

Documents

Behiry, I.K.^a, Abada, E.A.^{b c}, Ahmed, E.A.^b, Labeeb, R.S.^b

Enteropathogenic Escherichia coli associated with diarrhea in children in Cairo, Egypt

(2011) *TheScientificWorldJournal*, 11, pp. 2613-2619. Cited 6 times.

DOI: 10.1100/2011/485381

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Abstract

In this study we isolate and identify the Enteropathogenic Escherichia coli (EPEC) causing diarrhea in children less than five years in Cairo, Egypt, during different seasons. Children younger than five years with diarrhea, attending the Pediatric Gastroenterology Intensive Care Unit of the Cairo University Pediatric Hospital in one year period were our group of study. Our control group was age and sex matched concurrent healthy children. The identified E. coli isolates were subjected to antimicrobial disc diffusion susceptibility test and further identified for EPEC serotype by slide agglutination test, using antiserum E. coli somatic trivalent I (O111, O55, O26) according to the instructions of the manufacturer. Out of 134 patients 5.2 of them revealed EPEC in the fecal sample, while the 20 children control group showed no EPEC isolates in their samples. Our EPEC frequency showed variations from the compared results of other studies. Higher rate of EPEC (18.7) was found in patients between 2 to 3 years, while EPEC rate was (7.5) in patients less than 6 months old, with $P < 0.05$. EPEC was identified from fecal specimens as a unique pathogen or associated with other pathogens in acute and chronic diarrhea in children. EPEC were detected in all seasons except in winter, and was predominant in summer season. Four (57) EPEC isolates were resistant to ampicillin, ticarcillin, and cotrimoxazole, and (14.3) to the third generation cephalosporins. Copyright © 2011 Iman K. Behiry et al.

Author Keywords

children less than 5 years; enteropathogenic E. coli; slide agglutination test

Document Type: Article

Source: Scopus

Khalil, M.F., Shoukry, N.M., Morsy, T.A.

Corvus R. ruficollis (desert or brown necked raven): a reservoir host for zoonotic parasites in Egypt.

(2011) *Journal of the Egyptian Society of Parasitology*, 41 (3), pp. 753-764.

Department of Zoology & Entomology, Faculty of Science, Helwan University, Cairo, Egypt.

Abstract

Egypt includes many desert and rural areas. The small uptown fertile areas are placed under illegal enormous pressure of existing resources, where intensive agricultural practices are performed in combination with high population densities. The brown necked ravens (*Corvus ruficollis*) are attracted in huge numbers to such areas. The birds are omnivorous, very aggressive pest and seriously affect human welfare. The study focused on zoonotic role of ravens.

Document Type: Article

Source: Scopus

Abdel Halim, S.M.

Improving EFL majors' critical reading skills and political awareness: A proposed translation program

(2011) *International Journal of Educational Research*, 50 (5-6), pp. 336-348.

DOI: 10.1016/j.ijer.2011.11.003

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Abstract

Surveying the existing situation and considering the pilot study conducted by the researcher, it was clear that there is a problem concerning weaknesses in critical reading and translation skills aside from the lack of political awareness on the part of fourth year EFL majors at the Faculty of Education, Helwan University. The majority of students' problems laid in the fact that they do not approach critical reading and translation in a systematic, strategic way. Therefore, this study examined the effectiveness of a task-based translation program with a group of fourth-year TEFL majors. Being rooted in theoretical foundations such as Decker theory of literary instruction, and Crismore's input hypotheses, the proposed program aimed at improving students' critical reading and translation skills of expository and argumentative political texts and raising their political awareness. The results of pre- and post-intervention tests and review of written reflections by students and instructor reveal that this study project was successful in achieving its aim. Based on the results, certain recommendations are provided e.g. the relationship between translation and critical thinking/reading should be the focus in language learning. Implications and recommendations are made for similar EFL contexts. © 2011 Elsevier Ltd.

Author Keywords

Critical thinking/reading skills; Debate; Political awareness; Translation ability

Document Type: Article

Source: Scopus

Moustafa Hassan, M.^a, Mahmoud Ismail, M.^b

Using fuzzy logic algorithm for improvement of DTC three level inverter performance considering saturated model of induction motor

(2011) *SDEMPED 2011 - 8th IEEE Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives*, art. no. 6063670, pp. 503-510.

DOI: 10.1109/DEMPED.2011.6063670

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Abstract

The problem of controlling the π -model induction motor with magnetic saturation is considered in this proposed research. Direct Torque Control (DTC) of induction motor has been developed since three decades. Furthermore many techniques have been proposed to improve the performance of the induction machines that using the DTC drives in industry. However, all the previous models are based on the linear model of the machine for approximation. This is not the exact model and there is no guarantee that the process will work outside the saturation region of the flux, especially in large rating of induction machines. In this paper, multiple fuzzy logic controllers are used as a solution for improvement in the performance of the saturated model DTC controller. This is done via minimizing the speed error of the PI controller and by minimizing the torque ripples of the three level inverter. © 2011 IEEE.

Author Keywords

Direct Torque Control (DTC); Duty Ratio; Fuzzy Logic Control; Magnetically Saturated Induction Motors; Three Level Inverter

Document Type: Conference Paper

Source: Scopus

Eldosoky, M.A.A., Moustafa, H.M.

Detection of the blood leukemia by using the ultra wide band pulses

(2011) *2011 30th URSI General Assembly and Scientific Symposium, URSIGASS 2011*, art. no. 6051383, .

DOI: 10.1109/URSIGASS.2011.6051383

Dept. of Biomedical Eng., Faculty of Engineering, Helwan University, Egypt

Abstract

Ultra-wideband radar for diagnosing and detection of the tumors in the human tissue has been developed for many years. This detection includes the breast, liver and the skin tumors. This is due to the high resolution and the ability of detection and diagnosing. Detection of blood leukemia is another application of the ultra wide radar. This method minimizes the usage of the chemical process of detection. This paper presents the proposed model for detecting the blood leukemia without any aid of the chemical materials. © 2011 IEEE.

Document Type: Conference Paper

Source: Scopus

Ghanem, S.

Cloning of the nptII gene of Escherichia coli and construction of a recombinant strain harboring functional recA and nptII antibiotic resistance

(2011) *Genetics and Molecular Research*, 10 (3), pp. 1445-1454. Cited 1 time.

DOI: 10.4238/vol10-3gmr1334

Botany and Microbiology Department, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

In an attempt to clone the ORF of the nptII gene of Escherichia coli K12 (ATCC 10798), two degenerate primers were designed based on the nptII sequence of its Tn5 transposon. The nptII ORF was placed under the control of the E. coli hybrid trc promoter, in the pKK388-1 vector, transformed into E. coli DH5 α Δ recA (recombinant, deficient strain). Transferred cells were tested for ampicillin, tetracycline, kanamycin, neomycin, geneticin, paromomycin, penicillin, and UV resistance. The neomycin phosphotransferase gene of E. coli was cloned successfully and conferred kanamycin, neomycin, geneticin, and paromomycin resistance to recombinant DH5 α ; this did not inhibit insertion of additional antibiotic resistance against ampicillin and tetracycline, meaning the trc promoter can express two different genes carried by two different plasmids harbored in the same cell. This resistance conferral process could be considered as an emulation of horizontal gene transfer occurring in nature and would be a useful tool for understanding mechanisms of evolution of multidrug-resistant strains. © FUNPEC-RP.

Author Keywords

Aminoglycoside resistance; Escherichia coli; Homologous recombination gene (recA); Neomycin phosphotransferase gene (nptII)

Document Type: Article

Source: Scopus

Okb El Bab, A.S.^a, Ghany, H.A.^b, Ramadan, S.^a

On strongly negative definite functions for the product of commutative hypergroups

(2011) *International Journal of Pure and Applied Mathematics*, 72 (2), pp. 203-216. Cited 1 time.

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^b Department of Mathematics, Faculty of Industrial Education, Helwan University Al-Ameraia, Cairo, Egypt

Abstract

We study strongly negative definite functions on the product dual hypergroups and use their properties to give a proof of the Levy-khincin formula. Finally, as an application we give the Levy-khincin formula for negative definite functions defined on Jacobi polynomial hypergroups. © 2011 Academic Publications, Ltd.

Author Keywords

Hypergroup; Strongly negative definite

Document Type: Article

Source: Scopus

Ali, O.I.M.^a, Osman, H.H.^a, Sayed, S.A.^{a b}, Shalabi, M.E.H.^c

The removal of some rare earth elements from their aqueous solutions on by-pass cement dust (BCD)

(2011) *Journal of Hazardous Materials*, 195, pp. 62-67. Cited 14 times.

DOI: 10.1016/j.jhazmat.2011.08.014

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^b Ha'el University, Saudi Arabia

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Abstract

The sorption behavior of yttrium (Y 3+), neodymium (Nd 3+), gadolinium (Gd 3+), samarium (Sm 3+) and lutetium (Lu 3+) from their aqueous solutions by by-pass cement dust (BCD) has been investigated using a batch technique. The sorption on BCD was studied as a function of pH, shaking time, initial concentration, mass of BCD and temperature. It was found that the sorption capacity of BCD had the order of Lu 3+>Sm 3+>Y 3+>Gd 3+≈Nd 3+ following Freundlich isotherm at the determined optimum conditions. The results also demonstrated that the sorption data fit well the pseudo-second-order kinetic model. Thermodynamic parameters such as ΔH° , ΔS° and ΔG° indicated that the sorption of the investigated REEs on BCD was endothermic, favored at high temperature and spontaneous in nature. © 2011 Elsevier B.V.

Author Keywords

BCD; Rare earth elements; Sorption; Uptake

Document Type: Article**Source:** ScopusEl-Morsy, A.-W.^{a b}, Abouel-Kasem, A.^a**Tribological characteristics of deformed magnesium alloy AZ61 under dry conditions**(2011) *Journal of Tribology*, 133 (4), art. no. 41603, . Cited 1 time.**DOI:** 10.1115/1.4004761^a Mechanical Eng. Dept., Faculty of Eng.-Rabigh, King Abdulaziz University, P.O. Box 344, Rabigh 21911, Saudi Arabia^b Mechanical Eng. Dept., Faculty of Eng., Helwan University, Helwan, Egypt**Abstract**

The wear behavior of deformed magnesium alloy AZ61 under dry conditions was evaluated. Two types of AZ61 alloy were used, extruded and rolled samples, to investigate the effect of deformation process on the wear behavior. The experiments were performed using a pin-on-ring type wear apparatus against a stainless-steel counterface under applied stresses in the range of 3-7 MPa, and within a sliding velocity range of 0.2-1.8 m/s. The topographical images of the eroded surfaces at different sliding velocity for extruded and rolled samples were quantified using fractal analysis. The results revealed that for all applied stress, the wear rates increased with increasing the sliding velocity of both samples. The wear rate of the rolled samples is greater than that of the extruded samples at the stress range from 3 to 5 MPa. However, when the stress is increased to 7 MPa the wear rate of the rolled samples is lower than that of the extruded samples. The variation of fractal value of slope of linearized power spectral density (PSD) with the sliding velocity is largely similar to the relationship between the wear rate and the sliding velocity. © 2011 American Society of Mechanical Engineers.

Author Keywords

dry sliding wear; fractal; magnesium alloy az61, large strain deformation; second phase precipitate

Document Type: Article**Source:** Scopus

Mahmoud, K.R.

Central force optimization: Nelder-Mead hybrid algorithm for rectangular microstrip antenna design(2011) *Electromagnetics*, 31 (8), pp. 578-592. Cited 19 times.**DOI:** 10.1080/02726343.2011.621110

Helwan University, Electronics and Communications Department, Faculty of Engineering, 1 Sherif Street, Helwan 11792, Egypt

Abstract

In this article, an efficient global hybrid optimization method is proposed combining central force optimization as a global optimizer and the Nelder-Mead algorithm as a local optimizer. After the final global iteration, a local optimization can be followed to further improve the solution obtained from central force optimization. The convergence capability of the hybrid central force optimization-Nelder-Mead approach is compared with other recent evolutionary-based algorithms using 13 benchmark functions grouped into unimodal and multimodal functions. In addition, the proposed algorithm is used to calculate accurately the resonant frequency and feed-point position of rectangular microstrip patch antenna elements with various dimensions and various substrate thicknesses. It is found that, in addition to decreasing the required evaluation number and the required processing time, excellent results are obtained. © 2011 Copyright Taylor and Francis Group, LLC.

Author Keywords

central force optimization; feed position; Nelder-Mead algorithm; rectangular microstrip antenna; resonant frequency

Document Type: Article**Source:** ScopusAllam, F.^a, Nossai, Z.^b, Gomma, H.^b, Ibrahim, I.^b, Abdelsalam, M.^c**A recurrent neural network approach for predicting glucose concentration in type-1 diabetic patients**

(2011) *IFIP Advances in Information and Communication Technology*, 363 AICT (PART 1), pp. 254-259. Cited 1 time.

DOI: 10.1007/978-3-642-23957-1_29

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^c Faculty of Medicine, Ain Shams Univ., Egypt

Abstract

Estimation of future glucose concentration is important for diabetes management. To develop a model predictive control (MPC) system that measures the glucose concentration and automatically inject the amount of insulin needed to keep the glucose level within its normal range, the accuracy of the predicted glucose level and the longer prediction time are major factors affecting the performance of the control system. The predicted glucose values can be used for early hypoglycemic/hyperglycemic alarms for adjustment of insulin injections or insulin infusion rates of manual or automated pumps. Recent developments in continuous glucose monitoring (CGM) devices open new opportunities for glycemia management of diabetic patients. In this article a new technique, which uses a recurrent neural network (RNN) and data obtained from CGM device, is proposed to predict the future values of the glucose concentration for prediction horizons (PH) of 15, 30, 45, 60 minutes. The results of the proposed technique is evaluated and compared relative to that obtained from a feed forward neural network prediction model (NNM). Our results indicate that, the RNN is better in prediction than the NNM for the relatively long prediction horizons. © 2011 International Federation for Information Processing.

Author Keywords

glucose concentration prediction; neural networks; type-1 diabetes

Document Type: Conference Paper

Source: Scopus

Seliem, H.M.^a, Seracino, R.^b, Sumner, E.A.^b, Smith, S.T.^c

Case study on the restoration of flexural capacity of continuous one-way RC slabs with cutouts

(2011) *Journal of Composites for Construction*, 15 (6), pp. 992-998. Cited 3 times.

DOI: 10.1061/(ASCE)CC.1943-5614.0000232

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^b North Carolina State Univ., Dept. of Civil, Construction and Environmental Engineering, Raleigh, NC, United States

^c Univ. of Hong Kong, Dept. of Civil Engineering, Hong Kong, Hong Kong

Abstract

Introducing openings in existing reinforced concrete (RC) slabs can severely weaken the slabs because of the cut out of the concrete and reinforcing steel. This paper reports field tests on the use of carbon fiber-reinforced polymer (CFRP) composite strengthening techniques to restore the flexural capacity of RC slabs after having openings cut out in the positive moment region. The uniqueness of this study is that the tests were performed on an existing multistory RC building that was scheduled for demolition. Five tests on five different slabs were conducted using three different strengthening techniques-namely, externally bonded (EB) CFRP plates, EB CFRP plates with CFRP anchors, and near-surface mounted (NSM) CFRP strips-to determine the most effective system for strengthening. Test results showed that the three strengthening techniques increased the load-carrying capacity of the slabs with openings, with the NSM technique being more effective than the EB technique. However, the use of CFRP anchors to mechanically anchor the EB plates prevented complete detachment, and hence enabled the restoration of the slab to its full flexural capacity. © 2011 American Society of Civil Engineers.

Author Keywords

Field testing; Flexure; Openings; Slabs; Strengthening

Document Type: Article

Source: Scopus

Badr, I.^a, Gohner, P.^b

A generic simulation environment for agent-based FMS scheduling

(2011) *IEEE International Conference on Industrial Informatics (INDIN)*, art. no. 6034924, pp. 465-470.

DOI: 10.1109/INDIN.2011.6034924

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^b Institute of Industrial Automation and Software Engineering, University of Stuttgart, Germany

Abstract

Manufacturing scheduling is a classical optimization problem which is associated with high computational complexity causing low reactivity of conventional solutions. Scheduling for flexible manufacturing systems (FMSs) has to be performed dynamically with good reactivity and flexibility to adapt to the changing customer requirements. Agent-based scheduling is strongly advocated to tackle this challenge of combining the efficiency of the generated schedules with the flexibility of the scheduling process. The wide adoption of agent-based scheduling is hindered by the lack of simulation-based evaluation techniques. In this paper, a generic simulation environment for agent-based FMS scheduling is proposed. Details about the generation of dynamic FMS models and linking them to an agent-based scheduling framework, described in previous work, are given. By applying this generic simulation environment, the behavior of agent-based scheduling can be assessed for different shop floor control settings. © 2011 IEEE.

Document Type: Conference Paper

Source: Scopus

Haggag, E.G.^a, Kamal, A.M.^a, Abdelhady, M.I.S.^a, El-Sayed, M.M.^b, El-Wakil, E.A.^b, Abd-El-Hamed, S.S.^b

Antioxidant and cytotoxic activity of polyphenolic compounds isolated from the leaves of *Leucenia leucocephala* (2011) *Pharmaceutical Biology*, 49 (11), pp. 1103-1113. Cited 5 times.

DOI: 10.3109/13880209.2011.568623

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Abstract

Context: Cancer is a serious clinical problem to the health care system. Anticancer drugs have been extracted from plants containing phenolic compounds. *Leucenia* species (Fabaceae) contain a variety of bioactive components of numerous biological and pharmacological properties. Objective: This study explored the constitutive polyphenols of *Leucenia leucocephala* Lam. growing in Egypt and evaluated the antioxidant and cytotoxic activity. Materials and methods: Chemical structures of the isolated compounds from the leaves of *L. leucocephala* were established by spectral techniques (UV, 1H, and 13C NMR, MS). Results: Chromatographic separation of 80% MeOH extract of the leaves of *L. leucocephala* have resulted in a novel flavonoid-galloyl glycoside [myricetin 3-O-(2',3'4'-tri-O-galloyl)- α -l-rhamnopyranoside] with three known polyphenolic compounds isolated for the first time from this species (apigenin 7-O- β -d-glucuronopyranoside methyl ester, luteolin 7-O- β -d-glucuronopyranoside methyl ester, and 1,3,6-tri-O-galloyl- β -d-glucopyranose) and seven known previously isolated compounds. Also, 80% methanol extract exhibited high antioxidant activity (SC50=3.94 g/ml), which is correlated with its phenolic content. The extract also showed cytotoxic activity against Hep G2 (IC50 value 1.41 g/ml) confirming its anticancer activity against hepatocellular carcinoma. Among the tested compounds (48) for antioxidant property, compound 7 was the most active compound (SC50=2.49 g/ml). Also compounds 7 and 8 exhibited high cytotoxic activity (IC50=2.41 and 2.81 g/ml, respectively). Discussion and conclusion: These findings demonstrate that the leaves of *L. leucocephala* contain a considerable amount of polyphenolic compounds with high antioxidant properties, thus it has great potential as a source for natural health products. © 2011 Informa Healthcare USA, Inc.

Author Keywords

Acacia; Anticancer activity; Fabaceae; Flavonoid glycosides; Free radical scavenger; Tannins

Document Type: Article

Source: Scopus

Mourad, M.M.^a, El-Salmawy, A.^b, Almetwall, A.A.^c

Core spun yarn and the secret behind its popular appeal (2011) *Textile Asia*, 42 (10), pp. 41-43.

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^b Design and Technology Department, Helwan University, Cairo, Egypt

^c Textile Engineering Department, National Research Center, Dokki, Cairo, Egypt

Document Type: Article

Source: Scopus

Osman, M.E.^a, Ahmed, F.A.H.^b, Abd El All, W.S.M.^b

Antibiotic production from local *Streptomyces* Isolates from Egyptian soil at Wadey El-Natron II: Novel antibiotic identification produced by *Streptomyces plicatus* (2011) *Australian Journal of Basic and Applied Sciences*, 5 (11), pp. 1906-1910.

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^b National Organization for Drug Control and Research (NODCAR), Giza, Egypt

Abstract

A highly active antibiotic was extracted from the fermentation broth of *Streptomyces plicatus* which isolated from Wadey El-Natron salt lacks. The antibiotic was extracted with n-butanol at pH 8 and purified by thin layer chromatography using petroleum ether (60-80). The physicochemical properties of this compound indicated that the UV absorption spectra showed one absorption band at 453 nm and mass spectra and the formula is C₁₆H₁₅N₅O₂, molecular weight is 309 and according to the revealed structure the compound could be named 1,6 Diamino-2-oxo-4 (4- propoxyphenyl) 1,2 dihydro pyridine-3, 5 dicarbonitrile. It shows wide antimicrobial spectrum against bacteria and fungi. In addition the antimicrobial agent belong to the aminoglycoside group and produced under the following condition: incubation period 96 hours with agitation (180 rpm) and at 28°C. As far as the authors are aware, this the first time to obtain this novel compound from *S. plicatus* which proven its high antimicrobial activity against the tested microorganisms.

Author Keywords

Antibiotic; Egyptian soil; Local *Streptomyces* Isolates

Document Type: Article

Source: Scopus

El-Nezhawy, A.O.H.^{a c}, Adly, F.G.^a, Eweas, A.F.^{b c}, Hanna, A.G.^a, El-Kholy, Y.M.^d, El-Syed, S.H.^d, El-Naggar, T.B.A.^e

Design, synthesis and antitumor activity of novel D-Glucuronic acid derivatives
(2011) *Medicinal Chemistry*, 7 (6), pp. 624-638.

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^c Pharmaceutical Chemistry Department, College of Pharmacy, Taif University, Taif, Saudi Arabia

^d Chemistry Department, Faculty of Science, Helwan University, Egypt

^e Pharmacology Department, Faculty of Pharmacy, Complutense University, Spain

Abstract

A series of D-glucuronic acid derivatives were chemically synthesized including acetylated and deacetylated glucuronamides, as well as N-glucuronides starting from the D-glucuronic acid itself by means of protection/deprotection, activation and condensation protocols. Structure elucidation of all products along with optimization of the synthetic steps is described. The synthesized compounds were evaluated for their in vitro antitumor activity against MCF-7, TK-10 and UACC-62 cell lines. The compounds 4, 5, 7, 8, 14, 16 and 18 were the most active against TK-10 cell line. On the other hand, the most active compounds against the MCF-7 cell line were 9, 18 and 20. However, compounds 7-10 13-15 and 17 were the most active against the UACC-62 cell line. © 2011 Bentham Science Publishers.

Author Keywords

Amide linkage; Antitumor; D-glucuronamide; D-glucuronic acid; MCF-7; TK-10; UACC-62

Document Type: Article

Source: Scopus

Shabana, Y.M.^a, Ristinmaa, M.^b

Micromechanical modeling of smart composites considering debonding of reinforcements
(2011) *International Journal of Solids and Structures*, 48 (22-23), pp. 3209-3216. Cited 3 times.

DOI: 10.1016/j.ijsolstr.2011.07.011

^a Mechanical Design Department, Faculty of Engineering, El-Matara, Helwan University, P.O. Box 11718, Cairo, Egypt

^b Division of Solid Mechanics, Lund University, P.O. Box 118, 221 00 Lund, Sweden

Abstract

Using the information of the microstructure, this paper presents the development of an incremental constitutive law governing the response of an electro-magneto-thermo-mechanical smart composite. In this development, different shapes of reinforcements that have magneto-electro-thermo-elastic properties that differ from the matrix material are

considered. Shapes such as ellipsoidal (spherical, prolate and oblate) particles, elliptical and circular cylindrical fibers, disk and ribbon can be treated provided that the corresponding Eshelby tensor is used. The debonding of the reinforcements from the matrix is also a part of the microscopic process considered. The developed incremental constitutive law not only predicts the macroscopic and microscopic electro-magneto-thermo-mechanical-elastic behavior of composites while considering the debonding process, but it also characterizes their different macroscopic effective properties such as permittivity, permeability, stiffness moduli, pyroelectricity, pyromagnetivity and thermal expansion coefficient in different directions. Moreover, the developed constitutive law is applicable to porous materials and composites with multiple reinforcements and porosities. In the two examples considered below, particular attention is devoted to assessing the effects of both the shape and the concentration of the inclusion and/or porosity and the damage evolution on the multiphysical microscopic and macroscopic behaviors and the effective properties. The first example sheds light on obtaining the macroscopic effective properties, taking into account the piezoelectric BaTiO₃ continuous fibers embedded in the piezomagnetic CoFe₂O₄ matrix. While in the second example, mechanical loading is considered, epoxy is taken as the matrix material and the response of the composite is presented while the evolution of damage in terms of debonding is taking place. © 2011 Elsevier Ltd. All rights reserved.

Author Keywords

Debonding damage; Electro-magneto-thermo-mechanical properties; Macroscopic and microscopic behaviors; Micromechanical modeling; Porosity; Smart composites

Document Type: Article

Source: Scopus

Farid, T.M.^a, Salah, A.^b, Abbas, D.^c

Design of optimal linear suspension for quarter car with human model using genetic algorithms

(2011) *Journal of Applied Sciences Research*, 7 (11), pp. 1709-1720. Cited 2 times.

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^c Engineering Physics and Mathematics Department, Faculty of Engineering (Mataria), Helwan University, Cairo, Egypt

Abstract

Ride comfort is the most important demand in vehicle industry as it directly affects the sales amount. For that reason a lot of effort had been made to improve ride comfort by isolating vehicle from road irregularities as much as possible. The desired objective is proposed as the minimization of a seat suspension deflection, seat body acceleration and human body head acceleration, by choosing optimal vehicle suspension parameters. This paper presents an optimization of a four-degrees-of-freedom (4-DOF) vehicle's human with seat suspension system using genetic algorithms (GA) to determine vehicle suspension parameters to achieve the best comfort of the human body. Maximum allowed vertical acceleration of the human body and the suspension working space were used as constrained limits in this study. The genetic algorithm is applied to solve the optimization problem. The optimization results are compared through step and sinusoidal excitation of the seat suspension system for the optimal and currently used suspension systems. In case of sinusoidal profile excitation, results showed that root mean square (RMS) acceleration of the driver, seat suspension working space and sprung mass are reduced by about 21%, 21.5% and 20.3%, respectively. At step profile excitation, RMS acceleration of the driver, seat suspension working space and sprung mass are reduced by about 24%, 24.98% and 7.15%, respectively. The optimal design parameters of the suspension systems obtained are $k_s = 10039$ N/m and $c_s = 900$ N.s/m in case of sinusoidal input and $k_s = 10030$ N/m and $c_s = 913$ N.s/m in case of step input, respectively.

Author Keywords

Biodynamic response; Genetic algorithms; Ride-comfort; Simulation

Document Type: Article

Source: Scopus

Abdelfattah, M.S.^a, Kazufumi, T.^b, Ishibashi, M.^b

New pyranonaphthoquinones and a phenazine alkaloid isolated from *Streptomyces* sp. IFM 11307 with TRAIL resistance-overcoming activity

(2011) *Journal of Antibiotics*, 64 (11), pp. 729-734. Cited 11 times.

DOI: 10.1038/ja.2011.85

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^b Graduate School of Pharmaceutical Sciences, Chiba University, 1-33 Yayoi-cho, Inage-ku, Chiba 263-8522, Japan

Abstract

Four new pyranonaphthoquinones (1-4) were isolated from the liquid culture of *Streptomyces* sp. IFM 11307. Additionally, one new phenazine derivative (5), along with the known phenazine-1,6-dicarboxylic acid (6) were identified. The chemical structure of compounds 1-6 was elucidated by 1D and 2D NMR spectroscopy together with CD spectral analysis. Compounds 1-4 significantly overcame tumor necrosis factor-related apoptosis-inducing ligand resistance in human gastric adenocarcinoma cell lines. © 2011 Japan Antibiotics Research Association All rights reserved.

Author Keywords

Phenazine; Pyranonaphthoquinones; *Streptomyces*; TRAIL

Document Type: Article

Source: Scopus

Shabara, R.M.^a, Yehia, S.Z.^b, Aly, S.H.^a

Pressure-induced phase transitions, electronic and magnetic properties of GdN
(2011) *Results in Physics*, 1 (1), pp. 30-35. Cited 1 time.

DOI: 10.1016/j.rinp.2011.08.001

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^b Department of Physics, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

The electronic, magnetic and elastic properties of GdN in its three possible crystal structures: rock salt (RS), cesium chloride (CsCl), and zinc blende (ZB) are calculated using the ab-initio local spin density (LSDA) and the generalized gradient (GGA) approximations within the frame work of the density functional theory (DFT). We have performed our calculation at ambient ($P = 0$ GPa) and higher hydrostatic pressures; in order to study the effect of pressure on the physical properties and to predict possible pressure-induced crystallographic phase transitions. Three such transitions are predicted at -9.4, 113, and 23 GPa in the GGA approximation. Both LSDA and GGA calculations predicted that the ZB structure is half-metal and that the CsCl structure is metallic at ambient pressure. © 2011 Elsevier B.V.

Author Keywords

Bulk modulus; Half-metallicity; Magnetic moment; Pressure-induced phase transition; Rare-earth nitrides

Document Type: Article

Source: Scopus

Khalil, A.^a, Fatouh, M.^b, Elgendy, E.^b

Ejector design and theoretical study of R134a ejector refrigeration cycle
(2011) *International Journal of Refrigeration*, 34 (7), pp. 1684-1698. Cited 10 times.

DOI: 10.1016/j.ijrefrig.2011.01.005

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Abstract

In the present paper, a mathematical model is developed to design R134a ejector and to predict the performance characteristics of a vapor jet refrigeration system over a wide range of the investigated parameters. These parameters include boiling temperature (65-85 °C), condensing temperature (25-40 °C), evaporating temperature (0-10 °C), degrees of superheat (0-15 °C), nozzle efficiency (0.75-0.95) and diffuser efficiency (0.75-0.95). Simulated results showed that the present model data are in good agreement with experimental data in the literature with an average error of 6%. It is found that the ejector area ratio at boiling temperature of 85 °C is about double that at boiling temperature of 65 °C for various evaporating and condensing temperatures. The present results confirm that waste heat sources of temperature ranging from 65 to 85 °C are adequate to operate vapor jet refrigeration system for air-conditioning applications. © 2010 Elsevier Ltd and IIR. All rights reserved.

Author Keywords

Air conditioning; Design; Ejector; Modelling; Performance; R134a; System

Document Type: Article

Source: Scopus

Dkhil, M.A.^{a b}, Danfour, M.A.^c, Al-Quraishy, S.^a

Sperm function is affected by the electromagnetic radiation emitted by mobile phone
(2011) *African Journal of Microbiology Research*, 5 (27), pp. 4896-4900. Cited 2 times.

DOI: 10.5897/AJMR11.865

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^b Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

^c Department of Physiology, Faculty of Medicine, 7th of October University, Misurata, Libyan Arab Jamahiriya

Abstract

The use of mobile phone has become more widespread, concerns have mounted regarding the potentially harmful effects of the electromagnetic radiation (EMR) emitted from it. The current study aimed to investigate the effect of the EMR emitted by mobile phone on sperm function. Semen samples were subjected to swim up then separated into two groups. The first group acted as a control group which was unexposed to the electromagnetic radiation. The second group was exposed to radiation emitted by a mobile phone at a distance of 5 cm. Semen parameters were improved after swim up in FertiCult™ IVF medium. Our results showed a significant decrease in sperm function as indicated by a decrease in sperm vitality and viability as well as sperm motility. Sperm cells exposed to the EMR emitted by mobile phones, will become weakened. Sperm cells exposed to EMR may start functioning poorly and this means that a potential decrease in male fertility. © 2011 Academic Journals.

Author Keywords

Electromagnetic radiation and sperm function; Mobile phone

Document Type: Article

Source: Scopus

Hafez, A.G.^{a b}, Ghamry, E.^{a c}

Automatic detection of geomagnetic sudden commencement via time-frequency clusters
(2011) *Advances in Space Research*, 48 (9), pp. 1537-1544. Cited 6 times.

DOI: 10.1016/j.asr.2011.05.025

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^c Space Weather Monitoring Center (SWMC), Helwan University, Ain Helwan 11795, Egypt

Abstract

One of global processes in ionosphere-thermosphere-magnetosphere system is the geomagnetic storms. It is of great importance to develop an algorithm that auto-detects sudden commencement because it could be an indicator of onset of the geomagnetic storm. Automatic detection of geomagnetic sudden commencement is based on time-frequency clusters generated by spectrogram. Proposed algorithm is tested on data set collected from stations belong to the international real-time magnetic observatory network (INTERMAGNET). Maximum standard deviation of algorithm detection times is observed to be one minute of the corresponding arrival times published by National Geophysical Data Center (NGDC). © 2011 COSPAR. Published by Elsevier Ltd. All rights reserved.

Author Keywords

Automatic detection; INTERMAGNET; SC timing; Spectrogram; Sudden commencement; Wavelet

Document Type: Article

Source: Scopus

Hassanin, H.^{a b}, Jiang, K.^a

Multiple replication of thick PDMS micropatterns using surfactants as release agents
(2011) *Microelectronic Engineering*, 88 (11), pp. 3275-3277. Cited 8 times.

DOI: 10.1016/j.mee.2011.06.027

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Abstract

This paper introduces a simple approach for accurate replication of PDMS thick mould from previous PDMS replicas.

The process starts with reinforcing the PDMS mould to provide enough strength for demoulding. Afterwards, the surface of the reinforced PDMS mould was treated with low concentration commercial ceramic surfactants before the replication process. The surfactants are D-3005 and Brij52 and diluted before use. A number of PDMS mould copies have been obtained with excellent dimensional precision. The proposed ceramic surfactants shown to have a good releasing ability, which enabled a clean separation process. © 2011 Elsevier B.V. All rights reserved.

Author Keywords

PDMS; Release agent; Replica

Document Type: Article

Source: Scopus

Abdelhafez, O.M.^a, Amin, K.M.^b, Ali, H.I.^c, Maher, T.J.^d, Batran, R.Z.^a

Dopamine release and molecular modeling study of some coumarin derivatives

(2011) *Neurochemistry International*, 59 (6), pp. 906-912. Cited 4 times.

DOI: 10.1016/j.neuint.2011.08.004

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^b Pharmaceutical Chemistry Dept., Faculty of Pharmacy, Cairo University, Egypt

^c Pharmaceutical Chemistry Dept., Faculty of Pharmacy, Helwan University, Egypt

^d Massachusetts College of Pharmacy and Health Science, Boston University, Boston, MA, United States

Abstract

4-aryl-2-amino-6-(4-hydroxy-2-oxo-2H-chromen-3-yl)-pyridin-3-carbonitrile (1), 4-aryl-2-oxo-6-(4-hydroxy-2-oxo-2H-chromen-3-yl)-pyridin-3-carbonitriles (2a-2c), 3-(6-aryl-1,2,5,6-tetrahydro-2-thioxopyrimidin-4-yl)-4-hydroxy-2H-chromen-2-one (3a, 3b) and pyrazol-3-yl-4-hydroxycoumarin derivatives (4a-4c, 5, 6a, 6b, 7a, 7b, and 8a-8c) were prepared in order to measure their % change dopamine release in comparison to amphetamine as reference, using PC-12 cells in different concentrations. In addition, the molecular modeling study of the compounds into 3BHH receptor was also demonstrated. The calculated inhibition constant (k_i) implemented in the AutoDock program revealed identical correlation with the experimental results to that obtained binding free energy (ΔG_b) as both parameters revealed reasonable correlation coefficients (R^2) being 0.51 involving 10 compounds; (1, 2b, 2c, 3a, 3b, 4a, 4b, 6a, and 8c). © 2011 Elsevier B.V. All rights reserved.

Author Keywords

Coumarin; Dopamine release; Molecular modeling

Document Type: Article

Source: Scopus

Abdel Moneim, A.E.^a, Dkhil, M.A.^{a b}, Al-Quraishy, S.^b

The protective effect of flaxseed oil on lead acetate-induced renal toxicity in rats

(2011) *Journal of Hazardous Materials*, 194, pp. 250-255. Cited 22 times.

DOI: 10.1016/j.jhazmat.2011.07.097

^a Department of Zoology and Entomology, Faculty of Science, Helwan University, Cairo, Egypt

^b Department of Zoology, College of Science, King Saud University, Riyadh, Saudi Arabia

Abstract

Lead is a toxic metal inducing many destructive effects leading to a broad range of physiological, biochemical, and neurological dysfunctions in humans. Here, we investigated the effects of flaxseed oil (1000. mg/kg) on the outcome of renal cytotoxicity induced by lead acetate (20. mg/kg) in male rats. Lead induced injury of the renal tissue. This was evidenced (i) as increases in lead concentration in the kidney, (ii) as increases in the histopathological damage of the renal tissue, (iii) as increases in uric acid, urea and creatinine, (iv) as increases in lipid peroxidation, nitric oxide and reactive oxygen species, and (v) as lowered glutathione levels and decreased activities of catalase and superoxide dismutase, glutathione reductase, glutathione-S-transferase, and glutathione peroxidase, respectively. All these lead-induced parameters were significantly altered during flaxseed oil treatment. Therefore, our study suggests the role of flaxseed oil in limiting renal cytotoxicity-induced by lead acetate as a model for lead toxicity. © 2011 Elsevier B.V.

Author Keywords

Antioxidants enzymes; Flaxseed oil; Lead acetate; Renal tissue

Document Type: Article

Source: Scopus

Belal, N.M.

Hepatoprotective effect of feeding celery leaves mixed with chicory leaves and barley grains to hypercholesterolemic rats

(2011) *Asian Journal of Clinical Nutrition*, 3 (1), pp. 14-24. Cited 4 times.

DOI: 10.3923/ajcn.2011.14.24

Department of Nutrition and Food Science, Faculty of Home Economics, Helwan University, Egypt

Abstract

Celery, Chicory leaves and Barley grains are valuable in weight loss diets and regulate lipid metabolism. They may reduce risk of fatty liver. The present study aimed to investigate the effect of diet supplementation with celery, chicory and barley powder on liver enzymes and blood lipids in rats fed cholesterol enriched diet. In this study used four groups of rats fed 3% cholesterol were supplemented diet to induce hypercholesterolemia and one group was fed on cholesterol free basal diet. The dry powder of celery leaves, chicory leaves and barley grains was separately added to the basal diet at 10% concentration or in combination of three plants at 15% for four weeks. Biochemical analyses of serum liver enzymes and blood lipids as well as histopathological examination of liver were performed. Feeding of diet supplemented lowered the elevated serum level of liver enzymes and blood lipids in rats. While, feeding plant combination of celery, chicory and barley at 15% concentration (5% from each) was more effective in decreased the elevating of liver enzymes (AST, ALT and ALB), lowered blood lipids. The histopathological lesions seen in the livers of hypercholesterolemic rats were ameliorated by feeding this plant mixture. This study recommends that dietary intake of plant mixture concentration can be beneficial to patients suffering from hypercholesterolemia and liver diseases. © 2011 Asian Network for Scientific Information.

Author Keywords

Barley; Biochemical analysis; Celery; Chicory; Hypercholesterolemia

Document Type: Article

Source: Scopus

Rashad, M.M.^a, Roshdi, R.^a, El-Barawy, K.^a, Kandil, A.T.^b

Controlling the conditions for synthesis of strontium titanate nanopowders from celestite ore

(2011) *Transactions of the Institutions of Mining and Metallurgy, Section C: Mineral Processing and Extractive Metallurgy*, 120 (3), pp. 156-161. Cited 1 time.

DOI: 10.1179/1743285511Y.0000000015

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Abstract

Strontium titanate SrTiO₃ nanopowders have been successfully prepared through oxalate precursor route using Egyptian celestite ore. Celestite ore was reduced with the carbon at the annealed temperature of 1100°C for 3 h to obtain water soluble strontium sulphide that treated with a dilute hydrochloric acid to produce strontium chloride. The formed strontium chloride and titanium dioxide were mixed with a certain amount of oxalic acid to form strontium titanium oxalate complexing precursors. The effect of oxalic acid molar ratio, annealing temperature, time and hydrogen peroxide additive on the crystal structure, crystallite size and microstructure was systematically studied. The results revealed that a well crystallite single phase of SrTiO₃ nanopowders was achieved in the presence of hydrogen peroxide using 1.5 molar ratio of oxalic acid at the annealing temperature of 1000°C for 1 h. The crystallite size of the formed powders increased with increasing annealing temperature and time. The crystallite size was in the range between 50 and 80 nm. The SEM images of the formed SrTiO₃ particles appeared as cube-like structure. The band gap energy and the direct current resistivity of the produced powders were ~3.6 eV and 4.4036104 σ m respectively for the sample in the presence of 10% hydrogen peroxide annealed at 1000°C for 2 h. © 2011 Institute of Materials.

Author Keywords

Nanomaterials; Optical and electrical properties; Ores; Strontium titanate; Wet chemicals methods

Document Type: Article

Source: Scopus

Ezz-Din, D.^a, Gabry, M.S.^a, Farrag, A.R.H.^b, Abdel Moneim, A.E.^a

Physiological and histological impact of Azadirachta indica (neem) leaves extract in a rat model of cisplatin-induced hepato and nephrotoxicity

(2011) *Journal of Medicinal Plant Research*, 5 (23), pp. 5499-5506. Cited 8 times.

^a Department of Zoology and Entomology, Faculty of Science, Helwan University, Cairo, Egypt

^b Department of Pathology, Medical Research Division, National Research Centre, Cairo, Egypt

Abstract

This study investigated the protective effect of *Azadirachta indica* (neem) leaves against cisplatin-induced hepato and nephrotoxicity. Neem leaves showed significant protection as evidenced by the decrease of elevated serum alanine aminotransferase, aspartate aminotransferase, gamma glutamyl transpeptidase, alkaline phosphatase, total bilirubin, creatinine, uric acid and urea. This improvement of physiological function was associated with high protection against histopathological injury induced by cisplatin on liver and kidney. These results suggest that neem leaves pre, co and post-treatment can prevent the hepato and nephrotoxicity induced by cisplatin.

Author Keywords

Azadirachta indica; Cisplatin; Kidney; Liver; Rats

Document Type: Article

Source: Scopus

El-Teleity, S.A.-L.^a, Nossair, Z.B.^b, Abdel-Kader Mansour, H.M.^a, TagElDein, A.^c

Fuzzy logic control of an autonomous mobile robot

(2011) *2011 16th International Conference on Methods and Models in Automation and Robotics, MMAR 2011*, art. no. 6031342, pp. 188-193. Cited 3 times.

DOI: 10.1109/MMAR.2011.6031342

^a Department of Communications and Electronics, Shouba Faculty of Engineering, Benha University, Cairo, Egypt

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^c Department of Electrical Engineering, Benha University, Cairo, Egypt

Abstract

Navigation of autonomous mobile robots in unpredictable and dynamic environments is restricted by uncertainty, complexity, and unreliability issues of robots and their environments. In this context a navigation system for an autonomous mobile robot using intelligent fuzzy logic technique will be presented. Fuzzy logic control is able to emulate human experience about how best to control a system without needing accurate model equations, and can handle any perturbation in the system. A hierarchical behavior based control strategy has been devised in which four different reactive behaviors are combined by means of a fuzzy supervisor. For testing and validation, many simulations have been proposed which focus on: moving towards static or movable goal; escaping from local minima whenever it's detected; and traversing a cluttered environment with unknown static and dynamic obstacles. © 2011 IEEE.

Document Type: Conference Paper

Source: Scopus

Saad, E.M.^a, Bardawiny, E.L.^b, Ali, H.I.^a, Shawky, N.M.^a

Improving data association based on finding optimum innovation applied to nearest neighbor for multi-target tracking in dense clutter environment

(2011) *International Journal of Circuits, Systems and Signal Processing*, 5 (4), pp. 322-332. Cited 1 time.

^a Electronics and Communication Engineering Department, University of Helwan, Egypt

^b Radar.Department, M.T.C.College, Cairo, Egypt

Abstract

In this paper, a new method, named optimum innovation data association (OI-DA), is proposed to give the nearest neighbor data association the ability to track maneuvering multitarget in dense clutter environment. Using the measurements of two successive scan and depending on the basic principle of moving target indicator (MTI) filter, the proposed algorithm avoids measurements in the gate size of predicted target position that are not originated from the target and detects the candidate measurement with the lowest probability of error. The finding of optimum innovation corresponding to the candidate valid measurement increases the data association performance compared to nearest neighbor (NN) filter. Simulation results show the effectiveness and better performance when compared to conventional algorithms as Nearest Neighbor Kaman Filter (NNKF), Joint Probabilistic Data Association Algorithm (JPDA).

Author Keywords

Data Association; Joint Probabilistic Data Association Algorithm (JPDA); Moving Target Indicator (MTI) Filter; Multi-Target Tracking (MTT); Nearest Neighbor Kaman Filter (NNKF)

Document Type: Article

Source: Scopus

Yehia, H.M.^a, Elkhadragy, M.F.^b, Abdel Moneim, A.E.^b

Antimicrobial activity of pomegranate rind peel extracts

(2011) *African Journal of Microbiology Research*, 5 (22), pp. 3664-3668. Cited 4 times.

^a Department of Food Science and Nutrition, College of Food and Agriculture Sciences, King Saud University, Al-Riyadh, KSA, Saudi Arabia

^b Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

Abstract

The pomegranate, *Punica granatum* L., is an ancient, mystical, unique fruit borne on a small, long-living tree cultivated throughout the Mediterranean region. Pomegranate is used in several systems of medicine for a variety of ailments. The synergistic action of the pomegranate constituents appears to be superior to that of single constituents. *P. granatum*, have been reported to have antimicrobial activity against a range of Gram positive and negative bacteria. Pomegranate formulations containing ferrous salts have enhanced although on short-term. The aim of this experiment is to determine the antimicrobial activities of combinations of pomegranate rind extract with range of metal salts with the addition of vitamin C. Phytochemical analyses was made to determine the active inhibitors in rind extract, including phenolics and flavonoids. © 2011 Academic Journals.

Author Keywords

Antimicrobial activity; Flavonoids; Phenolics; Pomegranate rind extract

Document Type: Article

Source: Scopus

Saaied, M.M.^a, Nossair, Z.B.^b, Tawfik Hanna, M.^c

An image watermarking scheme based on multiresolution analysis

(2011) *Midwest Symposium on Circuits and Systems*, art. no. 6026418, .

DOI: 10.1109/MWSCAS.2011.6026418

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^b Department of Communications Engineering, Helwan University, Helwan, Egypt

^c Department of Engineering Mathematics and Physics, Fayoum University, Fayoum 63514, Egypt

Abstract

A robust blind image-watermarking algorithm is proposed. The proposed algorithm is based on both the Discrete Wavelet Transform (DWT) and the Wavelet Packet Transform (WPT). The main idea of the proposed algorithm is to decompose the host image using DWT and WPT according to the size of the watermark. The watermark is embedded in the fine-scale bands of the WPT of the fine-scale bands of the last DWT decomposition level of the host image. Each pixel in the watermark is split into three parts, and the One-Bit per Coefficient (OBC) approach is applied for embedding the pixel. The final step is to compute the inverses - IWPT and IDWT - to obtain the watermarked image. In this algorithm, the obtained watermarked image has high Peak Signal to Noise Ratio (PSNR) and the extracted watermark has very high Normalized Correlation (NC). The proposed algorithm is robust to a variety of signal operations. © 2011 IEEE.

Author Keywords

Digital watermark; Discrete Wavelet Transform (DWT); Image processing; One Bit per Coefficient (OBC) approach; Wavelet Packet Transform (WPT)

Document Type: Conference Paper

Source: Scopus

Darwish, A.^{a b}, Abraham, A.^{c d}

The use of computational intelligence in digital watermarking: Review, challenges, and new trends

(2011) *Neural Network World*, 21 (4), pp. 277-297. Cited 2 times.

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^c Faculty of Electrical Engineering and Computer Science, VSB, Technical University of Ostrava, Ostrava - Poruba, Czech Republic

^d Machine Intelligence Research Labs (MIR Labs), Scientific Network for Innovation and Research Excellence, Seattle, WA, United States

Abstract

Digital Watermarking (DW) based on computational intelligence (CI) is currently attracting considerable interest from the research community. This article provides an overview of the research progress in applying CI methods to the problem of DW. The scope of this review will encompass core methods of CI, including rough sets (RS), fuzzy logic (FL), artificial neural networks (ANNs), genetic algorithms (GA), swarm intelligence (SI), and hybrid intelligent systems. The research contributions in each field are systematically summarized and compared to highlight promising new research directions. The findings of this review should provide useful insights into the current DW literature and be a good source for anyone who is interested in the application of CI approaches to DW systems or related fields. In addition, hybrid intelligent systems are a growing research area in CI. © ICS AS CR 2011.

Author Keywords

Artificial neural networks; Computational intelligence; Digital Watermarking; Fuzzy logic; Fuzzy-neural systems; Genetic algorithms; Genetic-fuzzy systems; Genetic-swarm systems; Rough sets; Swarm intelligence

Document Type: Review

Source: Scopus

Okb El Bab, A.S.^a, Ghany, H.A.^b, Ramadan, S.^a

On strongly negative definite functions for the product of commutative hypergroups

(2011) *International Journal of Pure and Applied Mathematics*, 71 (4), pp. 581-594. Cited 5 times.

^a Department of Mathematics, Faculty of Science, Al Azhar University, Naser City, Cairo, Egypt

^b Department of Mathematics, Faculty of Industrial Education, Helwan University, Al-Ameraia, Cairo, Egypt

Abstract

We study strongly negative definite functions on the product dual hypergroups and use their properties to give a proof of the Lévy- khiněin formula. Finally, as an application we give the Lévy-khiněin formula for negative definite functions defined on Jacobi polynomial hypergroups. © 2011 Academic Publications, Ltd.

Author Keywords

Commutative hypergroup; Convolution structure; Harmonic analysis; Hypergroup; Semicharacter; Strongly negative definite functions

Document Type: Article

Source: Scopus

Hassan, M.M.^a, Ismail, M.M.^b

Speed estimation using ANFIS with the adaptive controller of magnetically saturated induction motor

(2011) *Proceedings of the 2011 14th European Conference on Power Electronics and Applications, EPE 2011*, art. no. 6020666, .

^a Faculty of Engineering, Cairo University, Giza, Egypt

^b Faculty of Engineering, Helwan University, Cairo, Egypt

Abstract

The problem of controlling the π -model induction motor with magnetic saturation is considered in this proposed research. The speed sensorless using Adaptive Neuro Fuzzy Inference Systems (ANFIS) technique will be used for the adaptive controller with stator current and speed measurement. This proposed research introduces the use of ANFIS technique for motor speed estimation, so there is no need of speed sensor which can reduce the cost than the old method with the classical estimation of any deviation in rotor resistance and load torque. A comparison study is illustrated between the new proposed method and with the previous works that done with speed measurement, which depends on stator currents and speed measurements. All the unknown parameters are assumed constant or slowly varying and are estimated online by the controller. Simulation results are provided for illustration. The proposed technique shows promising results © 2011 EPE Association - European Power Electr.

Author Keywords

Adaptive Control; Adaptive Neuro Fuzzy Inference Systems (ANFIS); Artificial Neural Networks (ANN); Magnetically Saturated Motor; Sensorless Speed Measurement

Document Type: Conference Paper

Source: Scopus

Moustafa, N.A.

Analysis of the optimal condition of differential digital speckle pattern inteferometry

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (10), pp. 513-519.

Department of Physics, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

A theoretical investigation of the optimal signal processing in DDSPI using the double reference beam technique is presented. Optical noise is taken care of, and the optimum of DDSPI with regard to reference/object-ratio is found. The dependence of the optimal reference to object intensity ratio on spurious noise patterns in the reference beam is given.

Author Keywords

Comparative measurement; Difference correlation fringes; Fringe signal; Speckle interferometry; Speckle pattern

Document Type: Article

Source: Scopus

Hassan, Y.M.E.

Surgical gowns and their protective qualities

(2011) *Textile Asia*, 42 (9), pp. 29-32.

Apparel Design and Technology Department, Faculty of Applied Arts, Helwan University, Cairo, Egypt

Document Type: Article

Source: Scopus

Sobaih, A.E.E.

Half job-half training? Management perceptions of part-time employee training in the hospitality industry

(2011) *Journal of Human Resources in Hospitality and Tourism*, 10 (4), pp. 400-420. Cited 2 times.

DOI: 10.1080/15332845.2011.588563

Faculty of Tourism and Hospitality Management, Helwan University, 1 Abd-Soaood, Manial Elroda, Cairo, Egypt

Abstract

The author used a qualitative research approach in this study to investigate why hospitality managers provide fewer training opportunities to part-time employees in comparison to their full-time colleagues. Data was collected through in-depth, one-on-one interviews with 22 hotel and restaurant owners/managers in South Wales, United Kingdom. The results showed seven main obstacles for training part-time employees: Cost of training and return on investment; time of training; the working of irregular shifts; working background; low enthusiasm of part-time employees; high turnover of part-time employees; lack of resources, knowledge, and suitable training provision. These obstacles are all interlinked and they are all associated with managers' perception of part-time employees and their assumptions that part-time employees are not interested in training and development. © Taylor & Francis Group, LLC.

Author Keywords

Hospitality; HRM; Human capital theory; Management perceptions; Part-time employees; Training; Training obstacles

Document Type: Article

Source: Scopus

Barakat, H.M.^a, Nigm, E.M.^a, El-Adll, M.E.^{b c}

Bootstrap for Extreme Generalized Order Statistics

(2011) *Arabian Journal for Science and Engineering*, 36 (6), pp. 1083-1090. Cited 2 times.

DOI: 10.1007/s13369-011-0105-1

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^c Department of Mathematics and Statistics, Faculty of Science, Taif University, Taif, Saudi Arabia

Abstract

In this paper we study some bootstrap properties of normalized extreme generalized order statistics under the assumption of a nondegenerate limit. The inconsistency, weak consistency and strong consistency of bootstrapping normalized extreme generalized order statistics for an appropriate choice of re-sample size are investigated when the normalizing constants are either known or unknown. A simulation study is given as an illustrative numerical example to explain how the suggested procedure is a very efficient tool for modeling extremes. © 2011 King Fahd University of Petroleum and Minerals.

Author Keywords

Bootstrap; Extreme generalized order statistics; Monte Carlo simulation; Strong consistency; Weak consistency

Document Type: Article

Source: Scopus

Abdallah, B.M.^{a b}, Bay-Jensen, A.-C.^c, Srinivasan, B.^d, Tabassi, N.C.^e, Garnero, P.^f, Delaissé, J.-M.^c, Khosla, S.^d, Kassem, M.^{a f}

Estrogen inhibits Dlk1/FA1 production: A potential mechanism for estrogen effects on bone turnover (2011) *Journal of Bone and Mineral Research*, 26 (10), pp. 2548-2551. Cited 7 times.

DOI: 10.1002/jbmr.444

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^e Department of Molecular Biomarkers, Synarc, Lyon, France

^f Department of Anatomy, College of Medicine, King Saud University, Riyadh, Saudi Arabia

Abstract

We have recently identified delta-like 1/fetal antigen 1 (Dlk1/FA1) as a novel regulator of bone mass that functions to mediate bone loss under estrogen deficiency in mice. In this report, we investigated the effects of estrogen (E) deficiency and E replacement on serum (s) levels of Dlk1/FA1 (s-Dlk1/FA1) and its correlation with bone turnover markers. s-Dlk1/FA1 and bone turnover markers (serum cross-linked C-telopeptide [s-CTX] and serum osteocalcin) were measured in two cohorts: a group of pre- and postmenopausal women (n=100) and a group of postmenopausal women, where half had received estrogen-replacement therapy (ERT, n=166). s-Dlk1/FA1 and s-CTX were elevated in postmenopausal E-deficient women compared with premenopausal E-replete women (both p<0.001). s-Dlk1/FA1 was correlated with s-CTX (r=0.30, p<0.01). ERT in postmenopausal women decreased s-Dlk1/FA1, as well as s-CTX and s-osteocalcin (all p<0.0001). Changes in s-Dlk1 were significantly correlated with those observed in s-CTX (r=0.18, p<0.05) and s-osteocalcin (r=0.28, p<0.001). In conclusion, s-Dlk1/FA1 is influenced by E-deficiency and is correlated with bone turnover. Increased levels of s-Dlk1/FA1 in postmenopausal women may be a mechanism mediating the effects of estrogen deficiency on bone turnover. © 2011 American Society for Bone and Mineral Research.

Author Keywords

bone turnover; Dlk1; estrogen; FA1; PREF -1

Document Type: Article

Source: Scopus

Ibrahim, N.A.^a, El-Zairy, M.R.^b, El-Zairy, W.M.^b, Ghazal, H.A.^b

A novel treatment for multifunctional finishing and reactive dyeing of polyamide-6-cotton blend (2011) *Journal of the Textile Institute*, 102 (10), pp. 863-869. Cited 2 times.

DOI: 10.1080/00405000.2010.525817

^a National Research Centre, Textile Research Division, Dokki, Cairo, Egypt

^b Faculty of Applied Arts, Printing, Dyeing and Finishing Department, Helwan University, Cairo, Egypt

Abstract

A new approach to simultaneous functional finishing and reactive dyeing of polyamide-6-cotton fabric (50/50) is developed. The extent of improvement in the functional and dyeing properties is determined by the UV-absorber, UV-Sun® CEL, concentration, type and concentration of the used reactive dye as well as the treatment sequence. The UV-protection and the antibacterial properties, against *S. Aureus* (G+ve) and *E. coli* (G -ve) bacteria, of the simultaneously finished and dyed fabric samples are maintained even after 15 washing cycles. After 15 washing cycles, the depth of shades and the fastness properties of the obtained dyeings are not seriously affected. The incorporation of the used UV-absorber onto the blend fibres was also confirmed by SEM analysis. © 2011 The Textile Institute.

Author Keywords

Antimicrobial function; Polyamide-cotton blend; Reactive dyeing; UV-absorber; UV-protection

Document Type: Article

Source: Scopus

Abdel-Moneim, A.E.^a, Dkhil, M.A.^{a b}, Al-Quraishy, S.^b

The redox status in rats treated with flaxseed oil and lead-induced hepatotoxicity

(2011) *Biological Trace Element Research*, 143 (1), pp. 457-467. Cited 22 times.

DOI: 10.1007/s12011-010-8882-z

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Abstract

Lead is a persistent environmental pollutant, and its toxicity continues to be a major health problem due to its interference with natural environment. In the present study, we have evaluated the effect of flaxseed oil on lead acetate-mediated hepatic oxidative stress and toxicity in rats. Lead acetate enhanced lipid peroxidation and nitric oxide production in both serum and liver with concomitant reduction in glutathione, catalase, superoxide dismutase, glutathione reductase, glutathione-S-transferase, and glutathione peroxidase activities, these findings were associated with DNA fragmentation. In addition, lead acetate caused liver injury as indicated by histopathological changes of the liver with an elevation in total bilirubin, serum alanine aminotransferase, aspartate aminotransferase, γ -glutamyl transpeptidase, and alkaline phosphatase. Treatment of rats with flaxseed oil resulted in marked improvement in most of the studied parameters as well as histopathological features. On the basis of the above results it can be hypothesized that flaxseed oil is a natural product that can protect against lead acetate-mediated hepatic cytotoxicity. © 2010 Springer Science+Business Media, LLC.

Author Keywords

Flaxseed oil; Hepatotoxicity; Lead; Rat; Redox status

Document Type: Article

Source: Scopus

Wahab, A.H.A.^a, El-Mezayen, H.A.^b, Sharad, H.^b, Rahman, S.A.^b

Promoter hypermethylation of RASSF1A, MGMT, and HIC-1 genes in benign and malignant colorectal tumors

(2011) *Tumor Biology*, 32 (5), pp. 845-852. Cited 16 times.

DOI: 10.1007/s13277-011-0156-7

^a Cancer Biology Department, NCI, Cairo University, Cairo, Egypt

^b Chemistry Department, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

Hypermethylation at the promoter region is an important epigenetic mechanism underlying the inactivation of tumor suppressor genes and frequently occurs as an early event in the development of different types of cancer including colorectal carcinoma (CRC). The aim of the present study is the detection of methylation status for some tumor suppressor genes including RASSF1A, MGMT, and HIC-1 in both cancerous and precancerous lesions of colorectal mucosa to evaluate the possibility of developing an epigenetic biomarker for early detection of Egyptian CRC. Tissue biopsy was collected from 72 patients (36 CRC, 17 adenomatous polyps, and 19 ulcerative colitis), and in addition, adjacent normal-appearing tissues were collected as control. Promoter hypermethylation status for RASSF1A, MGMT, and HIC-1 genes was detected after isolation of genomic DNA from the tissue samples using methylation-specific PCR technique. High frequency of methylation at MGMT, RASSF1A, and HIC-1 was detected in CRC patients (25%, 47.2%, and 41.7% respectively). The highest methylation detected in adenomatous polyps patients was in MGMT gene (47.1%) followed by 35.3% for HIC-1 and only 5.9% for RASSF1A gene. HIC-1 gene exhibited the highest frequency of methylation in ulcerative colitis patients (57.8%) whereas it was 26.3% for both RASSF1A and MGMT genes. A nonsignificant association was recorded between the methylation status in different genes examined with

the clinicopathological factors except the association between methylation at RASSF1A gene with gender ($p = 0.005$), and it was significant. In conclusion, aberrant hypermethylation at promoter region of RASSF1A, MGMT, and HIC-1 genes is involved in Egyptian CRCs. Hypermethylation of MGMT and HIC-1 genes plays an important role in the initiation of disease especially ulcerative colitis-carcinoma pathway. © 2011 International Society of Oncology and BioMarkers (ISOBM).

Author Keywords

Colorectal carcinoma; HIC-1; Methylation; MGMT; RASSF1A

Document Type: Article

Source: Scopus

Eraqi, M.I.^a, Abou-Alam, W.^b, Belal, M.^b, Fahmi, T.^c

Attitudes of Undergraduate Students Toward E-Learning in Tourism: The Case of Egypt

(2011) *Journal of Teaching in Travel and Tourism*, 11 (4), pp. 325-348. Cited 2 times.

DOI: 10.1080/15313220.2011.624397

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Abstract

E-learning has been suggested as an alternative approach that can provide graduates with a wide range of academic and employability skills. This study is designed to measure the attitudes of student and academic staff toward using e-learning technologies and strategies in tourism education. A questionnaire form was designed and distributed to the students, and semistructured interviews were conducted with academic staff in the faculties of tourism and hotels at Helwan University and Menoufia University. Results revealed that the students as well as the academic staff have a good positive attitude toward applying e-learning in the faculties of tourism and hotels in Egypt. © 2011 Copyright Taylor and Francis Group, LLC.

Author Keywords

e-learning; education; Egypt; information and communications technologies (ICT); students; tourism

Document Type: Article

Source: Scopus

Mahmoud, D.A.R.^a, Mahdy, E.-S.M.E.^b, Shousha, W.G.^b, Refaat, H.W.^a, Abdel-Fattah, A.F.^a

Raw garlic as a new substrate for inulinase production in comparison to dry garlic

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (10), pp. 453-462. Cited 2 times.

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^b Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

Although several new substrates for the production of inulinase have been reported as being economically effective such as utilization of inulin-rich substrate rather than pure inulin, however, there is still need to develop the substrate to make the entire process much cheaper and more effective. Garlic has been suggested to have induction effect on inulinase production, but this induction effect is reduced in dried garlic. Therefore, raw garlic was adopted as a new substrate. Raw garlic improved inulinase activity from *Aspergillus niger* NRRL 3 up to 66 fold higher than pure inulin. Inulinase activity was 86 IU/L and 5652 IU/L for pure inulin and raw garlic respectively. Raw garlic improved inulinase activity up to 500 IU/L higher than dried garlic due to reduction of fructan level in the later. The study gives evidence that garlic constituents like calcium and phosphorus are responsible for induction of much higher inulinase activity as beneficial inulinase production was achieved using calcium and phosphorus in the form of CaCl₂ and K₂HPO₄ in concentrations of 0.1g/100ml medium and 0.25g/100mL medium respectively. Economically, raw garlic satisfies all the demands of industrial technologies because it is low cost, safety, healthy and save the time and energy required for drying. Furthermore, out of various nitrogen sources tested for production, urea gave the highest inulinase activity which is also cost effective.

Author Keywords

Aspergillus; Fructose; Inulinase; Production; Raw garlic

Document Type: Article

Source: Scopus

El Hafez, M.A.^a, Khalaf, N.G.^b, El Ahmady, M.^c, El Aziz, A.A.^d, El Gawad Hashim, A.^e

An outbreak of methicillin resistant staphylococcus epidermidis among neonates in a hospital in Saudi Arabia (2011) *Journal of Infection in Developing Countries*, 5 (10), pp. 692-699. Cited 5 times.

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^c Department of Microbiology and Immunology, Faculty of Medicine, Zagazig University, ElSharkiya, Egypt

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^e Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University, Cairo, Egypt

Abstract

Introduction: Staphylococcus epidermidis is a pathogen associated with nosocomial infection in neonatal intensive care units (NICU). This study investigates an outbreak of methicillin resistant S. epidermidis in an NICU in a hospital in Saudi Arabia. **Methodology:** A total of 41 isolates identified as Gram-positive cocci were obtained from blood culture, umbilical wound swabs and endotracheal aspirate specimens of neonates, of which 29 were identified as S. epidermidis. Bacterial identification at the species level and determination of antibiotic resistance were performed by MicroScan (Dade Behring, USA). Genotyping was completed using randomly amplified polymorphic DNA (RAPD) and the mecA gene was detected by PCR. **Results:** All 29 S. epidermidis isolates were found to be resistant to oxacillin and were positive for the mecA gene. The isolates showed several multidrug-resistance patterns; the resistance rates to gentamicin, erythromycin, clindamycin, and trimethoprim/sulfamethoxazole were 89.7%, 86.2%, 75.9% and 72.4%, respectively. All isolates were susceptible to vancomycin, teicoplanin, rifampin, synercid, and ciprofloxacin. Several genotypic and phenotypic patterns were detected among the S. epidermidis isolates: antibiogram typing showed seven different patterns, one of which was shared by 65% of the isolates, whereas the most prevalent RAPD genotype was shared by only five S. epidermidis isolates, and did not correlate with antibiotic resistance phenotype. **Conclusion:** The diverse clonal origin of tested isolates indicates the presence of multiple S. epidermidis strains among neonates in the NICU setting. © 2011 El Hafez et al.

Author Keywords

Methicillin resistance; NICU; Saudi Arabia; Staphylococcus epidermidis

Document Type: Article

Source: Scopus

Fouad, H.^{a b}, Elleithy, R.^a

High density polyethylene/graphite nano-composites for total hip joint replacements: Processing and in vitro characterization

(2011) *Journal of the Mechanical Behavior of Biomedical Materials*, 4 (7), pp. 1376-1383. Cited 18 times.

DOI: 10.1016/j.jmbbm.2011.05.008

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^b Helwan University, Faculty of Engineering, Biomedical Engineering Department, Egypt

Abstract

The main objective of the present study is to investigate how the thermal, rheological, mechanical and cytotoxicity behavior of High Density Polyethylene (HDPE) can be changed by the addition of graphite nano particles (GNPs) at different contents. The HDPE/GNPs composites were prepared using melt blending in a co-rotating intermeshing twin screw extruder. The in vitro tests results showed that the original material (HDPE) and all HDPE/GNPs composites do not exhibit any cytotoxicity to the WISH cell line. The microscopic examination of the nano-composite tensile-fractured surface found a good distribution of GNPs in the HDPE matrix. The Differential Scanning Calorimetry (DSC) results indicated that the crystallization percentage increased by adding GNPs to HDPE up to 4%. The XRD patterns of the HDPE/GNPs composites showed an increase in peak intensity compared to neat HDPE. This increase echoed the crystallinity results obtained from DSC. The rheological tests showed that the complex viscosity of the HDPE increased as the percentage of GNPs increased due to the restriction of the molecular mobility. The tensile test results showed that with increasing the GNPs content, Young's modulus and the yield strength of the HDPE/GNPs composite increased while the strain at fracture decreased. Finally, the preliminary results of the abrasion test indicated that the abrasion rate decreased by increasing the GNPs ratio up to 4% content. The prepared HDPE/GNPs composites appear to have fairly good comprehensive properties that make them a good candidate as a bearing material for the total joint replacement. © 2011 Elsevier Ltd.

Author Keywords

Cytotoxicity; Graphite nano particles; HDPE; Mechanical; Morphology; Rheological; XRD

Document Type: Article

Source: Scopus

El Azab, R.M.^a, Shehab Eldin, E.H.^b, Lataire, P.^c, Sallam, M.M.^d

Power measurement for the AUFL

(2011) *International Review on Modelling and Simulations*, 4 (5), pp. 2285-2290. Cited 4 times.

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^d Vrije Universiteit Brussel, VUB, Brussels, Belgium

Abstract

Under Frequency Load Shedding, UFLS, is the last step and the most extreme in protecting electric power systems from black outs and severe damages. Adaptive UFLS methods usually use DF/DT measurement for sizing the degree of overloads. For so many reasons the measurement of DF/DT may found to be unreliable. This paper presents an alternative method for sizing the overloads through the measurement of the generated active powers in the system, as a first step of an adaptive under frequency load shedding. Using the advantage of high speed wide area protection system, the generated powers in the system can be obtained easily. The simulation and experimental results show the validity of the suggested method, and demonstrate its advantages in calculating the system overloads. © 2011 Praise Worthy Prize S.r.l. - All rights reserved.

Author Keywords

Active power control; Adaptive under frequency load shedding; Experimental results; Frequency behavior

Document Type: Article

Source: Scopus

El-Nezhawy, A.O.H.^{a b}, Adly, F.G.^a, Eweas, A.F.^{a b}, Hanna, A.G.^c, El-Kholy, Y.M.^d, El-Sayed, S.H.^d, El-Naggar, T.B.A.^e

Synthesis of some novel D-glucuronic acid acetylated derivatives as potential anti-tumor agents

(2011) *Archiv der Pharmazie*, 344 (10), pp. 648-657.

DOI: 10.1002/ardp.201000367

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^e Pharmacology Department, Faculty of Pharmacy, Complutense University, Spain

Abstract

A structurally diverse series of Δ 4,5-uronamide derivatives have been chemically synthesized starting from D-glucuronic acid itself by means of acetylation, activation, amide bond formation and base-catalyzed elimination protocols. Structure elucidation for all products along with optimization of the synthetic steps is described. The synthesized compounds were evaluated for their in-vitro anti-tumor activity against MCF-7, TK-10 and UACC-62 cell lines. The compounds 5, 11, 13, 15 and 16 were the most active against TK-10 cell line. On the other hand, the most active compounds against the MCF-7 cell line were 11 and 15. However, compounds 5, 7, 11, 13, 15 and 16 were the most active against the UACC-62 cell line. Copyright © 2011 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

Author Keywords

Amide linkage; Anti-tumor; D-Glucuronamide; D-Glucuronic acid; MCF-7; TK-10; UACC-62

Document Type: Article

Source: Scopus

Abouzeid, H.E.^a, Kassem, A.M.^b, El-Mezayen, H.A.^c, Sharad, H.^c, Rahman, S.A.^c, Abdel Wahab, A.H.^d

Erratum: Promoter hypermethylation of RASSF1A, MGMT, and HIC-1 genes in benign and malignant colorectal tumors (Tumor Biology DOI:10.1007/s13277-011-0156-7)

(2011) *Tumor Biology*, 32 (5), p. 1055.

DOI: 10.1007/s13277-011-0206-1

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^b Tropical Medicine Department, Faculty of Medicine, Cairo University, Cairo, Egypt

^c Chemistry Department, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

^d Cancer Biology Department, National Cancer Institute, Cairo University, Cairo, Egypt

Document Type: Erratum

Source: Scopus

Moneim, A.E.A.^a, Dkhil, M.A.^{a b}, Al-Quraishy, S.^b

Studies on the effect of pomegranate (*Punica granatum*) juice and peel on liver and kidney in adult male rats (2011) *Journal of Medicinal Plant Research*, 5 (20), pp. 5083-5088. Cited 10 times.

^a Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

^b Department of Zoology, College of Science, King Saud University, Riyadh, Saudi Arabia

Abstract

The pomegranate has been traditionally used as medicines in many countries. The study aimed to investigate the antioxidant properties of pomegranate in hepatic and renal tissues of rats. Eighteen adult male albino rats were randomly divided into three groups, six rats of each. The first group served as control and received saline (0.2 ml saline/rat) by oral administration via epigastric tube. The second group received oral administration of 3 ml/kg pomegranate juice for 21 days and served as pomegranate juice (PJ) group. The third group received oral administration of 200 mg/kg methanol extract of pomegranate peel for 21 days and served as methanol extract of pomegranate peel (MEPP) group. Pomegranate has no effect on liver and kidney functions. The present data demonstrate that PJ and MEPP reduced lipid peroxidation and nitric oxide in both liver and kidney tissue homogenate. A significant increase in superoxide dismutase and catalase activities of rats received pomegranate was observed. These findings demonstrate that pomegranate has a potent anti-oxidative effect. © 2011 Academic Journals.

Author Keywords

Kidney; Liver; Oxidants/antioxidants status; *Punica granatum*; Rat

Document Type: Article

Source: Scopus

Ouf, S., Nasr, M.

Business Intelligence in the Cloud

(2011) *2011 IEEE 3rd International Conference on Communication Software and Networks, ICCSN 2011*, art. no. 6014351, pp. 650-655. Cited 2 times.

DOI: 10.1109/ICCSN.2011.6014351

Faculty of Computers and Information, Helwan University, Egypt

Abstract

Business Intelligence (BI) deals with integrated approaches to management support. Currently, there are constraints to BI adoption and a new era of analytic data management for business intelligence these constraints are the integrated infrastructures that are subject to BI have become complex, costly, and inflexible, the effort required consolidating and cleansing enterprise data and Performance impact on existing infrastructure / inadequate IT infrastructure. So, in this paper Cloud computing will be used as a possible remedy for these issues. We will represent a new environment atmosphere for the business intelligence to make the ability to shorten BI implementation windows, reduced cost for BI programs compared with traditional on-premise BI software, Ability to add environments for testing, proof-of-concepts and upgrades, offer users the potential for faster deployments and increased flexibility. Also, Cloud computing enables organizations to analyze terabytes of data faster and more economically than ever before. Business intelligence (BI) in the cloud can be like a big puzzle. Users can jump in and put together small pieces of the puzzle but until the whole thing is complete the user will lack an overall view of the big picture. In this paper reading each section will fill in a piece of the puzzle. © 2011 IEEE.

Author Keywords

business Intelligence; Cloud Computing; platform as a services

Document Type: Conference Paper

Source: Scopus

Ouf, S., Nasr, M., Amr, M., Mosaad, M., Kamal, K., Mostafa, F., Said, R., Mohamed, S.

Business intelligence software as a service (SAAS)

(2011) *2011 IEEE 3rd International Conference on Communication Software and Networks, ICCSN 2011*, art. no. 6014350, pp. 641-649. Cited 2 times.

DOI: 10.1109/ICCSN.2011.6014350

Faculty of Computers and Information, Egypt Faculty of Information Technology, Helwan University, Egypt

Abstract

One of the scariest aspects of doing business is the failure to come up with the right decision. This is one of the reasons why many businesses have failed because of one small wrong decision. So the aim of this paper is to develop web based business intelligence software as a service to help the enterprise to maximize the profit by analyzing the data and providing detailed graphical view of the business performance and to be able to take decision based on facts, and with the cloud computing technique the user will be able to access the data from anywhere. © 2011 IEEE.

Author Keywords

business Intelligence; Cloud Computing; software as a services

Document Type: Conference Paper

Source: Scopus

El-Bendary, M.A.M.^a, Abou-El-azm, A.E.^b, El-Fishawy, N.A.^b, Shawki, F.^b, El-Tokhy, M.^a, Abd el-Samie, F.E.^b, Kazemian, H.B.^c

Enhancing the image transmission over wireless networks through a novel interleaver

(2011) *KSII Transactions on Internet and Information Systems*, 5 (9), pp. 1528-1543. Cited 2 times.

DOI: 10.3837/tiis.2011.09.003

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^c Intelligent Systems Research Centre, Faculty of Computing, London Metropolitan University, United Kingdom

Abstract

With increasing the using of wireless technologies in essential fields such as the medical application, this paper proposes different scenarios for the transmission of images over wireless networks. The paper uses the IEEE ZigBee 802.15.4 for applying the proposed schemes. It is a Wireless Personal Area Network (WPAN). This paper presents a novel chaotic interleaving scheme against error bursts. Also, the paper studies the proposed interleaver with the convolutional code with different constraint lengths (K). A comparison study between the standard scheme and proposed schemes for image transmission over a correlated fading channel is presented. The simulation results show the superiority of the proposed chaotic interleaving scheme over the traditional schemes. Also, the chaotic interleaver packet-by-packet basis gives a high quality image with (K=3) and reduces the need for the complex encoder with K=7. © 2011 KSII.

Author Keywords

Chaotic interleaving; Medical applications; Wireless networks

Document Type: Article

Source: Scopus

Fouad, M.M.M.^a, Mostafa, M.-S.M.^b, Dawood, A.R.^a

A pairwise key pre-distribution scheme based on prior deployment knowledge

(2011) *Proceedings - 3rd International Conference on Computational Intelligence, Communication Systems and Networks, CICSyN 2011*, art. no. 6005683, pp. 184-189. Cited 1 time.

DOI: 10.1109/CICSyN.2011.48

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Abstract

Still, the security problems remain one of the major barriers somehow preventing the complete utilization of wireless sensor networks (WSN) technology. Securing the communication channel through encrypting messages sent between nodes grow to be a must. Message encryption using the public key cryptosystems [1] in WSN is infeasible due to its constrained resources. A random key pre-distribution scheme [2] is of popular approaches that perfectly

securing a WSN and conserving its resources. The random key pre-distribution scheme or its enhanced editions is applied with assumptions of no prior deployment knowledge. The paper proposes a scheme that uses prior deployment knowledge in terms of the energy level carried by each node for modifying the polynomial pool based key pre-distribution scheme proposed in [3]. The paper shows that the node energy level observation can be used to control the creation and the selection of polynomial keys hold by this node. For the purpose of evaluating the proposed scheme it's applied on the A3 protocol as one of known topology control protocols [4]. The proposed scheme avoids the unnecessary key assignment and it reduces the number of active nodes per topology construction that positively reflects on the performance of the whole WSN. © 2011 IEEE.

Author Keywords

Key pre-distribution; Topology control protocol; Wireless sensor network

Document Type: Conference Paper

Source: Scopus

Darwish, A.^a, Hassanien, A.E.^b, Tan, Q.^c, Pal, N.R.^d

Securing patients medical images and authentication system based on public key infrastructure
(2011) *Advances in Intelligent and Soft Computing*, 87, pp. 27-34. Cited 2 times.

DOI: 10.1007/978-3-642-19644-7_4

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^b Cairo University, Faculty of Computers and Information, Cairo, Egypt

^c School of Computing and Information Systems, Athabasca University, Canada

^d Indian Statistical Institute, Calcutta, India

Abstract

In this paper we present a securing patient medical images and authentication system to increase the security, confidentiality and integrity of medical images transmitted through the Internet. A public key encryption technique was used to encrypt the patient capturing fingerprint and then embed it into the patient medical image. The fingerprint has been encrypted using the Rivest-Shamir-Adelman (RSA) public-key encryption algorithm. Then, by embedding the encrypted patient's fingerprint using a technique for digital watermarking in the Discrete Cosine Transform (DCT) domain makes the medical image be robust to several common attacks. The experimental results on different medical imaging modalities demonstrate the efficiency and transparency of the watermarking system. © 2011 Springer-Verlag Berlin Heidelberg.

Document Type: Conference Paper

Source: Scopus

Nasr, A.A., Darwish, A., Sadek, R.A., Saad, O.M.

A robust algorithm for enhancement of remotely sensed images based on wavelet transform
(2011) *Advances in Intelligent and Soft Computing*, 87, pp. 57-65.

DOI: 10.1007/978-3-642-19644-7_7

Computer Science Department, Helwan University, Cairo, Egypt

Abstract

In the field of remote sensing, removing noise from images is still a challenging research in image processing. Generally there is no common enhancement approach for noise reduction. Several approaches have been introduced and each has its own assumption, advantages and disadvantages. The speckle noise is usually found in the remote sensing images. This paper proposes an adaptive threshold method for image despeckling based on wavelet transform. The quality of the enhanced images in this paper is measured by the statistical quantity measures: Peak Signal-to-Noise Ratio (PSNR), and Mean Square Error (MSE). Experimental results showed that the proposed method demonstrates an improved denoising performance over related techniques according to increasing of PSNR values and decreasing of MSE values of enhanced images. © 2011 Springer-Verlag Berlin Heidelberg.

Author Keywords

Adaptive threshold; Image enhancement; SAR images; Speckle noise; Wavelet transform

Document Type: Conference Paper

Source: Scopus

Abaza, G.^a, Badr, I.^b, Goehner, P.^a, Jeschke, S.^c

Considering multi-evaluation perspectives in an agent-based FMS scheduling approach

(2011) *Proceedings - ISIE 2011: 2011 IEEE International Symposium on Industrial Electronics*, art. no. 5984426, pp. 1779-1784.

DOI: 10.1109/ISIE.2011.5984426

^a Institute of Industrial Automation and Software Engineering, Stuttgart University, Germany

^b Science Faculty, Helwan University, Helwan, Egypt

^c Center for Learning and Knowledge Management, Institute of Information Management in Mechanical Engineering, RWTH Aachen University, Germany

Abstract

For flexible manufacturing systems (FMS), scheduling approaches have been introduced to achieve optimized schedules while considering multiple optimization objectives. These objectives correspond mainly to the existing evaluation perspectives, namely, the system view and the customer view. The system view corresponds mainly to the maximization of resource utilization. The customer view corresponds to the minimization of jobs-makespans required for customer jobs to finish execution. These correspondent optimization objectives, in practice, are often conflicting and subject to certain constraints. In this paper, an agent-based scheduling approach for FMS is proposed. This approach takes into account both existing evaluation perspectives while generating FMS schedules. It seeks the maximization of the resource utilization and, simultaneously, the minimization of the involved jobs-makespans. Evaluation results recorded near-optimal schedules by the proposed scheduling process. © 2011 IEEE.

Document Type: Conference Paper

Source: Scopus

El-Raheem, Z.F.A.^a, Nasser, A.H.^b

The eigenfunction expansion for a dirichlet problem with explosive factor

(2011) *Abstract and Applied Analysis*, 2011, art. no. 828176, . Cited 1 time.

DOI: 10.1155/2011/828176

^a Department of Mathematics, Faculty of Education, Alexandria University, Alexandria 21526, Egypt

^b Department of Mathematics, Faculty of Industrial Education, Helwan University, Cairo, Egypt

Abstract

We prove the eigenfunction expansion formula for a Dirichlet problem with explosive factor by two ways, first by standard method and second by proving a convergence in some metric space $L^2(0, \pi; p(x))$. © 2011 Zaki F. A. El-Raheem and A. H. Nasser.

Document Type: Article

Source: Scopus

Al-Quraishy, S.^a, Dkhil, M.A.^{a b}, Alkhudhayri, A.A.^a

Effects of the electromagnetic radiation on oocysts of eimeria papillata infecting mice

(2011) *African Journal of Microbiology Research*, 5 (18), pp. 2755-2759.

^a Department of Zoology, College of Science, King Saud University, P. O. Box 2455, Riyadh 11451, Saudi Arabia

^b Department of Zoology and Entomology, Faculty of Science, Helwan University, Helwan, Egypt

Abstract

Electromagnetic radiation (EMR) produced by many telecommunication systems, has short and long term biological effects on living cells. The aim of this study was to investigate the influence of EMR on the outcome of coccidiosis induced by *Eimeria papillata*. Oocysts from *E. papillata* infected mice were exposed to the EMR in the form of gamma rays, ultraviolet rays and radiations emitted from the mobile phone. Sporulation rate, oocysts shedding as well as the histological alterations in jejunum of mice irradiated with oocysts exposed to EMR were determined. Oocyst output was reduced in mice exposed to EMR. The jejunum histopathology was improved after inoculation of mice with irradiated oocysts. We suggest that EMR has anticoccidial activities and its application could serve as an alternative to the anticoccidial drugs currently used in poultry production. © 2011 Academic Journals.

Author Keywords

Eimeria papillata; Electromagnetic radiation; Mice

Document Type: Article

Source: Scopus

Fouad, M.M.M.^a, Dawood, A.R.^a, Mostafa, M.-S.M.^b

Study of the effects of pairwise key pre-distribution scheme on the performance of a topology control protocol
(2011) *2011 International Conference on Distributed Computing in Sensor Systems and Workshops, DCOSS'11*, art. no. 5982209, .

DOI: 10.1109/DCOSS.2011.5982209

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Abstract

Collecting information from open and possibly hostile environments makes the wireless Sensor Network (WSN) vulnerable to different types of security threats [1]. To provide secure communications for the WSNs, all messages have to be encrypted with a secret key. Message encryption using the public key cryptosystems[2] in WSN is not applicable due to sensor's constrained resources. A random key pre-distribution scheme and its enhanced versions to deal with pairwise key establishment [3] are of popular approaches that have higher resilience for nodes compromising. On the other hand, the topology control protocols are special forms of WSNs that add some constraints for controlling the construction of wireless networks. This paper aims to identify whether it is applicable to apply a key pre-distribution technique on a topology control protocol and evaluates its performance. © 2011 IEEE.

Author Keywords

key pre-distribution; Topology control protocol; Wireless Sensor Network (WSN)

Document Type: Conference Paper

Source: Scopus

Affi, A.M.^{a f}, Yamamoto, M.^b, Yamane, H.^c, Kimura, Y.^c, Salmawy, A.E.^d, Nakano, S.^e

Electrospinning and characterization of aligned nanofibers from chitosan/polyvinyl alcohol mixtures: Comparison of several target devices newly designed

(2011) *Sen'i Gakkaishi*, 67 (5), pp. 103-108. Cited 2 times.

DOI: 10.2115/fiber.67.103

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Abstract

Electrospinning of pure chitosan or chitosan/poly(vinyl alcohol) (PVA) (blend) was carried out with an optimization of the electrospinning conditions. The electrospinning of the pure chitosan was only possible at a relatively high electric field of 5 kV/cm into fibers with a diameter as thick as 30 μm, and its reproducibility was very poor. Blending of PVA into chitosan significantly improved the spinnability and the chitosan/PVA blend fiber was electrospun for further characterization. Several target devices were designed and examined to collect aligned nanofibers of chitosan/PVA. The most efficient was a rotating collector having grounded short wire bars arranged on a drum. Over 90 % of electrospun fibers were collected in parallel to the take-up direction with this collector. The fiber alignment was further improved with increasing the collector rotation speed up to a maximum speed of 4.7 m/s. The aligned chitosan/PVA fibers were subjected to drawing to 1.5 times and the crystallization of chitosan fractions was induced without indicating the clear crystal orientation.

Document Type: Article

Source: Scopus

Mannaa, F.^a, El-Shamy, K.A.^a, El-Shaikh, K.A.^b, El-Kassaby, M.^a

Efficacy of fish liver oil and propolis as neuroprotective agents in pilocarpine epileptic rats treated with valproate

(2011) *Pathophysiology*, 18 (4), pp. 287-294. Cited 4 times.

DOI: 10.1016/j.pathophys.2011.04.002

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Abstract

Objective: To evaluate the action of fish liver oil and propolis in pilocarpine epileptic rats treated with the anticonvulsant drug valproate. **Methods:** Seven groups of rats were treated daily for six months: control; fish liver oil (0.4ml/kg b.w); propolis (50mg/kg b.w); pilocarpine-treated rats (epileptic control); epileptic rats treated with valproate (400mg/kg b.w); groups 6 and 7, epileptic rats treated with valproate plus fish liver oil or propolis. **Results:** Pilocarpine administration caused a significant increase in hippocampal dopamine and serotonin levels accompanied with a significant decrease in their levels in serum. Lipid peroxidation level and LDH activity in hippocampus were significantly increased after pilocarpine treatment whereas Na⁺/K⁺-ATPase activity and total antioxidant capacity were significantly decreased compared to the controls. Animals treated with the combined treatments showed a significant improvement in tested parameters towards the normal values of the control. **Conclusion:** Fish liver oil and propolis when given in combination with valproate, neuroprotected against the neurophysiological disorders induced by pilocarpine epilepsy in rats. © 2011 Elsevier Ireland Ltd.

Author Keywords

Epilepsy; Fish liver oil; Pilocarpine; Propolis; Rats; Valproate

Document Type: Article

Source: Scopus

Abdel Mageed Sayed, H.M., Sharaf, S.M., Elmasry, S.E., Elharony, M.

Simulation of the different transmission line faults for a grid connected wind farm with different types of generators

(2011) *International Journal of Power Electronics and Drive Systems*, 1 (2), pp. 179-189. Cited 1 time.

DOI: 10.11591/ijpeds.v1i2.104

Dep. of Electrical Power and Machine Engineering, Helwan University, Egypt

Abstract

This paper aims to simulate a wind farm model that includes wind turbine and three different types of generators, which are three-phase synchronous generator, three-phase squirrel-cage induction generator and three-phase doubly-fed induction generator, these generators are the main machines that generally used in the field of wind energy generation. All generators are connected in parallel at the point of common coupling (PCC) and connected to the utility grid. This model is a simple representation of the actual model of Zafarana, which is the biggest wind farm in Egypt and further to use it in different kinds of simulations, and display the difference in response among all generators with the same power rating (500 kW) and subjected to the same operating conditions and faults. This paper describes the simulation of the different faults that occur along the transmission line of the power system such as single-line fault, line to line fault, double lines to ground fault, and finally three line faults. The response of the wind turbine and the different generators will be analyzed and discussed to compare the transient response of all generators at the different types of faults, where the fault period is selected to be 300 ms. The model is created in MATLAB software that enables the dynamic and static simulations of electric, electromagnetic and electromechanical systems. The machines are standard blocks in the software library.

Author Keywords

Simulation model; Transient faults; Wind farm

Document Type: Article

Source: Scopus

Soliman, A.E.-K.S.

Behavior of long confined concrete column

(2011) *Ain Shams Engineering Journal*, 2 (3-4), pp. 141-148. Cited 2 times.

DOI: 10.1016/j.asej.2011.09.003

Helwan University, Faculty of Engineering, Civil Engineering Department, Egypt

Abstract

The behavior of concrete columns confined by fiber reinforced plastic/polymer (FRP) depends on several parameters, including concrete strength, types of fibers, volume and orientation of fiber in the jacket, jacket thickness and shape of cross section, length-to-diameter (slenderness) ratio of the column. In this paper, the behavior of long concrete

columns confined by means of proper plastic tube is investigated including failure mechanisms and subsequently their failure mode with theoretical model for calculation of the column capacity. The influence of column slenderness ratio on their axial load capacity, axial strains, and radial strains is also investigated. The experimental program was classified into three different groups with slenderness ratios from 9 to 18. Test results show that, utilizing plastic tube for confinement significantly influences the failure mechanisms of concrete columns. Results also show that the stiffness of the tested long confined concrete columns specimens increases as slenderness ratio decreases. © 2011 Ain Shams University. Production and hosting by Elsevier B.V. All rights reserved.

Author Keywords

Concrete column; Confinement; Experimental; Slenderness ratio

Document Type: Article

Source: Scopus

Delić, D.^a, Ellinger-Ziegelbauer, H.^b, Vohr, H.W.^b, Dkhil, M.^{c d}, Al-Quraishy, S.^c, Wunderlich, F.^{a c}

Testosterone response of hepatic gene expression in female mice having acquired testosterone-unresponsive immunity to Plasmodium chabaudi malaria

(2011) *Steroids*, 76 (10-11), pp. 1204-1212. Cited 5 times.

DOI: 10.1016/j.steroids.2011.05.013

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Abstract

Blood-stage malaria of *Plasmodium chabaudi* is characterized by its responsiveness to testosterone (T): T suppresses development of protective immunity, whereas once acquired immunity is T-unresponsive. Here, we have analyzed the liver, a T target and lymphoid organ with anti-malaria activity, for its T-responsiveness of gene expression in immune mice. Using Affymetrix microarray technology, in combination with quantitative RT-PCR, we have identified (i) T-unresponsive expression of newly acquired mRNAs encoding diverse sequences of IgG- and IgM-antibodies, (ii) 24 genes whose expression has become T-unresponsive including those encoding the T H2 response promoting EHMT2 and the erythrocyte membrane protein band 7.2 STOM, (iii) T-unresponsive expression of mRNAs for the cytokines IL-1 β , IL-6, TNF α , and IFN γ , as well as iNOS, which are even not inducible by infection, and (iv) 35 genes retaining their T-responsiveness, which include those encoding the infection-inducible acute phase proteins SAA1, SAA2, and ORM2 as well as those of liver metabolism which encode the T-downregulated female-prevalent enzymes CYP2B9, CYP2B13, CYP3A41, CYP7A1, and SULT2A2 and the T-upregulated male-prevalent enzymes CYP2D9, CYP7B1, UGT2B1, HSD3B2, HSD3B5, respectively. The mRNA of the latter T-metabolizing enzyme is even 5-fold increased by T, suggesting a decrease in the effective T concentrations in the liver of immune mice. Collectively, our data suggest that the liver, which has acquired a selective T-unresponsiveness of gene expression, contributes to the acquired T-unresponsive, antibody-mediated protective immunity to blood-stage malaria of *P. chabaudi*. © 2011 Elsevier Inc. All rights reserved.

Author Keywords

Gene expression; Immunity; Liver; Malaria; Testosterone

Document Type: Article

Source: Scopus

El-Bakry, A.A., Ghazi, M., Abdrabou, H.-A.

Production of cardiac glycosides from calotropis procera by cell suspension cultures

(2011) *Journal of Applied Sciences Research*, 7 (9), pp. 1375-1385.

Botany Department, Faculty of science, Helwan University, Ain Helwan, Cairo 11795, Egypt

Abstract

The study aimed at initiating suspension cultures and studying different factors to stimulate growth and cardiac glycosides (CG) production from a wild medicinal plant *Calotropis procera* (Ait) Ait. f. (Asclepiadaceae). All the tested factors were significantly different for CG production in cultures of both hypocotyls and cotyledonary leaves. Using inoculum density (ID) ranged from 0.25 to 5.0 g, significant differences at both 5% and 1% levels were found. Mean comparisons for increase in fresh weight (FW) and dry weight (DW) showed that for cotyledonary leaves ID of 0.25 g gave highest mean increase of 16.25 g and 1.45 g respectively, for hypocotyls ID 0.5 g gave highest mean of 13.1 and 0.98 for increase in FW & DW respectively. Highest concentration of CG, 3.3 mg/g DW was when using a 0.5 g ID.

Media strength ranged from 0.25 to 5.0 X was used to stimulate growth and CG production; we found that media strength (1X) gave highest mean FW & DW for cotyledonary leaves, media strength (2X) gave highest mean FW & DW for hypocotyls. For cotyledonary leaves media strength (2X) gave highest CG of 1.6 mg/g DW, for hypocotyls media strength of (5X) gave highest mean CG concentration of 1.5 mg/g DW. A range from 4 to 7 pH was pH 6.5 gave highest CG concentration of 1.2 and 1.0 mg/g for cotyledonary leaves and hypocotyls respectively. Studying temperature treatments of 35°C and 40°C for 12, 24 and 36 hours we found that 40°C for 24 hrs gave highest mean FW & DW for both explants; 40°C for 36 hrs gave highest mean CG for cotyledonary leaves of 1.86 mg/g DW, for hypocotyls 35°C for 24 hrs gave highest mean of 2.0 mg/g DW. A range of concentrations from 5 to 20mg/l of thiamine and pyridoxine and two combinations (10+10 mg/l) and (20+20 mg/l) were used to test the effect on FW, DW & CG production, where thiamine 10 mg/l gave highest mean FW for both explants. Mean comparisons for DW gave highest mean of 1.2 & 0.97 g for cotyledonary leaves and hypocotyls respectively. Thiamine 20+ pyridoxine 20 mg/l gave highest mean CG of 1.86 mg/g DW for cotyledonary leaves, for hypocotyls pyridoxine 20 mg/l gave highest mean CG concentration of 2.0 mg/g DW. Studying the effect of sucrose concentrations on FW, DW & CG was occurred, the used concentrations ranged from 0.75 to 9.0 g %. For the 2 explants used 3% sucrose gave highest mean FW; higher sucrose concentration of 4.5,6, 7.5 and 9% gave higher mean DW for cultures from both explants, CG concentrations mg/g was higher from hypocotyls 3.15 than from cotyledonary leaves 1.46 mg/g DW, suspension treated with 7.5% sucrose gave highest mean CG concentration for both explants of 9.06 mg/g & 2.38 mg/g DW for hypocotyls & cotyledonary leaves respectively. Six sugars (sucrose, maltose, lactose, fructose, glucose and galactose) were used to test their effect on FW, DW and CG production, CG concentration for the 2 explants showed that galactose gave highest mean of 2.5 and 2.1 mg/gDW for cotyledonary leaves and hypocotyls respectively.

Author Keywords

Calotropis procera; Cardiac glycosides; Inoculum density; Media strength; Ph; Pyridoxine; Sucrose; Sugars; Suspension cultures; Temperature; Thiamine

Document Type: Article

Source: Scopus

Ghany, H.A.

Computations of some integrals involving logarithmic function with some thermodynamical applications

(2011) *Physics Essays*, 24 (3), pp. 456-459. Cited 4 times.

DOI: 10.4006/1.3623429

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Abstract

In this paper, the derivatives of the hypergeometric functions with respect to parameters are employed to give explicit forms for some integrals involving logarithmic function. In an application to Laguerre ensemble, the usefulness of these forms is illustrated. © 2011 Physics Essays Publication.

Author Keywords

Hypergeometric Functions; Laguerre Ensemble

Document Type: Article

Source: Scopus

Rafat, H.^a, Soror, S.H.^a, Hassan, Z.^a, Ismaail, A.^b

Is cystatin c a powerful predictor of cardiovascular diseases in patients with type 2 diabetes mellitus? (study on egyptian patients)

(2011) *Journal of Applied Pharmaceutical Science*, 1 (7), pp. 54-58. Cited 1 time.

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^b National institute of diabetes and endocrinology, El Kaser Elainy, Cairo, Egypt

Abstract

Cystatin C is a non-glycosylated protein. It is used mainly as a biomarker of renal functions. Diabetes mellitus has been associated with serious complications. Diabetic nephropathy is the main risk factor for morbidity in diabetes mellitus. This study was conducted to assess the clinical value of Cystatin C (CysC) in the diagnosis of cardiovascular complications and diabetic nephropathy in type 2 Egyptian diabetic patients. Serum CysC level was determined in three groups of patients; Diabetics, diabetic nephropathy and diabetic cardiovascular, using ELIZA technique. CysC showed higher sensitivity in early kidney dysfunction and the different stages of nephropathy relative to the control group. C-reactive protein (CRP) showed significant difference in diabetic hypertensives group and in diabetic hypertensives suffering cardiac problems when compared to the control. We found that CysC had higher sensitivity,

specificity and area under the curve than creatinine, microalbuminuria and CRP CysC is one of the most efficient markers for diagnosis of diabetic complications and may be used to assess mild kidney impairment in healthy individuals with high muscle mass.

Author Keywords

ACR; And GFR Cys; CRP; Cystatin C; Diabetic complications; Microalbuminuria

Document Type: Article

Source: Scopus

Atta, A.M.^a, Sayed, S.A.^b, Farag, A.B.^b, Ismail, H.S.^a, Mohamed, Z.M.^c, Eraky, A.M.^d

Application of crosslinked acrylamidoxime/2-acrylamido-2-methylpropane sulfonic acid copolymer in wastewater treatment

(2011) *Journal of Dispersion Science and Technology*, 32 (9), pp. 1285-1295. Cited 3 times.

DOI: 10.1080/01932691.2010.505803

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Abstract

Crosslinked acrylonitrile/acrylamidoxime/2-acrylamido-2-methylpropane sulfonic acid (AN/AAx/AMPS) based hydrogels was prepared by radical solution polymerization technique. The structures of hydrogels were characterized by FTIR analysis and the results were consistent with the expected structures. These hydrogels were used for the separation of Cd(II), Cu(II), and Fe(III) ions from their aqueous solutions. The influence of the uptake conditions such as pH, time, and initial feed concentration on the metal ion binding capacity of hydrogel was also tested. The selectivity of the hydrogel toward the different metal ions tested was Cd(II)>Fe(III)>Cu(II). The recovery of metal ions was also investigated in acid media. © Taylor & Francis Group, LLC.

Author Keywords

2-Acrylamido-2-methylpropane sulfonic acid; Acrylonitrile; Adsorption; Heavy metal; Hydrogel; Wastewater

Document Type: Article

Source: Scopus

Mahmoud, A.A.^a, Awadalla, R.^b, Nassar, M.M.^a

Free vibration of non-uniform column using DQM

(2011) *Mechanics Research Communications*, 38 (6), pp. 443-448. Cited 1 time.

DOI: 10.1016/j.mechrescom.2011.05.015

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^b Department of Engineering Mathematics and Physics, Faculty of Eng., Helwan University, Cairo, Egypt

Abstract

Most of engineering problems are governed by a set of partial differential equations with proper boundary conditions. The present work is concerned with free vibration analysis of non-uniform column resting on elastic foundation and subjected to follower force. The used method of solution is the differential quadrature method (DQM). Formulation of the problem is introduced. The results obtained and compared with the exact solution and traditional numerical techniques such as finite element method. The parametric study is used to investigate the effect of column geometry on the natural frequencies, the mode shapes and the critical load. © 2011 Elsevier Ltd. All rights reserved.

Author Keywords

Critical load and Differential quadrature method; Follower force; Non-uniform column; Vibration

Document Type: Article

Source: Scopus

Badr, S.E.A.^a, Shaaban, M.^b, Elkholy, Y.M.^c, Helal, M.H.^a, Hamza, A.S.^a, Masoud, M.S.^a, El Safty, M.M.^a

Chemical composition and biological activity of ripe pumpkin fruits (*Cucurbita pepo* L.) cultivated in Egyptian habitats

(2011) *Natural Product Research*, 25 (16), pp. 1524-1539. Cited 5 times.

DOI: 10.1080/14786410903312991

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^b Chemistry of Natural Compounds Department, Division of Pharmaceutical Industries, National Research Centre, Dokki-Cairo 12622, Egypt

^c Department of Chemistry, Faculty of Science, Helwan University, Ain-Helwan, Egypt

Abstract

The chemical composition and biological activity of three parts (rind, flesh and seeds) of pumpkin fruits (*Cucurbita pepo* L.) cultivated in Egypt were studied. Chemical analysis of fibre, protein, -carotene, carbohydrates, minerals and fatty acids present in the rind, flesh, seeds and defatted seeds meal was conducted. Chemical, GC-MS and biological assays of organic extracts of the main fruit parts, rind and flesh established their unique constituents.

Chromatographic purification of the extracts afforded triglyceride fatty acid mixture (1), tetrahydro-thiophene (2), linoleic acid (3), calotropoleanly ester (4), cholesterol (5) and 13(18)-oleanen-3-ol (6). GC-MS analysis of the extract's unpolar fraction revealed the existence of dodecane and tetradecane. Structures of the isolated compounds (1-6) were confirmed by NMR and EI-MS spectrometry. Antimicrobial, antiviral and antitumour activities of the fruit parts were discussed. The promising combined extract of rind and flesh was biologically studied for microbial and cytotoxic activities in comparison with the whole isolated components. © 2011 Taylor & Francis.

Author Keywords

antitumour; antiviral; chemical composition; *Cucurbita pepo* L; cytotoxic and antimicrobial activities

Document Type: Article

Source: Scopus

Affi, G.M.

E-learning as an alternative strategy for tourism higher education in Egypt

(2011) *Quality Assurance in Education*, 19 (4), pp. 357-374. Cited 5 times.

DOI: 10.1108/09684881111170078

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Abstract

Purpose: This research aims to be one of the earliest studies to investigate tourism e-learning in Egypt, thus, it will initially shed light on the current standing of e-learning in Egypt before proceeding to: identify the present status of e-learning in Egyptian tourism higher education; explore the potential advantages and drawbacks of using e-learning in tourism higher education; and explore the suitability of e-learning for tourism higher education.

Design/methodology/approach: Data for this research have been collected by adopting a combination of "content analysis" and "semi-structured interviews". However, a pilot study was initially conducted before applying the main methods of research. **Findings:** Despite the relative newness of the Egyptian e-learning experiment, the Egyptian government has succeeded in establishing the required infrastructure for e-learning. However, deficiencies still exist especially regarding qualifying the Egyptian academics to participate efficiently in the e-learning process. Regarding application, tourism e-learning is applied to a limited extent in Egypt at the present time, as only seven public colleges are currently providing some e-learning services, which are mostly of a simple nature. Tourism private colleges are currently languid concerning the application of e-learning despite the potentiality of success especially with regard to serving international students. **Originality/value:** Despite the importance of both tourism and tourism education for a country such as Egypt, this research is the first to investigate the applicability of tourism e-learning in Egypt. © Emerald Group Publishing Limited.

Author Keywords

Distance education; E-learning; Egypt; Tourism; Tourism education

Document Type: Article

Source: Scopus

Marie, M.M., Salem, A.A., El Zairy, E.E.R.

A novel printing method to enhance the fixation of reactive dyes on wool-polyamide fabrics

(2011) *Journal of the Textile Institute*, 102 (9), pp. 790-800. Cited 2 times.

DOI: 10.1080/00405000.2010.522049

Textile Printing, Dyeing, and Finishing Department, Faculty of Applied Arts, Helwan University, Orman Giza 12311, Egypt

Abstract

The aim of this paper is to explain how colour fastness results are improved as a result of increasing the degree of fixation of reactive dyes on wool, polyamide and wool-polyamide blend fabrics. Wool-polyamide blend fabrics were printed with two different types of reactive dyes, e.g. monochlorotriazine and vinylsulphone. Trichloroacetic acid (TCAA) was added to the printing paste for controlling the pH level during the fixation process to get a maximum colour yield and a maximum dye fixation on the two components of the blend, e.g. wool and polyamide. In order to accelerate the reaction rate, a quaternising agent, e.g. triethylamine (TEA) was also added to the printing paste. The factors that may affect the efficiency of printing method, e.g. the concentration of TCAA, urea, wetting agent, TEA, steaming time and temperature were studied in detail. © 2011 The Textile Institute.

Author Keywords

Quaternisation; Reactive dye; Trichloroacetic acid; Triethylamine; Wool-polyamide

Document Type: Article

Source: Scopus

Metwalley, S.M., Abouel-Seoud, S.A., Farahat, A.M.

Emission components characteristics of a bi-fuel vehicle at idling condition
(2011) *Frontiers of Energy and Power Engineering in China*, 5 (3), pp. 322-329.

DOI: 10.1007/s11708-011-0158-6

Faculty of Engineering, Helwan University, Cairo, Egypt

Abstract

Natural gas (NG) represents today a promising alternative to conventional fuels for road vehicles propulsion, since it is characterized by a relatively low cost, better geopolitical distribution than oil, and lower environmental impact. This explains the current spreading of compressed natural gas (CNG) fuelled spark ignition (SI) engine, above all in the bi-fuel version, which is able to run either with gasoline or with NG. However, the aim of the present investigation is to evaluate the emission characteristics at idling condition. The vehicle engine was converted to bifueling system from a gasoline engine, and operated separately either with gasoline or CNG. Two different fuel injection systems (i. e., multi-point injection (MPI)-sequential and closed-loop venturi-continuous) are used, and their influences on the formation of emissions at different operating conditions are examined. A detailed comparative analysis of the engine exhaust emissions using gasoline and CNG is made. The results indicate that the CNG shows low air index and lower emissions of carbon monoxide (CO), carbon dioxide (CO₂), and total hydrocarbon (THC) compared to gasoline. © 2011 Higher Education Press and Springer-Verlag Berlin Heidelberg.

Author Keywords

air index; carbon dioxide (CO₂); carbon monoxide (CO); fuel injection systems; road vehicle engine; total hydrocarbon (THC); vehicle idle conditions

Document Type: Article

Source: Scopus

Hassan, H.E.^{a b}, Othman, A.A.^{a c h}, Eddington, N.D.^a, Duffy, L.^d, Xiao, L.^d, Waites, K.B.^d, Kaufman, D.A.^e, Fairchild, K.D.^e, Terrin, M.L.^f, Viscardi, R.M.^g

Pharmacokinetics, safety, and biologic effects of azithromycin in extremely preterm infants at risk for ureaplasma colonization and bronchopulmonary dysplasia

(2011) *Journal of Clinical Pharmacology*, 51 (9), pp. 1264-1275. Cited 13 times.

DOI: 10.1177/0091270010382021

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Abstract

Ureaplasma spp. respiratory tract colonization is a significant risk factor for bronchopulmonary dysplasia (BPD), a chronic lung disorder in preterm infants. As an initial step preparatory to future clinical trials to evaluate the clinical

efficacy of azithromycin to prevent BPD, the authors characterized the pharmacokinetics, safety, and biological effects of a single intravenous dose of azithromycin (10 mg/kg) in preterm neonates (n = 12) 24 to 28 weeks gestation at risk for Ureaplasma infection and BPD. A 2-compartment structural model with the clearance and volume of peripheral compartment (V2) allometrically scaled on body weight (WT) best described the pharmacokinetics of azithromycin in preterm neonates. The estimated parameters were clearance [0.18 L/h × WT(kg)^{0.75}], intercompartmental clearance [1.0 L/h], volume of distribution of central compartment [0.93 L], and V2 [14.2 L × WT(kg)]. There were no serious adverse events attributed to azithromycin. A single dose of azithromycin did not suppress inflammatory cytokines or myeloperoxidase activity in tracheal aspirates. These results demonstrated the safety of azithromycin and developed a pharmacokinetic model that is useful for future simulation-based clinical trials for eradicating Ureaplasma and preventing BPD in preterm neonates. © 2011 The Author(s).

Author Keywords

Azithromycin; bronchopulmonary dysplasia; pharmacokinetics; prematurity; Ureaplasma

Document Type: Article

Source: Scopus

Elnakish, M.T.^{a b c f}, Awad, M.M.^{a b f}, Hassona, M.D.H.^{a b c f}, Alhaj, M.A.^{a b}, Kulkarni, A.^{b c d}, Citro, L.A.^{b c d}, Sayyid, M.^{b d}, Abouelnaga, Z.A.^{a b}, El-Sayed, O.^d, Kuppusamy, P.^{b c d}, Moldovan, L.^{b e}, Khan, M.^{b c d}, Hassanain, H.H.^{a b c}

Cardiac remodeling caused by transgenic overexpression of a corn Rac gene

(2011) *American Journal of Physiology - Heart and Circulatory Physiology*, 301 (3), pp. H868-H880. Cited 12 times.

DOI: 10.1152/ajpheart.00807.2010

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Abstract

Rac1-GTPase activation plays a key role in the development and progression of cardiac remodeling. Therefore, we engineered a transgenic mouse model by overexpressing cDNA of a constitutively active form of Zea maize Rac gene (ZmRacD) specifically in the hearts of FVB/N mice. Echocardiography and MRI analyses showed cardiac hypertrophy in old transgenic mice, as evidenced by increased left ventricular (LV) mass and LV mass-to-body weight ratio, which are associated with relative ventricular chamber dilation and systolic dysfunction. LV hypertrophy in the hearts of old transgenic mice was further confirmed by an increased heart weight-to-body weight ratio and histopathology analysis. The cardiac remodeling in old transgenic mice was coupled with increased myocardial Rac-GTPase activity (372%) and ROS production (462%). There were also increases in α 1-integrin (224%) and β 1-integrin (240%) expression. This led to the activation of hypertrophic signaling pathways, e.g., ERK1/2 (295%) and JNK (223%). Pravastatin treatment led to inhibition of Rac-GTPase activity and integrin signaling. Interestingly, activation of ZmRacD expression with thyroxin led to cardiac dilation and systolic dysfunction in adult transgenic mice within 2 wk. In conclusion, this is the first study to show the conservation of Rho/Rac proteins between plant and animal kingdoms in vivo. Additionally, ZmRacD is a novel transgenic model that gradually develops a cardiac phenotype with aging. Furthermore, the shift from cardiac hypertrophy to dilated hearts via thyroxin treatment will provide us with an excellent system to study the temporal changes in cardiac signaling from adaptive to maladaptive hypertrophy and heart failure. © 2011 the American Physiological Society.

Author Keywords

Reactive oxygen species; Statin; Thyroxin

Document Type: Article

Source: Scopus

Abskharon, R.N.N.^{a b}, Soror, S.H.^{a b c}, Pardon, E.^{a b}, El Hassan, H.^{a b}, Legname, G.^d, Steyaert, J.^{a b}, Wohlkonig, A.^{a b}

Combining in-situ proteolysis and microseed matrix screening to promote crystallization of PrP c-nanobody complexes

(2011) *Protein Engineering, Design and Selection*, 24 (9), pp. 737-741. Cited 7 times.

DOI: 10.1093/protein/gzr017

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^d International School for Advanced Studies, Institute for Neurodegenerative Diseases, Trieste, Italy

Abstract

Prion proteins (PrPs) are difficult to crystallize, probably due to their inherent flexibility. Several PrPs structures have been solved by nuclear magnetic resonance (NMR) techniques; however, only three structures were solved by X-ray crystallography. Here we combined in-situ proteolysis with automated microseed matrix screening (MMS) to crystallize two different PrP C-nanobody (Nb) complexes. Nanobodies are single-domain antibodies derived from heavy-chain-only antibodies of camelids. Initial crystallization screening conditions using in-situ proteolysis of mouse prion (23-230) in complex with a nanobody (Nb-PrP-01) gave thin needle aggregates, which were of poor diffraction quality. Next, we used these microcrystals as nucleants for automated MMS. Good-quality crystals were obtained from mouse PrP (89-230)/Nb-PrP-01, belonged to the monoclinic space group P 1 21 1, with unit-cell parameters $a = 59.13$, $b = 63.80$, $c = 69.79$ Å, $\beta = 101.96^\circ$ and diffracted to 2.1 Å resolution using synchrotron radiation. Human PrP (90-231)/Nb-PrP-01 crystals belonged to the monoclinic space group C2, with unit-cell parameters $a = 131.86$, $b = 45.78$, $c = 45.09$ Å, $\beta = 96.23^\circ$ and diffracted to 1.5 Å resolution. This combined strategy benefits from the power of the MMS technique without suffering from the drawbacks of the in-situ proteolysis. It proved to be a successful strategy to crystallize PrP-nanobodies complexes and could be exploited for the crystallization of other difficult antigen-antibody complexes. © The Author 2011. Published by Oxford University Press. All rights reserved.

Document Type: Article

Source: Scopus

Hashem, F.M., Shaker, D.S., Ghorab, M.K., Nasr, M., Ismail, A.

Formulation, characterization, and clinical evaluation of microemulsion containing clotrimazole for topical delivery

(2011) *AAPS PharmSciTech*, 12 (3), pp. 879-886. Cited 25 times.

DOI: 10.1208/s12249-011-9653-7

Department of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmacy, Helwan University, Cairo, Egypt

Abstract

The objective of the present study was to formulate and evaluate microemulsion systems for topical delivery of clotrimazole (CTM). The solubility of CTM in various oils was determined to select the oil phase of the microemulsion systems. Pseudoternary phase diagrams were constructed to identify the area of microemulsion existence. Five CTM microemulsion formulations (M1-M5) were prepared and evaluated for their thermodynamic stability, pH, refractive index, droplet size, viscosity, and in vitro release across cellulose membrane. Among the prepared microemulsion formulations, M3 (lemon oil/Tween 80/n-butanol/water) and M4 (isopropyl myristate/Tween 80/n-butanol/water) microemulsion systems were found to be promising according to their physical properties and CTM cumulative percentage release. Gel form of M3 and M4 were prepared using 1% Carbopol 940 as the hydrogel matrix. Both formulations were evaluated in the liquid and gel forms for drug retention in the skin in comparison to the marketed CTM topical cream and their stability examined after storage at 40°C for 6 months. Microemulsion formulations achieved significantly higher skin retention for CTM over the CTM cream. Stability studies showed that M4 preparations were more stable than M3. The in vitro anti-fungal activity of M4 against *Candida albicans* was higher than that of the conventional cream. Moreover, clinical evaluation proved the efficacy and tolerability of this preparation in the treatment of various topical fungal infections. © 2011 American Association of Pharmaceutical Scientists.

Author Keywords

clotrimazole; microemulsion; skin retention; topical cream; topical gel

Document Type: Article

Source: Scopus

Ibrahim, N.A.^a, Eid, B.M.^a, El-Zairy, E.R.^b

Antibacterial functionalization of reactive-cellulosic prints via inclusion of bioactive Neem oil/ β CD complex

(2011) *Carbohydrate Polymers*, 86 (3), pp. 1313-1319. Cited 13 times.

DOI: 10.1016/j.carbpol.2011.06.032

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^b Faculty of Applied Arts, Printing, Dyeing and Finishing Dept., Helwan Univ., Cairo, Egypt

Abstract

In the present research enhancing the antibacterial activity of cellulosic fabrics printed with reactive dyes was achieved through combined reactive printing and β CD loading in one step followed by subsequent treatment with Neem oil, as an eco-friendly antimicrobial agent. Retention of Neem oil with its main compound azadirachtin within the hydrophobic cavities of β CD moieties-attached the reactive cellulosic prints, via formation of host-guest inclusion complexes, to impart antibacterial functionality against G+ve (*Staphylococcus aureus*) and G-ve (*Escherichia coli*) bacteria was carried out. The experimental results reveal that post-treatment with Neem oil results in a remarkable improvement in the antibacterial activity of the treated reactive prints along with darker depth of shade and without adversely affecting the UV-blocking properties of the final products. Mode of interactions, surface morphology as well as washing durability of antibacterial and anti-UV functions were also investigated. © 2011 Elsevier Ltd. All rights reserved.

Author Keywords

Antimicrobial activity; Cellulosic fabrics; MCT- β CD; Neem oil; Reactive prints

Document Type: Article

Source: Scopus

Elsanadily, S.I.^a, Badr, H.E.A.^a, Nossair, Z.B.^b, Eghandour, O.M.^b

Direction of arrival tracking under various degrees of correlation

(2011) *Proceedings - 2011 International Conference on Multimedia and Signal Processing, CMSP 2011*, 1, art. no. 5957375, pp. 73-78. Cited 1 time.

DOI: 10.1109/CMSP.2011.21

^a Department Of Electronic Warfare, Military Technical College, Cairo, Egypt

^b Department Of Communications and Electronics, Faculty of Engineering, Helwan University, Cairo, Egypt

Abstract

The tracking devices in the cellular networks or the tracking radars prefer to have an estimated covariance matrix in a single snapshot to estimate the next direction of the moving target. They have achieved great success in tracking when the targets are uncorrelated. Recent research provides the deflation approach to estimate the direction of arrival (DOA) of stationary targets by using symmetric uniform linear arrays (ULAs) under different unknown fading conditions. In this paper, a modified deflation approach using an adaptive signal processing is proposed to achieve DOA tracking capability for moving targets under various degrees of correlation. Computer simulation results are provided to verify the theoretical analysis of the proposed method. © 2011 IEEE.

Author Keywords

Array signal processing; DOA; Oblique projection; Symmetric ULA; Toeplitz matrix

Document Type: Conference Paper

Source: Scopus

Garner, T.W.^a, Slack, C.M.^a, Mehta, K.^a, Scholze, A.^a, Mahrous, A.M.^b

Ionospheric structures correlated with Anatolian surface features

(2011) *Radio Science*, 46 (4), art. no. RS0D16, . Cited 1 time.

DOI: 10.1029/2011RS004653

^a Space and Geophysics Laboratory, Applied Research Laboratories, University of Texas at Austin, PO Box 8029, Austin, TX 78758-4423, United States

^b Space Weather Monitoring Center, Helwan University, Helwan, Ain Helwan 11795, Egypt

Abstract

A UHF/VHF beacon receiver located in Helwan, Egypt, frequently observes structures in Δ TEC/ Δ t measurements (where TEC is total electron count), where the F region (300 km) intercept of the radio rays crosses the steep topographic gradients associated with the Anatolian Plateau. There are three classes of structures: bumps, ripples and waves. A bump is defined as a single spatial Δ TEC/ Δ t peak with a peak-to-trough amplitude of at least 0.01 TECU/s (1 TECU = 10¹⁶ electrons/m²) that is at least 1 wide in F region latitude. A ripple is a bump with smaller structures on either side of the central bump. Finally, waves have amplitudes \geq 0.01 TECU/s with several roughly equal peaks. These features were observed repeatedly in a number of passes from 31 August to 30 November 2008. Over half of passes had either a bump (34.6%), a ripple (18.2%) or a wave (6.3%). Most of these structures occur near areas with large orographic gradients. The prevailing surface wind blows across the mountains when bumps and ripples are observed. These correlations suggest that the local ionosphere is affected by the ground topography, most likely through the orographic lifting and the associated gravity waves. Copyright 2011 by the American Geophysical Union. Copyright 2011 by the American Geophysical Union.

Document Type: Article

Source: Scopus

Abdel-Rahman, M.K.

Can apricot kernels fatty acids delay the atrophied hepatocytes from progression to fibrosis in dimethylnitrosamine (DMN)-induced liver injury in rats?

(2011) *Lipids in Health and Disease*, 10, art. no. 114, . Cited 4 times.

DOI: 10.1186/1476-511X-10-114

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Abstract

Background and aims. The present study was aimed to analyze the chemical composition of ground apricot kernel (GAK) and examine its effect on hepatic fibrosis in vivo induced by dimethylnitrosamine (DMN) in rats. **Methods and results.** Hepatic fibrosis was induced by intraperitoneal injections of 10 mg/kg DMN for 3 consecutive days each week over a period of 4 wk. The rats were randomly assigned to five groups of nine rats each: the negative control group (NC), the hepatic fibrosis group (PC), hepatic fibrosis supplemented with GAK (0.5 mg/kg/BW/rat), hepatic fibrosis supplemented with GAK (1 mg/kg/BW/rat) and hepatic fibrosis supplemented with GAK (1.5 mg/kg/BW/rat). Rats were killed, blood was collected and livers were excised for biochemical measurements and histological examination. Results indicate that the diet supplemented with GAK led to improving liver function, lipid peroxides, and liver CAT, SOD and GSH. These results were confirmed by liver histology. Hierarchically high levels of GAK (1.5 mg/kg/BW/rat) gave the best results compared to other tested levels. **Conclusion:** This study demonstrates that GAK administration specifically (1.5 mg/kg/BW/rat) can effectively improve liver fibrosis caused by DMN, and may be used as a therapeutic option and preventive measure against hepatic fibrosis. Furthermore, a human trial would be applied specially GAK is a part of Egyptian diet. The act of why high amounts of GAK was improved biochemical values compared to low or moderate levels tested in this study may be due to increase levels of oleic acid and other polyphenols in apricot kernels. © 2011 Abdel-Rahman; licensee BioMed Central Ltd.

Author Keywords

Antioxidant activity; Cyanide; Dimethylnitrosamine; Ground apricots kernel (GAK); Liver fibrosis

Document Type: Article

Source: Scopus

Ghoneim, W.^a, El-Bassyouni, H.T.^b, Abdel Maksoud, S.A.^c

Peroxisomal biogenesis disorder biomarkers

(2011) *Clinical Laboratory*, 57 (7-8), pp. 469-480. Cited 1 time.

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^c Clinical Pathology Department, National Research Centre, Egypt

Abstract

Background: The pathological mechanisms underlying peroxisomal biogenesis disorders (PBD) are not fully understood and the available therapies are not sufficient. This stresses the importance of identifying biochemical markers that reflect the extent of peroxisomal dysfunction in plasma of PBD patients. **Methods:** Very long chain fatty acids VLCFAs, Phytanic acid, inflammatory markers: tumor necrosis- α , interleukin-6, and interleukin-2 (TNF- α , IL-6, and IL-2), lipid peroxidation parameter malonedialdehyde (MDA), low density lipoprotein-cholesterol (LDL-C), high density lipoprotein-cholesterol (HDL-C), and catalase activity were measured. **Results:** Significant increases in LDL-C, VLCFAs (C26:0, C26:0/C22:0 and C24:0/C22:0), Phytanic acid, MDA, and Catalase were observed along with significant decreases in Plasmalogen and HDL-C level. No significant difference could be found between male and female patients regarding the biochemical parameters. Both cholesterol and triglycerides showed no significant difference between patients and controls. The characteristic curve (ROC) showed that VLCFAs were the most significant diagnostic markers for PBD followed by TNF- α , IL2, IL6, MDA, and plasmalogens. **Conclusions:** PBD patients have impaired anti-oxidative defense together with increased inflammatory markers. We provide biomarkers that could guide therapies and prevention strategies. Based on our results we suggest clinical trials to investigate the role of dietary supplementation of antioxidants such as vitamin C and E as an adjuvant therapy for PBD patients.

Author Keywords

Antioxidants; Catalase; Cholesterol; Interleukin; Peroxisomal biogenesis disorder; Tumor necrosis factor; Very long chain fatty acids

Document Type: Article

Source: Scopus

Takagi, Y.^a, Lee, J.-C.^a, Yagi, S.-I.^a, Yamane, H.^a, Wano, T.^b, Kitagawa, D.^b, El Salmawy, A.^c

Fiber making directly from poly(tetrafluoroethylene) emulsion

(2011) *Polymer*, 52 (18), pp. 4099-4105. Cited 1 time.

DOI: 10.1016/j.polymer.2011.07.016

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^b Nitto Denko Co. Ltd., Saitama 366-8521, Japan

^c Apparel Department, Faculty of Applied Arts, Helwan University, Cairo, Egypt

Abstract

Poly(tetrafluoroethylene) (PTFE) fiber with a superior mechanical property was prepared directly from its emulsion by the novel manufacturing process. The PTFE emulsion turned into a paste when a high shear flow was applied and the paste was extruded through a nozzle into a strand consisting of fine PTFE particles. The diameter of the strand was reduced stepwise by applying the die-drawing process through a conical die at a low temperature. The strand was further die-drawn down at elevated temperatures into fine PTFE fibers with a highly oriented crystalline structure. The crystalline orientation factor of the PTFE fiber reached very close to unity. Although the fibers obtained have a very high tensile modulus, the tensile strength was not as high as that expected from the crystalline orientation, suggesting that the presence of some defects in the PTFE fiber formed in the instantaneous deformation. © 2011 Elsevier Ltd. All rights reserved.

Author Keywords

Die-drawing; Fiber formation; Poly(tetrafluoroethylene)

Document Type: Article

Source: Scopus

Khalil, B.^a, Ouarda, T.B.M.J.^{b,c}, St-Hilaire, A.^c

Estimation of water quality characteristics at ungauged sites using artificial neural networks and canonical correlation analysis

(2011) *Journal of Hydrology*, 405 (3-4), pp. 277-287. Cited 26 times.

DOI: 10.1016/j.jhydrol.2011.05.024

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Abstract

Three models are developed for the estimation of water quality mean values at ungauged sites. The first model is based on artificial neural networks (ANN), the second model is based on ensemble ANN (EANN) and the third model is based on canonical correlation analysis (CCA) and EANN. The ANN and EANN models are developed to establish the functional relationship between water quality mean values and basin attributes. In the CCA-based EANN model, CCA is used to form a canonical attributes space using data from gauged sites. Then, an EANN is applied to identify the functional relationships between water quality mean values and the attributes in the CCA space. Four water quality variables are selected as output of these models. Variable selection is based on principal component analysis. The water quality variables which showed the highest loading factors in the first four components are selected. The three models are applied to 50 subcatchments in the Nile Delta, Egypt. A jackknife validation procedure is used to evaluate the performance of the three models. The results show that the EANN model provides better generalization ability than the ANN. However, the CCA-based EANN model performed better than the other two models in terms of prediction accuracy. © 2011 Elsevier B.V.

Author Keywords

Artificial neural networks; Canonical correlation; Jackknife; Regional estimation; Ungauged site; Water quality

Document Type: Article

Source: Scopus

El-Gendy, Y.A.^a, Sakr, G.B.^b

Crystallization behavior of e-beam evaporated Ga5Ge 15Te80 thin films

(2011) *Journal of Non-Crystalline Solids*, 357 (16-17), pp. 3226-3229. Cited 2 times.

DOI: 10.1016/j.jnoncrysol.2011.05.013

^a Physics Department, Faculty of Science, Helwan University, Cairo, Egypt

^b Department of Physics, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt

Abstract

Ga₅Ge₁₅Te₈₀ thin films have been deposited by e-beam evaporation method. The chemical composition of the deposited films was identified using energy dispersive X-ray spectrometry. The electrical conductivity, σ of the deposited films during heating/cooling cycles was investigated in the temperatures 298-570 K. The conductivity curve showed two sudden upward trends during the first heating cycle. The first upward trend occurs in the temperature range 408-430 K and was attributed to the amorphous-to-crystalline phase transformation. While the second is in the temperature range 470-495 K, and can be attributed to the crystallization process. However, for second heating cycle the conductivity curve becomes reversible. The optical band gap of the as-deposited and annealed film at annealing temperature 423 K was determined from the recorded transmittance and reflectance spectra. The obtained results were confirmed throughout the X-ray and transmission electron microscope studies. © 2011 Elsevier B.V. All rights reserved.

Author Keywords

Electrical properties; Optical properties; Thin films

Document Type: Article

Source: Scopus

Mostafa, A.^{a b}, Medley, G.^a, Roberts, D.M.^{c d}, Mohamed, M.S.^e, Elshanawani, A.A.^f, Roberts, M.S.^{a g}, Liu, X.^a

Simultaneous quantification of carbamate insecticides in human plasma by liquid chromatography/tandem mass spectrometry

(2011) *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*, 879 (23), pp. 2234-2238. Cited 6 times.

DOI: 10.1016/j.jchromb.2011.06.006

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Abstract

Carbofuran (CFN), carbosulfan (CSN) and fenobucarb (FBC) are carbamate pesticides that are widely used in gardening and agriculture for the control of insects. Human poisoning due to occupational or self-poisoning exposures is also reported, so assays are required to quantify the plasma concentration of these insecticides. An LC-MS/MS method was developed and validated for the simultaneous quantification of these three carbamate insecticides in the plasma of patients with acute intentional self-poisoning. Plasma samples were pretreated by acetonitrile for protein precipitation. Chromatography was carried out on a Luna C18(2) analytical column with gradient elution using a mobile phase containing acetonitrile and water with 10. mM ammonium acetate. Mass spectrometric analysis was performed by an Applied Biosystems MDS Sciex API 2000 triple quadrupole mass spectrometer coupled with electrospray ionization (ESI) source in the positive ion mode. The total run time was 7. min. The assay was validated over a concentration range from 10 to 1000. ng/ml for CSN and FBC and 20-2000. ng/ml for CFN. The precision and accuracy for both intra- and inter-day determination of all analytes were acceptable (<15%). No significant matrix effect was observed. Stability of compounds was established for short term bench and autosampler storage as well as freeze/thaw cycles. The method was effectively applied to 270 clinical samples from patients with a history of acute intentional carbamate self-poisoning. © 2011 Elsevier B.V.

Author Keywords

Carbofuran; Carbosulfan; Fenobucarb; Insecticide; LC-MS/MS; Poisoning

Document Type: Article

Source: Scopus

El-Aziz, M.A.^{a b}

Erratum: Viscous dissipation effect on mixed convection flow of a micropolar fluid over an exponentially stretching sheet (Canadian Journal of Physics (2009) 87 (359-368))

(2011) *Canadian Journal of Physics*, 89 (8), p. 899.

DOI: 10.1139/p11-079

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Document Type: Erratum

Source: Scopus

Al-Quraishy, S.^a, Delic, D.^b, Sies, H.^{a c}, Wunderlich, F.^{a b}, Abdel-Baki, A.A.S.^{a d}, Dkhil, M.A.M.^{a e}

Differential miRNA expression in the mouse jejunum during garlic treatment of Eimeria papillata infections (2011) *Parasitology Research*, 109 (2), pp. 387-394. Cited 21 times.

DOI: 10.1007/s00436-011-2266-y

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^d Department of Zoology, Faculty of Science, Beni-Suef University, Beni-Suef, Egypt

^e Department of Zoology and Entomology, Faculty of Science, Helwan University, Helwan, Egypt

Abstract

Accumulating evidence indicates a critical role of microRNAs (miRNAs) in the outcome of diseases. Here, we investigate the effect of garlic on the intestinal miRNA signature of male Balb/c mice during infections with *Eimeria papillata*. Garlic decreases the intracellular development as evidenced by a lowered fecal output of *E. papillata* oocysts from $3,150 \pm 410$ to approximately $1,750 \pm 390$ oocysts per gram feces on day 4 postinoculation. This anti-coccidial activity of garlic is associated with an inhibition of the *E. papillata*-induced increases of interferon gamma, inducible nitric oxide synthase, nitrite/nitrate, and malondialdehyde and decrease in glutathione. Moreover, garlic downregulates the *E. papillata*-induced increases in the expression of the miRNAs miR-1959, miR-203, and miR-21, and it upregulates the expression of the 11 miRNA species miR-142-5P, miR-15A, miR-10A, miR-29B, miR-1902, miR-125A-5P, let-7E, miR-148A, miR-130A, miR-10B, and miR-93, respectively, as revealed by miRXplore microarray technology. Real-time PCR confirms these effects of garlic in the jejunum of *E. papillata*-infected mice. Our data indicate that the anti-coccidial activity of garlic is associated with specific changes in the miRNA signature of the mouse jejunum, the target site of *E. papillata*. These changes may reflect an involvement of miRNAs in garlic-activated pathways to reduce and/or to repair *E. papillata*-induced tissue injuries. © 2011 Springer-Verlag.

Document Type: Article

Source: Scopus

El-Aziz, M.A.^{a b}

Erratum: The effects of variable fluid properties and viscous dissipation on forced convection of viscoelastic liquids in a thin film over an unsteady stretching sheet (Canadian Journal of Physics (2010) 88 (607-616)) (2011) *Canadian Journal of Physics*, 89 (8), p. 901.

DOI: 10.1139/p11-080

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Document Type: Erratum

Source: Scopus

Khalil, B.^a, Ouarda, T.B.M.J.^{b c}, St-Hilaire, A.^c

A statistical approach for the assessment and redesign of the Nile Delta drainage system water-quality-monitoring locations (2011) *Journal of Environmental Monitoring*, 13 (8), pp. 2190-2205. Cited 12 times.

DOI: 10.1039/c0em00727g

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^c Canada Research Department of Estimation of Hydrometeorological Variables, INRS-ETE, 490 de la Couronne, Quebec, QC G1K 9A9, Canada

Abstract

There are several deficiencies in the statistical approaches proposed in the literature for the assessment and redesign of surface water-quality- monitoring locations. These deficiencies vary from one approach to another, but generally include: (i) ignoring the attributes of the basin being monitored; (ii) handling multivariate water quality data sequentially rather than simultaneously; (iii) focusing mainly on locations to be discontinued; and (iv) ignoring the reconstitution of information at discontinued locations. In this paper, a methodology that overcomes these deficiencies is proposed. In the proposed methodology, the basin being monitored is divided into sub-basins, and a hybrid-cluster analysis is employed to identify groups of sub-basins with similar attributes. A stratified optimum sampling strategy is then employed to identify the optimum number of monitoring locations at each of the sub-basin groups. An aggregate information index is employed to identify the optimal combination of locations to be discontinued. The proposed approach is applied for the assessment and redesign of the Nile Delta drainage water quality monitoring locations in Egypt. Results indicate that the proposed methodology allows the identification of (i) the optimal combination of locations to be discontinued, (ii) the locations to be continuously measured and (iii) the sub-basins where monitoring locations should be added. To reconstitute information about the water quality variables at discontinued locations, regression, artificial neural network (ANN) and maintenance of variance extension (MOVE) techniques are employed. The MOVE record extension technique is shown to result in a better performance than regression or ANN for the estimation of information about water quality variables at discontinued locations. © 2011 The Royal Society of Chemistry.

Document Type: Review**Source:** ScopusShams, H.Z.^a, Mohareb, R.M.^{b c}, Helal, M.H.^a, Mahmoud, A.E.-S.^a**Design and synthesis of novel antimicrobial acyclic and heterocyclic dyes and their precursors for dyeing and/or textile finishing based on 2-n-acylamino-4,5,6,7-tetrahydrobenzo[b]thiophene systems**
(2011) *Molecules*, 16 (8), pp. 6271-6305. Cited 7 times.**DOI:** 10.3390/molecules16086271^a Department of Chemistry, Faculty of Science, Helwan University, P.O. 11790, Ain Helwan, Cairo, Egypt^b Department of Organic Chemistry, Faculty of Pharmacy, October University for Modern Sciences and Arts, P.O. 12613, October City, Egypt^c Department of Chemistry, Faculty of Science, Cairo University, Giza, P.O. 12311, Egypt**Abstract**

A series of novel polyfunctionalized acyclic and heterocyclic dye precursors and their respective azo (hydrazone) counterpart dyes and dye precursors based on conjugate enaminones and/or enaminonitrile moieties were synthesized. The dyes and their precursors are based on 2-cyano-N-(3-cyano-4,5,6,7-tetrahydrobenzo[b]thiophen-2-yl)-acetamide, 2-ethoxycarbonyl-N-(3-cyano-4,5,6,7-tetrahydrobenzo[b]thiophen-2-yl)-acetamide or 2-phenylcarbamoyl-N-(3-cyano-4,5,6,7-tetrahydrobenzo[b]thiophen-2-yl)-acetamide systems as precursors. The latter compounds were used to synthesize polyfunctional thiophene-, thiazole-, pyrazole, pyridine-, pyrimidine-, oxazine-, as well as acyclic moieties. The dyes and dye precursors were characterized by elemental analysis and spectral methods. All dyes and their precursors were screened in vitro and evaluated for both their antibacterial and antifungal activities. MIC data of the novel dye systems and their respective precursors showed significant antimicrobial activity against most tested organisms. Some compounds exhibited comparable or even higher efficiency than selected standards. Dyes were applied at 5% depth for disperse dyeing of nylon, acetate and polyester fabrics. Their spectral characteristics and fastness properties were measured and evaluated.

Author Keywords

Antimicrobial activity; Dyes; Fastness; Heterocyclic; Textile finish

Document Type: Article**Source:** Scopus

Tantawy, S.F.

A note on solvability conditions for multiple objectives linear programming (MOLP) problems
(2011) *Journal of Algorithms and Computational Technology*, 5 (3), pp. 501-511.**DOI:** 10.1260/1748-3018.5.3.501

Mathematics Department, Faculty of Science, Helwan University Ain Helwan, 11795, Cairo, Egypt

Abstract

This paper investigates the advantages of using a simple linear programming problem with one unknown to show that whether the given multiple objectives linear programming (MOLP) problems is solvable or not. This kind of investigation is based mainly on both of feasibility and efficiency characterization of the (MOLP) problem. Our goal of

this investigation is to help the analyst of better understanding of the nature and the theory of the given problem under consideration. Some illustrative examples is given to clarify this investigation study.

Author Keywords

efficient point; Multiple objective linear programming problems; non dominated point

Document Type: Article

Source: Scopus

Ghany, H.A.

Exact solutions for stochastic generalized hirota-satsuma coupled KdV equations

(2011) *Chinese Journal of Physics*, 49 (4), pp. 926-940. Cited 17 times.

Department of Mathematics, Faculty of Industrial Education, Helwan University, Sawah street (P.O.11282), Cairo, Egypt

Abstract

Wick-type generalized stochastic Hirota-Satsuma coupled KdV equations are investigated. Some white noise functional solutions for these equations are obtained by using white noise analysis, Hermite transforms, and the modified tanh-coth method. Moreover two examples are given for the investigated model. © 2011 The physical society of the republic of China.

Document Type: Article

Source: Scopus

Rashad, M.M.^a, Abdou, H.M.^a, Shousha, W.G.^b, Ali, M.M.^b, El-Sayed, N.N.^a

Purification and characterization of the pectin lyase produced by Pleurotus ostreatus grown on lemon pulp waste

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (8), pp. 1377-1384.

^a Biochemistry Department, National Research Centre, Division of Genetic Engineering and Biotechnology, El Tahrir St, El Dokki 12622, Cairo, Egypt

^b Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

Utilization of lemon pulp waste as an agroindustrial waste for production of pectin lyase (PL) [E.C.4.2.2.10] by *Pleurotus ostreatus* mushroom NRRL 0366 was investigated using semi solid state culture. The enzyme was purified using DEAE-Cellulose column chromatography. The specific activity went up to 81.30 U/mg protein with a purification fold 15.6 and 30.24% recovery. The enzyme had molecular weight of (23 KDa) by SDS polyacrylamide gel electrophoresis and was mostly stable around (pH 7.5). The optimum pH and temperature for the enzyme activity were 7.5 and 60°C respectively. The Km value of PL was obtained to be about 3.6 mM. The effect of some metal ions and inhibitors on PL activity was investigated, No stimulation in PL activity was observed in all the examined metal ions.

Author Keywords

Lemon pulpe waste; Pectin lyase; Pectinases; *Pleurotus ostreatus*

Document Type: Article

Source: Scopus

Zefaan, H.A.

Noise and tail pipe emission of aftermarket conversion gasoline vehicle to CNG operation

(2011) *Journal of Engineering and Applied Science*, 58 (4), pp. 345-358.

Automotive and Tractors Engineering Department, Faculty of Engineering, Helwan University, Egypt

Abstract

Currently, in most countries, the converting gasoline vehicles to run on natural gas usually occurs aftermarket, without any modifications in its vehicle engines. This will continue to exist for a long time, thus the question of noise and exhaust emission of these vehicles over their useful life become very important This paper presents the experimental results carried out on aftermarket conversion gasoline vehicle to CNG operation, to evaluate aftermarket conversion, from standpoint of noise and exhaust emission. However, a series of road tests were done under steady state condition, over 10000 km of converted vehicle life. The investigation was performed over a wide range of vehicle

speeds and loads "speed range started from 20 until 100 km/hr, with variation 20 and load range started from one passenger until 4 with Variation one". The noise was measured at the driver head position and exhaust emission at exhaust manifold. The results are compared between the two fuels, CNG and gasoline. The CNG fueled engine showed low emissions of reactive hydrocarbons and noise, but NOx emissions showed an increase in their amounts.

Author Keywords

Aftermarket conversion; Alternative fuel; Dual diesel engines; Natural gas; Noise emission and exhaust emission; Si engine

Document Type: Article

Source: Scopus

El-Monem, A.F.A.^a, El-DougDoug, K.A.^b, Hamad, I.A.^a, Ahmed, E.A.^a, El-Kader, H.S.A.^{c,d}

Identification and molecular characterization of Tomato Yellow Leaf Curl Virus-EG

(2011) *Emirates Journal of Food and Agriculture*, 23 (4), pp. 355-367. Cited 1 time.

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^d Taif University, Biotechnology Department, Saudi Arabia

Abstract

Tomato Yellow Leaf Curl virus (TYLCV-Eg) was isolated from whiteflies-infected tomato (*Lycopersicon esculentum* cv. Castle rock) plants growing in Nubaria and El-Behera Governorate. The infected plants exhibited systemic viral symptoms in the form of severe leaf curling, leaf crinkle with marginal yellowing, stem upright, twisted and stunted. TYLCV-Eg reacted positively with polyclonal antibodies specific to TYLCV using DAS-ELISA. It was transmitted by both syringe injection and whiteflies with transmission efficiency of about 80% and 100%, respectively. TYLCV-Eg isolate was transmitted to different species belonging to families Cucurbitaceae, Fabaceae, Solanaceae and Chenopodiaceae. TYLCV had TIP of 70°C, DEP of 10⁻⁷ and LIV of about 6 days. Electron micrograph of the partially purified TYLCV revealed the presence of monomer and dimer gemini particles with dimensions of 22 nm and 20 × 30 nm to 24 × 30 nm, respectively when negatively stained with uranyl acetate. Using degenerate oligonucleotide primers, the viral coat protein gene was amplified successfully by PCR, producing ~ 500 bp fragment from tomato infected plants. The viral genome was detected by specific DNA probe using dot blot hybridization technique. Comparative nucleotide sequence analysis showed a similarity of 98% between TYLCV-Eg and other isolates.

Author Keywords

And Nucleotide sequence; DAS-ELISA; Dot-blot hybridization; PCR; TYLCV-EG

Document Type: Article

Source: Scopus

Awad, A.S.^a, Kamel, R.^b, Sherief, M.-A.E.^c

Effect of thymoquinone on hepatorenal dysfunction and alteration of CYP3A1 and spermidine/spermine N-1-acetyl-transferase gene expression induced by renal ischaemia-reperfusion in rats

(2011) *Journal of Pharmacy and Pharmacology*, 63 (8), pp. 1037-1042. Cited 17 times.

DOI: 10.1111/j.2042-7158.2011.01303.x

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Abstract

Objectives: Renal ischaemia-reperfusion (I/R) is a well-characterised model of acute renal failure that causes both local and remote organ injury. The aim of this work was to investigate the effect of thymoquinone, the main constituent of the volatile oil extracted from *Nigella sativa* seeds, on renal and hepatic changes after renal ischaemia-reperfusion. **Methods:** Male Sprague-Dawley rats were divided into sham I/R vehicle-treated groups, and I/R thymoquinone-treated groups. Thymoquinone (10 mg/kg, p.o.) was administered for ten consecutive days to the I/R thymoquinone group before injury. I/R and I/R thymoquinone groups were subjected to 30-min ischaemia followed by 4-h reperfusion. **Key findings:** I/R resulted in a significant increase in malondialdehyde (MDA) level and decreases in glutathione-S-transferase (GST) and superoxide dismutase (SOD) activity in liver and kidney tissues. Thymoquinone treatment caused the reversal of I/R-induced changes in MDA as well as GST and SOD activity. Moreover, I/R caused a significant rise in creatinine and alanine aminotransferase serum levels. CYP3A1 mRNA expression was induced

significantly by I/R in both liver and kidney tissues compared with sham group. Thymoquinone reduced significantly this increase. I/R caused induction of mRNA expression of spermidine/spermine N-1-acetyl-transferase (SSAT), a catabolic enzyme that participates in polyamine metabolism, in liver and kidney tissues. Thymoquinone reduced SSAT mRNA expression significantly in liver and markedly in kidney. Conclusions: These findings suggested that thymoquinone protected against renal I/R-induced damage through an antioxidant mechanism as well as the decrease of CYP3A1 and SSAT gene expression. © 2011 The Authors JPP © 2011 Royal Pharmaceutical Society.

Author Keywords

CYP3A1; Oxidative stress; Renal ischaemia-reperfusion; Spermidine/spermine N-1-acetyl-transferase; Thymoquinone

Document Type: Article

Source: Scopus

El-Bendary, M.A.M.^a, Kazimian Sr., H.^d, Abo-El-azm, A.E.^b, El-Fishawy, N.A.^c, El-Samie, F.A.^b, Shawki, F.^b

Image transmission in low-power networks in mobile communications channel

(2011) *World Academy of Science, Engineering and Technology*, 80, pp. 1019-1025.

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Abstract

This paper studies a vital issue in wireless communications, which is the transmission of images over Wireless Personal Area Networks (WPANs) through the Bluetooth network. It presents a simple method to improve the efficiency of error control code of old Bluetooth versions over mobile WPANs through Interleaved Error Control Code (IECC) technique. The encoded packets are interleaved by simple block interleaver. Also, the paper presents a chaotic interleaving scheme as a tool against bursts of errors which depends on the chaotic Baker map. Also, the paper proposes using the chaotic interleaver instead of traditional block interleaver with Forward Error Control (FEC) scheme. A comparison study between the proposed and standard techniques for image transmission over a correlated fading channel is presented. Simulation results reveal the superiority of the proposed chaotic interleaving scheme to other schemes. Also, the superiority of FEC with proposed chaotic interleaver to the conventional interleavers with enhancing the security level with chaotic interleaving packetby- packet basis.

Author Keywords

Chaotic interleaver; Interleaving technique; Jackes' model; Mobile Bluetooth terminals; WPANs

Document Type: Article

Source: Scopus

Kamel, O.M.^a, Ammar, M.K.^b

Solution of the Gaussian transfer orbit equations of motion

(2011) *Mechanics and Mechanical Engineering*, 15 (1), pp. 39-46.

^a Astronomy and Space Science Dept., Faculty of Sciences, Cairo University, Giza, Egypt

^b Mathematics Dept., Helwan University, Helwan, Egypt

Abstract

This article deals with an orbit transfer problem by the application of only one motor thrust engine impulse at any point (r, v) on the elliptic initial orbit. The terminal orbits are elliptic. We consider the coplanar non-limited duration case. We succeeded to attain an analytical solution for the transfer Lagrange-Gauss modulated equations of motion. We selected the eccentric anomaly to be the independent parameter. We evaluated the integrals that appear in the R.H.S. of the equations of motion for da/dE , de/dE and $e d\omega/dE$. Accordingly the three elements defining the final orbit are determined from $(a-a_0)$, $(e-e_0)$, $e(\omega - \omega_0)$. © Technical University of Lodz.

Author Keywords

Lagrange-gauss equations of motion; Orbit transfer; Orbital mechanics; Rocket dynamics

Document Type: Article

Source: Scopus

Kamel, O.M.^a, Soliman, A.S.^b, Ammar, M.K.^c

On the hyperbolic fly past problem as a velocity amplifier using the elliptic Hohmann transfer
(2011) *Mechanics and Mechanical Engineering*, 15 (1), pp. 25-38. Cited 1 time.

^a Astronomy and Space Science Dept., Faculty of Sciences, Cairo University, Egypt

^b Theoretical Physics Dept., National Research Center, Egypt

^c Mathematics Dept., Helwan University, Egypt

Abstract

We investigate the problem of fly past of a space vehicle traveling in a generalized elliptic Hohmann transfer system between the elliptic orbits of the Earth and Jupiter around the Sun. We consider the four feasible elliptic Hohmann configurations. We begin our treatment by a more precise expression for the hyperbolic excess velocity, because we deal with the elliptic not the circular Hohmann case. We assign the semi-major axes and the eccentricity of the hyperbolic trajectory that lies within the sphere of influence of the Jovian planet. Whence we have a more accurate determination of the elements of the hyperbolic trajectory before the vehicle's departure out of Jupiter's influence sphere to follow its trip to a further outer planet of the local solar system. © Technical University of Lodz.

Author Keywords

Astrodynamics; Fly past problem; Hohmann orbit transfer; Orbital mechanics; Sphere of influence

Document Type: Article

Source: Scopus

El Azab, R.M.^a, Shehab Eldin, E.H.^b, Lataire, P.^b, Sallam, M.M.^b

Factors affect on the UFLS: Experimental results

(2011) *2011 IEEE International Systems Conference, SysCon 2011 - Proceedings*, art. no. 5929121, pp. 91-96.

DOI: 10.1109/SYSCON.2011.5929121

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^b Department of Electrical Power and Machines Engineering, Helwan University, Egypt

Abstract

Under Frequency Load Shedding, UFLS, is the last step and the most extreme in protecting electric power systems from black outs and severe damages. The nature of the load and the system voltage play very important roles in the dynamics of the power system. In the present paper, the frequency variation during overloading and the subsequent load shedding is examined experimentally for a single machine system loaded with loads of different natures (resistive and induction machine). The obtained results demonstrate a considerable change in frequency behavior when using different load models. This may be a significant step in minimizing load to be shed if the load model could be estimated adaptively. © 2011 IEEE.

Document Type: Conference Paper

Source: Scopus

Eldeberky, Y.

Coastal adaptation to sea level rise along the Nile delta, Egypt

(2011) *WIT Transactions on Ecology and the Environment*, 149, pp. 41-52.

DOI: 10.2495/CP110041

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Abstract

Global warming and climate change processes are expected to raise sea levels. This paper represents a contribution to the efforts of investigating the impact of sea level rise (SLR) on the Nile delta coastal zone and identifies anticipatory and adaptation measures that may be appropriate today in spite of current SLR uncertainties. SLR was calculated by applying the quadratic equation for 10-year intervals using 1980 as the base year. Despite large variation between SLR predictions, the results indicated that SLR is accelerating, with estimated value for the present (21st) century in the order of 0.6 m, although with a margin of as much as ± 0.4 m. Local land subsidence in the Nile delta would exacerbate the impacts of rising seas. It was estimated that with a 1.0m SLR, about 4500 square kilometers representing 19% of the delta area will be submerged and that 6.1 million people will be affected. These potential impacts of SLR would be serious but manageable if appropriate actions are taken. The following adaptation measures to the impact of SLR in the Nile delta coastal zone were identified: maintaining and building coastal protection structures, restoration of sand dunes along the shore, preserving existing wetlands, setting regulations to

control development in vulnerable areas, change of land use, relocation of infrastructures in the landward side, and development of comprehensive monitoring and early warning systems. © 2011 WIT Press.

Author Keywords

Adaptation; Coastal zone; Impact assessment; Sea level rise; The Nile delta

Document Type: Conference Paper

Source: Scopus

Torayeh, N.M.

Manufactured exports and economic growth in Egypt: Cointegration and causality analysis
(2011) *Applied Econometrics and International Development*, 11 (1), pp. 107-126. Cited 2 times.

Department of Economics, Faculty of Commerce and Business Administration, Helwan University, Ein Helwan, Cairo, Egypt

Abstract

Although it is widely acknowledged that exports, particularly through manufactured components, play an important role as a potential source of economic growth, the relationship between exports and economic growth is still ongoing. This paper contributes to this controversy using cointegration analysis and Error Correction Model (ECM) test to determine the short and long run causality between manufactured exports and economic growth in Egypt during the period 1980-2008 with particular interest to decompose Egypt's manufactured exports into a number of key industries. The empirical results show that bi-direction long-run causality exists not only between exports of manufactured goods as a whole and economic growth but also in case of few Egyptian export industries like textile products, chemical products, fabricated metal products and food-processing. Furthermore, the short run unidirectional causality from exports of some industries to economic growth is explored. The direction of causality from growth to exports was inferred only in the case of chemical products. The main conclusion is that there is a long run circular causality between manufactured exports and economic growth in Egypt. Therefore, adopting vigorous growth policy is expected to stimulate the manufactured exports. However, the export-led policy seems to be a basic tool toward sustained growth in Egypt. Furthermore, emphasis on the composition of manufactured exports should be considered as a main instrument in the export driving growth policy.

Author Keywords

Causality; Cointegration; Egypt; Error correction; Manufactured exports

Document Type: Article

Source: Scopus

Rezq, A.A.^a, Mahmoud, M.Y.^b

Preventive effect of wheat germ on hypercholesteremic and atherosclerosis in rats fed cholesterol-containing diet

(2011) *Pakistan Journal of Nutrition*, 10 (5), pp. 424-432. Cited 3 times.

DOI: 10.3923/pjn.2011.424.432

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^b Department of Nutrition and Food Science, Faculty of Specific Education, Quant El-Swiss University, Ismailia, Egypt

Abstract

Wheat germ is one of the most potential and excellent sources of vitamins, minerals, fiber and proteins. The aim of the present study was to investigate the preventive effect of wheat germ on hypercholesteremic and atherosclerosis in rats fed cholesterol-containing diet. Five groups of rats were used; group (1) fed cholesterol free-diet (negative group); group (2) fed cholesterol-diet (positive group); groups (3), (4) and (5) were fed cholesterol-diets with adding 5, 10 and 15% wheat germ, respectively. Results revealed that positive control rats had significantly increased in serum levels of Total Lipids (TL), Triglycerides (TG), Total Cholesterol (TC), LDL-C, VLDL-C, GOT, GPT and ALP and significant decrease in serum level HDL-C which represented by increased atherogenic index as compared to the negative control groups. Histopathological examination showed that positive control rats had vacuulations of tunica media, narrowing in the lumen, focal necrosis of tunica intima and tunica media associated with leucocytic cells infiltration of aorta. In addition to vacuulations of cardiac myocytes associated with intramuscular edema as well as cytoplasmic vacuolization and fatty changes of hepatocytes. Feeding different levels of wheat germ caused significantly decreased in serum levels of TL, TG, TC, LDL-C, VLDL-C, GOT, GPT and ALP and significantly increased in serum level of HDL-C which represented with significantly decreased in atherogenic index as compared to the positive control group. Histopathological examination revealed that aorta, heart and liver sections of rats feeding 10 and 15% wheat germ had normal histological structure, except, some sections of group treated with 10% wheat germ had small vacuoles in the cytoplasm of hepatocytes. © Asian Network for Scientific Information, 2011.

Author Keywords

Hypercholesteremic; Lipid profile; Rats; Wheat germ

Document Type: Article

Source: Scopus

Elazab, S.S.^a, Rahman, S.A.^b, Hasan, A.A.^c, Zidan, N.A.^d

Hydromagnetic stability of oscillating hollow jet

(2011) *Applied Mathematical Sciences*, 5 (25-28), pp. 1391-1400. Cited 1 time.

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^d Engineering Physics and Mathematics Department, Faculty of Engineering, Helwan University, (Mataria), Cairo, Egypt

Abstract

The hydromagnetic stability of a gas jet of negligible motion surrounded by an oscillating liquid has been discussed. A total second order integro-differential equation in the amplitude of the deflection wave has been derived from which a general dispersion relation is obtained and discussed. The oscillating liquid has stabilizing tendency. The axial magnetic fields pervaded in the liquid and gas jet regions have stabilizing effect, and this effect is true for all modes of perturbation. The capillary force is destabilizing only in a small axisymmetric domain while it is stabilizing in all other axisymmetric domains and all domains of nonaxisymmetric perturbations. The destabilizing behavior of the model could be shrunked, reduced and suppressed, and then the stability sets in.

Author Keywords

Hollow jet; Hydromagnetic stability

Document Type: Article

Source: Scopus

Montaser, A.M.^a, Mahmoud, K.R.^b, Elmikati, H.A.^c

Compact Ultra-Wideband monopole antenna design for wireless communication using differential evolution optimization algorithm

(2011) *National Radio Science Conference, NRSC, Proceedings*, art. no. 5873583, .

DOI: 10.1109/NRSC.2011.5873583

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^b Helwan University, Egypt

^c Mansoura University, Mansoura, 35516, Egypt

Abstract

An internal Ultra-Wideband (UWB) monopole antenna for use in portable wireless communication applications is presented with a compact dimensions. It consists of a radiating patch, a matching stub, and a ground plane. The effect of defected ground plane structure (DGS) is studied in addition to the effect of defected slots in the radiating patch and matching stub on the return loss (S11). The Differential Evolution (DE) algorithm is considered to minimize S11 in the UWB frequency range by determining the appropriate antenna dimensions, the results are compared with other optimization techniques such as Genetic Algorithm (GA) and Particle Swarm Optimization (PSO). Also, the proposed antenna is built into a plastic case ($r = 3$), having external dimensions 43.4 21.4 8.3 mm to study its effect on the radiation parameters. © 2011 IEEE.

Author Keywords

defected ground plane structure (DGS); differential evolution (DE) algorithm; monopole antenna; Ultra-wideband (UWB) antenna

Document Type: Conference Paper

Source: Scopus

Rahhal, H.A.^a, Ali, I.A.^b, Shaheen, S.I.^a

A novel Trust-Based Cross-Layer Model for Wireless Sensor Networks

(2011) *National Radio Science Conference, NRSC, Proceedings*, art. no. 5873629, .

DOI: 10.1109/NRSC.2011.5873629

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^b Faculty of Engineering, Helwan University, Egypt

Abstract

Wireless Sensor Networks (WSNs) are vulnerable to attacks (selfish or malicious i.e. misbehaving nodes) due to the nature of the wireless media, restricted resource and the natural co-operations of sensors. Therefore, the security issue is very critical in WSN. The decision making in a WSN is essential for carrying out certain tasks as it aids sensors establish collaborations. In order to assist this process, trust management models could play a relevant role. Up to our knowledge, there is no one used the cross-layer concept in computing and updating the trust values. So, this paper presents new model for trust in WSN, called A Trust-Based Cross-Layer Model, which use cross-layer concept (ACKs from data link layer and TCP layer) to design trust-based model for sensor networks that guarantee the trust route from source to sink and isolate the malicious node. The simulation results and analysis show that our model is scalable and its display high performance even if the percent of malicious nodes is high. © 2011 IEEE.

Author Keywords

cross-layer; malicious; trust; wireless sensor networks

Document Type: Conference Paper

Source: Scopus

Montaser, A.M.^a, Mahmoud, K.R.^b, Elmikati, H.A.^c

Slotted bow-tie antenna design for RFID readers using hybrid optimization techniques

(2011) *National Radio Science Conference, NRSC, Proceedings*, art. no. 5873584, .

DOI: 10.1109/NRSC.2011.5873584

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Abstract

Recently hybrid optimizations algorithm has attracted a lot of attention as a high-performance optimizer. This paper presents a comparison between different hybrid optimization algorithms. The proposed algorithms are used to design a slotted bow-tie antenna for 2.45 GHz Radio Frequency Identification (RFID) readers. The antenna is optimized using different algorithms integrated with the CST Microwave studio. Four algorithms are compared: Genetic Algorithm (GA), Particle Swarm Optimization (PSO), hybrid approach involving Genetic Algorithm (GA) and Nelder-Mead (NM) algorithm (GA-NM), and a hybrid approach involving PSO and Nelder-Mead optimization algorithm (PSO-NM). It is anticipated that the introduced hybrid approaches are more efficient and can be applied to other types of antennas. © 2011 IEEE.

Author Keywords

Bow-tie antenna; Genetic algorithm; Nelder-Mead algorithm; Particle swarm optimization; RFID

Document Type: Conference Paper

Source: Scopus

Emam, M.A.^{a b c}

A new empirical formula for calculating vehicles' frontal area

(2011) *SAE 2011 World Congress and Exhibition*, .

DOI: 10.4271/2011-01-0763

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^b Helwan University, Egypt

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Abstract

The main objective of this research is to find a general empirical formula to predict vehicle frontal area applied to most types of vehicles. This was done on 21 vehicles; passenger cars, buses and trucks by calculating their frontal area by using image processing technique on cars photos extracted from catalogues. The software (Data Fit) is used to establish the required empirical formula. The results showed that the empirical formula is simple and accurate enough

for finding out the vehicles frontal areas. © 2011 SAE International.

Document Type: Conference Paper

Source: Scopus

Amin, A.^a, Darweesh, H.H.M.^b, Ramadan, A.M.^c, Morsi, S.M.M.^a, Ayoub, M.M.H.^a

Employing of some hyperbranched polyesteramides as new polymeric admixtures for cement

(2011) *Journal of Applied Polymer Science*, 121 (1), pp. 309-320. Cited 3 times.

DOI: 10.1002/app.33577

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^c Chemistry Department, Faculty of Science, Helwan University, Egypt

Abstract

Hyperbranched polyesteramides (HBPA1 and HBPA2) were synthesized by the bulk polycondensation of maleic anhydride (MAn) as an A2 monomer with both of diisopropanolamine (DIPA) and diethanolamine (DEA), respectively, as B'B2 monomer. The prepared polymers were analyzed with IR, GPC, 1H NMR, TGA, and DSC. The hyperbranched polyesteramides were applied as polymeric admixtures in two different types of cement, namely ordinary Portland cement (OPC) and Portland limestone cement (PLC). Several parameters were studied to evaluate the action of HBPA1 and HBPA2 polymers as cement admixtures. Adding HBPA1 and HBPA2 decreased the water of consistency and increased the compressive strength with no effect on the chemical composition of the cement phases. The combined water content and bulk density displayed the same trend as compressive strength. The IR spectra of the formed phases for the mixed cement pastes with HBPA1 and HBPA2 illustrated increased intensities of the absorption bands than those of the pristine cement pastes. The SEM photos showed that the incorporation of HBPA1 and HBPA2 in cement phases affected the morphology and microstructure of the formed hydrates. © 2011 Wiley Periodicals, Inc.

Author Keywords

hyperbranched polymers; limestone Portland cement; ordinary Portland cement; polyesteramides; polymeric admixtures

Document Type: Article

Source: Scopus

Ata, E-K.^a, Shoeib, S.^b

Efficiency of discrete glass fiber reinforced cement mortar in compression

(2011) *Advanced Materials Research*, 255-260, pp. 3137-3141.

DOI: 10.4028/www.scientific.net/AMR.255-260.3137

^a Department of Civil Engineering, Egypt

^b Faculty of Engineering, El-Matariya, Helwan University, Egypt

Abstract

The cement mortar with glass fiber (GF) can be widely used in strengthen different structure elements. In general, discrete glass fiber was used for improving the tensile strength of mortar. In article, the optimum material contents (sand, cement, water and fiber) enhancement compression strength with tensile strength was investigated. Forty-two specimens are tested after 28 days. Each specimen has of 3 cubes 15*15*15 and the average results were taken into consideration. The mortar content is cement, sand, water and discrete glass fiber. The fiber lengths (L f) are 20, 35, 50 mm. the fiber contents (V_f) are 1.5%, 3.0% and 4.5%. The water cement ratios (W/C) are 0.47, 0.42, and 0.37. The cement sand ratios (C/S) are 1:2, 1:3 and 1:4. The results show that, b y reducing the C/S ratio, the discrete glass fiber used is not recommended using. Moreover, from the experimental studies, the curves required for awareness the mixed material of mortar with discrete glass fiber were plotted. The theoretical equation that can be used in the initial trial mixing design is determined. This type of mortar can be successfully used for repairing or strengthen brick wall, or replaced instant of steel mish for resistance change temperature between wall layers. © (2011) Trans Tech Publications, Switzerland.

Author Keywords

Compression strength; Discrete glass fiber; Mortar

Document Type: Conference Paper

Source: Scopus

El-Dars, F.M.S.E., Mohammed, H.A., Farag, A.B.

Evaluation of the pollution load discharged at an upstream industry - Egypt - and methods for its reduction (2011) *Water Science and Technology*, 63 (12), pp. 2886-2895. Cited 1 time.

DOI: 10.2166/wst.2011.494

Chemistry Department, Faculty of Science, Helwan University, Ain Helwan, Egypt

Abstract

Oil exploration in Egypt is a major contributor to the national Gross Domestic Product (GDP). With 50-65% of the oil resources located in the Gulf of Suez (GoS) region, the impact of such activity upon the region's water environment and its quality cannot be overlooked because of the volume of effluent generated. The objective of this study (September 2000-September 2001) was to assess the impact of a 650,000 barrels/day (bl/d) (100,000 m³/d) effluent arising from a major oil exploration site located south of GoS upon the local water environment. Another objective was to identify the pollutant contents amenable for reduction relative to the new Egyptian regulations. This was achieved by the characterization of the main contributing streams and the identification of the final effluent parameter constraints relative to the type of injection waters used. Subsequent investigations for the reduction of these contents were conducted on site and the results obtained are reviewed herewith. © IWA Publishing 2011.

Author Keywords

Produced water; Red sea/Egypt; Upstream industry

Document Type: Article

Source: Scopus

Abdallah, B.M.^{a b h}, Ditzel, N.^a, Mahmood, A.^a, Isa, A.^c, Traustadottir, G.A.^a, Schilling, A.F.^d, Ruiz-Hidalgo, M.-J.^e, Laborda, J.^e, Amling, M.^f, Kassem, M.^{a g}

DLK1 is a novel regulator of bone mass that mediates estrogen deficiency-induced bone loss in mice (2011) *Journal of Bone and Mineral Research*, 26 (7), pp. 1457-1471. Cited 21 times.

DOI: 10.1002/jbmr.346

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Abstract

Delta-like 1/fetal antigen 1 (DLK1/FA-1) is a transmembrane protein belonging to the Notch/Delta family that acts as a membrane-associated or a soluble protein to regulate regeneration of a number of adult tissues. Here we examined the role of DLK1/FA-1 in bone biology using osteoblast-specific Dlk1-overexpressing mice (Col1-Dlk1). Col1-Dlk1 mice displayed growth retardation and significantly reduced total body weight and bone mineral density (BMD). Micro-computed tomography (μ CT) scanning revealed a reduced trabecular and cortical bone volume fraction. Tissue-level histomorphometric analysis demonstrated decreased bone-formation rate and enhanced bone resorption in Col1-Dlk1 mice compared with wild-type mice. At a cellular level, Dlk1 markedly reduced the total number of bone marrow (BM)-derived colony-forming units fibroblasts (CFU-Fs), as well as their osteogenic capacity. In a number of in vitro culture systems, Dlk1 stimulated osteoclastogenesis indirectly through osteoblast-dependent increased production of proinflammatory bone-resorbing cytokines (eg, Il7, Tnfa, and Ccl3). We found that ovariectomy (ovx)-induced bone loss was associated with increased production of Dlk1 in the bone marrow by activated T cells. Interestingly, Dlk1 ^{-/-} mice were significantly protected from ovx-induced bone loss compared with wild-type mice. Thus we identified Dlk1 as a novel regulator of bone mass that functions to inhibit bone formation and to stimulate bone resorption. Increasing DLK1 production by T cells under estrogen deficiency suggests its possible use as a therapeutic target for preventing postmenopausal bone loss. Copyright © 2011 American Society for Bone and Mineral Research.

Author Keywords

BONE REMODELING; DLK1; FA1; OSTEOCLAST; OVX; PREF-1; T CELLS

Document Type: Article

Source: Scopus

Eldosoky, M.A.A.

The detection of the coding system of the fingers movements by using the Ultra Wide Band Radar

(2011) *International Journal of Biomedical Engineering and Technology*, 6 (2), pp. 142-149.

DOI: 10.1504/IJBET.2011.041120

Faculty of Engineering, Department of Biomedical Engineering, Helwan University, 11792 Helwan, Cairo, Egypt

Abstract

The coding system of the fingers movements depends on the differences in the characteristics of the muscles responsible for these movements. The ability of the Ultra Wide Band (UWB) radar as a tool for identifying the movements of each finger is presented. This step will facilitate the ability of the UWB radar in designing a coding system for the movements of the fingers within each hand. © 2011 Inderscience Enterprises Ltd.

Author Keywords

Fingers muscles; Flexor carpi radialis; Hematoma; Ultra wide band; UWB

Document Type: Article

Source: Scopus

Ibrahim, N.A.^a, Khalifa, T.F.^b, El-Hossamy, M.B.^c, Tawfik, T.M.^c

Factors affecting the functional- and comfort-related properties of reactive dyed cotton knits

(2011) *Journal of Industrial Textiles*, 41 (1), pp. 41-56. Cited 3 times.

DOI: 10.1177/1528083710390966

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^c Department of Textile Printing, Dyeing and Finishing, Faculty of Applied Arts, Helwan University, Cairo, Egypt

Abstract

In this study, three different reactive dyed single jersey cotton knits produced from different yarn counts, i.e., Ne 20/1, Ne 24/1, and Ne 30/1 were selected for studying the impact of functional finishes, i.e., soft, bio-antibacterial, and water-repellent, on their performance and comfort-properties. It was found that the variation in the evaluated properties is very much dependent on the yarn count as well as on the type and concentration of the finishing agent. An improvement in pilling levels and tactile properties, i.e., smoothness and softness, as well as in comfort properties, i.e., heat transmittance, air permeability as well as water-absorption, is achieved by the bio-treatment. An enhancement in dimensional stability, pilling levels, bursting strength, tactile properties along with a reasonable improvement in antibacterial efficiency is obtained by soft-finishing, taking in consideration its tendency to entrap heat and air inside the fabric structure. The same holds true for water-repellent treatment, in addition to its outstanding water-repellency the antibacterial finish imparts superior antibacterial activity to the fabrics with marginal or little effect on other properties. © SAGE Publications 2010.

Author Keywords

antibacterial; cotton knits; enzyme treatment; functional and comfort properties; functional treatments; softeners; water repellency

Document Type: Article

Source: Scopus

Mohamed, M.S.^a, Kamel, R.^b, Fatahala, S.S.^a

New condensed pyrroles of potential biological interest: Syntheses and structure-activity relationship studies

(2011) *European Journal of Medicinal Chemistry*, 46 (7), pp. 3022-3029. Cited 15 times.

DOI: 10.1016/j.ejmech.2011.04.034

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Abstract

The Pyrrole derivatives Ia-d were prepared and utilized for the preparation of pyrrolo[2,3-d]pyrimidine derivatives IIa-c, III, IVa-e, V and VIIa-c; pyrrolo[3,2-e]tetrazolo[1,5-c]pyrimidine VI and pyrrolo[4,3e][1,2,4]triazolo[1,5-c]pyrimidine derivative derivatives VIIa-c. These some newly synthesized compounds were examined for their in vitro antimicrobial

activity and in vivo anti-inflammatory. Result indicated that these compounds showed promising anti-inflammatory activity in comparison to ibuprofen (the standard anti-inflammatory drug). The structure-activity relationships (SAR) and anti-inflammatory activities of these compounds are also discussed in this paper. © 2011 Elsevier Masson SAS. All rights reserved.

Author Keywords

Anti-inflammatory activity; Antimicrobial; Pyrrole; Pyrrolo[2,3-d]pyrimidine; Structure-activity-relationship

Document Type: Article

Source: Scopus

Essawy, M.

Egyptian hotel marketing managers' perceptions of the Internet's impact on marketing

(2011) *Tourism and Hospitality Research*, 11 (3), pp. 207-216. Cited 2 times.

DOI: 10.1177/1467358411418278

Faculty of Tourism and Hotels, Helwan University, 1st Abdel-Aziz Al-Seoud, El-Manial, Cairo, Egypt

Abstract

While the Internet is having a profound effect on the economies of the developed world, there is less evidence of its impact on developing economies. There is a lack of empirical evidence in terms of what the managers of independent Egyptian hotels are actually thinking and more importantly doing in response of the diffusion of the Internet. This study examines managers' perceptions of the impact of the Internet on key marketing activities: changes in the conceptualisation of the marketing activity, changes in market definition and value creation. Findings suggest that the impact of the Internet will urge hotels to redefine markets, improve marketing activities and value creation. Although these changes are more dramatic with large hotels, the majority of hotels still use the Internet for informational purposes but they are optimistic regarding the way in which hotels will be marketed via the Internet in the future. © 2011 The Author(s).

Author Keywords

Egypt; Independent hotels; Internet marketing; Internet value creation; Managers' perceptions

Document Type: Article

Source: Scopus

Ibrahim, N.A.^a, Abdel-Ghani, A.R.^b, Gouda, A.A.^b, Hanafy, I.H.M.^c, Hussein, M.Y.^c

A new approach for enhancing dyeing properties of jute-based textiles

(2011) *Journal of Natural Fibers*, 8 (3), pp. 205-239.

DOI: 10.1080/15440478.2011.602876

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Abstract

The effect of jute-grade, blending with other fibers, pretreatment regime, enzymatic treatment, as well as type of dye have been studied for attaining high performance dyeings with high value-added and potential applications. Results show that, the increase in fabric wettability, the improvement in fabric whiteness, the decrease in fabric stiffness, as well as the subsequent enhancement in dyeing properties could be achieved via proper selection of jute-grade, blend-components, treatment sequence, as well as dye class and dyeing regime. © Taylor & Francis Group, LLC.

Author Keywords

Biotreatment; Blend; Jute; Pretreatment; Reactive and natural dyes

Document Type: Article

Source: Scopus

Galal, T.M.

Size structure and dynamics of some woody perennials along elevation gradient in Wadi Gimal, Red Sea coast of Egypt

(2011) *Flora: Morphology, Distribution, Functional Ecology of Plants*, 206 (7), pp. 638-645. Cited 5 times.

DOI: 10.1016/j.flora.2010.11.010

Botany and Microbiology Department, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

The population structure of 10 common woody perennials was investigated in terms of size distribution, height, diameter and density in Wadi Gimal along the Red Sea coast of Egypt. It was attempted to assess the effect of elevation on the size, distribution and density of the studied species. These species are: five trees (*Acacia tortilis* subsp. *raddiana*, *Acacia tortilis* subsp. *tortilis*, *Balanites aegyptiaca*, *Tamarix aphylla*, and *Tamarix nilotica*), two shrubs (*Leptadenia pyrotechnica* and *Nitraria retusa*) and three shrublets (*Pulicaria undulata*, *Zilla spinosa*, and *Zygophyllum coccineum*). The size estimations were then used to classify population into six size classes: 20-80 cm for shrublets, 100-500 cm for shrubs, and 2-10 m for trees. The absolute and relative frequency of individuals and mean height, diameter and height to diameter ratio per individual in each size class were determined. Density of occurrence of most species, except *B. aegyptiaca*, decreased as elevation increased. The height-to-diameter ratio was less than unity for most of the recorded species except *T. nilotica*. Several forms - including, positively and negatively skewed, inverse J-shaped, bell shaped and more or less J-shaped distributions - were recognized along the different elevations. The size structure of some species was positively related with soil variables, such as *T. nilotica* with sulphate, while some others were negatively significant related to the substrate characteristics, such as *Z. spinosa* with salinity. © 2011 Elsevier GmbH.

Author Keywords

Density; Diameter; Elevations; Height; Size variability; Skewed distribution

Document Type: Article

Source: Scopus

Elazab, S.S.^a, Rahman, S.A.^b, Hasan, A.A.^c, Zidan, N.A.^d

Hydrodynamic stability of selfgravitating streaming magnetized fluid cylinder

(2011) *EPJ Applied Physics*, 55 (1), art. no. ap100485, .

DOI: 10.1051/epjap/2011100485

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^d Engineering Physics and Mathematics Department, Faculty of Engineering (Mataria), Helwan University, 11321 Cairo, Egypt

Abstract

The magnetohydrodynamic stability criterion of self-gravitating streaming fluid cylinder under the combined effect of capillary, inertia, pressure gradient and electromagnetic forces has been derived. The results are discussed analytically and some data are verified numerically for different parameters of the problem. The magnetic field is stabilizing, but the streaming is destabilizing while the self-gravitating and capillary forces are stabilizing or destabilizing according to restrictions. The stable and unstable domains are identified and moreover the influences of the magnetic field and capillary forces on the self-gravitating instability of the model have been examined. The including of the electromagnetic force together with both the capillary and self-gravitating forces improve the instability of the model. However, the self-gravitating instability will never be suppressed whatever are the effects of the capillary and MHD forces stabilizing effects. © EDP Sciences, 2011.

Document Type: Conference Paper

Source: Scopus

Mohamed, M.S., Awad, S.M., Ahmed, N.M.

Synthesis and antimicrobial activities of New Indolyl -pyrimidine derivatives

(2011) *Journal of Applied Pharmaceutical Science*, 1 (5), pp. 76-80. Cited 4 times.

Pharmaceutical Organic Chemistry Department, Helwan University, Faculty of Pharmacy, Ain Helwan, Cairo, Egypt

Abstract

The purpose of research was to synthesize a series of new indolyl-pyrimidine-5-carbonitriles 2-5 from compound I. The reaction of 2a with ethylcyanoacetate and aromatic aldehydes in presences of excess ammonium acetate gives 6 a-c while condensation with aromatic aldehydes produces chalcones 7a-c via the Claisen condensation. Structure of the synthesized compounds was confirmed by means of their IR, H-NMR spectral data and elemental analysis. The antimicrobial testing of the synthesized compounds were evaluated. Some of the prepared compounds, 2-(1H-indol-

3-yl)-4, 6-dioxo-6, 11-dihydro-4H-pyrimido [2, 1-b] quinazoline-3-carbonitrile 3 and 2-hydrazino-4-(1H-indol-3-yl)-6-oxo-1,6-dihydropyrimidine-5-carbonitrile 4 showed high antibacterial activity. Melting points of the synthesized compounds were determined by open end capillary tube method in Boetius melting point microscope and are uncorrected. The purity of the compounds was checked using precoated TLC plates (Merck 60 F254) using chloroform: methanol (3:1) solvent system. The structures of the compounds were characterized by Beckman Infrared Spectrophotometer PU9712 using KBr discs . The structures of the compounds were elucidated by H NMR (Proton Nuclear Magnetic Resonance) . The molecular weights of compound were determined by SSQ7000 mass spectrometer at 70 eV. H NMR spectra were recorded on JoelEX270MHz spectrometer using TMS as internal standard. All the new compounds gave satisfactory analytical results (within 0.4 of the theoretical values). All the synthesized compounds (1-7) were purified by successive recrystallization . The purity of the synthesized compounds was checked by performing TLC. The structures of the synthesized compounds were determined on the basis of their FTIR and HNMR data. In accordance with the data obtained from antimicrobial activity, most of the synthesized compounds have shown moderate activity against the tested bacteria while compounds 2-(1H-indol-3-yl)-4, 6-dioxo-6, 11-dihydro-4H-pyrimido [2, 1-b]quinazoline-3-carbonitrile (3) and 2-hydrazino-4-(1H-indol-3-yl)-6-oxo-1,6-dihydropyrimidine-5-carbonitrile (4) showed high antibacterial activity. Only compounds 1,3,4,7a,7 b and 7c are active against *C.albicans*.

Author Keywords

Antimicrobial activity; Indole; Pyrimidine; Synthesis

Document Type: Article

Source: Scopus

Abdel-Hadi, A.^{a b} , El-Nachar, E.^a , Safiieldin, H.^b

Residents perception of home range in Cairo

(2011) *Open House International*, 36 (2), pp. 59-69. Cited 1 time.

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Abstract

Recent studies in the realm of housing design avow for the concept of Liveable Cities; an aspect which in turn, places emphasis on the concept of home range. The home range is regarded as the challenge to create a 'near environment' that is humanistic and fair, community-oriented and environmentally conscious; a relatively new conception towards responsive and sustainable environments for residents' well-being. Considering that socio-cultural needs in tandem with architectural and urban characteristics correspond to residents perspectives of their home environment; hence, understanding residents' perceptions of their home range should provide designers with deeper insights for creating more responsive residential environments. This study aimed at identifying aspects that contribute to shaping the residents' perception of their home range. The field study included two housing features within the same social class in Egypt with a focus on Cairo: residents of the city's original districts and immigrants of the city to newly suburban gated communities. The methodology was an in-depth qualitative study, exploratory in nature, based on a theoretical content analysis of literature on home range, and a field survey that investigated the residents' perception of the concept. Tools for data gathering relied on photographic and observation methods; together with a structured interview on a random sample in each of the two defined residential environments. Discussions relate findings to planning concepts, and finally, results have generated a framework for decision makers and designers.

Author Keywords

Formal districts; Gated communities; Home range; Residents perception; Sustainability

Document Type: Article

Source: Scopus

Rasool, B.K.A.^a , Gareeb, R.H.^b , Fahmy, S.A.^c , Rasool, A.A.A.^d

Meloxicam β -cyclodextrin transdermal gel: Physicochemical characterization and in vitro dissolution and diffusion studies

(2011) *Current Drug Delivery*, 8 (4), pp. 381-391.

DOI: 10.2174/156720111795767942

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^d Pharmacy College, University of Baghdad, Baghdad, Iraq

Abstract

The aim of the study was to develop a Meloxicam (ME) transdermal gel formulations based on complexation with β -cyclodextrin. ME β -Cyclodextrin gel formulations were prepared using four different gel bases with different concentrations and different permeation enhancers. The developed formulations were examined for their in vitro characteristics and their diffusion through a mouse skin. The gel formulations were prepared successfully. Physicochemical characterization of ME β -CD complex in solution state by phase solubility revealed 1:1 M complexation of ME with β -Cyclodextrin. ME release profiles from the inclusion complex were superior over ME alone. Hydroxypropyl methyl cellulose 15% w/w gel base was proven to be a suitable base for ME inclusion complex formulation as it provides a high drug release than other studied bases. ME β -CD complex gel formulations containing oleic acid (1% w/w) or (5% w/w) cineol used as permeation enhancers in (15% w/w) HPMC gel base were proven to provide a higher diffusion rate of the drug through the mouse skin. This is very promising in providing analgesic activity of meloxicam via topical route of administration. © 2011 Bentham Science Publishers Ltd.

Author Keywords

β -cyclodextrin; Complexation; Meloxicam; Permeation enhancers and transdermal delivery

Document Type: Article

Source: Scopus

Soliman, D.M.

Exploring the role of film in promoting domestic tourism: A case study of AL Fayoum, Egypt

(2011) *Journal of Vacation Marketing*, 17 (3), pp. 225-235. Cited 7 times.

DOI: 10.1177/1356766711409183

Department of Tourism Studies, Faculty of Tourism and Hotels, Helwan University, Egypt

Abstract

This study aims at investigating the effects of film on the perceived image of the domestic destination portrayed in the film, and it offers insight to understand the recently emerging field of film-induced tourism. Films have the potential to offer fantastic marketing opportunities as they act as virtual holiday brochures. A strong film industry also helps in successful film tourism, whether on the domestic or the regional scale. The literature review revealed that little is known about the effect of film on domestic tourism. Furthermore, there is a shortage of research into eastern settings where the film is not in English; there is also a deficiency of studies on the issue of film-induced tourism in the Middle East region. The current study aims at filling this gap and contributes to the existing film-induced tourism literature by assessing the perception of a domestic tourist destination before and after watching a film featuring this destination. To fulfill this aim, a questionnaire containing 19 image attributes drawn from the literature was designed and a paired sample t-test on these attributes was applied. The study also examines the influence of the different film elements on the tendency to visit the filmed location. The findings of the study generally affirm the notion that films could positively affect audiences' perceptions of domestic destination in various ways. Practical implications and succeeding research directions are highlighted. © The Author(s) 2011.

Author Keywords

domestic tourism; film-induced tourism; perceived image; product placement

Document Type: Article

Source: Scopus

El Semy, N.A.

The polyphasic description of a *Desmodemus* spp. isolate with the potential of bioactive compounds production [Description polyphasique d'un isolat de *Desmodemus* spp. présentant un potentiel dans la production de composés bio-actifs]

(2011) *Biotechnology, Agronomy and Society and Environment*, 15 (2), pp. 231-238. Cited 1 time.

Helwan University, Faculty of Science, Department of Botany and Microbiology, Ain Helwan campus, ET-11795 Helwan, Egypt

Abstract

A polyphasic approach was applied to describe a colony-forming *Desmodemus* species collected from the Nile River, Maadi area, Helwan district, Egypt. The isolate grows best at moderate temperature and relatively high light intensity. The phenotypic features revealed the presence of both unicellular and colonial forms of the isolate and the latter form was either 2-4 celled. Cells were $4-6 \mu\text{m} \pm 0.5$ at their widest point and $11-15 \mu\text{m} \pm 0.48$ in their length with spiny projections that encircled the cells. Cells were heavily-granulated and enclosed within common mucilaginous sheath. Colonial forms were developed through production of daughter cells within mother cell. Molecular analysis using 18S rRNA gene showed some similarity to its nearest relative (*Desmodemus communis*) whereas the phylogenetic analyses clustered it together with other *Desmodemus* spp. and away from *Scenedesmus* spp. from the

database. However, the use of ITS-2 as a phylotaxonomic marker proved to be more resolving and confirmed the generic identity of the isolate as *Desmodemus* spp. The fatty acid composition revealed the presence of saturated palmitic fatty acid as the most abundant component followed by monounsaturated palmitoleic acid whereas the polyunsaturated fatty acids were in relatively low abundance. The palmitoleic acid in particular is suggested to be involved in active defense mechanism. The phytochemical screening revealed the presence of alkaloids and saponins and absence of tannins. Fractions of methanolic extracts showed antimicrobial activities against pathogenic bacterial strains including multi-drug resistant ones. This study documents the presence of this strain in the River Nile and highlights its biotechnological potential as a source of bioactive compounds.

Author Keywords

Antimicrobial activity; *Desmodemus*; Egypt; Fatty acids; Internal transcribed spacer-2; Nile River; Phytochemical screening; Polyphasic description and 18S rRNA gene

Document Type: Article

Source: Scopus

Amin, A.A.^a, Gharib, F.A.E.^b, El-Awadi, M.^a, Rashad, E.S.M.^a

Physiological response of onion plants to foliar application of putrescine and glutamine

(2011) *Scientia Horticulturae*, 129 (3), pp. 353-360. Cited 11 times.

DOI: 10.1016/j.scienta.2011.03.052

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^b Botany Department, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

Two field experiments were carried out in Egypt during two successive seasons (2007/2008 and 2008/2009). This study aimed to investigate the response of growth, yield quality and some metabolic constituents of onion (*Allium cepa* L. cv. 'Giza 20') to foliar application of putrescine (Put; 25, 50 and 100mgL⁻¹) and glutamine (Glut; 50, 100 and 200mgL⁻¹), the former a diamine and the latter an amino acid, either alone, or in combination. Foliar application of Put and Glut, either alone or in combination, significantly increased plant height, number of leaves, fresh weight of leaves/plant, fresh and dry weight/plant, leaf area, leaf area/plant, bulb length, bulb diameter and weight, as well as yield of onion and quality of bulbs. Total soluble sugars, sulfur compounds, total soluble phenols, total free amino acids and total photosynthetic pigment content in leaves were increased by increasing Put and/or Glut concentrations up to 100 and 200mgL⁻¹, respectively. Generally, foliar application of Put at 100mgL⁻¹ and Glut at 200mgL⁻¹ singly, or combined, effectively increased bulb yield and quality. In conclusion, the yield-contributing characters and quality of onion could be improved by application of Put and/or Glut. © 2011 Elsevier B.V.

Author Keywords

Glutamine; Growth; Onion plants; Photosynthetic pigments; Polyamines; Putrescine; Yield

Document Type: Article

Source: Scopus

Mohamed, H.H.^{a b}, Dillert, R.^a, Bahnemann, D.W.^a

Growth and reactivity of silver nanoparticles on the surface of TiO₂: A stopped-flow study

(2011) *Journal of Physical Chemistry C*, 115 (24), pp. 12163-12172. Cited 10 times.

DOI: 10.1021/jp2031576

^a Institut für Technische Chemie, Leibniz Universität Hannover, Callinstrasse 3, D-30167, Hannover, Germany

^b Chemistry Department, Faculty of Science, Helwan University, Helwan, Cairo, Egypt

Abstract

The reaction of electrons stored on TiO₂ nanoparticles with silver ions in aqueous solution has been studied employing the stopped flow technique. Prior to the kinetic experiments, nanosized TiO₂ particles were loaded with electrons by UV (A) photolysis in the presence of methanol. The formation of silver nanoparticles is detected by their typical surface plasmon (SP) absorbance band at 400 nm. Multiphase kinetic decay curves were observed for the electron absorbance as well as for the build-up of the plasmonic absorbance of the silver nanoparticles. This kinetic behavior is attributed to the multistep formation mechanism of the silver particles on the surface of TiO₂ followed by the transfer of excess electrons to the deposited silver particles. The mechanism of the formation and growth of the silver particles on the TiO₂ surface is proposed to be as following: (i) reduction of silver ions to form silver atoms which in turn form the nuclei for the metal particles, (ii) growth of the silver nuclei to form silver particles, and (iii) coalescence of the formed silver particles to form even bigger particles. Following the reduction of all silver ions present in solution, the remaining excess electrons are then transferred to the deposited silver particles resulting in a slight blue shift of the surface plasmon band. Subsequently, the stored electrons on the silver particles are used for the reduction of

adsorbed H⁺ to produce H₂ gas. The effect of Polyvinyl alcohol (PVA) as a stabilizer for the deposited metal nanoparticles as well as the effect of molecular oxygen on the unstabilized silver deposits have also been investigated. It could be shown that molecular oxygen acts as an electron acceptor, resulting in the partial oxidation of the deposited silver particles and thus a red shift and a damping of the surface plasmon absorbance band. The rate constants of the decay of the TiO₂ electron absorbance as well as of the build-up of the plasmon absorbance of the silver nanoparticles have been measured. © 2011 American Chemical Society.

Document Type: Article

Source: Scopus

El-Azab, M.S.^a, Mahmoud, S.^b, Abd-Elhameed, A.^c

Seismic response evaluation of buildings considering soil flexibility

(2011) *Advanced Materials Research*, 243-249, pp. 1383-1390.

DOI: 10.4028/www.scientific.net/AMR.243-249.1383

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Abstract

This research attempts to investigate the effect of soil-structure interaction (SSI) on the seismic response of buildings. Computational simulation of a one storey building having different natural periods is performed using time history analysis. Different earthquake motions with different peak ground accelerations (PGA) levels are used as excitations. The ground motion records have been selected in order to ensure low, moderate, and high PGA levels. Moreover, sandy soil with several values of shear wave velocities is used in order to investigate the sensitivity of the seismic response to the velocity variation. An efficient discrete-element model which represents the rotational and horizontal degrees of freedom of the soil mass is considered in the analysis. The coupled equations of motion for the building model with SSI are presented and solved in incremental form using the Newmark's step by step iteration method. In general, the results of the study in terms of response, peak response and peak response amplification show significant changes in considering and ignoring SSI effect. In particular, the numbers of significant cycles of large response amplitude for the building have been increased due to the inclusion of SSI. Moreover, considering the soil flexibility amplifies the peak response of buildings with low natural periods. Furthermore, it has been found that, shear wave velocity variation shows appreciable changes in the peak dynamic response amplification and seems to be insignificant at high natural periods for all levels of earthquake excitations considered. © (2011) Trans Tech Publications.

Author Keywords

Amplification factor (AF); Earthquake; Natural period; Response; Shear wave velocity; Soil-structure interaction (SSI)

Document Type: Conference Paper

Source: Scopus

Al-Saeed, T.A.^a, Khalil, D.A.^b

Spot size effects in miniaturized moving-optical-wedge interferometer

(2011) *Applied Optics*, 50 (17), pp. 2671-2678. Cited 3 times.

DOI: 10.1364/AO.50.002671

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^b Electronics and Communications Engineering Department, Faculty of Engineering, Ain-Shams University, 11 Elsarayat Street, Abbassia, Cairo 11517, Egypt

Abstract

In this paper we study the effect of diffraction on the performance of a miniaturized moving-optical-wedge interferometer. By using the Gaussian model, we calculate the degradation of the interferometer visibility due to diffraction effects. We use this model to optimize the detector size required to obtain maximum visibility and study its effect on resolution of Fourier transform spectrometers based on a moving-optical-wedge interferometer. A comparison between these effects in Michelson and wedge interferometers is also presented showing the advantage of the moving-optical-wedge interferometer in suppressing the diffraction effects with respect to the Michelson interferometer. © 2011 Optical Society of America.

Document Type: Article

Source: Scopus

Metwaly, M.S.^a, Dkhil, M.A.^{a b}, Al-Quraishy, S.^a

Renal tissue damage due to Eimeria coecicola infection in rabbits

(2011) *African Journal of Microbiology Research*, 5 (11), pp. 1349-1354. Cited 3 times.

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^b Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

Abstract

Coccidiosis causes considerable economic loss in the poultry industry. The study was designed to investigate the induced damage in renal tissue of rabbits infected with *Eimeria coecicola* sporulated oocysts. Animals were divided into two groups. The first group acted as the non-infected control group while the second group was infected with 50,000 *E. coecicola* sporulated oocysts. Infection which induced a weight loss and rabbits output were approximately 1.2 billion oocysts/g faeces on day 7 postinfection. Histological examinations revealed that the renal tissues of the infected animals were damaged, where the urinary space appeared wider, and some kidney tubule cells were vacuolated and the nuclei appeared to be slightly swollen than normal. Both carbohydrates and protein content in the infected renal tissue were reduced. Also, the level of both of urea and glucose in blood plasma were elevated due to infection with *E. coecicola* sporulated oocysts and reached 25.7 ± 1.1 and 143.8 ± 7.1 mg/dl, respectively. The results obtained from this study suggest that *E. coecicola* infection induced renal tissue damage. © 2011 Academic Journals.

Author Keywords

Coccidiosis; Rabbit; Renal tissue

Document Type: Article

Source: Scopus

Elazeem, H.A.^a, Adam, S.^a, Mohamed, G.^b

Awareness of hospital internal disaster management plan among health team members in a university hospital

(2011) *Life Science Journal*, 8 (2), pp. 42-52. Cited 3 times.

^a Faculty of Nursing, Ain Shams University, Cairo, Egypt

^b Faculty of Nursing, Helwan University, Helwan, Egypt

Abstract

A disaster management plan is a formal plan of action which enables the hospital staff to respond effectively and efficiently when confronted with a disaster. The aim of this study was to assess the awareness of health team regarding hospital internal disaster management plan at a university hospital. The study was conducted in a university hospital using a cross-sectional design. It included six groups of subjects namely, medical leaders, head nurses, staff nurses, technicians, employees, housekeepers, in addition to a jury group to test validity of the study tool. A self-administered questionnaire form was used to assess staff awareness about the internal disaster management plan in the hospital. The results showed the absence of a disaster plan in the study setting and absence of a hospital evacuation plan. Also the majority of various categories of the study subjects had low awareness about all items of the disaster plan. It is concluded that there is a need for an internal disaster plan for the hospital, and the awareness of study subjects about internal disaster preparedness need to be raised. Therefore, it is recommended that the hospital administration should develop policies for disaster management and pay more attention to the problem of internal disasters and preparedness for their management. Training programs are essential for all categories of hospital staff in order to increase their awareness about disaster management.

Author Keywords

Disaster management plan; Hospital preparedness; Internal disaster

Document Type: Article

Source: Scopus

Eldeberky, Y.

Modeling spectra of breaking waves propagating over a beach

(2011) *Ain Shams Engineering Journal*, 2 (2), pp. 71-77. Cited 1 time.

DOI: 10.1016/j.asej.2011.07.002

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Abstract

The spectral evolution of waves in shallow water is considered, in particular, wave breaking and the generation of sub- and super-harmonics. Modeling of these processes is based on a set of deterministic evolution equations for the propagation of fully dispersive nonlinear waves. Energy dissipation due to wave breaking is formulated in a spectral form and incorporated in the model. Previous laboratory measurements for wave transformation and breaking over barred and non-barred beaches were compared against the model results. In order to obtain wave field statistics, Monte Carlo simulations are performed by assuming the wave field Gaussian at the upwave boundary. Modal amplitudes are derived from the observed density spectrum together with the assumption of random independent initial phases. The overall statistical parameters such as the significant wave height, mean wave period and skewness are determined. The overall model results show agreement with the measurements including the generation of low-frequency waves. © 2011 Ain Shams University. Production and hosting by Elsevier B.V. All rights reserved.

Author Keywords

Breaking; Harmonics; Modeling; Nonlinear; Wave spectra

Document Type: Article

Source: Scopus

Marzouk, S.^a, Abo-Naf, S.M.^b, Hammam, M.^c, El-Gendy, Y.A.^c, Hassan, N.S.^c

FTIR spectra and optical properties of molybdenum phosphate glasses

(2011) *Journal of Applied Sciences Research*, 7 (6), pp. 935-946. Cited 3 times.

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Abstract

Glasses in the system 5Na₂O-5ZnO-5Al₂O₃-65P₂O₅-xMoO₃-(20-x)CaO, mol%; where x= 0, 2, 5, 7, 10, 12, 15, 20, have been prepared using the conventional melting and annealing method. Density and molar volume of these glasses were measured. Density was found to increase monotonically with increasing x (i.e. molybdenum oxide content) and, conversely, the molar volume decreased with increasing x. UV-visible optical absorption spectra of the prepared glasses were measured from 190 to 1100 nm. These spectra exhibit charge transfer bands due to iron trace impurities which eventually affect the induced absorption due to MoO₃ and that due to the host base glass in the UV-region. The UV-absorption edge, both direct and indirect allowed transitions with their optical energy gaps, has been studied. Also, the Urbach energy was evaluated. The refractive index and the extinction coefficient data were used to evaluate the absorption coefficient of the different glass compositions. The molar refraction, electronic polarizability and the optical basicity were obtained using the evaluated glass refractive indices. Fourier transform infrared (FTIR) spectra of the investigated glasses have been studied in order to understand the characteristic frequencies of the vibrational chemical bonds which are liable to the structural and spectral changes. These spectra showed IR absorption bands related to the characteristic phosphate and molybdate bonds especially P=O, P-O-P, O-P-O, P-O-H, P-O-Mo and Mo-O-Mo.

Author Keywords

FTIR; Molybdenum phosphate glass; Optical properties

Document Type: Article

Source: Scopus

Eskander, J.^{a c}, Lavaud, C.^a, Harakat, D.^b

Steroidal saponins from the leaves of *Beaucarnea recurvata*

(2011) *Phytochemistry*, 72 (9), pp. 946-951. Cited 5 times.

DOI: 10.1016/j.phytochem.2011.03.004

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Abstract

Thirteen steroidal saponins were isolated from the leaves of *Beaucarnea recurvata* Lem. Their structures were established using one- and two-dimensional NMR spectroscopy and mass spectrometry. Six of them were identified as: 26-O-β-d-glucopyranosyl (25S)-furosta-5,20(22)-diene 1β,3β,26- triol 1-O-α-l-rhamnopyranosyl-(1 → 2) β-d-fucopyranoside, 26-O-β-d-glucopyranosyl (25S)-furosta-5,20(22)-diene 1β,3β,26- triol 1-O-α-l-rhamnopyranosyl-(1 → 2)-4-O-acetyl-β-d- fucopyranoside, 26-O-β-d-glucopyranosyl (25R)-furosta-5,20(22)-diene-23- one-1β,3β,26-triol 1-O-

α -l-rhamnopyranosyl-(1 \rightarrow 2) β -d-fucopyranoside, 26-O- β -d-glucopyranosyl (25S)-furosta-5-ene-1 β ,3 β ,22 α ,26-tetrol 1-O- α -l-rhamnopyranosyl-(1 \rightarrow 4)-6-O-acetyl- β -d-glucopyranoside, 26-O- β -d-glucopyranosyl (25S)-furosta-5-ene-1 β ,3 β ,22 α ,26-tetrol 1-O- α -l-rhamnopyranosyl-(1 \rightarrow 2) β -d-fucopyranoside, and 24-O- β -d-glucopyranosyl (25R)-spirost-5-ene-1 β ,3 β ,24-triol 1-O- α -l-rhamnopyranosyl-(1 \rightarrow 2)-4-O-acetyl- β -d-fucopyranoside. The chemotaxonomic classification of *B. recurvata* in the family Ruscaceae was discussed. © 2011 Elsevier Ltd. All rights reserved.

Author Keywords

Beaucarnea recurvata; Ruscaceae; Steroidal saponins

Document Type: Article

Source: Scopus

Van De Water, K.^{a b}, Soror, S.H.^{a b c}, Wohlkonig, A.^{a b}, Van Nuland, N.A.J.^{a b}, Volkov, A.N.^{a b}

Crystallization and preliminary X-ray diffraction analysis of kanamycin-binding β -lactamase in complex with its ligand

(2011) *Acta Crystallographica Section F: Structural Biology and Crystallization Communications*, 67 (6), pp. 703-706.

DOI: 10.1107/S1744309111013832

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^c Department of Biochemistry and Molecular Biology, Faculty of Pharmacy, Helwan University, Cairo, Egypt

Abstract

TEM-1 β -lactamase is a highly efficient enzyme that is involved in bacterial resistance against β -lactam antibiotics such as penicillin. It is also a robust scaffold protein which can be engineered by molecular-evolution techniques to bind a variety of targets. One such β -lactamase variant (BlaKr) has been constructed to bind kanamycin (kan) and other aminoglycoside antibiotics, which are neither substrates nor ligands of native β -lactamases. In addition to recognizing kan, BlaKr activity is up-regulated by its binding via an activation mechanism which is not yet understood at the molecular level. In order to fill this gap, determination of the structure of the BlaKr-kan complex was embarked upon. A crystallization condition for BlaKr-kan was identified using high-throughput screening, and crystal growth was further optimized using streak-seeding and hanging-drop methods. The crystals belonged to the orthorhombic space group P212121, with unit-cell parameters $a = 47.01$, $b = 72.33$, $c = 74.62$ Å, and diffracted to 1.67 Å resolution using synchrotron radiation. The X-ray structure of BlaKr with its ligand kanamycin should provide the molecular-level details necessary for understanding the activation mechanism of the engineered enzyme. © 2011 International Union of Crystallography. All rights reserved.

Author Keywords

BlaKr; kanamycin; TEM-1 β -lactamase

Document Type: Article

Source: Scopus

Diab, S.L.

Developing an algorithm for compression, multiplexing and enhancement of multiple images

(2011) *Optics and Laser Technology*, 43 (4), pp. 838-847. Cited 3 times.

DOI: 10.1016/j.optlastec.2010.11.001

Helwan University, Faculty of Science, Physics Department, Zahraa El-Maady Blg. A2, Cairo 11251, Egypt

Abstract

Image compression is one of the important fields that has useful applications in data storage and transmission. In this research a new algorithm is developed and tested for multiple-image compression and enhancement. The algorithm, in addition, is applied to multiple noisy images. Also, the effect of compression ratio on the peak signal to noise ratio (PSNR) is explored by applying different compression ratios. The developed algorithm gives good compression and noise immunity. It can be used for storage/transmission of encrypted and compressed information. © 2010 Elsevier Ltd.

Author Keywords

Compression ratio; Law of universal gravity; Peak signal to noise ratio (PSNR)

Document Type: Article

Source: Scopus

Fouad, H.^{a b}

In vitro evaluation of Stiffness Graded artificial hip joint femur head in terms of joint stresses distributions and dimensions: Finite element study

(2011) *Journal of Materials Science: Materials in Medicine*, 22 (6), pp. 1589-1598. Cited 9 times.

DOI: 10.1007/s10856-011-4319-2

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^b Orthopedic Surgery Research, King Saud University, Riyadh, Saudi Arabia

Abstract

The aim of the present work is to evaluate the artificial hip joint femur head that is made of Stiffness Graded (SG) material in terms of joint stresses distributions and dimensions. In this study, 3D finite element models of femur head that is made of SG material and traditional femur heads made of Stainless Steel (SS), Cobalt Chromium alloy (Co Cr Mo) and Titanium alloy (Ti) have been developed using the ANSYS Code. The effects on the total artificial hip joint system stresses due to using the proposed SG material femur head (with low stiffness at the outer surface and high stiffness at its core) have been investigated. Also, the effects on the polymeric cup contact stresses due to the use of different sizes of femur heads, presence of metal backing shell and presence of radial clearance (gap) between cup and femur head have been investigated. The finite element results showed that using SG femur head resulted in a significant reduction in the cup contact stresses even for small femur heads compared with Ti alloy, SS and Co Cr Mo femur heads. The presence of radial clearance resulted in significant increase in the cup stresses especially for small femur heads. Finally, the presence of SS metal backing shell resulted in slight increase in the hip joint stresses especially for small femur head joints. This work analyzes successfully the usage of proposed SG material as femur head in order to reduce the predicted stresses at the total hip joint replacement due to the redistribution of strain energy in the hip prostheses. Therefore, the present results suggest that minor changes in design and geometrical parameters of the hip joint have significant consequences on the long term use of the joint and should be taken into consideration during the design of the hip joint. © Springer Science+Business Media, LLC 2011.

Document Type: Article

Source: Scopus

El-Bakry, A.A.^a, Genady, E.^b, Ghazi, S.M.^a, Rafat, S.A.^a

Regeneration, cardenolide and flavonoid production from in vitro cultures of *Cynanchum acutum* L. (Asclepiadaceae)

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (6), pp. 704-717.

^a Botany Department, Faculty of Science, Helwan University, Cairo, Egypt

^b Pharmacognosy Department, Faculty of Pharmacy, Al-Azhar University, Cairo, Egypt

Abstract

Callus was produced from hypocotyl sections of in vitro germinated seedlings of *Cynanchum acutum* on Murashige and Skoog media (1962) containing 0.5 - 4.0 mg/l *a*-Naphthalene acetic acid in combination with 0.2-1.0 mg/l Benzyl adenine. After 12 weeks in culture both fresh and dry weights (g) were significantly higher on 0.5 mg/l NAA and 0.2 mg/l BA. Cardiac glycoside concentration was highest (1.2 mg/g DW) on the same growth regulators combination. Flavonoids were highest (0.198 mg/g) on 0.5mg/l NAA and 1.0 mg/l BA. Twenty eight weeks old callus gave highest cardiac glycosides (1.3 mg/g) on media lacking BA and 0.5 mg/l NAA. Flavonoids concentration (0.27 mg/g) was highest on the same auxin concentration in the presence of 0.2 mg/l BA. Regeneration from callus cultures was obtained when 8-weeks old callus was subcultured on MS hormone free media for 6 weeks. Shoots were rooted on MS supplemented with 0.1 mg/l NAA and acclimatized in growth chamber. Adventitious shoots showed significantly higher CG (6.5 and 4.3 mg/g) than the wild plants (2.8), while regenerants gave comparable concentration (2.3) to the wild. Flavonoids were slightly lower in concentration in adventitious shoots (0.19) and regenerants (0.18) than the wild plant (0.27). Five cell lines were initiated from 8 weeks old individual callus pieces on NAA and BA containing media. Twenty weeks old cell line (1) showed higher CG (3.46) than the wild type and slightly lower flavonoid content (0.149). Plating of 12weeks old suspension on MS containing NAA and BA followed by hormone free media resulted in shoot regeneration, that were rooted and acclimatized. This represents the first report for regeneration from in vitro culture of *C. acutum*, as well as, the production of cardenolides and flavonoids from cultures to concentrations that are comparable to wild plants.

Author Keywords

Adventitious shoots; Callus culture; Cardiac glycosides; Medicinal plants; Micropropagation; Organogenesis; Suspension culture; Tissue culture

Document Type: Article

Source: Scopus

Osman, M.E., Khattab, O.H., Zaghlol, G.M., El-Hameed, R.M.A.

Optimization of some physical and chemical factors for lovastatin productivity by local strain of *Aspergillus terreus*

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (6), pp. 718-732. Cited 6 times.

Department of Botany and Microbiology, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

The effect of some physical and chemical factors on lovastatin production was investigated in this study. Shaking conditions showed negative effect on lovastatin production to a great extent. The highest yield has been observed in 8 days incubation. Fermentation at 30°C was the optimal for lovastatin production. Lovastatin productivity was optimal at alkaline pH 8.5. Some experiments were developed in order to investigate the influence of carbon and nitrogen sources and their concentrations on lovastatin productivity. The highest level for lovastatin production has been found in cultures grown on oat meal. However, the use of glucose as a carbon source resulted in a repression of lovastatin productivity. Oat meal 20g/l was the optimal concentration for lovastatin production. The use of urea as a nitrogen source in the production medium lead to an increase in lovastatin production. Also, methionine as an amino acid resulted in an increase in lovastatin production. Nutritional improvement increases the productivity level up to 188.3µg/ml comparing to the original fermentation medium (54.5µg/ml).

Author Keywords

Aspergillus terreus; Fungi; Lovastatin; Optimization; Secondary metabolites

Document Type: Article

Source: Scopus

Osman, M.E., Khattab, O.H., Zaghlol, G.M., Abd El-Hameed, R.M.

Screening for the production of cholesterol lowering drugs (Lovastatin) by some fungi

(2011) *Australian Journal of Basic and Applied Sciences*, 5 (6), pp. 698-703. Cited 6 times.

Department of Botany and Microbiology, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

Twenty three fungal isolates were tested for their ability to produce cholesterol lowering drugs (Lovastatin). Lovastatin, is a competitive inhibitor of 3-hydroxy-3-methylglutaryl-CoA reductase, the rate limiting enzyme of cholesterol biosynthesis. The fungal isolates were cultivated in a two stages submerged fermentation followed by testing for the presence of lovastatin. Thirteen species of six genera were found to be lovastatin producers. *Aspergillus terreus* (1) was the best lovastatin producing isolate with a level of 52.9 µg lovastatin per ml of screening production medium. Different substrates and waste products such as molasses, apple waste, strawberry waste, bagasse, wheat bran, corn meal and whey were tested for lovastatin production. Bagasse was found to be the most suitable substrate for lovastatin production (50 µg/ml).

Author Keywords

Aspergillus terreus; Lovastatin; Screening; Secondary metabolites

Document Type: Article

Source: Scopus

ElFangary, L.M.

Mining of Egyptian missions data for shaping new paradigms

(2011) *Education and Information Technologies*, 16 (2), pp. 139-157.

DOI: 10.1007/s10639-010-9124-x

Information Systems Department, Faculty of Computers and Information, Helwan University, Cairo, Egypt

Abstract

This paper reviews data mining applications of students' databases in educational institutions. Data mining techniques that predict and improve students' retention rates and success is presented. Moreover, the Missions Administration at the Ministry of Higher Education in Egypt and previous analysis done on the missions databases is described. The focus of the paper is to examine how data mining can help in classifying the delayed and succeeded missioners to support the implementation of a missioners model. An investigation of how data mining can help in best or worse destinations for missioners is implemented using the Cross Industry Standard Process for Data Mining (CRISP-DM). The paper further describes the methodology used for analyzing the database for the ministry of higher education in Egypt. The process starts by extracting a subset of data including the missioners and the mission's data, countries, specialties, departure and arrival dates and finally the extension requests from the missioners. These data

were extracted into a data warehouse for the analysis purpose. The used model discovered the best and the worst countries for student mission. A detailed analysis discovered the best and the worst specialties in the previously discovered countries. Moreover, the analysis revealed the effect of the marital status on the mission of students in foreign countries. A visual display using a chart was used to express the information to business users. This model may help in supporting decision making regarding the reallocation of Egypt students to other countries. © 2010 Springer Science+Business Media, LLC.

Author Keywords

Data analysis; Data mining; Egypt; Higher education; Mission data

Document Type: Review

Source: Scopus

Ali, T.S.T.^{a b}

Quark and sigma mass dependence of nucleon properties from linear sigma model

(2011) *International Journal of Modern Physics E*, 20 (6), pp. 1509-1517.

DOI: 10.1142/S0218301311018423

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Abstract

The sensitivity of static nucleon properties (magnetic moment, axial-vector coupling constant g_A , pion-nucleon coupling constant $g_{\pi NN}$ and sigma commutator term $\sigma_{\pi N}$) to the quark and sigma masses have been investigated in the mean-field approximation. We have solved the field equations in the mean-field approximation with different sets of model parameters. Good results have been obtained in comparison with the other models and experimental data. © 2011 World Scientific Publishing Company.

Document Type: Article

Source: Scopus

Darwish, A.^a, Hassanien, A.E.^b

Wearable and implantable wireless sensor network solutions for healthcare monitoring

(2011) *Sensors*, 11 (6), pp. 5561-5595. Cited 66 times.

DOI: 10.3390/s110605561

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Abstract

Wireless sensor network (WSN) technologies are considered one of the key research areas in computer science and the healthcare application industries for improving the quality of life. The purpose of this paper is to provide a snapshot of current developments and future direction of research on wearable and implantable body area network systems for continuous monitoring of patients. This paper explains the important role of body sensor networks in medicine to minimize the need for caregivers and help the chronically ill and elderly people live an independent life, besides providing people with quality care. The paper provides several examples of state of the art technology together with the design considerations like unobtrusiveness, scalability, energy efficiency, security and also provides a comprehensive analysis of the various benefits and drawbacks of these systems. Although offering significant benefits, the field of wearable and implantable body sensor networks still faces major challenges and open research problems which are investigated and covered, along with some proposed solutions, in this paper. © 2011 by the authors; licensee MDPI, Basel, Switzerland.

Author Keywords

Biosensors; Body area networks; Healthcare applications; Implantable sensors; Nanotechnology; Privacy; Security; Wearable sensors; Wireless sensor networks

Document Type: Review

Source: Scopus

Kotby, M.N.^{a d}, Saleh, M.^a, Hegazi, M.^a, Gamal, N.^a, Abdel Salam, M.^b, Nabil, A.^a, Fahmi, S.^c

The arabic vowels: Features and possible clinical application in communication disorders

(2011) *Folia Phoniatrica et Logopaedica*, 63 (4), pp. 171-177. Cited 1 time.

DOI: 10.1159/000316323

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Abstract

Most scholars, old and modern, agree that the vowel system of the Arabic language is composed of 3 vowels only, namely /i/, /e/ and /u/. The spoken Cairo dialect suggests that there are 6 identifiable vowels, with a short and long variant for each. Objective: The aim of this study is to test the validity of the notion that there are 6 × 2 distinct vowels, with a more central one. Subjects and Methods: Spectral analysis was used to measure F1 and F2 for the vowels of 14 real words. Data was collected from 60 healthy adult informants, 30 males and 30 females. They were native Egyptians speaking the colloquial Cairene dialect. Results: The values of the 6 long and short vowels plus the central one are presented. A significant difference was found between each of them. The long and short vowels differed only in the duration but did not differ in their formant values. Conclusion: The study illustrates the distinctive features of the vowels of the Arabic language. Each of the 7 vowels represents a distinct entity. This will have important implications in assessment and management of language, speech and voice disorders in children and adults. Copyright © 2010 S. Karger AG, Basel.

Author Keywords

Arabic vowels; Vowels features; Vowels in therapy

Document Type: Article

Source: Scopus

Mohamed, M.S., Awad, S.M., Ahmed, N.M.

Synthesis and antimicrobial evaluation of some 6-aryl-5-cyano-2-thiouracil derivatives

(2011) *Acta Pharmaceutica*, 61 (2), pp. 171-185. Cited 7 times.

DOI: 10.2478/v10007-011-0019-1

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Abstract

A series of 6-aryl-5-cyano-2-thiouracil derivatives (1a-d) was synthesized by the reaction of ethyl cyanoacetate with thiourea and aldehydes. These products were used as intermediate compounds for the synthesis of a number of thiouracil derivatives (2a-d to 10a-d). All compounds were screened for antibacterial and antifungal activities. Some of the prepared compounds, 6-(4-fluorophenyl)-4-oxo-2-thioxo-1,2,3,4-tetrahydropyrimidine-5-carboxamide (2a), 4-oxo-2-thioxo-6-(3,4,5-trimethoxyphenyl)-1,2,3,4-tetrahydropyrimidine-5-carboxamide (2d), 6-(4-fluorophenyl)-4-hydrazino-2-thioxo-1,2-dihydropyrimidine-5-carbonitrile (7a) and 4-hydrazino-2-thioxo-6-(3,4,5-trimethoxyphenyl)-1,2-dihydropyrimidine-5-carbonitrile (7d) revealed promising antimicrobial activity.

Author Keywords

6-aryl-5-cyano-2-thiouracil; antibacterial activity; antifungal activity

Document Type: Article

Source: Scopus

Al-Dahmesh, B.^a, Dkhil, M.A.^{b c}, Al-Quraishy, S.^b

Chili pepper-induced injury to splenic tissue of rabbit

(2011) *Journal of Medicinal Plants Research*, 5 (10), pp. 2015-2020.

^a Medical Laboratory Department, College of Health Sciences, King Saud University, Saudi Arabia

^b Department of Zoology, College of Science, King Saud University, Riyadh, Saudi Arabia

^c Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

Abstract

Chili pepper is the most common species used in food throughout the world. In the present study, we examined the effects of chili pepper on rabbit's splenic tissue. Oral administration of chili pepper was carried out every day for 10 days at a dose of 2 g/kg rabbit. Chili pepper induced significant increase in spleen weight as well as the number of leucocytes. Spleen architecture was altered as indicated by the histological score. White and red pulps were enlarged and the splenic capsule became thinner after administration of chili pepper to rabbits. Histochemical studies revealed a decrease in both carbohydrates and protein contents in the spleen. Therefore, based on our findings the excessive consumption of chili pepper is capable of inducing spleen damage and should be used in proper amounts. © 2011

Academic Journals.

Author Keywords

Chili pepper; Histochemistry; Histology; Rabbit spleen

Document Type: Article

Source: Scopus

Mostafa, H.A.M.^a, El-Bakry, A.A.^b, Alam, E.A.^a

Evaluation of antibacterial and antioxidant activities of different plant parts of *Rumex vesicarius* L. (Polygonaceae)

(2011) *International Journal of Pharmacy and Pharmaceutical Sciences*, 3 (2), pp. 109-118. Cited 15 times.

^a Botany Department, National Research Centre, Dokki, Giza, Egypt

^b Botany Department, Faculty of Science, Helwan University, Helwan, Egypt

Abstract

The main aim of this research work is to evaluate antibacterial and antioxidant activities of different plant parts of *Rumex vesicarius* L.. Different extracts of different organs of *Rumex vesicarius* L. (Leaves, Stems, Roots, Flowers, Whole plant parts and Fruits), were screened for their antibacterial activity against six human pathogenic bacterial isolates by disk diffusion assay. The pattern of inhibition, activity index and proportion index showed highly significant variations according to variations of solvents used for extraction; plant parts used and tested bacterial isolates. Ether extract of roots was found to be the most effective against *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Staphylococcus aureus* and *Streptococcus pyogenes* (inhibition zones=26.500, 22.000, 41.5000 and 21.500 mm respectively), methanol extract of roots was found to be the most effective against *Streptococcus pneumoniae* (inhibition zone=18.000 mm) and ethanol extract of flowers was found to be the most effective one against *Escherichia coli* (inhibition zone=15.875 mm). Antioxidant activity was determined spectrophotometrically using total antioxidant activity and DPPH scavenging activity methods. Stems were found to have the highest total antioxidant capacity (17.458 GA equivalents "ppm"). Regarding DPPH scavenging activity, fruits were found to be the most effective plant parts (IC₅₀=0.731 mg/ml). Preliminary phytochemical screening on crude extracts and chemical examination of successive extractives solvents of different plant parts showed variations in the presence and amount of active ingredients under investigation within different extracts of different plant parts. Total phenolics were estimated, fruits extract was found to be the richest one in this regard (15.633 mg GAEs/g F.W.). Total anthraquinones were estimated, the highest amount of anthraquinones was found to be in roots extract (352.941 µg/g F.W.). Total flavonoids were estimated, fruits extract was found to be the highest containing one in this regard (25.995 µg/g F.W.). HPLC analysis of flavonoids was carried out using Quercetin as standard, whole plant parts extract was found to contain the highest amount of Quercetin (82.452 µg/g D.W.). HPLC analysis of anthraquinones was carried out using Emodin as standard, leaves extract was found to contain the highest amount of Emodin (16.937 µg/g D.W.).

Author Keywords

Anthraquinones; Antibacterial activity; Antioxidant activity; Flavonoids; Phenolics; *Rumex vesicarius* L

Document Type: Article

Source: Scopus

Hassan, S.^{a b}, Hector, A.L.^a, Kalaji, A.^{a c}

Sol-gel processing of silicon nitride films from Si(NHMe)₄ and ammonia

(2011) *Journal of Materials Chemistry*, 21 (17), pp. 6370-6374. Cited 3 times.

DOI: 10.1039/c1jm10127g

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^b Chemistry Department, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

^c Department of Materials Science and Metallurgy, University of Cambridge, Pembroke Street, Cambridge CB2 3QZ, United Kingdom

Abstract

The formation of silicon nitride films using a sol-gel process and dip-coating is reported. The effect of a trifluoromethanesulfonic acid catalyst on condensation is investigated, and affects the behaviour of gels on heating. Smooth films can be obtained on silicon wafer substrates, and these can be built up using multiple dippings as the gelation process is irreversible. Firing at 1000 °C produces amorphous silicon nitride films, though these contain some carbon and hydrogen and are sensitive to surface oxidation. © 2011 The Royal Society of Chemistry.

Document Type: Article

Source: Scopus

Ahmed, H.H.^a, Shousha, W.G.^b, Hussien, R.M.^b, Farrag, A.R.H.^c

Potential role of some nutraceuticals in the regression of Alzheimer's disease in an experimental animal model (2011) *Turkish Journal of Medical Sciences*, 41 (3), pp. 455-466. Cited 5 times.

DOI: 10.3906/sag-0907-136

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^b Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

^c Pathology Department, National Research Centre, Dokki, Cairo, Egypt

Abstract

Aim: The goal of this study was to evaluate the potential role of some nutraceuticals, coenzyme Q10, vitamin B complex, and lecithin against aluminum-induced neurodegeneration characteristic of Alzheimer's disease. **Materials and methods:** Ninety-six male and female Sprague Dawley rats were divided into 2 main groups, namely female and male. Each group was divided into 6 subgroups. Group 1 served as control group. Group 2 was administered AlCl₃ for 4 months. Groups 3, 4, 5, and 6 were administered with AlCl₃ for 4 months then treated with Coenzyme Q10, vitamin B complex, lecithin, or all in combination for 3 months, respectively. Brain acetylcholinesterase (AChE), Na⁺/K⁺-ATPase activities, and vitamin B12, folate, homocysteine (Hcy), lipid peroxidation, glutathione, and plasma nitric oxide (NO) levels were determined. Moreover, histopathological examination of brain tissue was evaluated. **Results:** Al intoxication caused a significant increase in brain AChE activity, Hcy, lipid peroxidation, and plasma NO levels, while it produced significant decrease in brain Na⁺/K⁺-ATPase activity, glutathione, vitamin B12, and folate levels. Moreover, histopathological investigation of the brain of Al intoxicated rats showed marked neurodegeneration and deposition of neurofibrillary tangles. Treatment with the selected nutraceuticals revealed an improvement in the neurological damage induced by AlCl₃ as indicated by improvement in most of the biochemical markers and histopathological features. **Conclusion:** The selected nutraceuticals (Coenzyme Q10, vitamin B complex, lecithin, and their combination) may play a beneficial role in delaying the progression of neurodegenerative disorders. It is noteworthy that the combined therapy revealed more pronounced effect compared to singular treatments with either one of them. © TÜBITAK.

Author Keywords

Aluminum; Alzheimer's disease; CoQ10; Lecithin; Rats; Vitamin B

Document Type: Article

Source: Scopus

Fouad, H.^{a b}, Darwish, S.M.^c

Femur design parameters and contact stresses at UHMWPE hip joint cup (2011) *Key Engineering Materials*, 478, pp. 93-102.

DOI: 10.4028/www.scientific.net/KEM.478.93

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Abstract

The contact stress that occurs in the ultra-high molecular weight polyethylene (UHMWPE) hip joint cup has been shown to be correlated with the implant wear rate. The wear of the hip joint is considered as one of the main factors that affect the long term performance of the implant. The contact stress that occurs in the UHMWPE hip joint cup is affected by the implant dimensions and materials. In this study, four different femur materials and geometries were used to investigate the effects of femur design parameters on the resultant contact stress on the UHMWPE cup. The results of the finite element (FE) simulation show that the contact stresses at the UHMWPE cup decreases dramatically with increasing the femur diameter. Also the results indicated that the contact stresses on the UHMWPE cup decrease significantly when using functionally graded (FG) femur with low modulus of elasticity. The presence of metal backing results in a slight reduction in the UHMWPE cup contact stresses especially for small femurs. Finally, the presence of a gap between the UHMWPE cup and the femur results in a remarkable increase in the cup stress especially for a small femur. The hip joint femur dimensions and materials are thought to play an important role in the transition of load in the implant and should be taken into consideration during the design of the hip joint. © (2011) Trans Tech Publications.

Author Keywords

CoCrMo; Cup dimensions; FE; Femur; FGM; SS; Ti; UHMWPE

Document Type: Conference Paper

Source: Scopus

Helali, A.B.

Effects of water contamination on sub-cooled flow boiling heat transfer

(2011) *Energy Conversion and Management*, 52 (5), pp. 2288-2295. Cited 6 times.

DOI: 10.1016/j.enconman.2010.11.025

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Abstract

An experimental investigation has been carried out to study the effect of adding four different contaminants to distilled water on heat transfer under sub-cooled flow boiling conditions. Flow boiling experimental test rig has been designed and constructed to study the effect of changing the contaminant concentration and flow velocity. Lube oil, Nile river water, tap water and sea water were added at different concentrations to distilled water under sub-cooled flow boiling testing at constant bulk temperature. The effect of flow velocity was also studied for three different concentrations of 1%, 3% and 5% as compared to pure distilled water case. The heat flux applied was in the range of 100-400 kW/m². Flow velocities were changed from 1, 2 to 2.5 m/s at constant bulk temperature of 70 °C. It was found that adding any of the contaminants at all considered concentrations to distilled water impairs the heat transfer process substantially. © 2010 Elsevier Ltd. All rights reserved.

Author Keywords

Flow boiling; Heat transfer; River water; Sea water; Sub-cooled boiling; Tap water; Water contamination

Document Type: Article

Source: Scopus

Latif, R.^a, Refai, H.^a, Tawakkol, S.^b

Photostabilization of sunscreen oil through preparation of a free-flowing powder

(2011) *Journal of Microencapsulation*, 28 (3), pp. 159-165. Cited 3 times.

DOI: 10.3109/02652048.2010.520092

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Abstract

Octyl-p-methoxycinnamate (OMC) is a sun-blocking agent that absorbs ultraviolet (UV) radiation in UVB range. However, when exposed to sunlight, OMC is converted into a less UV-absorbent form, which reduces its effectiveness. The aim of this study was to stabilize the oil by microencapsulation and to convert it into a free-flowing powder form. In addition, the study aimed to develop a suitable high-performance liquid chromatography method to detect the oil in the presence of its degradation product. OMC was microencapsulated by the congealable disperse-phase encapsulation using carnauba wax (cw) and beeswax (bw) at different wax-to-drug ratios (2:1 and 4:1). The photostability of the oil was investigated by exposing the microspheres to UV radiation. After 180min of exposure, the photoprotective abilities of all the tested formulae were similar and reached about 82%. However, physicochemical assessment showed superiority of cw microspheres over their bw analogues. © 2011 Informa UK Ltd All rights reserved.

Author Keywords

HPLC assay; Microspheres; octyl-p-methoxycinnamate; sun protection factor; wax encapsulation

Document Type: Article

Source: Scopus

Zhou, H.^d, Touny, A.H.^a, Bhaduri, S.B.^{b c}

Fabrication of novel PLA/CDHA bionanocomposite fibers for tissue engineering applications via electrospinning

(2011) *Journal of Materials Science: Materials in Medicine*, 22 (5), pp. 1183-1193. Cited 16 times.

DOI: 10.1007/s10856-011-4295-6

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^d Department of Bioengineering, University of Toledo, Toledo, OH, United States

Abstract

The main theme here is to fabricate PLA (poly lactic-acid)/CDHA (carbonated calcium deficient hydroxyapatite) bionanocomposites, where both the constituents are biocompatible and biodegradable with one dimension in nanometer scale. Such materials are important in tissue engineering applications. The bionanocomposite fibers were fabricated via electrospinning. There are two important signatures of this paper. First, CDHA, rather than HA, is added to PLA as the second phase. As opposed to HA, CDHA mimics the bone mineral composition better and is biodegradable. Therefore, PLA/CDHA fibers should have better biodegradability while maintaining a physiological pH during degradation. To the best of our knowledge, this is the first attempt of electrospinning of such a composite. Second, the CDHA nanoparticles were synthesized using the benign low temperature biomimetic technique, the only route available for the retention of carbonate ions in the HA lattice. The structural properties, degradation behavior, bioactivity, cell adhesion, and growth capability of as-fabricated PLA/CDHA bionanocomposites were investigated. The results show that the incorporation of CDHA decreased PLA fiber diameters, accelerated PLA degradation, buffered pH decrease caused by PLA degradation, improved the bioactivity and biocompatibility of the scaffold. These results prove that PLA/CDHA bionanocomposites have the potential in tissue regeneration applications. © Springer Science+Business Media, LLC 2011.

Document Type: Article

Source: Scopus

El-Gendy, Y.A.^a, M.Hammam^a, Salem, A.M.^b, Abd-El Aal, M.M.^a

Thermal and optical properties of amorphous chalcogenide Ge₁₅Se_{85-x}In_x thin films

(2011) *Journal of Applied Sciences Research*, 7 (5), pp. 690-697.

^a Faculty of Science, Physics Department, Helwan University, Cairo, Egypt

^b Electron Microscope and Thin Films Department, National Research Center, Dokki, Cairo, Egypt

Abstract

Nearly stoichiometric thin amorphous films of Ge₁₅Se_{85-x}In_x system with x = 5, 7.5, 10, 12.5 and 15, have been prepared at room temperature by thermal evaporation technique. The glass transition temperature (T_g) and crystallization temperature (T_c) of the prepared glassy system were determined using the differential scanning calorimeter at heating rate 15 K/min. The glass transition temperature and crystallization temperatures both increase with increasing "In" content in Ge₁₅Se_{85-x}In_x system. The ease of the glass forming, glass thermal stability level and the glass-forming ability were also calculated as a function of the "In" content. The optical properties of the as-deposited Ge₁₅Se_{85-x}In_x films have been studied from the recorded transmission and reflection spectra in the wavelength range 400-2500 nm. The straightforward analysis proposed by Swanepoel has been successfully employed, and it has allowed us to determine the thickness, and the refractive indices of the deposited films, whereas, the optical absorption edge was described using the model of 'non-direct transition' proposed by Tauc.

Author Keywords

Optical properties; Thermal analysis; Thin films

Document Type: Article

Source: Scopus

El-Kady, M.^a, Biomy, M.^b

Interactive Chebyshev-Legendre algorithm for linear quadratic optimal regulator systems

(2011) *International Journal of Wavelets, Multiresolution and Information Processing*, 9 (3), pp. 459-483. Cited 3 times.

DOI: 10.1142/S0219691311004146

^a Department of Mathematics, Faculty of Science, Helwan University, Cairo, Egypt

^b Department of Mathematics, Faculty of Science, Suez Canal University, Port-Said, Egypt

Abstract

In this paper, we derive an algorithm to solve the linear quadratic (LQ) optimal regulator problems. The new approach is based on efficient Legendre and Chebyshev formulae at the Chebyshev-Gauss-Lobatto points. The technique enjoys advantages of both the Legendre and Chebyshev approximations near the end points. To show the numerical behavior of the proposed method, the simulation results of an example are presented. © 2011 World Scientific Publishing Company.

Author Keywords

Chebyshev polynomials; differentiation and integration matrices; Legendre polynomials; Optimal regulator problems

Document Type: Article
Source: Scopus

Fouad, H.^{a b}

Assessment of function-graded materials as fracture fixation bone-plates under combined loading conditions using finite element modelling

(2011) *Medical Engineering and Physics*, 33 (4), pp. 456-463. Cited 11 times.

DOI: 10.1016/j.medengphy.2010.11.013

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Abstract

In previous work by Fouad (*Medical Engineering and Physics* 2010 [23]), 3D finite element (FE) models for fractured bones with function-graded (FG) bone-plates and traditional bone-plates made of stainless steel (SS) and titanium (Ti) alloy were examined under compressive loading conditions using the ABAQUS Code. In this study, the effects of the presence of the torsional load in addition to the compressive load on the predicted stresses of the fracture fixation bone-plate system are examined at different healing stages. The effects on the stress on the fracture site when using contacted and non-contacted bone-plate systems are also studied. The FE modelling results indicate that the torsional load has significant effects on the resultant stress on the fracture fixation bone-plate system, which should be taken into consideration during the design and the analysis. The results also show that the stress shielding at the fracture site decreases significantly when using FG bone-plates compared to Ti alloy or SS bone-plates. The presence of a gap between the bone and the plate results in a remarkable reduction in bone stress shielding at the fracture site. Therefore, the significant effects of using an FG bone-plate with a gap and the presence of torsional load on the resultant stress on the fracture fixation bone-plate system should be taken into consideration. © 2010 IPPEM.

Author Keywords

Bone-plate; FG plate; Finite element; SS; Stress shielding; Ti; Torsional load

Document Type: Article
Source: Scopus

EI-AdII, M.E.

Predicting future lifetime based on random number of three parameters Weibull distribution

(2011) *Mathematics and Computers in Simulation*, 81 (9), pp. 1842-1854. Cited 5 times.

DOI: 10.1016/j.matcom.2011.02.003

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Abstract

In this paper, two pivotal quantities are modified to construct prediction intervals for future lifetime based on random number of three parameters Weibull distribution, which can be widely applied in reliability theory and lifetime problems. The case of fixed sample size is presented as a special case. The random number has one of three important distributions as special cases. An algorithm is constructed to explain the importance of the theoretical results in applications. Simulation studies are conducted to investigate the efficiency of the purposed results. Finally, two numerical examples for real lifetime data are presented to illustrate the paper. © 2011 IMACS. Published by Elsevier B.V. All rights reserved.

Author Keywords

Monte Carlo simulation; Order statistics; Predicative interval; Probability coverage; Truncated distributions

Document Type: Article
Source: Scopus

Semary, N.A.E.

The polyphasic description of a Phormidium-like cyanobacterium from Egypt with antimicrobial activity of its methanolic extracts

(2011) *Nova Hedwigia*, 92 (3-4), pp. 377-390. Cited 2 times.

DOI: 10.1127/0029-5035/2011/0092-0377

Department of Botany and Microbiology, Faculty of Science, Helwan University, Egypt

Abstract

The taxonomic position of a filamentous, non-heterocystous, benthic cyanobacterium isolated from an industrial waste canal, Helwan district, Egypt was investigated using a polyphasic approach. The isolate possessed unique ultrastructural features including heavily-granulated cells except for the dome-shaped apical cell. There is also an observed longitudinal partitioning within the cell caused by membrane-like structure, thus dividing the cell into unequal sections. Also the presence of elemental sulfur globules, the presence of refractile stacked gas vesicle-like structures and convoluted irregularly arranged thylakoids. Analysis of the *ssu* rDNA gene showed that the isolate was < 91% similar to other cyanobacteria sequences. The phylogenetic analysis showed the co-clustering of this isolate with other *Phormidium* isolates, thus implying its close phylogenetic relationship to this genus. To investigate other descriptive features of the isolate, fatty acid composition was used as a chemotaxonomic marker. Saturated arachidic fatty acid was found in abundance followed by polyunsaturated fatty acids. Finally, the antimicrobial screening revealed the effectiveness of methanolic fractions against some pathogens. Collectively, the study shows that morphological similarities can mask internal heterogeneities and that the correct identification of organisms with unique characteristics gives us an insight into their metabolic features and would offer opportunities for future biotechnological exploitation. © 2011 J. Cramer in Gebr.

Author Keywords

Antimicrobial; Antimicrobial screening; Fatty acid; *Phormidium*-like; Phylogenetic analysis; *Ssu* rDNA

Document Type: Article

Source: Scopus

Abd Elrahman, M.K.

Adapting particle swarm optimisation for charge simulation method

(2011) *IET Science, Measurement and Technology*, 5 (3), pp. 96-101. Cited 7 times.

DOI: 10.1049/iet-smt.2010.0109

Helwan University, Faculty of Engineering, Electrical Power and Machine Engineering Department, Egypt

Abstract

The charge simulation method (CSM), owing to its favourable characteristics, is commonly used for electric field analysis of high-voltage insulation systems. In order to improve the precision of the electric field calculation and to minimise the reliance on personal experience, a novel combination of particle swarm optimisation (PSO) and CSM is proposed. In this, the optimum allocations of the simulating charges can be obtained using PSO. The conventional CSM is briefly considered and the optimised version is formulated. The potential distribution between two spherical electrodes is determined as a sample problem. Also, the solution of field distribution with non-axial symmetry resulting from a floating spherical conductor between the spheres is considered. The optimised CSM using PSO proved to be more efficient and there is no need for the experience that was required to set up and implement a solution of this kind. © 2011 The Institution of Engineering and Technology.

Document Type: Article

Source: Scopus

Dkhil, M.A.^{a b}, Moniem, A.E.A.^b, Al-Quraishy, S.^a, Saleh, R.A.^c

Antioxidant effect of purslane (*Portulaca oleracea*) and its mechanism of action

(2011) *Journal of Medicinal Plants Research*, 5 (9), pp. 1589-1593. Cited 19 times.

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^b Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

^c Department of Anatomy, Faculty of Medicine, Al-Azhar University, Egypt

Abstract

Aqueous juice from purslane (*Portulaca oleracea*) was screened for its antioxidant activity in adult male Wistar albino rats. The antioxidant activity was determined by measuring reduced glutathione, catalase, superoxide dismutase, glutathione reductase, glutathione-S-transferase and glutathione peroxidase, as well as the inhibition in lipid peroxidation, nitric oxide in liver, kidney and testis of rats. Liver and kidney function were also determined. Administered rats with aqueous juice of purslane, resulted in marked improvement in all studied parameters. On the basis of the above results, it can be concluded that purslane is a promising natural product, which could be useful for the prevention of cardiovascular, neurodegenerative and other chronic diseases caused by oxidative stress. © 2011 Academic Journals.

Author Keywords

Antioxidant enzymes; Oxidative stress; Purslane; Rat

Document Type: Article

Source: Scopus

Bakr, I.M.

Densification behavior, phase transformations, microstructure and mechanical properties of fired Egyptian kaolins

(2011) *Applied Clay Science*, 52 (3), pp. 333-337. Cited 3 times.

DOI: 10.1016/j.clay.2011.03.002

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Abstract

The effect of firing temperature and soaking time on the densification behavior of two Egyptian kaolins was studied. Phase composition, microstructure, mechanical properties and color changes of the fired bodies were investigated. Firing at 1200 °C/1. h yielded a moderate porosity (about 13%) for the first kaolin sample and a relatively dense body for the other (about 0.6% apparent porosity). This great discrepancy of densification parameters between the two types of kaolins decreased rapidly with increasing firing temperature. When fired at 1500 °C/1. h, both samples reached almost zero apparent porosity. The finer particles and low amount of free quartz led to a more dense structure, fine isolated rounded pores, mullite grain growth, earlier densification, higher fracture toughness, and wider vitrification range. The coarser particles and the presence of larger amount of free quartz contradicted the expected effect of fluxing oxides. © 2011 Elsevier B.V.

Author Keywords

Ceramics; Clays; Firing; Mechanical properties; Particle size; Porosity

Document Type: Article

Source: Scopus

Touny, A.H.^{a d}, Dawkins, H.^b, Zhou, H.^b, Bhaduri, S.B.^{a c}

Hydrolysis of monetite/chitosan composites in α -MEM and SBF solutions

(2011) *Journal of Materials Science: Materials in Medicine*, 22 (5), pp. 1101-1109. Cited 6 times.

DOI: 10.1007/s10856-011-4288-5

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Abstract

There are two objectives of this work. The first objective is to study the hydrolysis behavior of monetite cements formed in the presence and absence of the chitosan in cell culture media (α -MEM) and simulated body fluid (SBF) solutions at 37°C. During hydrolysis, monetite transformed to carbonated apatite. Therefore, the second objective is to examine how addition of chitosan affects on the formation of carbonated apatite phases. The changes in the phase structure of monetite after hydrolysis reactions were characterized using XRD, FTIR and SEM. Pure monetite and monetite/chitosan composite were soaked in α -MEM and SBF solution for 4 and 7 days. In α -MEM solution, the monetite particles started to transform into carbonated apatite with a slow rate. However, in SBF, the rate of monetite transformation to carbonated apatite was more rapid. The presence of the chitosan had no significant effect on the precipitation of carbonated apatite on the monetite particles. © Springer Science+Business Media, LLC 2011.

Document Type: Article

Source: Scopus

Elgendy, E.^a, Schmidt, J.^a, Khalil, A.^b, Fatouh, M.^c

Performance of a gas engine driven heat pump for hot water supply systems

(2011) *Energy*, 36 (5), pp. 2883-2889. Cited 16 times.

DOI: 10.1016/j.energy.2011.02.030

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^c Mechanical Power Engineering Department, Faculty of Engineering at El-Mattaria, Helwan University, Masaken El-

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Abstract

The present work aimed at evaluating the experimental performance of a gas engine heat pump for hot water supply. In order to achieve this objective, a test facility was developed and experiments were performed over a wide range of ambient air temperature (10.9-25.3 °C), condenser water inlet temperature (33-49 °C) and at two engine speeds (1300 and 1750 rpm). Performance characteristics of the gas engine heat pump were characterized by water outlet temperature, total heating capacity and primary energy ratio. The reported results revealed that hot water outlet temperature between 35 and 70 °C can be obtained over the considered range of the operating parameters. Also, total heating capacity and gas engine heat recovery decrease by 9.3 and 27.7%, respectively, while gas engine energy consumption increases by 17.5% when the condenser water inlet temperature changes from 33 to 49 °C. Total heating capacity, gas engine heat recovery and gas engine energy consumption at ambient air temperature of 25.3 °C are higher than those at ambient air temperature of 10.9 °C by about 10.9, 6.3 and 1.5% respectively. Moreover, system primary energy ratio decreases by 15.3% when the engine speed changes from 1300 to 1750 rpm. © 2011 Elsevier Ltd.

Author Keywords

Gas engine heat pump; Heat recovery; Heating mode; Primary energy ratio; R410A; Water heating

Document Type: Article

Source: Scopus

Hassona, M.D.H.^{a b d f}, Elnakish, M.T.^{a b c f}, Abouelnaga, Z.A.^{a b}, Alhaj, M.^{a b}, Wani, A.A.^{c d e g}, Hassanain, H.^{a b c h}

The effect of selective antihypertensive drugs on the vascular remodeling-associated hypertension: Insights from a profilin1 transgenic mouse model

(2011) *Journal of Cardiovascular Pharmacology*, 57 (5), pp. 550-558. Cited 6 times.

DOI: 10.1097/FJC.0b013e318212b1c2

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^h Department of Anesthesiology, Dorothy M. Davis Heart and Lung Research Institute, Ohio State University, 460 West 12th Avenue, Columbus, OH, United States

Abstract

Hypertension represents a major risk factor for cardiovascular diseases. We have developed a novel transgenic mouse model by overexpressing the cDNA of human profilin1 in the blood vessels of transgenic mice, which led to vascular hypertrophy and hypertension. We assessed the effects of losartan, amlodipine, or atenolol on vascular hypertrophy-associated hypertension, by treating the profilin1 transgenic mice for 4 weeks. Our myograph results showed improvement in the contraction response toward phenylephrine and in the relaxation response toward acetylcholine and sodium nitrite in losartan- and amlodipine-treated profilin1 mice. Western blot analyses using mesenteric arteries of losartan- and amlodipine-treated profilin1 mice showed significant decreases in their signaling, respectively, as follows: the expression of $\alpha 1$ integrin (104% and 93%) and $\beta 1$ integrin (116% and 109%); p-ERK1/2 (149% and 130%) and p-JNK (171% and 137%); the phospho-myosin light chain 20 (117% and 150%); and the ROCKII expression (125% and 180%). Conversely, there were significant increases in the endothelial nitric oxide synthase expression (82% and 80%) and activation (p-endothelial nitric oxide synthase) (78% and 76%). On the other hand, atenolol-treated profilin1 mice showed no significant change in all measured parameters. In conclusion, the profilin1 gene may represent a new therapeutic target in the treatment of vascular hypertrophy-associated hypertension. © 2011 by Lippincott Williams & Wilkins.

Author Keywords

antihypertensive drugs; profilin1 gene; transgenic mice; vascular remodeling

Document Type: Article

Source: Scopus

Shaaban, E.R.^{a b}, El-Hagary, M.^{a c}, Emam-Ismael, M.^{a d}, El-Den, M.B.^d

Optical band gap, refractive index dispersion and single-oscillator parameters of amorphous Se70S30-xSbx semiconductor thin films

(2011) *Philosophical Magazine*, 91 (12), pp. 1679-1692. Cited 8 times.

DOI: 10.1080/14786435.2010.544683

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^d Physics Department, Faculty of Science, Ain Shams University, 11566 Cairo, Egypt

Abstract

The optical band gap, refractive index and oscillator parameters of amorphous semiconductor Se70S30-xSbx thin films with x = 0, 18, 12 and 30 at. % deposited by electron-beam evaporation were investigated by optical spectrophotometry. The energy gap E_{opt} decreases from 2.25 to 1.08 eV with increasing Sb content introduced at the expense of S, which is explained in terms of chemical bond and cohesive energy approaches. The method proposed by Swanepoel is applied to extract the refractive index n . It was found that the refractive index is strongly related to the change in the concentration of Sb, which is related to the increase density of the film material with increasing Sb content, and is interpreted in terms of polarisability and the mean coordination number. The ratio of the refractive indices of (Se70Sb30)/(Se 70S30) is ≈ 1.32 at a wavelength 1600 nm and increases to 1.48 at $\lambda \approx 950$ nm. Such a refractive index contrast could be used to fabricate a distributed Bragg reflector (DBR) stack with limited number of layers. The dispersion of the refractive index is discussed in terms of the Wemple-DiDomenico single-oscillator model. The oscillator parameters, i.e. the single-oscillator energy E_0 , the dispersion energy E_d , the static refractive index n_0 , the average interband oscillator wavelength λ_0 , and the average oscillator strength S_0 , and the optical conductivity have been estimated. © 2011 Taylor & Francis.

Author Keywords

amorphous semiconductor; chalcogenide glass; optical constant; optical properties; thin film

Document Type: Article

Source: Scopus

Fouad, H.^{a b}

In vitro evaluation of stiffness graded artificial hip joint femur head in terms of joint stresses distributions and dimensions: finite element study

(2011) *Journal of Materials Science: Materials in Medicine*, pp. 1-10. Article in Press.

DOI: 10.1007/s10856-011-4319-2

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^b Faculty of Engineering, Biomedical Engineering Department, Helwan University, Helwan, Egypt

Abstract

The aim of the present work is to evaluate the artificial hip joint femur head that is made of Stiffness Graded (SG) material in terms of joint stresses distributions and dimensions. In this study, 3D finite element models of femur head that is made of SG material and traditional femur heads made of Stainless Steel (SS), Cobalt Chromium alloy (Co Cr Mo) and Titanium alloy (Ti) have been developed using the ANSYS Code. The effects on the total artificial hip joint system stresses due to using the proposed SG material femur head (with low stiffness at the outer surface and high stiffness at its core) have been investigated. Also, the effects on the polymeric cup contact stresses due to the use of different sizes of femur heads, presence of metal backing shell and presence of radial clearance (gap) between cup and femur head have been investigated. The finite element results showed that using SG femur head resulted in a significant reduction in the cup contact stresses even for small femur heads compared with Ti alloy, SS and Co Cr Mo femur heads. The presence of radial clearance resulted in significant increase in the cup stresses especially for small femur heads. Finally, the presence of SS metal backing shell resulted in slight increase in the hip joint stresses especially for small femur head joints. This work analyzes successfully the usage of proposed SG material as femur head in order to reduce the predicted stresses at the total hip joint replacement due to the redistribution of strain energy in the hip prostheses. Therefore, the present results suggest that minor changes in design and geometrical parameters of the hip joint have significant consequences on the long term use of the joint and should be taken into consideration during the design of the hip joint. © 2011 Springer Science+Business Media, LLC.

Document Type: Article in Press

Source: Scopus

Abdelfattah, M.S.^{a b}, Toume, K.^a, Ishibashi, M.^a

Izumiphenazine D, a new phenazoquinoline N-oxide from Streptomyces sp. IFM 11204
(2011) *Chemical and Pharmaceutical Bulletin*, 59 (4), pp. 508-510. Cited 6 times.

DOI: 10.1248/cpb.59.508

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^b Chemistry Department, Faculty of Science, Helwan University, Cairo-11795, Egypt

Abstract

A new phenazine derivative named izumiphenazine D (1), together with three known metabolites, 1-hydroxyphenazine (2), phenazine-1-carboxylic acid (3) and 6-hydroxyphenazine-1-carboxylic acid (4) has been isolated from the ethyl acetate extract of culture of *Streptomyces* sp. IFM 11204. The structure of 1 was established via spectroscopic methods, including 1D- and 2D-NMR measurements. © 2011 Pharmaceutical Society of Japan.

Author Keywords

N-oxide; Phenazine; Spectroscopy; *Streptomyces* sp.

Document Type: Article

Source: Scopus

El-Mageed, N.M.A.^{a b}

Hepatoprotective effect of feeding celery leaves mixed with chicory leaves and barley grains to hypercholesterolemic rats

(2011) *Pharmacognosy Magazine*, 7 (26), pp. 151-156. Cited 4 times.

DOI: 10.4103/0973-1296.80675

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Abstract

Celery, chicory leaves, and barley grains are valuable in weight loss diets and regulate lipid metabolism. They may reduce risk of fatty liver. The present study aimed to investigate the effect of diet supplementation with celery, chicory, and barley powder on liver enzymes and blood lipids in rats fed with cholesterol-enriched diet. This study used four groups of rats fed with 3% cholesterol were supplemented diet to induce hypercholesterolemia and one group was fed on cholesterol-free basal diet. The dry powder of celery leaves, chicory leaves, and barley grains was separately added to the basal diet at 10% concentration or in combination of three plants at 15% for four weeks. Biochemical analyses of serum liver enzymes and blood lipids as well as histopathological examination of liver were performed. Feeding of diet supplemented with 10% of celery, 10% chicory, and 10% of barley lowered the elevated serum level of liver enzymes and blood lipids in rats. Feeding plant combination of celery, chicory, and barley at 15% concentration (5% from each) was more effective in decreasing the elevation of liver enzymes (aspartate aminotransferase, alanine aminotransferase, and alkaline phosphatase) and blood lipids. The histopathological lesions seen in the livers of hypercholesterolemic rats were ameliorated by feeding this plant mixture. This study recommends that dietary intake of plant mixture of celery; chicory, and barley at 15% (5% of each) concentration can be beneficial to patients suffering from hypercholesterolemia and liver diseases.

Author Keywords

Barley; biochemical analysis; celery; chicory; hypercholesterolemia

Document Type: Article

Source: Scopus

Rabie, M.H.

Behavior of temporary anchors in selty sand soils

(2011) *Journal of Engineering and Applied Science*, 58 (2), pp. 127-143.

Civil Eng. Dept., Helwan Uni., Cairo, Egypt

Abstract

Using grouted soil anchors has a comparatively recent development in the few past decades. They have become an increasingly used economic and reliable construction technique. The Egyptian geotechnical code "2001", however, does not address or deal with the design and the construction of ground anchor in details. The behavior of temporary ground soil anchors is introduced in this paper through investigating their response under full-scale tension tests. Two case histories are presented herein to illustrate the behavior of temporary anchors in silty sand formations of Egyptian

soils. Furthermore, an extensive comparison study is performed between the results of numerical model using finite element method and those of in-situ load-displacement tests showing the adequacy of the proposed numerical scheme. In addition, the research investigates the influence of existence of finesoil contents on the number of failed anchors during pullout tests.

Author Keywords

Displacement; Grouting pressure; Skin frictional resistance; Soil anchor

Document Type: Article

Source: Scopus

Fouad, H.^{a b e}, Elleithy, R.^a, Al-Zahrani, S.M.^{c d}, Ali, M.A.H.^c

Characterization and processing of High Density Polyethylene/carbon nano-composites

(2011) *Materials and Design*, 32 (4), pp. 1974-1980. Cited 14 times.

DOI: 10.1016/j.matdes.2010.11.066

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^e Helwan University, Faculty of Engineering, Biomedical Engineering Department, Egypt

Abstract

In the present study, different series of High Density Polyethylene (HDPE)/carbon nano-composites were prepared using melt blending in a co-rotating intermeshing twin screw extruder. The morphological, thermal, rheological, viscoelastic, mechanical, and fracture toughness properties of the nano-composites were analyzed. The microscopic examination of the cryogenically fractured surface found a good distribution of carbon nano-particles in the HDPE matrix. The melting temperature was not significantly affected by the addition of nano-carbon. Whereas, the crystallization percentage was slightly affected by adding carbon nano-particles into the matrix. The complex viscosity increased as the percentage of carbon increased. The Dynamic Mechanical Analysis (DMA) showed that the storage modulus increased with increasing the carbon nano-particles ratio and with increasing the testing frequency. The tensile test results showed that with increasing the carbon nano-particles contents, the Young's modulus, yield strength of HDPE nano-composite increased while the strain at fracture decreased. Similarly, the fracture toughness and the strain energy release rate decreased proportional to the carbon content. © 2010 Elsevier Ltd.

Author Keywords

A. Nanomaterials; C. Extrusion; E. Mechanical

Document Type: Article

Source: Scopus

El-Thalouth, A., Ragheb, A.A., Rekaby, M., Ibrahim, M.A., Abd El-Moaty, A.R.

Printing of wool, silk and cotton fabric samples using natural dye extracted from fenugreek seeds and thickened with different thickening agent

(2011) *Man-Made Textiles in India*, 39 (4), pp. 127-133. Cited 1 time.

Textile Division, National Research Centre, Helwan University, Egypt

Abstract

Fenugreek seeds gum, which is mainly galactomannan was used successfully as thickening agent for textile printing after treatment with sodium hydroxide. Natural dye was extracted from the same seeds and used in printing of wool, silk and cotton fabrics. Different colour ranges could be obtained from fenugreek peel extract using different mordants. Irrespective of the nature of the fabric used, the colour ranges from yellow to olive green. In case of cotton fabrics, the highest K/S was obtained when tannic acid was used as amordant. While in case of protein fabrics, i.e. wool and silk, all of the mordants caused a remarkable effect on the K/S; however the highest value was obtained on using tannic acid also. The colour fastness properties, i.e. for washing, rubbing or perspiration were quite satisfactory for practical purposes where it ranges between 2-3 to 4-5.

Document Type: Article

Source: Scopus

Abdel-Moemin, A.R.

Switching to black rice diets modulates low-density lipoprotein oxidation and lipid measurements in rabbits

(2011) *American Journal of the Medical Sciences*, 341 (4), pp. 318-324. Cited 3 times.

DOI: 10.1097/MAJ.0b013e3182019f62

Nutrition and Food Science Department, Faculty of Home Economics, Helwan University, Ain Helwan, Egypt

Abstract

The effect of white and black rice consumption on lipid profile, hydroperoxides, thiobarbituric reactive substances and oxidized low-density lipoprotein (LDL) induced by hypercholesterolemia was investigated in 24 male rabbits; a purified normal diet (NC, n = 6), a high fat/cholesterol (1.0 g/100 g) diet (PC group, n = 6), a high fat/cholesterol diet with 25 g/100 g white ground rice (PCWR group, n = 6), 25 g/100 g black ground rice (PCBR group, n = 6) for 10 weeks. Blood samples were collected for lipid measurements. Results indicate that serum high-density lipoprotein-cholesterol was higher ($P < 0.05$) in the PCBR compared with the PC and PCWR groups. Hydroperoxides and thiobarbituric reactive substances were significantly lower ($P < 0.05$) in the PCBR compared with PCWR and PC groups. Cyanidin-3-glucoside (Cy-3-Glu) and peonidin-3-glucoside have been tested in vitro against copper-mediated low-density lipoprotein. Cy-3-Glu was excelled peonidin-3-glucoside by increasing the lag time of NC from 80 to 500 minutes in the presence of 2.0 μM of Cy-3-Glu. Hierarchically, black rice rabbits group was given the best results compared with other groups. The results may be indicating to a suggested mechanism (anthocyanins protection; Cy-3-Glu) of the cardioprotective effect of black rice. © Copyright 2011 Southern Society for Clinical Investigation.

Author Keywords

Anthocyanins; Lipid profile; Oxidized LDL; Rabbits; Rice

Document Type: Article

Source: Scopus

Mourad, M.M.

Physical properties of terry towels

(2011) *Textile Asia*, 42 (3), pp. 21-24.

Faculty of Education, Helwan University, Helwan, Cairo, Egypt

Abstract

This study investigates the effect of cut and uncut pile appearance on the physical properties of terry towels. It found that physical properties of terry towels have been affected by the loop appearance ratio and the shape of loop piles; and for physical and mechanical properties, terry towels made of uncut piles were superior to those made of cut piles.

Document Type: Article

Source: Scopus

Abdel-Baki, A.S.^{a b}, Dkhil, M.A.^{a c}, Al-Quraishy, S.^a

Bioaccumulation of some heavy metals in tilapia fish relevant to their concentration in water and sediment of Wadi Hanifah, Saudi Arabia

(2011) *African Journal of Biotechnology*, 10 (13), pp. 2541-2547. Cited 41 times.

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^b Zoology Department, Faculty of Science, Beni-Suef University, Egypt

^c Department of Zoology and Entomology, Faculty of Science, Helwan University, Egypt

Abstract

Concentrations of some heavy metals (Pb, Cd, Hg, Cu and Cr) were determined in water, sediment and tissues of tilapia fish collected from Wadi Hanifah during summer 2010. The concentrations of the heavy metal in water were within the international permissible level. Cu had the highest accumulating level in fish whilst Hg had the lowest. The transfer factors of all metals in fish from water were greater than those from sediments. This led to the conclusion that fish bioaccumulation with these metals was from water. Heavy metals under study in the edible parts of tilapia were within the safety permissible level for human use. © 2011 Academic Journals.

Author Keywords

Bioaccumulation; Heavy metals; Tilapia; Wadi Hanifah

Document Type: Article

Source: Scopus

Mohamed, H.H.^{a b}, Mendive, C.B.^{a c}, Dillert, R.^a, Bahnemann, D.W.^a

Kinetic and mechanistic investigations of multielectron transfer reactions induced by stored electrons in TiO₂ nanoparticles: A stopped flow study

(2011) *Journal of Physical Chemistry A*, 115 (11), pp. 2139-2147. Cited 29 times.

DOI: 10.1021/jp108958w

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^c Departamento de Química, Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Mar Del Plata, Dean Funes 3350, 7600 Mar del Plata, Argentina

Abstract

The kinetics and the mechanism of various multielectron transfer reactions initiated by stored electrons in TiO₂ nanoparticles have been investigated employing the stopped flow technique. Moreover, the optical properties of the stored electrons in the TiO₂ nanoparticles have been studied in detail following the UV (A) photolysis of deaerated aqueous suspensions of TiO₂ nanoparticles in the presence of methanol. The reduction of common electron acceptors that are often present in photocatalytic systems such as O₂, H₂O₂, and NO₃⁻ has been investigated. The experimental results clearly show that the stored electrons reduce O₂ and H₂O₂ to water by multielectron transfer processes. Moreover, NO₃⁻ is reduced via the transfer of eight electrons evincing the formation of ammonia. On the other hand, the reduction of toxic metal ions, such as Cu(II), has been studied mixing their respective anoxic aqueous solutions with those containing the electrons stored in the TiO₂ particles. A two-electron transfer is found to occur, indicating the reduction of the copper metal ion into its non toxic metallic form. Other metal ions, such as Zn(II) and Mn(II), could not be reduced by TiO₂ electrons, which is readily explained on the bases of their respective redox potentials. The underlying reaction mechanisms are discussed in detail. © 2011 American Chemical Society.

Document Type: Article

Source: Scopus

Sawires, E.F.^a, Hamdy, A.M.^a, Amer, F.Z.^a, Bakr, E.M.^b

Disparity map using suboptimal cost with dynamic programming

(2011) *2010 IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2010*, art. no. 5711778, pp. 209-214.

DOI: 10.1109/ISSPIT.2010.5711778

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^b Mechanical Engineering Department, Helwan University, 1 Sherif st., Helwan, Egypt

Abstract

1D optimization methods based on dynamic programming (DP) stereo are of practical interest because it can reconstruct an observed 3D optical surface very quickly and thus has potential for real-time applications. While being efficient, its performance is far from the state of the art because the vertical consistency between the scanlines is not enforced. 1D optimization based on dynamic programming for stereo correspondence is re-examined by applying it to the vertical consistency between the scanlines as opposed to the individual scanlines. To do this, a pixel is allowed to have a disparity with possibly sub-optimal cost for it in two directions. Thus, the proposed algorithm is a truly global optimization method because disparity estimate at one pixel depends on the disparity estimates at all the other pixels, unlike the scanline based methods. Proposed algorithm is evaluated on the benchmark Middlebury database. The algorithm is very simple, so the proposed algorithm should be a good candidate for real time implementation. The results are considerably better than that of the scanline based methods. While the results are not the state of the art, the proposed algorithm offers a good trade off in terms of accuracy and computational efficiency. © 2011 IEEE.

Author Keywords

Disparity; Dynamic programming; Scanlines; Stereo vision; Suboptimal cost

Document Type: Conference Paper

Source: Scopus

Zaki, S.A.^a, Hana, M.A.^b, Helmy, Y.K.^b

SCAMRA: Simulated Context-Aware Meeting Room Application

(2011) *2010 IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2010*, art. no. 5711724, pp. 56-60.

DOI: 10.1109/ISSPIT.2010.5711724

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^b Faculty of Computers and Information, Helwan University, Egypt

Abstract

This paper deals with how to adapt the context architecture defined in [IJ] to a context-aware application called Simulated Context-Aware Meeting Room Application (SCAMRA). The main goal is to test and experiment the CFM and the proposed architecture done in [J]. SCAMRA can be used to manage any holding meeting on offices, universities, organizations or any other location by managing sessions, attendees and generating overall meeting report. It uses a large variety of context including user location, favorite subjects, preferred setting display, questions/notes that users ask/take, time, presentations, schedules, reports, and many activities and/or services. Primary context used in SCAMRA is about person, device, time, location, activity and services. Those contexts are grouped under more general categories related to meeting state and time-context, which are as before meeting, start meeting, end meeting, during meeting and after meeting context. SCAMRA has two main activities, person arrival and ask/take question/note activity. Other activities are based on the previous meeting states. These activities enforce special services such as greeting arrivals, change desktop setting, send meeting presentations to members, display meeting schedule, open presentation in its session, save attendee's questions/notes, switch between Bluetooth and barcode as needed, register new visitors, format/create/open/print/send overall meeting report. © 2011 IEEE.

Author Keywords

CFM; Context reasoner; Context repository; Context-aware application; Context-awareness; Ontology; SCAMRA

Document Type: Conference Paper

Source: Scopus

Ouf, S., Nasr, M., Helmy, Y.

An enhanced e-learning ecosystem based on an integration between cloud computing and Web 2.0

(2011) *2010 IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2010*, art. no. 5711721, pp. 48-55. Cited 4 times.

DOI: 10.1109/ISSPIT.2010.5711721

Faculty of Computers and Information, Helwan University, Egypt

Abstract

what we know is less important than our capacity to continue to learn more until e-learning appeared. While elearning technology has matured considerably since its inception, there are still many problems that practitioners find when come to implementing e-learning. Today's knowledge society of the 21st century requires a flexible learning environment which is capable to adapt according to teaching and learning objectives, students' profiles and preferences for information and communication technologies and services. Advances in technology offer new opportunities in enhancing teaching and learning. Many advances in learning technologies are taking place throughout the world. The new technologies enable individuals to personalize the environment in which they work or learn, utilizing a range of tools to meet their interests and needs. Research community has believed that an e-learning ecosystem is the next generation e-learning but has faced challenges in optimizing resource allocations, dealing with dynamic demands on getting information and knowledge anywhere and anytime, handling rapid storage growth requirements, cost controlling and greater flexibility. Additionally, e-learning ecosystems need to improve its infrastructure, which can devote the required computation and storage resources for e-learning ecosystems. So, we need flourish, growing, up-to-date and strong infrastructure elearning ecosystems in a productive and cost-effective way to be able to face rapidly-changing environments. In this paper, an e-learning ecosystem (ELES) which supports modern technologies is introduced and implemented. An integration between cloud computing and Web 2.0 technologies and services will be used to support the development of e-learning ecosystems; cloud computing as an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. Web 2.0 brings new instruments help building dynamic elearning ecosystem on the web. © 2011 IEEE.

Author Keywords

Cloud computing; E-learning; Ecosystem; Virtual community; Web 2.0

Document Type: Conference Paper

Source: Scopus

Ghanem, G.M.^a, Ebd-Elrazek, M.M.^b, Abd El-Bakey, S.M.^c, Hassan, A.A.^d, Emam Ali, E.^d

Numerical analysis of reinforced concrete frames subjected to fire under loading

(2011) *Advanced Materials Research*, 214, pp. 637-640.

DOI: 10.4028/www.scientific.net/AMR.214.637

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^d Building Materials and Quality Control Institute, Housing and Building National Research Centre, Cairo, Egypt

Abstract

Research over the last decade has shown that composite floor structures can have a significantly greater fire resistance than is suggested by conventional tests on isolated elements, this is largely due to the interaction between the beams and floor slabs and beams-column connections in the fire compartment and the restraint afforded by the surrounding structure. This research was carried out to investigate the effect of fire on the behavior of reinforced concrete frames especially the connection between beam and column, where a special model for a fire furnace was designed in HBRC in order to investigate the aim of the current research. An experimental program consisted of thirteen statically independent two hinged reinforced concrete frames is designed to study the deformational behavior of RC frames subjected to fire under short term loading in terms of deflection and strain distribution, temperatures distribution along the critical cross sections at different limit states with the following variables: fire durations (1, 2 and 3 hours), and fire temperatures (300, 600 and 800°C) with concrete strength (250 and 600 kg/cm²). Modes of failure, ultimate capacity, deflection and strain of steel reinforcement and concrete at critical sections were examined experimentally and theoretically. The non-linear finite element analysis for reinforced concrete structure is largely dependant on the stress-strain relationships, failure criteria used, simulation of steel reinforcement and interaction between steel and concrete [1]. A model for predicting the behavior of reinforced concrete frames failure was developed based on experimental results obtained from the experimental program carried out by the authors. This model has been incorporated into a new reinforced concrete element for the non-linear analysis program, using ANSYS Ver.10 program. In this paper, a general description of the finite element method, theoretical modeling of concrete and reinforcement are presented. In order to verify the analytical model used in this research using test results of the experimental data of the experimental branch, the finite element analysis were performed then to be able to proposed a guide charts which can be used to predict the moment capacity of joint in beam-column connection in RC frames subjected to fire taking into consideration the different fire durations, fire temperature, and concrete strength. © (2011) Trans Tech Publications.

Author Keywords

Compressive strength; Finite analysis; Fire duration; Fire temperature; Reinforced concrete frames

Document Type: Conference Paper

Source: Scopus

Mohamed, A.E.^a, Ammar, R.A.^b, Awadalla, M.H.A.^a

Parallel ICA algorithms

(2011) *International Journal of Computers and their Applications*, 18 (1), pp. 28-36.

^a Helwan University, Egypt

^b University of Connecticut, Storrs, CT, United States

Abstract

Blind source separation by Independent Component Analysis (ICA) has recently received attention because of its potential applications in signal processing applications. The separation time of the most well-known instantaneous Blind Source Separation (BSS) algorithms derived from ICA, kurtosis, Negentropy, and the Maximum Likelihood (MLE), is an application dependent. Furthermore, the performance of these algorithms should be assessed and their merits should be addressed to be able for a particular application to choose the most applicable algorithm. To address these issues, this paper focuses on the parallelization of the ICA algorithms based on SCILAB that uses a Parallel Virtual Machine (PVM). Also, we evaluate the performance of parallel ICA algorithms. Furthermore, the paper presents a new hybrid algorithm that combines MLE and Kurtosis. Extensive simulations on audio signals have been performed to demonstrate the evaluation of these algorithms. The achieved results show that the Maximum Likelihood (MLE) outperforms in terms of source to distortion ratio, source to interference ratio, source to noise ratio, and source to artifacts ratio, however, the kurtosis is the fastest algorithm only at low number of processors. ISCA Copyright © 2011.

Author Keywords

Blind source separation (BSS); Independent component analysis (ICA); Kurtosis; Maximum likelihood (MLE); Negentropy; SCILAB and PVM

Document Type: Article

Source: Scopus

Molnari, J.C.^a, Hassan, H.E.^{b c}, Moeller, B.M.^a, Myers, A.L.^a

Drug interaction study between bupropion and ticlopidine in male CF-1 mice
(2011) *Biological and Pharmaceutical Bulletin*, 34 (3), pp. 447-451. Cited 3 times.

DOI: 10.1248/bpb.34.447

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Abstract

Bupropion is an atypical antidepressant that is biotransformed in humans to its major active metabolite hydroxybupropion by cytochrome P450 2B6 (CYP2B6). Co-administration of bupropion with an inhibitor of CYP2B6 can result in a serious drug interaction, leading to bupropion related adverse effects (e.g. seizures). The antiplatelet agent ticlopidine has been identified as a potent in vitro inhibitor of bupropion hydroxylation, however it is unknown if it interacts in vivo in rodents. In this study we investigated the potential pharmacokinetic (PK) drug interaction between bupropion and ticlopidine in mice. Using a destructive sampling design, male CF-1 mice were administered ticlopidine 1.0 mg/kg daily for 5 d, followed by single-dose bupropion 50 mg/kg. Bupropion and hydroxybupropion levels were measured by HPLC-UV in plasma and brain tissues at 30, 60, 90, 120 and 180 min post-dose, and compared between treatment groups. There was a strong trend in both plasma and brain data towards greater bupropion levels and smaller hydroxybupropion levels in ticlopidine treated mice. Analysis of variance indicated statistical differences ($p < 0.05$) at many time points. The variance associated with the area under the curve was calculated using Bailer's method and significant differences were found between treatment groups. Taken together, the concentration time point statistical analysis followed by PK modeling demonstrate a significant PK drug interaction between bupropion and ticlopidine. To our knowledge, this is the first study to document an in vivo drug interaction between these drugs in mice. Our findings support future in vivo drug interaction studies in mice between bupropion and CYP2B6 inhibitors. © 2011 Pharmaceutical Society of Japan.

Author Keywords

Bupropion; Cytochrome P450 2B6; Drug-drug interaction; Pharmacokinetics; Ticlopidine

Document Type: Article

Source: Scopus

Habib, I.H.I.^a, Rizk, M.S.^b, El-Aryan, Th.R.^b

Determination of clindamycin in dosage forms and biological samples by adsorption stripping voltammetry with carbon paste electrode

(2011) *Pharmaceutical Chemistry Journal*, 44 (12), pp. 705-710. Cited 1 time.

DOI: 10.1007/s11094-011-0548-4

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^b Analytical Chemistry Department, Faculty of Pharmacy, Helwan University, Cairo, Egypt

Abstract

The electrochemical behavior of antibiotic drugs, clindamycin hydrochloride (I) and its phosphate salt (II), on carbon paste electrode (CPE) is thoroughly investigated. Chemical and electrical parameters affecting the adsorption stripping voltammetry (ASV) measurements are optimized. Two different modes of sweep, viz., differential pulse (DP) and square wave (SW), are compared over a potential range of +400 to +1100 mV in the presence of 0.04 M Britton - Robinson buffer (pH 10) with an accumulation time of 30 s, scan rate of 100 mV/s, and pulse amplitude of 30 mV. The responses are linear over a concentration range of 86 - 430 and 90 - 813 ng/ml for I and 86 - 516 and 172 - 1030 ng/ml for II in the DP and SW sweep modes, respectively. The limits of detection (with correlation coefficients given in brackets) are as follow (ng/ml): 32.60 (0.998) and 90.73 (0.994) for I and 43.51 (0.997) and 83.02 (0.996) for II in the DP and SW sweep modes, respectively. The DP method has been applied successfully to determining the active ingredients in pharmaceutical preparations and in spiked urine with mean percentage recoveries of 99.24 ± 2.14 and 98.66 ± 2.38 , respectively. © 2011 Springer Science+Business Media, Inc.

Author Keywords

adsorption stripping voltammetry; carbon paste electrode; Clindamycin

Document Type: Article

Source: Scopus

El-Azab, M.S.^a, Abdelgaber, K.M.^b

Finite element solution of nonlinear diffusion problems

(2011) *Applied Mathematics and Computation*, 217 (13), pp. 6198-6205.

DOI: 10.1016/j.amc.2010.12.105

^a Department of Physics and Engineering Mathematics, Faculty of Engineering Mansoura University, Mansoura 35516, Egypt

^b Department of Physics and Engineering Mathematics, Faculty of Engineering (Mataria), Helwan University, Cairo, Egypt

Abstract

In this paper we describe the Rothe-finite element numerical scheme to find an approximate solution of a nonlinear diffusion problem modeled as a parabolic partial differential equation of even order. This scheme is based on the Rothe's approximation in time and on the finite element method (FEM) approximation in the spatial discretization. A proof of convergence of the approximate solution is given and error estimates are shown. © 2011 Elsevier Inc. All rights reserved.

Author Keywords

Degenerate parabolic partial differential equation; Diffusion problems; Error analysis; Finite element method; Galerkin method; Linearization; Rothe's method

Document Type: Article

Source: Scopus

Brück, S.^{a b}, Treiber, S.^b, MacKe, S.^b, Audehm, P.^b, Christiani, G.^c, Soltan, S.^{c d}, Habermeier, H.-U.^c, Goering, E.^b, Albrecht, J.^e

The temperature-dependent magnetization profile across an epitaxial bilayer of ferromagnetic La_{2/3}Ca_{1/3}MnO₃ and superconducting YBa₂Cu₃O_{7-δ}

(2011) *New Journal of Physics*, 13, art. no. 033023, . Cited 5 times.

DOI: 10.1088/1367-2630/13/3/033023

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Abstract

Epitaxial bilayers of ferromagnetic (FM) La_{2/3}Ca_{1/3}MnO₃ (LCMO) and superconducting YBa₂Cu₃O_{7-δ} (YBCO) have been grown on singlecrystalline SrTiO₃ (STO) substrates by pulsed laser deposition. The manganese magnetization profile across the FM layer has been determined with high spatial resolution at low temperatures by x-ray resonant magnetic reflectivity (XRMR) performed at the BESSY II synchrotron light source of the Helmholtz Zentrum Berlin. It is found that not only the adjacent superconductor but also the substrate underneath influences the magnetization of the LCMO film at the interface at low temperatures. Both effects can be investigated individually by XRMR. © IOP Publishing Ltd and Deutsche Physikalische Gesellschaft.

Document Type: Article

Source: Scopus

Abdelfattah, M.S.^{a b}, Toume, K.^a, Ishibashi, M.^a

Isolation and structure elucidation of izuminosides A-C: A rare phenazine glycosides from *Streptomyces* sp. IFM 11260

(2011) *Journal of Antibiotics*, 64 (3), pp. 271-275. Cited 14 times.

DOI: 10.1038/ja.2010.172

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^b Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

Abstract

Three new glycosylated phenazine derivatives, named izuminosides A-C (1-3) have been isolated from the ethyl acetate extract of *Streptomyces* sp. IFM 11260. The structures of the new compounds were determined on the basis of their spectral data. Compounds 1-3 were evaluated for their activity in overcoming tumor necrosis factor-related

apoptosis-inducing ligand (TRAIL) resistance in human gastric adenocarcinoma cells. Compounds 2 (10 μ M) and 3 (60 μ M) in combination with TRAIL showed synergistic activity in sensitizing TRAIL-resistance AGS cells. © 2011 Japan Antibiotics Research Association All rights reserved.

Author Keywords

glycosides; phenazine; Streptomyces; TRAIL

Document Type: Article

Source: Scopus

Elassar, A.-Z.A.

Synthesis and reactions of 3-cyano-4,6-dimethyl-2-pyridone

(2011) *Journal of Heterocyclic Chemistry*, 48 (2), pp. 272-278. Cited 2 times.

DOI: 10.1002/jhet.545

Chemistry Department, Faculty of Science, Helwan University, Ain Helwan, Cairo, Egypt

Abstract

Rapid synthesis of 3-cyano-4,6-dimethyl-2-pyridone 3, using piprazine as a catalyst was reported. X-ray data of the 4,6-dimethyl-2-oxo-1,2-dihydropyridine-3-carbonitrile exhibited its oxo form. Synthesis of isoquinolinecarbonitrile and pyridylpyridazine using compound 3 was investigated. Reactivity of the synthesized pyridone toward different organic reagents was also studied. © 2010 HeteroCorporation.

Document Type: Article

Source: Scopus

Fouad, Y.^{a d}, El-Meniawi, M.^b, Afifi, A.^c

Erosion behaviour of epoxy based unidirectional (GFRP) composite materials

(2011) *Alexandria Engineering Journal*, 50 (1), pp. 29-34. Cited 3 times.

DOI: 10.1016/j.aej.2011.01.005

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Abstract

In the present work, the solid particle erosion behaviour and wear mechanism of commercial epoxy based unidirectional glass fibre reinforced plastics (GFRP) composites were investigated. The erosion experiments have been carried out using irregular silica sand (SiC) particles (150 \pm 15 μ m) as an erodent. The erosion losses of these composites were evaluated at various impingement angles (30°, 60° and 90°) with the change of both of erosion time and pressure. The erosion behaviour of (GFRP) has changed from ductile to brittle at 60° impingement angle and the erosion loss was the highest. The morphology of eroded surfaces was observed under scanning electron microscope and damage mechanisms were discussed. © 2011 Faculty of Engineering, Alexandria University. Production and hosting by Elsevier B.V. All rights reserved.

Author Keywords

Erosive wear; GFRP; Tribological properties; Wear mechanisms

Document Type: Article

Source: Scopus

Abdel Kader, M.M.^a, Elzayat, M.Y.^b, Hammad, T.R.^c, Aboud, A.I.^a, Abdelmonem, H.^a

Dielectric permittivity, ac conductivity and phase transition in hydroxyl ammonium sulfate

(2011) *Physica Scripta*, 83 (3), art. no. 035705, . Cited 1 time.

DOI: 10.1088/0031-8949/83/03/035705

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Abstract

The complex dielectric permittivity ($\epsilon^* = \epsilon' - j\epsilon''$) and ac conductivity $\sigma(\omega, T)$ as a function of temperature (90-375 K) and frequency (0.4 kHz to ≈ 100 kHz) were measured in this work for polycrystalline samples of hydroxyl ammonium sulfate, $(\text{NH}_3\text{OH})_2\text{SO}_4$. The measured electrical parameters revealed the existence of a structural phase transition at $T \approx 312$ K, which was further confirmed by a differential thermal analysis thermogram, where a clear endothermic peak centered at ≈ 312 K is observed. Regarding the charge transport mechanism, it is likely that the behavior of frequency-dependent conductivity follows the universal dynamic response $\sigma(\omega, T) = A(T) \omega s(T)$. Moreover, the temperature dependence of the frequency exponent s ($0 \leq s \leq 1$) suggests the quantum mechanical tunneling model to be the most likely one that describes the electrical transport mechanism. The data correlate with the crystal structure and the hydrogen-bonding system. © 2011 The Royal Swedish Academy of Sciences.

Document Type: Article

Source: Scopus

Abdelsalam, A.^a, El-Nagdy, M.S.^b, Badawy, B.M.^c

Pion production in relativistic nucleus-nucleus collisions

(2011) *Canadian Journal of Physics*, 89 (3), pp. 261-269. Cited 4 times.

DOI: 10.1139/P11-011

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Abstract

An experimental study on the production of pions is reviewed, covering pion spectra and multiplicity distributions. Emphasis is placed on progress in characterizing the conditions of nuclear matter by employing particle production observables. Further, the information derived from the Hagedorn temperature of the system emitting pions is critically examined, along with a discussion of the sources responsible for pion emission in the reaction, as revealed by particle spectra and yields.

Document Type: Article

Source: Scopus

Elsayed, T.A.^a, Eldaly, A.M.^b, El-Hefnawy, A.A.^b, Ghanem, G.M.^a

Behaviour of concrete beams reinforced with hybrid fiber reinforced bars

(2011) *Advanced Composite Materials*, 20 (3), pp. 245-259.

DOI: 10.1163/092430410X547074

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Abstract

Due to the linear elastic behaviour of FRP bars, the flexural behaviour of FRP reinforced beams exhibits no ductility as occurs in the steel reinforced structures. In this paper, study of the enhancement of the behaviour of concrete beams reinforced with FRP bars was carried out by testing nine beams reinforced with locally produced hybrid fiber reinforced polymer (HFRP) bars. The used hybrid fibers were aramid-glass and carbon-glass. Some of test specimens were reinforced by FRP bars provided with anchorages along the bar length. Crack patterns, cracking and ultimate loads, and deformation were observed and recorded for all tested beams. The effect of using the hybrid fiber reinforced bars and the bar anchorage system were judged by comparing the behaviour of the tested beams by two reference specimens, one reinforced by GFRP bars and the other one reinforced by traditional steel bars. The comparison revealed that HFRP bars provided with the used bars anchorage played a significant role in enhancing the behaviour of concrete beams reinforced with FRP bars. © 2011 Koninklijke Brill NV, Leiden.

Author Keywords

anchored bars; GFRP; HFRP; hybrid fiber reinforced polymers bars; RC beams; semi-ductility

Document Type: Article

Source: Scopus

Desouky, O.S.^a, Selim, N.S.^a, Elbakrawy, E.M.^a, Rezk, R.A.^b

Impact evaluation of α -lipoic acid in gamma-irradiated erythrocytes

(2011) *Radiation Physics and Chemistry*, 80 (3), pp. 446-452. Cited 8 times.

DOI: 10.1016/j.radphyschem.2010.09.017

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Abstract

This work is intended to study in vitro the ability of lipoic acid to protect erythrocytes against the oxidative damage resulting from exposure to gamma radiation through measurement of their rheological properties and to study the effects of detergent on their membrane solubility and permeability. Different doses of gamma radiation were applied: the most recommended and applied dose (25. Gy), and two higher doses, namely 50 and 100. Gy. The effect of addition of lipoic acid as well as its effect as a radioprotector was tested. The obtained results show changes in structural integrity of the erythrocyte cell membrane components as a result of oxidative damage due to gamma radiation that could be improved by pre-treatment with the antioxidant lipoic acid. © 2010 Elsevier Ltd.

Author Keywords

Erythrocyte; Gamma radiation; Lipoic acid; Osmotic fragility; Viscosity

Document Type: Article

Source: Scopus

Ewais, E.M.M.^a, Attia, M.A.A.^b, Abousree-Hegazy, A.^b, Bordia, R.K.^c

Erratum: Investigation of the effect of ZrO₂ and ZrO₂/Al₂O₃ additions on the hot-pressing and properties of equimolecular mixtures of α - & β -Si₃N₄ (Ceramics International (2010) 36 (1327-1338))

(2011) *Ceramics International*, 37 (2), p. 691.

DOI: 10.1016/j.ceramint.2010.08.014

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Document Type: Erratum

Source: Scopus

Hegazy, T.^a, Elhakeem, A.^b

Multiple optimization and segmentation technique (MOST) for large-scale bilevel life cycle optimization

(2011) *Canadian Journal of Civil Engineering*, 38 (3), pp. 263-271. Cited 10 times.

DOI: 10.1139/L10-134

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Abstract

This paper introduces a new formulation for large-scale combinatorial bilevel optimization problems that involve integer, discrete, two-level decisions. The most vivid example where the new technique most applies is the life cycle optimization needed to allocate repair types and repair timings to a number of infrastructure assets (e.g., building components). Combining these decisions into a single optimization for hundreds of assets simultaneously makes the optimization problem complex and prohibitive. For such a large-scale problem, a multiple optimization and segmentation technique (MOST) is proposed to handle the optimization one level at a time through a series of small-size optimizations that can be solved easily. The performance of MOST has been validated on various problem sizes and proved to be innovative and can handle thousands of variables simultaneously.

Author Keywords

Asset management; Buildings; Computer application; Life cycle cost analysis; Optimization

Document Type: Article

Source: Scopus

Arafat, A.^{a b}, Daous, M.A.^a

A short route of covalent biofunctionalization of silicon surfaces

(2011) *Sensors and Actuators, B: Chemical*, 152 (2), pp. 226-234. Cited 4 times.

DOI: 10.1016/j.snb.2010.12.013

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Abstract

Covalently attached organic monolayers on etched Si(1 1 1) surfaces were prepared by heating solutions of 1-alkenes and 1-alkynes in a refluxing mesitylene. Surface modification was monitored by measurement of the static water contact angle, X-ray photoelectron spectroscopy (XPS), infrared reflection absorption spectroscopy (IRRAS), and atomic force microscopy (AFM). Flat and clean N-hydroxysuccinimide (NHS)-ester-terminated/1-decyl mixed monolayers were covalently attached in one step onto a silicon surface. This procedure allows a mild and rapid functionalization of the surface by substitution of the NHS-ester moieties with amines at room temperature. The NHS-ester groups were shown to be fully intact onto the surface. The surface reactivity of the NHS-ester moieties toward amines was qualitatively and quantitatively evaluated via the reaction with methoxytetraethyleneglycolamine (TEGamine) and finally functionalized with single strand and complete DNA molecules. Moreover, domains of DNA were selectively immobilized, on silicon surface making use of TEGamine, which acts as protein repelling agent and therefore prevented non-specific DNA adsorption. The resulting DNA-modified surfaces have shown excellent specificity, and chemical and thermal stability under hybridization conditions. © 2010 Elsevier B.V. All rights reserved.

Author Keywords

Adsorption; Biofunctionalization; Biosensor; DNA; Non-specific; Silicon

Document Type: Article

Source: Scopus

Barakat, H.M.^a, El-Adll, M.E.^b, Aly, A.E.^b

Exact prediction intervals for future exponential lifetime based on random generalized order statistics

(2011) *Computers and Mathematics with Applications*, 61 (5), pp. 1366-1378. Cited 4 times.

DOI: 10.1016/j.camwa.2011.01.002

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Abstract

In this paper we develop two pivotal quantities to construct exact predication intervals for future exponential lifetime based on a random number of lower generalized order statistics. The distribution functions of the two pivotal quantities, when the sample size is assumed to be integer-valued random variable, are derived. Three important special cases for the random sample size are presented. A simulation study is conducted for illustrative purposes. © 2010 Elsevier Ltd. All rights reserved.

Author Keywords

Average width; Generalized order statistics; Monte Carlo simulation; Predictive interval; Probability coverage; Random sample size

Document Type: Article

Source: Scopus

Ghonime, M.^a, Eldomany, R.^a, Abdelaziz, A.^b, Soliman, H.^c

Evaluation of immunomodulatory effect of three herbal plants growing in Egypt

(2011) *Immunopharmacology and Immunotoxicology*, 33 (1), pp. 141-145. Cited 7 times.

DOI: 10.3109/08923973.2010.487490

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Abstract

A group of medicinal plant including Silene (*Silene nocturna*), Black seed (*Nigella sativa*) and Chamomile (*Matricaria*

chamomilla) growing in Egypt were examined for their immunomodulatory effect in Balb/c mice. Treatment (intraperitoneal injection) with five doses of methanolic extract for each plant was found to enhance the total white blood cells count (up to 1.2×10^4 cells/mm³). Bone marrow cellularity also increased significantly ($P < 0.01$) after the administration of the extract of each of three test plants. Furthermore, spleen weight of the treated groups was significantly increased ($P < 0.01$). Two groups of mice were immunosuppressed with cyclophosphamide, the one which pretreated with the plants extracts significantly ($P < 0.01$) restored their resistance against lethal infection with the predominately granulocyte-dependant *Candida albicans*. These results confirm the immunomodulatory activity of *Silene*, Black seed, and Chamomile extracts and may have therapeutical implications in prophylactic treatment of opportunistic infections and as supportive treatment in oncogenic cases. © 2011 Informa Healthcare USA, Inc.

Author Keywords

Bone marrow cellularity; *Candida albicans*; Immunomodulatory; immunosuppressed mice; WBC count

Document Type: Article

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