

MISG 2015

2nd International Conference on
**Multidisciplinary Innovation
For Sustainability
And Growth**

Pearl International Hotel
Kuala Lumpur Malaysia

June 02-03, 2015

Organized by:





CONFERENCE PROCEEDINGS

BOOK OF ABSTRACTS MISG-2015

2nd International Conference on
“MULTIDISCIPLINARY
INNOVATION FOR SUSTAINABILITY AND
GROWTH”
(MISG- 2015)
Kuala Lumpur, Malaysia

Kuala Lumpur Malaysia



Book of Abstracts Proceedings

2nd International Conference on
“MULTIDISCIPLINARY
INNOVATION FOR SUSTAINABILITY AND
GROWTH”
(MISG- 2015)
Kuala Lumpur, Malaysia

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Proceedings of the 2nd International Conference on
“Multidisciplinary Innovation For Sustainability And
Growth” (MISG- 2015)
ISBN: 978-969-9948-14-5

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INTERNATIONAL SCIENTIFIC COMMITTEE MISG 2015

BUSINESS, MANAGEMENT AND ECONOMICS STUDIES

Mej Mohd Noor Azli bin Hj. Ali Khan (PhD) *Senior Lecturer
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Human Resource Development/Management,
Entrepreneurship Leadership, Communication,
Psychology/Critical and Creative Thinking, and Education*

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Deputy Vice Chancellor (Academic & International)

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PHYSICAL LIFE AND APPLIED SCIENCES

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SYED AHMED SALMAN *International Islamic University*

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NURUL AKMAR BINTI EMRAN (Phd)

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Chee-Ming Chan (PhD) *Senior Lecturer*

Civil And Environmental Engineering

Universiti Tun Hussein Onn, Malaysia

HEALTH AND MEDICINE STUDIES

Balachandar S. Sayapathi, (PhD) *Chair of Scientific & Review*

Committee , Centre for Occupational and Environmental Health

Faculty of Medicine, University of Malaya

<http://www.globalilluminators.org>

**2nd International Conference on Multidisciplinary
Innovation for Sustainability and Growth at Kuala
Lumpur, Malaysia.**

Venue: Pearl International Hotel

ORGANIZING COMMITTEE

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CONFERENCE CHAIR MESSAGE

Farooq Ahmed Jam (PhD)



2nd International Conference on Multidisciplinary Innovation for Sustainability and Growth (MISG-2015) ” serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the regional and global challenges faced by our societies. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe, these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences. The scholars attending this conference will certainly find it helpful in refining their own research ideas, finding solutions to basic/applied problems they face and interact with other renowned scholars for possible future collaborations.

I am really thankful to our honourable scientific and review committee for spending much of their time in reviewing the papers for this event, selecting the best paper awards and helping the participants in publishing their research in affiliated journals. Also special thanks to all the session chairs from industry, academia and policy-making institutions who volunteered their time and support to make this event a success.

A very special thanks to the great scholars for being here with us as key note speakers. Their valuable thoughts will surely open the horizon of new research and practice for the conference participants coming from across the globe. I am

also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let's break all the discriminating barriers and get free from all minor affiliations. Let's contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you

Farooq Ahmed Jam (PhD)

Conference Chair MISG 2015

Executive Director

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KEYNOTE SPEAKER



Dr. Sailesh Sharma is Senior Lecturer International with Institute of Educational Leadership, University of Malaya, Kuala Lumpur. He is also a research fellow with The Joseph Lau Luen Hung Charitable Trust Asia Pacific Centre for Leadership and Change, Hong Kong Institute of Education, Hong Kong. His researches focus on school based leadership , leadership

in high need schools and leadership for learning beyond academic achievements. He is actively involved in various collaborative research projects with the top researchers in the field of educational leadership. He has presented several papers in various international conferences and has considerable number of publications in refereed journals.

Dr. Sailesh is one of the prominent supporters of Multidisciplinary innovation and research activities. He is one of the respected scholar member of Global Illuminators and helping the organisation to promote research excellence across the globe. His views and thoughts on multidisciplinary innovation for sustainability and growth will have a positive impact on the learning of the audience at MISG-2015 Kuala Lumpur, Malaysia.

Dr. Sailesh Sharma is based in University of Malaya, Kuala Lumpur Malaysia.



Dr. Syed Tahir Hijazi

Professor and Dr. Syed Tahir Hijazi is Ex. Dean at College of Business Administration, American University in The Emirates, Dubai UAE. He is regarded as leading international economist and reputed advocate of innovation in academia. His contribution for promotion of research excellence and academic innovation are recognized at international level. Dr. Hijazi has been in leading positions formerly across many countries including USA, Greece, Pakistan, and UAE. He has been involved in research and development activities with World Bank, ADB, ILO, USAID, UNDP and several other global institutions. He is among the main advisors of Global Illuminators International. His research contributions are wider and impactful for the scholars and researchers in the multidisciplinary fields. He is among the top advocates of promoting multidisciplinary research and practice for better service of humanity. He is on the advisory boards of several countries for development of innovation infrastructure to help in growth of knowledge based economies. His 35 years of rich academic and research experience along with visionary leadership for innovation and excellence makes him an ideal scholar to share his thoughts regarding innovation challenges in multidisciplinary research and practice.

CONFERENCE PROGRAM

DAY 01 Tuesday (June 2, 2015)
Welcome Reception & Registration

8:15 am – 9:00 am

Opening Ceremony (09:00am – 10:30 am)

Venue: Room 1

09:00 am – 9:15 am	Welcome Remarks - Felicia Chong Country Director Malaysia, Global Illuminators
09:15 am – 9:35 am	Opening Speech Farooq Ahmed Jam (Ph.D) Conference Chair & Executive Director, Global Illuminators
09:35 am – 10:00 am	Key Note Speech- Dr. Sailesh Sharma
10:00 am – 10:15 am	Key Note Speech – Professor & Dr. Syed Tahir Hijazi
10:15 am - 10:30 am	Group Photo & Award Ceremony

Grand Networking Session and Tea Break (10:30 am – 11:00 am)



DAY 01 Tuesday (June 2, 2015)

Session 1 (11:00 am – 1:00 pm)

Venue: Room 1

Session Chairs: Farooq Ahmed Jam & Pratibha J Mishra

Track A: Business Management & Economics Studies

MISG-15-135	Structural Ambidexterity vs. Contextual Ambidexterity: Preliminary Evidence from Malaysia	Mohamad Faizal Ahmad Zaidi
MISG-15-188	Trademark Activity for Sustainable Growth in an Emerging Economy	Siti Nurain Binti Mohamed Ridzuan
MISG-15-189	Industrial Design Protection for Sustainable Growth in Malaysian Firms? Financial Performance	Nur Kartika Elani Binti Yayanto

Lunch Break (1:00 pm – 2:00 pm)



DAY 01 Tuesday (June 2, 2015)

Session 1 (11:00 am – 1:00 pm)

Venue: Room 2

Session Chairs: Aysel Çağdaş & Fatma Ülkü Yıldız

Track B: Social Science & Humanities

MISG-15-102	Improving Awareness of the Water Crisis in South Africa	Dr Charles Van Der Vyver
MISG-15-128	The Science Diplomacy from International Antarctica Study Optimised the Effectiveness of Local Environmental Law	Rohani Mohd Shah
MISG-15-144	EFL learners Awareness of using reading strategies	Abdo Mohammed Al-Mekhlafi
MISG-15-145	Embedded Teacher Professional Development in Oman: Opportunities and Challenges	Dr. Mohamed El Tahir Osman
MISG-15-152	Arabic and Islamic manuscripts study as multifaceted process.	Oleg Redkin.

Lunch Break (1:00 pm – 2:00 pm)



DAY 01 Tuesday (June 2, 2015)

Session 1 (11:00 am – 1:00 pm)

Venue: Room 3

Session Chairs: & Loo Joo Ling & Dinara Adikanova

Track D: Engineering & Technology

MISG-15-109	Ubiquitous Future m-Health System including Wireless 3Gand 4G Wi-MAX Technology	Mst. Najnin Sultana
MISG-15-127	Properties of Eco-Brick Manufactured Using Kenaf Fibre as Matrix	Hanisom Abdullah
MISG-15-151	Physical-chemical analysis of MC-co-PAAm and application	Urkimbaeva P.I.
MISG-15-161	The new hybrid copolymers based on N-isopropylacrylamide	Mamutova A.A

Lunch Break (1:00 pm – 2:00 pm)



DAY 01 Tuesday (June 2, 2015)
Session 2 (02:00 pm – 3:30 pm)
Venue: Room 1
Session Chairs: Felicia Chong & Oleg Redkin

Track A: Business Management & Economics Studies

MISG-15-212	Supply Chain Risk Identification in Electrical and Electronics Industry: An Exploratory Study in the context of Malaysia	Ali Haj Aghapour
MISG-15-230	Relative Contribution of Loyalty Program Attributes and Store Attributes to Store Engagement and Store Equity	Suhaily Mohd Ramly
MISG-15-236	A study of relationship between Intellectual capital and performance of accountants	Heshmatolah Asadi

Tea Break (3:30 pm – 3:45 pm)



DAY 01 Tuesday (June 2, 2015)

Session 2 (02:00 pm – 3:30 pm)

Venue: Room 2

Session Chairs: Mst. Najnin Sultana & Abdo Mohammed Al-Mekhlafi

Track D: Engineering & Technology

MISG-15-194	Application Of Artificial Neural Network Modelling To Predict The Particle Size Formation From Extraction Of Ginger Rhizome Using Rapid Expansion Supercritical Solution	Nur Ain Binti Mohd Zainuddin
MISG-15-198	Sentiment Analysis Applied to Airline Feedback to Boost Customer's Endearment	Vignesh Mohan
MISG-15-200	The Correlation Of Consumable Wire Feed Rate With Welding Current In Gmaw Process	Mohd Shaifuddin Wahab
MISG-15-219	Highly Dispersed Polymer Suspensions With A Narrow Particle Size Distribution For Biotechnology	Dinara Adikanova

Tea Break (3:30 pm – 3:45 pm)



DAY 01 Tuesday (June 2, 2015)

Session 2 (02:00 pm – 3:30 pm)

Venue: Room 3

Session Chairs: Dr Charles van der Vyver & Dr. Mohamed El Tahir Osman

Track B: Social Science & Humanities

MISG-15-153	Arabic Acquisition In Islamic Studies Programs	Olga Bernikova
MISG-15-156	The Effects Of Mother-Child Communication Skills Education On Children's Skills To Expression Emotions	Aysel Çağdaş
MISG-15-157	Examination Of The Effects Of Computer Assisted Preschool Educational Activities On Children's Intuitive Mathematical Ability	Fatma Ülkü Yıldız
MISG-15-165	Skill Acquisition And Self-Employment In Malaysia: A Sufficient Condition?	Isidore Ekpe
MISG-15-169	Elder Abuse: Conceptual Framework & Observations In Indian Context	Pratibha J Mishra

Tea Break (3:30 pm – 3:45 pm)



DAY 01 Tuesday (June 2, 2015)

Session 3 (03:45 pm – 5:00 pm)

Venue: Room 1

Session Chairs: Aysel Çağdaş & Fatma Ülkü Yıldız

Track B: Social Science & Humanities

MISG-15-173	Science Teachers' Continuous Professionalism Development: Nature Of School Based Teacher Training And Its Implementation	Mohd Shafik Bin Yahya
MISG-15-180	Religiosity In A Multicultural Nation: Opportunities And Challenges	Vishalache Balakrishnan
MISG-15-187	Malay And Spanish Text Translation Comparison Based On Meaning Relevance	Salina Husain
MISG-15-204	Challenges And Expectations Of Local Government In Community Development	Thenmolli Vadeveloo
MISG-15-210	Student-Centered Learning At Sultan Qaboos University:EFL Students' Perceptions	Salma Al-Humaidi

Closing Ceremony (Room 1): 5:00pm to 5:30pm



DAY 01 Tuesday (June 2, 2015)

Session 3 (03:45 pm – 5:00 pm)

Venue: Room 2

Session Chairs: Dr Charles Van Der Vyver & Dr. Mohamed El Tahir Osman

Track B: Social Science & Humanities

MISG-15-229	Prevalence Of Self-Hurt Behaviour Among Adolescent In Malaysia	Guan Teik Ee
MISG-15-231	Sustainable Improvement of Extraction Gaharu Essential Oils from Aquilaria Tree by Subcritical Extraction (SE) Technology.	Norazah Ishak
MISG-15-232	Asynchronous Learning Tools Use In Graduate Study	Nor Rashimahwati Tarmuchi
MISG-15-235	Virtual Reference Services At A University Library	Haslinda Mohamed

Closing Ceremony (Room 1): 5:00pm to 5:30pm



DAY 01 Tuesday (June 2, 2015)

Session 3 (03:45 pm – 5:00 pm)

Venue: Room 3

Session Chairs: Isidore Ekpe & PRATIBHA J Mishra

Track C: Physical Life and Applied Sciences

MISG-15-121	Study Of Nutrient Content And Physical Properties Of Feed Partially Substituted With Kappaphycus Alvarezii For Malaysian Mahseer	Loo Joo Ling
MISG-15-185	The Use Of Ionic Liquid Based Imidazolium As A Pretreatment Solvent In Rubber Biomass	Dazylah Darji
MISG-15-186	Synthesized And Characterization Of New N-Heterocyclic Carbene (NHC)-Complexes; The Potential Of NHC Ligand As Ionophore In Potentiometric Sensor Application.	Nur Rahimah Said

Closing Ceremony (Room 1): 5:00pm to 5:30pm



LIST OF CONFERENCE ATTENDEES

The following scholars/practitioners/educationists don't have any paper presentations, however they will be attending the conference as delegates and observers.

S.No	NAME	AFFILIATION	COUNTRY
1	Sree Harissh Venu	Anna University, Chennai	India
2	Insup Han	Kyoggi University	South Korea
3	Heeyang Go	Kyoggi University	South Korea
4	Hyungjun Cho	Kyoggi University	South Korea

GlobalIlluminators

**ABSTRACT PROCEEDING BOOK
MISG--2015, Kuala Lumpur, Malaysia
ISBN: 978-969-9948-14-5**

**TRACK A: BUSINESS MANAGEMENT &
ECONOMICS**

Supply Chain Risk Identification in Electrical and Electronics Industry: An Exploratory Study in the context of Malaysia

Ali Haj Aghapour^{1*}, Suhaiza Zailani ², Govindan Marthandan³

Graduate School of Management, Multimedia University, Cyberjaya,
Malaysia

Abstract

The objective of this study is to assess the implementation of supply chain risk identification and its relevant techniques in the electrical and electronics industry in Malaysia. In this regard, a questionnaire based survey was developed and accomplished to explore the extent of implementation in 5 main uncertain areas namely Supply, Demand, Environment, process and control. The average mean score and standard deviation were calculated for the each of these key areas. Moreover, this paper surveyed issues associated to risk identification such as the level of understanding among the respondent companies, the benefits of adoption, the level of adoption for each risk identifying technique as well as its difference between SMEs and large companies. The result indicated that most of responding companies have been committed toward implementation of supply chain risk identification and its techniques. Although large companies are more interested into implement risk identification techniques in each area, two areas of Supply and Demand predominately are in the center of attention for both types of business. In general, every uncertain area, investigated, serves as a useful guide for companies when they attempt to implement the risk identification step of supply chain risk management. Furthermore, the findings show the number of adopted techniques increases along to the years of implementation regardless size of business. However, the current study is the first that investigating the extent of risk identification implementation in electrical and electronics industry in Malaysia.

Key words: Risk Identification, Implantation, Supply Chain Risk Management, Risk Identifying Techniques, Malaysia, Electrical and Electronics Industry

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Structural Ambidexterity vs. Contextual Ambidexterity: Preliminary Evidence from Malaysia

Mohamad Faizal Ahmad Zaidi ^{1*}, Siti Norezam Othman²

Universiti Utara Malaysia

Abstract

Structural ambidexterity and contextual ambidexterity have dominated the discussion on organisational ambidexterity, where the similarities and differences between them are being emphasised. One of the critical views is that although both of them are essential, the impacts on performance may be dissimilar. Since there are fewer empirical studies been done to demonstrate this view, this study aims to compare and contrast the effects of structural ambidexterity and contextual ambidexterity on the firms' performance of new product development (NPD). This study is examined in the case of manufacturing sector in Malaysia. The data was collected via a questionnaire survey targeting product/production managers, and processed with SPSS v.19 statistical technique. The results of correlation and linear regression analyses have shown that structural ambidexterity and contextual ambidexterity are indeed dissimilar in their effects on NPD performance, but at the same time are complementing each other. It is concluded that both of them are important, but must be applied according to the right contexts. Since this is a preliminary study, more empirical works need to be done to generalise the findings.

Keywords: Contextual ambidexterity; manufacturing sector of Malaysia; NPD performance; preliminary study; structural ambidexterity

*All correspondence related to this article should be directed to Mohamad Faizal Ahmad Zaidi Universiti Utara Malaysia
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Trademark Activity for Sustainable Growth in an Emerging Economy

Siti Nurain Mohamed Ridzuan^{1*}, Farha Abdol Ghapar²

Universiti Teknologi Mara, Malaysia

Abstract

Based from previous literature, it is said that firms might gain benefits and entitled for temporary monopoly rights over their innovations. Therefore, it is important for the innovations to be secured and one of the methods is by acquiring Intellectual Property Right (IPR) as it gives protection to the firm's intellectual assets. Looking at the statistics from Malaysian Intellectual Property Corporation (MyIPO), it can be noticed that there is a large differences in terms of IPR selection in Malaysia where trademark is chosen by most firms as their choice among other IPR. In this paper, we introduce a model to analyze the relationship between trademark activity and financial performance of Malaysian firms. The theory of the firm focusing on profit maximization is adopted as the underpinning theory for the study. In order to conduct the study quantitatively, secondary data will be gathered and estimated by using panel data model. Malaysian public listed firms are taken as the unit of analysis and the data spans from year 2008 to 2014..This study may contribute theoretically in the academia by introducing the new models in measuring trademark activity connected with firm performance. Plus, it gives insights on how the utilization of IPR such as trademark can lead to the sustainable growth of the firms. Further research on trademark is suggested as it may give a clear picture on the practice of trademark.

Keywords: Trademark; Firm Performance; Profit Maximization; Panel Model; Malaysia

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Industrial Design Protection for Sustainable Growth in Malaysian Firms Financial Performance

Nur Kartika Elani Binti Yayanto^{1*}**Dr. Farha Binti Abdol Ghapar**²
University of Technology, Malaysia

Abstract

Consumers nowadays have a broad range of products and services to choose from. The purchase decisions of most consumers do not only focus on the functionality, but also in its design. Therefore, most firms strive to produce new designs and connect with the intellectual property right (IPR) together to comprise a monopoly power for firms' sustainable growth. As a result, industrial design is one of the chosen IPRs in order to protect the designs and it is crucial as it will lead to the success of the designs. This study will analyze the trend and impact of industrial design protection on the financial performance at the Malaysian firm level. This study also will employ the Penrosean Views as the theory of the study. From the Views, it is theorized that the sources of profits take place when the firm possess the function of complementary resource or IP assets. It is expected that there is a significant trend and impact between industrial design protection and financial performance that leads to the firms' sustainable growth. Due to competitive market condition, it is expected that the impact is small and the signs of the coefficients are mixed.

Keywords -Industrial Design, Profit Maximization, Penrosean Views, Sustainable Growth, Malaysia

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Relative Contribution of Loyalty Program Attributes and Store Attributes to Store Engagement and Store Equity

Suhaily Mohd Ramly^{1*}, Nor Asiah Omar²

Kolej Poly-Tech MARA Bangi, Selangor, Malaysia

Abstract

With the intense competition in the retail sector, achieving high store equity can be a means to gain competitive advantage for retailers. Retailers' sole reliance on store attributes may not be sufficient to build relationship with customers, as prior studies demonstrate the high likelihood of customer opting to shop at stores with loyalty program. Underpinned by social exchange theory and service-dominant (S-D) logic perspective, this study aims to examine the contribution of loyalty program attributes and store attributes to store engagement and store equity in the context of department stores in Malaysia. Survey responses from 484 department store cardholders were collected, and PLS-SEM structural equation modelling was used to test the hypotheses. While all of the proposed hypotheses were supported, the relative contribution of both attributes towards store engagement and store equity provides insightful implication in term of theory and practice. From a theoretical perspective, the integration of social exchange theory and S-D logic offers significant contribution in understanding the effect of loyalty program attributes and store attributes on the relationship between the cardholder and the store. From the practical perspective, retailers should pay more attention in putting more value in their offering by incorporating experiential and interactive marketing approach to stimulate customer relationship in order to further enhance the store equity.

Key words: Relationship marketing, Social exchange theory, Service dominant Logic,

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A Study of Relationship between Intellectual Capital and Performance of Accountants

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Abstract

Accountants have pivotal role in a company. There are many factors, which have impact on their performance; one of these factors is intellectual capital. The aim of this research was study of relation between intellectual capital and accountants' performance. To conduct the study, 90 accountants were selected by random sampling and data was collected by a questionnaire. Data analysis was carried out by Pierson correlation method. The result was showed that there is a strong relationship between Intellectual capital and accountants' performance (significance 0/05). As a result, the companies could be improved accountants' performance through intellectual capital in an excellent way to take the best result.

Key words: Intellectual Capital, Accountants' Performance,

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GlobalIlluminators

**ABSTRACT PROCEEDING BOOK
MISG--2015, Kuala Lumpur, Malaysia
ISBN: 978-969-9948-14-5**

TRACK B: SOCIAL SCIENCE & HUMANITIES

Challenges and Expectations of Local Government in Community Development

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Abstract

The main concern of local government is to identify the important elements involved in getting people to participate in community development. In Malaysia, the federal government has put effort by invested significant amount of money, time and energy in helping community development projects at local level to be a part of successful agenda. Almost all local government programs contain some element of public participation. There has been rapid growth in the number of programs initiated by the local government to promote public involvement. Yet, the local governments often complain of passive involvement of the communities to address the challenges and obstacles facing the communities. Thus, this study examines the challenges of local government in supporting community participation and examines the expectations of local government in organizing community development programs. As a result, study shows local authorities play more significant role in creating more participatory, responsive and responsible community at local level. Therefore local government should find the opportunities and search of balance in providing better services to the people in the future.

Keywords: Local government, Community development, Participation, Challenges, Expectations

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Sustainable Improvement of Extraction Gaharu Essential Oils from Aquilaria Tree by Subcritical Extraction (SE) Technology

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Abstract

The odor of Gaharu is complex and pleasing, with few or no similar natural analogues. As a result, Gaharu and its essential oil gained great cultural and religious significance in ancient civilizations around the world. Gaharu, also known as one of the most expensive woods in the world have been used in many industries as perfumes or for ritual used. Processing of Gaharu consumed a lot of money and times. Traditionally, Gaharu oil is extracted by distilling the grinded Gaharu sample in a copper still where it involves submerging the desired raw material (Gaharu chips or powders) in water in the still and brought to boil, the oil that evaporates is lost in the water in the still as well as in the aqueous phase of the distillate. The process is not effective and the amounts of oil yields are relatively small as well as a lot of fuel and high temperature acquired throughout the process. Thus, extraction process using Subcritical Extraction (SE) technique is introduced and the effect of Subcritical Fluid Extraction (SFE) is studied. Extraction of Gaharu oil using Subcritical Fluid Extraction (SFE) has been improved to produce the Gaharu oil yields up to 2 times as compared to the traditional method. Result also shown that by using Subcritical Fluid Extraction (SFE) technique is not harmful and can be beneficial as well as benign for processing Gaharu. Hence, the technique can be introduced for better agriculture technique in Malaysia while improving economy system in harvesting tree such as Aquilaria tree. The result will also be used to assist the detection of Gaharu before harvesting process and the authentication of Gaharu essential oils as well as its scientific-based grading.

Key words: Appropriate Teacher, Pronunciation

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Prevalence of Self-Hurt Behaviour among Adolescent in Malaysia

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Abstract

Previous research suggested that the number of young people who hurt themselves is growing significantly in the recent years and is becoming a public health problem in the west. Some Asian researchers claimed that self-hurt was reported not only to be prevalent in the west, but also in the developing world. World Health Organization reported that self-hurt has been emerging as one of the problems contributing to the rise in morbidity and mortality rates. Surveys also revealed that adolescents and young adults are at higher risk of engaging in self-hurt behaviour. Malaysia, as a developing country, with a population of 30.8 millions up to May 2015 has a relatively young population. However, relatively little self-hurt research has been done in Malaysia. Although there were some counselling records found, there is virtually no study that has been designed to identify young people's self-hurt behaviour. Thus, this research is to find out the prevalence of self-hurt among the young people in Malaysia. At the same time a qualitative data revealed that adolescents did not seek help for their self-hurt problems.

Key words: *Prevalence, Self-Hurt Behaviour*

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Asynchronous Learning Tools Use in Graduate Study

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Abstract

In this era of Internet and information, communication, technology (ICT) advancement, most novice and expert researchers share their intellectual output virtually. In the beginning, this was done as part of their personal page on departmental websites or blogs. Now, asynchronous tools, which perform as idea management or argumentation channels such as, blogs, wikis, chats, forums, Q&A or FAQ sites, and social networks provide unprecedented opportunities for online engaged communities or organizations to express a discourse and act at a wide scale. This indicates the researchers' aspiration for informal learning circles as well as expanding their work cost-effectively. By creating informal online learning through collective intelligence, it means organizing the random posting of these scholarly communications and interactions into well structured, secured and attractive virtual spaces. The expected benefit of this informal online learning is included as a supplement to the consultation and supervisory process, provides institutional visibility and prestige and also to serve as a basis for a new model of consultation and supervisory communication. Understanding how and why researchers engage in these kinds of activities is important for developing better new tools for the research going forward. Based on the findings of an online survey with 35 respondents (i.e. postgraduate students), this paper reports the postgraduate students' perspectives of the usefulness of the asynchronous tools and the students' intentions to continue using the tools in the future.

Keywords: Online Communities; Asynchronous Learning Tools; Collective Intelligence; Informal Learning

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Virtual Reference Services at a University Library

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Abstract

This is a case study to explore the practices of virtual reference services at one of the academic libraries at a university. The library supports the needs of about 4500 to 5000 users from various programs, from undergraduate to postgraduate levels. The library provides reference services via various channels, from face to face to electronic mediums. The study is conducted to understand more about the current practices of reference services, particularly through electronic mediums at the campus, to identify issues faced by the librarians in supporting those users' demands, and to provide several recommendations. Library users have various needs and librarians have to support those needs through the services that they provide on a daily basis. A quick response and feedback from librarians are expected. Some of the questions that the librarians receive everyday from their users could have been avoided if proper database systems are available to store them for future retrieval. However, having a system in place and enforcing people to use it can be challenging.. It is good to have various ways of communicating with the users to give them flexibility; however, the library should have the capability to support them. Reference librarians should give equal attention to enquiries directly from e-mails as they would give to enquiries directly from users at the reference desk. Thus, the study has resulted in the development of a system prototype to support virtual reference services. In addition, librarians need to be well-trained and competent in using social media tools to take full advantage of the benefits offered by these technologies

Keywords: Virtual Reference Service, Reference Service, Academic Library, Librarian, University Library

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The Science Diplomacy from International Antarctica Study Optimised the Effectiveness of Local Environmental Law

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Abstract

Almost all legislation in Malaysia is initiated by the Government. However the interest to join international environmental treaty such as the Antarctica Treaty 1959 requires an initiation of legislation and in that matter, the related legislation is initiated by the Prime Minister's Office. The Cabinet decision to assent to Antarctica Treaty 1959 obliges the involvement of scientists, experts and practitioners in the formal legislative process of drafting the law. Since this Treaty falls within the scope of international environmental law, Ministry Of Science Technology and Innovations (MOSTI) is the Ministry appointed in charged with the responsibility of regulating that activity. Therefore MOSTI will proposed the new Bill or legislation which relates to the issue of interest and the Ministry will work with the Legislative Division of the Attorney General's Chambers to prepare the draft legislations. Since the proposed new legislation on international environmental law is broader in scope and cuts across the responsibilities of several Ministries, an inter-ministerial committee will be established with representatives from the Attorney General's Chambers and all Ministries that will be affected. In such cases MOSTI, is the Ministry that will be responsible for administering the legislation and will chair the committee. In practice, the degree of such integration varies at each legislative stage. Especially due to the magnitude of environmental risks and obligations, the information from science discoveries or diplomacy may prudently influence the final outcome and decisively defines the content of the new legislation. This article deals with the role of science in optimising the effectiveness of law.

Key words: International, Representatives, Magnitude

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Arabic and Islamic Manuscripts Study as Multifaceted Process.

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Abstract

Arabic and Islamic manuscripts are valuable sources of information about the mediaeval period. So, the detailed study, digital analysis and classification of these manuscripts are among priority tasks of the researches. To the date, the study of handwritten Arabic documents is limited to the study of their textual content and the digitalization as a rule means creation of the digital copy of the layout picture of the written document while cataloging is based on authors' name, date and theme of the text. Meanwhile there are a lot of formal markers, such as density of handwriting, type of the Arabic script, graphical layout of the individual columns, text color, illuminations, proportions of graphics to each other, the ratio of text fields, proportions between text and gaps, etc. Handwritten artifacts often have traces of later impacts of different kind, such as damages, supplements, contamination, which may be considered as indirect indications to the origin and the history of the 'life' of the document. Given the fact that each manuscript is an inherent set of such individual characteristics, it allows to determine the date and place of its creation, its authorship as well as its relation to particular manuscript school. All these characteristics can be described in terms of digital parameters. Formation of such metadata bases which include information from different libraries as well as the use of the principles of analysis which takes into account the maximum number of characteristics of handwritten document necessitates the implementation of computer technologies which in its turn allow to optimize the process of classification and comparative analysis of Arabic manuscripts from different sources. It is also necessary to develop common principles of codicological analysis as a whole.

Key words: Parameters, Technologies, Codicological

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Arabic Acquisition in Islamic Studies Programs

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Abstract

The paper identifies the place of the Arabic language acquisition in all kinds of Islamic Studies programs and best practices for Arabic teaching. Modern trends in the spread of radical movements make give an extra thought to the role of Islamic Studies, both as a scientific field and educational program. Arabic, as the main language of Islam, holds an important place in the content of educational programs in Islamic Studies. Our study of teaching methods of the Arabic language worldwide says that the language is often taught as a separate discipline without taking into consideration main specialization of a student. In present study, we review such issues as the optimal number of hours devoted to the study of Arabic, the most appropriate textbooks, methodological literature and variety of Arabic should be primarily taught (Modern Standard Arabic, Classical Arabic, Vernacular Arabic) etc. The research is based on a study of the practices of Arabic teaching in Russia (both in secular and Islamic educational institutions) and worldwide.

The result of the research shows that the obligatory competence of specialists with in-depth knowledge of the history and culture of Islam is a high level of knowledge of Arabic. However, the analysis of the implemented programs indicates that only a limited number of hours of the curriculum is given to the subject. Study of Arabic and historical sources in Arabic should take at least 30 % of the whole disciplines in Islamic Studies programs and study of the classical texts should have the priority. Such approach to the teaching of Arabic is applied in St. Petersburg State University (Russia) as a part of new Bachelor's Degree program "History and Culture of Islam," that will start this year.

Key words: Methodological Literature, Variety

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Malay and Spanish Text Translation Comparison Based on Meaning Relevance

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Abstract

This paper will discuss meaning relevance in text translation in order to discover similarities and differences in meaning forms between original and target texts. The writer has focused on ten text translation from Malay to Spanish. The grammatical structural difference between Malay and Spanish has been seen as one of the obstacles in translating without changing the grammatical structures of both languages. The writer will use Sperber and Wilson's Relevance Theory (1986 and 1995) in discussing translation equivalents for textual verb expressions from Malay to Spanish. Next, the writer will analyse the translation equivalents based on their functional similarities and differences to ensure the meaning conveyed remain the same to the original text. This research applies field research and textual references methods. Findings from this research can assist the teaching and learning of Spanish as a foreign language specifically in verb formation.

Keywords: Relevant Meaning, Similarity, Difference, Malay, Spanish, Relevance Theory

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Improving Awareness of the Water Crisis in South Africa

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Abstract

Water conservation continues to remain a priority on the international agenda. It is therefore all the more important that we continue to do as much as possible to conserve our already scarce water supply. This research aims to quantify the current awareness levels of the water crisis in South Africa. All one hundred members of staff at a faculty at one of the leading tertiary education institutions in the country formed the population for the study. Data collection took place through questionnaires, with a response rate of 25%, after which a quantitative analysis took place. The research found that a fair level of awareness does exist regarding the water crisis in South Africa, despite the fact that people are largely unaware of existing awareness campaigns. People are however willing to learn more and to become more responsible water users, as they have shown an interest in receiving more information. Although current awareness campaigns do accomplish a fair bit, future research should focus on not only maintaining these campaigns, but also on improving their efficiency and reach. Increasing the awareness and acceptance of the virtual water concept can also have far reaching implications for water scarce countries.

Keywords: Water Conservation, Awareness, Responsible Water Usage.

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EFL Learners Awareness of Using Reading Strategies

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Abstract

Reading, a literacy skill, is of great importance in any educational system. Even in tertiary education, many EFL learners are found to struggle to read academic texts in English, as they are often found to be using ineffective reading strategies. A review of relevant literature provides insights into a range of issues relating to the teaching of reading and the development of effective EFL reading strategies including metacognitive awareness of reading strategies. The present study investigated how frequently EFL learners studying in higher education institutions think they use selected EFL reading strategies. The study used MARSII, the Metacognitive Awareness of Reading Strategies Inventory, a think-aloud instrument, on a sample of 74 tertiary level EFL learners for eliciting the subjects' self-reports on their use of selected reading strategies on a Likert scale of 1 (low) to 5 (high). The findings are reported with recommendations for improving the reading effectiveness of tertiary level EFL learners.

Key Words: Reading in a foreign language; EFL reading strategies

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Embedded Teacher Professional Development in Oman: Opportunities and Challenges

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Abstract

The notion of Teachers as change agents is increasingly becoming a significant factor in educational reforms. This new emphasis on teachers as both subjects and objects of change makes the field of teachers' professional development a much challenging one. Based on the increasing complexity of learning environments and emerging instructional technologies, most education systems around the globe are gradually shifting resources toward contextual job-embedded professional development. According to Darling-Hammond, Wei, Andree, Richardson, & Orphanos (2009), teachers professional development systems should be guided by formative teacher evaluation data as well as formative and summative student assessment data to create differentiated professional development that will address a teacher's specific challenge areas, and be linked to opportunities for career advancement, and opportunities for teachers to be involved in its selection and delivery.. This paper presents embedded professional development as a viable alternative, and a powerful lever for improving and sustaining learning for both students and teachers alike. More specifically, It highlights the attributes of the embedded teacher development approach, and describes how effective these attributes can be aligned with the current teachers' development practices in Oman. Furthermore, the opportunities and challenges which might favor, or on the contrary hinder the adoption of this approach will be analyzed from the perspectives of teachers and policy makers.

Keywords: Embedded Professional Development, Teacher Education, Oman, Teachers as change agents.

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Skill Acquisition and Self-Employment in Malaysia: A Sufficient Condition?

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Abstract

The objective of this study is to examine the effect of skill training on self-employment practice among Malaysian University Graduates, as a means of assessing the success of several entrepreneurship development programs of the government. Studies have shown that skill acquisition is the most critical factor in the utilization of entrepreneurship opportunity for self-employment. However, vital as it may be, is skill acquisition a sufficient condition or factor for self-employment practice among Malaysian youths? Without other factors such as micro-credit, savings and social capital, can the skill-trained youths venture into self-employment? This is the focus of this study. The study adopts a quantitative survey by use of questionnaire and a proportionate stratified random sampling method to collect data. The study adopts data analysis using regression method. The study proffers solutions to the Malaysian Government for policy decisions that would engender greater participation of graduates in self-employment practice.

Keywords: Skill Acquisition, Self-Employment, Graduates, Malaysia, Sufficient Condition

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Science Teachers' Continuous Professionalism Development: Nature of School Based Teacher Training and Its Implementation

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Abstract

Poor performance of Malaysian students in International Mathematics and Science Study (TIMSS) and Program for International Students Assessment (PISA) has proven that there are more efforts need to be carried out for improvement. Many studies have proven that students' academic performance is strongly associates with teacher's content knowledge, pedagogical skills as well as pedagogical content knowledge. Therefore, it is conclusive that teacher has a vital role in ensuring the effectiveness of teaching and learning that occur in classroom. Recently, many issues related to teachers' attitudes, knowledge and skills have been discussed by media and various forms of academic and non-academic discourses. Through the discussion, it has been agreed that, the fundamental aspect that need to be addressed to revive the teaching and learning in schools is teacher's continuous professional development. In regard to the aforementioned matter, this study was conducted to study the nature of in-service training for Science teachers in Malaysian schools.. The findings revealed that there was a mismatch between the in-service training courses that have been carried out and the teacher's actual needs. The repercussion are, the in-service training that been carried out mostly perceived as insignificant and has no impact on development of teacher's professional development. However, there were also in-service training courses that valued by teachers and have positive impacts towards Science teachers especially in improving their pedagogical skills, knowledge in ICT, and understanding of new policy.

Keywords: Science Teacher, Teacher Training, Continuous Professional Development

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The Effects of Mother-Child Communication Skills Education on Children's Skills to Expression Emotions

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Abstract

This study was conducted to investigate the effects of "Mother-Child Communication Skills Education" on preschool period 6-year-old children's skills express emotions. The independent variable of the study was the "Mother-Child Communication Skills Education", which was given to mothers, and the dependent variable of the study was mothers' skills to express their children's emotions. The work group of the study, which was conducted in the pretest-posttest control group experimental model, included children of 68 mothers, 34 in the experimental group and 34 in the control group, who lived in the Selcuklu District of the province of Konya, whose children attended preschool education and were in the age group of 6. "Expression Test for Emotions", whose validity and reliability was tested by Ergin (2003), was used as the data collection tool of the study. Furthermore, "Personal Information Form" was used to determine the demographic characteristics of the mothers and their children. Expression Test for Emotions was administered to the children as pretest within the scope of the sample. During the study, "Mother-Child Communication Skills Education" program, which was prepared by the researcher to investigate its effect on 6-year-old children's skills to express emotions, was administered, in the form of group education, to the mothers in the experimental group in 3-hour sessions for 15 weeks. During the process of data analysis, significance level was determined to be 0.05. The findings obtained in the study is that "Mother-Child Communication Skills Education Program" makes positive contribution to the children's of the mothers in experimental group skills to express emotions.

Key Words: Communication, Skill, Communication Skill, Education, Emotion

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Examination of the Effects of Computer Assisted Preschool Educational Activities on Children's Intuitive Mathematical Ability

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Abstract

This research examined the effects of computer assisted preschool educational activities on children's intuitive mathematical ability. The research group is composed of five year olds attending nursery school in 2011 – 2012 school year in Selcuklu county of Konya in Turkey. The participants composed of five year olds were randomly selected. The research was designed with pre-test and post-test model with a control group. A total of 40 children (20 children in experimental group and 20 children in control group) were included in the research. Intuitive Mathematical Ability Test was applied to the children which was developed by Güven (2001) and it was used to determine children's intuitive mathematical ability. The test was administered to children before and after the experimentation. Mann Whitney U test was used to analyze the data with SPSS 15.0. The general result indicated that the computer assisted preschool educational activities makes positive contribution to five year old children's intuitive mathematical ability.

Key Words: Mathematical, Children, Experimentation

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Elder Abuse: Conceptual Framework and Observations in Indian Context

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Abstract

Ageing is emerging as a problem of crucial importance in India. India's over 60 years senior citizens are growing at a pace that is disconcerting. At the same time, elder abuse is growing across the country. Research studies conducted by Help Age India and releases in 2012 and 2013 have shown marked increase of abuse, both, verbal and physical in all parts of the country. In India, like in many other parts of the world, the number older people ¼60 years and older ½ is steadily increasing. Along with the trend, there is a very realistic fear that safety, dignity and quality of life of elders may get compromised. The reported figures of prevalence may vary; but, there no doubt that violence against elders is on the rise. Elder abuse to actions that harm an older person or negatively affect his/her well-being, preventing elder abuse is one of the key concerns for service providers and organizations that support elderly. While, no one age group is really safe from abuse and violence, older adults may be vulnerable due to a combination of factors i.e. personal, familial, economical, psychological and social .Therefore Understanding the complexity of abuse is the first step to addressing the problem effectively. Creating awareness among all stakeholders is a very important initiative in dealing with this issue. The need to bring out awareness on the issue speaks volumes about the current care and protection scenario vis-à-vis older people in India. Interpersonal violence is not really new; but, the scale of violence and the rapidity with which it is increasing is a matter of concern. Also worrying is the fact that institution that should be safe havens may fail to provide succor to the elders. The magnitude of elder abuse is still a matter of speculation, given the difficulty in defining and identifying it.

Key Words: Disconcerting, Protection, Violence

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Religiosity in a Multicultural Nation: Opportunities and Challenges

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Abstract

Religion has always been part and parcel of the Malaysian society. For centuries, the different ethnic groups with their own religiosity have been co-existing peacefully. They have been practicing their own faith, performing their own ritual and spiritual obligations and expressing themselves quite freely within their faith and also outside their faith. Religion was never an issue in a multicultural Malaysia. However, in the pass three or four decades, many incidences of pleasant and unpleasant moments of religiosity have been tormenting the media in Malaysia and also many other parts of the world. This paper will look into the opportunities and challenges appearing in first, Malaysia as a multicultural nation and secondly, Malaysia as a nation in a globalization era. Time and space as well as technology and modernisation are considered the essential aspects of further researching the future of religiosity within a multicultural nation. Most of the narratives analysed are real-life stories which have been shared in media and the newspapers. Analysis that I completed so far concludes that with current explosion in technology, the opportunities and challenges in religiosity has increased tremendously and there is a great need for sound education to ensure that information passed should be scrutinised and analysed before action is taken. There is a great need for interfaith dialogue at a wider and greater level.

Keywords: Religiosity, Multicultural Nation, Opportunities, Challenges

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Student-Centered Learning at Sultan Qaboos University:EFL Students' Perceptions

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Abstract

On-going research in education is focusing on exploring various approaches driven by a growing concern of ideal teaching and learning methods. Student-Centered Learning (SCL) is characterized by innovative methods of teaching and it has been promoted to support the rapidly changing education environment. This study aims at investigating EFL students' perceptions of practicing SCL in the teaching/learning process at Sultan Qaboos University (SQU). Data was gathered through a survey from 46 EFL students studying at SQU. Results show that the different dimensions of SCL are used to significantly varying degrees. Some implications and recommendations were elaborated in this paper.

Keywords: Student-Centered Learning, Students' Perceptions, Sultan Qaboos University

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GlobalIlluminators

**ABSTRACT PROCEEDING BOOK
MISG--2015, Kuala Lumpur, Malaysia
ISBN: 978-969-9948-14-5**

**TRACK C: PHYSICAL LIFE & APPLIED
SCIENCES**

Study of Nutrient Content and Physical Properties of Feed Partially Substituted With *Kappaphycus Alvarezii* for Malaysian Mahseer

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Abstract

High cost of fish meal has rendered increased use of alternative sources of protein as fish meal substitute. Seaweed is the only plant-based protein source completed with all essential amino acids for fish growth; besides rich in carbohydrates, minerals, vitamins, ω -3 and ω -3 fatty acids. In this study, seaweed (*Kappaphycus alvarezii*) was used as an alternative protein source to replace fish meal in the diet of Malaysian mahseer (*Tor tambroides*) fingerlings. Five experimental diets were formulated by substituting 0% (SW0, control diet), 15% (SW15), 30% (SW30), 45% (SW45) and 60% (SW60) of fish meal with seaweed. The objectives were to compare the nutrition and physical properties of control and experimental diets. Seaweed-substituted diets showed comparable nutritional values to control diet which contained 100% fish meal. Crude protein of SW15, SW30 and SW45 were comparable to SW0. All seaweed diets showed lower crude lipid content than control diet. Crude fiber and nitrogen-free extract of seaweed diets were significantly higher than SW0. Ash content increased parallel to inclusion levels of seaweed. Generally, crude fibre content, floatability, water solubility, water stability and pellet durability were positively correlated to seaweed substitution levels; whereas protein content and bulk density were negatively correlated to seaweed substitution levels.

Keywords: Alternative, Carbohydrates, Significantly

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Synthesized and Characterization of New N-Heterocyclic Carbene (NHC)-Complexes; the Potential of NHC Ligand as Ionophore in Potentiometric Sensor Application.

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Abstract

In this approach, a new bidentate bis-NHC ligand namely bis[1-benzyl-benzimidazoliumethyl]-4-methylbenzenesulfonamide bromide (NHCL) and its mercury(II) metal complex were successfully synthesized and characterized using FT-IR, ¹H NMR, ¹³C NMR spectroscopy, CHN elemental analysis, and X-ray single crystal diffraction and UV-Vis spectroscopy. The capability of NHCL as ionophore in potentiometric sensor application was then studied. The potentiometric self-plasticizing polypyrrole sensor was constructed based on a NHCL for the purpose of Hg²⁺ cation determination. The electrode with a membrane optimum composition had demonstrated a good Nernstian response to Hg²⁺ cations ranging from 1.0×10^{-6} to 1.0×10^{-2} M with a detection limit of 2.5×10^{-7} M and a Nernstian slope of 28.10 ± 0.29 mV decade⁻¹ over a pH range between 4.5-7.0 with a response time of about 20 seconds at room temperature.

Keywords:: Bidentate Bis-Nhc Ligand; Potentiometric; Self-Plasticizing; Polypyrrole Membrane Sensor; Hg²⁺ Cation; Nernstian Response.

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The Use of Ionic Liquid Based Imidazolium as a Pretreatment Solvent in Rubber Biomass

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Abstract

The fossil fuel resources such as coal and natural gas will eventually be decrease and contribute to climate change. Therefore, an attractive alternative need for renewable sources of energy such as biomass. Biomass that originate from waste such as agricultural residues, dedicated energy crops, effluent sludge, wood residues and paper waste. Rubber biomass is the promising candidate for renewable energy sources however the recalcitrance of cellulose hydrolysis is a primary obstruction for efficient conversion of this biomass to monomeric sugars that are fermented to ethanol or other products. Recently, ionic liquids are used as a potential solvent to dissolve rubber biomass and it is the most successful methods for the pretreatment biomass. Ionic liquids are recognized to have exclusive characteristics such as low vapor pressure, non-flammable, high thermal and low toxicity. In addition, in line with the current environmental requirements, ionic liquids are able to recycle and reused after the biomass pretreatments. The purpose of this study was to dissolve rubber biomass in ionic liquid at 110 °C and then stirred in inert atmosphere. Results are shown that the solubility of 1-ethyl-3-methyl imidazolium acetate is 20-25 wt% compared to the other ionic liquid tested. Dissolution of rubber biomass in this ionic liquid can reach as 90% yield recovered. The regenerated yield obtained was characterized using XRD, FTIR and TGA. XRD results have shown that morphology of the regenerated material dissimilarities after pretreatment. FTIR and TGA are in line with changes in regenerated of rubber biomass from the pretreatment process.

Keywords: Alternative, Carbohydrates, Significantly

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MISG--2015, Kuala Lumpur, Malaysia
ISBN: 978-969-9948-14-5**

TRACK D: ENGINEERING & TECHNOLOGY

Sentiment Analysis Applied to Airline Feedback to Boost Customer's Endearment

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Anna University, Chennai, India

Abstract

Customers differ greatly in terms of their demographics, lifestyles, needs, perceptions, preferences, and behaviors. A business entity needs to understand the profitability of each individual customer in a segment as well as their potential lifetime profitability. In this paper our focus is on the application of sentiment analysis to analyze feedback of passengers obtained from airline forums. For this purpose Multinomial Naive Bayes and Linear Support Vector models are used. This work also aims at finding suitable data model that achieve a high accuracy. The result of sentiment analysis and rating of different services given by passengers are plotted as a visualization. By this work we would like to help the airline industry to maximize the delivery and service to meet the customer expectation and build customer loyalty.

Keywords – Customers, Demographics, Expectation

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Ubiquitous Future m-Health System including Wireless 3G and 4G Wi-MAX Technology

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Daffodil International University, Bangladesh

Abstract

Developing countries are leisurely adopter of new technologies, particularly with regards to the health services of these countries. This study explores the current mobile health (m-health) information infrastructure and future prospects of Information and Communication Technology in Health System of Bangladesh. Already we have 2G m-health system in every upazila countrywide. But the service is limited and in terms of technology also old. Nowadays 3G and 4G wireless mobile technologies have been deployed in Bangladesh. These latest high speed mobile phone services offer us a ubiquitous opportunity to upgrade the m-health systems in developing country like Bangladesh. m-Health reflects the concept of key technological advances in remote healthcare system. At present due to upgraded average lifetime there are so many old populations. This aging problem becomes severe day to day. The modern expert health care delivery systems are based on urban area. So, to get an urgent, quality but low cost medical services is a great concern for those populations. This study shows that 3G and 4G Wi-MAX offers a tremendous interactive video traffic which can be used for monitoring vital signals like ECG signal, heart rate, bone fracture etc. Then the per capital income of Bangladesh has been considered. The huge initial costs and poor ICT culture of healthcare professionals make a barrier to an m-Health system. Also to handle Hi-tech devices comfortably by villagers also put a barrier to smooth run of the system. Our studies show that the maintenance cost is also not feasible for the poor income people. This paper has investigated this feasibility whether the people of developing country like Bangladesh are able to get such hi-tech m-health service and propose an efficient solution of using Mobile Recharging Point and/or Pharmacy and m-Banking system.

Keywords: Technological, Endous, Comfortably

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Properties of Eco-Brick Manufactured Using Kenaf Fibre as Matrix

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Abstract

Eco-brick is an important environmentally-friendly strategy to mitigate carbon dioxide emission in building construction. For energy and resource efficient eco-brick manufacturing, natural fibre and biomass waste can be utilised as matrix. The present study aims to evaluate the properties of concrete eco-brick manufactured using kenaf fibre matrix. The brick was produced by mixing 0.5-2.0% kenaf fibre (MR grade), Portland cement and sand. The physical and mechanical properties of the eco-brick were evaluated according to the ASTM C73 method. The data showed that, water absorption values of the eco-brick were in the range of 9.0-12.5 %. Eco-brick produced from 0.5, 1.0, 1.5% and 2.0% kenaf fibre have flexure resistance to compression of 4693.9, 4335.6, 3879.3 and 3294.5 psi respectively. According to the ASTM C73 guidelines, the properties of eco-brick from mixture of 0.5-1.5% kenaf fibre produced in this study meet building material criteria for construction in moderate weather conditions.

Keywords: Manufacturing, Construction, Portland cement

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Physical-Chemical Analysis of MC-Co-Paam and Application

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Abstract

This paper reports the physical-chemical characterization of polyacrylamide-co- methylcellulose and applications in concrete. Three ratio of polymers were used for the synthesis of copolymers: 95:5 (MC-PAAm), 85:15 (MC-PAAm), and 75:25 (MC-PAAm). In this process acrylamide was considered more stable than methylcellulose. The materials obtained were analysed by TG, FT-IR and scanning electron microscopy (SEM) techniques. In the nutshell, the results can be used to improve most of the characteristics of concrete. As the dosage of water-soluble copolymer increased, the demand of water gets decreased. The combined water content, absorption and compressive strength of the hardened cement pastes were increased by changing different ratio of polymers

Keywords: Polymers. Copolymer. Analysis of MC-co –PAAm, Strength

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The New Hybrid Copolymers Based On N- Isopropylacrylamide

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University of Wolverhampton, Wolverhampton, UK

Abstract

The copolymerization of N-isopropylacrylamide onto maize starch has been carried out at 70°C using ammonium persulfate (APS) as initiator. The N-isopropylacrylamide-modified copolymers were characterized by Fourier transform infrared (FTIR) spectroscopy, scanning electron microscopy (SEM), X-ray diffraction (XRD) and thermogravimetric analysis (TGA) techniques. The influence of these copolymers on the physico-mechanical properties of Portland cement (PC) pastes was determined using various characterization methods such as compressive strength, water absorption and workability.

Keywords: N-Isopropylacrylamide, Maize Starch, Copolymer, FTIR, SEM, TGA, X-Ray Diffraction, Cement

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Application of Artificial Neural Network Modelling to Predict the Particle Size Formation from Extraction of Ginger Rhizome Using Rapid Expansion Supercritical Solution

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Abstract

In this study, a feed forward multilayer back propagation with Levenberg-Marquardt training algorithm artificial neural network (ANN) was developed to predict the particle size formation from extraction of ginger rhizome using supercritical carbon dioxide in Rapid Expansion Supercritical Solution (RESS). Size of solid oil particle formation analysis will be carried using Scanning Electron Microscopy (SEM) and Image processing and analysis software, ImageJ. The ANN model account for the effect of extraction temperature (40,45,50,55,60,65 and 70 °C) and pressure (3000,4000,5000,6000 and 7000 Psi) on the size of particle. A two-layer ANN with two inputs variables (extraction temperature and pressure) and one output (particle size) with 35 experimental data used was developed for modelling purposed. Different network were trained and tested by changing the number of neuron in hidden layer. Using validation data set the network having the highest (nearest to value of one) regression coefficient (R) and the lowest (nearest to value of zero) mean square error (MSE) was selected as an optimum ANN model.

Keywords: Artificial Neural Network (ANN); Particle Size; Ginger; RESS; Supercritical CO₂

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The Correlation of Consumable Wire Feed Rate with Welding Current in GMAW Process

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Rahman⁶, Mohd Ridhwan Mohammed Redza⁷**

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Abstract

Gas metal arc welding (GMAW) has been widely applied in metal fabrication industry. Only the correct selection of welding parameters will produce quality weld deposition. In most GMAW welding system, the actual welding current will always be different from the value selected before the start of welding, as a result some of the weld bead geometries would have incorrect size and defect. In order to obtain a good quality weld, it is therefore necessary to develop a guiding system to enable the selected welding current should be closed to the actual welding current. This project investigates the correlation of consumable wire feed rate (WFR) with respect to the welding current. At constant wire extension, travel speed and arc voltage, the values of welding current were recorded when welded at WFR range from 2m/min to 14m/min. Robotic GMAW with CO₂ shielding was employed in the welding of 9mm carbon steel in 1G position. The correlation of WFR and welding current for a specific arc voltage can be expressed in a polynomial equation of second order. Based on this correlation, the actual welding current for any specific arc voltage can be predicted accurately before the start of the welding operation, provided the weld quality is visually acceptable. The predicted welding current was validated by experimental welding records, the average deviation was found to be less than 10 amperes. The result proved that WFR is a right factor for the accurate determination of actual welding current in GMAW process.

Keyword: GMAW, Robotic, Welding Parameter.

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Highly Dispersed Polymer Suspensions with a Narrow Particle Size Distribution for Biotechnology

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- M.V. Lomonosov Moscow State University of Fine Chemical
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Research Institute of Physicochemical Medicine of Federal Biomedical
Agency, Moscow, Russia

Abstract

Polymer suspensions with specified particle sizes are currently used as bioligand carriers when creating diagnostic test systems for optical analysis methods of biomaterials (live cells, viruses, etc.) In this study we review the methods for preparing mentioned above suspensions with diameters of 0.2-0.4µm and with a narrow particle size distribution by the method of emulsion polymerization of styrene using two different ways: (1) – in the conditions of synthesis of the emulsifier (surfactant) in the interphase boundary and (2) – without emulsifier in the presence of small amounts (3%) of the polymer (polymethylmethacrylate) which is incompatible with the formed polystyrene. Polymethylmethacrylate is involved in the formation of structural and mechanical barrier in the interfacial adsorption layer of polystyrene particles. Dispersive composition of the initial emulsions and polymer suspensions was studied by electrophoretic light scattering particle analyzer Zetasizer Nano ZS of the company "Malvern". Interfacial tension in the interphase boundary was measured by stalagmometric method. In order to determine the rate of polymerization the kinetics of reaction was studied by dilatometry, polymerization rate of styrene was calculated at various ratios of monomer / water phase.

Keywords: Polymer Suspensions, Narrow Particle Size Distribution, Diagnostic Test Systems

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Date: July 29-30, 2015

Venue: Holiday Inn Hotel Almaty Kazakhstan.

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Date: February 01-02, 2016

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Full Paper Submission Date: March 15, 2016

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