelladi, M. F. Dal Cappello, C. Icpac2015 29th International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) Jul 22-28, 2015 Toledo, SPAIN Univ Autonoma Madrid, Consejo Super Investigaciones Cient

**URL:** <Go to ISI>://WOS:000366407000417

**Reference Type: Book Section****Record Number:** 32**Author:** Mansouri, H. Badache, N. Aliouat, M. Pathan, A. S. K.**Year:** 2015**Title:** Adaptive Fault Tolerant Checkpointing Algorithm for Cluster Based Mobile Ad Hoc Networks**Editor:** Boubiche, D. E. Hidoussi, F. Cruz, H. T.**Book Title:** International Conference on Advanced Wireless Information and Communication Technologies**Volume:** 73**Pages:** 40-47**Series Title:** Procedia Computer Science**Short Title:** Adaptive Fault Tolerant Checkpointing Algorithm for Cluster Based Mobile Ad Hoc Networks**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.12.047**Accession Number:** WOS:000373736100005

**Abstract:** Mobile Ad hoc NETWORK (MANET) is a type of wireless network consisting of a set of self-configured mobile hosts that can communicate with each other using wireless links without the assistance of any fixed infrastructure. This has made possible to create a distributed mobile computing application and has also brought several new challenges in distributed algorithm design. Checkpointing is a well explored fault tolerance technique for the wired and cellular mobile networks. However, it is not directly applicable to MANET due to its dynamic topology, limited availability of stable storage, partitioning and the absence of fixed infrastructure. In this paper, we propose an adaptive, coordinated and non-blocking checkpointing algorithm to provide fault tolerance in cluster based MANET, where only minimum number of mobile hosts in the cluster should take checkpoints. The performance analysis and simulation results show that the proposed scheme performs well compared to works related. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Mansouri, Houssem Badache, Nadjib Aliouat, Makhoul Pathan, Al-Sakib Khan Awict 2015 International Conference on Advanced Wireless Information and Communication Technologies (AWICT) Oct 05-07, 2015 Natl Sch Engineers Sousse, TUNISIA

**URL:** <Go to ISI>://WOS:000373736100005

**Reference Type: Book Section****Record Number:** 33**Author:** Medani, K. Aliouat, M. Aliouat, Z.**Year:** 2015**Title:** High Velocity Aware Clocks Synchronization Approach in Vehicular Ad Hoc Networks**Editor:** Amine, A. Bellatreche, L. Elberrichi, Z. Neuhold, E. J. Wrembel, R.**Book Title:** Computer Science and Its Applications, Ciia 2015**Volume:** 456**Pages:** 479-490**Series Title:** IFIP Advances in Information and Communication Technology**Short Title:** High Velocity Aware Clocks Synchronization Approach in Vehicular Ad Hoc Networks**ISBN:** 1868-4238 978-3-319-19578-0; 978-3-319-19577-3**DOI:** 10.1007/978-3-319-19578-0\_39**Accession Number:** WOS:000374240400039

**Abstract:** Clock synchronization plays an important role in communications organization between applications in Vehicular Ad hoc NETWORKS (VANETs) requiring a strong need for coordination. Having a global time reference or knowing the value of a physical clock (indeed with an acceptable approximation) of cooperative process involved in the provision of a service by distributed applications, takes on a fundamental importance in decentralized systems, particularly in VANETs. The intrinsic and constraining features of VANETs, especially the high mobility of vehicles make the clock synchronization mechanisms more complex and require a concise and a specific adequacy. The aim of the work reported in this paper is to propose a new protocol for clocks synchronization for VANETs, sufficiently robust, with a good precision, and convenient to the main constraint such high nodes mobility. Our proposed protocol, named Time Table Diffusion (TTD), was simulated using a combination of two simulators: VanetMobiSim and NS2 to evaluate its performance in terms of convergence time and number of messages generated. The obtained results were conclusive.

**Notes:** Medani, Khedidja Aliouat, Makhlof Aliouat, Zibouda 5th IFIP TC 5 International Conference on Computer Science and Its Applications (CIA) May 20-21, 2015 Tahar Moulay Univ Saida, Saida, ALGERIA Int Federat Informat Proc TC 5, Tahar Moulay Univ, GeCoDe Lab, ISAE ENSMA, LIAS Lab, XLIM SIC, ARPT, DG RSdT

**URL:** <Go to ISI>://WOS:000374240400039

**Reference Type: Book Section****Record Number:** 34**Author:** Mediani, C. Abel, M. H. Djoudi, M.**Year:** 2015**Title:** Towards a Recommendation System for the Learner from a Semantic Model of Knowledge in a Collaborative Environment**Editor:** Amine, A. Bellatreche, L. Elberrichi, Z. Neuhold, E. J. Wrembel, R.**Book Title:** Computer Science and Its Applications, Ciia 2015**Volume:** 456**Pages:** 315-327**Series Title:** IFIP Advances in Information and Communication Technology**Short Title:** Towards a Recommendation System for the Learner from a Semantic Model of Knowledge in a Collaborative Environment**ISBN:** 1868-4238 978-3-319-19578-0; 978-3-319-19577-3**DOI:** 10.1007/978-3-319-19578-0\_26**Accession Number:** WOS:000374240400026

**Abstract:** Collaboration is a common work between many people which generates the creation of a common task. A computing environment can foster collaboration among peers to exchange and share knowledge or skills for succeeding a common project. Therefore, when users interact among themselves and with an environment, they provide a lot of information. This information is recorded and classified in a model of traces to be used to enhance collaborative learning. In this paper, we propose (1) the refinement of a semantic model of traces with indicators calculated according to Bayes formulas and (2) the exploitation of these indicators to provide recommendations to the learner to reinforce learning points with learners, of his/her community of collaboration, identified as "experts".

**Notes:** Mediani, Chahrazed Abel, Marie-Helene Djoudi, Mahieddine 5th IFIP TC 5 International Conference on Computer Science and Its Applications (CIA) May 20-21, 2015 Tahar Moulay Univ Saida, Saida, ALGERIA Int Federat Informat Proc TC 5, Tahar Moulay Univ, GeCoDe Lab, ISAE ENSMA, LIAS Lab, XLIM SIC, ARPT, DG RSdT

**URL:** <Go to ISI>://WOS:000374240400026

**Reference Type: Book Section****Record Number:** 35**Author:** Meguellati, S.**Year:** 2015**Title:** Precision optical device of Freeform defects inspection**Editor:** Duparre, A. Geyl, R.**Book Title:** Optical Systems Design 2015: Optical Fabrication, Testing, and Metrology V**Volume:** 9628**Series Title:** Proceedings of SPIE**Short Title:** Precision optical device of Freeform defects inspection**ISBN:** 0277-786X 978-1-62841-817-0**DOI:** 96281x 10.1117/12.2191202**Accession Number:** WOS:000366832100046

**Abstract:** This method of optical scanning presented in this paper is used for precision measurement deformation in shape or absolute forms in comparison with a reference component form, of optical or mechanical components, on reduced surfaces area that are of the order of some mm(2) and more. The principle of the method is to project the image of the source grating to palpate optically surface to be inspected, after reflection; the image of the source grating is printed by the object topography and is then projected onto the plane of reference grating for generate moire fringe for defects detection. The optical device used allows a significant dimensional surface magnification of up to 1000 times the area inspected for micro-surfaces, which allows easy processing and reaches an exceptional nanometric imprecision of measurements. According to the measurement principle, the sensitivity for displacement measurement using moire technique depends on the frequency grating, for increase the detection resolution. This measurement technique can be used advantageously to measure the deformations generated by the production process or constraints on functional parts and the influence of these variations on the function. The optical device and optical principle, on which it is based, can be used for automated inspection of industrially produced goods. It can also be used for dimensional control when, for example, to quantify the error as to whether a piece is good or rubbish. It then suffices to compare a figure of moire fringes with another previously recorded from a piece considered standard; which saves time, money and accuracy. The technique has found various applications in diverse fields, from biomedical to industrial and scientific applications.

**Notes:** Meguellati, S. Conference on Optical Systems Design - Optical Fabrication, Testing, and Metrology V Sep 07-10, 2015 Jena, GERMANY Spie

**URL:** <Go to ISI>://WOS:000366832100046

**Reference Type: Book Section****Record Number:** 36**Author:** Meguellati, S.**Year:** 2015**Title:** Precision inspection of micro-components flatness by Moire interferometry**Editor:** Lehmann, P. Osten, W. Albertazzi, G. A.**Book Title:** Optical Measurement Systems for Industrial Inspection Ix**Volume:** 9525**Series Title:** Proceedings of SPIE**Short Title:** Precision inspection of micro-components flatness by Moire interferometry**ISBN:** 0277-786X 978-1-62841-685-5**DOI:** 952521 10.1117/12.2184119**Accession Number:** WOS:000357981400073

**Abstract:** The technique proposed in this paper provides a quality control components surface flatness by non-destructive and contactless way, with high resolution and increased sensitivity. The control is done in real time and instantaneously on all inspected surface. The technique has found various applications in diverse fields, from biomedical to industrial and scientific applications. In many industrial metrology applications, contactless and non-destructive shape measurement is a desirable tool for, quality control and contour mapping. This method of optical scanning presented in this paper is used for precision measurement deformation in shape or absolute forms in comparison with a reference component form, of optical or mechanical components, on surfaces that are of the order of few mm(2) and more. The principle of the method is to project the image of the source grating to palpate optically surface to be inspected, after reflection; the image of the source grating is printed by the object topography and is then projected onto the plane of reference grating for generate moire fringe for defects detection. The optical device used allows a significant dimensional surface magnification of the area inspected for micro-surfaces, which allows easy processing and reaches an exceptional nanometric imprecision of measurements. According to the measurement principle, the sensitivity for displacement measurement using moire technique depends on the frequency grating, for increase the detection resolution.

**Notes:** Meguellati, S. Conference on Optical Measurement Systems for Industrial Inspection IX Jun 22-25, 2015 Munich, GERMANY Spie

**URL:** <Go to ISI>://WOS:000357981400073

**Reference Type: Book Section****Record Number:** 37**Author:** Menas, F. Dal Cappello, C. Houamer, S.**Year:** 2015**Title:** A study of the turn-up effect in the Electron Momentum Spectroscopy**Editor:** Diaz, C. Rabadan, I. Garcia, G. Mendez, L. Martin, F.**Book Title:** Xxix International Conference on Photonic, Electronic, and Atomic Collisions**Volume:** 635**Series Title:** Journal of Physics Conference Series**Short Title:** A study of the turn-up effect in the Electron Momentum Spectroscopy**ISBN:** 1742-6588**DOI:** 052017 10.1088/1742-6596/635/5/052017**Accession Number:** WOS:000366407000268**Abstract:** We show that the PWIA model completely fails for any ionization of atomic hydrogen in its initial state or in an excited state. The results of our study are compared with those of the 3C or BBK model.**Notes:** Menas, F. Dal Cappello, C. Houamer, S. Icp2015 29th International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) Jul 22-28, 2015 Toledo, SPAIN Univ Autonoma Madrid, Consejo Super Investigaciones Cient**URL:** <Go to ISI>://WOS:000366407000268

**Reference Type: Book Section****Record Number:** 38**Author:** Messai, M. L. Seba, H. Aliouat, M.**Year:** 2015**Title:** A New Hierarchical Key Management Scheme for Secure Clustering in Wireless Sensor Networks**Editor:** AguayoTorres, M. C. Gomez, G. Poncela, J.**Book Title:** Wired/Wireless Internet Communications, Wwic 2015**Volume:** 9071**Pages:** 411-424**Series Title:** Lecture Notes in Computer Science**Short Title:** A New Hierarchical Key Management Scheme for Secure Clustering in Wireless Sensor Networks**ISBN:** 0302-9743 978-3-319-22572-2; 978-3-319-22571-5**DOI:** 10.1007/978-3-319-22572-2\_30**Accession Number:** WOS:000363784000030

**Abstract:** In Wireless Sensor Networks (WSNs), clustering is the suitable topology to save the energy of sensor nodes. In this paper, we provide a secured cluster formation by proposing a new symmetric key management scheme for hierarchical WSNs. The new scheme is called EAHKM (Energy Aware Hierarchical Key Management in WSNs). EAHKM needs the pre-distribution of only three keys in each sensor node before deployment, and it ensures a secure cluster formation after deployment. EAHKM assures the establishment of a pairwise key between each sensor node and its cluster head, thus the establishment of a broadcast key in each cluster in the network. Simulation results show that EAHKM provides an energy-efficient, flexible and scalable solution to the key management problem in hierarchical WSNs, and it presents a good resilience to node compromising attacks than other hierarchical key management schemes.

**Notes:** Messai, Mohamed-Lamine Seba, Hamida Aliouat, Makhoulf 13th International Conference on Wired and Wireless Internet Communications (WWIC) May 25-27, 2015 Malaga, SPAIN Escuela Tecnica Superior Ingn Telecomunicac, Univ Malaga, Int Federat Informat Proc, Departamento Ingn Comunicaciones

**URL:** <Go to ISI>://WOS:000363784000030

**Reference Type: Book Section****Record Number:** 39**Author:** Nekkab, M. Kahoul, A. Deghfel, B. Aylikci, N. K. Aylikci, V.**Year:** 2015**Title:** Calculation of K-Shell Fluorescence Yields for Low-Z Elements**Editor:** Oral, A. Y. Bahsi, Z. B. Ozer, M. Sezer, M. Akoz, M. E.**Book Title:** 4th International Congress in Advances in Applied Physics and Materials Science**Volume:** 1653**Series Title:** AIP Conference Proceedings**Short Title:** Calculation of K-Shell Fluorescence Yields for Low-Z Elements**ISBN:** 0094-243X 978-0-7354-1295-8**DOI:** 020077 10.1063/1.4914268**Accession Number:** WOS:000362294100077

**Abstract:** The analytical methods based on X-ray fluorescence are advantageous for practical applications in a variety of fields including atomic physics, X-ray fluorescence surface chemical analysis and medical research and so the accurate fluorescence yields ( $\omega(K)$ ) are required for these applications. In this contribution we report a new parameters for calculation of K-shell fluorescence yields ( $\omega(K)$ ) of elements in the range of  $11 \leq Z \leq 30$ . The experimental data are interpolated by using the famous analytical function  $(\omega(K)/(1-\omega(K)))^{(1/q)}$  (where  $q=3, 3.5$  and  $4$ ) vs  $Z$  to deduce the empirical K-shell fluorescence yields. A comparison is made between the results of the procedures followed here and those theoretical and other semi-empirical fluorescence yield values. Reasonable agreement was typically obtained between our result and other works.

**Notes:** Nekkab, M. Kahoul, A. Deghfel, B. Aylikci, N. Kup Aylikci, V. Apmas 2014 4th International Congress in Advances in Applied Physics and Materials Science (APMAS) Apr 24-27, 2014 Fethiye, TURKEY

**URL:** <Go to ISI>://WOS:000362294100077

**Reference Type: Book Section****Record Number:** 40**Author:** Ounnas, D. Ramdani, M. Chenikher, S. Bouktir, T. Ieee,**Year:** 2015**Title:** A Fuzzy Tracking Control Design Strategy for Wind Energy Conversion System**Book Title:** 2015 International Conference on Renewable Energy Research and Applications**Pages:** 777-782**Series Title:** International Conference on Renewable Energy Research and Applications**Short Title:** A Fuzzy Tracking Control Design Strategy for Wind Energy Conversion System**ISBN:** 2377-6897 978-1-4799-9982-8**Accession Number:** WOS:000379126300126

**Abstract:** The aim of this paper is to present a new fuzzy tracking control for a wind energy conversion system (WECS), which consists of a permanent magnet synchronous generator based variable speed wind turbine (WT). First, a fuzzy Takagi-Sugeno (T-S) model is used to represent the PMSG-WT nonlinear system. Next, a fuzzy tracking control based on the concept of virtual desired variables (VDVs) is formulated to simplify the design of the virtual reference model and the control law. Using this concept, a two-stage design procedure is developed: i) determine the VDV's from the output equation of the nonlinear system and the generalized kinematics constraints ii) find the feedback controller gains by solving a set of linear matrix inequalities (LMIs). Finally, simulation results are provided to demonstrate the validity and the effectiveness of the proposed method.

**Notes:** Ounnas, Djamel Ramdani, Messaoud Chenikher, Salah Bouktir, Tarek Icrera 4th International Conference on Renewable Energy Research and Applications (ICRERA) Nov 22-25, 2015 Palermo, ITALY

**URL:** <Go to ISI>://WOS:000379126300126

**Reference Type: Book Section****Record Number:** 41**Author:** Popov, Y. V. Galstyan, A. Chuluunbaatar, O. Houamer, S. Bulychev, A. A. Schoffler, M. S. Kim, H. K. Titze, J. N. Jahnke, T. Schmidt, L. P. H. Schmidt-Bocking, H. Dorner, R.**Year:** 2015**Title:** Charge transfer processes in proton-helium collisions: The validity of the first Born approximation**Editor:** Ancarani, L. U.**Book Title:** International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces**Volume:** 601**Series Title:** Journal of Physics Conference Series**Short Title:** Charge transfer processes in proton-helium collisions: The validity of the first Born approximation**ISBN:** 1742-6588**DOI:** 012008 10.1088/1742-6596/601/1/012008**Accession Number:** WOS:000354877300008

**Abstract:** The validity of the Born series expansion for the charge transfer reactions is studied in the case of a proton-helium collision. Three different channels are considered, namely the charge transfer, transfer excitation and transfer ionization. The differential cross sections and the contributions from different charge transfer mechanisms within various Born approximations are compared with experimental data. The role of the electron-electron correlations in the initial helium state is discussed in detail. It is shown that the first Born approximation is valid in the case of reactions under consideration, provided very small scattering angles are involved and the proton energy is  $>500$  keV. It is also shown that the electron-electron correlations in the initial helium state are important only in transfer excitation and transfer ionization reactions.

**Notes:** Popov, Yu. V. Galstyan, A. Chuluunbaatar, O. Houamer, S. Bulychev, A. A. Schoeffler, M. S. Kim, H. -K. Titze, J. N. Jahnke, T. Schmidt, L. Ph. H. Schmidt-Boecking, H. Doerner, R. Mps2014 International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces (MPS) Jul 15-18, 2014 Metz, FRANCE Institut Jean Barriol, Laboratoire SRSMC, Groupement Rech THEMIS, Ville Metz, Metz Metropole, Conseil Gen Moselle, Reg Lorraine

**URL:** <Go to ISI>://WOS:000354877300008

**Reference Type: Book Section****Record Number:** 42**Author:** Semchedine, F. Oukachbi, W. Zaichi, N. Bouallouche-Medjkoune, L.**Year:** 2015**Title:** EECP: A new cross-layer protocol for routing in Wireless Sensor Networks**Editor:** Boubiche, D. E. Hidoussi, F. Cruz, H. T.**Book Title:** International Conference on Advanced Wireless Information and Communication Technologies**Volume:** 73**Pages:** 336-341**Series Title:** Procedia Computer Science**Short Title:** EECP: A new cross-layer protocol for routing in Wireless Sensor Networks**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.12.001**Accession Number:** WOS:000373736100042

**Abstract:** Maximizing the lifetime of a Wireless Sensor Network (WSN) is a very important challenge of network design. Therefore, the design of effective techniques that conserve scarce energy resources is a critical problem in a WSN. In this regard, a detailed study of the cross-layer protocols allowed us to draw their major drawbacks and that concerns the routing of messages and the synchronization at the sleep mode. Taking advantage of this study, we proposed a variant of the CLEEP protocol to improve and optimize the network performance. Our basic idea is to consider the network, the MAC and the physical layers when routing the sensed data. In fact, the new protocol, and by using the physical layer information, routes the data to the node that has the maximum of energy and closest to the sink. On the other hand, the protocol considers the MAC layer to determine the duty-cycle of the node and extend the sleep mode time. A comparative analysis with CLEEP shows that our protocol can improve the network performance. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Semchedine, Fouzi Oukachbi, Wahiba Zaichi, Naima Bouallouche-Medjkoune, Louiza Awict 2015 International Conference on Advanced Wireless Information and Communication Technologies (AWICT) Oct 05-07, 2015 Natl Sch Engineers Sousse, TUNISIA

**URL:** <Go to ISI>://WOS:000373736100042

**Reference Type: Book Section****Record Number:** 43**Author:** Simoens, S. Saleh, A. Leribault, C. Belhmadi, M. Zegadi, B. Allag, F. Vignon, J. M. Huang, G.**Year:** 2015**Title:** Influence of Gaussian hill on concentration of solid particles in suspension inside Turbulent Boudary Layer**Editor:** Huang, N.**Book Title:** Iutam Symposium on the Dynamics of Extreme Events Influenced by Climate Change**Volume:** 17**Pages:** 110-118**Series Title:** Procedia IUTAM**Short Title:** Influence of Gaussian hill on concentration of solid particles in suspension inside Turbulent Boudary Layer**ISBN:** 2210-9838**DOI:** 10.1016/j.piutam.2015.06.015**Accession Number:** WOS:000380500500013

**Abstract:** The soil erosion is a major problem that affects the agriculture, climate and health. It is therefore necessary to understand the phenomena that are its wheels in order to either predict or limit it. One of the main problem of this kind of study is the presence of high particle concentration that restricts measurements of either particle concentration or carrier flow rate. In so numerical simulations are essential for detailed studies. Nevertheless these numerical models have to be performant enough and validated with situations that if they are not realistic are representative of phenomena involved. So here we focused on the problem of the possibility of trapping the solid particles in the recirculation zones. We have reproduced in laboratory a configuration representative of sites with enough steep hills to generate recirculation zones during saltation regimes. Measurements have been made of the dispersion of solid particles released from a rectangular area flushed at the ground of a flat plate on which evolved a turbulent boundary layer. The originality here is that it is flushed at the ground and push up the particles to continuously feed the ground at the same mean rate as the mean local erosion rate. One or more Gaussian hills were disposed transversally to the flow downstream the solid particle injection. Various Reynolds number where chosen to characterise take-off regimes and recirculation regime behind the Gaussian hill(s). One optical system combined with CMOS camera is used successively to measure the velocity of career fluid or solid particles by PIV. Digital Image treatment is used to separate fluid seeding from solid particle images. Supplementary comparison was done to compare velocity field of the career flow for smooth and rough floor only for kinematic around the hill(s). In this paper, in a first part we will present kinematic characteristics of the flow whereas in a second part of this work, the data will provide some concentration profiles of solid particles. The results presented concerning the velocity and concentration field are related to streamwise vertical planes at the center of the wind tunnel at successive longitudinal positions. For velocity field we will report different regimes for smooth and rough plate. Only one regime will be presented for solid particles. We present in a first part the kinematic study and in the second part results on the concentrations of solid particles. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Simoens, S. Saleh, A. Leribault, C. Belhmadi, M. Zegadi, Br. Allag, F. Vignon, J. M. Huang, G. 2013 IUTAM Symposium on the Dynamics of Extreme Events Influenced by Climate Change Sep 23-25, 2015 Lanzhou Univ, Lanzhou, PEOPLES R CHINA Natl Nat Sci Fdn China

**URL:** <Go to ISI>://WOS:000380500500013

**Reference Type: Book Section****Record Number:** 44**Author:** Terrab, H. El-Hag, A. Bayadi, A. Ieee,**Year:** 2015**Title:** Characterization of Leakage Current on the Surface of Porcelain Insulator under Contaminated Conditions**Book Title:** 2015 4th International Conference on Electric Power and Energy Conversion Systems**Series Title:** International Conference on Electric Power and Energy Conversion Systems**Short Title:** Characterization of Leakage Current on the Surface of Porcelain Insulator under Contaminated Conditions**ISBN:** 2325-2677 978-1-4673-9130-6**Accession Number:** WOS:000379205200037

**Abstract:** Insulator flashover under polluted conditions has been a serious threat on the reliability of power systems. It is known that the flashover process is mainly affected by the environmental conditions such as the pollution level and humidity. Those are the essential parameters influencing the wetting process. This paper presents an investigation of the characteristics of the leakage current (LC) developed on the surface of porcelain insulator at contaminated conditions under AC voltage. The study is done in an artificial fog chamber and the LC is characterized for different stages; dry, wet and presence of discharge activities. Time-frequency and spectral analysis are adopted to calculate the evolution of LC characteristics with various stages till the occurrence of dry band arcing. The preliminary results could be used in analysing the LC to develop more effective diagnosis of early signs of dry band arcing as an indication for insulation washing.

**Notes:** Terrab, Hocine El-Hag, Ayman Bayadi, Abdelhafid Epecs 4th International Conference on Electric Power and Energy Conversion Systems (EPECS) Nov 24-26, 2015 Sharjah, U ARAB EMIRATES

**URL:** <Go to ISI>://WOS:000379205200037

**Reference Type: Book Section****Record Number:** 45**Author:** Toumi, L. Moussaoui, A. Ugur, A.**Year:** 2015**Title:** A linear programming approach for bitmap join indexes selection in data warehouses**Editor:** Shakshuki, E.**Book Title:** 6th International Conference on Ambient Systems, Networks and Technologies**Volume:** 52**Pages:** 161-169**Series Title:** Procedia Computer Science**Short Title:** A linear programming approach for bitmap join indexes selection in data warehouses**ISBN:** 1877-0509**DOI:** 10.1016/j.procs.2015.05.052**Accession Number:** WOS:000361567100019

**Abstract:** Data warehousing is the crucial part of business intelligence applications. The data warehouse physical design is a hard task due to a large number of possible choices involved. The bitmap join indexes selection problem is crucial in the data warehouse physical design. All proposed approaches to solve the bitmap join indexes selection problem are based on statistics such as data mining or meta-heuristics such as genetic algorithm and particle swarm optimization. In the present work, we propose a new approach based on mixed-integer linear programming for solving the bitmap join indexes selection problem. Several experiments are performed to demonstrate the effectiveness of the proposed approach and the results are compared to the well known approaches that are best so far: the data mining, the genetic algorithm and particle swarm optimization based approaches. The mixed-integer linear programming is found to be faster and more effective than the genetic algorithm, particle swarm optimization and data mining approaches for solving the bitmap join indexes selection problem. (C) 2015 The Authors. Published by Elsevier B.V.

**Notes:** Toumi, Lyazid Moussaoui, Abdelouahab Ugur, Ahmet Ant-2015 6th International Conference on Ambient Systems, Networks and Technologies (ANT) / 5th International Conference on Sustainable Energy Information Technology (SEIT) Jun 02-05, 2015 London, ENGLAND

**URL:** <Go to ISI>://WOS:000361567100019



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# PRODUCTION SCIENTIFIQUE ANNEE 2016

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1

**Reference Type: Journal Article**

**Record Number: 100**

**Author:** Ababsa, N. Kribaa, M. Addad, D. Tamrabet, L. Baha, M.

**Year:** 2016

**Title:** DOES EARTHWORMS DENSITY REALLY MODIFY SOIL'S HYDRODYNAMIC PROPERTIES IN IRRIGATED SYSTEMS WITH RECYCLED WATER?

**Journal:** Journal of Fundamental and Applied Sciences

**Volume:** 8

**Issue:** 2

**Pages:** 627-638

**Short Title:** DOES EARTHWORMS DENSITY REALLY MODIFY SOIL'S HYDRODYNAMIC PROPERTIES IN IRRIGATED SYSTEMS WITH RECYCLED WATER?

**ISSN:** 1112-9867

**DOI:** 10.4314/jfas.v8i2.29

**Accession Number:** WOS:000377429900029

**Abstract:** Our study has the general objective to understand the impact of the valuation of treated water on earthworm abundance and total porosity of the soil and the effect of the interaction between these two physical-biological components of the hydrological functioning of soils. It was carried out on the meadows soils of the valley of Wadi Bousselam. Although the treated water has high organic and particulate filler, it improved the earthworm abundance, total porosity and hydraulic conductivity of the soil.

**Notes:** Ababsa, N. Kribaa, M. Addad, D. Tamrabet, L. Baha, M.

**URL:** <Go to ISI>://WOS:000377429900029

**Reference Type: Journal Article****Record Number:** 179**Author:** Abu Odeh, A. Al-Douri, Y. Ayub, R. M. Ameri, M. Bouhemadou, A. Prakash, D. Verma, K. D.**Year:** 2016**Title:** Optical analysis of lens-like Cu<sub>2</sub>CdSnS<sub>4</sub> quaternary alloy nanostructures**Journal:** Applied Physics a-Materials Science & Processing**Volume:** 122**Issue:** 10**Date:** Oct**Short Title:** Optical analysis of lens-like Cu<sub>2</sub>CdSnS<sub>4</sub> quaternary alloy nanostructures**ISSN:** 0947-8396**DOI:** 10.1007/s00339-016-0420-1**Article Number:** 888**Accession Number:** WOS:000384753800018

**Abstract:** Cu<sub>2</sub>CdSnS<sub>4</sub> quaternary alloy nanostructures with different copper concentrations (0.2, 0.4, 0.6, 0.8 and 1.0 M) were successfully synthesized on n-type silicon substrates using spin coating technique with annealing temperature at 300 degrees C. Optical properties were analyzed through UV-Vis and Photoluminescence spectroscopies, and thus, there is a change in energy band gap with increasing Cu concentration from 0.2 to 1.0 M. The structural properties of Cu<sub>2</sub>CdSnS<sub>4</sub> quaternary alloy nanostructures were investigated by X-ray diffraction. The particles size and shape have a direct relationship with copper concentration. Morphological and topographical studies were carried out by using scanning electron microscopy and atomic force microscopy. The obtained results are investigated to be available in the literature for future studies.

**Notes:** Abu Odeh, Ali Al-Douri, Y. Ayub, R. M. Ameri, M. Bouhemadou, A. Prakash, Deo Verma, K. D.

**URL:** <Go to ISI>://WOS:000384753800018

**Reference Type: Journal Article**

**Record Number: 20**

**Author: Achache, M.**

**Year: 2016**

**Title: COMPLEXITY ANALYSIS OF A WEIGHTED-FULL-NEWTON STEP INTERIOR-POINT ALGORITHM FOR  $P^{*(\kappa)}$ -LCP**

**Journal: Rairo-Operations Research**

**Volume: 50**

**Issue: 1**

**Pages: 131-143**

**Date: Jan-Mar**

**Short Title: COMPLEXITY ANALYSIS OF A WEIGHTED-FULL-NEWTON STEP INTERIOR-POINT ALGORITHM FOR  $P^{*(\kappa)}$ -LCP**

**ISSN: 0399-0559**

**DOI: 10.1051/ro/2015020**

**Accession Number: WOS:000369421300009**

**Abstract:** In this paper, a weighted-path-following interior point algorithm for  $P^{*(\kappa)}$ -linear complementarity problems ( $P^{*(\kappa)}$ -LCP) is presented. The algorithm uses at each weighted interior point iteration only feasible full-Newton steps and the strategy of the central-path for getting a solution for  $P^{*(\kappa)}$ -LCP. We prove that the proposed algorithm has quadratically convergent with polynomial time. The complexity bound, namely,  $O((1 + \kappa)\sqrt{n} \log n/\epsilon)$  of the algorithm is obtained. Few numerical tests are reported to show the efficiency of the algorithm.

**Notes: Achache, Mohamed**

**URL: <Go to ISI>://WOS:000369421300009**

**Reference Type: Journal Article****Record Number:** 138**Author:** Afghoul, H. Chikouche, D. Krim, F. Babes, B. Beddar, A.**Year:** 2016**Title:** Implementation of Fractional-order Integral-plus-proportional Controller to Enhance the Power Quality of an Electrical Grid**Journal:** Electric Power Components and Systems**Volume:** 44**Issue:** 9**Pages:** 1018-1028**Short Title:** Implementation of Fractional-order Integral-plus-proportional Controller to Enhance the Power Quality of an Electrical Grid**ISSN:** 1532-5008**DOI:** 10.1080/15325008.2016.1147509**Accession Number:** WOS:000379050600006

**Abstract:** This article integrates a suitable controller to the direct power control algorithm for a shunt active power filter. The conventional proportional-integral (PI) controller is commonly used in DC bus regulation loops because of its advantages in the steady state, but it is limited in the dynamic state. Thus, this article contributes an appropriate controller, the fractional-order-integral-plus-proportional controller. The controller under study extends the integration order of the controller from integer to real order based on fractional calculus theory and Oustaloup continuous approximation. The fractional-order-integral-plus-proportional controller offers a short response time, withstands parameters variations, and deals with external disturbances. To investigate the efficiency and accuracy of the proposed fractional-order-direct power control algorithm considering all robustness tests, an experimental setup was made. The experimental results confirm its high performance in both steady and dynamic states and demonstrate its feasibility and effectiveness. Therefore, the shunt active power filter improves the power quality, corrects the power factor, and reduces the harmonics injected by non-linear loads. Thanks to its high level of power quality, the fractional-order-direct power control could become an interesting alternative for active power filtering.

**Notes:** Afghoul, Hamza Chikouche, Djamel Krim, Fateh Babes, Badreddine Beddar, Antar**URL:** <Go to ISI>://WOS:000379050600006

**Reference Type: Journal Article****Record Number:** 112**Author:** Aggoune, L. Chetouani, Y. Raissi, T.**Year:** 2016**Title:** Fault detection in the distillation column process using Kullback Leibler divergence**Journal:** Isa Transactions**Volume:** 63**Pages:** 394-400**Date:** Jul**Short Title:** Fault detection in the distillation column process using Kullback Leibler divergence**ISSN:** 0019-0578**DOI:** 10.1016/j.isatra.2016.03.006**Accession Number:** WOS:000381164700039

**Abstract:** Chemical plants are complex large-scale systems which need designing robust fault detection schemes to ensure high product quality, reliability and safety under different operating conditions. The present paper is concerned with a feasibility study of the application of the black-box modeling method and Kullback Leibler divergence (KLD) to the fault detection in a distillation column process. A Nonlinear Auto-Regressive Moving Average with exogenous input (NARMAX) polynomial model is firstly developed to estimate the nonlinear behavior of the plant. Furthermore, the KLD is applied to detect abnormal modes. The proposed FD method is implemented and validated experimentally using realistic faults of a distillation plant of laboratory scale. The experimental results clearly demonstrate the fact that proposed method is effective and gives early alarm to operators. (C) 2016 ISA. Published by Elsevier Ltd. All rights reserved.

**Notes:** Aggoune, Lakhdar Chetouani, Yahya Raissi, Tarek**URL:** <Go to ISI>://WOS:000381164700039

**Reference Type: Journal Article****Record Number:** 127**Author:** Aggoune, L. Chetouani, Y. Radjeai, H.**Year:** 2016**Title:** Change detection in a distillation column using non-linear auto-regressive moving average with exogenous input model and Hellinger distance**Journal:** Iet Science Measurement & Technology**Volume:** 10**Issue:** 1**Pages:** 10-17**Date:** Jan**Short Title:** Change detection in a distillation column using non-linear auto-regressive moving average with exogenous input model and Hellinger distance**ISSN:** 1751-8822**DOI:** 10.1049/iet-smt.2015.0045**Accession Number:** WOS:000367903600002

**Abstract:** The presence of faults in industrial processes represents a serious threat, which can lead to performance degradation as well as damage to human health. The early detection of change might avoid undesired consequences. This study proposes a fault detection (FD) method based on the probability distribution measure. The method needs the generation of residual. To this end, the residual is obtained from applying a non-linear auto-regressive moving average with exogenous input model. To detect a fault, this approach compares the probability density of current residual against a reference one, using the Hellinger distance (HD). The change detection problem is formulated in terms of distance measures that characterise the similarity of distributions of the residual. Sensitivity analysis on the HD under normal distribution assumption is performed. To demonstrate the satisfying performance of the proposed FD technique, a distillation plant at the laboratory scale is used as the case study.

**Notes:** Aggoune, Lakhdar Chetouani, Yahya Radjeai, Hammoud**URL:** <Go to ISI>://WOS:000367903600002

7

**Reference Type: Journal Article**

**Record Number: 52**

**Author:** Aibeche, A. Amroune, N. Maingot, S.

**Year:** 2016

**Title:** On Elliptic Equations with General Non-Local Boundary Conditions in UMD Spaces

**Journal:** Mediterranean Journal of Mathematics

**Volume:** 13

**Issue:** 3

**Pages:** 1051-1063

**Date:** Jun

**Short Title:** On Elliptic Equations with General Non-Local Boundary Conditions in UMD Spaces

**ISSN:** 1660-5446

**DOI:** 10.1007/s00009-015-0537-z

**Accession Number:** WOS:000378820200011

**Abstract:** In this work, we give new results concerning existence, uniqueness and maximal regularity of the strict solution of a class of elliptic equations with non-local boundary conditions containing an unbounded linear operator. This study is performed in the framework of UMD Banach spaces.

**Notes:** Aibeche, Aissa Amroune, Nasreddine Maingot, Stephane

**URL:** <Go to ISI>://WOS:000378820200011

**Reference Type: Journal Article****Record Number:** 137**Author:** Aissa, O. Moulahoum, S. Colak, I. Kabache, N. Babes, B.**Year:** 2016**Title:** Improved Performance and Power Quality of Direct Torque Control of Asynchronous Motor by Using Intelligent Controllers**Journal:** Electric Power Components and Systems**Volume:** 44**Issue:** 4**Pages:** 343-358**Date:** Feb**Short Title:** Improved Performance and Power Quality of Direct Torque Control of Asynchronous Motor by Using Intelligent Controllers**ISSN:** 1532-5008**DOI:** 10.1080/15325008.2015.1117541**Accession Number:** WOS:000371822500001

**Abstract:** Direct torque control of asynchronous motors has good dynamic performance of torque and flux. However, the use of hysteresis controllers leads to a variable switching frequency. This lack of control over frequency is the origin of torque and flux ripples. To overcome these problems, this article proposes modified fuzzy direct torque control for an induction motor. In addition, a three-phase pulse width modulation rectifier controlled by the fuzzy direct power control is used. This rectifier draws a sinusoidal current from the grid and operates with a power factor close to unity. The pulse width modulation rectifier feeds the inverter of the direct torque control, ensuring a speed control loop. The proposed direct torque control-direct power control method is investigated based on theoretical analysis, computer simulation, and experimental validation that provide acceptable results.

**Notes:** Aissa, Oualid Moulahoum, Samir Colak, Ilhami Kabache, Nadir Babes, Badreddine**URL:** <Go to ISI>://WOS:000371822500001

**Reference Type: Journal Article****Record Number:** 81**Author:** Aissaoui, T. AlNashef, I. M. Benguerba, Y.**Year:** 2016**Title:** Dehydration of natural gas using choline chloride based deep eutectic solvents: COSMO-RS prediction**Journal:** Journal of Natural Gas Science and Engineering**Volume:** 30**Pages:** 571-577**Date:** Mar**Short Title:** Dehydration of natural gas using choline chloride based deep eutectic solvents: COSMO-RS prediction**ISSN:** 1875-5100**DOI:** 10.1016/j.jngse.2016.02.007**Accession Number:** WOS:000375357600053

**Abstract:** Water removal from natural gas is one of the most potent techniques widely used in the pre-treatment processes required for avoiding industrial problems such as corrosion and hydrate formation. Due to its accuracy and precision, conductor-like screening model for a real solvent (COSMO-RS) has recently attracted the attention of researchers around the globe in many applications. In this article, COSMO-RS investigation on the dehydration of natural gas using choline chloride (ChCl) based deep eutectic solvents (DESs) was conducted. The structural combination of the DESs and their water absorption mechanism were well interpreted by performing mixture job to form the DESs and measuring the activity coefficient, a profile and 6 potential of the involved species using COSMO-RS. In addition, vapor pressures for the formed DESs were reported. The activity coefficients of H<sub>2</sub>O in DESs were also investigated. The results found in this work imply that DESs can be good alternative to the conventional absorbents for natural gas dehydration. To the best of our knowledge, this is the first report implements COSMO-RS in dehydration of natural gas using DESs. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Aissaoui, Tayeb AlNashef, Inas M. Benguerba, Yacine**URL:** <Go to ISI>://WOS:000375357600053

**Reference Type: Journal Article****Record Number:** 50**Author:** Al-Douri, Y. Ameri, M. Bouhemadou, A. Khenata, R.**Year:** 2016**Title:** Annealing temperature effect on structural, optical, morphological and electrical properties of CdS/Si(100) nanostructures**Journal:** Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems**Volume:** 22**Issue:** 10**Pages:** 2529-2541**Date:** Oct**Short Title:** Annealing temperature effect on structural, optical, morphological and electrical properties of CdS/Si(100) nanostructures**ISSN:** 0946-7076**DOI:** 10.1007/s00542-015-2584-6**Accession Number:** WOS:000384423700019

**Abstract:** CdS nanostructures have grown on p-type silicon (Si) (100) substrates using sol-gel method. The crystalline quality, surface morphology, optical and electrical properties of the deposited CdS nanostructures have been characterized and analyzed using atomic force microscopy, scanning electron microscopy, X-ray diffraction, thermogravimetric analysis, differential thermal analysis, UV-vis spectroscopy and electrical characterization, respectively. The effect of annealing temperature in the range 200-600 A degrees C on the structural, morphological, optical and electrical properties has been elaborated. The XRD analysis shows that the crystalline quality can be improved by increasing the temperature to 400 A degrees C, but further increase to 600 A degrees C leads to degradation of crystalline quality. The bulk modulus is calculated and showed good agreement with experimental and theoretical results. The optical properties of absorption, reflection, energy band gap and extinction coefficient are obtained by UV-vis spectroscopy. The calculated refractive index and optical dielectric constant have shown good agreement with other results. The electrical and thermal properties are studied for antireflection coating applications.

**Notes:** Al-Douri, Y. Ameri, M. Bouhemadou, A. Khenata, R.**URL:** <Go to ISI>://WOS:000384423700019

**Reference Type: Journal Article****Record Number:** 57**Author:** Aliat, T. Kaabeche, M. Khomri, H. Nouri, L. Neffar, S. Chenchouni, H.**Year:** 2016**Title:** A Pedological Characterisation of Some Inland Wetlands and Ramsar Sites in Algeria**Journal:** Land Degradation & Development**Volume:** 27**Issue:** 3**Pages:** 693-705**Date:** Apr**Short Title:** A Pedological Characterisation of Some Inland Wetlands and Ramsar Sites in Algeria**ISSN:** 1085-3278**DOI:** 10.1002/ldr.2467**Accession Number:** WOS:000373949600022

**Abstract:** This paper aims to characterise soils of 12 wetlands, of which ten are Ramsar sites, in the ecocomplex of wetlands of the Hauts Plateaux region in Northeast Algeria. Soil samples from every site were collected following the four cardinal directions, along a transect covering the peripheral vegetation belts, and from two depths of the surface horizon. Each soil sample was analysed to determine electrical conductivity, pH, total carbonates, gypsum, chlorides, bicarbonates, sulfates and the particle size. The soil texture and chemical facies (Cl-SO<sub>4</sub>-HCO<sub>3</sub>) of each site were identified and discussed. Changes in physicochemical parameters were tested according to the spatial features of sites (orientations, vegetation transects and sample depth). A great heterogeneity was found between soils of sampled sites. Indeed, soil physicochemical characteristics differed from one site to another and between belts of the natural vegetation within the same site. Overall, the study wetlands were characterised by salty to very salty soils (electrical conductivity=346 +/- 244dSm(-1)), of neutral to alkaline pH (69-81), moderately calcareous (CaCO<sub>3</sub> ranged between 157% and 337%) and little to extremely gypsiferous (gypsum varied from 21% to 394%). The dominant soil texture classes were medium textures (loam, sandy loam or silty clay loam). Chemically, chlorides (185 +/- 163Meq/100g) and/or sulfates (165 +/- 125Meq/100g) dominated soil solutions of these environments but with slight bicarbonate contents (06 +/- 26Meq/100g). Moreover, there were poor correlations between physicochemical parameters, which indicates interactions between certain parameters under the effect of specific habitat conditions. Copyright (c) 2015 John Wiley & Sons, Ltd.

**Notes:** Aliat, Toufik Kaabeche, Mohammed Khomri, Hana Nouri, Lilya Neffar, Souad Chenchouni, Haroun

**URL:** <Go to ISI>://WOS:000373949600022

**Reference Type: Journal Article****Record Number:** 18**Author:** Alihellal, D. Chibane, L.**Year:** 2016**Title:** Simulation study of the effect of water removal from Fischer-Tropsch products on the process performance using a hydrophilic membrane reactor**Journal:** Reaction Kinetics Mechanisms and Catalysis**Volume:** 117**Issue:** 2**Pages:** 605-621**Date:** Apr**Short Title:** Simulation study of the effect of water removal from Fischer-Tropsch products on the process performance using a hydrophilic membrane reactor**ISSN:** 1878-5190**DOI:** 10.1007/s11144-015-0961-x**Accession Number:** WOS:000372544200014

**Abstract:** In this study, a mathematical model describing Fischer-Tropsch synthesis over an iron catalyst carried out in two configurations of membrane reactors was developed to predict the process performance. For this purpose, the impact of water removal from the reaction side on syngas conversion and on hydrocarbons selectivity was theoretically analyzed and quantified under different operating conditions. The obtained main results reveal that the process can be intensified when the catalyst was packed in a single region, whereas the produced water was continuously removed from the reaction side to the permeate side, which is constituted of two identical and parallel regions. This configuration design is characterized by a sufficient large area, which can enable fast water removal by an adequate sweep-fluid flow rate. As a result, the conversion and product selectivity could be enhanced obviously at the suitable conditions.

**Notes:** Alihellal, Dounia Chibane, Lemnouer**URL:** <Go to ISI>://WOS:000372544200014

**Reference Type: Journal Article**

**Record Number: 176**

**Author: Alihellal, D. Chibane, L.**

**Year: 2016**

**Title: Comparative Study of the Performance of Fischer-Tropsch Synthesis in Conventional Packed Bed and in Membrane Reactor Over Iron- and Cobalt-Based Catalysts**

**Journal: Arabian Journal for Science and Engineering**

**Volume: 41**

**Issue: 2**

**Pages: 357-369**

**Date: Feb**

**Short Title: Comparative Study of the Performance of Fischer-Tropsch Synthesis in Conventional Packed Bed and in Membrane Reactor Over Iron- and Cobalt-Based Catalysts**

**ISSN: 1319-8025**

**DOI: 10.1007/s13369-015-1836-1**

**Accession Number: WOS:000368990200003**

**Abstract:** A comparative study of Fischer-Tropsch synthesis for synthesizing liquid hydrocarbons from syngas was carried out in a conventional packed bed reactor and in a water perm-selective membrane reactor over iron and cobalt catalysts. The process was performed under different operating conditions, such as inlet syngas feed molar ratio, total pressure, gas velocity, temperature, reactor dimensions and sweep fluid ratio. The main simulation results show that the use of the concept of membrane reactor can improve the process performance compared to that obtained in the case of the conventional packed bed reactor. Furthermore, under certain operating conditions, the process could be intensified by a reduction of carbon monoxide conversion magnitude via the water-gas shift reaction. This is possible by using a hydrophilic membrane. Our findings indicate that the membrane reactor provides a quasi-complete conversion of carbon monoxide over iron- or cobalt-based catalysts.

**Notes: Alihellal, Dounia Chibane, Lemnouer**

**URL: <Go to ISI>://WOS:000368990200003**

**Reference Type: Journal Article****Record Number:** 33**Author:** Arab, F. Sahraoui, F. A. Haddadi, K. Bouhemadou, A. Louail, L.**Year:** 2016**Title:** Phase stability, mechanical and thermodynamic properties of orthorhombic and trigonal MgSiN<sub>2</sub>: an ab initio study**Journal:** Phase Transitions**Volume:** 89**Issue:** 5**Pages:** 480-513**Date:** May**Short Title:** Phase stability, mechanical and thermodynamic properties of orthorhombic and trigonal MgSiN<sub>2</sub>: an ab initio study**ISSN:** 0141-1594**DOI:** 10.1080/01411594.2015.1089574**Accession Number:** WOS:000372929000004

**Abstract:** Structural stability and mechanical and thermodynamic properties of the orthorhombic and trigonal MgSiN<sub>2</sub> polymorphs (or-MgSiN<sub>2</sub> and tr-MgSiN<sub>2</sub>) were investigated through density functional theory and quasi-harmonic Debye model (QHDM). Our calculations show that or-MgSiN<sub>2</sub> is energetically the stable polymorph at low pressure, in agreement with previous experimental and theoretical study. Under pressure, a crystallographic transition from the orthorhombic structure to the trigonal one occurs around 25, 17.45 and 19.05 GPa as obtained from the generalized gradient approximation of Perdew-Wang (GGA-PW91), the generalized gradient approximation parameterized recently by Perdew et al (GGA-PBEsol) and the local density approximation developed by Ceperley and Alder and parameterized by Perdew and Zunger (LDA-CAPZ), respectively. Single-crystalline and polycrystalline elastic constants and related properties, namely Vickers hardness, acoustic Gruneisen parameter, minimum thermal conductivity, isotropic sound velocities and Debye temperature, were numerically estimated for both or-MgSiN<sub>2</sub> and tr-MgSiN<sub>2</sub>. We have showed that the hardness of tr-MgSiN<sub>2</sub> is comparable to that of the harder materials like c-BN and B<sub>6</sub>O. Temperature and pressure dependencies of volume, bulk modulus, thermal expansion, Gruneisen parameter, heat capacities and Debye temperature were investigated using QHDM.

**Notes:** Arab, Fahima Sahraoui, F. Ali Haddadi, Khelifa Bouhemadou, Abdelmadjid Louail, Layachi

**URL:** <Go to ISI>://WOS:000372929000004

**Reference Type: Journal Article****Record Number:** 121**Author:** Attia, A. Moussaoui, A. Taleb-Ahmed, A.**Year:** 2016**Title:** fMRI Data Analysis Using Dempster-Shafer Method with Estimating Voxel Selectivity by Belief Measure**Journal:** International Journal of Advanced Computer Science and Applications**Volume:** 7**Issue:** 1**Pages:** 316-324**Date:** Jan**Short Title:** fMRI Data Analysis Using Dempster-Shafer Method with Estimating Voxel Selectivity by Belief Measure**ISSN:** 2158-107X**Accession Number:** WOS:000369852100043

**Abstract:** In the functional Magnetic Resonance Imaging (fMRI) data analysis, detecting the activated voxels is a challenging research problem where the existing methods have shown some limits. We propose a new method wherein brain mapping is done based on Dempster-Shafer theory of evidence (DS) that is a useful method in uncertain representation analysis. Dempster-Shafer allows finding the activated regions by checking the activated voxels in fMRI data. The activated brain areas related to a given stimulus are detected by using a belief measure as a metric for evaluating activated voxels. To test the performance of the proposed method, artificial and real auditory data have been employed. The comparison of the introduced method with the t-test and GLM method has clearly shown that the proposed method can provide a higher correct detection of activated voxels.

**Notes:** Attia, Abdelouahab Moussaoui, Abdelouahab Taleb-Ahmed, Abdelmalik**URL:** <Go to ISI>://WOS:000369852100043

**Reference Type: Journal Article****Record Number:** 77**Author:** Attoui, H. Khaber, F. Melhaoui, M. Kassmi, K. Essounbouli, N.**Year:** 2016**Title:** Development and experimentation of a new MPPT synergetic control for photovoltaic systems**Journal:** Journal of Optoelectronics and Advanced Materials**Volume:** 18**Issue:** 1-2**Pages:** 165-173**Date:** Jan-Feb**Short Title:** Development and experimentation of a new MPPT synergetic control for photovoltaic systems**ISSN:** 1454-4164**Accession Number:** WOS:000374426500028

**Abstract:** This paper proposes a new approach of maximum power point tracking (MPPT) using a synergetic control (SC) theory for photovoltaic (PV) system. This system is mainly composed of a solar array, DC/DC boost converter, MPPT controller, and an output load. Synergetic controller is used for boost converter to achieve the maximum power output. The stability of the closed-loop system is guaranteed using Lyapunov's method. The new approach gives a good maximum power operation under different conditions such as changing solar radiation and PV cell temperature. To show the validity and robustness of the proposed approach, different simulations under different atmospheric conditions are realized using Matlab/Simulink. The implementation of synergetic control is also presented. The experimental results show satisfactory performance of the proposed approach.

**Notes:** Attoui, H. Khaber, F. Melhaoui, M. Kassmi, K. Essounbouli, N.**URL:** <Go to ISI>://WOS:000374426500028

**Reference Type: Journal Article****Record Number: 3****Author:** Azizi, F. Kahoul, A.**Year:** 2016**Title:** Electrodeposition and corrosion behaviour of Zn-Co coating produced from a sulphate bath**Journal:** Transactions of the Institute of Metal Finishing**Volume:** 94**Issue:** 1**Pages:** 43-48**Short Title:** Electrodeposition and corrosion behaviour of Zn-Co coating produced from a sulphate bath**ISSN:** 0020-2967**DOI:** 10.1080/00202967.2015.1122917**Accession Number:** WOS:000371813800009

**Abstract:** The present work investigates the electrodeposition of Zn and Zn-Co alloys from a sulphate bath on stainless steel substrate using cyclic voltammetry and transient current methods. Corrosion behaviour of Zn and Zn-Co alloy coatings in 3.5 wt-% NaCl solution was studied using potentiodynamic polarisation, open circuit potential, Tafel plots and electrochemical impedance spectroscopy. The results showed that the corrosion resistance of the deposits was highly influenced by the composition and morphology of the coatings. This resistance increases with the increase of the  $[Co^{2+}]/[Zn^{2+}]$  ratio in the solution.

**Notes:** Azizi, F. Kahoul, A.**URL:** <Go to ISI>://WOS:000371813800009

**Reference Type: Journal Article****Record Number:** 40**Author:** Azoug, S. E. Bouguezel, S.**Year:** 2016**Title:** A non-linear preprocessing for opto-digital image encryption using multiple-parameter discrete fractional Fourier transform**Journal:** Optics Communications**Volume:** 359**Pages:** 85-94**Date:** Jan**Short Title:** A non-linear preprocessing for opto-digital image encryption using multiple-parameter discrete fractional Fourier transform**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2015.09.054**Accession Number:** WOS:000364327600015

**Abstract:** In this paper, a novel opto-digital image encryption technique is proposed by introducing a new non-linear preprocessing and using the multiple-parameter discrete fractional Fourier transform (MPDFrFT). The non-linear preprocessing is performed digitally on the input image in the spatial domain using a piecewise linear chaotic map (PLCM) coupled with the bitwise exclusive OR (XOR). The resulting image is multiplied by a random phase mask before applying the MPDFrFT to whiten the image. Then, a chaotic permutation is performed on the output of the MPDFrFT using another PLCM different from the one used in the spatial domain. Finally, another MPDFrFT is applied to obtain the encrypted image. The parameters of the PLCMs together with the multiple fractional orders of the MPDFrFTs constitute the secret key for the proposed cryptosystem. Computer simulation results and security analysis are presented to show the robustness of the proposed opto-digital image encryption technique and the great importance of the new non-linear preprocessing introduced to enhance the security of the cryptosystem and overcome the problem of linearity encountered in the existing permutation-based opto-digital image encryption schemes. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Azoug, Seif Eddine Bouguezel, Saad**URL:** <Go to ISI>://WOS:000364327600015

**Reference Type: Journal Article****Record Number:** 49**Author:** Babesse, E. Belkhiat, S. Cherif, A. Meddad, M. Eddiai, A. Boughaleb, Y.**Year:** 2016**Title:** Improved modal observer for modal SSDI-Max**Journal:** Molecular Crystals and Liquid Crystals**Volume:** 628**Issue:** 1**Pages:** 145-161**Short Title:** Improved modal observer for modal SSDI-Max**ISSN:** 1542-1406**DOI:** 10.1080/15421406.2015.1137118**Accession Number:** WOS:000378126400019

**Abstract:** The objective of this paper is to improve a semi-active control of structural vibrations, which is Synchronised Switch Damping on Inductor Maximum. The improvement is attained by adding a system to estimate the structure modal displacement. A model of smart structure shunted to resonant circuit is used and tested with Matlab (TM) environment and the performance of the new strategy based on Lenear Quadratic Guaussian and Neuro-Fuzzy observer are presented and compared with that one based on Proportional Integral Derivative observer. Results shows the new technique effectiveness when conventional one reaches its limits in the wide bande frequency case.

**Notes:** Babesse, E. Belkhiat, S. Cherif, A. Meddad, M. Eddiai, A. Boughaleb, Y. 13th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM) - Emerging and Transferring New Technologies Mar 29-apr 02, 2015 Marrakech, MOROCCO Si

**URL:** <Go to ISI>://WOS:000378126400019

**Reference Type: Journal Article****Record Number:** 12**Author:** Badoud, A. Raison, B. Vila, L. L. F. Bouamama, B. O. Khemliche, M.**Year:** 2016**Title:** Modeling, simulation and hardware implementation of a bond graph-maximum power point tracker for a photovoltaic panel under partially shaded conditions**Journal:** Simulation-Transactions of the Society for Modeling and Simulation International**Volume:** 92**Issue:** 7**Pages:** 687-707**Date:** Jul**Short Title:** Modeling, simulation and hardware implementation of a bond graph-maximum power point tracker for a photovoltaic panel under partially shaded conditions**ISSN:** 0037-5497**DOI:** 10.1177/0037549716646846**Accession Number:** WOS:000380933300008

**Abstract:** The electric power generated by a photovoltaic module can be greatly reduced compared with optimal production due to weather conditions and factors such as partial shade. The main defect of a conventional maximum power point tracking control algorithm is its misinterpretation of the location of the maximum power point during a sudden change in climatic conditions because of the existence of several local maxima on the power-voltage characteristic curve. This work presents a preliminary study on the modeling, simulation and implementation of a new algorithm for power output maximization of photovoltaic generators under partially shaded conditions using a bond graph approach. The idea is to use a buck-boost converter and to test experimentally the performance of the proposed algorithm on a real photovoltaic panel. We imposed ten patterns of irradiance on the photovoltaic panel, of which more than half were patterns of partial shading. The proposed controller performed excellently under all shading conditions compared with the classical direct duty cycle technique. The control part and the proposed algorithm were implemented on a microcontroller, and the efficiency of the developed algorithm was demonstrated as a function of the real position of the maximum power point through the results of a simulation performed using Symbols (SYstem Modeling by BOnd graph Language and Simulation) software. The results obtained from the simulation were compared with experimental results obtained from real measurements using a Photowatt PW1650 photovoltaic panel under the same operating conditions and climatic environment.

**Notes:** Badoud, Abd Essalam Raison, Bertrand Vila, Luiz Lavado Fernando Bouamama, Belkacem Ould Khemliche, Mabrouk Si

**URL:** <Go to ISI>://WOS:000380933300008

**Reference Type: Journal Article****Record Number:** 101**Author:** Baki, N. Eithiraj, R. D. Khachai, H. Khenata, R. Murtaza, G. Bouhemadou, A. Seddik, T. Bin-Omran, S.**Year:** 2016**Title:** Elastic, Electronic, Optical and Thermal Properties of Na<sub>2</sub>Po: An Ab Initio Study**Journal:** Journal of Electronic Materials**Volume:** 45**Issue:** 1**Pages:** 435-443**Date:** Jan**Short Title:** Elastic, Electronic, Optical and Thermal Properties of Na<sub>2</sub>Po: An Ab Initio Study**ISSN:** 0361-5235**DOI:** 10.1007/s11664-015-4119-4**Accession Number:** WOS:000367467800052

**Abstract:** The structural, elastic, electronic, optical and thermodynamic properties of the sodium polonide Na<sub>2</sub>Po compound have been studied through the full potential linearized augmented plane wave plus local orbitals (FP-LAPW + lo) and tight-binding linear muffin-tin orbital (TB-LMTO) methods. The exchange-correlation potential was treated within the local density approximation for the TB-LMTO calculations and within the generalized gradient approximation for the FP-LAPW + lo calculations. In addition, Tran and Blaha-modified Becke-Johnson (TB-mBJ) potential and Engel-Vosko generalized gradient approximation were used for the electronic and optical properties. Ground state properties such as the equilibrium lattice constant, bulk modulus and its pressure derivative were calculated and compared with available data. The single-crystal and polycrystalline elastic constants of the considered compound were calculated via the total energy versus strain in the framework of the FP-LAPW + lo approach. The calculated electronic structure reveals that Na<sub>2</sub>Po is a direct band gap semiconductor. The frequency-dependent dielectric function, refractive index, extinction coefficient, reflectivity coefficient and electron energy loss function spectra are calculated for a wide energy range. The variations of the lattice constant, bulk modulus, heat capacity, volume expansion coefficient and Debye temperature with temperature and pressure were calculated successfully using the FP-LAPW + lo method in combination with the quasi-harmonic Debye model.

**Notes:** Baki, N. Eithiraj, R. D. Khachai, H. Khenata, R. Murtaza, G. Bouhemadou, A. Seddik, T. Bin-Omran, S.

**URL:** <Go to ISI>://WOS:000367467800052

**Reference Type: Journal Article****Record Number:** 132**Author:** Beddar, A. Bouzekri, H. Babes, B. Afghoul, H.**Year:** 2016**Title:** Experimental enhancement of fuzzy fractional order PI plus I controller of grid connected variable speed wind energy conversion system**Journal:** Energy Conversion and Management**Volume:** 123**Pages:** 569-580**Date:** Sep**Short Title:** Experimental enhancement of fuzzy fractional order PI plus I controller of grid connected variable speed wind energy conversion system**ISSN:** 0196-8904**DOI:** 10.1016/j.enconman.2016.06.070**Accession Number:** WOS:000380601300050

**Abstract:** In this paper, fuzzy fractional order PI+I (FFOPI+I) controller for grid connected Variable Speed Wind Energy Conversion System (VS-WECS) is proposed. The FFOPI+I controller is applied to control a Permanent Magnet Synchronous Generator (PMSG) connected to the grid and nonlinear load through a back-to-back AC-DC-AC PWM converter. The control strategy of the Machine Side Converter (MSC) aims, at first, to extract a maximum power under fluctuating wind speed. Then, the Grid Side Converter (GSC) is controlled to improve the power quality and ensure sinusoidal current in the grid side. The FFOPI+I controller implements a Fuzzy Logic Controller (FLC) in parallel with Fractional Order PI (FOPI) and conventional PI controllers by having a common proportional gain. The FLC changes the integral gains at runtime. The initial parameters of the FFOPI+I controller were calculated using a frequency method to create a search space then the PSO algorithm is used to select the optimal parameters. To evaluate the performance of the proposed controller in steady and transient states, an experimental test bench has been built in laboratory using dSPACE1104 card. The experimental results demonstrate the effectiveness and feasibility of the FFOPI+I over FOPI and conventional PI controllers by realizing maximum power extraction and improving the grid-side power factor for a wide range of wind speed. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Beddar, Antar Bouzekri, Hacene Babes, Badreddine Afghoul, Hamza**URL:** <Go to ISI>://WOS:000380601300050

**Reference Type: Journal Article****Record Number:** 128**Author:** Bedjaoui, A. Bouhemadou, A. Bin-Omran, S.**Year:** 2016**Title:** Structural, elastic and thermodynamic properties of tetragonal and orthorhombic polymorphs of Sr<sub>2</sub>GeN<sub>2</sub>: an ab initio investigation**Journal:** High Pressure Research**Volume:** 36**Issue:** 2**Pages:** 198-219**Short Title:** Structural, elastic and thermodynamic properties of tetragonal and orthorhombic polymorphs of Sr<sub>2</sub>GeN<sub>2</sub>: an ab initio investigation**ISSN:** 0895-7959**DOI:** 10.1080/08957959.2016.1167202**Accession Number:** WOS:000378870400008

**Abstract:** The structural, elastic and thermodynamic properties of the alpha (tetragonal) and beta (orthorhombic) polymorphs of the Sr<sub>2</sub>GeN<sub>2</sub> compound have been examined in detail using ab initio density functional theory pseudopotential plane-wave calculations. Apart the structural properties at the ambient conditions, all present reported results are predicted for the first time. The calculated equilibrium lattice parameters and inter-atomic bond-lengths of the considered polymorphs are in good agreement with the available experimental data. It is found that alpha-Sr<sub>2</sub>GeN<sub>2</sub> is energetically more stable than beta-Sr<sub>2</sub>GeN<sub>2</sub>. The two examined polymorphs are very similar in their crystal structures and have almost identical local environments. The single-crystal and polycrystalline elastic parameters and related properties - including elastic constants, bulk, shear and Young's moduli, Poisson's ratio, anisotropy indexes, Pugh's criterion, elastic wave velocities and Debye temperature - have been predicted. Temperature and pressure dependence of some macroscopic properties - including the unit-cell volume, bulk modulus, volume thermal expansion coefficient, heat capacity and Debye temperature - have been evaluated using ab initio calculations combined with the quasi-harmonic Debye model.

**Notes:** Bedjaoui, A. Bouhemadou, A. Bin-Omran, S.**URL:** <Go to ISI>://WOS:000378870400008

**Reference Type: Journal Article****Record Number:** 181**Author:** Belkaid, A. Colakc, I. Isik, O.**Year:** 2016**Title:** Photovoltaic maximum power point tracking under fast varying of solar radiation**Journal:** Applied Energy**Volume:** 179**Pages:** 523-530**Date:** Oct**Short Title:** Photovoltaic maximum power point tracking under fast varying of solar radiation**ISSN:** 0306-2619**DOI:** 10.1016/j.apenergy.2016.07.034**Accession Number:** WOS:000383291800042

**Abstract:** Perturb and Observe (P&O) and Incremental Conductance (INC) are widely used as Maximum Power Point Tracking (MPPT) techniques in Photovoltaic (PV) systems. But, they fail under rapidly varying of sunlight levels. This paper proposes a new MPPT technique, which can make a distinction between perturbation in the reference voltage and sudden-changing of sunlight and thus optimize the PV system efficiency. This method consists on a modified INC algorithm, which is used to fine-tune the duty cycle of the DC/DC converter in order to avoid divergences of the maximum power point (MPP) when using basic INC under fast varying of luminosity levels. The proposed PV-MPPT system, which is composed by a step-up converter as the interface to feed the load, is tested by simulation within the Matlab/Simulink software by taking into account the luminosity, the temperature-and the load variation. The simulation results are satisfactory and demonstrate that the improved INC technique can track the PV maximum power at diverse operating conditions with the most excellent performance, the energy conversion efficiency is increased by approximately 5%. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Belkaid, A. Colakc, I. Isik, O.**URL:** <Go to ISI>://WOS:000383291800042

**Reference Type: Journal Article****Record Number:** 150**Author:** Belkaid, A. Gaubert, J. P. Gherbi, A.**Year:** 2016**Title:** An Improved Sliding Mode Control for Maximum Power Point Tracking in Photovoltaic Systems**Journal:** Control Engineering and Applied Informatics**Volume:** 18**Issue:** 1**Pages:** 86-94**Date:** Mar**Short Title:** An Improved Sliding Mode Control for Maximum Power Point Tracking in Photovoltaic Systems**ISSN:** 1454-8658**Accession Number:** WOS:000373525400010

**Abstract:** Tracking the maximum power point (MPP) has a great interest in the study of photovoltaic (PV) systems. This task is very difficult due to the non linearity of PV current-voltage characteristics which are dependent on the temperature and irradiation conditions. The sliding mode control (SMC) based MPPT with two different step sizes designed for Boost-type DC/DC converter method is investigated in this paper. The robustness of the proposed controller is tested under rapidly changing solar radiations. The SMC based MPPT is compared to perturb and observe (P&O) method and to incremental conductance (IncCond) method. The PV-MPPT system is simulated by Matlab/Simulink environment and verified by practical implementation within DS1104 R&D controller board. The simulation and experimental results are satisfactory and demonstrate that the new SMC can follow the PV peak power at different operating conditions with best performance.

**Notes:** Belkaid, Abdelhakim Gaubert, Jean-Paul Gherbi, Ahmed**URL:** <Go to ISI>://WOS:000373525400010

**Reference Type: Journal Article****Record Number:** 119**Author:** Belkhir, N. Chorfa, A. Bouzid, D.**Year:** 2016**Title:** Compression behavior of polyurethane polishers in optical polishing process**Journal:** International Journal of Advanced Manufacturing Technology**Volume:** 86**Issue:** 9-12**Pages:** 2595-2601**Date:** Oct**Short Title:** Compression behavior of polyurethane polishers in optical polishing process**ISSN:** 0268-3768**DOI:** 10.1007/s00170-016-8393-y**Accession Number:** WOS:000385072400020

**Abstract:** In polishing process, polishers must have a number of proprieties inter alia elasticity to perform their function, which is the achievement of a minimum roughness and a correct form. During the process, the polishers are subjected to compression stress generated by the technological parameters of the process. The efficiency of the polishers and the obtained quality will be influenced when they lost their mechanical properties after some hours of use. This work aims to characterize the polisher's compression behavior and its influence on the surface quality and the effectiveness during the optical polishing process. The subjects are to define polishers wear reasons and thus to define their lifetime, in addition to the identification of the relationship between the compression behavior and the polishing quality and efficiency. For that, polishing, compression and hysteresis tests were conducted on polyurethane polishers before and after their use and the obtained results were discussed. The found results after 2 h of polishing showed the difference of the elastic properties of the polishers without a big influence on their total wear. Consequently, a very low surface roughness was obtained, with high shape accuracy.

**Notes:** Belkhir, N. Chorfa, A. Bouzid, D.**URL:** <Go to ISI>://WOS:000385072400020

**Reference Type: Journal Article****Record Number:** 80**Author:** Benabid, F. Z. Zouai, F.**Year:** 2016**Title:** Study of PVDF/PMMA blend resistance to artificial aging and neutral spray**Journal:** Journal of New Technology and Materials**Volume:** 6**Issue:** 1**Pages:** 31-33**Date:** Jun**Short Title:** Study of PVDF/PMMA blend resistance to artificial aging and neutral spray**ISSN:** 2170-161X**Accession Number:** WOS:000382993400004

**Abstract:** The resistance of poly (vinylidene fluoride)/poly (methyl methacrylate) (PVDF/PMMA) blends was investigated using the artificial aging and neutral salt spray tests. The solution of each polymer was prepared using the N, N-dimethylformamide (DMF) as a solvent for the two polymers. The PVDF/PMMA blend is a compromise of a great development in the field of architectural preservation, since it is the best method in term of quality and price to make new polymeric materials having enhanced properties. The addition of PVDF to PMMA enhances the properties of this last to know the exhibition in the natural and artificial ageing and to the saline fog. The results showed that the exposure of coatings to artificial aging and to the salt water vapors showed a high resistance of the blend at compositions  $\geq 70$  of PVDF/PMMA.

**Notes:** Benabid, F. Z. Zouai, F.**URL:** <Go to ISI>://WOS:000382993400004

**Reference Type: Journal Article****Record Number:** 71**Author:** Benaddi, H. Benachour, D. Grohens, Y.**Year:** 2016**Title:** = Preparation and characterization of polystyrene-MgAl layered double hydroxide nanocomposites using bulk polymerization**Journal:** Journal of Polymer Engineering**Volume:** 36**Issue:** 7**Pages:** 681-693**Date:** Sep**Short Title:** = Preparation and characterization of polystyrene-MgAl layered double hydroxide nanocomposites using bulk polymerization**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2015-0162**Accession Number:** WOS:000382971800004

**Abstract:** Polymer/mineral filler nanocomposites are more and more used for diverse applications. As mineral fillers, layered double hydroxides (LDHs) present a great advantage as flame retardants from an environmental point a view (reduction of smoke and toxic gases). This article deals with the use of LDH as flame retardants as compared to montmorillonite (MMT). In situ bulk polymerization of styrene was carried out in the presence of MgAl LDH modified with dodecyl sulfate (DDS) and dodecylbenzene sulfonate (DBS) surfactants. LDH concentrations used were lower than 10 wt.%. X-ray diffraction analysis of the LDH-styrene suspensions revealed the monomer intercalation into the DDS-LDH galleries and a slight decrease in the DBS-LDH basal spacing. Transmission electron microscopy analysis showed that the polymerization occurred outside the DBS-LDH galleries, leading to exfoliation of the layers on the outer surface of LDH platelets. DDS-LDH particles were trapped in the PS polymer. The thermal stability effect was observed for all LDH nanocomposites by thermogravimetric analysis. Cone calorimetry measurements revealed that only the DBS-LDH nanofiller resulted in a reduction of the peak heat released rate (PHRR) and a decrease of smoke released. DBS-LDH/PS exhibited fire properties close to those of clay-PS nanocomposite at 7 wt.% montmorillonite. The PHRR reduction remained small and the total heat release rate constant at 7 wt.% DBS-LDH loading.

**Notes:** Benaddi, Hadja Benachour, Djafer Grohens, Yves**URL:** <Go to ISI>://WOS:000382971800004

**Reference Type: Journal Article****Record Number:** 48**Author:** Benahdouga, S. Khenfer, R. Meddad, M. Eddiai, A. Benkhouja, K.**Year:** 2016**Title:** New material connected with Matlab for physicals characteristics tracer of a thermogenerator**Journal:** Molecular Crystals and Liquid Crystals**Volume:** 628**Issue:** 1**Pages:** 41-48**Short Title:** New material connected with Matlab for physicals characteristics tracer of a thermogenerator**ISSN:** 1542-1406**DOI:** 10.1080/15421406.2015.1137124**Accession Number:** WOS:000378126400005

**Abstract:** This paper presents new hardware equipments low-cost and the software for researcher to monitoring and diagnosis of thermo-electric generator modules (TEG). The system designed to allow the physical characteristics tracer and reveals the internal resistance of thermogenerator modules where tested under different values of temperature, and provides also the information of maximum power point. This tracer developed based on a microcontroller board family called ChipKIT Max32 which is connected to Matlab\ Simulink. The load of this tracer based on a capacitor varying. The output results data acquisition of TEG can be traced on an oscilloscope or using Matlab environment. These results showed the effectiveness of the present prototype.

**Notes:** Benahdouga, Seddik Khenfer, Riad Meddad, Mounir Eddiai, Adil Benkhouja, Khalil 13th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM) - Emerging and Transferring New Technologies Mar 29-apr 02, 2015 Marrakech, MOROCCO Si

**URL:** <Go to ISI>://WOS:000378126400005

**Reference Type: Journal Article****Record Number:** 117**Author:** Benaicha, M. Hamla, M. Derbal, S.**Year:** 2016**Title:** Electrochemical Formation and Selenization of Ternary CuZnSn Alloys for Growing Cu<sub>2</sub>ZnSnSe<sub>4</sub> Photoactive Thin Films**Journal:** International Journal of Electrochemical Science**Volume:** 11**Issue:** 6**Pages:** 4909-4921**Date:** Jun**Short Title:** Electrochemical Formation and Selenization of Ternary CuZnSn Alloys for Growing Cu<sub>2</sub>ZnSnSe<sub>4</sub> Photoactive Thin Films**ISSN:** 1452-3981**DOI:** 10.20964/2016.06.76**Accession Number:** WOS:000378559300055

**Abstract:** A two-step electrochemical route for the synthesis of Cu<sub>2</sub>ZnSnSe<sub>4</sub> (CZTSe) photoactive thin films is reported in this work. A ternary Cu-Zn-Sn (CZT) alloy was electrochemically deposited onto Indium doped Tin Oxide (ITO) substrates from citrate electrolyte followed by a thin layer of Se on the top. The CZT + Se deposits were annealed under vacuum and characterized by means of field emission scanning electron microscopy (FESEM), energy dispersive spectrometry (EDS), X-ray diffraction (XRD), Raman spectroscopy and UV-VIS spectroscopy respectively. The XRD measurements indicated that when annealed under vacuum at 350 degrees C, the manufactured CZT+ Se precursors contained the main diffraction peaks of CZTSe in addition to secondary phases such as Cu<sub>6</sub>Sn<sub>5</sub> and Cu<sub>5</sub>Zn<sub>8</sub> binaries. With increasing temperature up to 550 degrees C, the CZTSe deposits presented stannite structure with a band gap of 1.12 eV and contained traces of Cu<sub>2</sub>SnSe<sub>3</sub> phase.

**Notes:** Benaicha, Mohamed Hamla, Meriem Derbal, Sabrine**URL:** <Go to ISI>://WOS:000378559300055

**Reference Type: Journal Article****Record Number:** 165**Author:** Benaissa, S. Hamidouche, M. Kolli, M. Bonnefont, G. Fantozzi, G.**Year:** 2016**Title:** Characterization of nanostructured MgAl<sub>2</sub>O<sub>4</sub> ceramics fabricated by spark plasma sintering**Journal:** Ceramics International**Volume:** 42**Issue:** 7**Pages:** 8839-8846**Date:** May**Short Title:** Characterization of nanostructured MgAl<sub>2</sub>O<sub>4</sub> ceramics fabricated by spark plasma sintering**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2016.02.130**Accession Number:** WOS:000374075300128

**Abstract:** The aim of this work is to investigate the effect of sintering temperature on the properties of nanostructured spinel (MgAl<sub>2</sub>O<sub>4</sub>) fabricated by Spark Plasma Sintering (SPS). The starting material was a pure spinel (MgAl<sub>2</sub>O<sub>4</sub>) nanopowder. The sintering was carried out at T=1300 degrees C, 1350 degrees C and 1400 degrees C under a pressure of 73 MPa. The samples sintered at 1300 degrees C exhibit a finer microstructure (mean grain size is about similar to 250 nm) than those sintered at 1350 degrees C and 1400 degrees C. The relative density is about 99.93% at 1300 degrees C, 99.63% at 1350 degrees C and 99.58% at 1400 degrees C due to the presence of some porosity in the fabricated samples. Samples sintered at 1300 degrees C have a good transmittance (70% at 550 nm and 78% at 1100 nm) compared to those sintered at 1350 degrees C and 1400 degrees C. Due to their high density and fine grain size, samples sintered at 1300 degrees C exhibit a Vickers micro hardness Hv=18 GPa, elastic modulus E=228 GPa relatively more important than those measured on samples sintered at 1350 degrees C (Hv=15 GPa, E=172 GPa,) and at 1400 degrees C (Hv=12 GPa, E=136 GPa). They present the reverse behavior for fracture toughness k(IC) (1.05 MPa root m for samples sintered at 1300 degrees C, 1.43 MPa root m for samples sintered at 1350 degrees C and 2.23 MPa root m for that sintered at 1400 degrees C). The tribological behavior of the MgAl<sub>2</sub>O<sub>4</sub> ceramic was equally studied: the friction coefficient mu is measured and increases with sintering temperature mu=0.06, mu=0.13, mu=0.18, respectively for sintering temperature of 1300 degrees C, 1350 degrees C and 1400 degrees C. The wear behavior is also examined and the mass loss increases with increasing sintering temperature. (C) 2016 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Benaissa, S. Hamidouche, M. Kolli, M. Bonnefont, G. Fantozzi, G.**URL:** <Go to ISI>://WOS:000374075300128

**Reference Type: Journal Article****Record Number:** 164**Author:** Benali, F. Hamidouche, M. Belhouchet, H. Bouaouadja, N. Fantozzi, G.**Year:** 2016**Title:** Thermo-mechanical characterization of a silica-alumina refractory concrete based on calcined algerian kaolin**Journal:** Ceramics International**Volume:** 42**Issue:** 8**Pages:** 9703-9711**Date:** Jun**Short Title:** Thermo-mechanical characterization of a silica-alumina refractory concrete based on calcined algerian kaolin**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2016.03.059**Accession Number:** WOS:000374811600051

**Abstract:** The aim of this work is to study the thermo-mechanical behaviour (bending and compressive tests, creep and thermal shock resistance) of a refractory concrete based on local kaolin grogs and aluminous cement. Strength tests revealed a behaviour that is almost linear elastic for temperatures up to 800 degrees C and viscoplastic at 900 degrees C. A crack bridging strengthening process was observed at 800 degrees C. The creep tests were carried out at different temperatures between 1000 and 1150 degrees C using stresses in the range (0.75-2.76 MPa). The stress exponent was about 1.255. Microscopic observations suggested an intergranular creep mechanism. A water quenching test was used for estimating the thermal shock resistance of the material. The tested samples supported 80 cycles of standardized cyclic thermal shock without failure. Ultrasonic measurements were applied in order to evaluate the of ultrasonic velocity changes after these thermal shock tests. Strength degradation of the samples was evaluated using two models based on ultrasonic velocity changes during test and compared with the experimental values. (C) 2016 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Benali, F. Hamidouche, M. Belhouchet, H. Bouaouadja, N. Fantozzi, G.**URL:** <Go to ISI>://WOS:000374811600051

**Reference Type: Journal Article****Record Number:** 72**Author:** Bencheikh, K. Rasanen, E.**Year:** 2016**Title:** Hermitian one-particle density matrix through a semiclassical gradient expansion**Journal:** Journal of Physics a-Mathematical and Theoretical**Volume:** 49**Issue:** 1**Date:** Jan**Short Title:** Hermitian one-particle density matrix through a semiclassical gradient expansion**ISSN:** 1751-8113**DOI:** 10.1088/1751-8113/49/1/015205**Article Number:** 015205**Accession Number:** WOS:000366674000012

**Abstract:** We carry out the semiclassical expansion of the one-particle density matrix up to the second order in  $\hbar$ . We use the method of Grammaticos and Voros based on the Wigner transform of operators. We show that the resulting density matrix is Hermitian and idempotent in contrast with the well-known result of the semiclassical Kirzhnits expansion. Our density matrix leads to the same particle density and kinetic energy density as in the literature, and it satisfies the consistency criterion of the Euler equation. The derived Hermitian density matrix clarifies the ambiguity in the usefulness of gradient expansion approximations and might reignite the development of density functionals with semiclassical methods.

**Notes:** Bencheikh, K. Rasanen, E.**URL:** <Go to ISI>://WOS:000366674000012

**Reference Type: Journal Article****Record Number:** 30**Author:** Bencheikh, K. van Zyl, B. P. Berkane, K.**Year:** 2016**Title:** Manifestly Hermitian semiclassical expansion for the one-particle density matrix of a two-dimensional Fermi gas**Journal:** Physical Review B**Volume:** 94**Issue:** 7**Date:** Aug**Short Title:** Manifestly Hermitian semiclassical expansion for the one-particle density matrix of a two-dimensional Fermi gas**ISSN:** 2469-9950**DOI:** 10.1103/PhysRevB.94.075423**Article Number:** 075423**Accession Number:** WOS:000381482600010

**Abstract:** The semiclassical ( $\hbar$ ) over bar expansion of the one-particle density matrix for a two-dimensional Fermi gas is calculated within the Wigner transform method of B. Grammaticos and A. Voros [Ann. Phys. ( N.Y.) 123, 359 ( 1979)], originally developed in the context of nuclear physics. The method of Grammaticos and Voros has the virtue of preserving both the Hermiticity and idempotency of the density matrix to all orders in the ( $\hbar$ ) over bar expansion. As a topical application, we use our semiclassical expansion to go beyond the local-density approximation for the construction of the total dipole-dipole interaction energy functional of a two-dimensional, spin-polarized dipolar Fermi gas. We find a finite, second-order gradient correction to the Hartree-Fock energy, which takes the form  $\epsilon(\Delta \rho)^2/\sqrt{\rho}$ , with  $\epsilon$  being small ( $|\epsilon| \ll 1$ ) and negative. We test the quality of the corrected energy by comparing it with the exact results available for harmonic confinement. Even for small particle numbers, the gradient correction to the dipole-dipole energy provides a significant improvement over the local-density approximation.

**Notes:** Bencheikh, K. van Zyl, B. P. Berkane, K.**URL:** <Go to ISI>://WOS:000381482600010

**Reference Type: Journal Article****Record Number:** 89**Author:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Benghia, A.**Year:** 2016**Title:** Prediction of half-metallic properties for the AMnSe(2) (A=Rb, Cs) compounds from first-principle calculations**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 399**Pages:** 179-184**Date:** Feb**Short Title:** Prediction of half-metallic properties for the AMnSe(2) (A=Rb, Cs) compounds from first-principle calculations**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2015.09.078**Accession Number:** WOS:000363463700030

**Abstract:** Using first-principle calculations method based on spin-polarized density functional theory, we have predicted the half-metallic character of the AMnSe(2) (A = Rb, Cs) layered compounds. The structural, electronic magnetic and elastic properties of these ternary chalcogenides crystals have been investigated. The electronic exchange-correlation energy has been described by the generalized gradient approximation GGA and the GGA+U(U is the Hubbard correction). Our calculated structural parameters are in good agreement with the available experimental data. The calculated total magnetic moment is equal to 4.00  $\mu_B$  for both studied compounds. Architecture of the electronic states near the Fermi level has been explored and the origin of the gap in the considered half-metallic alloys has been determined. Single-crystals and polycrystals elastic moduli and related properties for both investigated materials have been examined. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Benghia, A.**URL:** <Go to ISI>://WOS:000363463700030

**Reference Type: Journal Article****Record Number:** 90**Author:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Maabed, S. Benghia, A. Khenata, R. Bin-Omran, S.**Year:** 2016**Title:** Structural, half-metallic magnetism and elastic properties of the  $\text{KMnQ}_2$  (Q=O, S, Se, Te) chalcogenides from first-principles calculations**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 408**Pages:** 199-205**Date:** Jun**Short Title:** Structural, half-metallic magnetism and elastic properties of the  $\text{KMnQ}_2$  (Q=O, S, Se, Te) chalcogenides from first-principles calculations**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2016.02.058**Accession Number:** WOS:000372319900030

**Abstract:** The structural, electronic, magnetic and elastic properties of the ternary chalcogenides  $\text{KMnQ}_2$  (Q=O, S, Se, Te) crystals were investigated by means of spin-polarized density functional theory calculations. The 3d orbitals of the Mn atoms were treated using the GGA+U approach. The calculated equilibrium structural parameters agree well with the experimental data. Based on the analysis of the spin-polarized band structures and density of states, we predict the half-metallic character of the studied compounds, with a half-metallic gap of 1.38 eV, 0.53 eV, 0.37 eV and 0.14 eV for  $\text{KMnO}_2$ ,  $\text{KMnS}_2$ ,  $\text{KMnSe}_2$  and  $\text{KMnTe}_2$ , respectively, and a total magnetic moment of 4.00  $\mu(\text{B})$  per unit-cell for all considered structures. The examined properties for the title compounds include also the single-crystal elastic constants, bulk modulus, shear modulus, Young's modulus and Poisson's ratio. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Benmakhlouf, A. Bentabet, A. Bouhemadou, A. Maabed, S. Benghia, A. Khenata, R. Bin-Omran, S.

**URL:** <Go to ISI>://WOS:000372319900030

**Reference Type: Journal Article****Record Number:** 75**Author:** Benseghir, A.**Year:** 2016**Title:** Decay of a Transmission Problem with Memory and Time-Varying Delay**Journal:** Journal of Partial Differential Equations**Volume:** 29**Issue:** 3**Pages:** 161-174**Short Title:** Decay of a Transmission Problem with Memory and Time-Varying Delay**ISSN:** 2079-732X**DOI:** 10.4208/jpde.v29.n3.1**Accession Number:** WOS:000385008400001

**Abstract:** In this article we consider a transmission problem with memory in a bounded domain and varying delay term in the first equation. Under suitable assumptions on the weight of the damping and the weight of the delay, we show the exponential stability of the solution by introducing a suitable Lyapunov functional.

**Notes:** Benseghir, Aissa**URL:** <Go to ISI>://WOS:000385008400001

**Reference Type: Journal Article****Record Number:** 44**Author:** Beroual, N. Bendjeddou, A.**Year:** 2016**Title:** On a Predator-Prey System with Holling Functional Response:  $x(p)/(a + x(p))$ **Journal:** National Academy Science Letters-India**Volume:** 39**Issue:** 1**Pages:** 43-46**Date:** Feb**Short Title:** On a Predator-Prey System with Holling Functional Response:  $x(p)/(a + x(p))$ **ISSN:** 0250-541X**DOI:** 10.1007/s40009-015-0400-6**Accession Number:** WOS:000374321200010

**Abstract:** In this paper, an important modification was made to the previously studied predator-prey system with a Holling functional response:  $x(p)/a+x(p)$  for any real  $p$ . A new sufficient condition for non-existence was presented. This study showed, through numerical simulations, that for  $p < 1$  the positive equilibrium point loses its global stability and a heteroclinic bifurcation occurred.

**Notes:** Beroual, Nabil Bendjeddou, Ahmed**URL:** <Go to ISI>://WOS:000374321200010

**Reference Type: Journal Article****Record Number:** 65**Author:** Berri, S.**Year:** 2016**Title:** Half-Metallic Ferromagnetism in Li<sub>6</sub>VC18, Li<sub>6</sub>MnCl8, Li<sub>6</sub>CoCl8 and Li<sub>6</sub>FeCl8 from First Principles**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 29**Issue:** 9**Pages:** 2381-2386**Date:** Sep**Short Title:** Half-Metallic Ferromagnetism in Li<sub>6</sub>VC18, Li<sub>6</sub>MnCl8, Li<sub>6</sub>CoCl8 and Li<sub>6</sub>FeCl8 from First Principles**ISSN:** 1557-1939**DOI:** 10.1007/s10948-016-3556-5**Accession Number:** WOS:000382398300023

**Abstract:** Within the framework of density functional theory, the electronic structure and magnetic properties have been studied for the Li<sub>6</sub>XCl8 (X = V, Mn, Co and Fe) Suzuki-type compounds. Features such as the lattice constant and the bulk modulus and its pressure derivative are reported. The Li<sub>6</sub>XCl8 (X = V, Mn, Co and Fe) Suzuki-type compounds show half-metallic ferromagnetism with total magnetic moments (M (tot)) of 3, 5, 3, and 4  $\mu$  (B) per formula unit, respectively. The half metallicity is originated by the hybridization of TM-d states with Cl-p states. The analysis of charge density contours leads us to conclude that the bonding character in these compounds is a mixture between covalent and ionic natures. The half-metallic nature and complete 100 % spin polarization show that the new compounds have a potential application in spintronic devices.

**Notes:** Berri, Saadi**URL:** <Go to ISI>://WOS:000382398300023

**Reference Type: Journal Article****Record Number:** 66**Author:** Berri, S.**Year:** 2016**Title:** First-principles Study on Half-metallic Properties of the CoMnCrSb Quaternary Heusler Compound**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 29**Issue:** 5**Pages:** 1309-1315**Date:** May**Short Title:** First-principles Study on Half-metallic Properties of the CoMnCrSb Quaternary Heusler Compound**ISSN:** 1557-1939**DOI:** 10.1007/s10948-016-3404-7**Accession Number:** WOS:000374264600026

**Abstract:** Within the framework of density functional theory, the electronic structure and magnetic properties have been studied for the CoMnCrSb quaternary Heusler compound. Features such as the lattice constant, the bulk modulus, and its pressure derivative are reported. The spin-up band of compound has metallic character, and spin-down band is semiconducting with an indirect gap of 0.50 eV at equilibrium lattice constant, resulting in stable half-metallic ferrimagnetic behavior with a magnetic moment of 3  $\mu(B)$ . In addition, the ferromagnetic states are found to be energetically more favorable than paramagnetic states. Therefore, the CoMnCrSb compound is a candidate material for future spintronic application.

**Notes:** Berri, Saadi**URL:** <Go to ISI>://WOS:000374264600026

**Reference Type: Journal Article****Record Number:** 88**Author:** Berri, S.**Year:** 2016**Title:** The electronic structure and spin polarization of  $\text{Co}_2\text{Mn}_{0.75}(\text{Gd}, \text{Eu})_{0.25}\text{Z}$  ( $\text{Z} = \text{Si}, \text{Ge}, \text{Ga}, \text{Al}$ ) quaternary Heusler alloys**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 401**Pages:** 667-672**Date:** Mar**Short Title:** The electronic structure and spin polarization of  $\text{Co}_2\text{Mn}_{0.75}(\text{Gd}, \text{Eu})_{0.25}\text{Z}$  ( $\text{Z} = \text{Si}, \text{Ge}, \text{Ga}, \text{Al}$ ) quaternary Heusler alloys**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2015.10.101**Accession Number:** WOS:000366585200092

**Abstract:** A first-principles approach is used to study the electronic and magnetic properties of  $\text{Co}_2\text{Mn}_{0.75}(\text{Gd}, \text{Eu})_{0.25}\text{Z}$  ( $\text{Z} = \text{Si}, \text{Ge}, \text{Ga}, \text{Al}$ ) quaternary Heusler alloys. The investigation was done using the (FP-LAPW) method where the exchange-correlation potential was calculated with the frame of GGA-WC. At ambient conditions our calculated results of band structures reveal that for  $\text{Co}_2\text{Mn}_{0.75}(\text{Gd}, \text{Eu})_{0.25}\text{Z}$  ( $\text{Z} = \text{Si}, \text{Ge}$ ) has a half-metallic (HM) band structure profile showing 100% spin polarization at the Fermi level. In contrast,  $\text{Co}_2\text{Mn}_{0.75}(\text{Gd}, \text{Eu})_{0.25}\text{Z}$  ( $\text{Z} = \text{Ga}, \text{Al}$ ) alloys are found to be metallic. Finally, the half metallic compounds found in some structures of this series might be useful in spintronic devices. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Berri, Saadi**URL:** <Go to ISI>://WOS:000366585200092

**Reference Type: Journal Article****Record Number:** 64**Author:** Berri, S. Maouche, D.**Year:** 2016**Title:** Electronic Structure and Magnetism of Ti-2(Pd, Pt) (B, Al, Ga, In): A First-Principle Study**Journal:** Journal of Superconductivity and Novel Magnetism**Volume:** 29**Issue:** 8**Pages:** 2189-2194**Date:** Aug**Short Title:** Electronic Structure and Magnetism of Ti-2(Pd, Pt) (B, Al, Ga, In): A First-Principle Study**ISSN:** 1557-1939**DOI:** 10.1007/s10948-016-3532-0**Accession Number:** WOS:000379347200031

**Abstract:** Within the framework of density functional theory, the electronic structure and magnetic properties have been studied for Ti-2(Pd, Pt)(B, Al, Ga and In) Full Heusler alloys within AlCu<sub>2</sub>Mn and Hg<sub>2</sub>CuTi-type structures for both ferromagnetic and paramagnetic cases. The investigation was done using the (FP-LAPW) method where the exchange-correlation potential was calculated with the frame of GGA (Perdew et al, Phys. Rev. Lett. 77 (1996) 3865). Results showed that Ti<sub>2</sub>PdAl, Ti<sub>2</sub>PdIn, Ti<sub>2</sub>PtAl, Ti<sub>2</sub>PtGa, and Ti<sub>2</sub>PtIn alloys are HM ferromagnets with a magnetic moment of 3  $\mu_B$  per formula unit which were in agreement with Slater-Pauling rule  $m(\text{tot}) = N(v) - 18$ . In addition, the energy band gap decreases with increasing atomic number Z in the Hg<sub>2</sub>CuTi-type structure. These new materials are good candidates for potential applications in spintronic. The Ti<sub>2</sub>PdGa, Ti<sub>2</sub>PdB and Ti<sub>2</sub>PtB alloys in the AlCu<sub>2</sub>Mn-type structure are found to be energetically more favorable than Hg<sub>2</sub>CuTi-type structure. The highest spin-polarization at Fermi energy 45, 42, and 18 % is expected for Ti<sub>2</sub>PdGa, Ti<sub>2</sub>PdB and Ti<sub>2</sub>PtB, respectively.

**Notes:** Berri, Saadi Maouche, Djamel**URL:** <Go to ISI>://WOS:000379347200031

**Reference Type: Journal Article****Record Number:** 109**Author:** Bersi, M. Saibi, H. Chabou, M. C.**Year:** 2016**Title:** Aerogravity and remote sensing observations of an iron deposit in Gara Djebilet, southwestern Algeria**Journal:** Journal of African Earth Sciences**Volume:** 116**Pages:** 134-150**Date:** Apr**Short Title:** Aerogravity and remote sensing observations of an iron deposit in Gara Djebilet, southwestern Algeria**ISSN:** 1464-343X**DOI:** 10.1016/j.jafrearsci.2016.01.004**Accession Number:** WOS:000371550400011

**Abstract:** The Gara Djebilet iron ore region is one of the most important regions in Africa. Located in the southwestern part of Algeria at the border with Mauritania, the Gara Djebilet region is characterized by steep terrain, which makes this area not easily accessible. Due to these conditions, remote sensing techniques and geophysics are the best ways to map this iron ore. The Gara Djebilet formations are characterized by high iron content that is especially rich in hematite, chamosite and goethite. The high iron content causes an absorption band at 0.88  $\mu$  m, which is referred to as band 5 in the Operational Land Imager (OLI) Landsat 8 images. In this study, we integrated geological data, aerogravity data, and remote sensing data for the purpose of mapping the distribution of the Gara Djebilet iron deposit. Several remote sensing treatments were applied to the Landsat 8 OLI image, such as color composites, band ratioing, principal component analysis and a mathematical index, which helped locate the surface distribution of the iron ore. The results from gravity gradient interpretation techniques, 2-D forward modeling and 3-D inversion of aerogravity data provided information about the 2-D and 3-D distribution of the iron deposit. The combination of remote sensing and gravity results help us evaluate the ore potential of Gara Djebilet. The estimated tonnage of the iron ore at Gara Djebilet is approximately 237 billion tonnes with 57% Fe. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Bersi, Mohand Saibi, Hakim Chabou, Moulley Charaf**URL:** <Go to ISI>://WOS:000371550400011

**Reference Type: Journal Article****Record Number:** 78**Author:** Bouafia, M. Benterki, D. Yassine, A.**Year:** 2016**Title:** An Efficient Primal-Dual Interior Point Method for Linear Programming Problems Based on a New Kernel Function with a Trigonometric Barrier Term**Journal:** Journal of Optimization Theory and Applications**Volume:** 170**Issue:** 2**Pages:** 528-545**Date:** Aug**Short Title:** An Efficient Primal-Dual Interior Point Method for Linear Programming Problems Based on a New Kernel Function with a Trigonometric Barrier Term**ISSN:** 0022-3239**DOI:** 10.1007/s10957-016-0895-0**Accession Number:** WOS:000380275600010

**Abstract:** In this paper, we present a primal-dual interior point method for linear optimization problems based on a new efficient kernel function with a trigonometric barrier term. We derive the complexity bounds for large and small-update methods, respectively. We obtain the best known complexity bound for large update, which improves significantly the so far obtained complexity results based on a trigonometric kernel function given by Peyghami et al. The results obtained in this paper are the first to reach this goal.

**Notes:** Bouafia, Mousaab Benterki, Djamel Yassine, Adnan**URL:** <Go to ISI>://WOS:000380275600010

**Reference Type: Journal Article****Record Number:** 191**Author:** Bouaoud, Y. Setifi, Z. Buvailo, A. Potaskalov, V. A. Merazig, H. Denes, G.**Year:** 2016**Title:** Crystal structure of poly diaqua( $\mu$ -2-carboxyacetato-kappa O-3,O ':O')(2-carboxyacetato-kappa O)di- $\mu$ -chlorido-dicobalt(II)**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 72**Pages:** 21-+**Date:** Jan**Short Title:** Crystal structure of poly diaqua( $\mu$ -2-carboxyacetato-kappa O-3,O ':O')(2-carboxyacetato-kappa O)di- $\mu$ -chlorido-dicobalt(II)**ISSN:** 2056-9890**DOI:** 10.1107/s2056989015023269**Accession Number:** WOS:000370797300006

**Abstract:** The asymmetric unit of the title polymer,  $[\text{Co}_2(\text{C}_3\text{H}_3\text{O}_4)_2(\text{Cl})_2(\text{H}_2\text{O})_2](n)$ , comprises one Co-II atom, one water molecule, one singly deprotonated malonic acid molecule (HMal(-); systematic name 2-carboxyacetate) and one Cl- anion. The Co-II atom is octahedrally coordinated by the O atom of a water molecule, by one terminally bound carboxylate O atom of an HMal(-) anion and by two O atoms of a chelating HMal(-) anion, as well as by two Cl- anions. The Cl- anions bridge two Co-II atoms, forming a centrosymmetric  $\text{Co}_2\text{Cl}_2$  core. Each malonate ligand is involved in the formation of six-membered chelate rings involving one Co-II atom of the dinuclear unit and at the same time is coordinating to another Co-II atom of a neighbouring dinuclear unit in a bridging mode. The combination of chelating and bridging coordination modes leads to the formation of a two-dimensional coordination polymer extending parallel to (001). Within a layer, O-H-water center dot center dot center dot Cl and O-H-water center dot center dot center dot O hydrogen bonds are present. Adjacent layers are linked through O-H center dot center dot center dot O=C hydrogen bonds involving the carboxylic acid OH and carbonyl groups.

**Notes:** Bouaoud, Yasmina Setifi, Zouaoui Buvailo, Andrii Potaskalov, Vadim A. Merazig, Hocine Denes, Georges 1

**URL:** <Go to ISI>://WOS:000370797300006

**Reference Type: Journal Article****Record Number:** 188**Author:** Boubaker, O. Said, B.**Year:** 2016**Title:** Investigation on Mechanical Properties of Mn<sub>3</sub>Sb Intermetallic Compound**Journal:** Acta Physica Polonica A**Volume:** 130**Issue:** 1**Pages:** 33-35**Date:** Jul**Short Title:** Investigation on Mechanical Properties of Mn<sub>3</sub>Sb Intermetallic Compound**ISSN:** 0587-4246**DOI:** 10.12693/APhysPolA.130.33**Accession Number:** WOS:000384810700010

**Abstract:** In this work, ab initio calculation has been performed to investigate the structural, elastic and mechanical properties of Mn<sub>3</sub>Sb intermetallic compound, based on density functional theory plane-wave pseudo potential method within local density approximation and generalized gradient approximation. The calculated structural parameter in both approximations of Mn<sub>3</sub>Sb compound is consistent with the experimental data. The elastic constants were determined from a linear fit of the calculated stress-strain function according to the Hooke law. From the elastic constants, the bulk modulus B, shear modulus G, the Young modulus E, the Poisson ratio sigma, anisotropy factor A and the ratio B/G for Mn<sub>3</sub>Sb compound are obtained. This is the first quantitative theoretical prediction of these properties.

**Notes:** Boubaker, O. Said, B. 2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN) Oct 14-19, 2015 Kemer, TURKEY

**URL:** <Go to ISI>://WOS:000384810700010

**Reference Type: Journal Article****Record Number:** 91**Author:** Boucetta, S. Ugur, G.**Year:** 2016**Title:** Elastic and mechanical properties of Mg<sub>3</sub>Rh intermetallic compound: An ab initio study**Journal:** Journal of Magnesium and Alloys**Volume:** 4**Issue:** 2**Pages:** 123-127**Date:** Jun**Short Title:** Elastic and mechanical properties of Mg<sub>3</sub>Rh intermetallic compound: An ab initio study**ISSN:** 2213-9567**DOI:** 10.1016/j.jma.2016.04.003**Accession Number:** WOS:000378163700007

**Abstract:** In this work, density functional theory plane-wave pseudo potential method, with local density approximation (LDA) and generalized gradient approximation (GGA) are used to investigate the structural, elastic, mechanical and thermodynamic properties of the intermetallic compound Mg<sub>3</sub>Rh. Comparison of the calculated equilibrium lattice constants and experimental data shows very good agreement. The elastic constants were determined from a linear fit of the calculated stress-strain function according to Hooke's law. From the elastic constants, the bulk modulus B, shear modulus G, Young's modulus E, Poisson's ratio  $\sigma$ , anisotropy factor A, the ratio B/G and the hardness parameter H for Mg<sub>3</sub>Rh compound are obtained. Our calculated elastic constants indicate that the ground state structure of Mg<sub>3</sub>Rh is mechanically stable. The calculation results show that this intermetallic crystal is stiff, elastically anisotropic and ductile material. The sound velocities and Debye temperature are also predicted from elastic constants. This is the first quantitative theoretical prediction of these properties. (C) 2016 Production and hosting by Elsevier B.V. on behalf of Chongqing University.

**Notes:** Boucetta, S. Ugur, G.**URL:** <Go to ISI>://WOS:000378163700007

**Reference Type: Journal Article****Record Number:** 105**Author:** Bouchaala, R. Mercier, L. Andreiuk, B. Mely, Y. Vandamme, T. Anton, N. Goetz, J. G. Klymchenko, A. S.**Year:** 2016**Title:** Integrity of lipid nanocarriers in bloodstream and tumor quantified by near-infrared ratiometric FRET imaging in living mice**Journal:** Journal of Controlled Release**Volume:** 236**Pages:** 57-67**Date:** Aug**Short Title:** Integrity of lipid nanocarriers in bloodstream and tumor quantified by near-infrared ratiometric FRET imaging in living mice**ISSN:** 0168-3659**DOI:** 10.1016/j.jconrel.2016.06.027**Accession Number:** WOS:000380246400007

**Abstract:** Lipid nanocarriers are considered as promising candidates for drug delivery and cancer targeting because of their low toxicity, biodegradability and capacity to encapsulate drugs and/or contrasting agents. However, their biomedical applications are currently limited because of a poor understanding of their integrity in vivo. To address this problem, we report on fluorescent nano-emulsion droplets of 100 nm size encapsulating lipophilic near-infrared cyanine 5.5 and 7.5 dyes with a help of bulky hydrophobic counterion tetraphenylborate. Excellent brightness and efficient Forster Resonance Energy Transfer (FRET) inside lipid NCs enabled for the first time quantitative fluorescence ratiometric imaging of NCs integrity directly in the blood circulation, liver and tumor xenografts of living mice using a whole-animal imaging set-up. This unique methodology revealed that the integrity of our FRET NCs in the blood circulation of healthy mice is preserved at 93% at 6 h of post-administration, while it drops to 66% in the liver (half-life is 8.2 h). Moreover, these NCs show fast and efficient accumulation in tumors, where they enter in nearly intact form (77% integrity at 2 h) before losing their integrity to 40% at 6 h (half-life is 4.4 h). Thus, we propose a simple and robust methodology based on ratiometric FRET imaging in vivo to evaluate quantitatively nanocarrier integrity in small animals. We also demonstrate that nano-emulsion droplets are remarkably stable nano-objects that remain nearly intact in the blood circulation and release their content mainly after entering tumors. (C) 2016 The Authors. Published by Elsevier B.V.

**Notes:** Bouchaala, Redouane Mercier, Luc Andreiuk, Bohdan Mely, Yves Vandamme, Thierry Anton, Nicolas Goetz, Jacky G. Klymchenko, Andrey S.**URL:** <Go to ISI>://WOS:000380246400007

**Reference Type: Journal Article****Record Number:** 116**Author:** Bouchelaghem, M. Trabelsi, N.**Year:** 2016**Title:** GROUPS WHOSE PROPER SUBGROUPS OF INFINITE RANK HAVE POLYCYCLIC-BY-FINITE CONJUGACY CLASSES**Journal:** International Journal of Group Theory**Volume:** 5**Issue:** 3**Pages:** 61-67**Date:** Sep**Short Title:** GROUPS WHOSE PROPER SUBGROUPS OF INFINITE RANK HAVE POLYCYCLIC-BY-FINITE CONJUGACY CLASSES**ISSN:** 2251-7650**Accession Number:** WOS:000383953700005

**Abstract:** A group  $G$  is said to be a (PF)C-group or to have polycyclic-by-finite conjugacy classes, if  $G/CG(x(G))$  is a polycyclic-by-finite group for all  $x$  is an element of  $G$ . This is a generalization of the familiar property of being an FC-group. De Falco et al. (respectively, de Giovanni and Trombetti) studied groups whose proper subgroups of infinite rank have finite (respectively, polycyclic) conjugacy classes. Here we consider groups whose proper subgroups of infinite rank are (PF)C-groups and we prove that if  $G$  is a group of infinite rank having a non-trivial finite or abelian factor group and if all proper subgroups of  $G$  of infinite rank are (PF)C-groups, then so is  $G$ . We prove also that if  $G$  is a locally soluble -by -finite group of infinite rank which has no simple homomorphic images of infinite rank and whose proper subgroups of infinite rank are (PF)C-groups, then so are all proper subgroups of  $G$ .

**Notes:** Bouchelaghem, Mounia Trabelsi, Nadir**URL:** <Go to ISI>://WOS:000383953700005

**Reference Type: Journal Article****Record Number:** 130**Author:** Boudiaf, K. Hurtado-Nedelec, M. Belambri, S. A. Benboubetra, M. Marie, J. C. El-Benna, J. Dang, P. M.**Year:** 2016**Title:** Thymoquinone, a natural product from *Nigella sativa* strongly inhibits fMLF-induced neutrophils functions**Journal:** European Journal of Clinical Investigation**Volume:** 46**Pages:** 97-97**Date:** Apr**Short Title:** Thymoquinone, a natural product from *Nigella sativa* strongly inhibits fMLF-induced neutrophils functions**ISSN:** 0014-2972**Accession Number:** WOS:000375378000238**Notes:** Boudiaf, K. Hurtado-Nedelec, M. Belambri, S. A. Benboubetra, M. Marie, J. C. El-Benna, J. Dang, P. M. 1 Si**URL:** <Go to ISI>://WOS:000375378000238

**Reference Type: Journal Article****Record Number:** 172**Author:** Boudiaf, K. Hurtado-Nedelec, M. Belambri, S. A. Marie, J. C. Derradji, Y. Benboubetra, M. El-Benna, J. Dang, P. M. C.**Year:** 2016**Title:** Thymoquinone strongly inhibits fMLF-induced neutrophil functions and exhibits anti-inflammatory properties in vivo**Journal:** Biochemical Pharmacology**Volume:** 104**Pages:** 62-73**Date:** Mar**Short Title:** Thymoquinone strongly inhibits fMLF-induced neutrophil functions and exhibits anti-inflammatory properties in vivo**ISSN:** 0006-2952**DOI:** 10.1016/j.bcp.2016.01.006**Accession Number:** WOS:000371952600007

**Abstract:** Polymorphonuclear neutrophils are key players in host defense against pathogens through the robust production of superoxide anion by the NADPH oxidase and the release of antibacterial proteins from granules. However, inappropriate release of these agents in the extracellular environment induces severe tissue injury, thereby contributing to the physiopathology of acute and chronic inflammatory disorders. Many studies have been carried out to identify molecules capable of inhibiting phagocyte functions, in particular superoxide anion production, for therapeutic purposes. In the present study, we show that thymoquinone (TQ), the major component of the volatile oil from *Nigella sativa* (black cumin) seeds strongly inhibits fMLF-induced superoxide production and granules exocytosis in neutrophils. The inhibition of superoxide anion was not due to a scavenger effect, as TQ did not inhibit superoxide anion produced by the xanthine/xanthine oxidase system. Interestingly, TQ impaired the phosphorylation on Ser-304 and Ser-328 of p47(PHOX), a cytosolic subunit of the NADPH oxidase. TQ also attenuated specific and azurophilic granule exocytosis in fMLF-stimulated neutrophils as evidenced by decreased cell surface expression of gp91(PHOX) and CD11b, and release of myeloperoxidase. Furthermore, both the PKC and MAPK pathways, which are involved in p47(PHOX) phosphorylation and granules exocytosis, respectively, were inhibited by TQ in fMLF-stimulated neutrophils. Finally, in a model of pleurisy induced by lambda-carrageenan in rats, TQ reduced neutrophil accumulation in the pleural space, showing that it not only inhibits PMN functions in vitro, but also exhibits anti-inflammatory properties in vivo. Thus, TQ possesses promising anti-inflammatory therapeutic potential. (C) 2016 Elsevier Inc. All rights reserved.

**Notes:** Boudiaf, Kaouthar Hurtado-Nedelec, Margarita Belambri, Sahra Amel Marie, Jean-Claude Derradji, Yacine Benboubetra, Mustapha El-Benna, Jamel Pham My-Chan Dang

**URL:** <Go to ISI>://WOS:000371952600007

**Reference Type: Journal Article****Record Number:** 149**Author:** Boudiar, R. Casas, A. M. Cantalapiedra, C. P. Gracia, M. P. Igartua, E.**Year:** 2016**Title:** Identification of quantitative trait loci for agronomic traits contributed by a barley (*Hordeum vulgare*) Mediterranean landrace**Journal:** Crop & Pasture Science**Volume:** 67**Issue:** 1**Pages:** 37-46**Short Title:** Identification of quantitative trait loci for agronomic traits contributed by a barley (*Hordeum vulgare*) Mediterranean landrace**ISSN:** 1836-0947**DOI:** 10.1071/cp15149**Accession Number:** WOS:000369766300003

**Abstract:** Some Spanish barley (*Hordeum vulgare* L.) landraces perform better than modern cultivars at low-production sites. The objective of this study was to identify favourable quantitative trait loci (QTLs) for interesting agronomic traits contributed by the landrace SBCC073. To achieve this objective, a population of 100 BC1F5 lines was derived from the cross between the elite cultivar Orria, with high productivity, and the Spanish landrace SBCC073, which was the best performer in low-production trials. The population was evaluated in field trials for 3 years (2011, 2013, and 2014) in Zaragoza, Spain. The population was genotyped with a DArTseq genotyping-by-sequencing assay. A genetic linkage map was developed by using markers of four flowering-time genes and 1227 single-nucleotide polymorphisms of good quality. The genetic map resulted in 11 linkage groups, covering a total distance of 871.1 cM. Five QTLs for grain yield were detected on 2H.1, 4H, 5H and 6H.2. Alleles from SBCC073 contributed to increased yield in three of them. A region at the end of chromosome 5H contains favourable alleles for early vigour, higher grain yield and earlier flowering, all derived from SBCC073. Alleles from Orria contributed to increasing grain yield and simultaneously to reducing plant height on the same region of 6H.2, and to increasing 1000-kernel weight on chromosomes 3H and 5H.

**Notes:** Boudiar, Ridha Casas, Ana M. Cantalapiedra, Carlos P. Pilar Gracia, M. Igartua, Ernesto**URL:** <Go to ISI>://WOS:000369766300003

**Reference Type: Journal Article**

**Record Number: 9**

**Author:** Boudilmi, A. Loucif, K.

**Year:** 2016

**Title:** Hardness Measurements via an Ellipsoid-Shaped Indenter

**Journal:** Strength of Materials

**Volume:** 48

**Issue:** 3

**Pages:** 419-425

**Date:** May

**Short Title:** Hardness Measurements via an Ellipsoid-Shaped Indenter

**ISSN:** 0039-2316

**DOI:** 10.1007/s11223-016-9780-1

**Accession Number:** WOS:000382014900012

**Abstract:** In this theoretical study, we have chosen to use a body of an ellipsoidal geometric form as an indenter, where we determined the mathematical expression of the static hardness as function of the depth and the radii of the area of projected imprint. We used the general formula of the static hardness expressed by the ratio of a force applied perpendicular on the indenter to the resulting area of the imprint; also, we have established the real imprint (cap) of an indenter of revolution ellipsoid form. Finally, geometrical and mathematical approaches have been used to derive the formula of the static hardness expression.

**Notes:** Boudilmi, A. Loucif, K.

**URL:** <Go to ISI>://WOS:000382014900012

**Reference Type: Journal Article****Record Number:** 35**Author:** Boudoukha, C. Bouriche, H. Ortega, E. Senator, A.**Year:** 2016**Title:** Immunomodulatory effects of Santolina chamaecyparissus leaf extracts on human neutrophil functions**Journal:** Pharmaceutical Biology**Volume:** 54**Issue:** 4**Pages:** 667-673**Date:** Apr**Short Title:** Immunomodulatory effects of Santolina chamaecyparissus leaf extracts on human neutrophil functions**ISSN:** 1388-0209**DOI:** 10.3109/13880209.2015.1071853**Accession Number:** WOS:000371917000015

**Abstract:** Context: Santolina chamaecyparissus L. (Asteraceae) is an aromatic plant wide spread in the Mediterranean region. It is used in folk medicine for its anti-inflammatory properties. Objective: The effects of S. chamaecyparissus aqueous extract (SCAE) and polyphenolic extract (SCPE) on human polymorphonuclear neutrophil (PMN) degranulation, chemotaxis, phagocytosis, and microbicidal capacity were examined in vitro. Materials and methods: Aqueous and polyphenolic extracts were prepared from S. chamaecyparissus leaves. The elastase release was used as a marker for measuring PMN degranulation, while chemotaxis was performed using a 48-microwell chemotaxis chamber. The phagocytosis and the microbicidal capacity were evaluated using fresh cultures of Candida albicans. Results: The treatment of neutrophils with different concentrations (10-200  $\mu$ g/ml) of SCAE and SCPE caused a significant ( $p < 0.001$ ) and dose-dependent inhibitory effect on elastase release in fMLP/Cytochalasin B (CB)-stimulated neutrophils. Indeed, 100  $\mu$ g/ml of SCAE exerted an inhibitory effect of 51.976.2%, whereas SCPE at the same concentration abolished completely PMN degranulation. Moreover, both extracts inhibited markedly ( $p < 0.01$ ) fMLP-induced chemotactic migration. At 200  $\mu$ g/ml, SCAE and SCPE exerted an inhibitory effect of 54.61  $\pm$  7.3% and 57.71  $\pm$  7.44%, respectively. In addition, a decline in both phagocytosis and microbicidal capacity against Candida albicans was observed when PMNs were exposed to 100 and 200  $\mu$ g/ml of SCAE or SCPE. Conclusion: The exerted effects on neutrophil functions support the anti-inflammatory activity and show new mechanisms of action and effectiveness of S. chamaecyparissus leaf extracts. This plant may be considered as an interesting source of anti-inflammatory and immunomodulatory agents.

**Notes:** Boudoukha, Chahra Bouriche, Hamama Ortega, Eduardo Senator, Abderrahmane**URL:** <Go to ISI>://WOS:000371917000015

**Reference Type: Journal Article****Record Number:** 32**Author:** Boudrifa, O. Bouhemadou, A. Ugur, S. Khenata, R. Bin-Omran, S. Al-Douri, Y.**Year:** 2016**Title:** Structural, electronic, optical and elastic properties of the complex  $K_2PtCl_6$ -structure hydrides  $ARuH(6)$  ( $A = Mg, Ca, Sr$  and  $Ba$ ): first-principles study**Journal:** Philosophical Magazine**Volume:** 96**Issue:** 22**Pages:** 2328-2361**Short Title:** Structural, electronic, optical and elastic properties of the complex  $K_2PtCl_6$ -structure hydrides  $ARuH(6)$  ( $A = Mg, Ca, Sr$  and  $Ba$ ): first-principles study**ISSN:** 1478-6435**DOI:** 10.1080/14786435.2016.1198874**Accession Number:** WOS:000380160400003

**Abstract:** We report a systematic study of the structural, electronic, optical and elastic properties of the ternary ruthenium-based hydrides  $A(2)RuH(6)$  ( $A=Mg, Ca, Sr$  and  $Ba$ ) within two complementary first-principles approaches. We describe the properties of the  $A(2)RuH(6)$  systems looking for trends on different properties as a function of the  $A$  sublattice. Our results are in agreement with experimental ones when the latter are available. In particular, our theoretical lattice parameters obtained using the GGA-PBEsol to include the exchange-correlation functional are in good agreement with experiment. Analysis of the calculated electronic band structure diagrams suggests that these hydrides are wide nearly direct band semiconductors, with a very slight deviation from the ideal direct-band gap behaviour and they are expected to have a poor hole-type electrical conductivity. The TB-mBJ potential has been used to correct the deficiency of the standard GGA for predicting the optoelectronic properties. The calculated TB-mBJ fundamental band gaps are about 3.53, 3.11, 2.99 and 2.68eV for  $Mg_2RuH_6$ ,  $Ca_2RuH_6$ ,  $Sr_2RuH_6$  and  $Ba_2RuH_6$ , respectively. Calculated density of states spectra demonstrates that the topmost valence bands consist of d orbitals of the Ru atoms, classifying these materials as d-type hydrides. Analysis of charge density maps tells that these systems can be classified as mixed ionic-covalent bonding materials. Optical spectra in a wide energy range from 0 to 30eV have been provided and the origin of the observed peaks and structures has been assigned. Optical spectra in the visible range of solar spectrum suggest these hydrides for use as antireflection coatings. The single-crystal and polycrystalline elastic moduli and their related properties have been numerically estimated and analysed for the first time.

**Notes:** Boudrifa, O. Bouhemadou, A. Ugur, S. Khenata, R. Bin-Omran, S. Al-Douri, Y.**URL:** <Go to ISI>://WOS:000380160400003

**Reference Type: Journal Article****Record Number:** 148**Author:** Bouguettoucha, A. Reffas, A. Chebli, D. Mekhalif, T. Amrane, A.**Year:** 2016**Title:** Novel activated carbon prepared from an agricultural waste, *Stipa tenacissima*, based on ZnCl<sub>2</sub> activation characterization and application to the removal of methylene blue**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 50**Pages:** 24056-24069**Date:** Oct**Short Title:** Novel activated carbon prepared from an agricultural waste, *Stipa tenacissima*, based on ZnCl<sub>2</sub> activation characterization and application to the removal of methylene blue**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1137231**Accession Number:** WOS:000384675100054

**Abstract:** Activated carbon (AC) was prepared by means of a novel physiochemical activation method from low-cost biosorbent, agricultural waste (*Stipa tenacissima* fiber). A two-step pyrolysis was considered instead of a single-step pyrolysis, which involved zinc chloride for the first activation step and a steam mixture of water, CO<sub>2</sub> and acetic acid for the second step. The obtained AC was tested as an adsorbent for the removal of a basic dye, Methylene blue (MB) from aqueous solutions. Batch experiments were conducted to examine the effect of the main parameters, such as the initial MB concentration, the pH, and the kinetic adsorption of this dye. Results showed that a pH value of 7 is favorable for the adsorption of MB. Rate constants of pseudo-first-order, pseudo-second-order, and intraparticle diffusion coefficient were calculated to analyze the dynamic of the adsorption process; they showed that adsorption kinetics followed a pseudo-second-order and an intraparticle diffusion model, while the two straight lines describing experimental data indicated that intraparticle diffusion was not the limiting mechanism for adsorption. Among the tested isotherm models, the Sips isotherm was found to be the most relevant to describe MB adsorption onto both activated and non-ACs with the best maximum adsorption capacity ( $Q(m)$ ), 178.44 and 27.21 mgg<sup>-1</sup>, respectively. The negative values of G degrees revealed that the adsorption process was spontaneous. The positive values of H degrees and S degrees showed the endothermic nature and an increase in disorder of MB molecules during the adsorption process, respectively.

**Notes:** Bouguettoucha, Abdallah Reffas, Abdelbaki Chebli, Derradji Mekhalif, Tahar Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000384675100054

**Reference Type: Journal Article****Record Number:** 110**Author:** Bouhank, S. Nekkaa, S. Haddaoui, N.**Year:** 2016**Title:** Water absorption, biodegradation, thermal and morphological properties of Spartium junceum fiber-reinforced polyvinylchloride composites: effects of fibers content and surface modification**Journal:** Journal of Adhesion Science and Technology**Volume:** 30**Issue:** 13**Pages:** 1462-1478**Date:** Jul**Short Title:** Water absorption, biodegradation, thermal and morphological properties of Spartium junceum fiber-reinforced polyvinylchloride composites: effects of fibers content and surface modification**ISSN:** 0169-4243**DOI:** 10.1080/01694243.2016.1150118**Accession Number:** WOS:000372114200007

**Abstract:** In this study, we want to investigate the effects of fibers content and surface modification of Spartium junceum (SJ) fibers on the water absorption characteristics, thermal degradation, and morphological properties of SJ-reinforced poly (vinyl chloride) (PVC) composites. In addition, the change in mechanical proprieties of the composites after biodegradation test was evaluated by tensile strength. In order to improve the interfacial interactions between the PVC matrix and the SJ fibers, SJ fibers were modified by sodium hydroxide (NaOH), vinyltrimethoxysilane (VTMS) and treated with sodium hydroxide solution followed by VTMS (NaOH+VTMS). The results show that the water uptake of PVC/SJ fibers composites increases with the increase in the fibers' content. However, the surface modification reduces water uptake. Moreover, the results indicate that the kinetics of water absorption of the PVC/SJ fibers composites approaches the Fickian diffusion mechanism. Also, the results indicate that the tensile strength of the composites is affected by the biodegradation test and chemical treatments. The atomic force microscope pictures of the composites illustrate the reduction of roughness via surface treatments of fibers.

**Notes:** Bouhank, Salim Nekkaa, Sorya Haddaoui, Nacerddine**URL:** <Go to ISI>://WOS:000372114200007

**Reference Type: Journal Article****Record Number:** 87**Author:** Boukelkoul, M. Haroun, M. F. Haroun, A.**Year:** 2016**Title:** Ab-initio study of the magneto-optical properties of the ultrathin films of Fe-n/Au(001)**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 420**Pages:** 166-170**Date:** Dec**Short Title:** Ab-initio study of the magneto-optical properties of the ultrathin films of Fe-n/Au(001)**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2016.07.006**Accession Number:** WOS:000382218700025

**Abstract:** With the aim of understand the microscopic origin of the magneto-optical response in the Fe ultrathin films, we used the first principle full-relativistic Spin-Polarized Relativistic Linear Muffin-Tin Orbitals with Atomic Sphere Approximation. We performed an ab-initio study of the structural, magnetic and magneto-optical properties of Fe deposited on semi-infinite Au(001). The structure and growth of the film leads to a pseudomorphic body centered tetragonal structure with tetragonality ratio  $c/a = 1.62$ , and the pseudomorphic growth is found to be larger than 3 monolayers. The magnetic study revealed a ferromagnetic phase with a large magnetic moment compared to the bulk one. The magneto-optical response is calculated via the polar magneto-optical Kerr effect over a photon energy range up to 10 eV. The most important features of the Kerr rotation spectra are interpreted trough the interband transitions between localized states. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Boukelkoul, Mebarek Haroun, Mohamed Fahim Haroun, Abdelhalim**URL:** <Go to ISI>://WOS:000382218700025

**Reference Type: Journal Article****Record Number:** 68**Author:** Boukezata, B. Chaoui, A. Gaubert, J. P. Hachemi, M.**Year:** 2016**Title:** An improved fuzzy logic control MPPT based P&O method to solve fast irradiation change problem**Journal:** Journal of Renewable and Sustainable Energy**Volume:** 8**Issue:** 4**Date:** Jul**Short Title:** An improved fuzzy logic control MPPT based P&O method to solve fast irradiation change problem**ISSN:** 1941-7012**DOI:** 10.1063/1.4960409**Article Number:** 043505**Accession Number:** WOS:000383874000010

**Abstract:** This paper proposes a fuzzy control method for tracking maximum power point in photovoltaic (PV) power systems to solve a fast irradiation change problem. Perturb and Observe (P&O) is known as a very simple maximum power point tracking and is extensively disseminated. Fuzzy logic is also simple to investigate and provides fast dynamics. The suggested technique combines both fuzzy logic and P&O advantages. A fuzzy logic-based P&O algorithm is illustrated to identify the fault direction tracking of conventional P&O algorithm under trapezoidal irradiation change. The proposed algorithm is verified using Matlab/Simulink TM software. The robust tracking capability under rapidly increasing and decreasing irradiance is verified experimentally with a PV array emulator. Simulation and experimental results confirm that the proposed algorithm provides effective, fast, and accurate tracking compared to the conventional P&O algorithm. Published by AIP Publishing.

**Notes:** Boukezata, Boualem Chaoui, Abdelmadjid Gaubert, Jean-Paul Hachemi, Mabrouk**URL:** <Go to ISI>://WOS:000383874000010

**Reference Type: Journal Article****Record Number:** 79**Author:** Boukoucha, R. Bendjeddou, A.**Year:** 2016**Title:** On the dynamics of a class of rational Kolmogorov systems**Journal:** Journal of Nonlinear Mathematical Physics**Volume:** 23**Issue:** 1**Pages:** 21-27**Short Title:** On the dynamics of a class of rational Kolmogorov systems**ISSN:** 1402-9251**DOI:** 10.1080/14029251.2016.1135629**Accession Number:** WOS:000373068200002**Abstract:** In this paper we are interested in studying the existence of a First integral and the non-existence of limit cycles of rational Kolmogorov systems of the form [GRAPHICS], where  $P(x, y)$ ,  $Q(x, y)$ ,  $R(x, y)$ ,  $S(x, y)$  are homogeneous polynomials of degree  $n, n, m, a$  respectively.**Notes:** Boukoucha, Rachid Bendjeddou, Ahmed**URL:** <Go to ISI>://WOS:000373068200002

**Reference Type: Journal Article****Record Number:** 126**Author:** Bourahala, F. Guelton, K. Khaber, F. Manamanni, N.**Year:** 2016**Title:** Improvements on PDC Controller Design for Takagi-Sugeno Fuzzy Systems with State Time-Varying Delays**Journal:** Ifac Papersonline**Volume:** 49**Issue:** 5**Pages:** 200-205**Short Title:** Improvements on PDC Controller Design for Takagi-Sugeno Fuzzy Systems with State Time-Varying Delays**ISSN:** 2405-8963**DOI:** 10.1016/j.ifacol.2016.07.113**Accession Number:** WOS:000381503600035

**Abstract:** This paper deals with the controller design for a class of T-S fuzzy model with state time varying delays. By choosing a convenient augmented Lyapunov-Krasovskii functional and employing a Parallel Distributed Compensation (PDC) control law including both memoryless and delayed state feedback, new delay dependent sufficient conditions for the stabilization of T-S fuzzy model with time varying delay are derived in terms of linear matrix inequalities (LMIs). By taking into account the bounds of the time varying delays and its maximal rate of variation, the proposed LMI-based conditions guarantee the closed-loop asymptotic stability of the considered class of delayed T-S fuzzy systems. Finally, a numerical example is given to illustrate the effectiveness of the proposed controller design methodology and the conservatism improvement regarding to previous results. (C) 2016, IFAC (International Federation of Automatic Control) Hosting by Elsevier Ltd. All rights reserved.

**Notes:** Bourahala, Faycal Guelton, Kevin Khaber, Farid Manamanni, Nouredine 4th IFAC Conference on Intelligent Control and Automation Sciences (ICONS) Jun 01-03, 2016 Reims, FRANCE IFAC TC 3 2 Computat Intelligence Control, IFAC TC 1 2 Adapt & Learning Syst, IFAC TC 1 3 Discrete Event & Hybrid Syst, IFAC TC 2 2 Linear Control Syst, IFAC TC 2 5 Robust Control, IFAC TC 3 1 Comp Control, IFAC TC 4 3 Robot, IFAC TC 4 5 Human Machine Syst, IFAC TC 7 1 Automot Control, IFAC TC 7 5 Intelligent Autonomous Vehicles, IFAC TC 8 2 Biol & Med Syst

**URL:** <Go to ISI>://WOS:000381503600035

**Reference Type: Journal Article****Record Number:** 29**Author:** Bourzami, A. Bulou, H. Weber, W.**Year:** 2016**Title:** Dispersion relations for the spin-motion angles in spin-polarized electron reflection**Journal:** Physical Review B**Volume:** 93**Issue:** 2**Date:** Jan**Short Title:** Dispersion relations for the spin-motion angles in spin-polarized electron reflection**ISSN:** 1098-0121**DOI:** 10.1103/PhysRevB.93.024413**Article Number:** 024413**Accession Number:** WOS:000368483600007

**Abstract:** When spin-polarized electrons are reflected at a ferromagnetic surface, their spin-polarization vector exhibits a spin motion, comprised of an azimuthal precession and a polar rotation about the magnetization direction of the ferromagnetic material. It is shown that the angles of precession and of rotation are intimately related by dispersion relations. Comparison with experimental data verifies their applicability. Particular attention has to be paid to the presence of complex zeros of the spin-dependent electron reflectivity.

**Notes:** Bourzami, A. Bulou, H. Weber, W.**URL:** <Go to ISI>://WOS:000368483600007

**Reference Type: Journal Article****Record Number:** 95**Author:** Boussif, A. Rolas, L. Weiss, E. Bouriche, H. Moreau, R. Perianin, A.**Year:** 2016**Title:** Impaired intracellular signaling, myeloperoxidase release and bactericidal activity of neutrophils from patients with alcoholic cirrhosis**Journal:** Journal of Hepatology**Volume:** 64**Issue:** 5**Pages:** 1041-1048**Date:** May**Short Title:** Impaired intracellular signaling, myeloperoxidase release and bactericidal activity of neutrophils from patients with alcoholic cirrhosis**ISSN:** 0168-8278**DOI:** 10.1016/j.jhep.2015.12.005**Accession Number:** WOS:000374370300012

**Abstract:** Background & Aims: Myeloperoxidase exocytosis and production of hydrogen peroxide via the neutrophil superoxide generating nicotinamide adenine dinucleotide phosphate (NADPH) oxidase contribute to efficient elimination of bacteria. Cirrhosis impairs immune functions and increases susceptibility to bacterial infection. We recently showed that neutrophils from patients with decompensated alcoholic cirrhosis exhibit a severe impairment of formylpeptide receptor (fPR)-mediated intracellular signaling and superoxide production. Here, we performed ex vivo studies with these patients' neutrophils to further investigate myeloperoxidase release, bactericidal capacity and signaling events following fPR stimulation by the formylpeptide formyl-met-leu-phe (fMLP). Methods: Myeloperoxidase release was studied by measuring extracellular myeloperoxidase activity. Activation of signaling effectors was studied by Western blot and their respective contribution to myeloperoxidase release studied using pharmacological antagonists. Results: fMLP-induced myeloperoxidase release was strongly impaired in patients' neutrophils whereas the intracellular myeloperoxidase stock was unaltered. The fMLP-induced phosphorylation of major signaling effectors, AKT, ERK1/2 and p38-MAP-Kinases, was also strongly deficient despite a similar expression of signaling effectors or fPR. However, based on effector inhibition in healthy neutrophils, AKT and p38-MAPK but not ERK1/2 upregulated fMLP-induced myeloperoxidase exocytosis. Interestingly, patients' neutrophils exhibited a defective bactericidal capacity that was reversed ex vivo by the TLR7/8 agonist CL097, through potentiation of the fMLP-induced AKT/p38-MAPK signaling axis and myeloperoxidase release. Conclusions: We provide first evidence that neutrophils from patients with decompensated alcoholic cirrhosis exhibit a deficient AKT/p38-MAPK signaling, myeloperoxidase release and bactericidal activity, which can be reversed via TLR7/8 activation. These defects, together with the previously described severe deficient superoxide production, may increase cirrhotic patients' susceptibility to bacterial infections. (C) 2015 European Association for the Study of the Liver. Published by Elsevier B.V. All rights reserved.

**Notes:** Boussif, Abdelali Rolas, Loic Weiss, Emmanuel Bouriche, Hamama Moreau, Richard Perianin, Axel**URL:** <Go to ISI>://WOS:000374370300012

**Reference Type: Journal Article****Record Number:** 17**Author:** Bouzerafa, B. Ourari, A. Aggoun, D. Ruiz-Rosas, R. Ouennoughi, Y. Morallon, E.**Year:** 2016**Title:** Novel nickel(II) and manganese(III) complexes with bidentate Schiff-base ligand: synthesis, spectral, thermogravimetry, electrochemical and electrocatalytical properties**Journal:** Research on Chemical Intermediates**Volume:** 42**Issue:** 5**Pages:** 4839-4858**Date:** May**Short Title:** Novel nickel(II) and manganese(III) complexes with bidentate Schiff-base ligand: synthesis, spectral, thermogravimetry, electrochemical and electrocatalytical properties**ISSN:** 0922-6168**DOI:** 10.1007/s11164-015-2325-6**Accession Number:** WOS:000373617700058

**Abstract:** An unsymmetrical bidentate Schiff base ligand, ethane 2-(4-methoxyphenyl)-1-iminosalicylidene, and its novel two mononuclear complexes, Nickel(II) [Ni(II)-2L] and Manganese(III) [Mn(III)Cl-2L] where L represents the ligand, have been synthesized and characterized by various physicochemical methods. The Ni(II) ion is coordinated by two nitrogen and two oxygen atoms with both the bidentate Schiff base ligands in an approximately square planar coordination geometry, while the manganese complex, the Mn(III) ion, is involved in an additional contact with one chloride anion for which the coordination sphere appears as a square pyramidal arrangement. The thermogravimetric analyses of the synthesized compounds revealed three different stages of decomposition for NONO bis-bidentate manganese and nickel complexes. The cyclic voltammetry studies of these complexes in N,N-dimethylformamide showed a redox couple for each one of them, such as Ni(II)/Ni(I) and Mn(III)/Mn(II), which are quasi-reversible. Their catalytic behaviors were tested showing that the nickel complex is an effective electrocatalyst in the reduction of bromocyclopentane. Regarding the manganese complex, it was revealed that it is an efficient catalyst in the activation of molecular dioxygen, currently applied in oxidation reactions of hydrocarbons according to the monooxygenase enzymes as those of cytochrome P450 model.

**Notes:** Bouzerafa, Brahim Ourari, Ali Aggoun, Djouhra Ruiz-Rosas, Ramiro Ouennoughi, Yasmina Morallon, Emilia**URL:** <Go to ISI>://WOS:000373617700058

**Reference Type: Journal Article****Record Number:** 169**Author:** Chahmana, N. Matrakova, M. Zerroual, L.**Year:** 2016**Title:** Physicochemical and electrochemical study of lead acid battery positive active mass (PAM) modified by the addition of bismuth**Journal:** Bulgarian Chemical Communications**Volume:** 48**Issue:** 2**Pages:** 285-289**Short Title:** Physicochemical and electrochemical study of lead acid battery positive active mass (PAM) modified by the addition of bismuth**ISSN:** 0324-1130**Accession Number:** WOS:000378981200017

**Abstract:** This study attempts to discuss the influence of Bi alone and its combination with Sb and Sn on the electrochemical performance of the PAM of lead acid batteries. The different additives were added in the electrolyte as cations. PAMs were prepared by electro formation of cured battery plates in the presence and absence of a dopant (non-doped sample ND). The results from different analyses showed that bismuth alone gives a remarkable improvement of the capacity. The highest performance of PAM is obtained when bismuth is mixed with tin together as dopants. The incorporation of bismuth and tin cations leads to an increase of the quantity of structural water in PAM. This increases the hydrated and amorphous zones within the PbO<sub>2</sub> particles and leads to an improvement of the electrochemical capacity.

**Notes:** Chahmana, N. Matrakova, M. Zerroual, L.**URL:** <Go to ISI>://WOS:000378981200017

**Reference Type: Journal Article****Record Number: 7****Author:** Chalal, D. Garuz, R. Benachour, D. Boucle, J. Ratier, B.**Year:** 2016**Title:** Influence of an electrode self-protective architecture on the stability of inverted polymer solar cells based on P3HT:PCBM with an active area of 2 cm(2)**Journal:** Synthetic Metals**Volume:** 212**Pages:** 161-166**Date:** Feb**Short Title:** Influence of an electrode self-protective architecture on the stability of inverted polymer solar cells based on P3HT:PCBM with an active area of 2 cm(2)**ISSN:** 0379-6779**DOI:** 10.1016/j.synthmet.2015.12.021**Accession Number:** WOS:000370088400020

**Abstract:** In this paper, we study the performance and stability of solution-processed inverted organic solar cells based on photoactive blends composed by the conjugated regioregular poly-(3-hexylthiophene) (P3HT) and [6,6]-phenyl-C61-butyric acid methyl ester (PCBM), using an active area of 2 cm(2). These inverted organic solar cells are fabricated with a novel top electrode design in which the silver electrode is deposited over the whole substrate to completely cover the photoactive layer, allowing an effective protection of the entire device. Consequently, initial power conversion efficiencies of 3.2% are maintained at 90% after 15 h under standard illumination conditions in ambient atmosphere. Light beam induced photo-voltage (LBIV) maps have been recorded to monitor the uniformity of the photo-response on the whole active area, and revealed the effectiveness of our design to prevent lateral moisture and oxygen diffusion. The dependency of short-circuit current density on incident light intensity, combined with LBIV data, indicates that the degradation of performance arises from dark spots which reduce the active layer area, rather than from an intrinsic aging of the active layer. Taking into account these observations, we rationalize the time evolution of device efficiency upon degradation for both non-encapsulated and encapsulated devices. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Chalal, Djazia Garuz, Richard Benachour, Djafer Boucle, Johann Ratier, Bernard**URL:** <Go to ISI>://WOS:000370088400020

**Reference Type: Journal Article****Record Number:** 136**Author:** Chaoui, A. Gaubert, J. P. Bouafia, A.**Year:** 2016**Title:** Experimental Validation of Active Power Filtering with a Simple Robust Control**Journal:** Electric Power Components and Systems**Volume:** 44**Issue:** 10**Pages:** 1163-1176**Short Title:** Experimental Validation of Active Power Filtering with a Simple Robust Control**ISSN:** 1532-5008**DOI:** 10.1080/15325008.2016.1148800**Accession Number:** WOS:000379051700007

**Abstract:** This article deals with shunt active power filtering for power quality improvement with hysteresis current controllers by two methods of implementation assessed under unfavorable non-linear load and source conditions. Fully digital and simple hybrid hysteresis control strategies are tested based on a numerical integrator proportional DC bus controller combined with phase-locked loop outputs to generate current references. In two cases, reference mains currents are generated to ensure three-phase sinusoidal synchronized waveforms of the mains currents. The experimental evaluation of the robustness control in these two implementation methods is verified using a 10-kVA shunt active power filter in steady state for transitional conditions (step load, switch-on of shunt active power filter) and in the worst case of unbalanced loads (break phase) and source voltages. Several experimental results are presented and discussed to prove the robustness and excellent performance of the proposed simple hybrid technique.

**Notes:** Chaoui, Abdelmadjid Gaubert, Jean-Paul Bouafia, Abdelouahab**URL:** <Go to ISI>://WOS:000379051700007

**Reference Type: Journal Article****Record Number:** 147**Author:** Chebli, D. Bouguettoucha, A. Reffas, A. Tiar, C. Boutahala, M. Gulyas, H. Amrane, A.**Year:** 2016**Title:** Removal of the anionic dye Biebrich scarlet from water by adsorption to calcined and non-calcined Mg-Al layered double hydroxides**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 46**Pages:** 22061-22073**Short Title:** Removal of the anionic dye Biebrich scarlet from water by adsorption to calcined and non-calcined Mg-Al layered double hydroxides**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1128365**Accession Number:** WOS:000384060500036

**Abstract:** A native layered double hydroxide Mg-Al-CO<sub>3</sub>, denominated LDH, containing Mg(II) and Al(III) in the layers, was prepared by a co-precipitation method. Its calcined form Mg-Al, (CLDH), was obtained by calcination at 500 degrees C. Both materials were characterized by powder X-ray diffraction (PXRD), Fourier transformation infrared spectroscopy, thermogravimetric analysis, and the determination of the point of zero charge. The porous structure of the solids was investigated by nitrogen adsorption at 77 K. The adsorptive affinity of these materials for Biebrich Scarlet was studied as a function of dye-adsorbent contact time, initial pH of the solution, initial dye concentration, and temperature. Sorption kinetics data fitted best to a pseudo-second-order model suggesting that the process of BS adsorption is controlled by reaction rate for interaction of dye molecules rather than by diffusion. Equilibrium data for both adsorbents were in accordance with both Sips and Langmuir isotherm models. The sorption capacity of CLDH was found to be almost independent on the initial pH, while sorption capacity of LDH was lower in neutral and alkaline conditions than at acidic pH. The adsorption process was also found to be spontaneous and endothermic in nature.

**Notes:** Chebli, Derradji Bouguettoucha, Abdallah Reffas, Abdelbaki Tiar, Chafia Boutahala, Mokhtar Gulyas, Holger Amrane, Abdeltif

**URL:** <Go to ISI>://WOS:000384060500036

**Reference Type: Journal Article****Record Number:** 85**Author:** Cherbal, O. Maamache, M.**Year:** 2016**Title:** Time-dependent pseudofermionic systems and coherent states**Journal:** Journal of Mathematical Physics**Volume:** 57**Issue:** 2**Date:** Feb**Short Title:** Time-dependent pseudofermionic systems and coherent states**ISSN:** 0022-2488**DOI:** 10.1063/1.4939967**Article Number:** 022102**Accession Number:** WOS:000371620000028

**Abstract:** We show, by means of similarity transformations, that the time-dependent fermionic systems are associated to the time-dependent pseudofermionic systems. A general construction of time dependent fermionic coherent states (FCSs) describing the two-level dissipative system driven by a periodic electromagnetic field is developed, and a strict parallelism between FCS and the time dependent pseudofermionic coherent states (PFCSs) is established and examined. We discuss properties of the constructed FCS and PFCS. (C) 2016 AIP Publishing LLC.

**Notes:** Cherbal, O. Maamache, M.**URL:** <Go to ISI>://WOS:000371620000028

**Reference Type: Journal Article****Record Number:** 42**Author:** Cherif, A. Meddad, M. Eddiai, A. Zouhair, A. Zawadzka, A. Migalska-Zalas, A.**Year:** 2016**Title:** Multimodal vibration damping using energy transfer**Journal:** Optical and Quantum Electronics**Volume:** 48**Issue:** 5**Date:** May**Short Title:** Multimodal vibration damping using energy transfer**ISSN:** 0306-8919**DOI:** 10.1007/s11082-016-0467-4**Article Number:** 283**Accession Number:** WOS:000375532100010

**Abstract:** The vibration control using the piezoelectric elements is an area interesting for many industrial sectors. Within this framework, we propose an improved control technique based in synchronized switch damping by energy transfer. It realizes the energy transfer using storage capacitances and switches synchronized with the structure modal coordinates or piezo-voltages. These switches produce either a voltage inversion on the piezoelements for damping or energy extraction purposes, or oscillating discharges between the piezoelements and the storage capacitances for energy transfer. This new method has an improvement in the modal damping technology SSDI-Max. Their performance is simulated with a model representative of a clamped plate with four piezoelectric elements coupled with the structural modes while taking into account realistic transfer losses. The damping effect is simulated in multi-modal with pulse or multi-sine excitation.

**Notes:** Cherif, A. Meddad, M. Eddiai, A. Zouhair, A. Zawadzka, A. Migalska-Zalas, A.**URL:** <Go to ISI>://WOS:000375532100010

**Reference Type: Journal Article****Record Number:** 38**Author:** Cherif, S. Medjahed, A. Manallah, A.**Year:** 2016**Title:** Conversion of Laguerre-Gaussian beams into Gaussian beams of reduced focal spot by use of a circular echelon**Journal:** Optik**Volume:** 127**Issue:** 5**Pages:** 3134-3137**Short Title:** Conversion of Laguerre-Gaussian beams into Gaussian beams of reduced focal spot by use of a circular echelon**ISSN:** 0030-4026**DOI:** 10.1016/j.ijleo.2015.12.035**Accession Number:** WOS:000369207700142

**Abstract:** In this article we present numerical calculations for the diffraction of a Laguerre-Gaussian laser beam (TEM<sub>p0</sub>), with "0" radial mode number and "p" azimuthal mode number, by circular echelon (CE) which is an annular multi-phase level Diffractive Optical Element (DOE) with a phase variations of Delta phi. We apply the super resolution technique for transforming a symmetrical TEM<sub>p0</sub> Laguerre-Gauss beam into a quasi Gaussian intensity distribution. The beam shaping is modeled on the p light rings of the incident beam. We present the diffracted intensities distributions in the back focal plane of a converging lens for different mode TEM<sub>01</sub>, TEM<sub>02</sub>, TEM<sub>03</sub>, TEM<sub>04</sub>, TEM<sub>05</sub>. The advantage of this technique is that the rectified TEM<sub>p0</sub> beam at focus has a focal volume very smaller than that of a Gaussian beam and smaller than the rectified TEM<sub>p0</sub> beam at focus of an annular binary Diffractive Optical Element (DOE) and its intensity is greater than that of an annular binary (DOE), also its fabrication is simpler. (C) 2015 Elsevier GmbH. All rights reserved.

**Notes:** Cherif, Sabah Medjahed, Aicha Manallah, Ahmed**URL:** <Go to ISI>://WOS:000369207700142

**Reference Type: Journal Article****Record Number:** 183**Author:** Cherif-Silini, H. Silini, A. Yahiaoui, B. Ouzari, I. Boudabous, A.**Year:** 2016**Title:** Phylogenetic and plant-growth-promoting characteristics of *Bacillus* isolated from the wheat rhizosphere**Journal:** Annals of Microbiology**Volume:** 66**Issue:** 3**Pages:** 1087-1097**Date:** Sep**Short Title:** Phylogenetic and plant-growth-promoting characteristics of *Bacillus* isolated from the wheat rhizosphere**ISSN:** 1590-4261**DOI:** 10.1007/s13213-016-1194-6**Accession Number:** WOS:000380710200016

**Abstract:** The rhizobacteria that promote the growth of plants can have a positive effect on the productivity of crops, especially in stress conditions. Among the plant -growth -promoting (PGP) rhizobacteria (PGPR) cluster, *Bacillus* spp. are among the genera with most potential due to their spore forming ability, thereby increasing the adaptation of *Bacillus* strains to commercial formulation and field application. Due to their intrinsic properties, the Bacilli have several mechanisms conferring beneficial effects on plants. Thirty-five strains of *Bacillus* isolated from the rhizosphere of wheat from three different soils in arid and semi-arid areas of Algeria were tested for properties involved in the promotion of plant growth. The PGP ability of the 35 strains was evaluated by determining their biofertilisation (phosphate solubilisation), biostimulation [indole acetic acid (IAA) production] and biocontrol [cyanhydric acid (HCN), siderophores, 2,3-butanediol production and antifungal activity] activities. Of the 35 strains, 78 % had the ability to solubilise phosphates at rates of 16.65  $\mu\text{g/mL}$  for strain D13, 15.60  $\mu\text{g/mL}$  for D7 and 15.05  $\mu\text{g/mL}$  for D6. These strains were the most successful and were isolated from arid and alkaline soils. The highest concentrations of IAA were produced by strains D4 and D7 to values ranging from 10 to 19  $\mu\text{g/mL}$ . All strains inhibited at least one fungal strain tested, and 75 % had activity against three fungi or more. More than half of *Bacillus* strains produced 2,3- butanediol but only a single strain produced HCN. Only three strains (B25, D11 and BA11) were efficient in the production of siderophores. Also, four strains (B21, D4, B10 and B25) possessed ACCdeaminase and were considered regulators of stress. Phylogenetic diversity of the strains was analysed by 16S rDNA sequencing. The results identified all strains as being similar to the *Bacillus* sp. cluster, and divided separately into five groups. The majority of strains ( $n = 28$ ) were assigned to the species *Bacillus thuringiensis* and *Bacillus subtilis*. The *Bacillus* species isolated in this study showing PGP abilities have the potential to be used as PGPR.

**Notes:** Cherif-Silini, Hafsa Silini, Allaoua Yahiaoui, Bilal Ouzari, Imen Boudabous, Abdellatif**URL:** <Go to ISI>://WOS:000380710200016

**Reference Type: Journal Article****Record Number:** 159**Author:** Chihi, T. Fatmi, M. Ghebouli, B. Ghebouli, M. A.**Year:** 2016**Title:** Ab initio study of the parent (BCC) and martensitic (HCP) phases of nonferrous Ti, Zr, and Hf metals**Journal:** Chinese Journal of Physics**Volume:** 54**Issue:** 1**Pages:** 127-134**Date:** Feb**Short Title:** Ab initio study of the parent (BCC) and martensitic (HCP) phases of nonferrous Ti, Zr, and Hf metals**ISSN:** 0577-9073**DOI:** 10.1016/j.cjph.2016.03.014**Accession Number:** WOS:000377793900016

**Abstract:** We present calculations of the structural, elastic and electronic properties of nonferrous Ti, Zr, and Hf pure metals in both parent and martensitic phases in bcc and hcp structures respectively. They are based on the generalized gradient approximation (GGA) within the density functional theory. The shear modulus, Young's modulus and Poisson's ratio for Ti, Zr, and Hf metals have were calculated and compared with the corresponding experimental values. Using elastic constants obtained from calculations under the GGA, the bulk modulus along the crystallographic axes of single crystals is calculated. This is in good agreement with experiment for Ti and Zr, whereas the hcp structure for Hf is a prediction. At zero temperature and zero pressure, the bcc crystal structure is found to be mechanically unstable for Ti, Zr, and Hf. In our calculations the hcp structure is correctly found to be stable at the equilibrium volume. In the electronic density of states, the smaller  $n(E-F)$  is, the more stable the compound is, in agreement with the results obtained from the total energy minimum. (C) 2016 The Physical Society of the Republic of China (Taiwan). Published by Elsevier B.V. All rights reserved.

**Notes:** Chihi, T. Fatmi, M. Ghebouli, B. Ghebouli, M. A.**URL:** <Go to ISI>://WOS:000377793900016

**Reference Type: Journal Article**

**Record Number: 8**

**Author:** Chikouche, I. Sahari, A. Zouaoui, A. Zegadi, A.

**Year:** 2016

**Title:** ELECTRODEPOSITION OF COPPER ONTO POLYPYRROLE FILMS:  
APPLICATION TO PROTON REDUCTION

**Journal:** Surface Review and Letters

**Volume:** 23

**Issue:** 1

**Date:** Feb

**Short Title:** ELECTRODEPOSITION OF COPPER ONTO POLYPYRROLE FILMS:  
APPLICATION TO PROTON REDUCTION

**ISSN:** 0218-625X

**DOI:** 10.1142/s0218625x15500869

**Article Number:** 1550086

**Accession Number:** WOS:000371128700007

**Abstract:** In this paper, we have electrodeposited copper on polypyrrole surface. Results show that at high applied cathodic potential ( $>-1.8$  V), copper electrodeposition occurs with difficulties. The amount of electrodeposited copper is low (1.32%) and it is limited by the low polypyrrole conductivity. At this potential, poor conductivity is caused by its insulating state. However, at an applied cathodic potential of  $-1.2$  V, the polypyrrole exhibits a relatively high conductivity and copper particles are electrodeposited with large amounts (12.44%) on polypyrrole/silicon system. At high applied cathodic potential, the SEM images show clearly dispersed grains of copper, but polypyrrole surface is less occupied. At an applied cathodic potential of  $-1.2$  V, the SEM image shows that polypyrrole surface is homogeneously more occupied with copper. After copper deposition, the Cu/PPy/Si system is used to catalyze the hydrogen reaction. It was found that, once the deposited copper is present with considerable amounts, the proton reduction occurs easily. As for the polypyrrole conductivity, it was found that electrodeposited copper onto PPy/Si surface affect the total conductivity.

**Notes:** Chikouche, Imene Sahari, Ali Zouaoui, Ahmed Zegadi, Ameer

**URL:** <Go to ISI>://WOS:000371128700007

**Reference Type: Journal Article****Record Number: 6****Author:** Choi, J. R. Kim, D. Menouar, S. Sever, R. Abdalla, M. S.**Year:** 2016**Title:** Classical analysis of time behavior of radiation fields associated with biophoton signals**Journal:** Technology and Health Care**Volume:** 24**Pages:** S577-S585**Short Title:** Classical analysis of time behavior of radiation fields associated with biophoton signals**ISSN:** 0928-7329**DOI:** 10.3233/thc-161184**Accession Number:** WOS:000379355100020

**Abstract:** BACKGROUND: Propagation of photon signals in biological systems, such as neurons, accompanies the production of biophotons. The role of biophotons in a cell deserves special attention because it can be applied to diverse optical systems. OBJECTIVE: This work has been aimed to investigate the time behavior of biophoton signals emitted from living systems in detail, by introducing a Hamiltonian that describes the process. The ratio of the energy loss during signal dissipation will also be investigated. METHOD: To see the adiabatic properties of the biophoton signal, we introduced an adiabatic invariant of the system according to the method of its basic formulation. RESULTS: The energy of the released biophoton dissipates over time in a somewhat intricate way when  $t$  is small. However, after a sufficient long time, it dissipates in proportion  $(1 + \lambda(0)t)^2$  to where  $\lambda(0)$  is a constant that is relevant to the degree of dissipation. We have confirmed that the energy of the biophoton signal oscillates in a particular way while it dissipates. CONCLUSION: This research clarifies the characteristics of radiation fields associated with biophotons on the basis of Hamiltonian dynamics which describes phenomenological aspects of biophotons signals.

**Notes:** Choi, Jeong Ryeol Kim, Daeyeoul Menouar, Salah Sever, Ramazan Abdalla, M. Sebawe 4th International Conference on Biomedical Engineering and Biotechnology (iCBEB) Aug 18-21, 2015 Shanghai, PEOPLES R CHINA 2

**URL:** <Go to ISI>://WOS:000379355100020

**Reference Type: Journal Article**

**Record Number: 63**

**Author:** Chougui, N. Drabla, S. Hemici, N.

**Year:** 2016

**Title:** VARIATIONAL ANALYSIS OF AN ELECTRO-VISCOELASTIC CONTACT PROBLEM WITH FRICTION AND ADHESION

**Journal:** Journal of the Korean Mathematical Society

**Volume:** 53

**Issue:** 1

**Pages:** 161-185

**Date:** Jan

**Short Title:** VARIATIONAL ANALYSIS OF AN ELECTRO-VISCOELASTIC CONTACT PROBLEM WITH FRICTION AND ADHESION

**ISSN:** 0304-9914

**DOI:** 10.4134/jkms.2016.53.1.161

**Accession Number:** WOS:000367182700011

**Abstract:** We consider a mathematical model which describes the quasistatic frictional contact between a piezoelectric body and an electrically conductive obstacle, the so-called foundation. A nonlinear electro-viscoelastic constitutive law is used to model the piezoelectric material. Contact is described with Signorini's conditions and a version of Coulomb's law of dry friction in which the adhesion of contact surfaces is taken into account. The evolution of the bonding field is described by a first order differential equation. We derive a variational formulation for the model, in the form of a system for the displacements, the electric potential and the adhesion. Under a smallness assumption which involves only the electrical data of the problem, we prove the existence of a unique weak solution of the model. The proof is based on arguments of time-dependent quasi-variational inequalities, differential equations and Banach's fixed point theorem.

**Notes:** Chougui, Nadhir Drabla, Salah Hemici, Nacerdinne

**URL:** <Go to ISI>://WOS:000367182700011

**Reference Type: Journal Article**

**Record Number:** 166

**Author:** Chougui, N. Drabla, S.

**Year:** 2016

**Title:** A Quasistatic Electro-Viscoelastic Contact Problem with Adhesion

**Journal:** Bulletin of the Malaysian Mathematical Sciences Society

**Volume:** 39

**Issue:** 4

**Pages:** 1439-1456

**Date:** Oct

**Short Title:** A Quasistatic Electro-Viscoelastic Contact Problem with Adhesion

**ISSN:** 0126-6705

**DOI:** 10.1007/s40840-015-0236-8

**Accession Number:** WOS:000384547900011

**Abstract:** The aim of this paper is to study the process of contact with adhesion between a piezoelectric body and an obstacle, the so-called foundation. The material's behavior is assumed to be electro-viscoelastic; the process is quasistatic, the contact is modeled by the Signorini condition. The adhesion process is modeled by a bonding field on the contact surface. We derive a variational formulation for the problem and then we prove the existence of a unique weak solution to the model. The proof is based on a general result on evolution equations with maximal monotone operators and fixed-point arguments.

**Notes:** Chougui, Nadhir Drabla, Salah

**URL:** <Go to ISI>://WOS:000384547900011

**Reference Type: Journal Article**

**Record Number: 60**

**Author: Daili, N.**

**Year: 2016**

**Title: BORELIAN DENSITIES IN NUMBER THEORY: BORELIAN DENSITIES OF SUBSETS OF N**

**Journal: Jp Journal of Algebra Number Theory and Applications**

**Volume: 38**

**Issue: 3**

**Pages: 261-270**

**Date: Jun**

**Short Title: BORELIAN DENSITIES IN NUMBER THEORY: BORELIAN DENSITIES OF SUBSETS OF N**

**ISSN: 0972-5555**

**DOI: 10.17654/nt038030261**

**Accession Number: WOS:000382319500004**

**Abstract:** In this paper, we introduce Borelian density of non-empty subset E of the set N of natural numbers and make comparative study of this density with others. Further, we provide certain criteria and also the applications of this newly proposed density.

**Notes: Daili, Nouredine**

**URL: <Go to ISI>://WOS:000382319500004**

**Reference Type: Journal Article**

**Record Number: 24**

**Author:** Daoud, S. Bioud, N. Lebgaa, N.

**Year:** 2016

**Title:** Elastic and piezoelectric properties, sound velocity and Debye temperature of (B3) BBi compound under pressure (vol 81, pg 885, 2013)

**Journal:** Pramana-Journal of Physics

**Volume:** 86

**Issue:** 4

**Pages:** 945-946

**Date:** Apr

**Short Title:** Elastic and piezoelectric properties, sound velocity and Debye temperature of (B3) BBi compound under pressure (vol 81, pg 885, 2013)

**ISSN:** 0304-4289

**DOI:** 10.1007/s12043-015-1099-0

**Accession Number:** WOS:000374681000022

**Notes:** Daoud, S. Bioud, N. Lebgaa, N.

**URL:** <Go to ISI>://WOS:000374681000022

**Reference Type: Journal Article****Record Number:** 193**Author:** Debbi, A. E. Ieee**Year:** 2016**Title:** Dependencies data flow graph based approach for speeding-up application**Journal:** 2016 International Conference on Industrial Informatics and Computer Systems (Ciics)**Short Title:** Dependencies data flow graph based approach for speeding-up application**Accession Number:** WOS:000382702400017

**Abstract:** This paper bring a description of 'HSCoT', an efficient high level synthesis tool generating register transfer level (RTL) specifications for applications written entirely in C language and an associate reliable approach for speeding applications execution. It's based on dependency data flow graph construction and aims to explore maximally the inherent intrinsic parallelism of application. Application written in algorithmic C specifications will be parsed, transformed on intermediate representation (IR) and dependency data flow graph and restructured once again in novel statements sequences that can be executed in shortest time on parallel architectures as FPGAs. The tool permits the efficient mappings at the fine and coarse granularity levels, and in this earliest release, it gives developers the opportunity to generate the fastest IP cores. The reliability of the approach is proved on carrying the outcomes of accelerations acquired for some IP cores synthesized by the associate tool compared to those achieved by some market and open source cores.

**Notes:** Debbi, Aimad Eddine 2nd IEEE International Conference on Industrial Informatics and Computer Systems (CIICS) Mar 13-15, 2016 Sharjah, U ARAB EMIRATES Ieee 978-1-4673-8743-9

**URL:** <Go to ISI>://WOS:000382702400017

**Reference Type: Journal Article****Record Number: 1****Author:** Deghfel, B. Kahoul, A. Derradj, I. Bendjedi, A. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**Year:** 2016**Title:** Three dimensional (Z-dependence), collective and individual semi-empirical formulae for L X-ray production and ionization cross section by protons impact within corrected ECPSSR theory and updated experimental data: a review**Journal:** X-Ray Spectrometry**Volume:** 45**Issue:** 5**Pages:** 247-257**Date:** Sep-Oct**Short Title:** Three dimensional (Z-dependence), collective and individual semi-empirical formulae for L X-ray production and ionization cross section by protons impact within corrected ECPSSR theory and updated experimental data: a review**ISSN:** 0049-8246**DOI:** 10.1002/xrs.2698**Accession Number:** WOS:000382776500001

**Abstract:** In this paper we propose a new three dimensional semi-empirical formulae for the deduction of L X-ray production and ionization cross sections by introducing the dependence on the atomic number of the target, noted as 'Z-dependence'. The data are also fitted collectively and separately (for each element) by analytical functions to calculate semi-empirical cross sections. For this purpose, the corrected ECPSSR model (noted as eCPSSR) and the published experimental data of L, L and L X-ray production and L-1, L-2 and L-3 ionization cross sections in the period (1950-2014) are combined to calculate the semi-empirical ones for a wide range of elements by proton impact. The semi-empirical cross sections (for the three x-rays lines L, L, L and the three sub-shells L-1, L-2, L-3) are then deduced by fitting the available experimental data normalized to their corresponding theoretical values (using the eCPSSR model) giving a better representation of the experimental data for the individual interpolation. At last, a comparison is made between the three semi-empirical formulae reported in this work. Copyright (c) 2016 John Wiley & Sons, Ltd.

**Notes:** Deghfel, B. Kahoul, A. Derradj, I. Bendjedi, A. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**URL:** <Go to ISI>://WOS:000382776500001

**Reference Type: Journal Article****Record Number:** 34**Author:** Dehimi, K. Speciale, A. Saija, A. Dahamna, S. Raciti, R. Cimino, F. Cristani, M.**Year:** 2016**Title:** Antioxidant and Anti-inflammatory Properties of Algerian *Thymelaea microphylla* Coss. and Dur. Extracts**Journal:** Pharmacognosy Magazine**Volume:** 12**Issue:** 47**Pages:** 203-210**Date:** Jul-Sep**Short Title:** Antioxidant and Anti-inflammatory Properties of Algerian *Thymelaea microphylla* Coss. and Dur. Extracts**ISSN:** 0973-1296**DOI:** 10.4103/0973-1296.186345**Accession Number:** WOS:000379644400008

**Abstract:** Background: *Thymelaea microphylla* Coss. et Dur. (Thymelaeaceae) (TM) is a rare medicinal plant endemic to Algeria. Leaves decoction is used in folk medicine for anticancer, anti-inflammatory, and antidiabetic properties. Objective: Herein, the antioxidant and anti-inflammatory properties of different extracts from leaves and flowers of Algerian TM were evaluated. Materials and Methods: The study was carried out by in vitro cell-free assays (antioxidant/radical properties), ex vivo experiments (inhibition of prostaglandin E2 and thromboxane B2 release in human whole blood) and in vitro experiments on cell systems (cytotoxicity on peripheral blood mononuclear cells, and protective effects on human vein endothelial cells exposed to TNF-alpha). Results: The acetone TM extract showed significant antioxidant properties and excellent anti-inflammatory and cyclooxygenase-inhibitory activity, together with lack of toxicity on normal human blood cells; furthermore, it was able to protect endothelial cells against dysfunction induced by TNF-alpha, as shown by decrease in cell death, e-selectin expression and leukocyte adhesion. Conclusion: On these bases, TM leaves and flowers appear to be a good source of bioactive compounds with significant antioxidant and antiinflammatory capability, and potentially effective in prevention and treatment of pathological conditions related to oxidative stress and inflammation, such as endothelial dysfunction.

**Notes:** Dehimi, Khadidja Speciale, Antonio Saija, Antonina Dahamna, Saliha Raciti, Roberto Cimino, Francesco Cristani, Mariateresa

**URL:** <Go to ISI>://WOS:000379644400008

**Reference Type: Journal Article****Record Number:** 22**Author:** Derradj, I. Kahoul, A. Deghfel, B. Bendjedi, A. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**Year:** 2016**Title:** L-shell cross section within corrected ECPSSR theory and updated experimental data**Journal:** Radiation Physics and Chemistry**Volume:** 121**Pages:** 81-86**Date:** Apr**Short Title:** L-shell cross section within corrected ECPSSR theory and updated experimental data**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2015.12.021**Accession Number:** WOS:000370096000011**Abstract:** The aim of this contribution is to investigate the inclusion of the correct exact integration limits for momentum transfer on ECPSSR theory for a wide range of elements ( $18 \leq Z \leq 92$ ) by proton impact with energy up to 10.0 MeV and its effect on deducing a reliable semi-empirical method for calculating L shell x-ray production and ionization cross sections. A comparison is made with earlier theoretical and experimental results. (C) 2015 Elsevier Ltd. All rights reserved.**Notes:** Derradj, I. Kahoul, A. Deghfel, B. Bendjedi, A. Khalfallah, F. Sahnoune, Y. Bentabet, A. Nekkab, M.**URL:** <Go to ISI>://WOS:000370096000011

**Reference Type: Journal Article****Record Number:** 74**Author:** Djaker, N. Sultana, S. Issaad, D. Boca, S. Moustouai, H. Spadavecchia, J. Medjahed, A. Bouafia, M. Astilean, S. de la Chapelle, M. L.**Year:** 2016**Title:** Spherical and Flower-Shaped Gold Nanoparticles Characterization by Scattering Correlation Spectroscopy**Journal:** Journal of Physical Chemistry C**Volume:** 120**Issue:** 21**Pages:** 11700-11708**Date:** Jun**Short Title:** Spherical and Flower-Shaped Gold Nanoparticles Characterization by Scattering Correlation Spectroscopy**ISSN:** 1932-7447**DOI:** 10.1021/acs.jpcc.6b02436**Accession Number:** WOS:000377239000040

**Abstract:** The aim of this study is to compare the optical scattering properties of different gold nanoparticles (GNPs), with different shapes (spherical, GNSs, and flower-shaped, GNFs), sizes (20, 30, and 50 nm), and surface chemistries (with and without PEG). These scattering properties give geometrical characterization of hydrodynamic sizes of GNPs by using the scattering correlation spectroscopy. Afterward, a multiparametric comparative study of the scattering efficiency is presented depending on various parameters such as GNPs geometry, excitation wavelength (532 and 633 nm) and powers (from 5 to 100  $\mu$ W). As predicted by Mie theory, we demonstrate that the increase in GNSs size leads to an increase of the scattered intensity, proportional to the excitation power. The scattered signal is the highest when the excitation wavelength is closer to the localized surface plasmon resonance. In the case of GNFs, the measured scattered signal is around 1000 times stronger than that for GNSs of the same size and concentration. For GNFs, a scattering coefficient at the plasmon resonance of around  $2 \times 10^{-13}$   $m^2$  was calculated, which is comparable to the scattering coefficient of a GNS with a diameter of 300 nm. Due to their strong scattering properties, GNFs appear as a good alternative to GNSs of the same size for cell imaging.

**Notes:** Djaker, Nadia Sultana, Sadequa Issaad, Dahia Boca, Sanda Moustouai, Hanane Spadavecchia, Jolanda Medjahed, Aicha Bouafia, Mohamed Astilean, Simion de la Chapelle, Marc Lamy

**URL:** <Go to ISI>://WOS:000377239000040

**Reference Type: Journal Article****Record Number:** 73**Author:** Djeghloul, F. Gruber, M. Urbain, E. Xenioti, D. Joly, L. Boukari, S. Arabski, J. Bulou, H. Scheurer, F. Bertran, F. Le Fevre, P. Taleb-Ibrahimi, A. Wulfhekel, W. Garreau, G. Hajjar-Garreau, S. Wetzel, P. Alouani, M. Beaurepaire, E. Bowen, M. Weber, W.**Year:** 2016**Title:** High Spin Polarization at Ferromagnetic Metal-Organic Interfaces: A Generic Property**Journal:** Journal of Physical Chemistry Letters**Volume:** 7**Issue:** 13**Pages:** 2310-2315**Date:** Jul**Short Title:** High Spin Polarization at Ferromagnetic Metal-Organic Interfaces: A Generic Property**ISSN:** 1948-7185**DOI:** 10.1021/acs.jpcllett.6b01112**Accession Number:** WOS:000379457400003

**Abstract:** A high spin polarization of states around the Fermi level, E-F, at room temperature has been measured in the past at the interface between a few molecular candidates and the ferromagnetic metal Co. Is this promising property for spintronics limited to these candidates? Previous reports suggested that certain conditions, such as strong ferromagnetism, i.e., a fully occupied spin-up d band of the ferromagnet, or the presence of pi bonds on the molecule, i.e., molecular conjugation, needed to be met. What rules govern the presence of this property? We have performed spin-resolved photoemission spectroscopy measurements on a variety of such interfaces. We find that this property is robust against changes to the molecule and ferromagnetic metal's electronic properties, including the aforementioned conditions. This affirms the generality of highly spin-polarized states at the interface between a ferromagnetic metal and a molecule and augurs bright prospects toward integrating these interfaces within organic spintronic devices.

**Notes:** Djeghloul, Fatima Gruber, Manuel Urbain, Etienne Xenioti, Dimitra Joly, Loic Boukari, Samy Arabski, Jacek Bulou, Herve Scheurer, Fabrice Bertran, Francois Le Fevre, Patrick Taleb-Ibrahimi, Amina Wulfhekel, Wulf Garreau, Guillaume Hajjar-Garreau, Samar Wetzel, Patrick Alouani, Mebarek Beaurepaire, Eric Bowen, Martin Weber, Wolfgang

**URL:** <Go to ISI>://WOS:000379457400003

**Reference Type: Journal Article****Record Number:** 76**Author:** Djerdali, S. Guerrero-Casado, J. Tortosa, F. S.**Year:** 2016**Title:** The effects of colony size interacting with extra food supply on the breeding success of the White Stork (*Ciconia ciconia*)**Journal:** Journal of Ornithology**Volume:** 157**Issue:** 4**Pages:** 941-947**Date:** Oct**Short Title:** The effects of colony size interacting with extra food supply on the breeding success of the White Stork (*Ciconia ciconia*)**ISSN:** 0021-8375**DOI:** 10.1007/s10336-016-1343-5**Accession Number:** WOS:000382944500002

**Abstract:** In the present study, we evaluated the effect of distance to food from rubbish dumps and colony size on White Stork breeding success. Waste from poultry farms is expanding in the study area and is commonly used by the White Stork as a new food resource, which may explain the increase in the number of breeding Storks in the region. The study was carried out at 24 sites, including 88 different colonies of White Stork in northern Algeria, S,tif (36A degrees 09'N, 05A degrees 26'E; 900 m.a.s.l.); over a 4-year period (2002-2005) with considerable variation in rainfall. Nests were monitored at different distances from 30 rubbish dumps emanating largely from chicken farms. Results of the General Linear Mixed Models (GLMM) showed that breeding success of White Stork was dependent upon distance to dumps, recording the highest values in nests close to these places with food supply. There was a highly significant interaction between the year and the distance to the rubbish dumps. That is, reproductive success was higher when there was extra food in all years except in 2002, which could be due to the very low rainfall during spring 2002. Also, we found a significant interaction between colony size and distance to a rubbish dump. Results suggest that White Stork breeding success was also affected by natural food resources, since bigger colonies may deplete natural prey sooner, which is more evident in dry years.

**Notes:** Djerdali, Sofia Guerrero-Casado, Jose Tortosa, Francisco S.**URL:** <Go to ISI>://WOS:000382944500002

**Reference Type: Journal Article****Record Number:** 171**Author:** Djerdali, S. Guerrero-Casado, J. Tortosa, F. S.**Year:** 2016**Title:** Food from dumps increases the reproductive value of last laid eggs in the White Stork *Ciconia ciconia***Journal:** Bird Study**Volume:** 63**Issue:** 1**Pages:** 107-114**Date:** Jan**Short Title:** Food from dumps increases the reproductive value of last laid eggs in the White Stork *Ciconia ciconia***ISSN:** 0006-3657**DOI:** 10.1080/00063657.2015.1135305**Accession Number:** WOS:000372039300012

**Abstract:** Capsule Accessing extra food from waste dumps increases egg volume and hatching mass in White Storks. Aim To test how White Storks vary their investment in egg size, especially in last laid eggs, in relation to food availability, and to improve our understanding of the importance of extra feeding on intra-clutch variation. Methods The study was carried out in three White Stork breeding colonies in northern Algeria. Breeding performance was recorded in 70 nests over three years. White Stork colonies situated close to chicken farms were considered to be part of a 'pseudo experiment' where parents had access to extra food. Egg volume, laying order, hatching order and hatching weight were recorded. Results Egg volume and hatching mass in White Storks was significantly greater when they had access to extra food. The reproductive value of last laid eggs (fourth and fifth) doubled when females had access to extra food. Conclusion Laying smaller last eggs within a clutch provides a mechanism to facilitate early brood reduction in the White Stork, and so should be advantageous when food is scarce. On the contrary, when females had access to extra food, last laid eggs were as big as first eggs which suggests egg size variation is adaptable to local conditions.

**Notes:** Djerdali, Sofia Guerrero-Casado, Jose Tortosa, Francisco S.**URL:** <Go to ISI>://WOS:000372039300012

**Reference Type: Journal Article****Record Number:** 25**Author:** Eddiai, A. Meddad, M. Mazroui, M. Boughaleb, Y. Idiri, M. Khanfer, R. Rguiti, M.**Year:** 2016**Title:** Strain effects on an electrostrictive polymer composite for power harvesting: experiments and modeling**Journal:** Polymers for Advanced Technologies**Volume:** 27**Issue:** 5**Pages:** 677-684**Date:** May**Short Title:** Strain effects on an electrostrictive polymer composite for power harvesting: experiments and modeling**ISSN:** 1042-7147**DOI:** 10.1002/pat.3738**Accession Number:** WOS:000373924200013

**Abstract:** In the field of vibrational energy harvesting, the electromechanical conversion demonstrated the many advantages of using electrostrictive polymers. These materials present advantageous features such as high productivity and high flexibility. The aim of this work is to provide a solution for artificially increasing the current flowing through the sample when simultaneously driven by an electrical field and a mechanical excitation in order to determine the optimal range of deformation for a good efficiency of the electromechanical conversion. Thus, by using the fast Fourier transform (FFT) analysis, our experimental results, shown clearly that under certain conditions of strain  $S$  ( $S4\%$ ), the efficiency of energy harvesting becomes significant, indicating that the mechanical parameter  $S$  was a crucial parameter for a better efficiency of electromechanical conversion. Furthermore, a good agreement between theoretical and experimental results was found. Copyright (c) 2015 John Wiley & Sons, Ltd.

**Notes:** Eddiai, A. Meddad, M. Mazroui, M. Boughaleb, Y. Idiri, M. Khanfer, R. Rguiti, M.**URL:** <Go to ISI>://WOS:000373924200013

**Reference Type: Journal Article****Record Number:** 146**Author:** Fadel, A. Lafi, R. Aouni, A. Hafiane, A. Nacef, S.**Year:** 2016**Title:** Separation of zinc ions from synthetically prepared brackish water using electro dialysis: effect of operating parameters**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 38**Pages:** 17852-17860**Short Title:** Separation of zinc ions from synthetically prepared brackish water using electro dialysis: effect of operating parameters**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1086692**Accession Number:** WOS:000378619500021

**Abstract:** The removal of zinc(II) at low concentrations from an aqueous saline solution was investigated using a five-compartment electro dialysis cell. In this work, the effect of key operating parameters such as initial zinc ions concentration, solution pH, applied voltage, and feed flow rate on process efficiency was studied. The separation performance was evaluated in terms of mass transfer, energy consumption, and current efficiency. The results showed that increasing the initial concentration of Zn(II) and applied voltage improves the cell performance. However, separation performance decreases with an increase in the flow rate. It was also found that specific power consumptions (SPC) are strongly dependant on ionic strength as the increase of ionic strength leads to an increase of the solution conductivity. Zinc removal rate and SPC were virtually constant and increased sharply when pH values ranged in the alkaline region.

**Notes:** Fadel, Ammar Lafi, Ridha Aouni, Anissa Hafiane, Amor Nacef, Saci**URL:** <Go to ISI>://WOS:000378619500021

**Reference Type: Journal Article****Record Number:** 158**Author:** Fatmi, M. Sahnoune, F. Belhouchet, H. Chihi, T. Ghebouli, M. A. Ghebouli, B. Barka, B. Rechidi, T.**Year:** 2016**Title:** Thermal aging, kinetics and mechanical properties of Al-7 wt% Mg alloy**Journal:** Chinese Journal of Physics**Volume:** 54**Issue:** 2**Pages:** 216-222**Date:** Apr**Short Title:** Thermal aging, kinetics and mechanical properties of Al-7 wt% Mg alloy**ISSN:** 0577-9073**DOI:** 10.1016/j.cjph.2016.04.006**Accession Number:** WOS:000377795500006

**Abstract:** This work presents the experimental results of the differential scanning calorimetry (DSC), hardness measurements (Hv) and X-ray diffraction (XRD) analysis, investigating the kinetics of precipitation phenomena in Al-7 wt % Mg alloy. In the XRD and DSC curves indicates the formation of the intermediate precipitation of beta-(Al<sub>3</sub>Mg<sub>2</sub>) phase respectively. The activation energies associated with the processes have been determined according to the three models proposed by Kissinger, Ozawa and Boswell. Consequently, the nucleation mechanism of the precipitates can be explained. These phases are confirmed by the XRD analysis. (C) 2016 The Physical Society of the Republic of China (Taiwan). Published by Elsevier B.V. All rights reserved.

**Notes:** Fatmi, M. Sahnoune, F. Belhouchet, H. Chihi, T. Ghebouli, M. A. Ghebouli, B. Barka, B. Rechidi, T.

**URL:** <Go to ISI>://WOS:000377795500006

**Reference Type: Journal Article****Record Number:** 96**Author:** Fellahi, O. Barras, A. Fan, G. H. Coffinier, Y. Hadjersi, T. Maamache, M. Szunerits, S. Boukherroub, R.**Year:** 2016**Title:** Reduction of Cr(VI) to Cr(III) using silicon nanowire arrays under visible light irradiation**Journal:** Journal of Hazardous Materials**Volume:** 304**Pages:** 441-447**Date:** Mar**Short Title:** Reduction of Cr(VI) to Cr(III) using silicon nanowire arrays under visible light irradiation**ISSN:** 0304-3894**DOI:** 10.1016/j.jhazmat.2015.11.020**Accession Number:** WOS:000367699200049

**Abstract:** We report an efficient visible light-induced reduction of hexavalent chromium Cr(VI) to trivalent Cr(III) by direct illumination of an aqueous solution of potassium dichromate (K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>) in the presence of hydrogenated silicon nanowires (H-SiNWs) or silicon nanowires decorated with copper nanoparticles (Cu NPs-SiNWs) as photocatalyst. The SiNW arrays investigated in this study were prepared by chemical etching of crystalline silicon in HF/AgNO<sub>3</sub> aqueous solution. The Cu NPs were deposited on SiNW arrays via electroless deposition technique. Visible light irradiation of an aqueous solution of K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> (10<sup>-4</sup> M) in presence of H-SiNWs showed that these substrates were not efficient for Cr(VI) reduction. The reduction efficiency achieved was less than 10% after 120 min irradiation at  $\lambda > 420\text{nm}$ . Addition of organic acids such as citric or adipic acid in the solution accelerated Cr(VI) reduction in a concentration-dependent manner. Interestingly, Cu NPs-SiNWs was found to be a very efficient interface for the reduction of Cr(VI) to Cr(III) in absence of organic acids. Almost a full reduction of Cr(VI) was achieved by direct visible light irradiation for 140 min using this photocatalyst. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Fellahi, Ouarda Barras, Alexandre Fan, Guo-Hui Coffinier, Yannick Hadjersi, Toufik Maamache, Mustapha Szunerits, Sabine Boukherroub, Rabah

**URL:** <Go to ISI>://WOS:000367699200049

**Reference Type: Journal Article****Record Number:** 54**Author:** Ghebouli, B. Ghebouli, M. A. Choutri, H. Fatmi, M. Chihi, T. Louail, L. Bouhemadou, A. Bin-Omran, S. Khenata, R. Khachai, H.**Year:** 2016**Title:** An ab initio study of the structural, elastic, electronic, optical properties and phonons of the double perovskite oxides Sr<sub>2</sub>AlXO<sub>6</sub> (X=Ta, Nb, V)**Journal:** Materials Science in Semiconductor Processing**Volume:** 42**Pages:** 405-412**Date:** Feb**Short Title:** An ab initio study of the structural, elastic, electronic, optical properties and phonons of the double perovskite oxides Sr<sub>2</sub>AlXO<sub>6</sub> (X=Ta, Nb, V)**ISSN:** 1369-8001**DOI:** 10.1016/j.mssp.2015.09.026**Accession Number:** WOS:000367638400019

**Abstract:** We report ab initio density functional theory calculations of the structural, elastic, electronic and optical properties of the double perovskite oxides Sr<sub>2</sub>AlXO<sub>6</sub> (X=Ta, Nb, V). We have predicted a direct Gamma-Gamma band gap in Sr<sub>2</sub>AlXO<sub>6</sub> (X=Ta, Nb) and an indirect F-X band gap for Sr<sub>2</sub>AlXO<sub>6</sub>. The fundamental band gap increases linearly when the pressure is enhanced in the range 0-20 Gpa. The frequency dependent of complex dielectric function, absorption, reflectivity and electron energy loss function were investigated in the range 0-40 eV. Features such as lattice constant, bulk modulus, elastic constants, band structure, total and local densities of states have been computed. Published by Elsevier Ltd.

**Notes:** Ghebouli, B. Ghebouli, M. A. Choutri, H. Fatmi, M. Chihi, T. Louail, L. Bouhemadou, A. Bin-Omran, S. Khenata, R. Khachai, H. 3**URL:** <Go to ISI>://WOS:000367638400019

**Reference Type: Journal Article****Record Number:** 133**Author:** Hachana, O. Tina, G. M. Hemsas, K. E.**Year:** 2016**Title:** PV array fault DiagnosticTechnique for BIPV systems**Journal:** Energy and Buildings**Volume:** 126**Pages:** 263-274**Date:** Aug**Short Title:** PV array fault DiagnosticTechnique for BIPV systems**ISSN:** 0378-7788**DOI:** 10.1016/j.enbuild.2016.05.031**Accession Number:** WOS:000381529300024

**Abstract:** To ensure the cost effectiveness of photovoltaic power plants (PVPPs) it is needed to keep the level of yearly energy production as high as possible. In this context, efficiency and availability of a PVPP have to be checked continuously. The section of a PVPP which deserves more attention is surely the PV array, where many fault conditions can happen (shading, by-pass diode faults, cable interruptions, and so on). A diagnostic tool to detect faults in the PV array is desirable, even if its implementation is critical owing to: the fluctuation of the operating conditions (mainly irradiance), which complicates the instantaneous response investigation and costs and implementation constraints to implement a distributed (at PV module level) or semi-distributed (at string level) monitoring/diagnostic system. Particularly, for BIPV systems, further constraints related to the regular access for inspection and maintenance operations have to be considered. In this paper, the procedure adopted to develop and validate a diagnostic tool can be summarized in four steps: (1) using real data to model the PV array; (2) introducing several fault scenarios on the real PV string and analyzing the relative modifications of the I-V curves; (3) assessment of the meaningful parameters useful to discern the different faults by means of a PV generator (PVG) simulator based on a metaheuristic technique denominated ABC-DE; (4) proposition of several fault signing tables to assess the PV plant fault diagnostic. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Hachana, Oussama Tina, Giuseppe Marco Hemsas, Kamel Eddine**URL:** <Go to ISI>://WOS:000381529300024

**Reference Type: Journal Article****Record Number:** 178**Author:** Hachouf, N. Kharfi, F. Hachouf, M. Boucenna, A.**Year:** 2016**Title:** New analytical approach for neutron beam-hardening correction**Journal:** Applied Radiation and Isotopes**Volume:** 107**Pages:** 353-358**Date:** Jan**Short Title:** New analytical approach for neutron beam-hardening correction**ISSN:** 0969-8043**DOI:** 10.1016/j.apradiso.2015.11.024**Accession Number:** WOS:000367410300056

**Abstract:** In neutron imaging, the beam-hardening effect has a significant effect on quantitative and qualitative image interpretation. This study aims to propose a linearization method for beam-hardening correction. The proposed method is based on a new analytical approach establishing the attenuation coefficient as a function of neutron energy. Spectrum energy shift due to beam hardening is studied on the basis of Monte Carlo N-Particle (MCNP) simulated data and the analytical data. Good agreement between MCNP and analytical values has been found. Indeed, the beam-hardening effect is well supported in the proposed method. A correction procedure is developed to correct the errors of beam-hardening effect in neutron transmission, and therefore for projection data correction. The effectiveness of this procedure is determined by its application in correcting reconstructed images. (C) 2015 Elsevier Ltd. All rights reserved.

**Notes:** Hachouf, N. Kharfi, F. Hachouf, M. Boucenna, A.**URL:** <Go to ISI>://WOS:000367410300056

**Reference Type: Journal Article****Record Number:** 99**Author:** Haddad, L. Bouzerzour, H. Benmahammed, A. Zerargui, H. Hannachi, A. Bachir, A. Salmi, M. Oulmi, A. Nouar, H. Laala, Z.**Year:** 2016**Title:** ANALYSIS OF THE PHENOTYPIC VARIABILITY OF SOME VARIETIES OF DURUM WHEAT (TRITICUM DURUM DESF) TO IMPROVE THE EFFICIENCY OF PERFORMANCE UNDER THE CONSTRAINING CONDITIONS OF SEMI-ARID ENVIRONMENTS**Journal:** Journal of Fundamental and Applied Sciences**Volume:** 8**Issue:** 3**Pages:** 1021-1036**Short Title:** ANALYSIS OF THE PHENOTYPIC VARIABILITY OF SOME VARIETIES OF DURUM WHEAT (TRITICUM DURUM DESF) TO IMPROVE THE EFFICIENCY OF PERFORMANCE UNDER THE CONSTRAINING CONDITIONS OF SEMI-ARID ENVIRONMENTS**ISSN:** 1112-9867**DOI:** 10.4314/jfas.v8i3.19**Accession Number:** WOS:000384248800019

**Abstract:** The experiment was conducted during three growing seasons and two planting dates. The cultivation site is placed at the ITGC Setif characterized by a semi-arid environment. The objective of the study is the analysis of phenotypic variability of traits measured for 15 varieties of durum wheat, through the average effects, to decline the ways, characters and varieties could play in favour of performance under the constraining semi-arid conditions. The year effect indicates that given the difficulty of predicting the performance enabled by years, it then makes sense to go straight for this performance within genotypes. Analysis of the effect genotype highlights characters connected to performance and is the Setifis variety that lends itself well. For the effect of sowing date, it is that early sowing promotes a better expression of the characteristics compared to late sowing.

**Notes:** Haddad, L. Bouzerzour, H. Benmahammed, A. Zerargui, H. Hannachi, A. Bachir, A. Salmi, M. Oulmi, A. Nouar, H. Laala, Z.**URL:** <Go to ISI>://WOS:000384248800019

**Reference Type: Journal Article****Record Number:** 56**Author:** Hadjab, M. Berrah, S. Abid, H. Ziane, M. I. Bennacer, H. Reshak, A. H.**Year:** 2016**Title:** First-principles investigation of the optical properties for rocksalt mixed metal oxide  $Mg_xZn_{1-x}O$ **Journal:** Materials Chemistry and Physics**Volume:** 182**Pages:** 182-189**Date:** Oct**Short Title:** First-principles investigation of the optical properties for rocksalt mixed metal oxide  $Mg_xZn_{1-x}O$ **ISSN:** 0254-0584**DOI:** 10.1016/j.matchemphys.2016.07.021**Accession Number:** WOS:000383524900024

**Abstract:** In this paper, we have presented a theoretical study of the optical properties for the cubic  $Mg_5Zn_{1-x}O$  ( $x = 0.0, 0.125, 0.375, 0.625, 0.875$  and  $1.0$ ) alloys using the full-potential linearized augmented plane wave (FP-LAPW) method based on the density functional theory (DFT). The local density approximation (LDA) was applied to calculate the structural properties. In order to explore the desired properties, the  $Mg_5Zn_{1-x}O$  alloys were modeled at various  $x$  compositions from 0.0 to 1.0 by step of 0.125. The recently modified semi-local Becke-Johnson potential with LDA correlation in the form of mBJ-LDA was used to predict the energy band gap, optical dielectric function, refractive index, absorption coefficient, reflectivity, optical conductivity and the electron energy loss of  $Mg_5Zn_{1-x}O$  alloys. The obtained results show good agreement with the experimental data, which indicate that the investigated ternary alloys are among promising material for the fabrication of electronic, optoelectronic devices and their applications. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Hadjab, Moufdi Berrah, Smail Abid, Hamza Ziane, Mohamed Issam Bennacer, Hamza Reshak, Ali H.**URL:** <Go to ISI>://WOS:000383524900024

**Reference Type: Journal Article****Record Number:** 175**Author:** Hadji, R. Chouabi, A. Gadri, L. Rais, K. Hamed, Y. Boumazbeur, A.**Year:** 2016**Title:** Application of linear indexing model and GIS techniques for the slope movement susceptibility modeling in Bousselam upstream basin, Northeast Algeria**Journal:** Arabian Journal of Geosciences**Volume:** 9**Issue:** 3**Date:** Mar**Short Title:** Application of linear indexing model and GIS techniques for the slope movement susceptibility modeling in Bousselam upstream basin, Northeast Algeria**ISSN:** 1866-7511**DOI:** 10.1007/s12517-015-2169-9**Article Number:** 192**Accession Number:** WOS:000372169700026

**Abstract:** The main objective of this study was to assess spatial prediction of slopes movement susceptibility in the Bousselam upstream basin, northeast of Algeria, using a linear indexing model and Geographic Information Systems. First, the locations of 1109 slope instabilities, which occurred in the last three decades, were mapped upon data from various sources such as follows: remote sensing, aerial photographs interpretation, and internal reports compilation. This slope movement inventory was randomly segmented into training and validation datasets (75% of the known events locations were used for training and building the model and the remaining 25% for its validation). Second, nine natural and anthropogenic causing factors were mapped as independent variables: geological factors (lithology and faults density), morphometric factors (slope, aspect, and elevations), environmental factors (precipitations, seism, and stream network density), and the land use factor (roads and rail network density). Third, the relative value of each categorical variable involved in the slope movements emergence was assessed (categorization of evaluation criteria, standardization of factors, and weighting of variables). Then, a global index value of slopes movement susceptibility was calculated for each cell in the study area by using a linear indexing model. Finally, the slopes movement susceptibility map was categorized into five hierarchic classes and validated using the validation dataset that was not used in the model building. The area under the curve was included to assess prediction capability of the adopted model (sensitivity = 0.83 and 1-specificity = 0.74). The resulted susceptibility map may be used for preliminary land planning purposes.

**Notes:** Hadji, Riheb Chouabi, Abdelmadjid Gadri, Larbi Rais, Khaled Hamed, Younes Boumazbeur, Abderahmene**URL:** <Go to ISI>://WOS:000372169700026

**Reference Type: Journal Article****Record Number:** 98**Author:** Hannachi, A. Gharzouli, R. Tabet, Y. D. Daoud, A.**Year:** 2016**Title:** WASTEWATER REUSE IN AGRICULTURE IN THE OUTSKIRTS OF THE CITY BATNA (ALGERIA)**Journal:** Journal of Fundamental and Applied Sciences**Volume:** 8**Issue:** 3**Pages:** 919-944**Short Title:** WASTEWATER REUSE IN AGRICULTURE IN THE OUTSKIRTS OF THE CITY BATNA (ALGERIA)**ISSN:** 1112-9867**DOI:** 10.4314/jfas.v8i3.15**Accession Number:** WOS:000384248800015

**Abstract:** The study is based on a survey of farmers. The data collected allow us to understand the reasons for the reuse of wastewater. This resource can be an important element in irrigation water management strategy. The possibilities of wastewater reuse in agriculture are significant, as is the case in the Batna region. In this context, the presence of texts establishing the modality of wastewater reuse, are a prerequisite for promotion of wastewater reuse projects. Policymakers are faced with the need to exploit the increase in volumes to meet greater demand. To do this, the integrated management should be considered now as a public / private partnership model and as the best approach for development and efficient and sustainable management.

**Notes:** Hannachi, A. Gharzouli, R. Tabet, Y. Djellouli Daoud, A.**URL:** <Go to ISI>://WOS:000384248800015

**Reference Type: Journal Article****Record Number:** 174**Author:** Hassani, M. Chabou, M. C. Haddoum, H. Hamoudi, M.**Year:** 2016**Title:** Tectonic control on the morphology of the subcircular structure of El Mdaouar (Saharan Atlas, Algeria): insights from geological and remote sensing data**Journal:** Arabian Journal of Geosciences**Volume:** 9**Issue:** 14**Date:** Sep**Short Title:** Tectonic control on the morphology of the subcircular structure of El Mdaouar (Saharan Atlas, Algeria): insights from geological and remote sensing data**ISSN:** 1866-7511**DOI:** 10.1007/s12517-016-2659-4**Article Number:** 632**Accession Number:** WOS:000384319500003

**Abstract:** El Mdaouar subcircular structure is located in the eastern Saharan Atlas (Algeria) at 35 degrees 05' N and 4 degrees 19' 30 " E, about 20 km southwest of the town of Bou Saada. Its diameter is about 3.2 km and shows a raised rim that stands high above the surrounding terrain. We have carried out a combining remote sensing (Landsat 8 OLI image and Shuttle Radar Topography Mission (SRTM) data) and geological field investigation of the El Mdaouar subcircular structure in order to study its morphology and to determine its origin. In the absence of evidence of magmatism, diapirism, and impact on this structure, a tectonic deformation is the most likely in the origin of this subcircular feature. The counterclockwise rotational motion of the layers explains the morphology of the structure. This rotational motion is probably the result of a combination of the movement of the faults which pass through the structure, in particular two NE-SW strike-slip faults and a NW-SE fault, which marks the eastern limit of the El Mdaouar structure. The NE-SW trending of the structure indicates a NW-SE compressional event, which corresponds to that of the Atlasic phase. This event occurred in the Late Eocene (35 Ma), which is the best estimation of the age of the El Mdaouar structure.

**Notes:** Hassani, Mohamed Chabou, Moulley Charaf Haddoum, Hamid Hamoudi, Mohamed**URL:** <Go to ISI>://WOS:000384319500003

**Reference Type: Journal Article****Record Number:** 59**Author:** Hellal, A. Chafaa, S. Touafri, L.**Year:** 2016**Title:** An eco-friendly procedure for the efficient synthesis of diethyl alpha-aminophosphonates in aqueous media using natural acids as a catalyst**Journal:** Korean Journal of Chemical Engineering**Volume:** 33**Issue:** 8**Pages:** 2366-2373**Date:** Aug**Short Title:** An eco-friendly procedure for the efficient synthesis of diethyl alpha-aminophosphonates in aqueous media using natural acids as a catalyst**ISSN:** 0256-1115**DOI:** 10.1007/s11814-016-0098-2**Accession Number:** WOS:000381161800014**Abstract:** WE describe a new, convenient and high yielding procedure for the preparation of diethyl alpha-aminophosphonates in water by one-pot reaction of aromatic aldehydes, aminophenols and dialkyl phosphites in the presence of a low catalytic amount (10mol%) of citric, malic, tartaric, and oxalic acids as a naturel, recyclable and highly stable catalyst.**Notes:** Hellal, Abdelkader Chafaa, Salah Touafri, Lasnoui**URL:** <Go to ISI>://WOS:000381161800014

**Reference Type: Journal Article****Record Number:** 84**Author:** Hellal, A. Chafaa, S. Chafai, N.**Year:** 2016**Title:** Synthesis, characterization and computational studies of three alpha-amino-phosphonic acids derivatives from Meta, Ortho and Para aminophenol**Journal:** Journal of Molecular Structure**Volume:** 1103**Pages:** 110-124**Date:** Jan**Short Title:** Synthesis, characterization and computational studies of three alpha-amino-phosphonic acids derivatives from Meta, Ortho and Para aminophenol**ISSN:** 0022-2860**DOI:** 10.1016/j.molstruc.2015.08.070**Accession Number:** WOS:000364726700013

**Abstract:** In this paper, we report first, the synthesis of three alpha-aminophosphonic acids from Meta-aminophenol, Ortho-aminophenol and Para-aminophenol. Then, we present a detailed DFT study based on B3LYP/6-31G (d, p) of geometrical structures and electronic properties of these compounds. The vibrational frequencies determined experimentally were compared with OFT gradient calculations which were obtained theoretically employing the B3LYP/6-31G (d, p) basis set method for the optimized geometry of the compound. The vibrations obtained from DFT method were found in good agreement with the experimental data. The study was extended to the HOMO-LUMO analysis to calculate the energy gap ( $\Delta$ ), Ionization potential (I), Electron Affinity (A), Global Hardness ( $\eta$ ), Chemical Potential ( $\mu$ ) and Global Electrophilicity ( $\omega$ ). The calculated HOMO and LUMO energy reveals shows that the charge transfers occurring within the molecule. On the basis of vibrational analyses, the thermodynamic properties of the titles compound were also calculated. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Hellal, A. Chafaa, S. Chafai, N.**URL:** <Go to ISI>://WOS:000364726700013

**Reference Type: Journal Article****Record Number:** 67**Author:** Henni, A. Merrouche, A. Telli, L. Karar, A. Ezema, F. I. Haffar, H.**Year:** 2016**Title:** Optical, structural, and photoelectrochemical properties of nanostructured In-doped ZnO via electrodepositing method**Journal:** Journal of Solid State Electrochemistry**Volume:** 20**Issue:** 8**Pages:** 2135-2142**Date:** Aug**Short Title:** Optical, structural, and photoelectrochemical properties of nanostructured In-doped ZnO via electrodepositing method**ISSN:** 1432-8488**DOI:** 10.1007/s10008-016-3190-y**Accession Number:** WOS:000380120600004

**Abstract:** Indium-doped zinc oxide nanorods were electrochemically deposited at low temperature on ITO substrates. The synthesized ZnO-arrayed layers were investigated by using X-ray diffraction, scanning electron microscopy, UV-vis transmittance, electrochemical impedance spectroscopy, and photocurrent spectroscopy. X-ray diffraction analysis demonstrates that the electrodeposited films are crystalline and present the hexagonal Wurtzite ZnO phase with preferential (002) orientation. The ZnO films obtained forms aligned hexagonal nanorods, and depending on the increasing In concentration, the surface morphologies of the films are changed. The In-doped ZnO nanorods (NRs) are well-aligned with the c-axis being perpendicular to the substrates when the In concentration was between 0 and 2 at.%. of In, the grown films with In contents up to 4 at.%, changes in the optical band gap from 3.31 to 3.39 eV, and the blue shift in the band gap energy was attributed to the Burstein-Moss effect. The effect of In concentration on the photocurrent generated by films shows that the obtained thin films can be used as a photovoltaic material. Changes in the photocurrent response and the electronic disorder were also discussed in the light of In doping. It was found that the carrier density of IZO thin films varied between  $1.06 \text{ Au } 10^{18}$  and  $1.88 \text{ Au } 10^{18} \text{ cm}^{-3}$  when the In concentration was between 0 and 4 at.%.

**Notes:** Henni, Abdellah Merrouche, Abdallah Telli, Laid Karar, Amina Ezema, Fabian I. Haffar, Hichem

**URL:** <Go to ISI>://WOS:000380120600004

**Reference Type: Journal Article****Record Number:** 102**Author:** Henni, A. Merrouche, A. Telli, L. Karar, A.**Year:** 2016**Title:** Studies on the structural, morphological, optical and electrical properties of Al-doped ZnO nanorods prepared by electrochemical deposition**Journal:** Journal of Electroanalytical Chemistry**Volume:** 763**Pages:** 149-154**Date:** Feb**Short Title:** Studies on the structural, morphological, optical and electrical properties of Al-doped ZnO nanorods prepared by electrochemical deposition**ISSN:** 1572-6657**DOI:** 10.1016/j.jelechem.2015.12.037**Accession Number:** WOS:000370458300021

**Abstract:** A study about the growth mechanism of zinc oxide (ZnO) nanorods and Al-doped zinc oxide (AZO) electrodeposited from the reduction of hydrogen peroxide in zinc chloride solutions was reported. The variations of the electrochemical, morphological, structural, optical and photoelectrochemical properties of the AZO thin films were investigated in terms of different Al concentration in the starting solution. X-ray diffraction spectra demonstrate that films crystalline with the Wurtzite structure with preferential (002) crystallographic orientation having c-axis perpendicular to the substrate. The AZO films obtained forms aligned hexagonal nanorods and depending on the increasing aluminium concentration, the surface morphologies of the films are changed. As Al concentration increased the optical band gap was also found to be increase from 3.31 to 3.45 eV and in the carrier densities from  $1.06 \times 10^{18}$  to  $2.91 \times 10^{18}$  cm<sup>-3</sup> are observed. The blue shift in the band gap energy was attributed to the Burstein-Moss effect. Changes in the photocurrent response are also discussed in the light of Al doping. The amplitude of the photocurrent generated increases steadily from undoped ZnO to the AZO film (2 at%) going from 21 to 58  $\mu$ A at 1.0 V. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Henni, Abdellah Merrouche, Abdallah Telli, Laid Karar, Amina**URL:** <Go to ISI>://WOS:000370458300021

**Reference Type: Journal Article****Record Number:** 139**Author:** Henouda, S. Bensalem, A. Reggad, R. Serrar, N. Rouabah, L. Pujol, P.**Year:** 2016**Title:** Contribution of BRCA1 and BRCA2 Germline Mutations to Early Algerian Breast Cancer**Journal:** Disease Markers**Short Title:** Contribution of BRCA1 and BRCA2 Germline Mutations to Early Algerian Breast Cancer**ISSN:** 0278-0240**DOI:** 10.1155/2016/7869095**Article Number:** 7869095**Accession Number:** WOS:000371586400001

**Abstract:** Breast cancer is the most common female malignancy and the leading cancer mortality cause among Algerian women. Germline mutations in the BRCA1 and BRCA2 genes in patients with early-onset breast cancer have not been clearly identified within the Algerian population. It is necessary to study the BRCA1/2 genes involvement in the Algerian breast cancer occurrence. We performed this study to define germline mutations in BRCA1/2 and their implication in breast cancer among young women from eastern Algeria diagnosed or treated with primary invasive breast cancer at the age of 40 or less who were referred to Anti-Cancer Center of Setif, Algeria. Case series were unselected for family history. Eight distinct pathogenic mutations were identified in eight unrelated families. Three deleterious mutations and one large genomic rearrangement involving deletion of exon 2 were found in BRCA1 gene. In addition, four mutations within the BRCA2 gene and one large genomic rearrangement were identified. Novel mutation was found among Algerian population. Moreover, five variants of uncertain clinical significance and favor polymorphisms were identified. Our data suggest that BRCA1/2 mutations are responsible for a significant proportion of breast cancer in Algerian young women.

**Notes:** Henouda, Sarra Bensalem, Assia Reggad, Rym Serrar, Nedda Rouabah, Leila Pujol, Pascal

**URL:** <Go to ISI>://WOS:000371586400001

**Reference Type: Journal Article****Record Number:** 103**Author:** Herbadji, O. Slimani, L. Bouktir, T.**Year:** 2016**Title:** Solving Bi-Objective Optimal Power Flow using Hybrid method of Biogeography-Based Optimization and Differential Evolution Algorithm: A case study of the Algerian Electrical Network**Journal:** Journal of Electrical Systems**Volume:** 12**Issue:** 1**Pages:** 197-215**Date:** Mar**Short Title:** Solving Bi-Objective Optimal Power Flow using Hybrid method of Biogeography-Based Optimization and Differential Evolution Algorithm: A case study of the Algerian Electrical Network**ISSN:** 1112-5209**Accession Number:** WOS:000384227500014

**Abstract:** This paper proposes a new hybrid metaheuristic algorithm based on the hybridization of Biogeography-based optimization with the Differential Evolution for solving the optimal power flow problem with emission control. The biogeography-based optimization (BBO) algorithm is strongly influenced by equilibrium theory of island biogeography, mainly through two steps: Migration and Mutation. Differential Evolution (DE) is one of the best Evolutionary Algorithms for global optimization. The hybridization of these two methods is used to overcome traps of local optimal solutions and problems of time consumption. The objective of this paper is to minimize the total fuel cost of generation, total emission, total real power loss and also maintain an acceptable system performance in terms of limits on generator real power, bus voltages and power flow of transmission lines. In the present work, BBO/DE has been applied to solve the optimal power flow problems on IEEE 30-bus test system and the Algerian electrical network 114 bus. The results obtained from this method show better performances compared with DE, BBO and other well known metaheuristic and evolutionary optimization methods.

**Notes:** Herbadji, Ouafa Slimani, Linda Bouktir, Tarek**URL:** <Go to ISI>://WOS:000384227500014

**Reference Type: Journal Article****Record Number:** 163**Author:** Hervas, I. Montagne, A. Van Gorp, A. Bentoumi, M. Thuault, A. Iost, A.**Year:** 2016**Title:** Fracture toughness of glasses and hydroxyapatite: A comparative study of 7 methods by using Vickers indenter**Journal:** Ceramics International**Volume:** 42**Issue:** 11**Pages:** 12740-12750**Date:** Aug**Short Title:** Fracture toughness of glasses and hydroxyapatite: A comparative study of 7 methods by using Vickers indenter**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2016.05.030**Accession Number:** WOS:000378952100026

**Abstract:** Numerous methods have been proposed to estimate the indentation fracture toughness  $K_{IC}$  for brittle materials. These methods generally use formula established from empirical correlations between critical applied force, or average crack length, and classical fracture mechanics tests. This study compares several models of fracture toughness calculation obtained by using Vickers indenters. Two optical glasses (Crown and Flint), one vitroc ceramic (Zerodur) and one ceramic (hydroxyapatite) are tested. Fracture toughness and hardness are obtained by using instrumented Vickers indentation at micrometer scale. Young's moduli are obtained by instrumented Berkovich indentation at nanometer scale. Fracture toughness is calculated with models involving crack length measurements, and by models free of crack length measurements by considering critical force, chipping, pop-in. Finally, method based on the cracking energy, commonly employed for coated materials is also used. The aim of this work is to compare seven methods, which enable the fracture toughness determination, on four brittle materials. To do so, it was necessary to determine some specific constant in the case of Vickers tip use. On the one hand, results show that methods using crack length, critical force, edge chipping or pop-in lead to comparable results, and the advantages and drawbacks are highlighted. On the other hand, the indentation energy method leads to underestimated results of about 20%. (C) 2016 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Hervas, I. Montagne, A. Van Gorp, A. Bentoumi, M. Thuault, A. Iost, A.**URL:** <Go to ISI>://WOS:000378952100026

**Reference Type: Journal Article****Record Number:** 182**Author:** Houas, M. Amrani, N. Boucenna, A.**Year:** 2016**Title:** Evaluation of the Americium transmutation performance in high flux reactors**Journal:** Annals of Nuclear Energy**Volume:** 97**Pages:** 198-203**Date:** Nov**Short Title:** Evaluation of the Americium transmutation performance in high flux reactors**ISSN:** 0306-4549**DOI:** 10.1016/j.anucene.2016.06.036**Accession Number:** WOS:000382350300022

**Abstract:** The numerical transmutation of Americium heterogeneous loaded for one cycle in thermal high flux reactor category was realized. The transmutation calculations are performed based on ChainSolver 2.34 code. A comparison with the measurement and calculation results of the burn up of Am-241 irradiated in HFR at Petten was examined to evaluate the accuracy of current available numerical tool. To reach the Am destruction with a short irradiation time, a high flux SM3 reactor having a flux density of thermal neutrons higher than  $10^{15} \text{ cm}^{-2} \text{ s}^{-1}$  was proposed. To obtain transmutation rate of 99.75%, the Am samples needed only 90 exposure days in full power for SM3 reactor. The effectiveness results suggested an effective use of SM3 as compared to Petten HFR. Finally, the results have been discussed in order to propose a new concept of high flux reactor destined for the destruction of actinide minors, in particular Am-241. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Houas, Mounira Amrani, Naima Boucenna, Ahmed**URL:** <Go to ISI>://WOS:000382350300022

**Reference Type: Journal Article****Record Number:** 125**Author:** Imane, M. Nadjat, K.**Year:** 2016**Title:** Hybrid Bat algorithm for overlapping community detection**Journal:** Ifac Papersonline**Volume:** 49**Issue:** 12**Pages:** 1454-1459**Short Title:** Hybrid Bat algorithm for overlapping community detection**ISSN:** 2405-8963**DOI:** 10.1016/j.ifacol.2016.07.776**Accession Number:** WOS:000383468400249

**Abstract:** This a new technique of detecting overlapping communities networks. The technique hybridse bat algorithm with tabu search: in order to improve the results obtained by applying a standard Bat algorithm The algorithm transforms the phase of selection new solution in the standard bat algorithm by the procedure of tabu search. The aim of the method is to maximize the density of the links like objective function. The two algorithms are testing on the same benchmarks, where the hybrid Bat shows promising results. (C) 2016, IFAC(International Federation of Automatic Control) Hosting by Elsevier Ltd. All right reserved.

**Notes:** Imane, Messaoudi Nadjat, Kamel 8th IFAC Conference on Manufacturing Modelling, Management and Control (MIM) Jun 28-30, 2016 Troyes, FRANCE Int Federat Automat Control, Tech Comm 5 2 Mfg Modelling Management & Control, Int Federat Automat Control Tech Comm 1 3 Discrete Event & Hybrid Syst, Int Federat Automat Control Tech Comm 3 2 Computat Intelligence Control, Int Federat Automat Control Tech Comm 4 3 Robot, Int Federat Automat Control Tech Comm 5 1 Mfg Plant Control, Int Federat Automat Control Tech Comm 5 3 Enterprise Integrat & Networking, Int Federat Automat Control Tech Comm 5 4 Large Scale Complex Syst, Int Federat Automat Control Tech Comm 7 4 Transporat Syst, Int Federat Automat Control Tech Comm 9 1 Econ, Business, & Financial Syst, Inst Elect & Elect Engineers, France Sect, Int Federat Operat Res Soc, Int Ind Engineers, Int Federat Informat Proc, Inst Operat Res & Management Sci, Soc Modeling & Simulat Int, French Operat Res & Decis Aid Soc, Soc Electricite Electronique TIC, CNRS GdR MACS, CNRS GdR RO

**URL:** <Go to ISI>://WOS:000383468400249

**Reference Type: Journal Article****Record Number:** 151**Author:** Kaabeche, H. Chabou, M. C. Bendaoud, A. Bodinier, J. L. Lobry, O. Retif, F.**Year:** 2016**Title:** MetClass: A software for the visualization and exploitation of Dill's (2010) "chessboard" classification of mineral deposits**Journal:** Computers & Geosciences**Volume:** 91**Pages:** 128-135**Date:** Jun**Short Title:** MetClass: A software for the visualization and exploitation of Dill's (2010) "chessboard" classification of mineral deposits**ISSN:** 0098-3004**DOI:** 10.1016/j.cageo.2016.03.014**Accession Number:** WOS:000375818000012

**Abstract:** Rising economic value of a large number of metals as a result of their importance for new technologies and industrial development has renewed worldwide interest for mineral exploration and detailed studies of ore deposits. The Dill's (2010) "chessboard" classification of mineral deposits is the most recent attempt to provide an exhaustive overview of all mineral deposits known to date. However, the voluminous Dills review paper is accessible only in print or as PDF file. In this article, we present MetClass, software that provides advanced solutions to perform efficient research and statistics using Dill's classification and the related database. MetClass allows to assemble all results relevant to a given ore deposit on a user-friendly interface. This software is therefore a valuable tool for mineral exploration and research on ore deposits, as well as an educational solution for students in metallogeny. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Kaabeche, Hamza Chabou, Moulley Charaf Bendaoud, Abderrahmane Bodinier, Jean-Louis Lobry, Olivier Retif, Fabien**URL:** <Go to ISI>://WOS:000375818000012

**Reference Type: Journal Article****Record Number:** 131**Author:** Karar, A. Naamoune, F. Kahoul, A. Belattar, N.**Year:** 2016**Title:** Inhibitory effect of glutamic acid on the scale formation process using electrochemical methods**Journal:** Environmental Technology**Volume:** 37**Issue:** 16**Pages:** 1996-2002**Short Title:** Inhibitory effect of glutamic acid on the scale formation process using electrochemical methods**ISSN:** 0959-3330**DOI:** 10.1080/09593330.2016.1139629**Accession Number:** WOS:000379772100001

**Abstract:** The formation of calcium carbonate  $\text{CaCO}_3$  in water has some important implications in geoscience researches, ocean chemistry studies,  $\text{CO}_2$  emission issues and biology. In industry, the scaling phenomenon may cause technical problems, such as reduction in heat transfer efficiency in cooling systems and obstruction of pipes. This paper focuses on the study of the glutamic acid (GA) for reducing  $\text{CaCO}_3$  scale formation on metallic surfaces in the water of Bir Aissa region. The anti-scaling properties of glutamic acid (GA), used as a complexing agent of  $\text{Ca}^{2+}$  ions, have been evaluated by the chronoamperometry and electrochemical impedance spectroscopy methods in conjunction with a microscopic examination. Chemical and electrochemical study of this water shows a high calcium concentration. The characterization using X-ray diffraction reveals that while the  $\text{CaCO}_3$  scale formed chemically is a mixture of calcite, aragonite and vaterite, the one deposited electrochemically is a pure calcite. The effect of temperature on the efficiency of the inhibitor was investigated. At 30 and 40 degrees C, a complete scaling inhibition was obtained at a GA concentration of 18 mg/L with 90.2% efficiency rate. However, the efficiency of GA decreased at 50 and 60 degrees C.

**Notes:** Karar, A. Naamoune, F. Kahoul, A. Belattar, N.**URL:** <Go to ISI>://WOS:000379772100001

**Reference Type: Journal Article****Record Number:** 145**Author:** Karar, A. Naamoune, F. Kahoul, A.**Year:** 2016**Title:** Chemical and electrochemical study of the inhibition of calcium carbonate precipitation using citric acid and sodium citrate**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 35**Pages:** 16300-16309**Short Title:** Chemical and electrochemical study of the inhibition of calcium carbonate precipitation using citric acid and sodium citrate**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1077743**Accession Number:** WOS:000374923400009

**Abstract:** This work investigated the inhibitive effect of citric acid (CA), sodium citrate (SC), and their mixture (CA-SC) on the CaCO<sub>3</sub> scale. The study was carried out using chronoamperometry, impedancemetry, and fast-controlled precipitation methods. The electrochemical study showed that CA provides a slight inhibition of CaCO<sub>3</sub> deposit at a concentration of 70 ppm on stainless steel surface. The use of SC alone inhibits very little the formation of scale. The use of the mixture (50% of CA and 50% of SC) with small concentration led to significant inhibition of the CaCO<sub>3</sub> formation. The deposits formed were characterized by scanning electron microscope (SEM) and X-ray diffraction (XRD). The XRD showed that the intensity of the preferential orientation (104) corresponding to crystallographic plans of calcite decreases and the SEM demonstrated a decrease in calcite crystal size from 10 to about 2  $\mu$  m.

**Notes:** Karar, Amina Naamoune, Farid Kahoul, Abdelkrim**URL:** <Go to ISI>://WOS:000374923400009

**Reference Type: Journal Article****Record Number:** 173**Author:** Kenane, E. H. Djahli, F.**Year:** 2016**Title:** Optimum design of non-uniform symmetrical linear antenna arrays using a novel modified invasive weeds optimization**Journal:** Archives of Electrical Engineering**Volume:** 65**Issue:** 1**Pages:** 5-18**Date:** Mar**Short Title:** Optimum design of non-uniform symmetrical linear antenna arrays using a novel modified invasive weeds optimization**ISSN:** 1427-4221**DOI:** 10.1515/aee-2016-0001**Accession Number:** WOS:000373290900001

**Abstract:** This paper presents a new modified method for the synthesis of non-uniform linear antenna arrays. Based on the recently developed invasive weeds optimization technique (IWO), the modified invasive weeds optimization method (MIWO) uses the mutation process for the calculation of standard deviation (SD). Since the good choice of SD is particularly important in such algorithm, MIWO uses new values of this parameter to optimize the spacing between the array elements, which can improve the overall efficiency of the classical IWO method in terms of side lobe level (SLL) suppression and nulls control. Numerical examples are presented and compared to the existing array designs found in the literature, such as ant colony optimization (ACO), particle swarm optimization (PSO), and comprehensive learning PSO (CLPSO). Results show that MIWO method can be a good alternative in the design of non-uniform linear antenna array.

**Notes:** Kenane, El Hadi Djahli, Farid**URL:** <Go to ISI>://WOS:000373290900001

**Reference Type: Journal Article****Record Number:** 187**Author:** Khelifati, N. Bouhaf, D. Mebarek-Azzem, A. Abaidia, S. E. Palahouane, B. Kouhlane, Y.**Year:** 2016**Title:** Adequate Method for Decoupling Bulk Lifetime and Surface Recombination Velocity in Silicon Wafers**Journal:** Acta Physica Polonica A**Volume:** 130**Issue:** 1**Pages:** 188-190**Date:** Jul**Short Title:** Adequate Method for Decoupling Bulk Lifetime and Surface Recombination Velocity in Silicon Wafers**ISSN:** 0587-4246**DOI:** 10.12693/APhysPolA.130.188**Accession Number:** WOS:000384810700049

**Abstract:** In this paper, we present an appropriate method of decoupling surface and bulk recombination processes in silicon wafers. The study was carried out using the surface passivation of multicrystalline silicon wafers by ethanolic solution of iodine at different molarities varying between 0.01 M and 0.1 M. The effect of the concentration of ethanolic iodine solution on surface passivation effectiveness was investigated by using quasi steady state photo-conductance technique. Reproducible experiments have shown that the best passivation is reached for a molarity of around 0.02 M. The carrier lifetime after passivation at 0.02 M has been improved by more than one order of magnitude, compared to that of the same wafer before the passivation. Using an adequate modeling of minority carrier lifetime curves  $\tau(\Delta n)$ , based on Hornbeck-Haynes model, surface recombination velocity was calculated. The minimum values of surface recombination velocity have been found to be approximately 120 cm/s for 0.02 M. The modeling results indicate that the minority carrier lifetime improvement can be easily correlated with the decrease of the surface recombination velocity for a fixed bulk lifetime  $\tau(b) = 115 \mu s$ .

**Notes:** Khelifati, N. Bouhaf, D. Mebarek-Azzem, A. Abaidia, S. El-Hak Palahouane, B. Kouhlane, Y. 2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN) Oct 14-19, 2015 Kemer, TURKEY

**URL:** <Go to ISI>://WOS:000384810700049

**Reference Type: Journal Article****Record Number:** 47**Author:** Khenfer, R. Benahdoug, S. Meddad, M. Mostefai, M. Eddiai, A. Benkhouja, K.**Year:** 2016**Title:** Effect of temperature on the PV cells and improving their performance by the use of thermo generators**Journal:** Molecular Crystals and Liquid Crystals**Volume:** 627**Issue:** 1**Pages:** 23-28**Short Title:** Effect of temperature on the PV cells and improving their performance by the use of thermo generators**ISSN:** 1542-1406**DOI:** 10.1080/15421406.2015.1137141**Accession Number:** WOS:000378124600003

**Abstract:** In this work we propose a new approach to recovering thermoelectricity to improving the efficiency of a photovoltaic (PV) generator under the high temperature as the desert weather. The proposed system composed on two parts, the first is the thermo generator, when is used for a thermo energy harvesting from the PV temperature, the second is to use the energy recovered by the thermo generator to power a fan to cool a photovoltaic panel PV cells. Tests based on such low power fan cooling system show a 3% increase on the voltage generated by a PV panel.

**Notes:** Khenfer, Riad Benahdoug, Seddik Meddad, Mounir Mostefai, Mohamed Eddiai, Adil Benkhouja, Khalil 13th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM) - Emerging and Transferring New Technologies Mar 29-apr 02, 2015 Marrakech, MOROCCO Si

**URL:** <Go to ISI>://WOS:000378124600003

**Reference Type: Journal Article****Record Number:** 161**Author:** Khoukhi, O. E. El Bahri, Z. Diaf, K. Baitiche, M.**Year:** 2016**Title:** Piroxicam/beta-cyclodextrin complex included in cellulose derivatives-based matrix microspheres as new solid dispersion-controlled release formulations**Journal:** Chemical Papers**Volume:** 70**Issue:** 6**Pages:** 828-839**Date:** Jun**Short Title:** Piroxicam/beta-cyclodextrin complex included in cellulose derivatives-based matrix microspheres as new solid dispersion-controlled release formulations**ISSN:** 0366-6352**DOI:** 10.1515/chempap-2016-0014**Accession Number:** WOS:000379755400016

**Abstract:** New formulations capable to enhance piroxicam (PRX) water solubility and at the same time to control and adjust its release have been developed. For this purpose, two methods have been used and combined to achieve this goal, namely complexation and microencapsulation by O/W emulsion solvent evaporation. In order to modify the drug release, first, microparticles composed of pure PRX and ethylcellulose (EC) or mixtures of EC and hydroxypropylmethylcellulose (HPMC) were prepared, and then, other microparticles containing the beta-cyclodextrin/piroxicam (beta-CD/PRX) complex obtained by the solvent evaporation technique and EC or a mixture of EC and HPMC were produced and tested. These formulations were characterized by FT-IR, XRD, optical microscopy, and SEM methods. Drug dissolution tests were carried out in acidic media at pH = 1.2 and 37 degrees C. Depending on the microparticles composition, their size (d(10)) ranged between 49 mu m and 121 mu m and PRXloaded varied from 10.8 % to 27.7 %. The effect of complexation and HPMC polymer on the drug release was investigated; the results demonstrated that the Higuchi's release constant significantly increased when using the EC/HPMC mixture as a matrix with pure PRX or only EC as a matrix with the beta-CD/PRX complex. The results are remarkably promising since the combination of these processes provided new SD-CR formulations of piroxicam which enabled simultaneous enhancement and control of its release from the carriers. (C) 2016 Institute of Chemistry, Slovak Academy of Sciences

**Notes:** Khoukhi, Oum Elkheir El Bahri, Zineb Diaf, Kheira Baitiche, Milad**URL:** <Go to ISI>://WOS:000379755400016

**Reference Type: Journal Article**

**Record Number: 122**

**Author: Kimouche, B. Rouabhi, A.**

**Year: 2016**

**Title: The impact of intangibles on the value relevance of accounting information: Evidence from French companies**

**Journal: Intangible Capital**

**Volume: 12**

**Issue: 2**

**Pages: 506-529**

**Short Title: The impact of intangibles on the value relevance of accounting information: Evidence from French companies**

**ISSN: 2014-3214**

**DOI: 10.3926/ic.653**

**Accession Number: WOS:000378517900006**

**Abstract:** Purpose: The paper aims to explore whether intangible items that recognised in financial statements are value relevant to investors in the French context, and whether these items affect the value relevance of accounting information. Design/methodology: The data has been collected from a sample of French listed companies over the nine year period of 2005 to 2013. Starting of Ohlson's (1995) model, the Correlation analysis and the Linear Multiple Regression has been applied. Findings: We find that intangibles and traditional accounting measures as a whole are value relevant. However, the amortization and impairment charges of intangibles and, cash flows do not affect the market values of French companies, unlike other variables, which affect positively and substantially the market values. Also goodwill and book values are more associated with market values than intangible assets and earnings respectively. Finally, we find that intangibles improve the value relevance of accounting information. Practical implications: French legislators must give more interest to intangibles, in order to enrich the content of financial statements and increase the pertinence of accounting information. Auditors must give more attention to intangibles' examination process, in order to certify the amounts related to them in financial statements, and hence enrich their reliability, what provides adequacy guarantees for investors to use them in decision making. Originality/value: The paper used recently available financial data, and proposed an improvement concerning the measure of incremental value relevance of intangible items.

**Notes: Kimouche, Bilal Rouabhi, Abdenacer**

**URL: <Go to ISI>://WOS:000378517900006**

**Reference Type: Journal Article****Record Number:** 113**Author:** Labair, M. Rached, H. Rached, D. Benalia, S. Abidri, B. Khenata, R. Ahmed, R. Bin Omran, S. Bouhemadou, A. Syrotyuk, S. V.**Year:** 2016**Title:** Prediction of phase transition, mechanical and electronic properties of inverse Heusler compound Y<sub>2</sub>RuPb, via FP-LMTO method**Journal:** International Journal of Modern Physics C**Volume:** 27**Issue:** 9**Date:** Sep**Short Title:** Prediction of phase transition, mechanical and electronic properties of inverse Heusler compound Y<sub>2</sub>RuPb, via FP-LMTO method**ISSN:** 0129-1831**DOI:** 10.1142/s0129183116501072**Article Number:** 1650107**Accession Number:** WOS:000382829400011

**Abstract:** Topological insulators (TI) are immensely investigated due to their promising characteristics for spintronics and quantum computing applications. In this regard, although bismuth, telluride, selenide and antimony containing compounds are typically considered as topological insulators, materials with Hg<sub>2</sub>CuTi-type structure have also shown their potential for TIs as well. Here, we present first principles study of the Y<sub>2</sub>RuPb compound, pertaining to its structural, mechanical, electrical and the optical properties. Calculations are executed at the level of the parameterized Perdew-Burke-Ernzerhof (PBE) generalized gradient approximation (GGA), employing the full-potential (FP) linearized muffin-tin orbital (LMTO) approach, as designed within the density functional theory (DFT). The study is carried out on the Hg<sub>2</sub>CuTi-type and Cu<sub>2</sub>MnAl-type structures of the Y<sub>2</sub>RuPb compound. From our structural calculations, it is found that Y<sub>2</sub>RuPb is more stable in its Hg<sub>2</sub>CuTi-type structure; however, the analysis of the mechanical properties reveals its stability in both phases against any kind of elastic deformation. Similarly, Dirac cone shaped surface energy levels found in the predicted electronic band structure of the Y<sub>2</sub>RuPb compound, and good agreement of the obtained results with Zhang et al., demonstrates that it is a topological insulating material. Additionally, the real and imaginary parts of the dielectric function  $\epsilon(\omega)$  and refractive index  $n(\omega)$ , for an energy range up to 14 eV, are analyzed as well.

**Notes:** Labair, M. Rached, H. Rached, D. Benalia, S. Abidri, B. Khenata, R. Ahmed, R. Bin Omran, S. Bouhemadou, A. Syrotyuk, S. V.**URL:** <Go to ISI>://WOS:000382829400011

**Reference Type: Journal Article****Record Number:** 16**Author:** Lahmar, H. Azizi, A. Schmerber, G. Dinia, A.**Year:** 2016**Title:** Effect of the thickness of the ZnO buffer layer on the properties of electrodeposited p-Cu<sub>2</sub>O/n-ZnO/n-AZO heterojunctions**Journal:** Rsc Advances**Volume:** 6**Issue:** 73**Pages:** 68663-68674**Short Title:** Effect of the thickness of the ZnO buffer layer on the properties of electrodeposited p-Cu<sub>2</sub>O/n-ZnO/n-AZO heterojunctions**ISSN:** 2046-2069**DOI:** 10.1039/c6ra04834j**Accession Number:** WOS:000381512600015

**Abstract:** Transparent conducting Cu<sub>2</sub>O/non-doped ZnO/Al-doped ZnO/FTO heterojunction solar cells were fabricated by a three-step electrodeposition by inserting a thin non-doped ZnO film as a buffer layer between a n-AZO thin film and a p-Cu<sub>2</sub>O nanostructure. The effect of the thickness of the buffer layer on the properties of the heterojunction was investigated by means of a number of techniques. Mott-Schottky electrochemical impedance analysis showed a p-type conductivity for the Cu<sub>2</sub>O layers and an n-type conductivity for the doped and undoped ZnO films. Analysis also showed that the flat band and carrier concentration of the ZnO thin films varied with the thickness of the layer of ZnO. From field emission scanning electron microscopy (FE-SEM) observation, when the thickness of ZnO was increased, the grains size and the morphology of Cu<sub>2</sub>O was affected; in addition, the cubic structure of Cu<sub>2</sub>O was damaged. This was confirmed by the atomic force microscopy (AFM) images, which showed that the surface morphology transformed from a pyramid shape to a granular form when the thickness of ZnO increased. The X-ray diffraction (XRD) analysis indicated that with Cu<sub>2</sub>O, the undoped and the doped ZnO nanostructures have a polycrystalline nature and a cubic and hexagonal wurtzite structure with (111) and (101) preferential orientations, respectively. We also noted a high transmittance of 65% from the UV-Vis spectra and a band gap energy as large as 2.4 eV was found. The current-voltage (I-V) characteristics of p-Cu<sub>2</sub>O/n-ZnO/n-AZO heterojunctions with different ZnO buffer layer thicknesses were investigated. The results showed that p-Cu<sub>2</sub>O/n-ZnO/n-AZO heterojunctions have a well-defined rectifying behavior.

**Notes:** Lahmar, Halla Azizi, Amor Schmerber, Guy Dinia, Aziz**URL:** <Go to ISI>://WOS:000381512600015

**Reference Type: Journal Article****Record Number:** 15**Author:** Lakehal, H. Maamache, M. Choi, J. R.**Year:** 2016**Title:** Novel quantum description for nonadiabatic evolution of light wave propagation in time-dependent linear media**Journal:** Scientific Reports**Volume:** 6**Date:** Feb**Short Title:** Novel quantum description for nonadiabatic evolution of light wave propagation in time-dependent linear media**ISSN:** 2045-2322**DOI:** 10.1038/srep19860**Article Number:** 19860**Accession Number:** WOS:000369381200001

**Abstract:** A simple elegant expression of nonadiabatic light wave evolution is necessary in order to have a deeper insight for complicated optical phenomena in light science as well as in everyday life. Light wave propagation in linear media which have time-dependent electromagnetic parameters is investigated by utilizing a quadratic invariant of the system. The time behavior of the nonadiabatic geometric phase of the waves that yield a cyclic nonadiabatic evolution is analyzed in detail. Various quantum properties of light waves in this situation, such as variances of electric and magnetic fields, uncertainty product, coherent and squeezed states, and their classical limits, are developed. For better understanding of our research, we applied our analysis in a particular case. The variances of the fields D and B are illustrated and their time behaviors are addressed. Equivalent results for the corresponding classical systems are deduced from the study of the time evolution of the appropriate coherent and squeezed states.

**Notes:** Lakehal, Halim Maamache, Mustapha Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000369381200001

**Reference Type: Journal Article****Record Number:** 129**Author:** Lamrani, S. Guittoum, A. Schafer, R. Pofahl, S. Neu, V. Hemmous, M. Benbrahim, N.**Year:** 2016**Title:** Microstructure investigation and magnetic study of permalloy thin films grown by thermal evaporation**Journal:** European Physical Journal-Applied Physics**Volume:** 74**Issue:** 3**Date:** Jun**Short Title:** Microstructure investigation and magnetic study of permalloy thin films grown by thermal evaporation**ISSN:** 1286-0042**DOI:** 10.1051/epjap/2016150548**Article Number:** 30302**Accession Number:** WOS:000380770900005

**Abstract:** We study the effect of thickness on the structural and magnetic properties of permalloy thin films, evaporated on glass substrate. The films thicknesses range from 16 to 90 nm. From X-ray diffraction spectra analysis, we show that the thinner films present a  $\langle 111 \rangle$  preferred orientation. However, the thicker films exhibit a random orientation. The grains size increases and the lattice parameter decreases with increasing thickness. The magnetic force microscopy observations display cross-tie walls features only for the two thicker films (60 and 90 nm thick films). The magnetic microstructure, carried out by Kerr microscopy technique, shows the presence of magnetic domains changing with the direction of applied magnetic field. The coercive field,  $H_c$ , was found to decrease from 6.5 for 16 to 1.75 Oe for 90 nm. All these results will be discussed and correlated.

**Notes:** Lamrani, Sabrina Guittoum, Abderrahim Schaefer, Rudolf Pofahl, Stefan Neu, Volker Hemmous, Messaoud Benbrahim, Nassima

**URL:** <Go to ISI>://WOS:000380770900005

**Reference Type: Journal Article****Record Number:** 13**Author:** Latreche, A. Ouennoughi, Z. Weiss, R.**Year:** 2016**Title:** Temperature dependence of the inhomogeneous parameters of the Mo/4H-SiC Schottky barrier diodes**Journal:** Semiconductor Science and Technology**Volume:** 31**Issue:** 8**Date:** Aug**Short Title:** Temperature dependence of the inhomogeneous parameters of the Mo/4H-SiC Schottky barrier diodes**ISSN:** 0268-1242**DOI:** 10.1088/0268-1242/31/8/085008**Article Number:** 085008**Accession Number:** WOS:000380223200016

**Abstract:** The inhomogeneous parameters of Mo/4H-SiC Schottky barrier diodes were determined from current-voltage (I-V) characteristics in the temperature range of 303-498 K by using a general approach for the real Schottky diode. In this approach the total series resistances is divided into two resistances; the first one (R-P) is the sum of the series resistances ( $r$ ) of the particular diodes connected in parallel and the second is the common resistance (R-C) to all particular diodes. The mean barrier height ( $\phi$ ) and the standard deviation ( $\sigma$ ) decrease linearly with decreasing temperature and they are between the values for the diodes with the two limiting cases; no current spreading and full current spreading. The series resistance R-C increases, while the series resistance R-P slightly decreases with decreasing temperature.

**Notes:** Latreche, A. Ouennoughi, Z. Weiss, R.**URL:** <Go to ISI>://WOS:000380223200016

**Reference Type: Journal Article****Record Number:** 46**Author:** Latreche, S. Mostefai, M. Meddad, M. Eddiai, A. Sahraoui, B. Khemliche, M. Badoud, A.**Year:** 2016**Title:** Modelling and diagnostic of an ultrasonic piezoelectric actuator**Journal:** Molecular Crystals and Liquid Crystals**Volume:** 628**Issue:** 1**Pages:** 23-40**Short Title:** Modelling and diagnostic of an ultrasonic piezoelectric actuator**ISSN:** 1542-1406**DOI:** 10.1080/15421406.2015.1137121**Accession Number:** WOS:000378126400004

**Abstract:** Modeling of piezoelectric motors is a difficult task because their characteristics are affected by various factors such as materials properties, electrical and mechanical boundary conditions. This work presents the modeling of piezoelectric motor via bond graph method and used for the diagnostic. This method is an innovative way to analyse the effects of different design variables on the objective function but can be also considered as an optimization stage of the study. The validation and the development of bond graph models are based on physical insight to aid in structural damage detection and use the technique of optimal sensors placement.

**Notes:** Latreche, S. Mostefai, M. Meddad, M. Eddiai, A. Sahraoui, B. Khemliche, M. Badoud, A. 13th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM) - Emerging and Transferring New Technologies Mar 29-apr 02, 2015 Marrakech, MOROCCO  
Si

**URL:** <Go to ISI>://WOS:000378126400004

**Reference Type: Journal Article****Record Number:** 168**Author:** Lefahal, M. Benahmed, M. Djarri, L. Zaabat, N. Hay, A. E. Kamel, M. Franca, M. G. D. Laouer, H. Akkal, S.**Year:** 2016**Title:** Chemical composition of *Limonium thouinii* (viv.) kuntze (Plumbaginaceae) and the DPPH free radical scavenging activity**Journal:** Bulgarian Chemical Communications**Volume:** 48**Issue:** 3**Pages:** 476-479**Short Title:** Chemical composition of *Limonium thouinii* (viv.) kuntze (Plumbaginaceae) and the DPPH free radical scavenging activity**ISSN:** 0324-1130**Accession Number:** WOS:000384785800019**Abstract:** The present work considers the phytochemical investigation and DPPH free radical-scavenging activity of the aerial parts of *Limonium thouinii* (Viv.) Kuntze (Plumbaginaceae). The aerial parts of *Limonium thouinii* (Viv.) Kuntze allow the isolation of four flavonoids: Quercetin, Vitexin, Isoorientin and Cannabiscitrin. Their structures were elucidated on the basis of spectroscopic analysis, including UV, MS and NMR techniques. The DPPH free radical-scavenging activity was evaluated on crude extracts (MeOH, EtOAc and n-BuOH extracts).**Notes:** Lefahal, M. Benahmed, M. Djarri, L. Zaabat, N. Hay, A. E. Kamel, M. Franca, M. G. Dijoux Laouer, H. Akkal, S.**URL:** <Go to ISI>://WOS:000384785800019

**Reference Type: Journal Article****Record Number:** 93**Author:** Lounnas, B. Bouderah, B. Moussaoui, A.**Year:** 2016**Title:** A Novel Algorithm for Pattern Matching Based on Modified Push-Down Automata**Journal:** Journal of Information Science and Engineering**Volume:** 32**Issue:** 2**Pages:** 403-424**Date:** Mar**Short Title:** A Novel Algorithm for Pattern Matching Based on Modified Push-Down Automata**ISSN:** 1016-2364**Accession Number:** WOS:000373409500009

**Abstract:** In this paper we propose a new algorithm called MEPda (Motif Extraction algorithm based on Push-down automata) to solve the problem of finding patterns containing loops. These loop-patterns or loop-motifs are very known and used in many domains, especially in mathematics and bioinformatics. MEPda meant to find these kinds of patterns by using pushdown automata as a mechanism of matching process alongside with a counter to verify the acceptance length of loop in an optimistic way of looking. The results obtained from MEPda have shown high accuracy and much reduced runtime for finding patterns containing loops compared to using a push-down automata based algorithm without implementing a counter, a regular expression based algorithm, an Aho-Corasick algorithm, a KMP algorithm, and MoTeX algorithm.

**Notes:** Lounnas, Bilal Bouderah, Brahim Moussaoui, Abdelouahab**URL:** <Go to ISI>://WOS:000373409500009

**Reference Type: Journal Article****Record Number:** 23**Author:** Maamache, M. Bouguerra, Y. Choi, J. R.**Year:** 2016**Title:** Time behavior of a Gaussian wave packet accompanying the generalized coherent state for the inverted oscillator**Journal:** Progress of Theoretical and Experimental Physics**Issue:** 6**Date:** Jun**Short Title:** Time behavior of a Gaussian wave packet accompanying the generalized coherent state for the inverted oscillator**ISSN:** 2050-3911**DOI:** 10.1093/ptep/ptw057**Article Number:** 063a01**Accession Number:** WOS:000381227000006

**Abstract:** A Gaussian wave packet of the inverted oscillator is investigated using the invariant operator method together with the unitary transformation method. A simple wave packet directly derived from the eigenstates of the invariant operator of the system corresponds to a plane wave that is fully delocalized. However, we can construct a weighted wave packet in terms of such plane waves, which corresponds to a Gaussian wave. This wave packet is associated with the generalized coherent state, which can be crucially utilized for investigating the classical limit of quantum wave mechanics. Various quantum properties of the system, such as fluctuations of the canonical variables, the uncertainty product, and the motion of the wave packet or quantum particle, are analyzed by means of this wave packet. We have confirmed that the time behavior of such a wave packet is very similar to the counterpart classical state. The wave packet runs away from the origin in the positive or negative direction in the 1D coordinate depending on the condition of the initial state. We have confirmed that this wave packet not only moves acceleratively but also spreads out during its propagation.

**Notes:** Maamache, Mustapha Bouguerra, Yacine Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000381227000006

**Reference Type: Journal Article****Record Number:** 14**Author:** Maamache, M. Khatir, A. Lakehal, H. Choi, J. R.**Year:** 2016**Title:** Analyzing generalized coherent states for a free particle**Journal:** Scientific Reports**Volume:** 6**Date:** Aug**Short Title:** Analyzing generalized coherent states for a free particle**ISSN:** 2045-2322**DOI:** 10.1038/srep30538**Article Number:** 30538**Accession Number:** WOS:000381198600001

**Abstract:** Despite the didactic importance of a free particle in quantum mechanics, its coherent state analysis has long been untouched. It is only recently that it has been noticed and studied in the semiclassical domain. While the previously known solutions, reported by Bagrov et al. for a free particle, are described using the linear non-Hermitian invariant operator, we show in this work that the general solution of the Schrodinger equation can also be naturally derived using a simpler method based on an Hermitian linear invariant operator. According to this, an exact Gaussian wave function that corresponds to a coherent state solution is obtained. An interpretation for such general quantum solution designated within the Lewis-Riesenfeld framework is provided and, further, quantum-classical correspondence principle for the system is reexamined.

**Notes:** Maamache, Mustapha Khatir, Abderrezak Lakehal, Halim Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000381198600001

**Reference Type: Journal Article****Record Number:** 115**Author:** Madaci, B. Chenni, R. Kurt, E. Hemsas, K. E.**Year:** 2016**Title:** Design and control of a stand-alone hybrid power system**Journal:** International Journal of Hydrogen Energy**Volume:** 41**Issue:** 29**Pages:** 12485-12496**Date:** Aug**Short Title:** Design and control of a stand-alone hybrid power system**ISSN:** 0360-3199**DOI:** 10.1016/j.ijhydene.2016.01.117**Accession Number:** WOS:000380869700006

**Abstract:** This work presents a control of stand-alone hybrid system including photovoltaic (PV), wind turbine, fuel cell (PEMFC), storage systems and a dump load (in our case, an electrolyzer). All these sources are connected by a continuous bus to three phase load through a DC-AC converter. A strategy for the power management is designed for the proposed hybrid system to supervise power amount among various energy resources, the storage system and the dump load. In the design, the PV and wind systems are considered as main power resources, whereas PEMFC is used as an additional support, and the dump load is used for the effect of consumption of the surplus power available from sources (i.e. PV and wind), when the battery has been charged completely. The hybrid system includes a modified control algorithm, which has been developed to maintain the DC bus voltage at its reference through the regulation of the DC DC bidirectional converter between the battery and DC bus. A dynamic model of various components of stand-alone hybrid system is presented along with a maximum power point tracking (MPPT) algorithms of the PV and wind system. The effectiveness of this modified control algorithm method has been verified using the Matlab/Simulink software. (C) 2016 Hydrogen Energy Publications LLC. Published by Elsevier Ltd. All rights reserved.

**Notes:** Madaci, Bouthaina Chenni, Rachid Kurt, Erol Hemsas, Kamel Eddine 3rd European Conference on Renewable Energy Systems (ECRES) Oct 07-10, 2015 Kerner, TURKEY Gazi Univ, Akdeniz Univ Si

**URL:** <Go to ISI>://WOS:000380869700006

**Reference Type: Journal Article****Record Number:** 53**Author:** Mahgoun, H. Chaari, F. Felkaoui, A.**Year:** 2016**Title:** Detection of gear faults in variable rotating speed using variational mode decomposition (VMD)**Journal:** Mechanics & Industry**Volume:** 17**Issue:** 2**Pages:** 207-U81**Short Title:** Detection of gear faults in variable rotating speed using variational mode decomposition (VMD)**ISSN:** 2257-7777**DOI:** 10.1051/meca/2015058**Accession Number:** WOS:000372338900007

**Abstract:** The ensemble empirical mode decomposition (EEMD) was largely used in the diagnosis of the rotating machines, this method could detect the defect at an early stage in the case of non variable speed or slightly variable, but when the speed of the machine varies in acceleration or deceleration the use of the EEMD under these conditions shows a limitation with the detection of the impulses, that are influenced by the presence of the mode mixing, and the end effect. To detect the shocks due to the defect where the variation of speed is forced by the working conditions, we propose to use the Variational Mode Decomposition (VMD) which was recently proposed by Konstantin Dragomiretskiy. This method gave promising results in the detection of the defects on machine elements under non stationary conditions imposed by the variation of speed and torque. In this work, first we show by simulated signal the advantage of VMD compared to the EEMD in the detection of impulses in the case of variable speed and load. Then, we analyze vibration signals given by a dynamic modeling of a gear transmission in the case of non stationary load and speed, for healthy gear and two different of localized faults (early and advanced). The modes are extracted using VMD and followed by calculation of spectrogram and statistics values, which give more information about the defect and allow us to detect it at an early stage.

**Notes:** Mahgoun, Hafida Chaari, Fakher Felkaoui, Ahmed**URL:** <Go to ISI>://WOS:000372338900007

**Reference Type: Journal Article****Record Number:** 160**Author:** Mahtout, S. Tariket, Y.**Year:** 2016**Title:** Electronic and magnetic properties of CrGe<sub>n</sub> (15 ≤ n ≤ 29) clusters: A DFT study**Journal:** Chemical Physics**Volume:** 472**Pages:** 270-277**Date:** Jun**Short Title:** Electronic and magnetic properties of CrGe<sub>n</sub> (15 ≤ n ≤ 29) clusters: A DFT study**ISSN:** 0301-0104**DOI:** 10.1016/j.chemphys.2016.03.011**Accession Number:** WOS:000376445500030

**Abstract:** We report ab initio calculations of electronic and magnetic properties of medium-sized CrGe<sub>n</sub> (15 ≤ n ≤ 29) clusters using density functional theory. The encapsulation of Cr atoms within Ge-n clusters leads to stable Cr encapsulated Ge-n clusters. The binding energies generally increase while the differences between the highest occupied molecular orbital and lowest unoccupied molecular orbital (HOMO-LUMO gaps) generally decrease with the increasing of cluster size. The clusters of CrGe<sub>n</sub> at size 16, 17, 19, 22, 24 and 29 exhibit high stabilities when compared to their neighbors. This has been discussed in terms of their structures, energies and the effect of the position of doping atom. Doping of Ge-n clusters with one Cr atom leads to CrGe<sub>n</sub> clusters with magnetic moment depending on the structure of the clusters and the position of Cr atom in the clusters. Moreover, vertical ionization potential, vertical electronic affinity, and chemical hardness are also analyzed. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Mahtout, Sofiane Tariket, Yacine**URL:** <Go to ISI>://WOS:000376445500030

**Reference Type: Journal Article****Record Number:** 70**Author:** Maiza, M. Benaniba, M. T. Massardier-Nageotte, V.**Year:** 2016**Title:** Plasticizing effects of citrate esters on properties of poly(lactic acid)**Journal:** Journal of Polymer Engineering**Volume:** 36**Issue:** 4**Pages:** 371-380**Date:** May**Short Title:** Plasticizing effects of citrate esters on properties of poly(lactic acid)**ISSN:** 0334-6447**DOI:** 10.1515/polyeng-2015-0140**Accession Number:** WOS:000375210600003

**Abstract:** Triethyl citrate (TEC) and acetyl tributyl citrate (ATBC) were used as plasticizer for poly(lactic acid) (PLA). The treated and plasticized PLA at various concentrations were analyzed by differential scanning calorimetry (DSC), dynamic mechanical analysis (DMA), X-ray diffraction (XRD), Fourier transform infrared (FTIR) spectroscopy and opacity. DSC was used to evaluate the crystallinity and thermal property of all the samples. It was found that the glass transition temperature (T-g) and the melting temperature (T-m) decreased as the amount of citrate esters increased. Additionally, the presence of TEC or ATBC tended to increase the crystallinity of PLA. This result was supported by XRD. DMA of plasticized PLA indicates that a decrease in T-g is obtained with increasing plasticizer content. FTIR spectra indicate that there are some molecular interactions by intermolecular hydrogen bonds between PLA and citrate esters. The effect of the concentration of plasticizer on the opacity of the films was negligible.

**Notes:** Maiza, Mounira Benaniba, Mohamed Tahar Massardier-Nageotte, Valerie**URL:** <Go to ISI>://WOS:000375210600003

**Reference Type: Journal Article****Record Number:** 135**Author:** Malha, S. I. R. Lahcen, A. A. Arduini, F. Ourari, A. Amine, A.**Year:** 2016**Title:** Electrochemical Characterization of Carbon Solid-like Paste Electrode Assembled Using Different Carbon Nanoparticles**Journal:** Electroanalysis**Volume:** 28**Issue:** 5**Pages:** 1044-1051**Date:** May**Short Title:** Electrochemical Characterization of Carbon Solid-like Paste Electrode Assembled Using Different Carbon Nanoparticles**ISSN:** 1040-0397**DOI:** 10.1002/elan.201500637**Accession Number:** WOS:000379040500018

**Abstract:** Solid like carbon paste electrodes (SCPEs) are built using different carbon materials namely carbon black N110, N220, N375, N772 and acetylene black. The electrochemical behavior of these electrodes and the influence of carbon black/paraffin ratio were studied and the results were discussed and compared to other electrodes prepared with graphite, mesoporous carbon and nanopowder carbon. Cyclic voltammetry, amperometry and electrochemical impedance spectroscopy were employed for their electrochemical and analytical characterizations. Amperometric measurements using N110, N220, N375 SCPEs with solid paraffin, showed a linear response of benzoquinone concentration with a detection limit of 75, 32 and 171 nM respectively.

**Notes:** Malha, Seif Islam Rabie Lahcen, Abdellatif Ait Arduini, Fabiana Ourari, Ali Amine, Aziz**URL:** <Go to ISI>://WOS:000379040500018

**Reference Type: Journal Article****Record Number:** 51**Author:** Mebarki, M. Layadi, A. Khelladi, M. R. Azizi, A. Tiercelin, N. Preobrazhensky, V. Pernod, P.**Year:** 2016**Title:** Structural and Magnetic Properties of Fe Films Electrodeposited on Al Substrates**Journal:** Metallurgical and Materials Transactions a-Physical Metallurgy and Materials Science**Volume:** 47A**Issue:** 7**Pages:** 3677-3683**Date:** Jul**Short Title:** Structural and Magnetic Properties of Fe Films Electrodeposited on Al Substrates**ISSN:** 1073-5623**DOI:** 10.1007/s11661-016-3516-5**Accession Number:** WOS:000377434700042

**Abstract:** Series of Fe films have been prepared by electrodeposition in a solution of iron chloride onto Al substrate. Different deposition times were used in the elaboration process. The texture, the strain, and the grain size values were derived from X-ray diffraction experiments. Scanning electron microscopy (SEM) has been used to get the surface and the cross section images. Vibrating Sample magnetometer has been used to obtain the hysteresis curves; the external magnetic field was applied in different directions in the film plane, and also perpendicular to the film. Hysteresis curves have been obtained at low temperatures [120 K (-153 A degrees C) to room temperature]. The aOE (c) 100 > texture, small strain, and grain size ranging from 58 to 113 nm are found for these Fe/Al films. All samples show an in-plane magnetic anisotropy, with no preferred orientation within the film plane. Depending on the film thickness range, different mechanisms have been found to be responsible for the coercive field H (C) behavior. These magnetic properties are correlated with the structural ones and with the SEM observations.

**Notes:** Mebarki, M. Layadi, A. Khelladi, M. R. Azizi, A. Tiercelin, N. Preobrazhensky, V. Pernod, P.

**URL:** <Go to ISI>://WOS:000377434700042

**Reference Type: Journal Article****Record Number:** 41**Author:** Meddad, M. Eddiai, A. Cherif, A. Guyomar, D. Hajjaji, A.**Year:** 2016**Title:** Enhancement of electrostrictive polymer power harvesting using new technique SSHI-Max**Journal:** Optical and Quantum Electronics**Volume:** 48**Issue:** 2**Date:** Feb**Short Title:** Enhancement of electrostrictive polymer power harvesting using new technique SSHI-Max**ISSN:** 0306-8919**DOI:** 10.1007/s11082-016-0404-6**Article Number:** 94**Accession Number:** WOS:000368741200018

**Abstract:** Applications Energy harvesting have increased for powering wireless sensors and low power devices during the past few decades. Smart materials used as generators have received considerable attention lately and several prototypes were built to demonstrate the process. At present, the investigation of using electrostrictive polymers for energy harvesting (a conversion of mechanical to electrical energy) is beginning to show their potential. The focus of this paper is to show how the electrostrictive polymers can be used as generator, and to propose a solution for artificially increasing the coupling factor of electrostrictive materials. Based on a new technique SSHI-Max, with a transverse strain of 0.5 % and a bias field of 10 V/ $\mu$ m, such a process rendered it possible to increase the converted power by 500 % with a low-frequency mechanical excitation. This study contributes to provide a framework for developing an innovative energy harvesting technology that collects vibrations from the environment and converts them into electricity to power a variety of sensors.

**Notes:** Meddad, Mounir Eddiai, Adil Cherif, Aida Guyomar, Daniel Hajjaji, Abdelwahed**URL:** <Go to ISI>://WOS:000368741200018

**Reference Type: Journal Article****Record Number:** 192**Author:** Mediani, C. Abel, M. H. Ieee,**Year:** 2016**Title:** Semantic Recommendation of Pedagogical Resources within Learning Ecosystems**Journal:** 2016 International Conference on Industrial Informatics and Computer Systems (Ciics)**Short Title:** Semantic Recommendation of Pedagogical Resources within Learning Ecosystems**Accession Number:** WOS:000382702400044

**Abstract:** Learning ecosystem is a coherent set of training biocenes that promotes collaborative learning and allows exchanging and sharing of knowledge and/or skills for succeeding in a common project. Learning ecosystems have changed the learning mode. Nowadays, the customers (the learners in our case) teach us what they want, hence, training can become the pilot of this change. The collaborative environment E-Memorae2.0 is organized into a set of learning ecosystems that share a set of learning resources. In this paper, we propose a semantic recommendation approach of the pedagogical resources within learning ecosystem. This approach is based on a voting system that enables each member of the ecosystem to assess the appropriateness of one or more pedagogical resources found in his/her sharing space about a specific subject.

**Notes:** Mediani, Chahrazed Abel, Marie-Helene 2nd IEEE International Conference on Industrial Informatics and Computer Systems (CIICS) Mar 13-15, 2016 Sharjah, U ARAB EMIRATES Ieee 978-1-4673-8743-9

**URL:** <Go to ISI>://WOS:000382702400044

**Reference Type: Journal Article****Record Number:** 157**Author:** Medjber, S. Bekkar, H. Menouar, S. Choi, J. R.**Year:** 2016**Title:** Testing the validity of the Ehrenfest theorem beyond simple static systems: Caldirola-Kanai oscillator driven by a time-dependent force**Journal:** Chinese Physics B**Volume:** 25**Issue:** 8**Date:** Aug**Short Title:** Testing the validity of the Ehrenfest theorem beyond simple static systems: Caldirola-Kanai oscillator driven by a time-dependent force**ISSN:** 1674-1056**DOI:** 10.1088/1674-1056/25/8/080301**Article Number:** 080301**Accession Number:** WOS:000384264300001

**Abstract:** The relationship between quantum mechanics and classical mechanics is investigated by taking a Gaussian-type wave packet as a solution of the Schrodinger equation for the Caldirola-Kanai oscillator driven by a sinusoidal force. For this time-dependent system, quantum properties are studied by using the invariant theory of Lewis and Riesenfeld. In particular, we analyze time behaviors of quantum expectation values of position and momentum variables and compare them to those of the counterpart classical ones. Based on this, we check whether the Ehrenfest theorem which was originally developed in static quantum systems can be extended to such time-varying systems without problems.

**Notes:** Medjber, Salim Bekkar, Hacene Menouar, Salah Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000384264300001

**Reference Type: Journal Article****Record Number:** 185**Author:** Medjber, S. Bekkar, H. Menouar, S. Choi, J. R.**Year:** 2016**Title:** Quantization of a 3D Nonstationary Harmonic plus an Inverse Harmonic Potential System**Journal:** Advances in Mathematical Physics**Short Title:** Quantization of a 3D Nonstationary Harmonic plus an Inverse Harmonic Potential System**ISSN:** 1687-9120**DOI:** 10.1155/2016/3693572**Article Number:** 3693572**Accession Number:** WOS:000375300200001

**Abstract:** The Schrodinger solutions for a three-dimensional central potential system whose Hamiltonian is composed of a time-dependent harmonic plus an inverse harmonic potential are investigated. Because of the time-dependence of parameters, we cannot solve the Schrodinger solutions relying only on the conventional method of separation of variables. To overcome this difficulty, special mathematical methods, which are the invariant operator method, the unitary transformation method, and the Nikiforov-Uvarov method, are used when we derive solutions of the Schrodinger equation for the system. In particular, the Nikiforov-Uvarov method with an appropriate coordinate transformation enabled us to reduce the eigenvalue equation of the invariant operator, which is a second-order differential equation, to a hypergeometric-type equation that is convenient to treat. Through this procedure, we derived exact Schrodinger solutions (wave functions) of the system. It is confirmed that the wave functions are represented in terms of time-dependent radial functions, spherical harmonics, and general time-varying global phases. Such wave functions are useful for studying various quantum properties of the system. As an example, the uncertainty relations for position and momentum are derived by taking advantage of the wave functions.

**Notes:** Medjber, Salim Bekkar, Hacene Menouar, Salah Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000375300200001

**Reference Type: Journal Article****Record Number:** 120**Author:** Mellah, H. Hemsas, K. E. Taleb, R.**Year:** 2016**Title:** Intelligent Sensor based Bayesian Neural Network for Combined Parameters and States Estimation of a Brushed DC Motor**Journal:** International Journal of Advanced Computer Science and Applications**Volume:** 7**Issue:** 7**Pages:** 230-235**Date:** Jul**Short Title:** Intelligent Sensor based Bayesian Neural Network for Combined Parameters and States Estimation of a Brushed DC Motor**ISSN:** 2158-107X**Accession Number:** WOS:000381940300032

**Abstract:** The objective of this paper is to develop an Artificial Neural Network (ANN) model to estimate simultaneously, parameters and state of a brushed DC machine. The proposed ANN estimator is novel in the sense that his estimates simultaneously temperature, speed and rotor resistance based only on the measurement of the voltage and current inputs. Many types of ANN estimators have been designed by a lot of researchers during the last two decades. Each type is designed for a specific application. The thermal behavior of the motor is very slow, which leads to large amounts of data sets. The standard ANN use often Multi-Layer Perceptron (MLP) with Levenberg-Marquardt Backpropagation (LMBP), among the limits of LMBP in the case of large number of data, so the use of MLP based on LMBP is no longer valid in our case. As solution, we propose the use of Cascade-Forward Neural Network (CFNN) based Bayesian Regulation backpropagation (BRBP). To test our estimator robustness a random white-Gaussian noise has been added to the sets. The proposed estimator is in our viewpoint accurate and robust.

**Notes:** Mellah, Hacene Hemsas, Kamel Eddine Taleb, Rachid**URL:** <Go to ISI>://WOS:000381940300032

**Reference Type: Journal Article****Record Number:** 62**Author:** Menouar, S. Choi, J. R.**Year:** 2016**Title:** Quantization of Time-dependent Non-central Singular Potential Systems in Three Dimensions by Using the Nikiforov-Uvarov Method**Journal:** Journal of the Korean Physical Society**Volume:** 68**Issue:** 4**Pages:** 505-512**Date:** Feb**Short Title:** Quantization of Time-dependent Non-central Singular Potential Systems in Three Dimensions by Using the Nikiforov-Uvarov Method**ISSN:** 0374-4884**DOI:** 10.3938/jkps.68.505**Accession Number:** WOS:000371528200002

**Abstract:** Quantum solutions of a time-dependent Hamiltonian for the motion of a time-varying mass subjected to time-dependent singular potentials in three dimensions are investigated. A time-dependent inverse quadratic potential and a Coulomb-like potential are considered as the components of the singular potential of the system. Because the Hamiltonian is a function of time, special techniques for deriving quantum solutions of the system are necessary. A quadratic invariant operator is introduced, and its eigenstates are derived using the Nikiforov-Uvarov method together with a unitary transformation method. The Nikiforov-Uvarov method enables us to solve the eigenvalue equations of the invariant operator, which are second-order linear differential equations, by reducing the original equation to a hypergeometric type. According to the invariant operator theory, the wave functions of the system are represented in terms of the eigenstates obtained in such a way. The difference of the wave functions from the eigenstates of the invariant operator is that the wave functions have time-dependent phases while the eigenstates do not. By determining the phases of the wave functions via the help of the Schrodinger equation, we identify the full wave functions of the system and address their physical implications.

**Notes:** Menouar, Salah Choi, Jeong Ryeol**URL:** <Go to ISI>://WOS:000371528200002

**Reference Type: Journal Article****Record Number:** 37**Author:** Meratate, F. Lalaoui, A. Rebbas, K. Belhadad, O. K. Hammadou, N. I. Meratate, H. Demirtas, I. Akkal, S. Laouer, H.**Year:** 2016**Title:** Chemical Composition of the Essential Oil of *Carduncellus helenioides* (Desf.) Hanelt from Algeria**Journal:** Oriental Journal of Chemistry**Volume:** 32**Issue:** 3**Pages:** 1305-1312**Date:** Jun**Short Title:** Chemical Composition of the Essential Oil of *Carduncellus helenioides* (Desf.) Hanelt from Algeria**ISSN:** 0970-020X**DOI:** 10.13005/ojc/320304**Accession Number:** WOS:000380936000004**Abstract:** The essential oil extracted from *Carduncellus helenioides* was analyzed using GC/EIMS. It was characterized by diepicedrene-1-oxide ( 10.6%), isoaromadendrene epoxide ( 7.1 %), caryophyllene oxide ( 6.20 %), eudesmol ( 6.17 %) and aromadendrene oxide ( 1.3 %) as major constituents. The antibacterial activity of the essential oil of this plant were carrying out by disc diffusion method against four bacterial strains and the oil was only active against *Staphylococcus aureus* ATCC 25923.**Notes:** Meratate, F. Lalaoui, A. Rebbas, K. Belhadad, O. K. Hammadou, N. I. Meratate, H. Demirtas, I. Akkal, S. Laouer, H.**URL:** <Go to ISI>://WOS:000380936000004

**Reference Type: Journal Article****Record Number:** 83**Author:** Merzougui, M. Ouari, K. Weiss, J.**Year:** 2016**Title:** Ultrasound assisted synthesis, characterization and electrochemical study of a tetradentate oxovanadium diazomethine complex**Journal:** Journal of Molecular Structure**Volume:** 1120**Pages:** 239-244**Date:** Sep**Short Title:** Ultrasound assisted synthesis, characterization and electrochemical study of a tetradentate oxovanadium diazomethine complex**ISSN:** 0022-2860**DOI:** 10.1016/j.molstruc.2016.05.046**Accession Number:** WOS:000378453100027

**Abstract:** The oxovanadium (IV) complex "VOL" of a tetradentate Schiff base ligand derived from the condensation of diaminoethane and 2-hydroxy-1-naphthaldehyde was efficiently prepared via ultrasound irradiation and the template effect of VO(acac)<sub>2</sub>. The resulting product was characterized by elemental analysis, infrared, electronic absorption and molar conductance measurement. Single X-ray structure analysis showed that the complex is a monomeric five-coordinate with a distorted square pyramidal geometry. It crystallizes in monoclinic system having unit cell parameters a = 83960 (5) angstrom; b = 12.5533 (8) angstrom and c = 18.7804 (11) angstrom; alpha = gamma = 90 degrees; beta = 104.843 degrees(2), with P 2(1)/c space group. Cyclic voltammetry of the complex, carried out on a glassy carbon (GC) electrode in DMF, showed reversible cyclic voltammograms response in the potential range 0.15-0.60 V involving a single electron redox wave V-V/V-IV, the diffusion coefficient is determined using GC rotating disk electrode. The Levich plot  $I_{lim} = f(\omega^{1/2})$ , was used to calculate the diffusion-convection controlled currents. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Merzougui, Moufida Ouari, Kamel Weiss, Jean**URL:** <Go to ISI>://WOS:000378453100027

**Reference Type: Journal Article****Record Number:** 152**Author:** Messai, M. L. Seba, H.**Year:** 2016**Title:** A survey of key management schemes in multi-phase wireless sensor networks**Journal:** Computer Networks**Volume:** 105**Pages:** 60-74**Date:** Aug**Short Title:** A survey of key management schemes in multi-phase wireless sensor networks**ISSN:** 1389-1286**DOI:** 10.1016/j.comnet.2016.05.005**Accession Number:** WOS:000380869300005

**Abstract:** Wireless Sensor Networks (WSNs) are the enabling technology for smart cities, intelligent cars and transportation systems, precision agriculture, animal tracking, and all data collection and sensing-based applications. In most WSN applications, new sensor nodes are added to the network by post-deployment to assure network connectivity, to replace dead sensor nodes or to cover more regions in the area of interest. This type of network is called Multi-Phase WSNs (MPWSNs). Similarly to classical WSNs, multi-phase WSNs require security mechanisms to ensure their deployment. However, these networks need specific solutions adapted to the multiple deployments of nodes. In this paper, we review, classify and compare the existing key management schemes proposed for this type of sensor network. We illustrate both advantages and disadvantages of each multi-phase key management scheme. Finally, we give some directions to design lightweight robust key management for MPWSNs. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Messai, Mohamed-Lamine Seba, Hamida**URL:** <Go to ISI>://WOS:000380869300005

**Reference Type: Journal Article****Record Number:** 43**Author:** Mezache, Z. Aib, S. Benabdelaziz, F. Zebiri, C.**Year:** 2016**Title:** Modeling of a light pulse in bi-isotropic optical fiber with Kerr effect: case of Tellegen media**Journal:** Nonlinear Dynamics**Volume:** 86**Issue:** 2**Pages:** 789-794**Date:** Oct**Short Title:** Modeling of a light pulse in bi-isotropic optical fiber with Kerr effect: case of Tellegen media**ISSN:** 0924-090X**DOI:** 10.1007/s11071-016-2923-x**Accession Number:** WOS:000383667400006

**Abstract:** Modeling of a light pulse propagating in optical fiber where the core is bi-isotropic non-reciprocal achiral media (i.e., Tellegen media) with Kerr effect is studied. The two constitutive equations approach for nonlinear bi-isotropic media are proposed to highlight nonlinear effect, which is due to the magnetization vector under the influence of a strong electric field. According to this approach, nonlinear parameter of magnetization vector is illustrated; it is the important factors to estimate bi-isotropic optical fiber dispersion and nonlinearity. Split-step Fourier method is used to simulate and solve the nonlinear Schrodinger equation.

**Notes:** Mezache, Zinelabiddine Aib, Samia Benabdelaziz, Fatiha Zebiri, Chemseddine**URL:** <Go to ISI>://WOS:000383667400006

**Reference Type: Journal Article****Record Number:** 97**Author:** Meziane, O. Bensedira, A. Guessoum, M. Haddaoui, N.**Year:** 2016**Title:** POLYPROPYLENE-MODIFIED KAOLINITE COMPOSITES: EFFECT OF CHEMICAL MODIFICATION ON MECHANICAL, THERMAL AND MORPHOLOGICAL PROPERTIES**Journal:** Journal of Fundamental and Applied Sciences**Volume:** 8**Issue:** 2**Pages:** 494-509**Short Title:** POLYPROPYLENE-MODIFIED KAOLINITE COMPOSITES: EFFECT OF CHEMICAL MODIFICATION ON MECHANICAL, THERMAL AND MORPHOLOGICAL PROPERTIES**ISSN:** 1112-9867**DOI:** 10.4314/jfas.v8i2.21**Accession Number:** WOS:000377429900021

**Abstract:** The intercalation of kaolinite with an ammonium salt was performed. Untreated and treated kaolinite samples were examined by X-ray diffraction (XRD). PP/kaolinite compounds were prepared by the melt intercalation method. The effects of modified clay on properties of the prepared composites were studied. The XRD results showed that the treatment with the ammonium salt caused the return to the initial state of the clay. The thermogravimetric analysis thermograms (TGA) marked an increase in thermal degradation of the composites, while the differential scanning calorimetric (DSC) results showed the decrease of the crystallization temperature and the melting point in presence of clay in the matrix owing to the fact that the filler acts as reinforcing effect. The mechanical properties of the composites exhibited important variations, the morphology of the composites was further studied using scanning electron microscopy (SEM) and showed poor dispersion of used nanoclay in PP matrix.

**Notes:** Meziane, O. Bensedira, A. Guessoum, M. Haddaoui, N.**URL:** <Go to ISI>://WOS:000377429900021

**Reference Type: Journal Article****Record Number:** 92**Author:** Miloud, H. Abdelouahab, H.**Year:** 2016**Title:** Improving mobile robot navigation by combining fuzzy reasoning and virtual obstacle algorithm**Journal:** Journal of Intelligent & Fuzzy Systems**Volume:** 30**Issue:** 3**Pages:** 1499-1509**Short Title:** Improving mobile robot navigation by combining fuzzy reasoning and virtual obstacle algorithm**ISSN:** 1064-1246**DOI:** 10.3233/ifs-151857**Accession Number:** WOS:000371606400022

**Abstract:** In this paper, a new approach is developed for contributing in solving the problem of autonomous mobile robot navigation in unknown environments. This approach is built upon combining fuzzy reasoning and virtual obstacle algorithm to overcome the local minimum problem encountered in presence of concave obstacles by efficiently coordinating priorities between multiple reactive behaviors such as goal reaching, obstacles avoiding, wall following and emergency situations preventing. To achieve this objective, an array of ultrasonic sensors is mounted on the mobile robot providing the distance information between the robot and obstacles. This distance information is used by the virtual obstacle algorithm to calculate some sub-goals for determining the good motion direction to avoid robot trap in local region (emergency situation), since the fuzzy reasoning is used for behavior control of the mobile robot. All the reactive behaviors are mapped into one universe of discourse to guarantee a smooth transition between them especially when the robot moves through closely spaced obstacles. In this manner, the robot oscillations are significantly reduced. Some simulation results are presented to show the ability of the developed approach in performing successfully in complex and uncertain environments.

**Notes:** Miloud, Hamani Abdelouahab, Hassam 4th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS) Sep 09-11, 2015 Zahedan, IRAN

**URL:** <Go to ISI>://WOS:000371606400022

**Reference Type: Journal Article****Record Number:** 140**Author:** Mohammed, N. B. Razak, F. A. Nor, R. M. Benouattas, N.**Year:** 2016**Title:** EFFECT OF MWCNT LOADINGS IN MWCNT/PEO COMPOSITES AS ACETONE SENSORS**Journal:** Digest Journal of Nanomaterials and Biostructures**Volume:** 11**Issue:** 3**Pages:** 699-706**Date:** Jul-Sep**Short Title:** EFFECT OF MWCNT LOADINGS IN MWCNT/PEO COMPOSITES AS ACETONE SENSORS**ISSN:** 1842-3582**Accession Number:** WOS:000383509500001

**Abstract:** In this paper, we report a study on the behavior of PEO/MWCNT composites as acetone vapour sensors. PEO/MWCNT composites were fabricated at MWCNT loadings of 5 to 50% wt. using the solution casting method. Dried composite films were analyzed using Raman spectroscopy and FESEM. Acetone sensors were fabricated from dried composite films by monitoring resistance changes due to acetone vapor exposure. Sensor responses were measured as a function of airflow rates bubbled through a solution of acetone in water. Effects on sensor response and sensitivity for sensors made up of composites with different MWCNT loadings were studied. MWCNTs were found to be well dispersed in the composite based on Raman spectroscopy analysis. Acetone sensing using the PEO/MWCNT composite showed a trend where sensitivity increased with decreasing MWCNT loadings but with saturation of measurements at high acetone concentration. This phenomenon was explained in terms of the electrical conductivity mechanism in MWCNT, which involved the immobilization of carrier electrons in the MWCNT. Our results demonstrated that as the sensitivity of the sensor increased with decreasing MWCNT loadings, saturation of measurements increased with increasing MWCNT loadings.

**Notes:** Mohammed, N. B. Razak, F. A. Nor, R. Md Benouattas, N.**URL:** <Go to ISI>://WOS:000383509500001

**Reference Type: Journal Article****Record Number:** 108**Author:** Mokadem, N. Demdoun, A. Hamed, Y. Bouri, S. Hadji, R. Boyce, A. Laouar, R. Saad, A.**Year:** 2016**Title:** Hydrogeochemical and stable isotope data of groundwater of a multi-aquifer system: Northern Gafsa basin - Central Tunisia**Journal:** Journal of African Earth Sciences**Volume:** 114**Pages:** 174-191**Date:** Feb**Short Title:** Hydrogeochemical and stable isotope data of groundwater of a multi-aquifer system: Northern Gafsa basin - Central Tunisia**ISSN:** 1464-343X**DOI:** 10.1016/j.jafrearsci.2015.11.010**Accession Number:** WOS:000369561200018

**Abstract:** The hydrodynamic of the multi-aquifer system (the Continental Intercalaire " C.I " and the Complex Terminal " C.T ") of the North Gafsa basin is largely determined by tectonics (Tebessa - Gafsa fault). The composition of groundwater is controlled by complex reactions at gas-liquid-solid "mineralogical composition of associated rocks" interfaces, which depend on the natural surrounding and potential anthropogenic impact. The hydrochemical data (major ion geochemistry) indicate that these ground waters are characterized by the dominance a Ca-Mg-HCO<sub>3</sub>/SO<sub>4</sub> and Na-Cl-NO<sub>3</sub> water types. Geochemical pattern is mainly controlled by the dissolution of halite, gypsum and/or anhydrite as well as by the incongruent dissolution of carbonate minerals. The pH of these samples range from 6.54 to 8.89, supporting the conclusion that the H<sub>2</sub>CO<sub>3</sub>/HCO<sub>3</sub> couple control pH buffering. Oxygen-18 (delta O-18 parts per thousand(SMOW)) and deuterium (dD parts per thousand(SMOW)) isotopic data show the exchange between the groundwater and the rock (water rock interaction) and the evaporation effect. The isotopic content of the boreholes waters is of mixed Mediterranean - Atlantic origin and is opposite to the quantity of rainwater distribution, both in space and time in the study area. This is due to its geographical situation in the southern and southwestern of the Mediterranean Sea and between the Atlas area and the Sahara Platform. The concentrations of the isotopic composition of the groundwater are significantly higher than the rainwater. This is indicative of the dissolution of salts and other processes modifying the rainwater geochemical composition during infiltration into the vadose zone. The hydraulic interconnection of these components of the system has led to the evolution of these interesting groundwater types. (C) 2015 Published by Elsevier Ltd.

**Notes:** Mokadem, Naziha Demdoun, Abedslem Hamed, Younes Bouri, Salem Hadji, Rihab Boyce, Adrian Laouar, Rabah Saad, Abedaziz**URL:** <Go to ISI>://WOS:000369561200018

**Reference Type: Journal Article****Record Number:** 114**Author:** Monir, M. E. A. Baltache, H. Khenata, R. Murtaza, G. Ahmed, R. Ahmed, W. K. Bin Omran, S. Bouhemadou, A.**Year:** 2016**Title:** Half-metallicity and optoelectronic properties of V-doped zincblende ZnS and CdS alloys**Journal:** International Journal of Modern Physics B**Volume:** 30**Issue:** 8**Date:** Mar**Short Title:** Half-metallicity and optoelectronic properties of V-doped zincblende ZnS and CdS alloys**ISSN:** 0217-9792**DOI:** 10.1142/s021797921650034x**Article Number:** 1650034**Accession Number:** WOS:000373926800001

**Abstract:** In this paper, spin-polarized density functional calculations on the structural, electronic, optical and magnetic properties of the zincblende structure of the  $Zn_{1-x}V_xS$  and  $Cd_{1-x}V_xS$  alloys at  $x = 0.25$  in the ferromagnetic (FM) ordering has been investigated. The study is accomplished using the full-potential (FP) linearized augmented plane wave plus local orbital (LAPW+lo) self-consistent scheme of calculations. To incorporate the exchange correlation component in the total energy calculations of the crystal, Perdew-Burke and Ernzerhof (PBE) parameterization for the generalized gradient approximation (GGA) and GGA+U are employed. Basically, for both alloys, to address their structural properties, we calculated their equilibrium lattice constants, bulk moduli as well as pressure derivatives. In general, from the analysis of the obtained electronic band structure of these alloys, the half-metallic nature of  $Zn_{0.75}V_{0.25}S$  and nearly half-metallic nature of the  $Cd_{0.75}V_{0.25}S$  alloy are demonstrated. The plotted density of states (DOS) curves project spin-exchange splitting energy  $\Delta(x)(d)$  and  $\Delta(x)(pd)$  as generated by V-3d states. It has been clearly evident that the effective potential results for the spin-down case are more striking than for the spin-up case. In order to describe the magnetic behavior of these alloys, the exchange constants  $N-0$  alpha (valence band) and  $N-0$  beta (conduction band) as well as the magnetic moment values are estimated. The calculated results of the magnetic moment show that the main source in the reduction of the local magnetic moment of V in the alloys in comparison with its free value is a p-d orbital hybridization and partial transfer to nonmagnetic sites of (Zn, S) and (Cd, S) in  $Zn_{0.75}V_{0.25}S$  and  $Cd_{0.75}V_{0.25}S$  alloys. In addition, a study concerning optical properties, such as the refractive index, reflectivity and absorption coefficients is performed to determine their potential for optical and optoelectronic devices.

**Notes:** Monir, Mohammed El Amine Baltache, H. Khenata, R. Murtaza, G. Ahmed, R. Ahmed, Waleed. K. Bin Omran, S. Bouhemadou, A.**URL:** <Go to ISI>://WOS:000373926800001

**Reference Type: Journal Article**

**Record Number: 5**

**Author:** Mounira, A. Boussouf, K. Begag, S. Houcher, Z. Houcher, B. Touabti, A.

**Year:** 2016

**Title:** PLASMA TOTAL HOMOCYSTEINE LEVELS AND OTHER BIOCHEMICAL PARAMETERS IN ALGERIAN PATIENTS WITH DEEP VEIN THROMBOSIS

**Journal:** Thrombosis Research

**Volume:** 141

**Pages:** S52-S52

**Date:** May

**Short Title:** PLASMA TOTAL HOMOCYSTEINE LEVELS AND OTHER BIOCHEMICAL PARAMETERS IN ALGERIAN PATIENTS WITH DEEP VEIN THROMBOSIS

**ISSN:** 0049-3848

**Accession Number:** WOS:000376766300149

**Notes:** Mounira, A. Boussouf, K. Begag, S. Houcher, Z. Houcher, B. Touabti, A. 24th Biennial International Congress on Thrombosis / EMLTD Congress May 04-07, 2016 Istanbul, TURKEY Emltd 1

**URL:** <Go to ISI>://WOS:000376766300149

**Reference Type: Journal Article****Record Number:** 4**Author:** Mounira, A. Chekour, M. C. Boutrid, N. Rahmoun, H. Khaira, B. Houcher, B. Nasri, R. Touabti, A. Charefeddine, M.**Year:** 2016**Title:** SERUM VITAMIN B12 AND FOLIC ACID LEVELS IN ACUTE CEREBRAL ATHEROTHROMBOTIC INFARCTION**Journal:** Thrombosis Research**Volume:** 141**Pages:** S41-S41**Date:** May**Short Title:** SERUM VITAMIN B12 AND FOLIC ACID LEVELS IN ACUTE CEREBRAL ATHEROTHROMBOTIC INFARCTION**ISSN:** 0049-3848**Accession Number:** WOS:000376766300114**Notes:** Mounira, A. Chekour, M. C. Boutrid, N. Rahmoun, H. Khaira, B. Houcher, B. Nasri, R. Touabti, A. Charefeddine, M. 24th Biennial International Congress on Thrombosis / EMLTD Congress May 04-07, 2016 Istanbul, TURKEY Emltd 1**URL:** <Go to ISI>://WOS:000376766300114

**Reference Type: Journal Article****Record Number:** 155**Author:** Moussa, K. A. Clement, G. Guennoune, H.**Year:** 2016**Title:** Chern-Simons dilaton black holes in 2+1 dimensions**Journal:** Classical and Quantum Gravity**Volume:** 33**Issue:** 6**Date:** Mar**Short Title:** Chern-Simons dilaton black holes in 2+1 dimensions**ISSN:** 0264-9381**DOI:** 10.1088/0264-9381/33/6/065008**Article Number:** 065008**Accession Number:** WOS:000370601100009

**Abstract:** We construct rotating magnetic solutions to the three-dimensional Einstein-Maxwell-Chern-Simons-dilaton theory with a Liouville potential. These include a class of black hole solutions which generalize the warped AdS black holes. The regular black holes belong to two disjointed sectors. The first sector includes black holes which have a positive mass and are co-rotating, while the black holes of the second sector have a negative mass and are counter-rotating. We also show that a particular, non-black hole, subfamily of our threedimensional solutions may be uplifted to new regular non-asymptotically flat solutions of five-dimensional Einstein-Maxwell-Chern-Simons theory.

**Notes:** Moussa, Karim Ait Clement, Gerard Guennoune, Hakim**URL:** <Go to ISI>://WOS:000370601100009

**Reference Type: Journal Article****Record Number:** 124**Author:** Nechadi, E. Harmas, M. N. Essounbouli, N. Hamzaoui, A.**Year:** 2016**Title:** Optimal Synergetic Control based Bat Algorithm for DC-DC Boost Converter**Journal:** Ifac Papersonline**Volume:** 49**Issue:** 12**Pages:** 698-703**Short Title:** Optimal Synergetic Control based Bat Algorithm for DC-DC Boost Converter**ISSN:** 2405-8963**DOI:** 10.1016/j.ifaco1.2016.07.792**Accession Number:** WOS:000383468400120

**Abstract:** In this paper, an optimal synergetic controller based on a bat algorithm for a DC-DC boost converter is presented. DC-DC boost converters are some of the most widely used power electronics devices for their high conversion efficiency and versatility. Bat optimisation based on the echolocation behaviour of bats, a bio-inspired algorithm, is successfully used for synergetic parameters optimization. The proposed control scheme is evaluated in a simulation and implementation study of a boost converter indicating satisfactory overall performance with stability insured through Lyapunov synthesis. Experimental results show that the proposed control provides good regulation. (C) 2016, IFAC (International Federation of Automatic Control) Hosting by Elsevier Ltd. All right reserved.

**Notes:** Nechadi, E. Harmas, M. N. Essounbouli, N. Hamzaoui, A. 8th IFAC Conference on Manufacturing Modelling, Management and Control (MIM) Jun 28-30, 2016 Troyes, FRANCE Int Federat Automat Control, Tech Comm 5 2 Mfg Modelling Management & Control, Int Federat Automat Control Tech Comm 1 3 Discrete Event & Hybrid Syst, Int Federat Automat Control Tech Comm 3 2 Computat Intelligence Control, Int Federat Automat Control Tech Comm 4 3 Robot, Int Federat Automat Control Tech Comm 5 1 Mfg Plant Control, Int Federat Automat Control Tech Comm 5 3 Enterprise Integrat & Networking, Int Federat Automat Control Tech Comm 5 4 Large Scale Complex Syst, Int Federat Automat Control Tech Comm 7 4 Transporat Syst, Int Federat Automat Control Tech Comm 9 1 Econ, Business, & Financial Syst, Inst Elect & Elect Engineers, France Sect, Int Federat Operat Res Soc, Int Ind Engineers, Int Federat Informat Proc, Inst Operat Res & Management Sci, Soc Modeling & Simulat Int, French Operat Res & Decis Aid Soc, Soc Electricite Electronique TIC, CNRS GdR MACS, CNRS GdR RO

**URL:** <Go to ISI>://WOS:000383468400120

**Reference Type: Journal Article****Record Number:** 61**Author:** Nedjma, S. Djidjelli, H. Boukerrou, A. Grohens, Y. Chibani, N. Benachour, D. Pillin, I.**Year:** 2016**Title:** Effect of chemical treatment on newspaper fibers reinforced polymer poly(vinyl chloride) composites**Journal:** Journal of Vinyl & Additive Technology**Volume:** 22**Issue:** 3**Pages:** 173-181**Date:** Sep**Short Title:** Effect of chemical treatment on newspaper fibers reinforced polymer poly(vinyl chloride) composites**ISSN:** 1083-5601**DOI:** 10.1002/vnl.21425**Accession Number:** WOS:000382940900001

**Abstract:** Natural fibers used as reinforcement in composite materials present specific mechanical properties, which are comparable to glass fibers. In addition, they have the advantage of being renewable and recyclable. However, their main drawback is their inherent susceptibility to moisture expansion, which has the effect of inducing a decrease in mechanical properties, and of debonding in the composite. In this study, lignocellulosic fibers from newspapers were modified with acetic anhydride, NaOH, and KMnO<sub>4</sub> in order to enhance the interfacial adhesion between poly(vinyl chloride) (PVC) matrix and the newspaper fibers. Composites samples were prepared with different treated fibers at the same loading (20 wt%). X-ray and scanning electron microscopy (SEM) were used to characterize the fiber's surfaces. The mechanical, morphological, and thermal properties of PVC/newspaper composites were also studied. Moreover, the maximum improvement in the mechanical properties (tensile strength) was obtained for the permanganate treated PVC/newspaper composites. *J. VINYL ADDIT. TECHNOL.*, 22:173-181, 2016. (c) 2014 Society of Plastics Engineers

**Notes:** Nedjma, Samira Djidjelli, Hocine Boukerrou, Amar Grohens, Yves Chibani, Nacera Benachour, Djafer Pillin, Isabelle**URL:** <Go to ISI>://WOS:000382940900001

**Reference Type: Journal Article****Record Number:** 177**Author:** Nemla, F. Cherrad, D.**Year:** 2016**Title:** Metallic amorphous electrodeposited molybdenum coating from aqueous electrolyte: Structural, electrical and morphological properties under current density**Journal:** Applied Surface Science**Volume:** 375**Pages:** 1-8**Date:** Jul**Short Title:** Metallic amorphous electrodeposited molybdenum coating from aqueous electrolyte: Structural, electrical and morphological properties under current density**ISSN:** 0169-4332**DOI:** 10.1016/j.apsusc.2016.01.012**Accession Number:** WOS:000376708100001

**Abstract:** Molybdenum coatings are extensively utilized as back contact for CIGS-based solar cells. However, their electrodeposition from aqueous electrolyte still sophisticates, since long time, owing to the high reactivity with oxygen. In this study, we present a successful 30 min electrodeposition experiment of somewhat thick (similar to 0.98-2.9  $\mu\text{m}$ ) and of moderate surface roughness RMS (similar to 47-58 nm), metallic bright Mo coating from aqueous electrolyte containing molybdate ions. XRD analysis and Hall Effect measurements have been used to confirm the presence of Mo. The crystal structure of deposits was slightly amorphous in nature to body centred cubic structure (bcc) Mo (110), (211) and (220) face. Lattice parameters exhibit some weak fluctuated tensile stress when compared to the reference lattice parameter. Additionally, our calculated lattice parameters are in good agreement with some previous works from literature. Discussions on the grain growth prove that they are constrained by grain boundary energy not the thickness effect. Further discussions were made on the electrical resistivity and surface morphology. Resonance scattering of Fermi electrons are expected to contribute towards the variation in the film resistivity through the carrier mobility limitation. However, studied samples might be qualified as candidates for solar cell application. (C) 2016 Published by Elsevier B.V.

**Notes:** Nemla, Fatima Cherrad, Djellal**URL:** <Go to ISI>://WOS:000376708100001

**Reference Type: Journal Article****Record Number:** 28**Author:** Ochapski, M. Urbain, E. Djeghloul, F. Speisser, V. Majjad, H. Spor, D. Vu, A. D. Coraux, J. Rougemaille, N. Chen, G. Schmid, A. K. Suzuki, M. Yasue, T. Koshikawa, T. Bulou, H. Weber, W.**Year:** 2016**Title:** Breakdown of the electron-spin motion upon reflection at metal-organic or metal-carbon interfaces. II**Journal:** Physical Review B**Volume:** 93**Issue:** 17**Date:** May**Short Title:** Breakdown of the electron-spin motion upon reflection at metal-organic or metal-carbon interfaces. II**ISSN:** 2469-9950**DOI:** 10.1103/PhysRevB.93.174411**Article Number:** 174411**Accession Number:** WOS:000376244900003

**Abstract:** A breakdown of the spin dependence of the electron reflection due to organic molecules or amorphous carbon deposited onto a metallic film has been observed in the past. The goal of the present work is to further elucidate the physics of this phenomenon by studying it in ways not yet studied in the past. The most intriguing observation of the present study is that the breakdown phenomenon appears in a relatively well defined electron energy range between 2 and about 200 eV kinetic energy. Outside this energy range the breakdown phenomenon is not observed. However, an explanation of the breakdown phenomenon is still missing.

**Notes:** Ochapski, M. Urbain, E. Djeghloul, F. Speisser, V. Majjad, H. Spor, D. Vu, A. D. Coraux, J. Rougemaille, N. Chen, G. Schmid, A. K. Suzuki, M. Yasue, T. Koshikawa, T. Bulou, H. Weber, W.

**URL:** <Go to ISI>://WOS:000376244900003

**Reference Type: Journal Article****Record Number:** 45**Author:** Ouali, A. Sahnoune, F. Heraiz, M. Belhouchet, H.**Year:** 2016**Title:** Sinterability and thermal properties of cordierite ceramics prepared from Algerian kaolinite and magnesium hydroxide**Journal:** Molecular Crystals and Liquid Crystals**Volume:** 628**Issue:** 1**Pages:** 65-71**Short Title:** Sinterability and thermal properties of cordierite ceramics prepared from Algerian kaolinite and magnesium hydroxide**ISSN:** 1542-1406**DOI:** 10.1080/15421406.2015.1137120**Accession Number:** WOS:000378126400008

**Abstract:** In this paper, we investigate the effect of MgO additions on the formation and densification behaviour of the cordierite obtained from some mixtures of Algerian kaolin and magnesium hydroxide. The sintering properties of these compositions have been evaluated by X-ray diffraction and bulk density. XRD analysis revealed that the major phase of the synthesized ceramics was cordierite along with a trace of spinel. Firing the pressed specimens at 1400 degrees C for 1 hour yielded a dense cordierite ceramics with a relative density higher than 96%, a negligible open porosity and a lower linear thermal expansion coefficient of  $2.73 \times 10^{-6}$  K<sup>-1</sup> between 200 and 800 degrees C. Cordierite due to its very low coefficient of thermal expansion is considered as promising candidate for advanced applications.

**Notes:** Ouali, A. Sahnoune, F. Heraiz, M. Belhouchet, H. 13th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM) - Emerging and Transferring New Technologies Mar 29-apr 02, 2015 Marrakech, MOROCCO Si

**URL:** <Go to ISI>://WOS:000378126400008

**Reference Type: Journal Article****Record Number:** 86**Author:** Ouarab, N. Haroun, A. Baadji, N.**Year:** 2016**Title:** Structural changes induced spin-reorientation of ultrathin Mn films grown on Ag(001)**Journal:** Journal of Magnetism and Magnetic Materials**Volume:** 419**Pages:** 5-16**Date:** Dec**Short Title:** Structural changes induced spin-reorientation of ultrathin Mn films grown on Ag(001)**ISSN:** 0304-8853**DOI:** 10.1016/j.jmmm.2016.06.001**Accession Number:** WOS:000381228900003

**Abstract:** The strained body centered tetragonal (bct) Mn ultrathin film from lattice parameter  $a = 2.89$  angstrom to lattice value of  $2.73$  angstrom induces anti-ferromagnetic behavior between Mn layers. The magnetic easy axis of Mn film was demonstrated theoretically to switch from the in-plane to out-of-plane by magneto-optical Kerr effect investigation. By including spin orbit coupling in full potential linearized augmented plane waves and linearized muffin-tin orbitals methods, manganese ultrathin film displays different magnetic behaviors and the spin-reorientation transition is shown to be correlated to these structural changes. The calculated magnetic moment of manganese planes are enhanced and reach a value of similar to  $4.02 \mu(B)$ . The polar magneto-optical Kerr effect is calculated for a photon energy range extended to  $15 \text{ eV}$ . It shows a pronounced peak in visible light. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Ouarab, N. Haroun, A. Baadji, N.**URL:** <Go to ISI>://WOS:000381228900003

**Reference Type: Journal Article****Record Number:** 153**Author:** Ounissi, A. Benguerba, Y. Ouddai, N.**Year:** 2016**Title:** Theoretical investigation on structural and physicochemical properties of some ionic liquids**Journal:** Computational and Theoretical Chemistry**Volume:** 1092**Pages:** 68-73**Date:** Sep**Short Title:** Theoretical investigation on structural and physicochemical properties of some ionic liquids**ISSN:** 2210-271X**DOI:** 10.1016/j.comptc.2016.08.007**Accession Number:** WOS:000383007200010

**Abstract:** Theoretical studies were carried out using density functional theory (DFT) method, including the explicit dispersion (functional B97D), on a group of five Ionic liquids (ILs), selected based on their hardness. The results of all the theoretical approaches show that there is no covalent bond between anion and cation of the ILs. The quantum theory of atoms in molecules (AIM) allowed us to confirm the existence of weak hydrogen bonds. The physicochemical properties were determined using the program Cosmotherm. A correlation between viscosity and the ILs Van der Waals energy was obtained. The distribution of the electron density displayed by "molecular electrostatic potential" (MEP) cards shows the effect of introducing the oxygen atom in MoEMIM. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Ounissi, Ali Benguerba, Yacine Ouddai, Nadia**URL:** <Go to ISI>://WOS:000383007200010

**Reference Type: Journal Article****Record Number:** 111**Author:** Rahmoune, H. Boutrid, N. Bioud, B.**Year:** 2016**Title:** Association of Infection in Early Life and Risk of Developing Type 1 Diabetes**Journal:** Jama-Journal of the American Medical Association**Volume:** 316**Issue:** 8**Pages:** 882-882**Date:** Aug**Short Title:** Association of Infection in Early Life and Risk of Developing Type 1 Diabetes**ISSN:** 0098-7484**DOI:** 10.1001/jama.2016.10285**Accession Number:** WOS:000381736200026**Notes:** Rahmoune, Hakim Boutrid, Nada Bioud, Belkacem**URL:** <Go to ISI>://WOS:000381736200026

**Reference Type: Journal Article****Record Number:** 144**Author:** Reffas, A. Bouguettoucha, A. Chebli, D. Amrane, A.**Year:** 2016**Title:** Adsorption of ethyl violet dye in aqueous solution by forest wastes, wild carob**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 21**Pages:** 9859-9870**Date:** May**Short Title:** Adsorption of ethyl violet dye in aqueous solution by forest wastes, wild carob**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1031707**Accession Number:** WOS:000370963600031

**Abstract:** The adsorption of basic dye (i.e. ethyl violet (EV) or basic violet 4) from aqueous solutions onto the forest waste non-modified wild carob (NMWC) was carried out by varying some process parameters, such as initial concentration, pH, and temperature. The experimental results showed that an increase in the pH from 2 to 7 led to a strong decrease in the adsorption capacity of the dye (EV) on NMWC, showing the predominance of the dispersion forces compared to the electrostatic interactions, owing to the cationic character of the dye and the pH(pzc) of the biosorbent (~6). The adsorption process can be well described by means of a pseudo-second-order reaction model showing that boundary layer resistance was not the rate-limiting step, as confirmed by intraparticle diffusion. In addition, experimental data were accurately expressed by the Sips equation if compared with the Langmuir and Freundlich isotherms. The high "m" values of the Sips model characterized a multilayer adsorption and the maximum amount adsorbed given by the Sips model was 100.4mg/g at 20 degrees C, namely close to the experimental value and increased only weakly with the temperature. The values of Delta G(0) and Delta H-0 confirmed that the adsorption of EV on NMWC was spontaneous and endothermic in nature. The positive values of Delta S-0 suggested an irregular increase in the randomness at the NMWC-solution interface during the adsorption process.

**Notes:** Reffas, Abdelbaki Bouguettoucha, Abdallah Chebli, Derradji Amrane, Abdeltif**URL:** <Go to ISI>://WOS:000370963600031

**Reference Type: Journal Article****Record Number:** 107**Author:** Rouabhi, A. Mekhlouf, A. Mokhneche, S. Elkolli, N.**Year:** 2016**Title:** Farming transitions under Socio-economic and climatic constraints in the southern part of Setif, Algeria**Journal:** Journal of Agriculture and Environment for International Development**Volume:** 110**Issue:** 1**Pages:** 139-153**Short Title:** Farming transitions under Socio-economic and climatic constraints in the southern part of Setif, Algeria**ISSN:** 2240-2802**DOI:** 10.12895/jaeid.20161.429**Accession Number:** WOS:000384745700009

**Abstract:** This study was carried out on a sample of 224 farms in the southern region of Setif-Algeria, aimed to identify the different typologies and the agricultural changes caused by the climatic constraints experienced in last three decades. Indeed, the combined effect of climatic and anthropogenic factors on agricultural practices transitions is too tangled. A series of multivariate and classification statistical analysis have been implemented to demonstrate the main trends and adaptation strategies of farmers in such conditions. The farming characterization analysis showed that the medium scale farming was more economically efficient than small and large scale farming. Moreover, the study showed the effect of climate change on some farming transitions, where farming practices transitioned to bovine and poultry farming as well as for market gardening cultivation. Indeed, these changes occurred at the expense of rainfed agriculture (cereals) and ovine breeding. These transitions have impacted the economic performance of farms in some municipalities. However, greenhouse crops and tobacco cultivation were observed as being a Local Production Systems (LPS) that could be a good alternative to mitigate the natural and socioeconomic constraints. The emergence of LPS in an agricultural system may facilitate farmer adaptation that will provide a tool for agricultural development policies, through financial and technical assistance.

**Notes:** Rouabhi, Amar Mekhlouf, Abdelhamid Mokhneche, Sihem Elkolli, Nawel**URL:** <Go to ISI>://WOS:000384745700009

**Reference Type: Journal Article****Record Number:** 69**Author:** Saci, H. Bouhelal, S. Bouzarafa, B. Lopez, D. Fernandez-Garcia, M.**Year:** 2016**Title:** Reversible crosslinked low density polyethylenes: structure and thermal properties**Journal:** Journal of Polymer Research**Volume:** 23**Issue:** 4**Pages:** 1-9**Date:** Mar**Short Title:** Reversible crosslinked low density polyethylenes: structure and thermal properties**ISSN:** 1022-9760**DOI:** 10.1007/s10965-016-0965-x**Article Number:** 68**Accession Number:** WOS:000374261000001

**Abstract:** In the present study, low density polyethylene (LDPE) has been crosslinked at 170 A degrees C with three different systems by a) using peroxide, b) peroxide and accelerator and c), peroxide, accelerator and sulfur. The effect of chemical crosslinking on LDPE structure has been investigated using torque measurements, Fourier transform infrared spectroscopy (FTIR), wide angle X-ray diffraction (WAXS), thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC). Therefore, effects of each crosslinking system on the structural and thermal properties of the material in terms of crystallinity, thermal transitions and stability have been discussed. The reversible crosslinking of LDPE allow the recyclability of polyolefins, increasing the thermal properties.

**Notes:** Saci, H. Bouhelal, S. Bouzarafa, B. Lopez, D. Fernandez-Garcia, M.**URL:** <Go to ISI>://WOS:000374261000001

**Reference Type: Journal Article****Record Number:** 104**Author:** Sahara, A. Kessal, A. Rahmani, L. Gaubert, J. P.**Year:** 2016**Title:** Improved Sliding Mode Controller for Shunt Active Power Filter**Journal:** Journal of Electrical Engineering & Technology**Volume:** 11**Issue:** 3**Pages:** 662-669**Date:** May**Short Title:** Improved Sliding Mode Controller for Shunt Active Power Filter**ISSN:** 1975-0102**DOI:** 10.5370/jeet.2016.11.3.662**Accession Number:** WOS:000375176500014

**Abstract:** In this work, nonlinear control of a three-phase shunt active power filter (SAPF) has been studied and compared to classical control based on proportional integral regulator. The control strategy is based on the direct current method using sliding mode control (SMC), where the aim is to regulate the average voltage across the dc bus of the inverter. Details are given for the control algorithm; the controller is comprised of a current loop which utilizes a hysteresis controller to generate the gating signals for the switching devices, and a nonlinear controller based on SMC law which is different from classical laws based on error between reference and measured output voltage of the inverter. Sliding surface applied in this work contains the whole of state variables, in order to ensure full control of the system behavior in the presence of disturbances that affect the supply source, the load parameterS or the reference value. The designed controller offers advantage that it can gives the improvement of dynamic and static performances in cases of large disturbances. A comparison of the effects of PI control and SMC on the APF response in steady stat, under line variations, load variations, and different component variations is performed.

**Notes:** Sahara, Attia Kessal, Abdelhalim Rahmani, Lazhar Gaubert, Jean-Paul**URL:** <Go to ISI>://WOS:000375176500014

**Reference Type: Journal Article****Record Number:** 143**Author:** Sahnoun, S. Boutahala, M. Zaghouane-Boudiaf, H. Zerroual, L.**Year:** 2016**Title:** Trichlorophenol removal from aqueous solutions by modified halloysite: kinetic and equilibrium studies**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 34**Pages:** 15941-15951**Date:** Jul**Short Title:** Trichlorophenol removal from aqueous solutions by modified halloysite: kinetic and equilibrium studies**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1075159**Accession Number:** WOS:000374589200021

**Abstract:** To obtain new materials, we modified Algerian halloysite by thermal activation (HalC), acid activation (HalA), combined thermal-acid activation (HalCA) and acid-thermal activation. X-ray diffraction, Fourier Transform infrared and BET textural analysis were used to characterize changes. After the HalC of halloysite at 600 degrees C, no XRD peaks were shown and a total disappearance of the absorption bands ranging from 3,700 to 3,600cm<sup>-1</sup>. The treatment of halloysite by sulphuric acid increases the surface area from 185.4 to 321.0m<sup>2</sup>/g. Halloysite is first calcined and then activated by acid, its surface area increases from 74.3 to 538.6m<sup>2</sup>/g. The effect of initial pH, adsorbent dose, contact time and temperature on the removal of 2,4,5-trichlorophenol (TCP) by modified halloysite samples was investigated. Equilibrium data were fitted to the Langmuir, Freundlich and Toth models. The best fit of the cited models was the Freundlich model, which suggested infinite adsorption onto heterogeneous surface. The pseudo-first-order, pseudo-second-order and intraparticle diffusion models were applied to the experimental kinetic data. The results showed that the pseudo-second-order is the best model to describe the process. The study of thermodynamic parameters shows that the process of adsorption of TCP onto the prepared samples was spontaneous, endothermic and physical in nature.

**Notes:** Sahnoun, Sousna Boutahala, Mokhtar Zaghouane-Boudiaf, Hassina Zerroual, Larbi**URL:** <Go to ISI>://WOS:000374589200021

**Reference Type: Journal Article****Record Number:** 21**Author:** Sahnoune, Y. Kahoul, A. Kasri, Y. Deghfel, B. Medjadi, D. E. Khalfallah, F. Daoudi, S. Aylikci, V. Aylikci, N. K. Nekkab, M.**Year:** 2016**Title:** L-1, L-2, and L-3 subshell fluorescence yields: Updated database and new empirical values**Journal:** Radiation Physics and Chemistry**Volume:** 125**Pages:** 227-251**Date:** Aug**Short Title:** L-1, L-2, and L-3 subshell fluorescence yields: Updated database and new empirical values**ISSN:** 0969-806X**DOI:** 10.1016/j.radphyschem.2016.04.016**Accession Number:** WOS:000377324200034

**Abstract:** In this paper, a summary of experimental data published in the period of time between 1955 to february-2016 was presented in a tabular form for L, subshell fluorescence yields ( $\omega(L1)$ ,  $\omega(L2)$  and  $\omega(L3)$ ) taken from different sources. First, a critical examination of these data using the weighted average values  $\omega(Li-W)$  was presented. Then, an interpolation using the famous analytical function  $(\omega(Li-W)/(1-\omega(Li-W)))^{1/4}$  the atomic number  $Z$  was proformed to deduce a new empirical L-i subshell fluorescence yields for elements in the range  $40 \leq Z \leq 96$  for  $\omega(L1)$  and  $\omega(L2)$  and  $23 \leq Z \leq 96$   $\omega(L3)$ . At last, our calculated empirical L-i subshell fluorescence yields have been compared with other theoretical and empirical values reported in the literature. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Sahnoune, Y. Kahoul, A. Kasri, Y. Deghfel, B. Medjadi, D. E. Khalfallah, F. Daoudi, S. Aylikci, V. Aylikci, N. Kup Nekkab, M.**URL:** <Go to ISI>://WOS:000377324200034

**Reference Type: Journal Article****Record Number:** 162**Author:** Sahraoui, T. Belhouchet, H. Heraiz, M. Brihi, N. Guermat, A.**Year:** 2016**Title:** The effects of mechanical activation on the sintering of mullite produced from kaolin and aluminum powder**Journal:** Ceramics International**Volume:** 42**Issue:** 10**Pages:** 12185-12193**Date:** Aug**Short Title:** The effects of mechanical activation on the sintering of mullite produced from kaolin and aluminum powder**ISSN:** 0272-8842**DOI:** 10.1016/j.ceramint.2016.04.157**Accession Number:** WOS:000377733500086

**Abstract:** In this work, the effects of mechanical activation on the sintering of mullite produced from kaolin and aluminum metal powder was investigated. Because of the higher content of silica in kaolin it is necessary to add alumina or aluminum oxide in order to obtain the stoichiometric mullite composition. After mechanical treatment for different milling time, the reactions and phase transformations between kaolin and aluminum metal powder were studied using thermal techniques (DTA/TG), X-ray diffraction (XRD) and infrared spectroscopy (FT-IR). The heated samples at different temperatures were studied by XRD, apparent density, open porosity measurements and SEM analysis. The results showed the formation of silicon, quartz and small amount of nacrite after 40 h of milling at room temperature. All mixture powders milled for different time showed the formation of several alumina transitions during heat treatment. The formation of alumina transitions,  $\alpha$ -alumina, cristobalite crystallization of and mullite (primary and secondary) formation was affected by ball milling time. The mixture of kaolin and aluminum milled for 40 h show the formation of kyanite ( $\text{Al}_2\text{SiO}_5$ ) at 1300 degrees C. The mechanical treatment enhances the formation and sintering of mullite. (C) 2016 Elsevier Ltd and Techna Group S.r.l. All rights reserved.

**Notes:** Sahraoui, T. Belhouchet, H. Heraiz, M. Brihi, N. Guermat, A.**URL:** <Go to ISI>://WOS:000377733500086

**Reference Type: Journal Article****Record Number:** 31**Author:** Saoud, B. Moussaoui, A.**Year:** 2016**Title:** Community detection in networks based on minimum spanning tree and modularity**Journal:** Physica a-Statistical Mechanics and Its Applications**Volume:** 460**Pages:** 230-234**Date:** Oct**Short Title:** Community detection in networks based on minimum spanning tree and modularity**ISSN:** 0378-4371**DOI:** 10.1016/j.physa.2016.05.014**Accession Number:** WOS:000379093300023

**Abstract:** In this paper we propose a novel splitting and merging method for community detection in which a minimum spanning tree (MST) of dissimilarity between nodes in graph is employed. In the splitting process, edges with high dissimilarity in the MST are removed to construct small disconnected subgroups of nodes from the same community. In the merging process, subgroup pairs are iteratively merged to identify the final community structure maximizing the modularity. The proposed method requires no parameter. We provide a general framework for implementing such a method. Experimental results obtained by applying the method on computer-generated networks and different real world networks show the effectiveness of the proposed method. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Saoud, Bilal Moussaoui, Abdelouahab**URL:** <Go to ISI>://WOS:000379093300023

**Reference Type: Journal Article****Record Number:** 156**Author:** Seddik, T. Ugur, G. Khenata, R. Ugur, S. Soyalp, F. Murtaza, G. Rai, D. P. Bouhemadou, A. Bin Omran, S.**Year:** 2016**Title:** Optoelectronic and thermoelectric properties of Zintl  $YLi_3A_2$  ( $A = Sb, Bi$ ) compounds through modified Becke-Johnson potential**Journal:** Chinese Physics B**Volume:** 25**Issue:** 10**Date:** Oct**Short Title:** Optoelectronic and thermoelectric properties of Zintl  $YLi_3A_2$  ( $A = Sb, Bi$ ) compounds through modified Becke-Johnson potential**ISSN:** 1674-1056**DOI:** 10.1088/1674-1056/25/10/107801**Article Number:** 107801**Accession Number:** WOS:000384227700066

**Abstract:** In the present work, we investigate the structural, optoelectronic and thermoelectric properties of the  $YLi_3X_2$  ( $X = Sb, Bi$ ) compounds using the full potential augmented plane wave plus local orbital (FP-APW + lo) method. The exchange-correlation potential is treated with the generalized gradient approximation/local density approximation (GGA/LDA) and with the modified Becke-Johnson potential (TB-mBJ) in order to improve the electronic band structure calculations. In addition, the estimated ground state properties such as the lattice constants, external parameters, and bulk moduli agree well with the available experimental data. Our band structure calculations with GGA and LDA predict that both compounds have semimetallic behaviors. However, the band structure calculations with the GGA/TB-mBJ approximation indicate that the ground state of the  $YLi_3Sb_2$  compound is semiconducting and has an estimated indirect band gap ( $\Gamma$ -L) of about 0.036 eV while the ground state of  $YLi_3Bi_2$  compound is semimetallic. Conversely the LDA/TB-mBJ calculations indicate that both compounds exhibit semiconducting characters and have an indirect band gap ( $\Gamma$ -L) of about 0.15 eV and 0.081 eV for  $YLi_3Sb$  and  $YLi_3Bi_2$  respectively. Additionally, the optical properties reveal strong responses of the herein materials in the energy range between the IR and extreme UV regions. Thermoelectric properties such as thermal conductivity, electrical conductivity, Seebeck coefficient, and thermo power factors are also calculated.

**Notes:** Seddik, T. Ugur, G. Khenata, R. Ugur, S. Soyalp, F. Murtaza, G. Rai, D. P. Bouhemadou, A. Bin Omran, S.

**URL:** <Go to ISI>://WOS:000384227700066

**Reference Type: Journal Article****Record Number:** 134**Author:** Sekhri, H. Guechi, F. Mekias, H.**Year:** 2016**Title:** A WAVELESS FREE SURFACE FLOW PAST A SUBMERGED TRIANGULAR OBSTACLE IN PRESENCE OF SURFACE TENSION**Journal:** Electronic Journal of Differential Equations**Date:** Jul**Short Title:** A WAVELESS FREE SURFACE FLOW PAST A SUBMERGED TRIANGULAR OBSTACLE IN PRESENCE OF SURFACE TENSION**ISSN:** 1072-6691**Article Number:** 190**Accession Number:** WOS:000379843700003

**Abstract:** We consider the Free surface flows passing a submerged triangular obstacle at the bottom of a channel. The problem is characterized by a nonlinear boundary condition on the surface of unknown configuration. The analytical exact solutions for these problems are not known. Following Dias and Vanden Broeck [6], we computed numerically the solutions via a series truncation method. These solutions depend on two parameters: the Weber number a characterizing the strength of the surface tension and the angle beta at the base characterizing the shape of the apex. Although free surface flows with surface tension admit capillary waves, it is found that solution exist only for values of the Weber number greater than  $\alpha(0)$  for different configurations of the triangular obstacle.

**Notes:** Sekhri, Hakima Guechi, Fairouz Mekias, Hocine**URL:** <Go to ISI>://WOS:000379843700003

**Reference Type: Journal Article****Record Number:** 167**Author:** Selmani, M. Selmani, L.**Year:** 2016**Title:** On a frictional contact problem with adhesion in piezoelectricity**Journal:** Bulletin of the Belgian Mathematical Society-Simon Stevin**Volume:** 23**Issue:** 2**Pages:** 263-284**Date:** Apr-Jun**Short Title:** On a frictional contact problem with adhesion in piezoelectricity**ISSN:** 1370-1444**Accession Number:** WOS:000379379100007

**Abstract:** We consider a mathematical model describing the quasistatic frictional contact between an electro-elasto-viscoplastic body and an adhesive conductive foundation. The contact is described with a normal compliance condition with adhesion, the associated general version of Coulomb's law of dry friction in which the adhesion of contact surfaces is taken into account and a regularized electrical conductivity condition. The existence of a unique weak solution is established under smallness assumption on the surface conductance. The proof is based on arguments of time-dependent variational inequalities, differential equations and Banach fixed point theorem.

**Notes:** Selmani, Mohamed Selmani, Lynda**URL:** <Go to ISI>://WOS:000379379100007

**Reference Type: Journal Article****Record Number:** 170**Author:** Senoussi, H. Osmani, H. Courtois, C. Bourahli, M. E.**Year:** 2016**Title:** Mineralogical and chemical characterization of DD3 kaolin from the east of Algeria**Journal:** Boletin De La Sociedad Espanola De Ceramica Y Vidrio**Volume:** 55**Issue:** 3**Pages:** 121-126**Date:** May-Jun**Short Title:** Mineralogical and chemical characterization of DD3 kaolin from the east of Algeria**ISSN:** 0366-3175**DOI:** 10.1016/j.bsecv.2015.12.001**Accession Number:** WOS:000378096700005

**Abstract:** The mineralogical and chemical characteristics, based on X-ray diffraction (XRD) and scanning electron microscopy, of a kaolin known as DD3, from eastern Algeria were examined in the present study. The results showed that kaolin DD3 has an alumina content of 39%. The SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> molar ratio of 2.14 is close to that of a pure halloysite. The hematite concentration is relatively large and the flux oxides ratios remain as acceptable impurities. Microscopic observations showed a predominant tubular halloysite phase, flattened hexagonal platelets corresponding to the presence of kaolinite and its polymorphs (nacrite, dickite), and hydrated alumina. The SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> molar ratio and tubular DD3 suggest possible uses in technical ceramics and nanotechnology applications. Analysis by XRD revealed the presence of many phases. Thermal treatment at 450 degrees C and chemical treatment with HCl confirmed the presence of halloysite. The inclusion in the clay of organic molecules (dimethylsulfoxide (DMSO), DMF, and diluted glycerol) showed that the DMSO led to expansion of the inter-planar distance. The intercalation by DMSO molecules resulted in a shift of the basal peak from 10 to 11.02 angstrom and partial displacement of the peak from 3.35 to 3.65 angstrom. These two peaks are characteristic of halloysite. The presence of residual nacrite was also confirmed by the shift of the peak observed at 3.35 angstrom. A full analysis of the XRD patterns using the Match software, based on these results, showed that the DD3 clay consists of >60% halloysite. (C) 2015 SECV. Published by Elsevier Espana, S.L.U.

**Notes:** Senoussi, Hamza Osmani, Hocine Courtois, Christian Bourahli, Mohamed el Hadi**URL:** <Go to ISI>://WOS:000378096700005

**Reference Type: Journal Article****Record Number:** 190**Author:** Setifi, F. Knaust, J. M. Setifi, Z. Touzani, R.**Year:** 2016**Title:** Bis{bis(azido-kappa N)bis bis(pyridin-2-yl-kappa N)amine -cobalt(III)} sulfate dihydrate**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 72**Pages:** 470-+**Date:** Apr**Short Title:** Bis{bis(azido-kappa N)bis bis(pyridin-2-yl-kappa N)amine -cobalt(III)} sulfate dihydrate**ISSN:** 2056-9890**DOI:** 10.1107/s2056989016003662**Accession Number:** WOS:000374651100012

**Abstract:** The search for new molecular materials with interesting magnetic properties, using the pseudohalide azide ion and di-2-pyridylamine (dpa, C<sub>10</sub>H<sub>9</sub>N<sub>3</sub>) as a chelating ligand, led to the synthesis and structure determination of the title compound, [Co(N-3)(2)(dpa)(2)](2)SO<sub>4</sub> center dot 2H(2)O. The crystal structure comprises discrete [Co(dpa)(2)(N-3)(2)](+) cations, sulfate anions, as well as H<sub>2</sub>O solvent molecules. The Co-III cations display a slightly distorted octahedral coordination sphere defined by two N atoms from azide anions and four N atoms from the pyridyl rings of two dpa ligands. In the crystal, extensive C-H center dot center dot center dot O, N-H center dot center dot center dot O, and O-H center dot center dot center dot O interactions result in supramolecular sheets that lie parallel to the ab plane. The sheets are further linked through O-H center dot center dot center dot N interactions between the water molecules of one sheet and azide anions of another sheet, forming a supramolecular framework.

**Notes:** Setifi, Fatima Knaust, Jacqueline M. Setifi, Zouaoui Touzani, Rachid 4**URL:** <Go to ISI>://WOS:000374651100012

**Reference Type: Journal Article****Record Number:** 189**Author:** Setifi, F. Valkonen, A. Setifi, Z. Nummelin, S. Touzani, R. Glidewell, C.**Year:** 2016**Title:** Crystal structure of tris(4,4'-bipyridine) diium bis(1,1,3,3-tetracyano-2-ethoxypropenide) trihydrate**Journal:** Acta Crystallographica Section E-Crystallographic Communications**Volume:** 72**Pages:** 1246-+**Date:** Sep**Short Title:** Crystal structure of tris(4,4'-bipyridine) diium bis(1,1,3,3-tetracyano-2-ethoxypropenide) trihydrate**ISSN:** 2056-9890**DOI:** 10.1107/s2056989016012160**Accession Number:** WOS:000382301000005

**Abstract:** The title hydrated salt,  $C_{30}H_{26}N_6 \cdot 2C(9)H(5)N(4)O(-) \cdot 3H(2)O$ , was obtained as an unexpected product from the hydrothermal reaction between potassium 1,1,3,3-tetracyano-2-ethoxypropenide, 4,4'-bipyridine and iron(II) sulfate heptahydrate. The cation lies across a twofold rotation axis in the space group  $I2/a$  with the other components all in general positions. In the cation, the H atom linking the pyridine units is disordered over two adjacent sites having occupancies of 0.66 (4) and 0.36 (4), i.e. as N-H center dot center dot center dot N and N center dot center dot center dot H-N. The water molecules of crystallization are each disordered over two sets of atomic sites, having occupancies of 0.522 (6) and 0.478 (6) for one, and 0.34 (3) and 0.16 (3) for the other, and it was not possible to reliably locate the H atoms associated with these partial-occupancy sites. In the crystal, four independent C-H center dot center dot center dot N hydrogen bonds link the ionic components into a three-dimensional network.

**Notes:** Setifi, Fatima Valkonen, Arto Setifi, Zouaoui Nummelin, Sami Touzani, Rachid Glidewell, Christopher 9

**URL:** <Go to ISI>://WOS:000382301000005

**Reference Type: Journal Article****Record Number:** 123**Author:** Setifi, Z. Addala, A. Tao, J. Wannarit, N. Glidewell, C. Setifi, F. Youngme, S.**Year:** 2016**Title:** Two novel self-interpenetrating 3D iron(II) coordination frameworks: Synthesis, spectroscopic and structural characterizations with magnetic properties**Journal:** Inorganic Chemistry Communications**Volume:** 68**Pages:** 80-84**Date:** Jun**Short Title:** Two novel self-interpenetrating 3D iron(II) coordination frameworks: Synthesis, spectroscopic and structural characterizations with magnetic properties**ISSN:** 1387-7003**DOI:** 10.1016/j.inoche.2016.04.005**Accession Number:** WOS:000376711600019

**Abstract:** Two novel self-interpenetrating 3D Fe(II) coordination frameworks namely {Fe(4,4'-bpy)[Ag-2(CN)(3)](2)}(n) (I) and {Fe(4,4'-bpy)[Ag(CN)(2)](2)[AgCN](2)}(n) (II) have been synthesized and fully characterized. The 3D architectures and degree of interpenetration of these coordination frameworks were significantly affected by silver(I) cyanide species. The crystal structure of I presents 4-fold interpenetrating 3D framework with 4,4'-bpy and [Ag-2(CN)(3)](-) species. While, that of II constructed by 4,4'-bpy and two different silver(I) cyanide species, AgCN and [Ag(CN)(2)](-) resulting to 2-fold interpenetrating 3D framework. The stability and rigidity of both coordination frameworks are mainly supported dominantly by Ag-I center dot center dot center dot Ag-I interactions. Their magnetic properties exhibit high spin behavior. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Setifi, Zouaoui Addala, Abderazzak Tao, Jun Wannarit, Nanthawat Glidewell, Christopher Setifi, Fatima Youngme, Sujitra

**URL:** <Go to ISI>://WOS:000376711600019

**Reference Type: Journal Article****Record Number:** 26**Author:** Setifi, Z. Ghazzali, M. Glidewell, C. Perez, O. Setifi, F. Gomez-Garcia, C. J. Reedijk, J.**Year:** 2016**Title:** Azide, water and adipate as bridging ligands for Cu(II): Synthesis, structure and magnetism of (mu(4)-adipato-kappa-O)(mu-aqua)(mu-azido-kappa N-1, N-1)copper(II) monohydrate**Journal:** Polyhedron**Volume:** 117**Pages:** 244-248**Date:** Oct**Short Title:** Azide, water and adipate as bridging ligands for Cu(II): Synthesis, structure and magnetism of (mu(4)-adipato-kappa-O)(mu-aqua)(mu-azido-kappa N-1, N-1)copper(II) monohydrate**ISSN:** 0277-5387**DOI:** 10.1016/j.poly.2016.05.060**Accession Number:** WOS:000384384500029

**Abstract:** The synthesis, characterization, single crystal structure and magnetic properties of the compound [(CuN<sub>3</sub>(OH<sub>2</sub>))(2)(adp)](n) (1) are presented, in which adp stands for the adipate(2-) anion. This compound consists of layers containing chains of six-coordinated Cu(II) ions; the chains are connected by mu(4)-adipate anions. The magnetically interesting part of the compound is the Cu(II) chain, built from 3 bridging ligands, i.e. a water ligand, an azide anionic ligand bridging by using a terminal N atom to connect 2 Cu(II) ions, and one symmetrically bridging carboxylato group of adipate; the other end of the tetradentate adipate anions symmetrically connect the chains, forming the layers. From the magnetic point of view the compound is considered as a Cu(II) chain with a quite unusual, symmetrical water bridge, the mu-syn-syn carboxylate and the mu-N-3 bridge. The bridging water also hydrogen bonds to a terminal N of a nearby azido ligand. Magnetic susceptibility measurements show that 1 presents moderate ferromagnetic intrachain interactions (J(chain), = +38.4 cm(-1)) with a metamagnetic behaviour for the inter-chain interaction with a critical field of 0.7 T. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Setifi, Zouaoui Ghazzali, Mohamed Glidewell, Christopher Perez, Olivier Setifi, Fatima Gomez-Garcia, Carlos J. Reedijk, Jan**URL:** <Go to ISI>://WOS:000384384500029

**Reference Type: Journal Article****Record Number:** 36**Author:** Sobhi, W. Stevigny, C. Duez, P. Calderon, B. B. Atmani, D. Benboubetra, M.**Year:** 2016**Title:** Effect of lipid extracts of *Nigella sativa* L. seeds on the liver ATP reduction and alpha-glucosidase inhibition**Journal:** Pakistan Journal of Pharmaceutical Sciences**Volume:** 29**Issue:** 1**Pages:** 111-117**Date:** Jan**Short Title:** Effect of lipid extracts of *Nigella sativa* L. seeds on the liver ATP reduction and alpha-glucosidase inhibition**ISSN:** 1011-601X**Accession Number:** WOS:000370997700015

**Abstract:** Various extracts from the seeds of *Nigella sativa* have been used in traditional folk medicine to treat inflammation, liver disorders and arthritis. These seeds have been experimentally shown to possess antioxidant and hepatoprotective properties. Beside the hypoglycaemic and hypolipidemic effects, this study was carried out to evaluate, in vitro, toxicological effect of lipid extracts from the *Nigella sativa* seeds. The tested fractions were: (i) defatted methanolic extract, (ii) total lipid extract obtained by hexane extraction from methanolic extract and (iii) neutral and polar lipid fractions. The fractions were assessed, in vitro, for their inhibitory activity potential on the enzyme alpha-glucosidase as suppressing the enzyme activity is one among the therapeutic approaches to attenuate postprandial hyperglycemia. High inhibition of alpha-glucosidase by the two polar lipid fractions (F6 and F7) was reflected by their 1050 (0.51 +/- 0.04mg/ml and 0.55 +/- 0.09mg/ml, respectively), compared to acarbose (0.53 +/- 0.06mg/ml) and thymoquinone (0.65 +/- 0.05mg/ml). The hypoglycaemic effect of the polar lipid fraction of *Nigella sativa* could be explained by the inhibition of alpha-glucosidase, which is one of early steps of carbohydrate metabolism. Toxicological evaluation was investigated on precision-cut rat liver slices (PCLS). On PCLS, lipid extracts reduced ATP levels by 27 to 35%. Results indicate suggest that *Nigella sativa* extracts don't show a hepatoprotective effect against acetaminophen, but don't exhibit a major hepatotoxicity when tested alone.

**Notes:** Sobhi, Widad Stevigny, Caroline Duez, Pierre Calderon, Bedro Buc Atmani, Djebbar Benboubetra, Mustapha**URL:** <Go to ISI>://WOS:000370997700015

**Reference Type: Journal Article****Record Number:** 141**Author:** Stuckey, H. L. Mullan-Jensen, C. Kalra, S. Reading, J. Wens, J. Vallis, M. Kokoszka, A. Malek, R. Burns, K. K. Piana, N. Skovlund, S. E. Peyrot, M.**Year:** 2016**Title:** Living with an adult who has diabetes: Qualitative insights from the second Diabetes Attitudes, Wishes and Needs (DAWN2) study**Journal:** Diabetes Research and Clinical Practice**Volume:** 116**Pages:** 270-278**Date:** Jun**Short Title:** Living with an adult who has diabetes: Qualitative insights from the second Diabetes Attitudes, Wishes and Needs (DAWN2) study**ISSN:** 0168-8227**DOI:** 10.1016/j.diabres.2016.04.028**Accession Number:** WOS:000378073400037

**Abstract:** Aims: The second Diabetes Attitudes, Wishes and Needs (DAWN2) study identified the experiences of family members who support adults living with diabetes. Methods: Participants were 2057 adult family members living with the person with diabetes from 17 countries. Qualitative data were responses to open-ended survey questions about how living with a person with diabetes has impacted family members and the ways they choose to be involved in the diabetes care for the person with whom they live. Emergent coding with input from multinational collaborators identified thematic content about psychosocial aspects. Results: Family members wanted to do what was best for the person with diabetes and help in whatever way possible. Four themes branched from that principle: (1) family members worry about day-to-day struggles of the person with diabetes, such as hypoglycemia and employment stability; (2) diabetes negatively affects the person with diabetes-family member relationship, creating an emotional strain and shift in relationship; (3) family members have some support resources to deal with the burdens and lifestyle changes of diabetes, but would like more; and (4) the person with diabetes has provided inspiration to the family member, and helped the family member make positive life changes in eating healthier. Conclusions: These data provide insight into the ways that family members experience living with diabetes, including their challenges, motivations and intentions in supporting their person with diabetes. Family members speak eloquently and with emotion about their role in a family with diabetes. (c) 2016 Elsevier Ireland Ltd. All rights reserved.

**Notes:** Stuckey, Heather L. Mullan-Jensen, Christine Kalra, Sanjay Reading, Jean Wens, Johan Vallis, Michael Kokoszka, Andrzej Malek, Rachid Burns, Katharina Kovacs Piana, Natalia Skovlund, Soren E. Peyrot, Mark

**URL:** <Go to ISI>://WOS:000378073400037

**Reference Type: Journal Article****Record Number:** 27**Author:** Sun, X. W. Bioud, N. Fu, Z. J. Wei, X. P. Song, T. Li, Z. W.**Year:** 2016**Title:** High-pressure elastic properties of cubic Ir<sub>2</sub>P from ab initio calculations**Journal:** Physics Letters A**Volume:** 380**Issue:** 43**Pages:** 3672-3677**Date:** Oct**Short Title:** High-pressure elastic properties of cubic Ir<sub>2</sub>P from ab initio calculations**ISSN:** 0375-9601**DOI:** 10.1016/j.physleta.2016.08.048**Accession Number:** WOS:000384853600018

**Abstract:** A study of the high-pressure elastic properties of new synthetic Ir<sub>2</sub>P in the anti-fluorite structure is conducted using ab initio calculations based on density functional theory. The elastic constants C-11, C-12 and C-44 for the cubic Ir<sub>2</sub>P are obtained by the stress-strain method and the elastic stability calculations under pressure indicate that it is stable at least 100 GPa. Additionally, the electronic density of states, the aggregate elastic moduli, that is bulk modulus, shear modulus, and Young's modulus along with the Debye temperature, Poisson's ratio, and elastic anisotropy factor are all successfully obtained. Moreover, the pressure dependence of the longitudinal and shear wave velocities in three different directions [100], [110], and [111] for Ir<sub>2</sub>P are also predicted for the first time. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Sun, Xiao-Wei Bioud, Nadhira Fu, Zhi-Jian Wei, Xiao-Ping Song, Ting Li, Zheng-Wei**URL:** <Go to ISI>://WOS:000384853600018

**Reference Type: Journal Article****Record Number:** 142**Author:** Tiar, C. Boutahala, M. Benhouria, A. Zaghouane-Boudiaf, H.**Year:** 2016**Title:** Synthesis and physicochemical characterization of ZnMgNiAl-CO<sub>3</sub>-layered double hydroxide and evaluation of its sodium dodecylbenzenesulfonate removal efficiency**Journal:** Desalination and Water Treatment**Volume:** 57**Issue:** 28**Pages:** 13132-13143**Date:** Jun**Short Title:** Synthesis and physicochemical characterization of ZnMgNiAl-CO<sub>3</sub>-layered double hydroxide and evaluation of its sodium dodecylbenzenesulfonate removal efficiency**ISSN:** 1944-3994**DOI:** 10.1080/19443994.2015.1055809**Accession Number:** WOS:000371813600023

**Abstract:** In this study, the adsorption of anionic surfactant by uncalcined ZnMgNiAl-CO<sub>3</sub> was examined using sodium dodecylbenzenesulfonate (SDBS) as a model compound in an aqueous solution. The synthesized adsorbent (ZnMgNiAl-CO<sub>3</sub>) was characterized by FTIR, X-ray diffraction, and BET. The capacity of ZnMgNiAl-CO<sub>3</sub> to adsorb surfactant was evaluated at different contact times, pH values, mass effect, and initial surfactant concentrations. According to the obtained results, the adsorption processes could be described by a pseudo-second-order kinetic model. The adsorption isotherm was well fitted by the Sips model. Maximum adsorption capacity for SDBS on ZnMgNiAl-CO<sub>3</sub> was found to be 191.7mg/g which was in accordance with the experimental value. Thermodynamic parameters were estimated as well, and their values indicated that the adsorption process was spontaneous and endothermic. The values of H degrees and S degrees of the adsorption process were 7.9 and 0.102kJ/mol, respectively. The low value of H degrees (<40kJ/mol) indicated that adsorption process occurs mainly through a physical means.

**Notes:** Tiar, Chafia Boutahala, Mokhtar Benhouria, Assia Zaghouane-Boudiaf, Hassina**URL:** <Go to ISI>://WOS:000371813600023

**Reference Type: Journal Article****Record Number: 2****Author:** Titouna, C. Aliouat, M. Gueroui, M.**Year:** 2016**Title:** FDS: Fault Detection Scheme for Wireless Sensor Networks**Journal:** Wireless Personal Communications**Volume:** 86**Issue:** 2**Pages:** 549-562**Date:** Jan**Short Title:** FDS: Fault Detection Scheme for Wireless Sensor Networks**ISSN:** 0929-6212**DOI:** 10.1007/s11277-015-2944-7**Accession Number:** WOS:000367465300012

**Abstract:** Since more than one decade, Wireless Sensor Networks (WSN) have been emerged as a promising and interesting area which increasingly drawing researcher attention. So, the attraction to WSNs is due to their large applicability having growing tendency to fit almost all domains in our daily life. WSNs consist of a large number of heterogeneous/homogeneous sensor nodes communicating through wireless medium and working cooperatively to sense or monitor environment sizes related to physical phenomena. As a corner stone involved in WSN design, fault detection is indispensable to offer WSN applications robustness capability allowing them to meet mission success requirements. In order to ensure high quality of service, it is essential for a WSN to be able to detect its faulty sensor nodes before carrying out necessary recovery actions. In this paper, we propose a fault detection scheme (FDS) to identify faulty sensor nodes. FDS performs in two levels; the first level is conducted locally inside the sensor nodes, while the second level is carried out in a higher level (e.g., in a cluster head or gateway). The performance evaluation is tested through simulation to evaluate some factors such as: detection accuracy, false alarm rate, control overhead and memory overhead. We compared our results with referenced algorithm: Fault Detection in Wireless Sensor Networks (FDWSN), and found that FDS performance outperforms that of FDWSN.

**Notes:** Titouna, Chafiq Aliouat, Makhoulf Gueroui, Mourad**URL:** <Go to ISI>://WOS:000367465300012

**Reference Type: Journal Article****Record Number:** 10**Author:** Toumi, S. Ouennoughi, Z. Strenger, K. C. Frey, L.**Year:** 2016**Title:** Determination of Fowler-Nordheim tunneling parameters in Metal-Oxide-Semiconductor structure including oxide field correction using a vertical optimization method**Journal:** Solid-State Electronics**Volume:** 122**Pages:** 56-63**Date:** Aug**Short Title:** Determination of Fowler-Nordheim tunneling parameters in Metal-Oxide-Semiconductor structure including oxide field correction using a vertical optimization method**ISSN:** 0038-1101**DOI:** 10.1016/j.sse.2016.04.007**Accession Number:** WOS:000376199800010

**Abstract:** Current conduction mechanisms through a Metal-Oxide-Semiconductor structure are characterized via Fowler-Nordheim (FN) plots. The extraction of the FN parameters like the electron/hole effective mass in oxide  $m(\text{ox})$  and in semiconductor  $m(\text{sc})$ , the barrier height at the semiconductor-oxide interface  $\phi(\text{B})$ , and the correction oxide voltage  $V\text{-corr}$  for a MOS structure is made using a vertical optimization process on the current density without any assumption about  $\phi(\text{B})$  or  $m(\text{ox})$ . An excellent agreement is obtained between the FN plots calculated with the FN parameters extracted using a vertical optimization process with the experimental one. (C) 2016 Elsevier Ltd. All rights reserved.

**Notes:** Toumi, S. Ouennoughi, Z. Strenger, K. C. Frey, L.**URL:** <Go to ISI>://WOS:000376199800010

**Reference Type: Journal Article****Record Number:** 82**Author:** Youcef, H. A. Chafaa, S. Doufnoune, R. Douadi, T.**Year:** 2016**Title:** Synthesis, characterization and thermal behavior of tetrakis(melamine(2+)) bis(melamine(+)) pentakis(monohydrogenphosphate) tetrahydrate**Journal:** Journal of Molecular Structure**Volume:** 1123**Pages:** 138-143**Date:** Nov**Short Title:** Synthesis, characterization and thermal behavior of tetrakis(melamine(2+)) bis(melamine(+)) pentakis(monohydrogenphosphate) tetrahydrate**ISSN:** 0022-2860**DOI:** 10.1016/j.molstruc.2016.05.073**Accession Number:** WOS:000381833100018

**Abstract:** A new organic inorganic salt, tetrakis (2,4,6-triamino-1,3,5-triazin-1,3-dium) bis (2,4,6-triamino-1,3,5-triazin-1-ium) pentakis (monohydrogenphosphate) tetrahydrate,  $4C(3)H(8)N(6)(+2)center dot 2C(3)H(7)N(6)(+)center dot 5HPO(4)(2-)center dot 4H(2)O$  was synthesized through the reaction of melamine and phosphoric acid in an acidic medium HCl/H<sub>2</sub>O. It was then characterized by X-ray diffraction. The title compound crystallizes in monoclinic system with non-centrosymmetric space group P 21 with lattice parameters a = 113008 angstrom, b = 20.9798 angstrom, c = 12.2679 angstrom, alpha = 90 degrees, beta = 117.236 degrees, gamma = 90, Z = 2 and V = 2586.10 (angstrom)<sup>3</sup>. The UV-vis absorption spectrum UV-vis showed that the crystal has a good optical transmittance in the entire visible region with a lower cut off wavelength of 290 nm. The vibrational frequencies of various functional groups present in the crystal were identified by FT-IR analysis. The chemical structure of the compound was also confirmed by H-1, C-13 and P-31 NMR spectroscopy. TGA-DTA analysis revealed that the materials have a good thermal stability without any melting. Published by Elsevier B.V.

**Notes:** Youcef, Hakima Ait Chafaa, Salah Doufnoune, Rachida Douadi, Tahar**URL:** <Go to ISI>://WOS:000381833100018

**Reference Type: Journal Article****Record Number:** 39**Author:** Zaboub, M. Guessoum, A. Demagh, N. E. Guermat, A.**Year:** 2016**Title:** Fabrication of polymer microlenses on single mode optical fibers for light coupling**Journal:** Optics Communications**Volume:** 366**Pages:** 122-126**Date:** May**Short Title:** Fabrication of polymer microlenses on single mode optical fibers for light coupling**ISSN:** 0030-4018**DOI:** 10.1016/j.optcom.2015.12.010**Accession Number:** WOS:000369368700021

**Abstract:** In this paper, we present a technique for producing fibers optics micro-collimators composed of polydimethylsiloxane PDMS microlenses of different radii of curvature. The waist and working distance values obtained enable the optimization of optical coupling between optical fibers, fibers and optical sources, and fibers and detectors. The principal is based on the injection of polydimethylsiloxane (PDMS) into a conical micro-cavity chemically etched at the end of optical fibers. A spherical microlens is then formed that is self-centered with respect to the axis of the fiber. Typically, an optimal radius of curvature of 10.08  $\mu\text{m}$  is obtained. This optimized micro-collimator is characterized by a working distance of 19.27  $\mu\text{m}$  and a waist equal to 2.28  $\mu\text{m}$  for an SMF 9/125  $\mu\text{m}$  fiber. The simulation and experimental results reveal an optical coupling efficiency that can reach a value of 99.75%. (C) 2015 Elsevier B.V. All rights reserved.

**Notes:** Zaboub, Monsef Guessoum, Assia Demagh, Nacer-Eddine Guermat, Abdelhak**URL:** <Go to ISI>://WOS:000369368700021

**Reference Type: Journal Article****Record Number:** 118**Author:** Zebiri, C. Daoudi, S. Benabdelaziz, F. Lashab, M. Sayad, D. Ali, N. T. Abd-Alhameed, R. A.**Year:** 2016**Title:** Gyro-chirality effect of bianisotropic substrate on the operational of rectangular microstrip patch antenna**Journal:** International Journal of Applied Electromagnetics and Mechanics**Volume:** 51**Issue:** 3**Pages:** 249-260**Short Title:** Gyro-chirality effect of bianisotropic substrate on the operational of rectangular microstrip patch antenna**ISSN:** 1383-5416**DOI:** 10.3233/jae-150141**Accession Number:** WOS:000381119300003

**Abstract:** In this paper, the gyrotropic bi-anisotropy of the chiral medium in substrate constitutive parameters ( $\xi(c)$  and  $\eta(c)$ ) of a rectangular microstrip patch antenna is introduced in order to observe its effects on the complex resonant frequency, half-power bandwidth and input impedance. Numerical calculations and analysis based on the dominant mode are carried out to show that the latter is directly related to the former. This paper is based on the Moment Method as full-wave spectral domain approach using sinusoidal basis functions. Two new results, namely the appearance of the difference ( $\xi(c)-\eta(c)$ ) and sum ( $\xi(c)+\mu(c)$ ) of the two magneto-electric elements are obtained in the electric transverse components and Green tensor expressions, respectively. These new results can be considered as a generalisation form of the previously published work.

**Notes:** Zebiri, Chemseddine Daoudi, Samiha Benabdelaziz, Fatiha Lashab, Mohamed Sayad, Djamel Ali, Nazar T. Abd-Alhameed, Raed A.

**URL:** <Go to ISI>://WOS:000381119300003

**Reference Type: Journal Article****Record Number:** 154**Author:** Zebiri, C. Sayad, D. Daoudi, S. Benabdelaziz, F. Lashab, M. Abd-Alhameed, R. A.**Year:** 2016**Title:** Gyro-Chirality Effect of Bianisotropic Substrate on the Resonant Frequency and Half-power Bandwidth of Rectangular Microstrip Patch Antenna**Journal:** Cmc-Computers Materials & Continua**Volume:** 52**Issue:** 2**Pages:** 123-131**Date:** Mar**Short Title:** Gyro-Chirality Effect of Bianisotropic Substrate on the Resonant Frequency and Half-power Bandwidth of Rectangular Microstrip Patch Antenna**ISSN:** 1546-2218**Accession Number:** WOS:000383215000003

**Abstract:** In this paper, the gyrotropic bi-anisotropy of the chiral medium in substrate constitutive parameters ( $\xi(c)$ , and  $\eta(c)$ ) of a rectangular microstrip patch antenna is introduced in order to observe its effects on the complex resonant frequency and half-power bandwidth. The analysis is based on the full-wave spectral domain approach using the Moment Method, with sinusoidal type basis functions. The numerical calculations related to the dominant mode have been carried out, and it has been observed that the resonant frequency and the bandwidth are directly linked to the medium chirality. The new results can be considered as a generalisation form of the previously published work.

**Notes:** Zebiri, C. Sayad, D. Daoudi, S. Benabdelaziz, F. Lashab, M. Abd-Alhameed, R. A.**URL:** <Go to ISI>://WOS:000383215000003

**Reference Type: Journal Article****Record Number:** 186**Author:** Zegrar, F. Boucetta, S. Othmani, B.**Year:** 2016**Title:** High Pressure Behaviour of Elastic and Mechanical Properties of NiGa Intermetallic Compound**Journal:** Acta Physica Polonica A**Volume:** 130**Issue:** 1**Pages:** 471-474**Date:** Jul**Short Title:** High Pressure Behaviour of Elastic and Mechanical Properties of NiGa Intermetallic Compound**ISSN:** 0587-4246**DOI:** 10.12693/APhysPolA.130.471**Accession Number:** WOS:000384810700127

**Abstract:** We have employed the density functional theory plane-wave pseudopotential method with local density approximation and generalized gradient approximation to investigate the structural, elastic and mechanical properties of the intermetallic compound NiGa. The calculated equilibrium lattice constant and bulk modulus are in good agreement with the experimental and other calculated values. According to our best knowledge, from the elastic constants, the bulk modulus  $B$ , anisotropy factor  $A$ , shear modulus  $G$ , the Young modulus  $E$  and the Poisson ratio  $\sigma$  for NiGa compound are obtained for the first time. By comparison, our results for the elastic constants  $C_{ij}$ , bulk modulus  $B$ , shear modulus  $G$  and the Young modulus  $E$  are as good as those of NiAl compound. The dependences of the elastic and mechanical parameters of NiGa compound on pressure were also investigated. It was found that the cubic NiGa compound is mechanically stable under pressure according to the elastic stability criteria up to 13 GPa, and it is not elastically isotropic. By analyzing the ratio  $(B/G)$ , it was concluded that NiGa compound is ductile in nature.

**Notes:** Zegrar, F. Boucetta, S. Othmani, B. 2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN) Oct 14-19, 2015 Kemer, TURKEY

**URL:** <Go to ISI>://WOS:000384810700127

**Reference Type: Journal Article****Record Number:** 94**Author:** Zenati, K. Touati, A. Bakour, S. Sahli, F. Rolain, J. M.**Year:** 2016**Title:** Characterization of NDM-1-and OXA-23-producing *Acinetobacter baumannii* isolates from inanimate surfaces in a hospital environment in Algeria**Journal:** Journal of Hospital Infection**Volume:** 92**Issue:** 1**Pages:** 19-26**Date:** Jan**Short Title:** Characterization of NDM-1-and OXA-23-producing *Acinetobacter baumannii* isolates from inanimate surfaces in a hospital environment in Algeria**ISSN:** 0195-6701**DOI:** 10.1016/j.jhin.2015.09.020**Accession Number:** WOS:000367619800006

**Abstract:** Background: Investigation of several outbreaks of multidrug-resistant *Acinetobacter baumannii* infection has demonstrated that contamination of the inanimate hospital environment could be implicated in the spread of these multidrug-resistant strains. Aim: To investigate the occurrence of carbapenem-resistant *A. baumannii* on inanimate surfaces and possible dissemination in the hospital environment in Algeria as a potential source of infection in humans. Methods: *A. baumannii* strains were isolated from the hospital environment and identified by matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS). Antimicrobial susceptibility was determined using disc diffusion and E-test methods. Carbapenemase activity was detected using microbiological tests, including modified Hodge test, modified Carba NP test, and EDTA test. Carbapenem resistance determinants were studied by polymerase chain reaction (PCR) and sequencing. Clonal relatedness was determined using multi-locus sequence typing (MLST). Results: A total of 67 *A. baumannii* isolates were obtained from 868 environmental samples and identified by MALDI-TOF MS. Among them, 61 isolates were resistant to imipenem with minimum inhibitory concentration >32 µg/mL and positive by the modified Hodge test and modified Carba NP test. In addition, the activity of carbapenemase was inhibited by EDTA in 32 strains. PCR and sequencing showed the presence of bla(OXA-23) gene in 29 strains, and the bla(NDM-1) gene in 32 isolates. MLST demonstrated the presence of five types of ST (ST19, ST2, ST85, ST98, and ST115). Conclusion: Our study demonstrated the dissemination of carbapenemase-producing *A. baumannii* strains recovered from inanimate surfaces in a hospital environment, surrounding patients, healthcare workers and visitors, in Algeria as a potential source for nosocomial infection. (C) 2015 The Healthcare Infection Society. Published by Elsevier Ltd. All rights reserved.

**Notes:** Zenati, K. Touati, A. Bakour, S. Sahli, F. Rolain, J. M.**URL:** <Go to ISI>://WOS:000367619800006

**Reference Type: Journal Article****Record Number:** 106**Author:** Zerroug, S. Gueddim, A. Bouarissa, N.**Year:** 2016**Title:** Composition dependence of fundamental properties of Te magnetic semiconductor alloys**Journal:** Journal of Computational Electronics**Volume:** 15**Issue:** 2**Pages:** 473-478**Date:** Jun**Short Title:** Composition dependence of fundamental properties of Te magnetic semiconductor alloys**ISSN:** 1569-8025**DOI:** 10.1007/s10825-016-0802-9**Accession Number:** WOS:000375714500013

**Abstract:** Ab initio calculations based on density functional theory have been performed using the full-potential augmented-plane-wave method so as to investigate the composition dependence of the electronic structure and fundamental properties of hypothetical zinc-blende magnetic semiconductor alloys at low Co concentrations. To treat the exchange and correlation energies, the generalized gradient approximation (GGA) of Perdew-Burke-Ernzerhof has been used. In addition, the modified Becke-Johnson exchange potential with the GGA approach is used for the band structure providing high accuracy. It is found that the addition of a small amount of Co atoms in the makes the latter less compressible, ferromagnetic and exhibiting a half metallic character. Besides, the composition dependence of the real and imaginary parts of the dielectric function has been examined and discussed. The information derived from the present study may be useful for spintronics technological applications.

**Notes:** Zerroug, S. Gueddim, A. Bouarissa, N.**URL:** <Go to ISI>://WOS:000375714500013

**Reference Type: Journal Article****Record Number:** 180**Author:** Ziadi, R. Bencherif-Madani, A. Ellaia, R.**Year:** 2016**Title:** Continuous global optimization through the generation of parametric curves**Journal:** Applied Mathematics and Computation**Volume:** 282**Pages:** 65-83**Date:** May**Short Title:** Continuous global optimization through the generation of parametric curves**ISSN:** 0096-3003**DOI:** 10.1016/j.amc.2016.01.067**Accession Number:** WOS:000371878200005

**Abstract:** In this paper we develop a new approach for solving a large class of global optimization problems. The objective function is only continuous, non-smooth and non-Lipschitzian, defined on a rectangle of  $\mathbb{R}^n$ . This approach is based on the generation, in the feasible set, of a family of parametrized curves satisfying certain properties combined with the one-dimensional Evtushenko algorithm. To accelerate the corresponding mixed algorithm, we have incorporated in a variant a Pattern Search-type deterministic local optimization method and in another variant a new stochastic local optimization method. Both variants have been applied to several typical test problems. A comparison with some well known methods is highlighted through numerical experiments. (C) 2016 Elsevier Inc. All rights reserved.

**Notes:** Ziadi, Raouf Bencherif-Madani, Abdelatif Ellaia, Rachid**URL:** <Go to ISI>://WOS:000371878200005

**Reference Type: Journal Article**

**Record Number: 19**

**Author:** Zitouni, R. Selt, O.

**Year:** 2016

**Title:** METAHEURISTICS TO SOLVE A TASKS SCHEDULING PROBLEM IN PARALLEL IDENTICAL MACHINES WITH UNAVAILABILITY PERIODS

**Journal:** Rairo-Operations Research

**Volume:** 50

**Issue:** 1

**Pages:** 83-90

**Date:** Jan-Mar

**Short Title:** METAHEURISTICS TO SOLVE A TASKS SCHEDULING PROBLEM IN PARALLEL IDENTICAL MACHINES WITH UNAVAILABILITY PERIODS

**ISSN:** 0399-0559

**DOI:** 10.1051/ro/2015013

**Accession Number:** WOS:000369421300006

**Abstract:** In this paper, we introduce an approach for scheduling problems of  $n$  tasks on  $m$  identical parallel machines with unavailability periods. This problem is strongly NP-complete which makes finding an optimal solution looks impossible task. In this frame, we suggest a novel heuristic in which availability periods of each machine are filled with the highest weighted tasks. To improve the performance of this heuristic, we have used, on one hand, different diversification strategies with the aim of exploring unvisited regions of the solution space, and on the other hand, two well-known neighborhoods (neighborhood by swapping and neighborhood by insertion). The computational experiment was carried out on three identical parallel machines with different availability periods. It must be mentioned that tasks movement can be within one machine or between different machines. The performance criterion to optimize in this problem is the weighted sum of the end dates of tasks. Note that all data in this problem are integer and deterministic.

**Notes:** Zitouni, Rachid Selt, Omar

**URL:** <Go to ISI>://WOS:000369421300006

**Reference Type: Journal Article****Record Number:** 184**Author:** Zitouni, S. Rouabah, K. Chikouche, D. Mokrani, K. Atia, S. Harba, R. Ravier, P.**Year:** 2016**Title:** General analytical models characterizing MBOC modulated signal**Journal:** Aerospace Science and Technology**Volume:** 50**Pages:** 112-126**Date:** Mar**Short Title:** General analytical models characterizing MBOC modulated signal**ISSN:** 1270-9638**DOI:** 10.1016/j.ast.2015.12.027**Accession Number:** WOS:000371650000012

**Abstract:** The modernized Global Positioning System (GPS) and Galileo satellite navigation systems have recommended the interoperable Multiplexed-Binary Offset Carrier (MBOC) modulation on L1C/E1 frequency band for their open service signals. MBOC signal multiplexes BOC(6, 1) and BOC(1, 1) according to a certain proportion, and can be implemented in a number of ways, including Composite BOC (CBOC) and Time-Multiplexed BOC (TMBOC). The complexity and the accuracy of the theoretical signal modeling pose a growing concern to scrutinize and to optimize signal characteristics and receiver performances. In this paper, the analytical expressions of the optimal correlation function (CF) for the new modernized MBOC signal are proposed. Also derived are the analytical models of the discriminator functions (DFs) and the multipath error envelopes (MEEs) in both coherent and non-coherent code tracking configurations. The validation of the proposed models is performed and the simulation results show that the proposed analytical models coincide with the numerical ones. (C) 2016 Elsevier Masson SAS. All rights reserved.

**Notes:** Zitouni, Sihem Rouabah, Khaled Chikouche, Djamel Mokrani, Karim Atia, Salim Harba, Rachid Ravier, Philippe

**URL:** <Go to ISI>://WOS:000371650000012

**Reference Type: Journal Article**

**Record Number: 11**

**Author:** Zouache, D. Nouioua, F. Moussaoui, A.

**Year:** 2016

**Title:** Quantum-inspired firefly algorithm with particle swarm optimization for discrete optimization problems

**Journal:** Soft Computing

**Volume:** 20

**Issue:** 7

**Pages:** 2781-2799

**Date:** Jul

**Short Title:** Quantum-inspired firefly algorithm with particle swarm optimization for discrete optimization problems

**ISSN:** 1432-7643

**DOI:** 10.1007/s00500-015-1681-x

**Accession Number:** WOS:000380288800020

**Abstract:** The firefly algorithm is a recent meta-heuristic inspired from nature. It is based on swarm intelligence of fireflies and generally used for solving continuous optimization problems. This paper proposes a new algorithm called "Quantum-inspired Firefly Algorithm with Particle Swarm Optimization (QIFAPSO)" that among other things, adapts the firefly approach to solve discrete optimization problems. The proposed algorithm uses the basic concepts of quantum computing such as superposition states of Q-bit and quantum measure to ensure a better control of the solutions diversity. Moreover, we use a discrete representation for fireflies and we propose a variant of the well-known Hamming distance to compute the attractiveness between them. Finally, we combine two strategies that cooperate in exploring the search space: the first one is the move of less bright fireflies towards the brighter ones and the second strategy is the PSO movement in which a firefly moves by taking into account its best position as well as the best position of its neighborhood. Of course, these two strategies of fireflies' movement are adapted to the quantum representation used in the algorithm for potential solutions. In order to validate our idea and show the efficiency of the proposed algorithm, we have used the multidimensional knapsack problem which is known as an NP-Complete problem and we have conducted various tests of our algorithm on different instances of this problem. The experimental results of our algorithm are competitive and in most cases are better than that of existing methods.

**Notes:** Zouache, Djaafar Nouioua, Farid Moussaoui, Abdelouahab

**URL:** <Go to ISI>://WOS:000380288800020

**Reference Type: Journal Article****Record Number:** 55**Author:** Zouaoui, H. Abdi, D. Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Julien, C. M.**Year:** 2016**Title:** Electro-synthesis, characterization and photoconducting performance of ITO/polybithiophene-MnO<sub>2</sub> composite**Journal:** Materials Science and Engineering B-Advanced Functional Solid-State Materials**Volume:** 208**Pages:** 29-38**Date:** Jun**Short Title:** Electro-synthesis, characterization and photoconducting performance of ITO/polybithiophene-MnO<sub>2</sub> composite**ISSN:** 0921-5107**DOI:** 10.1016/j.mseb.2016.02.007**Accession Number:** WOS:000374365800004

**Abstract:** Manganese dioxide is synthesized by reduction reaction of potassium permanganate with hydrogen peroxide. The as-synthesized alpha-MnO<sub>2</sub> is characterized by powder X-ray diffraction and infrared spectroscopy. The MnO<sub>2</sub> particles are used to prepare composite films containing polybithiophene (PBTh) on indium tin oxide (ITO) glass substrates. The composite films ITO/PBTh-MnO<sub>2</sub> are obtained by electro-polymerization of bithiophene in the presence the alpha-MnO<sub>2</sub> particles dispersed in the electrolytic solution. The XRD and SEM analyses show that the alpha-MnO<sub>2</sub> particles of size in the range 100-300 nm are incorporated in the polymer. The films are characterized by cyclic voltammetry impedance spectroscopy, UV-vis spectroscopy and scanning electron microscopy. As a result, the electrochemical gap and the optical gap are shifted by the incorporation of MnO<sub>2</sub> from 2.15 eV for ITO/PBTh to 1.88 eV for ITO/PBTh-MnO<sub>2</sub>, while the electrical conductivity decreases from 195.35 S/cm for ITO/PBTh down to 0.047 S/cm for ITO/PBTh-MnO<sub>2</sub> at the highest MnO<sub>2</sub> investigated. The photo-electrochemical measurements also indicate that the ITO/PBTh-MnO<sub>2</sub> films show a photocurrent that is three times higher than that of ITO/PBTh substrate to reach 20.6  $\mu\text{A cm}^{-2}$ , so that such a composite can be used as a new active material in solar cells. (C) 2016 Elsevier B.V. All rights reserved.

**Notes:** Zouaoui, H. Abdi, D. Bahloul, A. Nessark, B. Briot, E. Groult, H. Mauger, A. Julien, C. M.**URL:** <Go to ISI>://WOS:000374365800004

**Reference Type: Book Section****Record Number:** 1**Author:** Boumaaraf, A. Mohamadi, T. Gourmat, L.**Year:** 2016**Title:** FPGA Implementation of High-Frequency Multiple PWM for Variable Voltage Variable Frequency Controller**Editor:** Aillerie, M. Salame, C. T. Papageorgas, P.**Book Title:** Technologies and Materials for Renewable Energy, Environment and Sustainability**Volume:** 1758**Series Title:** AIP Conference Proceedings**Short Title:** FPGA Implementation of High-Frequency Multiple PWM for Variable Voltage Variable Frequency Controller**ISBN:** 0094-243X 978-0-7354-1416-7**DOI:** Unsp 020018 10.1063/1.4959394**Accession Number:** WOS:000383018700018

**Abstract:** In this paper, we present the FPGA implementation of the multiple pulse width modulation (MPWM) signal generation with repetition of data segments, applied to the variable frequency variable voltage systems and specially at to the photovoltaic water pumping system, in order to generate a signal command very easily between 10hz to 60 hz with a small frequency and reduce the cost of the control system.

**Notes:** Boumaaraf, Abdelaali Mohamadi, Tayeb Gourmat, Laid Tmrees International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES) Apr 15-18, 2016 Beirut, LEBANON Euro Mediterranean Inst Sustainable Dev, European Acad Sustainable Dev

**URL:** <Go to ISI>://WOS:000383018700018

**Reference Type: Book Section****Record Number: 2****Author:** Fedala, S. Remond, D. Zegadi, R. Felkaoui, A.**Year:** 2016**Title:** Gear Fault Diagnosis Based on Angular Measurements and Support Vector Machines in Normal and Nonstationary Conditions**Editor:** Chaari, F. Zimroz, R. Bartelmus, W. Haddar, M.**Book Title:** Advances in Condition Monitoring of Machinery in Non-Stationary Operations**Volume:** 4**Pages:** 291-308**Series Title:** Applied Condition Monitoring**Short Title:** Gear Fault Diagnosis Based on Angular Measurements and Support Vector Machines in Normal and Nonstationary Conditions**ISBN:** 2363-698X 978-3-319-20463-5; 978-3-319-20462-8**DOI:** 10.1007/978-3-319-20463-5\_22**Accession Number:** WOS:000375989600022

**Abstract:** Contrary to time-sampled acceleration signals (TA), angular measurements like instantaneous angular speed (IAS), transmission error (TE), and angular sampled acceleration (AA) represent all potential sources of relevant information in fault detection and diagnosis systems, but also to construct feature vector (FV) to make the methods of classification robust and effective even for different running speed or load conditions. In this work, we propose to use angular measurements and support vector machines (SVM) to detect and diagnose gear faults in normal and nonstationary conditions. For this purpose, features are extracted from angular and angle frequency domains of AA, TE, and IAS. Then, the classification is performed by SVM in order to improve the detection and identification of gear defects.

**Notes:** Fedala, Semchedine Remond, Didier Zegadi, Rabah Felkaoui, Ahmed 4th International Conference on Condition Monitoring of Machinery in Non-Stationary Operations (CMMNO) Dec 15-17, 2014 Lyon, FRANCE

**URL:** <Go to ISI>://WOS:000375989600022

**Reference Type: Book Section****Record Number:** 3**Author:** Hocine, F. Ahmed, F.**Year:** 2016**Title:** Electric Motor Bearing Diagnosis Based on Vibration Signal Analysis and Artificial Neural Networks Optimized by the Genetic Algorithm**Editor:** Chaari, F. Zimroz, R. Bartelmus, W. Haddar, M.**Book Title:** Advances in Condition Monitoring of Machinery in Non-Stationary Operations**Volume:** 4**Pages:** 277-289**Series Title:** Applied Condition Monitoring**Short Title:** Electric Motor Bearing Diagnosis Based on Vibration Signal Analysis and Artificial Neural Networks Optimized by the Genetic Algorithm**ISBN:** 2363-698X 978-3-319-20463-5; 978-3-319-20462-8**DOI:** 10.1007/978-3-319-20463-5\_21**Accession Number:** WOS:000375989600021

**Abstract:** The artificial neural networks (ANN) by their capacities of training, classification, and decision, give a solution to bearing diagnosis problem by the automatic classification of the vibratory signals corresponding to the various states the machines. They are intended to increase the precision(accuracy) and to reduce errors caused by subjective human judgments. However it is important to note that the ANNs in the aids to diagnosis must be set for optimum performance. The non-existence of predefined rules for ANNs parameters setting (number of hidden neurons in each hidden layers etc.) obstruct the achievement of optimal performances. The use of genetic algorithm (GA) can solve this problem by the parameters and structure optimization of ANN. This paper discusses the use of the ANN multilayer Perceptron (MLP), for the diagnosis of electric motor bearings, by the automatic classification of the various operating conditions the machine. The signals taken from the experimental test rig are processed by using various methods of signal processing. The calculated indicators were used to build the patterns vector, which is used for the following to train and test of the network. The GA are used to search(optimize) the structure and the various parameters of the network, which simplifies the neural network structure and makes the training process more efficient and giving the best performances of the network.

**Notes:** Hocine, Fenineche Ahmed, Felkaoui 4th International Conference on Condition Monitoring of Machinery in Non-Stationary Operations (CMMNO) Dec 15-17, 2014 Lyon, FRANCE

**URL:** <Go to ISI>://WOS:000375989600021

**Reference Type: Book Section****Record Number:** 4**Author:** Mahfoud, A. Fathi, M. Belghachi, A. Djahli, F.**Year:** 2016**Title:** Numerical Modeling of GaInP/GaAs Monolithic Tandem Solar Cells**Editor:** Aillerie, M. Salame, C. T. Papageorgas, P.**Book Title:** Technologies and Materials for Renewable Energy, Environment and Sustainability**Volume:** 1758**Series Title:** AIP Conference Proceedings**Short Title:** Numerical Modeling of GaInP/GaAs Monolithic Tandem Solar Cells**ISBN:** 0094-243X 978-0-7354-1416-7**DOI:** Unsp 020014 10.1063/1.4959390**Accession Number:** WOS:000383018700014

**Abstract:** In this work, we present simulation of a monolithic tandem GaInP/GaAs solar cell made from a top GaInP cell and a bottom GaAs cell. For this purpose we used one dimensional simulation program tool called Solar Cell Capacitance Simulator in one Dimension (SCAPS-1D), the proposed methodology consists of simulating each cell separately. For enhanced electric characteristics of a tandem solar cell, the current-match condition between the top and bottom cells should be satisfied, which in turn requires careful design of the tandem parameters. To fulfill this condition, the top cell base thickness of (GaInP) is adjusted accordingly. The solar spectrum reaching the lower cell is computed by subtracting the top cell spectrum from the total solar spectrum. The optimal value of the short circuit current density corresponds to a top cell's base thickness of 0.7  $\mu\text{m}$ ; this results in an open circuit voltage of 2.397 V, a short circuit current density of 13.87 mA/cm<sup>2</sup>, an efficiency of 29.83 and a fill factor of 89.74 % under the AM1.5G solar spectrum.

**Notes:** Mahfoud, Abderrezak Fathi, Mohamed Belghachi, Abderrahmane Djahli, Farid Tmrees International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES) Apr 15-18, 2016 Beirut, LEBANON Euro Mediterranean Inst Sustainable Dev, European Acad Sustainable Dev

**URL:** <Go to ISI>://WOS:000383018700014

**Reference Type: Book Section****Record Number: 5****Author:** Mahgoun, H. Felkaoui, A. Fedala, S. Chaari, F.**Year:** 2016**Title:** Detection of Gear Faults in Variable Rotating Speed Using EEMD Decomposition and Instantaneous Frequency**Editor:** Chaari, F. Zimroz, R. Bartelmus, W. Haddar, M.**Book Title:** Advances in Condition Monitoring of Machinery in Non-Stationary Operations**Volume:** 4**Pages:** 177-195**Series Title:** Applied Condition Monitoring**Short Title:** Detection of Gear Faults in Variable Rotating Speed Using EEMD Decomposition and Instantaneous Frequency**ISBN:** 2363-698X 978-3-319-20463-5; 978-3-319-20462-8**DOI:** 10.1007/978-3-319-20463-5\_14**Accession Number:** WOS:000375989600014

**Abstract:** When a local gear fault is presented, both the amplitude and phase of the tooth meshing vibration are modulated. If the rotating speed of the shaft is invariable, the gear-fault-induced modulation phenomenon which manifest as frequency sidebands equally spaced around the meshing frequency and its harmonics in vibration spectra. The Hilbert transform has been widely used in demodulation of such signals and has given good results. However, under variable rotating speed of the shaft, the meshing frequency and its harmonic and the sidebands vary with time and hence the vibration signal becomes non-stationary. The use directly of the Hilbert transform doesn't allow detecting the variation of the rotating machine and its harmonics which reflect the gear fault. In this study, we propose to use first the ensemble empirical decomposition (EEMD) which is particularly suitable for processing non stationary signals. By using EEMD the signal can be decomposed into a number of IMFs which are mono component, and then we use the Hilbert transform to calculate the instantaneous frequency and the envelope of each IMF. To identify the fault, we apply the ensemble empirical decomposition (EEMD) in second time to the instantaneous frequency to obtain mono component frequency and we calculate the spectrum of each IMF to evaluate the frequency. In this works, to validate this strategy, we analyze simulated signals for healthy and faulty gear boxes when the speed of machine is regular and variable; these models are based on the models of McFadden.

**Notes:** Mahgoun, Hafida Felkaoui, Ahmed Fedala, Semchedine Chaari, Fakher 4th International Conference on Condition Monitoring of Machinery in Non-Stationary Operations (CMMNO) Dec 15-17, 2014 Lyon, FRANCE

**URL:** <Go to ISI>://WOS:000375989600014

**Reference Type: Book Section****Record Number:** 6**Author:** Meguellati, S.**Year:** 2016**Title:** Precision Topographic inspection of MEOMS by moire interferometry**Editor:** Gorecki, C. Asundi, A. K. Osten, W.**Book Title:** Optical Micro- and Nanometrology Vi**Volume:** 9890**Series Title:** Proceedings of SPIE**Short Title:** Precision Topographic inspection of MEOMS by moire interferometry**ISBN:** 0277-786X 978-1-5106-0135-2**DOI:** Unsp 989013 10.1117/12.2227051**Accession Number:** WOS:000381887800034

**Abstract:** The manufacturing of micro components is useful and necessary for eventual use in the field of MOEMS micro technologies, but, micro fabrication process inspection quality is required. The accuracy of components geometry is parameter which influences the precision of the function. Moire topography is full-field optical technique in which the contour and shape of object surfaces is measured by means of geometric interference between two identical line gratings. The technique has found various applications in diverse fields, from biomedical to industrial, scientific applications, and miniaturized instrumentation for space applications. This method of optical scanning presented in this paper is used for precision measurement deformation or absolute forms in comparison with a reference component form, of optical or mechanical micro components, on surfaces that are of the order of mm(2) and more. The optical device used allows high magnification dimensional surface inspected which allows easy processing and reaches an exceptional nanometric imprecision of measurements. This measurement technique can be used advantageously to measure the deformations generated by constraints on functional parts and the influence of these variations on the function. It can also be used for dimensional control when, for example, to quantify the error as to whether a piece is good or rubbish. It then suffices to compare a figure of moire fringes with another previously recorded from a piece considered standard, which saves time, money and accuracy. This method of control and measurement allows real time control; speed control and the detection resolution may vary depending on the importance of defects to be measured.

**Notes:** Meguellati, S. Conference on Optical Micro- and Nanometrology VI Apr 05-07, 2016 Brussels, BELGIUM SPIE, Brussels Photon Team, Res Fdn Flanders, Visit Brussels

**URL:** <Go to ISI>://WOS:000381887800034

**Reference Type: Book Section****Record Number:** 7**Author:** Messai, S. Boukerram, A. Seba, H. Ieee,**Year:** 2016**Title:** Energy-Efficient Data Collection in Grid-Based Wireless Sensor Networks Using a Mobile Sink**Book Title:** 2016 9th Ifip Wireless and Mobile Networking Conference**Pages:** 89-94**Series Title:** Joint IFIP Wireless and Mobile Networking Conference**Short Title:** Energy-Efficient Data Collection in Grid-Based Wireless Sensor Networks Using a Mobile Sink**ISBN:** 2163-4033 978-1-4673-8746-0**Accession Number:** WOS:000383221300012

**Abstract:** To save energy in Wireless Sensor Networks (WSNs) and prolong the network lifetime, many works investigate the use of one or more mobile sinks. These solutions are mainly based on organizing the network within a grid to simplify the computation of the sink trajectory. However, existing solutions do not take into account energy consumption during grid construction and do not scale when the sink has to visit every cell of the network grid. To overcome this drawback, we propose an energy-based cell-head selection combined with two sink mobility algorithms to minimize energy consumption of sensor nodes and optimize data collection. Experimentation results confirm the efficiency of our algorithms compared to two basics schemes, i.e. static sink and random sink mobility and also to the related work.

**Notes:** Messai, Sarra Boukerram, Abdellah Seba, Hamida Wmnc 9th IFIP Wireless and Mobile Networking Conference (WMNC) Jul 11-13, 2016 Colmar, FRANCE Ifip

**URL:** <Go to ISI>://WOS:000383221300012

**Reference Type: Book Section****Record Number:** 8**Author:** Sehili, F. Chennaoui, Y. Madani, S.**Year:** 2016**Title:** THE HQDIL METHOD TO ASSESS THE SUSTAINABILITY OF AN HISTORIC CENTER CASE OF MANSOURAH K'BIRA (ALGERIA)**Editor:** Naselli, F. Pollice, F. Amer, M. S.**Book Title:** Urban Planning and Architectural Design for Sustainable Development**Volume:** 216**Pages:** 570-577**Series Title:** Procedia Social and Behavioral Sciences**Short Title:** THE HQDIL METHOD TO ASSESS THE SUSTAINABILITY OF AN HISTORIC CENTER CASE OF MANSOURAH K'BIRA (ALGERIA)**ISBN:** 1877-0428**DOI:** 10.1016/j.sbspro.2015.12.023**Accession Number:** WOS:000380951700054

**Abstract:** Today several approaches are used to assess the sustainability of a country, a city, a neighborhood or a historic site in order to achieve the objectives of sustainable development. In our research, we try to apply the "HQDIL" (Heritage-Quality-Diversity-Integration-Social link) method which is structured around five sustainable development goals. Mansourah K'bira is a historic site, dating back to 1152. Although it has more than eight centuries of existence with several assets; it is not yet rated. Thus, to assess the sustainability of this site, we have agreed to link the integrated conservation interests of the built heritage to those of the sustainable development. The advantage of this method lies in its "operationality" as a tool for decision making that could be used by local authorities. The objective assigned to this research was to verify the validity of the "HQDIL" method's indicators and tools in an Algerian local context. (C) 2016 The Authors. Published by Elsevier Ltd.

**Notes:** Sehili, Farida Chennaoui, Youcef Madani, Said Upadsd Conference on Urban Planning and Architectural Design for Sustainable Development (UPADSD) Oct 14-16, 2015 Lecce, ITALY

**URL:** <Go to ISI>://WOS:000380951700054