CONFERENCE PROCEEDINGS

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CONFERENCE VENUE

Central European University (CEU), Konferencia Központ (Conference and Residence Center), Budapest, Hungary

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Preface:

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KEYNOTE SPEAKER

Dr. Habil Maria Berkes Maros
Associate Professor
University of Miskolc, Institute of Materials Science and Technology, Dept. of Structural Integrity (Miskolc, Hungary)

Graduated from the University of Miskolc, in 1981 as MSc, Mechanical Engineer, got second diploma in 1994 as MSc, Engineer-Physicist on Mat. Sci. Defended her PhD Thesis in 1998 ("Thermodynamic Analysis of LCF and Correlation between the Empirical Parameters of the Manson-Coffin Relationship"). Dr. Habil since 2018. Associate Professor at the University of Miskolc, Institute of Materials Science and Technology (Miskolc, Hungary). Leader of the Surface Testing and Tribology Laboratory. More than 30 years of education activity in the field of Materials Sciences. Current research field: Tribology of engineering ceramics; Superhard coatings of automotive tool steels. Superviser of 7 PhD researches.

Abubakar Mohammed ERCICSTR1806051	**Anti-diabetic activity in Azadirachta indica: Comparison between young and matured leaves.**

Abubakar Mohammed
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Syed Ibrahim Rizvia
Department of Biochemistry, Bauchi State University, Gadau PMB 065, Nigeria

Abstract

Ethno pharmacological relevance: Azadirachta indica (Neem) is used for its anti-diabetic properties in India, Pakistan, and Nigeria; and is also recognized in Ayurveda. The present study was undertaken to investigate the anti-diabetic capacity of the ethanolic extract of the matured and young leaves of Azadirachta indica in streptozotocin induced diabetic rats

Materials and methods: Azadirachta indica leaf extract (AIOLE) was orally administered at 400mg/kg body weight (BW) dose to Streptozotocin induced diabetic rats. After 28 days consecutive treatment, various diabetic parameters were studied and compared with the untreated rats. Furthermore, Laser Induced Breakdown Spectroscopy (LIBS) and Fourier Transformed Infra-red Spectroscopy (FTIR) were used to determine the elemental analysis and functional groups respectively.

Results: The matured and young leaf extract demonstrated antihyperglycaemic activity by reducing 75.4% blood glucose level after 28 days treatment. Oral glucose tolerance test (OGTT) revealed increasing glucose tolerance as shown by a 72% decrease in blood glucose in 3 hours post treatment. Treatment of the diabetic rats with ethanolic extract of leaves of matured and young A. indica at a dose of 400 mg/kg body weight for 28 days resulted in gradual but significant normalization of plasma sialic acid (N-acetyl neuraminic acid -NANA) level, erythrocyte reduced glutathione (GSH), erythrocyte malondialdehyde (MDA) content, plasma antioxidant activity by FRAP method, erythrocyte plasma membrane redox system (PMRS) activity. Different elemental compositions were identified with LIBS and the FTIR revealed the different functional groups present in the matured and young leaf.

Conclusion: The present investigation revealed that Azadirachta indica possesses potent anti-diabetic activity as claimed in different ethno pharmacological practices.

Cem Akça ERCICSTR1806052	**Corrosion Behavior of Intrauterine Device Manufactured Using Biodegradable Mg-Al-Zn Alloy in Simulated Uterine Fluid**

Cem Akça
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Ebru Kaymaz
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Abstract

Intrauterine devices (IUDs) are frequently used in birth control due to their long-term effectiveness, very low typical-use failure rates, high acceptability ratings and reliability greater that 99%. Although the implantation procedure

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is quick and easy, a health professional is always needed for both implantation and removal operations. Especially the removal of the device could be painful. So, a biodegradable metallic IUD material was introduced which eliminates the removal after use.

Magnesium-based materials are promising bioactive devices to be widely used in orthopedic fields, no longer limiting to fix fractured bones at non-weight-bearing sites. Magnesium alloys are used in human body to carry out various tasks, from fixation of bone fractures to cardiac stent applications due to biocompatibility and biodegradability properties.

In this study, biodegradation behavior of AZ91E alloy (Mg-Al-Zn alloy) in simulated uterine fluid (SUF) was investigated. Aluminum in this alloy improves the corrosion resistance and strength and zinc provides an antibacterial effect. The pH of SUF increases with aging and it reaches to a maximum of 8.0 after menopause. Since then IUD materials were tested in three different SUF solutions to simulate aging.

Magnesium alloy specimens were machined into 8x8x1 mm dimensions and ground 400 grit to obtain an optimal surface roughness. Then magnesium alloy specimens were immersed into SUF solutions with pH values of 6.3, 7.0 and 8.0 at 37 C. Immersion time was applied as 3, 7, 15 and 30 days. Biodegradation behavior was measured using weight loss method. Surface geometry and effect of reaction products were examined using scanning electron microscope (SEM). The results have shown that corrosion rate was dramatically affected by the pH of SUF solutions. However, authors conclude that magnesium alloys could be used in the manufacturing of IUDs successfully.

Keywords: intrauterine device, magnesium, birth control, biodegradable, implant

A.Berkache **ERCICSTR1806053**	**Comparison between Experimental and Numerical Study Applied to Turbine Blade Film Cooling** **A.Berkache** **Department. Mechanical Engineering University of Msila ALGERIA** **R. Dizene** **LMA Laboratory University Houari Boumediene Bab Ezzouar Algiers ALGERIA** **Abstract** Comparison between an experimental study and a numerical study of the interaction of a row of jets of a secondary coolant fluid in transverse flow is performed. Discrete jets are arranged across a surface exposed to a wall boundary layer of parallel incompressible stream, as occurs in certain discrete-hole cooling systems for turbine blades. Comparisons between the results for 4 different blowing ratios (M=1 to M=4) obtained for injection angle of 30° show discrepancies observed in the flow near the wall. The causes of these differences are identified and discussed. Keywords: Turbine blade, film cooling, Jet-in-a-crossflow · Density ratio · Velocity ratio · Cooling efficiency
Dyah Purwaningsih **ERCICSTR1806054**	**Synthesis of LiMxMn2-xO4 Doped Co, Ni, Cr and Its Characterization as Lithium Battery Cathode** **Dyah Purwaningsih** **Chemistry Education,Yogyakarta State University,Jakarta, Indonesia** **Roto Roto**

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Chemistry Education,Yogyakarta State University,Jakarta, Indonesia

Hari Sutrisno
Chemistry Education,Yogyakarta State University,Jakarta, Indonesia

Abstract

Manganese dioxide (MnO2) and its derivatives are among the most widely used materials for positive electrode in both primary and rechargeable lithium batteries. The MnO2 derivative compound of LiMxMn2-xO4 (M: Co, Ni, Cr) is one of the leading candidates for positive electrode materials in lithium batteries as it is abundant, low cost and environmentally friendly. Over the years, synthesis of LiMxMn2-xO4 (M: Co, Ni, Cr) has been carried out using various methods including sol-gel, gas condensation, spray pyrolysis, and ceramics. Problems with these various methods persist including high cost (so commercially inapplicable) and must be done at high temperature (environmentally unfriendly). This research aims to: (1) synthesize LiMxMn2-xO4 (M: Co, Ni, Cr) by reflux technique; (2) develop microstructure analysis method from XRD Powder LiMxMn2-xO4 data with two-stage method; (3) study the electrical conductivity of LiMxMn2-xO4.

This research developed the synthesis of LiMxMn2-xO4 (M: Co, Ni, Cr) with reflux. The materials consisting of Mn(CH3COOH)2. 4H2O and Na2S2O8 were refluxed for 10 hours at 120°C to form β-MnO2. The doping of Co, Ni and Cr were carried out using solid state method with LiOH to form LiMxMn2-xO4. The instruments used included XRD, SEM-EDX, XPS, TEM, SAA, TG/DTA, FTIR, LCR meter and eight-channel battery analyzer. Microstructure analysis of LiMxMn2-xO4 was carried out on XRD powder data by two-stage method using FullProf program integrated in WinPlotR and Oscail Program as well as on binding energy data from XPS. The morphology of LiMxMn2-xO4 was studied with SEM-EDX, TEM and SAA. The thermal stability test was performed with TG/DTA, the electrical conductivity was studied from the LCR meter data. The specific capacity of LiMxMn2-xO4 as lithium battery cathode was tested using an eight-channel battery analyzer.

The results showed that the synthesis of LiMxMn2-xO4 (M: Co, Ni, Cr) was successfully carried out by reflux. The optimal temperature of calcination is 750°C. XRD characterization shows that LiMn2O4 has a cubic crystal structure with Fd3m space group. By using the CheckCell in the WinPlotr, the increase of Li/Mn mole ratio does not result in changes in the LiMn2O4 crystal structure. The doping of Co, Ni and Cr on LiMxMn2-xO4 (x = 0.02; 0.04; 0; 0.6; 0.08; 0.10) does not change the cubic crystal structure of Fd3m. All the formed crystals are polycrystals with the size of 100-450 nm. Characterization of LiMxMn2-xO4 (M: Co, Ni, Cr) microstructure by two-stage method shows the shrinkage of lattice parameter and cell volume. Based on its range of capacitance, the conductivity obtained at LiMxMn2-xO4 (M: Co, Ni, Cr) is an ionic conductivity with varying capacitance. The specific battery capacity at a voltage of 4799.7 mV for LiMn2O4; Li1.08Mn1.92O4; LiCo0.1Mn1.9O4; LiNi0.1Mn1.9O4 and LiCr0.1Mn1.9O4 are 88.62 mAh/g; 2.73 mAh/g; 89.39 mAh/g; 85.15 mAh/g; and 1.48 mAh/g respectively.

Keywords: LiMxMn2-xO4, solid-state, reflux, two-stage method, ionic conductivity, specific capacity.

Budi Hastuti **ERCICSTR1806055**	**Kinetic and Thermodynamic Modified Pectin with Chitosan by Forming Polyelectrolit Complex Adsorbent to Remediate of Pb(II)** **Budi Hastuti** **Department of Chemistry Education, Faculty of Teacher Training and Education, Universitas Sebelas Maret, Jl. Ir. Sutami 36A Surakarta, 57126,**

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Abstract
Biosorbent, such as pectin and chitosan, are usually produced with low physical stability, thus the materials need to be modified. In this research, the physical characteristic of adsorbent was increased by grafting chitosan using acetate carboxymetyl chitosan (CC). Further, CC and Pectin (Pec) were crosslinked using cross-linking agent BADGE (bis phenol A diglycidyl ether) to get CC-Pec-BADGE(CPB) adsorbent. The cross-linking processes aim to form stable structure and resistance on acidic media. Furthermore, in order to increase of the adsorption capacity in removing Pb(II), the adsorbent were added with NaCl to form macroporous adsorbent named CCPec-BADGE-Na (CPB-Na). The physical and chemical characteristics of porogenic adsorbent structure were characterized by scanning electron microscopy (SEM) and Fourier transform infrared spectroscopy (FT-IR). The adsorption parameter of CPB-Na to adsorb Pb(II) ion was determined. The kinetics and thermodynamic of the bath sorption of Pb(II) on CPB-Na adsorbent and using chitosan and pectin as comparison were also studied. The results showed that the CPB-Na biosorbent was stable on acidic media. It had a rough and porous surface area, increased and gived higher sorption capacity for removal Pb(II) ion. The CPB-Na 1/1 and 1/3 adsorbent adsorbed Pb(II) with adsorption capacity of 45.48 mg/g and 45.97 mg/g respectively, whereas pectin and chitosan was of 39.20 mg /g and 24.67 mg /g respectively.
Keywords: porogen, Pb(II), Pectin, Chitosan, Carboxymethyl Chitosan (CC) and CC- Pec-BADGE-Na

Dyah Purwaningsih **ERCICSTR1806056**	**Synthesis of LiMxMn2-xO4 Doped Co, Ni, Cr and Its Characterization as Lithium Battery Cathode** **Dyah Purwaningsih** **Department of Chemistry Education, Faculty of Mathematics and Natural Sciences, Yogyakarta State Universitry** **Roto Roto** **Department of Chemistry Education, Faculty of Mathematics and Natural Sciences, Yogyakarta State Universitry** **Hari Sutrisno** **Department of Chemistry, Faculty of Mathematics and Natural Sciences, Gadjah Mada University**

Abstract

Manganese dioxide (MnO_2) and its derivatives are among the most widely used materials for positive electrode in both primary and rechargeable lithium batteries. The MnO_2 derivative compound of $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) is one of the leading candidates for positive electrode materials in lithium batteries as it is abundant, low cost and environmentally friendly. Over the years, synthesis of $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) has been carried out using various methods including sol-gel, gas condensation, spray pyrolysis, and ceramics. Problems with these various methods persist including high cost (so commercially inapplicable) and must be done at high temperature (environmentally unfriendly). This research aims to: (1) synthesize $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) by reflux technique; (2) develop microstructure analysis method from XRD Powder $LiM_xMn_{2-x}O_4$ data with two-stage method; (3) study the electrical conductivity of $LiM_xMn_{2-x}O_4$.

This research developed the synthesis of $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) with reflux. The materials consisting of $Mn(CH_3COOH)_2 \cdot 4H_2O$ and $Na_2S_2O_8$ were refluxed for 10 hours at 120°C to form β-MnO_2. The doping of Co, Ni and Cr were carried out using solid state method with LiOH to form $LiM_xMn_{2-x}O_4$. The instruments used included XRD, SEM-EDX, XPS, TEM, SAA, TG/DTA, FTIR, LCR meter and eight-channel battery analyzer. Microstructure analysis of $LiM_xMn_{2-x}O_4$ was carried out on XRD powder data by two-stage method using FullProf program integrated in WinPlotR and Oscail Program as well as on binding energy data from XPS. The morphology of $LiM_xMn_{2-x}O_4$ was studied with SEM-EDX, TEM and SAA. The thermal stability test was performed with TG/DTA, the electrical conductivity was studied from the LCR meter data. The specific capacity of $LiM_xMn_{2-x}O_4$ as lithium battery cathode was tested using an eight-channel battery analyzer.

The results showed that the synthesis of $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) was successfully carried out by reflux. The optimal temperature of calcination is 750°C. XRD characterization shows that $LiMn_2O_4$ has a cubic crystal structure with Fd3m space group. By using the CheckCell in the WinPlotr, the increase of Li/Mn mole ratio does not result in changes in the $LiMn_2O_4$ crystal structure. The doping of Co, Ni and Cr on $LiM_xMn_{2-x}O_4$ (x = 0.02; 0.04; 0; 0.6; 0.08; 0.10) does not change the cubic crystal structure of Fd3m. All the formed crystals are polycrystals with the size of 100-450 nm. Characterization of $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) microstructure by two-stage method shows the shrinkage of lattice parameter and cell volume. Based on its range of capacitance, the conductivity obtained at $LiM_xMn_{2-x}O_4$ (M: Co, Ni, Cr) is an ionic conductivity with varying capacitance. The specific battery capacity at a voltage of 4799.7 mV for $LiMn_2O_4$; $Li_{1.08}Mn_{1.92}O_4$; $LiCo_{0.1}Mn_{1.9}O_4$; $LiNi_{0.1}Mn_{1.9}O_4$ and $LiCr_{0.1}Mn_{1.9}O_4$ are 88.62 mAh/g; 2.73 mAh/g; 89.39 mAh/g; 85.15 mAh/g; and 1.48 mAh/g respectively.

Keywords: $LiM_xMn_{2-x}O_4$, solid-state, reflux, two-stage method, ionic conductivity, specific capacity.

Aminu Abbas Gumel
ERCICSTR1806057

The Impact of Knowledge Repositories in Organizations

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Abdullahi Bashir Abdullahi
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Abstract

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Abstract - Knowledge repositories (KR) are systematic approach commonly used by organizations as a way of capturing and reusing solutions to common problems via an online database system and are generally expected to improve quality of work, reduce cost and enhance employees learning. All information presented to citizens, as well as information generated and shared among extension employees, educators, and staff, can be stored in centralized Knowledge repositories. The aim of this paper is to find out what functions knowledge repositories perform in an organization. The paper will reflect the aspect of knowledge and information usage in an organization. Another aim of this paper is to find out what segments in an organization are responsible for providing knowledge, as knowledge in an organization comes from various parts of that organization so it is essential to identify the various types of the approach of knowledge management.
Keywords - Information Systems, Knowledge repository, Organizations, Knowledge management, organizational knowledge

Binta Muhammad Ibrahin **ERCICSTR1806058**	**Impact Of Digital Technology In Textiles Industry** **Binta Muhammad Ibrahin** **Department of fashion, College of Science and Technology,Hussaini Adamu Federal Polytechnic,Kazaure, Nigeria** **Abstract** It has been observed that computer has contributed immensely in manufacturing of goods and services. Virtually every activity in the manufacturing or production of goods and services requires computation and information as such cannot be carried out perfectly by human. In spite of these, there has been indifferent attitude among some producers and organizations towards the role of digital technology in decision making and efficiency of productivity. This research into the impact of digital technology in textiles as well as any manufacturing industry is imperative and useful to give a clear picture on its relevance and how effective and efficient digital technology are in the textile industry. It also traced how digital technology is used in making colourful designs, which is more important to textile industries in making of attractive goods. Despite the limitations of digital technology, which the research work try to trace, it's role in ensuring effective administration in decision – making and accountability cannot be over emphasized. Therefore it is important for manufacturers to recognize the contribution of digital technology in textiles and manufacturing industries as a whole. Key Words: Computer, Textile, Technology, Industrial
Yupaporn Areepong **ERCICSTR1806059**	**Moving Average Control Chart for Monitoring Process Mean in INAR(1) Process with Zero Inflated Poisson** **Yupaporn Areepong** **Department of Applied Statistics, Faculty of Applied Science, King Mongkut's University of Technology North Bangkok, Bangkok, Thailand** **Abstract** In this paper, explicit formulas are proposed to evaluate the Average Run Length (ARL) of the Moving Average control chart (MA chart) for the first order integer-valued autoregressive with Zero Inflated Poisson mode (ZIPINAR(1)). The characteristics of control charts are frequently measured by Average Run Length (ARL), which is the expectation of the samples taken before a system signals that it is out of control. The performance of MA and Exponentially Weighted Moving Average (EWMA) charts are compared. The

results shown that, for   performance of MA chart is superior to EWMA chart. Especially, the performance of the MA chart gets better when the value of the span ( ) decreases for upward shifts. However, for   EWMA performs better than MA chart for all magnitudes of changes.

Keywords : Zero Inflated Poisson with first order integer-valued autoregressive model, Average Run Length, Moving Average control chart

Robustness of Generally Weighted Moving Average Signed – Rank Control Chart for Monitoring a Shift of Skew Processes

Saowanit Sukparungsee
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Saowanit Sukparungsee
ERCICSTR1806060

Abstract
A distribution-free control charts play a virtual role in quality control chart because it is not necessary to know the specific distributional assumption for any process. In this article, the robustness of a generally weighted moving average based on signed-rank (GWMA-SR) control charts are intensive studied for skew processes. In addition, the GWMA-SR control chart is compared the performance in order to detect a shift in process mean with GWMA based on sign statistic (GWMA-SN) and exponentially weighted moving average based on the signed-rank statistic (EWMA-SR) control charts. The numerical results using Monte Carlo simulation found that the GWMA-SR chart robust to the skew process and perform as good as the benchmark charts. Furthermore, the GWMA-SR chart is superior to existing chart in many situations.

Keywords: Distribution-free, Wilcoxon signed-rank, Sign statistic, Nonparametric chart.

Security System Based On Digesting Illusion Messages for Hiding Process

Dr. Saad   M. Khaleefah
ERCICSTR1806062

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Abstract
Information security systems one of the important software's now days will be in human needs, because of wieldy uses over digital media for many reasons that might be personal or military uses. Steganography and Cryptography both can be used for constructing information security systems based on many algorithms. In our proposed system, digesting using MD5 algorithm the illusion messages, which represent outcome of the Rabin crypto system that will play a role as a map in hiding mechanisms process, which will solve the illusion messages size, which consider as problem in Rabin system as well as will be used for authentication purpose.

Keywords: MD5, Rabin code, Information hiding, Illusion messages, Rabin cryptosystem, map constructing.

Security System Based On Digesting Illusion Messages for Hiding Process

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Abstract
Information security systems one of the important software's now days will be in human needs, because of wieldy uses over digital media for many reasons that might be personal or military uses. Steganography and Cryptography both can be used for constructing information security systems based on many algorithms. In our proposed system, digesting using MD5 algorithm the illusion messages, which represent outcome of the Rabin crypto system that will play a role as a map in hiding mechanisms process, which will solve the illusion messages size, which consider as problem in Rabin system as well as will be used for authentication purpose.
Keywords: MD5, Rabin code, Information hiding, Illusion messages, Rabin cryptosystem, map constructing.

Robert Baťa ERCICSTR1806065

Comparison of environmental costs and performance in the processing of sorted waste on model

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Abstract
The aim of this paper is to analyze the additional environmental load caused by the treatment of sorted waste for the selected type of waste using the model. On the basis of the comparison with the positive effects of recycling, the total net environmental effect from the recycling of the selected type of waste is determined. Modelled is part of the LCA chain for the processing of plastic waste in the conditions of the Czech Republic. The analysis includes all identified input and output material and energy flows according to company records. Model takes into account the environmental burden of consumed energy and of auxiliary materials necessary for plastic waste recycling process. The model is processed using a colored Petri net. Modeling results serve to compare the environmental burden and the overall environmental recycling effect.
Keywords: plastic waste recycling, material and energy flow management, modeling, Petri nets, sustainability

Alimohammad Taghieh ERCICSTR1806093

Technology

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Abstract
The Journal of Information Technology (JIT) is a top-ranked journal in its field, focused on new research addressing technology and the management of IT - including strategy, change, infrastructure, human resources, sourcing,

	system development and implementation, communications, technology developments, technology futures, national policies and standards, as well as articles that advance understanding and application of research approaches and methods.
	The journal publishes work from all disciplinary, theoretical and methodological perspectives. It is designed to be read by researchers, scholars, teachers and advanced students in the fields of Information Systems and Information Science, as well as IT developers, consultants, software vendors, and senior IT executives seeking an update on current experience and future prospects in relation to contemporary information and communications technology.
Galina Panayotova **ERCICSTR1806077**	**Infographics as a stage of statistical analysis of big data** **Galina Panayotova** **University of Library Studies and Information Technologies, Sofia, Bulgaria** **Georgi Petrov Dimitrov** **University of Library Studies and Information Technologies, Sofia, Bulgaria** **Abstract** Scientific visualization often consists of finding the best possible way to explore the data and to illustrate results in an intuitive and straightforward manner. The huge variety of neuroscientific data types and acquisition modalities naturally requires a wide range of specific visualization tools. This paper investigates and analyses the visualizations as a stage for finding regularities in large sets of data, as well as their application. Extracting knowledge is a non-trivial process of identifying valid, novel, potentially useful and understandable images (templates) from a given set of data. The data contain a description of the surveyed objects. However, new database technologies, coupled with emerging Web-based technologies, may hold the key to lowering the cost of visualization generation and allow it to become a more integral part of the scientific process. Infographics are one of the best marketing tools out there. In fact, studies have shown that including visuals makes information easier to remember, and your messages are received quicker than through text alone. It's not surprising that infographics have extended to arenas such as teaching and the media. The applications of the presented approaches are based on data derived from a relatively large information system (University of Library Studies and Information Technologies, Sofia, Bulgaria). **Keywords** **Infographics, Data processing, Large sets of data, Statistical analysis.**
Damião Pergentino de Sousa **ERCICSTR1806086**	**Antifungal Activity Of Amides Derived From Vanillic Acid** **Damião Pergentino de Sousa** **Department of Pharmaceutical Sciences, Federal University of Paraíba, João Pessoa, Paraíba, 58051-900, Brazil** **Ana Júlia de Morais Santos Oliveira** **Department of Pharmaceutical Sciences, Federal University of Paraíba, João Pessoa, Paraíba, 58051-900, Brazil** **Ricardo Dias de Castro** **Laboratory of Experimental Pharmacology and Cell Culture of the Health Sciences Center, Federal University of Paraíba, João Pessoa, Paraíba, 58051-900, Brazil**

Abstract

In recent decades there has been a considerable increase in the prevalence of resistance to antimicrobial agents associated with prolonged treatment times and increased toxicity. So, there is a need to search for new substances with lower toxicity and better pharmacological efficacy. Thus, in the present study the synthesis, characterization and antifungal evaluation of a collection of benzoic amides was carried out. Vanillic acid was used as the starting material to obtain the synthetic derivatives via coupling reactions using benzotriazol-1-yloxy-tripyrrolidinophosphonium hexafluorophosphate or dicyclohexylcarbodiimide. The biological activity of the amides was carried out against the Candida species using antimicrobial tests by broth microdilution method to determine the minimum inhibitory concentration (MIC). The ten amides were obtained in yields ranging from 28.81-86.44% and showed antifungal activity in at least one strain tested. Amide 5 demonstrated a better antifungal profile with MIC of 0.46 µmol/mL suggesting that the presence of methyl group in the aromatic ring potentiates the activity of this amide. The results obtained demonstrate the therapeutic potential of these amides as antifungal agents.

Key words: phenolic derivatives, benzoic acid, antimicrobial activity.

Alimohammad Taghieh **ERCICSTR1806093**	**Technology**

Alimohammad Taghieh
Bide Sobhan,Company,Tehran, Iran

Abstract

The Journal of Information Technology (JIT) is a top-ranked journal in its field, focused on new research addressing technology and the management of IT - including strategy, change, infrastructure, human resources, sourcing, system development and implementation, communications, technology developments, technology futures, national policies and standards, as well as articles that advance understanding and application of research approaches and methods.

The journal publishes work from all disciplinary, theoretical and methodological perspectives. It is designed to be read by researchers, scholars, teachers and advanced students in the fields of Information Systems and Information Science, as well as IT developers, consultants, software vendors, and senior IT executives seeking an update on current experience and future prospects in relation to contemporary information and communications technology.

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Key Words : Technology, Internet, Divice

Mohammad Rahim Rahimi ERCICSTR1806099	**Adaptation and Impact of Climate Change in Kabul Region - A Case Study**

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Abstract

Building Information Management (BIM) at recent years has widespread consideration on the Architecture, Engineering and Construction (AEC). BIM has been bringing innovation in AEC industry and has the ability to improve the construction industry with high quality, reduction time and budget of project. Meanwhile, BIM support model and process in AEC industry, the process include the project time cycle, estimating, delivery and generally the way of management of project but not limited to those. This research carried the BIM advantages, adaptation and challenges of implementation in Kabul region. Capital Region Independence Development Authority (CRIDA) have responsibilities to implement the development projects in Kabul region. The method of study were considers on advantages and reasons of BIM performance in Afghanistan based on online survey and data. Besides that, five projects were studied, the reason of consideration were many times design revises and changes. Although, most of the projects had problems regard to designing and implementation stage, hence in canal project was discussed in detail with the main reason of problems. Which were many time changes and revises due to the lack of information, planning, and management. In addition, two projects based on BIM utilization in Japan were also discussed. The Shinsuizenji Station and Oita River dam projects. Those are implemented and implementing consequently according to the BIM requirements. The investigation focused on BIM usage, project implementation process. Eventually, the projects were the comparison with CRIDA and BIM utilization in Japan. The comparison will focus on the using of the model and the way of solving the problems based upon on the BIM. In conclusion, that BIM had capacity to prevent many times design changes and revises. On behalf of achievement those objectives are required to focused on data management and sharing, BIM training and using new technology.

Keywords— construction information management, implementation and adaptation of BIM, project management, developing countries

Sam Rasoulzadeh ERCICSTR1806101	**Hydrodynamic analysis with heat transfer in solid gas Fluidized bed reactor for solar thermal applications**

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Abstract

Fluidized bed reactors are known as highly exothermic and endothermic according to uniformity in temperature as a safe and effective mean for catalytic reactors. In these reactors, a wide range of catalyst particles can be used and by using a continuous operation proceed producing in succession. Providing optimal conditions for the operation of these types of reactors will prevent the exorbitant costs necessary to carry out laboratory work. In this regard, a hydrodynamic analysis was carried out with heat transfer in the

solid-gas fluidized bed reactor for solar thermal applications, and the results showed that in the fluid flow the input of the reactor has a lower temperature than the outlet, and when the fluid is passing from the reactor the heat transfer happens between cylinder and solar panel and fluid that cause an increase in the fluid temperature in the outlet pump and also in the outlet areas the kinetic energy of the fluid has been raised. Key words: Solar reactor, fluidized bed reactor, CFD

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- ICSTR Jakarta – International Conference on Science & Technology Research, 23-24 November, 2018

- ICSTR Mauritius – International Conference on Science & Technology Research, 17-18 December 2018

- ICSTR Bangkok – International Conference on Science & Technology Research, 21-22 December, 2018

- 2nd ICSTR Dubai – International Conference on Science & Technology Research, 26-27 December 2018

ICSTR Budapest – International Conference on Science & Technology Research, Budapest, Hungary
Central European University (CEU), Konferencia Központ (Conference and Residence Center), Budapest, Hungary

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- ➢ ICSTR Bali – International Conference on Science & Technology Research, 29-30 December 2018

- ➢ 2nd ICSTR Bangkok – International Conference on Science & Technology Research, 07-08 February 2019

- ➢ 3rd ICSTR Dubai – International Conference on Science & Technology Research, 26-27 February 2019

- ➢ 2nd ICSTR Singapore – International Conference on Science & Technology Research, 15-16 March 2019

- ➢ ICSTR London – International Conference on Science & Technology Research, 11-12 April 2019