2016 APCBEES PATTAYA CONFERENCE ABSTRACT

January 23-25, 2016

Pattaya Discovery Beach Hotel

Pattaya, Thailand

Sponsored and Published by

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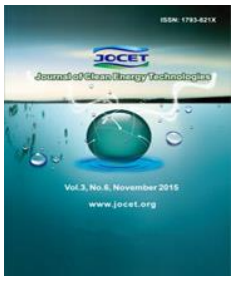
Table of Contents

2016 APCBEES Pattaya Conference Introductions

Welcome to CBEES 2016 conferences in Pattaya, Thailand. The objective of the Pattaya conferences is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Future Environment and Energy, Climate Change and Humanity, and Bioscience, Biochemistry and Bioinformatics.

2016 6th International Conference on Future Environment and Energy (ICFEE 2016)

❄ **Paper publishing and index:** ICFEE 2016 papers will be published in one of the following journals:



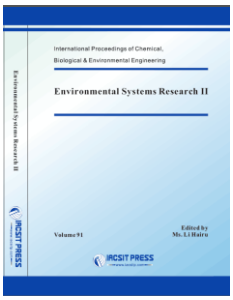
Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X), and be included in EI (INSPEC, IET), Electronic Journals Library, Chemical Abstracts Services (CAS), Ulrich's Periodicals Directory, Google Scholar, ProQuest and DOAJ and sent to be reviewed by Ei Compendex and ISI Proceedings.

Journal of Environmental Science and Development (IJESD, ISSN: 2010-0264), and be included in Chemical Abstracts Services (CAS), CABI, DOAJ, Ulrich Periodicals Directory, Engineering & Technology Digital Library, Electronic Journals Library, Crossref, ProQuest and sent to be reviewed by EI Compendex and ISI Proceedings.

International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009), and be included in Index Corpernicus, ProQuest, UDL, Google Scholar, Open J-Gate; etc and sent to be reviewed by EI Compendex and ISI Proceedings.

❄ **Conference website and email:** http://www.icfee.org/; icfee@cbees.org.

2016 5th International Conference on Climate Change and Humanity (ICCCH 2016)



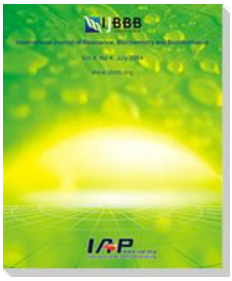
❄ **Paper publishing and index:** ICCCH 2016 papers will be published in International Proceeding of Chemical, Biological and Environmental Engineering (IPCBEE), and all the papers published in IPCBEE will be indexed by EI Geobase(Elsevier), Chemical Abstracts Services (CAS), CABI, CNKI, WorldCat, Google Scholar, EBSCO, Ulrich's Periodicals Directory, Crossref, and Engineering & Technology Digital Library.

❄ **Conference website and email:** http://www.iccch.org/; iccch@cbees.org.

2016 6th International Conference on Bioscience, Biochemistry and Bioinformatics (ICBBB 2016)

❄ **Paper publishing and index:** ICBBB 2016 papers will be published in Conference Proceedings, the following journal or both Conference Proceedings and journal:

The volume of Proceedings, which is indexed by Ei Compendex, Inspec, DOAJ and Scopus.



International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638), and be included in Electronic Journals Library, Chemical Abstracts Services (CAS), Engineering & Technology Digital Library, Google Scholar, and ProQuest.

Publication in both Conference Proceedings and Journal. Firstly, papers will undergo the peer review system of the conference committee, and accepted papers will be published into Conference Proceedings after registration. Then the authors are supposed to add at least 30% new content and resubmit the papers to icbbb@cbees.org in 30 days after the conference for further peer review to get published by IJBBB, and no extra fee will be charged for publishing if accepted.

❄ **Conference website and email:** http://www.icbbb.org/; icbbb@cbees.org.

Presentation Instructions

Instructions for Oral Presentations

Devices Provided by the Conference Organizer:

Laptop Computer (MS Windows Operating System with MS PowerPoint and Adobe Acrobat Reader)
Digital Projectors and Screen
Laser Sticks

Materials Provided by the Presenters:

PowerPoint or PDF Files (Files should be copied to the Conference laptop at the beginning of each Session.)

Duration of each Presentation (Tentatively):

Regular Oral Presentation: about **12** Minutes of Presentation and **3** Minutes of Question and Answer
Keynote Speech: about **40** Minutes of Presentation and **10** Minutes of Question and Answer

Instructions for Poster Presentation

Materials Provided by the Conference Organizer:

The place to put poster

Materials Provided by the Presenters:

Home-made Posters
Maximum poster size is A1
Load Capacity: Holds up to 0.5 kg

Best Presentation Award

One best oral presentation will be selected from each oral presentation session, and the Certificate for Best Oral Presentation will be awarded at the end of each session on January 24, 2016.

Dress code

Please wear formal clothes or national representative of clothing.

Keynote Speaker Introductions

Keynote Speaker I

Prof. Dr. Manju Tembhre
Barkatullah University, Bhopal, India

Dr. Manju Tembhre obtained M.Sc., M. Phil and Ph.D. in 1994 from Barakatullah University, Bhopal, India. Dr. Tembhre began her teaching career in 1983 as Asst. professor later became Professor at SSSWC and in 2006 went on to become the Founder-Principal of a multi faculty college. She has over 32 years of teaching experience in Zoology in under and post-graduate classes and 25 years of research experience. Dr. Tembhre has contributed significantly in the field of neurotoxicology and has guided several Ph. D students, at present eight students are pursuing Ph. D degree under her supervision in Zoology and Biotechnology. She has published two books and around 48 scientific papers/ review articles in various high quality International and National journals. Dr. Tembhre has also successfully completed many research projects. She has widely travelled and worked in many countries like USA, France, Singapore, Sri Lanka, UAE and Malaysia to present research papers, invited talks and to chair technical sessions and as Jury member. Dr. Tembhre is recipient of prestigious INSA fellowship for pursuing higher research, Best teacher Award by Rotary Club and Young Scientist awards for best paper presentation. She has long experience in administration, research and teaching.

Topic: “Role of Antioxidant Herbs in Prevention of In Vivo Oxidative Stress Markers in the Liver and Kidney in Rats”

Abstract: Background: Oxidative stress due to changing lifestyle has become a leading global health problem owing to its strong association with a high incidence of various diseases.

Aim: To induce oxidative stress in rat using CCl_4 and to estimate oxidative stress markers in herbs extracts treated liver and kidney tissues in order to shed the light on the preventive effect of antioxidants on these organs.

Materials and methods: Sixty white albino rats weighing 150-200g were randomly divided into equal groups for treatments of CCl_4 , extracts of Taraxacum officinale, Colocasia esculenta, Coleous aromaticus leaves, Crataeva nurvala bark and Annona reticulata leaves, Rosemarinus officinalis and Tegetus minuta. The serum was used for the measurement of various biochemical markers like aspartate amino transferase (AST) activity, alanine amino transferase (ALT) activity, alkaline phosphatase (ALP), and acid phosphatase (ACP). The liver homogenate was used for various biochemical estimations like superoxide dismutase (SOD), catalase (CAT), glutathione (GSH) and lipid peroxidation (LPO).

Results: Data showed that CCl_4 significantly increased the levels of marker enzymes and induced a state of Oxidative stress. Also our results showed a significant decrease in AST, ALT, ALP, ACP, levels in the serum of herbal extract treated groups. On the other hand a significant decrease in the activity SOD, CAT, GSH and LPO hepatic, heart and renal tissues of CCl_4 rats. However, herbal extracts restored to normal level of these enzymes.

Conclusion: CCl_4 induced Oxidative stress is accompanied by increased hepatic and renal tissues oxidative stress, which is characterized by reduction in the antioxidant enzymes activities and glutathione levels. This may probably contribute to the additional progression of liver and renal diseases. The use of experimental herb extract significantly appreciated the antioxidant enzymes and proved to be beneficial in protection of damage from oxidative stress.

Keynote Speaker II

Prof. Orawan Siriratpiriya
Aquatic Resources Research Institute, Chulalongkorn University (ARRIC), Thailand

EDUCATION

1990 Cert. in Environmental Management Specialized in Risk Assessment and Analysis,
UNEP/Tufts University, USA.

1989 D.Sc. (Soil Management-Waste Disposal/Utilization) The Agricultural University of Norway, NORWAY.

1984 Research Dip. in Environmental Science, The Agricultural University of Norway, NORWAY.

1979 M.Sc. (Environmental Science-Soil) Kasetsart University, Bangkok, THAILAND

1976 B.Ed. (Chemistry-Biology) Chulalongkorn University, Bangkok, THAILAND

RELATED EXPERIENCES

1.Thai National Expert, EIA/SEA (Environmental Impact Assessment/Strategi
Environmental Assessment guidelines development in the Mekong River Basin,
Mekong River Commission for sustainable development: MRC (2002-2003).

2.Southeast Asia Programme Officer, The International START (HDP/IGBP/WCRP)
Secretariat, Washington DC, USA (1994-1995).

[START = Global Change System for Analysis, Research, and Trainning]

Topic: “Integrated Approach for Closed Looped Imminent Environment in a Sustainable World”

Abstract: The direction to create a sustainable society utilized limited natural resources need reducing the environmental burden. Environmental sustainability is complex needed integrated approach, coherence, innovation, and balance under space and time scale. Closed loop systems are conceptualization of integrated approach to manage entire life cycle of resources lead to reduce costs, save loads of materials and energy, and designed a valuable input as raw material for another process and products. Zero waste is a philosophy driven the closed loop signified waste as a resource. Closed materials loops is at forefront of developing technologies about turning the materials recovered from any product into new products provided similar environmental quality and/or benefits. The concept of using recycled materials to produce new products not only virtually eliminating the need for materials from natural resources but also need acceptance and interest of consumer to purchase. In addition, shifting in behavior, design, collaboration among stakeholders, logistic, and regulation are required significantly. People behavior is a heart of closed loop system started with segregate waste at source properly. A zero baht shop in Thailand as a case study for using recycle materials as cash for goods and service showed strategy involvement of people in entry point for closed looped imminent environment in a sustainable world.

Plenary Speaker III

Dr. Jerasorn Santisirisomboon

Division of Energy Engineering, Faculty of Engineering,
Ramkhamhaeng University, Bangkok, Thailand.

Topic: "Climate Change in the Context of Thailand"

Work Experiences:

March 2004 – Present	Head of Energy Engineering Division, Faculty of Engineering, Ramkhamhaeng University, Bangkok, Thailand.
August 2003 – Present	Lecturer, Division of Energy Engineering, Faculty of Engineering, Ramkhamhaeng University, Bangkok, Thailand.
May 2011 – April 2012	Technical Consultant, ERM-Siam, Co Ltd
November 2001 – June 2004	Research Scientist, Energy Technology Program, Sirindhorn International Institute of Technology, Thammasat University, Bangkok, Thailand.
June 1998 – October 2001	Research Assistant of Royal Golden Jubilee Program, Ph.D. Candidate,Department of Mechanical Engineering, Sirindhorn International Institute of Technology, Thammasat University, Bangkok, Thailand.
June 1995 – October 1998:	Visiting Lecturer, Division of Environmental Science, Faculty of Science, Ramkhamhaeng University, Bangkok, Thailand.
September 1994 – May 1998:	Research Associate, Energy and Environment Program, Thailand Environment Institute (TEI), Bangkok, Thailand.
Teaching experiences:	Energy and Environment, Renewable Energy, Thermal Energy Management, Thermodynamics, Numerical Methods, Mechanical Engineering Laboratory, Thermal Energy Laboratory, Engineering Mathematics, Ordinary Differential Equations, Partial Differential Equations, Energy Technology, Thermal Energy Analysis, Energy Conversion, Power Plant Engineering, Thermal System Design. Data Analyses.

Brief Schedule for Conferences

Day 1	**January 23, 2016 (Saturday) 10:00~17:00** **Venue: Hotel Lobby** Arrival Registration
Day 2	**January 24, 2016 (Sunday) 9:00~19:00** **Venue: Had-Sai Meeting Room** Arrival Registration, Keynote Speeches, and Conference Presentations
	Morning Conferences
	Venue: Had-Sai Meeting Room Opening Remarks 9:00~9:10 Keynote Speech I 9:10~10:00 Coffee Break & Photo Taking 10:00~10:20 Keynote Speech II 10:20~11:10 Plenary Speech III 11:10~12:00
	Lunch 12:00~13:00 **Venue: Hotel Restaurant**
	Afternoon Conferences
	Session 1: 13:00~16:00 **Venue: Had-Sai Meeting Room** 12 presentations-Topic: “Environment &Climate”
	Coffee Break 16:00~16:15
	Session 2: 16:15~19:00 **Venue: Had-Sai Meeting Room** 11 presentations-Topic: “Energy & Biology”
	Poster Session: 9:00~19:00 **Venue: Had-Sai Meeting Room**
	Dinner:19:20 **Venue: Hotel Restaurant**
Day 3	**January 25, 2016 (Monday) 9:00-17:00** **One-Day Visit**

Tips:
Please arrive at conference room 10 minutes before the session beginning to upload PPT into conference laptop.

Detailed Schedule for Conferences

January 23, 2016 (Saturday)

Venue: Hotel Lobby

10:00-17:00	**Arrival and Registration**

Note: (1) The registration can also be done at any time during the conference.
(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.
(3) One best oral presentation will be selected from each oral presentation session, and the Certificate for Best Oral Presentation will be awarded at the end of each session on January 24, 2016.

Morning, January 24, 2016 (Sunday)

Venue: Had-Sai Meeting Room

9:00~9:10		**Opening Remarks** Prof. Orawan Siriratpiriya Aquatic Resources Research Institute, Chulalongkorn University (ARRIC), Thailand
9:10~10:00		**Keynote Speech I** Prof. Dr. Manju Tembhre Barkatullah University, Bhopal, India Topic: "Role of Antioxidant Herbs in Prevention of In Vivo Oxidative Stress Markers in the Liver and Kidney in Rats"
10:00~10:20		**Coffee Break & Photo Taking**
10:20~11:10		**Keynote Speech II** Prof. Orawan Siriratpiriya Aquatic Resources Research Institute, Chulalongkorn University (ARRIC), Thailand Topic: "Integrated Approach for Closed Looped Imminent Environment in a Sustainable World"
11:10~12:00		**Plenary Speaker III** Dr. Jerasorn Santisirisomboon Division of Energy Engineering, Faculty of Engineering, Ramkhamhaeng University, Bangkok, Thailand. Topic: "Climate Chang in the Context of Thailand"

Lunch	
12:00~13:00	**Hotel Restaurant**

Let's move to the Sessions!

Session 1

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

A0005 Presentation 1 (13:00~13:15)

Borehole Integrity of Austenitized and Annealed Pipe Steels Suitable for Carbon Capture and Storage (CCS)

Anja Pfennig and Axel Kranzmann

HTW University of Applied Sciences Berlin, Germany

Abstract—Properties of pipe steels for CCS (carbon capture and storage) technology require resistance against the corrosive environment of a potential CCS-site (heat, pressure, salinity of the aquifer, CO_2-partial pressure). The influence of austenitzing in heat treatment routines of two different injection pipe steels (1.4034, X46Cr13 and 1.4021, X20Cr13) was evaluated. Steel coupons were austenitized at different temperatures (900- 1050 ℃) for different lengths of time (30-90 min) before quenching and annealing prior to long term corrosion experiments (60 ℃, 100 bar, artificial brine close to a CCS-site in the Northern German Basin, Germany). In general, fewer pits are found on X46Cr13. Comparing steels with 13% chromium each the higher carbon content of X46Cr13 (0.46% C) results in a lower number of pits compared to X20Cr13 (0.20% C). It is found that neither the carbon content of the steels nor austenitizing temperature has much influence, but local corrosion behaviour is most susceptible towards austenitzing time.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

A0020 Presentation 2 (13:15~13:30)

Microbubbles-Assisted Flotation for the Recovery of High Density Oil from Contaminated Sand after Oil Spills: An Optimization Study

Lim Mee Wei, Lau Ee Von, and Poh Phaik Eong

Monash University Malaysia, Malaysia

Abstract—The impact of oil-spills on beach sands highlights the need for effective technologies to separate on-site oil-spills. This study proposes the optimization of (Sauter diameter: 80 μm) flotation technology aided by microbubbles to remove high density bunker oil from oil-wet sand using response surface methodology (RSM). The flotation efficiency under the influence of pH, temperature, experimental duration and input flow of microbubbles was modelled using a second order response function. From the results, the optimum flotation parameters were at temperature of 60 ^{o}C, pH 8, flotation duration of 20 minutes, and an input flow rate of 6L/min, with a predicted maximum flotation efficiency of 40.4%. The predicted flotation efficiency was in good agreement with the flotation experimental results of 40.1%. A control study was also carried out to investigate the flotation ability of high density oil from contaminated sand without the aid of microbubbles. Results of the control study showed a mere 2.9% oil recovery which reinforces the fact that the presence of microbubbles could aid the recovery of oil from sand. Nevertheless, even though microbubbles could aid the oil recovery from sand, the oil-wet conditions prove difficult for efficient recovery of oil contaminant. The oil contaminant was easier to be removed in water-wet conditions, whereby increase in water content from 0 wt% to 8 wt% increased the recovery efficiency from 40.1% to 76.2% under same optimum flotation conditions. This was attributed to the presence of thin film of water which weakens the attractive force between sand and oil layer.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

A1003 Presentation 3 (13:30~13:45)

Investigation of Intertidal Wetland Sediment as a Novel Inoculation Source for Anaerobic Saline Wastewater Treatment

Xueqing SHI, Kok Kwang NG, and How Yong NG

National University of Singapore, Singapore

Abstract—Biological treatment of saline wastewater is considered unfavorable due to salinity inhibition on microbial activity. In this study, intertidal wetland sediment (IWS) collected from high saline environment was investigated as a novel inoculation source for anaerobic treatment of saline pharmaceutical wastewater. Two parallel lab-scale anaerobic sequencing batch reactors (AnSBR) were set-up to compare the organic removal potential of IWS with conventional anaerobic digested sludge (ADS). Under steady-state condition, IWS reactor (Ri) showed significantly superior organic reduction performance than that of ADS reactor (Ra), achieving COD removal efficiency of 71.4±3.7 and 32.3±6.1%, respectively. In addition, as revealed by fluorescent-in-situ-hybridization (FISH) analysis, a higher relative abundance of methanogenic populations was detected in Ri. A further 16S rRNA gene pyrosequencing test was conducted to understand both the bacterial and archaeal community populations in the two AnSBRs. A predominance of halo-philic/tolerant microganisms (class Clostridia of bacteria, genus Methanosarcina and Methanohalophilus of archaea) in Rienhanced its organic removal efficiency. Moreover, several microbial groups related with degradation of hardly biodegradable compounds (PAHs, n-alkenes, aliphatic hydrocarbons and alkanes etc.) were detected in the IWS. All these findings indicated that IWS is a promising inoculation source for anaerobic treatment of saline wastewater.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

A1006 Presentation 4 (13:45~14:00)

Plasmatron Reforming of CO_2 and CH_4 with Steam as Dehydrogenated Agent to Produce Rich Hydrogen Fuel Gas

Je-Lueng Shie, Chih-Hua Chang, and Ching-Yuan Chang

National I-Lan University, Taiwan

Abstract—The mitigation technology of greenhouse gas (GHG) was got more and more attentions, including the great potential studies of reforming of carbon dioxide (CO_2) and methane (CH_4) to fuel gas. In this study, plasmatron reforming of CO_2 and CH_4 with steam as dehydrogenated agent to produce rich hydrogen synthesis gas (or "syngas"). The major parameters used in this study are: 1) CH_4/CO_2 ratio (4/1 to 4/8 and 3/7 to 7/3); 2) total flow rate of CO_2 and CH_4 (0.5 to 2.5 slpm); 3) reaction temperature (573 to 873 K); and 4) water flow rate (0 to 3 mL/min) for steam. The comparison indicators are conversion of CH_4 and CO_2, selectivity of H_2 and CO, concentration of products, H_2/CO ratio, H_2 yield at case of water injection and energy conversion efficiency (ECE). A plasmatron was used as reforming reactor with CO_2, CH_4 and steam injections simultaneously and the products were analyzed by GC-TCD. In the first part without steam injection, the optimum performance condition were CH_4:CO_2 ratio of 4:6, total flow rate of 0.5 slpm, temperature of 673 K; meanwhile, the results of conversion rate of CH_4 and CO_2 were 95.1 and 86.2% as well as the selectivity of H_2 and CO were 86.7 and 90.0%, respectively. At this condition, H_2/CO ratio and ECE were 0.84 and 0.2, respectively. The major reactions are carbon dioxide reforming ($CH_4 + CO_2 \rightarrow 2CO + 2H_2$) and methane decomposition ($CH_4 \rightarrow C + 2H_2$). The residue carbon black contained 67.63 wt.% pure C and BET surface area of 153 m2/g. In order to increase the yield of H_2, steam was injected into the reactor in the second stage following the suitable operational parameters got from the first part test. After the steam injection, both of conversions of CH_4 and CO_2, and selectivity of CO_2 decreased, nevertheless, the H_2 yield (ratio relative to the input H mass from CH_4) increased dramatically with the highest value of 169.7 wt.% at the water flow rate of 3 ml min-1. The concentrations of H_2 increased from 47,564 to 82,729 ppmv with 2 times. Steam reforming and carbon gasification reactions took place at this situation. The need of energy for this GHG utilization can be recovered from the incineration of biomass or waste. Therefore, GHG can be utilized not only as energy source but also can be reduced from the thermal treatment of waste or biomass.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

A2001 Presentation 5 (14:00~14:15)

Laboratory Testing of Eutectic Freezing Desalination of Highly Saline Solutions

Huda Al-Jabli

Kuwait Institute for Scientific Research, Kuwait

Abstract—This paper is aimed at verifying the performance of a treatment system that uses eutectic freezing to treat highly saline brines (50,000 to 180,000 ppm total dissolved solids [TDS]). Complete laboratory benchscale testing of the freezing technique was designed, constructed, and tested at the Doha Research Plant (DRP) in Kuwait. The principal unit operations considered in the laboratory study were ice crystallization, separation, washing, and melting. The process applied is characterized as secondary-refrigerant indirect freezing, which utilizes normal freezing. The NaCl solutions having different salinities ranging from 5 to 18% were used as a feedwater and tested to assess the performance of the proposed treatment system. Various parameters were considered including feedwater concentration, freezing time, freezing temperature, and separation time. The results of this experimental investigation showed that the freezing-melting process was capable of reducing the TDS of the feedwater by 45 to 50%, which is reasonable since the water recovery percentages ranged between 38 and 48% for feedwater 5, 10, and 18%. This process is technically capable of significantly reducing the amount of dissolved salts in highly saline brine with reasonable recovery. Therefore, this process may be competitive with other brine disposal processes.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M0003 Presentation 6 (14:15~14:30)

Interactions of Climate Change, Water Resources and Agricultural Production in India with Special Reference to Karnataka : A Socio-Economic Analysis

Rajendra Poddar, Raghavendra Chourad and **Veeresh Wali**

University of Agricultural Sciences, Dharwad, Karnataka, India

Abstract—Climate change refers to changes beyond the average atmospheric condition that are caused both by natural factors such as the orbit of earth's revolution, volcanic activities and crustal movements and by artificial factors such as the increase in concentration of greenhouse gases and aerosol. Climate change effects will impose significant additional stress on ecological and socioeconomic systems, but currently these systems are burdened by pollution, natural resource scarcities and other unsustainable practices. Technologically advanced countries are prepared well for responding to climate change, particularly by developing and establishing suitable, institutional and social policies capable for dealing with the consequences. But, the poor and developing countries are affected most by climate change, because they are not having enough and sound technologies or scientific development to deal with this impact. In developing countries like India, climate change is an additional burden because ecological and socioeconomic systems are already facing pressures from rapid population, industrialization and economic development. The average annual per capita availability of water in the country, taking into consideration the population of the country as per the 2001 census, was 1,816 cubic meters reduced to 1545 cubic meters as per the 2011 census. India is facing water stress due to limited availability of water growing demand of water due to increasing population, urbanization and industrialization. In addition, due to contamination of water sources and poor water treatment facility it is often difficult to get safe drinking water [Press Information Bureau, Government of India].

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M0005 Presentation 7 (14:30~14:45)

Study on Specie Diversity, Zoogeographical Distribution and Ecological Properties of the Miridae (Hemiptera) Family in the Hulun Buir City, Inner Mongolia of China

Kai Shi, Yuanyuan Li and Changhua Bao

Inner Mongolia University for the Nationalities

Abstract—The main aim of this study was to understand the species diversity composition, zoogeographic distribution and ecological properties of the family Miridae (Hemiptera) from the Hulun Buir city. Our results showed there were 51 genera 122 species, including three new record species of China and one endemic species of China. In the world animal geographical fauna, the composition of Palaearctic region was dominant. There were 79 species only distributed there, about 64.75 % of the total known. Studies of ecological properties had shown the most species were distributed in 48 °01' -49 °N and the most appropriate altitudinal range was 601-800 m.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M0006 Presentation 8 (14:45~15:00)

Mining Concept Maps from Academic Articles for Measuring Civic Climate Change Literacy in Scholarly

Hsin-Chih Lai and **Shih-Hua Chien**

Chang Jung Christian University

Abstract—Since the Industrial Revolution, greenhouse gases produced by human activities is significant increasing, associated with temperature rising, polar ice disintegrating, sea levels rising and changing patterns of land use weather; it also made the frequency of extreme weather and disasters events increases. For example the period from 2002 to 2007 with the Millennium Drought in Australian, the 2010 European heatwave and forest fires, and the worst flooding in a century struck Pakistan, British heavy rains and floods for centuries in 2013 etc., climate change is not only a problem of natural science, but also include conflict between human, environment and social issues. Its impact level is quite extensive, relates to the field of water resources, public health, infrastructure and biodiversity. The Fifth Assessment Report (AR5) of the United Nations Intergovernmental Panel on Climate Change (IPCC) have been confirmed that human activity is the dominant cause of global warming. Therefore, the impact of climate change has become a big problem for the international community, and the awareness of climate change on public should be enhanced.

With the advances in media technology and the massive information, knowledge transfer more quickly, but the likelihood of learner disorientation increased, too. The studies have found that about 40% of adults worldwide have never heard about climate change (Lee, Markowitz, Howe, Ko, & Leiserowitz, 2015). In Taiwan, related literature shows that most people still has the wrong idea and myth are related to climate change concepts (Wang, 2007; Chen, 2011; Lin, 2003). That means public society need to be educated for establishing the climate change literacy.

In past studies, the construction of literacy indicators typically relied upon domain experts, but it is time consuming and laborious. Some studies also shows that the use of concept map can help students improve their understanding on more complex content (Liu, Chen, Shih, Huang, & Liu, 2011). For the research improving Chen et al. shows the concept maps can

display core knowledge about a subject area.(Chen, Kinshuk, Wei, & Chen, 2008) Therefore, this study attempts to exploit a concept for map designing climate change literacy assessment questionnaire. At first, use an automatic system with built concept maps to embed text mining techniques for climate change domain. They were subjected to an association analysis based on their co-occurrence in sentences to reveal their term-to-term relationship (Tseng, Chang, Rundgren, & Rundgren, 2010). The study adopt the climate change related academic journals keyword extraction, combined with vocabulary which embed text mining techniques by IPCC report, Taiwan integrated research program on Climate Change Adaptation Technology (TaiCCAT) and Climate literacy: the essential principles of climate science(GCRP, 2009), and then output a concept map of climate change. Through this approach, it can design a literacy assessment of climate change issues, for assessing climate change literacy of civic.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M0008 Presentation 9 (15:00~15:15)

Assessing Community Resilience to Climate-related Disasters: Examining the Relative Importance of Indicators

C Chethika Abenayake and Ashu Marasinghe

Nagaoka University of Technology

Abstract—Selecting indicators for assessing community resilience to disasters has been a key challenge faced by practitioners specially who employs inductive assessment methods. As an aid to overcome the challenge, this study attempted to explain the relative importance of indicators within an index and among indices. The discussion of this paper is based on community resilience levels computed for 40 disaster-prone localities in Sri Lanka by two assessment methods: Resilience Index Measurement and Analysis (RIMA) and Resilience Capacity Index (RCI). Zero order correlation, partial correlation and semi-partial correlation measures were used in explaining and comparing the relative importance of indicators to the aggregated resilience level of each locality. Results explained the relative importance of indicators within each index and among indices respectively. The findings emphasized the need of considering the relative importance of indicators as an imperative criterion in selecting indicators to assess community disaster resilience.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M0011 Presentation 10 (15:15~15:30)

Very High Resolution Impact Assessment of Global Climate Scenarios over European Cities

Roberto San Jose, Juan L. Pérez-Camaño, Libia Perez, Rosa María González, Julia Pecci, Antonio Garzón and Marino Palacios

TECHNICAL UNIVERSITY OF MADRID (UPM)

Abstract—The coarse resolution of global climate models make not possible use their information to city level, but the impact of urban climate is a key issue. The goal of this work is to quantify the future (2030, 2050 and 2100 impact on urban climate, air pollution and health of two of the IPCC global climate scenarios over the cities: Madrid, Antwerp, Milan, Helsinki and London (zone Kensington-Chelsea) with very high spatial resolution (200 meters) respect to the present (2011). The two RPC scenarios are 4.5 (stabilization emissions) and 8.5 (increases emissions). For the urban simulations we have used the present landscape of the cities and 2011 emissions inventories because we want to isolate the effects of the global climate over the city. For this task, we have used a modelling system than allow the evaluation of the impact of climate change on urban climate, air quality and health with feasible computational cost. It includes the usually mesoscale/regional meteorological/air pollution model WRF-Chem (NOAA, USA) to produce information about concentrations and meteorological data covering Europe with 25 km of spatial resolution. At urban scale we use the diagnostic meteorological model CALMET and the air pollution CMAQ with simple chemical reactions. Several climate and health indicator have been calculated to meet the future impacts. Comparison of simulations to the current situation (using NNRP 2011 reanalysis datasets) shows acceptable agreement with measurements that give us great confidence in the results. he scenario is characterized by temperature increase from 2050, peaking impact in 2100, especially in Madrid and Milan, with large increases.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M1004 Presentation 11 (15:30~15:45)

Trends and Features of China's Urban Expansion from 1992 to 2012 Based on DMSP/OLS Data

Na Li, Wenli Qiang, Shuwen Niu, Haixia Zhang, and Hong He

Lanzhou University

Abstract—Based on DMSP/OLS data, this study discusses the trends and features of China's urban land expansion in eight regions during 1992-2012. The results show that China's urban land area extracted using threshold values 8, 20, and 41 was inversely related to the threshold values and had a high reliability when DN≥20. There was the highest urban land proportion in the coastal region and the lowest in the western region. The intensity index of annual average expansion showed the similar change trend. For the speed of land urbanization was faster than that of population urbanization, the population density in urban areas tended to be sparse. The elasticity coefficient of urban land expansion had different characteristic in different region. Thus it is necessary to deal with the relationship between improving people's living condition and land conservation, and develop moderate compact cities in the process of urbanization.

Afternoon, January 24, 2016 (Sunday)

Time: 13:00~16:00

Venue: Had-Sai Meeting Room

Session 1: 12 presentations-Topic: "Environment & Climate"

Session Chair: Prof. Orawan Siriratpiriya

M1005 Presentation 12 (15:45~16:00)

Geological Statistics Analysis of Population Distribution at Township Level in Henan Province, China

Haixia Zhang, Wei Qu, Shuwen Niu, Jinghui Qi, Liqiong Ye, and Guimei Zhang

Lanzhou University

Abstract—Based on the sixth population census data at township level, this article analyzes the population distribution of Henan province, China by the geological statistics method. The result shows that population distribution of Henan province could be divided into three types: low density in mountain areas, medium density in plain areas, and high density in urban regions. The variation functions have similar trends in the four directions of E-W, N-S, NE-SW, and NW-SE. When the distance is over 80km, the anisotropy enhances. The exponential model has the best fitting effect for the variation function. The interpolation results represent the gradient change process of population density intuitively. Terrain condition is the basic factor influencing on the population spatial pattern. High population density in urban regions are the outcomes of mutual effects between the superior geographical condition and socioeconomic development.

16:00-16:15	**Coffee Break**

Session 2

Tips: The schedule for each presentation is for reference only. In case of missing your presentation, we strongly suggest that you attend the whole session.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

A0003 Presentation 1 (16:15~16:30)

Optimal Operation of a CCHP Microgrid Using Interval Mixed-Integer Linear Programming

Zhao Luo, Wei Gu, Song Gao, Zhihe Wang, and Yiyuan Tang

The School of Electrical Engineering, Southeast University, China

Abstract—The development of combined cooling, heating, and power (CCHP) microgrids using distributed cogeneration equipment and renewable energy sources has drawn considerable research attention. In this study, we propose an interval mixed-integer linear programming (IMILP) dispatching model for supporting the economic dispatch of a CCHP microgrid under uncertainties. Our model is based on the interval programming method, where uncertainties can be incorporated and communicated into the economic dispatch problem using interval values. The proposed IMILP dispatching model is decomposed into two sets of deterministic sub-models, f^- and f^+, which are solved sequentially. We use a case study of a hotel in China to demonstrate how this model can be applied to support economic dispatch decisions for a CCHP microgrid. Simulation results indicated that load and PV power uncertainties mainly affect the dispatching results of the power exchange, gas boiler and electricity chiller, while the power generation unit is consistent under different uncertainty levels. The obtained dispatching results can provide more flexibility for decision makers by generating alternative decisions for CCHP microgrid dispatching under uncertainties.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

A0006 Presentation 2 (16:30~16:45)

Integration of Wind Flow into the Bioclimatic Design in Djibouti

Abdou Idris Omar, Abdoulkader Ibrahim Idriss, Omar Assowe Dabar, Mohamed Said Darar, and Abdourazak Ahmed Kayad

University of Djibouti, Djibouti

Abstract—East African countries are growing rapidly which significantly affect cities' climate. Such modifications negatively affect environment and inhabitant safety and comfort. Proper urban atmospheric planning and management are therefore key to making cities environmentally friendly and sustainable. Djibouti, in particularly, there is a need to integrate wind flow into the building design and to introduce the bioclimatic conception while improving the comfort of building occupants. Therefore, integration wind in building design known as a passive design strategy in buildings is one of the innovative techniques in modern building to reduce operation costs and energy consumption. This work provides an overview of the potential use of natural ventilation for free cooling applications and aerothermal analysis, by using the CFD (Computational Fluid Dynamics) applied on the building, for a local and sustainable development in Djibouti.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: “Energy & Biology”

Session Chair: Prof. Dr. Manju Tembhre

A0009 Presentation 3 (16:45~17:00)

Numerical Investigation of Solar Enhanced Passive Air Cooling System for Concentration Photovoltaic Module Heat Dissipation

Zheng Zou, Hengxiang Gong, Jingshu Wang, and Xieshi Lie

Chongqing University of Technology, China

Abstract—The major issue related to the passive air cooling technology for high concentration photovoltaic (HCPV) module is that their heat dissipation efficiencies highly rely on the ambient temperature and wind speed. It may not provide enough cooling for solar cells causing the malfunction of HCPV module under the worst case scenario, i. e., high ambient temperature and no wind condition. In this study, a novel passive air cooling device, named as Solar Enhanced Passive Air Cooling System (SEPACS), was proposed. To verify its performance advantage over conventional aluminum plate heat sink, a three dimensional model was developed in the CFD software. Numerical comparative analysis shows that the SEPACS can keep cell temperature under 75oC when the concentration ratio reaches to 700, while solar cells cooled by conventional aluminum plate heat sink would be overheated at same concentration ratio.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: “Energy & Biology”

Session Chair: Prof. Dr. Manju Tembhre

A0012 Presentation 4 (17:00~17:15)

Retrofitting a CO_2 Capture Unit with a Coal Based Power Plant, Process Simulation and Parametric Study

Sukanta K. Dash and Leena Wadibhasme

Pandit Deendayal Petroleum University, India

Abstract—In this work flowsheet simulation of a coal fired power plant retrofitted with a CO_2 capture unit has been carried out in the AspenPlus process simulator platform. The simulation is an attempt for the detailed process involved in CO_2 capture starting from generation of flue gas, CO_2 capture by monoethanolamine (MEA) and regeneration of solvent using unit operation models available in Aspen Plus and appropriate calculator blocks wherever necessary using FORTRAN codes. The parametric study includes effect of absorber column height, regenerator pressure, on reboiler heat duty and power plant efficiency. Parametric study such as energy penalty on the power plant, reboiler duty of the capture unit, evolution of energy requirement has been done and presented. The contribution of desorption energy is about 47% of the total capture energy and the power plant penalty is about 30% lower when low pressure steam has been utilized to supply heat energy to reboiler.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: “Energy & Biology”

Session Chair: Prof. Dr. Manju Tembhre

A0014 Presentation 5 (17:15~17:30)

Modeling of Dust Deposition Affecting Transmittance of PV Modules

Jingshu Wang, Hengxiang Gong, and Zheng Zou

Chongqing University of Technology, China

Abstract—The dust deposition significantly influences the energy gained from the solar power system. The dust deposition of PV modules is decided many factors, such as weather, location, tilt angle, and so on. This paper focuses on the influence factors of the PV modules. In order to realize the relationship between the dust deposition and the sunlight transmittance of the solar PV module, improved models considering the effect of incident angle and tilt angle are developed based on the overlay model. Then simulation with the improved models is conducted to analyze the characteristics of each model.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: “Energy & Biology”

Session Chair: Prof. Dr. Manju Tembhre

A0024 Presentation 6 (17:30~17:45)

Deposition of Pt and Pt-Ru Nanoparticles on $RuO_2.xH_2O$ Using Microwave Method for Direct Methanol Fuel Cells

Jim Zheng and Vivek Tiwari

Florida State University, USA

Abstract—An easy and quick way to deposit platinum (Pt)-ruthenium (Ru) alloy nanoparticleson hydrous ruthenium dioxide ($RuO_2.xH_2O$) as supporting materials was developed usingmicrowave heating. The x-ray diffractometer and selective area electron diffraction (SAED)showed that Pt-Ru alloy was formed. The transmission electron microscopic (TEM) imageshowed that average size of Pt-Ru was about 2-3 nm. Cyclic voltammogram of a Pt-Ru/$RuO_2.xH_2O$ electrode showed high specific capacitance due to the protonation reaction in the acidic electrolyte and catalytic activity, including the methanol oxidation. The new Pt-Ru/$RuO_2.xH_2O$ can be used as anode electrode materials in monolithic fuel cell/supercapacitor hybrid energy devices, since it has already been demonstrated that a layer of $RuO_2.xH_2O$ sandwiched between anode catalytic layer and a membrane improved the dynamic response of the direct methanol fuel cell (DMFC).

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

A1005 Presentation 7 (17:45~18:00)

Economic Analysis of Coal Gasification Plant for Electricity and Thermal Energy Supplies in Indonesia

Prima Zuldian, Suneerat Fukuda, and M. Djoni Bustan

The Joint Graduate School of Energy and Environment at King Mongkut's University of Technology Thonburi (JGSEE-KMUTT), Thailand

Abstract—Development of coal gasification plants in Indonesia for electricity and thermal energy supplies has been started officially since 2011. So far, two gasification technologies have been selected for demonstration, including two-stage updraft fixed-bed (Plant A) and twin-fire fixed bed gasifier technologies (Plant B). Economic analysis for electricity generation cost, selling price (with achieve ROI = 11% and 4 year loan installment) and tariff (with transmission cost added) as well as syngas generation cost and selling price was conducted based on these two technologies. The calculated electricity generation cost are 0.189 and 0.204 US$/kWh, electricity selling price are 0.273 and 0.352 US$/kWh and electricity tariff are 0.279 and 0.358 US$/kWh for Plant A and B, respectively. Thermal energy is supplied as synthetic gas (syngas). The calculated syngas generation cost are 0.322 and 0.340 US$/Nm3 and syngas selling price are 0.38 and 0.512 US$/Nm3, for Plant A and B, respectively. The analysis also shows that, based on the studied scenario, the selling prices of electricity from coal gasification are competitive when compared to that from diesel oil (i.e. 0.375 US$/kWh) but much less competitive when compared to that natural gas (i.e. 0.0864 US$/kWh). The selling prices of syngas is also higher than that of Liquefied Petroleum Gas (LPG) (i.e. 0.238 US$/Nm3).

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

A2014 Presentation 8 (18:00~18:15)

Computational Study on Energy Savings and CO_2 Reduction from Combined Heat and Power with Chemical Heat Storage

Yoshikazu Shirai and Noriko Osaka

Tokyo Gas Co. Ltd, Japan

Abstract—The potential of chemical heat storage (CHS) for saving energy and reducing CO_2 emissions through more effective utilization of combined heat and power systems (CHP) was evaluated using a mathematical model based on linear programming. The mathematical model constructed in this study can be used to minimize the total cost in industrial factories by optimizing the capacity and operational performance of the energy supply equipment. CHP utilization, total primary energy consumption, and total CO_2 emissions were calculated from the optimized results. Optimization and calculation were conducted for selected food factory and automobile factory in Japan. It was assumed that their energy system consisted of a power grid, boiler, gas engines or gas turbines as CHP, along with CHS using MgO/H_2O materials. In the case of the food factory, the potential of CHS for saving energy and reducing CO_2 emissions could not be confirmed because the energy supply could be optimized without CHS, using only the power grid, CHP, and boiler. On the other hand, for the automobile factory, CHS improved CHP utilization by 2.1%, and reduced total primary energy consumption and total CO_2 emissions by 1.4% and 1.5%, respectively.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: “Energy & Biology”

Session Chair: Prof. Dr. Manju Tembhre

G0005 Presentation 9 (18:15~18:30)

Prediction of Bacterial Virulent Proteins with Composition Moment Vector Feature Encoding Method

Murat Gök and **Deniz Herand**

Yalova University / Turkish German University, Turkey

Abstract—Prediction of bacterial virulent proteins is critical for vaccine development and understanding of virulence mechanisms in pathogens. For this purpose, a number of feature encoding methods based on sequences and evolutionary information of a given protein have been proposed and applied with some classifier algorithms so far. In this paper, we performed composition moment vector (CMV), which includes information about both composition and position of amino acid in the protein sequence to predict bacterial virulent proteins. The tests were validated in three different independent datasets. Experimental results show that CMV feature encoding method leads to better classification performance in terms of accuracy, sensitivity, f-measure and the Matthews correlation coefficient (MCC) scores on diverse classifiers.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

G1002 Presentation 10 (18:30 ~18:45)

Optimization of Callus Biomass yield and Phyllanthin Compound in the Callus Culture from Leaves of *Phyllanthus debilis* Klein ex Willd

Dr. B. Janarthanam, Ms. S. I. Beema Jainab, and Dr. E. Sumathi

POONGA BIOTECH RESEARCH CENTRE, INDIA

Abstract—The aim of the present study was to evaluate the optimization of callus biomass culture yield and high-performance liquid chromatography (HPLC) analysis of Phyllanthin compound in the callus culture from leaves of *Phyllanthus debilis*. Leaf explants showed better callus initiation than nodal explants. Maximum callus induction was observed in MS medium containing 4.54 μM TDZ. Further screening of callus culture was carried out on MS medium supplemented with different concentrations and combinations of 2,4-D, NAA, IAA, BA, and TDZ individually and in combinations. Optimum callus biomass of 18.63 g/L dry weight (196.31 g/L fresh weight) was developed on MS media containing 2.26 μM - 2,4-D, 2.22 μM – BA, and 4.54 μM - TDZ. The harvested callus biomass was subjected to extraction and purification of Phyllanthin compound. The present study concludes that HPLC analysis of cell biomass extracts in comparison with extracts from leaves of mother plants of *Phyllanthus debilis* showed main component of Phyllanthin was present in sufficiently large amounts in the undifferentiated cultured cells.

Afternoon, January 24, 2016 (Sunday)

Time: 16:15~19:00

Venue: Had-Sai Meeting Room

Session 2: 11 presentations-Topic: "Energy & Biology"

Session Chair: Prof. Dr. Manju Tembhre

G2012 Presentation 11 (18:45~19:00)

Reliability of Using Elastic Modulus for Non- Homogeneous Materials

RIMSHA KHAN and Zartasha Mustansar

Research Center of Modelling and Simulations (RCMS), National University of Sciences and Technology (NUST), Sector H-12, Islamabad, Pakistan

Abstract—This paper reviews the literature available for the derivation of elastic modulus (E) as employed specifically in non-homogenous materials. There is a big pool of (E) values in the literature that user can pick and use. However their reliability, is still a question. This study will therefore focus on the values of elastic modulus acquired from the secondary databases and their reliability. The study uses (E) values mostly obtained from bones, muscles and tissues. Bone is a composite material with a very complicated internal geometry. Acquiring the elastic modulus values for irregular geometries like bones is not a straight forward process. This study therefore compares the different studies provided in literature for the derivation of elastic properties of bones from different vertebrates and investigates the reason of different E values in different vertebrates. The study infers that populating all the values of elastic modulus without a standard procedure, creates a level of ambiguity that bars the understanding of the use of modulus of elasticity where insightful procedures are in question for example finite element analysis of sensitive materials . Therefore there is a need to arrange the whole pool of (E) values in a manner which is sensible, less uncertain and reliable (especially) for the biomechanics community to gain overall confidence in the results.

Poster Session

Tips: The poster session will last from 9：00 to 19:00. Please provide your home-made poster to the conference specialist in advance before the conference beginning.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A0008

WinDam: A Novel Airborne Wind Turbine

Ken Nagasaka, Amin Amini, and Mohammad Mehdi Vaez Momeni

Tokyo University of Agriculture and Technology, Japan

Abstract—This paper presents the design, modeling and development of a novel airborne wind turbine composed of a tethered air dam supporting an embedded wind power generator, denoted as WinDam, which extracts energy from wind blowing between 50 and 300 m above the ground. The power generation and lift systems are integrated in this design; they do rely on each other for operation and design. The lift system is an air flyer with longitudinal control, lateral control and attack angle control capabilities. The tether serves to both anchor the device and to transmit electricity to the ground. The good matching between experimental data, collected by using an embedded system installed on the small-scale WinDam prototype, compared to computational fluid dynamic (CFD) analysis results reveal that WinDam can increase the flow stream wind velocity up to 193% at the location of generator due to low-pressure region behind the kite. Finally, WinDam has the potential to overcome the limits of the actual wind turbines and to provide large quantities of renewable energy.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A2005

Less Iodide Remained PbS Quantum Dots Sensitized-Solar Cells with S2- Concentration

Min Hyeok Jang, Jin Hyuck Heo, and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—PbS quantum dots (QDs) have been of great interest because of their noticeable properties. Therefore, the PbS QDs are good model candidate as a new sensitizer to demonstrate highly efficient QDs sensitized-solar cells. Until now, the PbS QDs have been successively synthesized by the hot solution chemistry. However, the colloidal PbS QDs are passivated by long insulating alkyl chains to form uniform sized colloidal QDs. The long alkyl chains should be removed or substituted to short chains to efficiently transport charge carriers between multiply layered PbS QDs. Hence, it is more desirable to form PbS QDs without insulating passivation layer by simple solution chemistry such as successive ionic layer adsorption and reaction (SILAR) method. But, there is a problem which unreacted PbI_2 remains on mp-TiO_2. It act as defects to happen recombination. To solve this problem, we propose some different concentrations of S2- based on a simple idea about reaction probability.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: "Energy & Biology"

A2006

High Device Performance of Mesoscopic Hybrid Solar Cells by One-Step Coating Method with Controlled Crystallization

Jin Kyoung Park, Jin Hyuck Heo, and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—In a recently few years, the perovskite-hybrid solar cells attract researcher's attention because of their interest properties in accordance with the binding of inorganic&organic nature such as high absorption coefficient by direct bandgap, convenient bandgap tunability by simple combination/mixing of materials, long diffusion length of charge carriers by long life time, high open circuit voltage by small exciton binding energy, low temperature solution processibility and so on. One of important points to improve performance of hybrid solar cells being studied nowadays is to fabricate the formation of pinhole-free single crystalline thin-films during the coating process in order to reach a similar performance of established energy source like fossil fuel. The thin-film deposition methods can be roughly classified to solution and vapor deposition of which the former includes one-step and multi-step coating method and the latter includes dual source vapor deposition and vapor assisted solution process. Among them, one-step coating method seems the simplest process and has benefit to form single crystalline perovskite thin-film. Here, we deposited methylammoniumleadtriiodide perovskite thin-films on mp-TiO_2 electrode by one-step spin-coating method with well-developed crystallization. Accordingly, we could only improve the efficiency of mesoscopic perovskite solar cells through the formation of pinhole-free thin-film with controlled morphology.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A2007

Reproducible Film Formation of $CH_3NH_3PbI_{3-x}Cl_x$ Mixed Halide Perovskite Solar Cell

Dea Ho Song, Jin Hyuck Heo, and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—The mixed halide perovskite ($CH_3NH_3PbI_3$-xClx, $MAPbI_3$-xClx) is used for highly efficient photovoltaic material because of its improved charge transport property and diffusion length by Cl doping without band gap change. The film uniformity is dramatically affect reproducibility of the device efficiency for solar cell of planar-structure type. The conventional method of $MAPbI_3$-xClx film deposition is single-step spin-coating using one solution dissolving MAI, $PbCl_2$ (molar ratio, 3:1) in polar solvent. This method is difficult to obtain uniform film because the heat-treatment process for long time makes rough surface by sublimation/elimination of excess MACl. To obtain uniform the film of $MAPbI_3$-xClx reproducibly, we separated the process to the formation of $MAPbI_3$-xClx and the film deposition of $MAPbI_3$-xClx.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: "Energy & Biology"

A2008

$Sb(TA)_2Cl_3$ Single Source Precursor: Application to Solar Cells

Min Ho Lee, Jin Hyuck Heo, and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—Sb_2S_3 is compatible material as a light absorber in metal chalcogenides because of its great merits. Antimony sulfide has a strong absorption coefficient ($1.8 \times 10^5\ cm^{-1}$ in visible region), suitable band gap (≈ 1.7 eV) and large dipole moment which enable separate charge easily. So far, the Sb_2S_3 light absorber has been formed by successive ionic layer adsorption and reaction (SILAR), chemical bath deposition (CBD) and spin & heat treatment method. When forming Sb_2S_3 using CBD method, it is impossible to avoid forming Sb_2O_3 because of the side reaction of $SbCl_3$ and H_2O into insoluble SbOCl. To prevent the formation of SbOCl, we synthesized $Sb(TA)_2Cl_3$ single source precursor which can convert Sb_2O_3 into the pure Sb_2S_3 by heat treatment. So we fabricated Sb_2S_3 sensitized solar cells by spin & heat treatment method using $Sb(TA)_2Cl_3$ single source precursor.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A2009

Synthesis of Polystyrene Microspheres by Changing Reaction Time in Plug Flow Reaction System

Jin Han and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—Polystyrene (PS) is useful in many fields such as photonic sensor, optical filtering element and anti-glare filler. To synthesize PS, many research have been developed the process with many kinds of reactors. One of them is Plug flow reactor which is widely used for producing synthetic polymer. In many cases, it has many advantages such as product quality, high conversion and ease of handling reagents and products compared to batch reactor. In batch reactor, we often meet the situation that some particles are coagulated, flocculated and then precipitated. It is difficult to get uniform products because of sediment. This situation would deteriorate according to scale-up, so the amount of sediment would increase. Also, it is hard to apply a large quantity production. These are the reasons for necessity of a precise reactor design to prevent the situation. However, in plug flow reaction system, there is no variation of reaction condition and the conversion per unit volume is higher than batch reactor. Therefore, we can get easily the same quality of particles using plug flow reaction system which is suitable for mass production. Here, we synthesized the uniform polystyrene microspheres with controlled size by changing reaction time in plug flow reaction system.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A2010

High-Yield Synthesis of Silver Nanowires with High Aspect Ratio via Selective Nucleation and Growth Reaction

Hye Ji Han and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—Lately, 1-D metallic nanostructures including silver nanowires have attracted a great deal of attention because of their prominent optical, electrical, and thermal properties. As the market gradually requires the large and flexible displays such as LCDs, touch screens, and LEDs, the conventional inorganic TCO such as ITO becomes not to satisfy the specification of low resistance, high transmittance, flexibility, and low cost. Therefore, needs for alternative technologies such as metal meshes, graphene, CNT, TCOsols, conducting polymers, and metal nanowires are created to solve the problems. Among them, metal meshes or metal nanowires seem to be good candidate to satisfy above specifications because the metals are inherently conductive and ductile, and can be drawn the patterns by modifying conventional TCO pattering equipment. Especially, the silver nanowires are of great interest because the flexible transparent electrode for large touch screens can be fabricated by cheap solution coatings. One of key technologies for silver nanowire based transparent electrode is relied on the development of silver nanowires with high aspect ratio (>1000). Here, we tried to synthesize silver nanowires with high aspect ratio via selective crystal nucleation and crystal growth reaction by controlling additives which can selective cap the certain facet of silver nanocrystals.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

A2013

Hydrothermal Synthesis of Metal Doped VO_2 Using Seed

Myung Sang You and Sang Hyuk Im

Kyung Hee University, Republic of Korea

Abstract—VO_2(M/R) shows fully reversible first-order metal-to-insulator transition with the phase transition temperature(Tc) at about 680C, so it is expected to be able to apply for the smart window which can reduce energy consumption for building. Various technologies have been developed to synthesize VO_2(M), however most of them are complicated and high cost. So they are not suitable for industrial applications. Among them, hydrothermal method has the possibility for application because the route is simple and requires low temperature respectively although heat treatment process is necessary to make pure phase. To solve this limit, we use VO_2 seed which can accelerates the reaction, so it requires less temperature and can remove heat treatment process. Finally we synthesize pure Mo-doped VO_2(M) through one pot hydrothermal method by using VO_2 seed at lower temperature than other research and it is useful to realize for the smart window application.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: "Energy & Biology"

G2002

Regulation of Intestinal Inflammation by Black Adzuki Bean in the Development of Obesity following High-Fat Diet Feeding

Jin-Seon Yook, **Mina Kim**, Kyung-Ah Kim, and **Youn-Soo Cha**

Chonbuk National University, Republic of Korea

Abstract—Dietary factors and low-grade inflammatory state are known to be related to obesity. In addition, it has been noted that hyperphagia triggers hypertrophy of adipocytes leading to inflammation. Adzuki bean (*Vignaangularis*) widely used in East Asia as folk medicine and has been reported to possess several health benefits on metabolic diseases like obesity, diabetes. Moreover, recent research reported that black adzuki bean (BAB) has anti-obesity effect *in vitro* and *in vivo* and anti-radical effects *in vitro*. Therefore, the aim of current study was to investigate the hypothesis that inflammation in intestine induced by high-fat diet could be ameliorated by the treatment of BAB in rodents. C57BL/6J mice were divided into 4 groups: Normal Diet (ND), High-fat Diet (HD), High-fat diet with 0.5% BAB extract (B0.5), High-fat diet with 0.08% Kaempferol (Kfr). The improved parameters such as body weight gain and pro-inflammatory cytokines suggested that BAB might have anti-inflammatory effects against high-fat induced obesity in mice. Thus, these results may lead to a potential alternative in the treatment of obesity and inflammation induced by high fat diet.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: "Energy & Biology"

G2003

Anti-Oxidant Modulatory Effect of Three Different Types of Fertilizers on Chinese Cabbage (Brassica Campestris Ssp. Pekinensis) Enhancing its Anti-Proliferative Properties on HepG2 Cells

Hee-Jeong Kim, **Thomas Shalom Sara**, **Mi-Sun Kim**, Ravichandran Vijaya Abinaya, and Youn-Soo Cha

Chonbuk National University, Republic of Korea

Abstract—As a result of increase in global population, the demand for agricultural products has risen; to meet such an extensive need, chemical fertilizers are widely used resulting in vegetables with compromised nutritional value. Vegetables with higher nutritional value have greater demand in market these days. Therefore, this study was carried out to identify and compare the antioxidant capacity of Chinese cabbage cultivated using three different kinds of fertilizers (i.e. eco-developed/organic/chemical) and the effect of the same against hepatic cancer cell (HepG2) proliferation was analyzed. Analyses of phenolic compounds were carried out by measuring the total flavonoids and total polyphenol; while antioxidant capacity were analyzed using reducing power, DPPH and $ABTS^{+}$ radical scavenging activity assays. HepG2 cell proliferation was determined using MTT assay.The results showed a significant increase in the level of phenolic compounds and antioxidant capacity in the Chinese cabbage cultivated using eco-developed fertilizer compared to those using chemical or organic fertilizers. The Chinese cabbage cultivated in chemical fertilizer significantly inhibited the proliferation of HepG2 cells compared to those cultivated using eco-fertilizer or organic fertilizer. In conclusion, the phenolic compound and antioxidant activity of Chinese cabbage were affected by different kinds of fertilizers. Compared to other two fertilizers, usage of eco-developed fertilizer could improve the nutritional value of vegetable by enhancing the phenolic compounds and antioxidant properties.However, the HepG2 cells proliferation inhibitory effect was higher in the chemical fertilizer cultivated cabbage could be due to the difference in levels of other phytochemicals which is needed to be analyzed in future.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

G2005

Enzyme Kinetics and Molecular Docking Studies of Compounds Isolated from the Root Bark of *Morus Alba* on Inhibition of Acetylcholinesterase and β-site Amyloid Precursor Protein Cleaving Enzyme 1 (BACE1)

Eun Bi Kuk, A Ra Jo, Seo In Oh, Hee Sook Sohn, Jae Sue Choi, and Hyun Ah Jung

Chonbuk National University, Republic of Korea

Abstract—Inhibition of acetylcholinesterase (AChE) and β-site amyloid precursor protein cleaving enzyme 1 (BACE1) plays important roles in treatment of Alzheimer's disease (AD). In this study, we investigated the compounds, including mulberrofuran G (1), albanol B (2) and kuwanon G (3) which were isolated from the root bark of *Morus alba* L. as AChE- and BACE1-inhibitors *via* enzyme kinetic studies and molecular docking simulations. Our enzymatic kinetic study revealed that compounds 2 and 3 showed noncompetitive-type inhibition, while 1 showed mixed-type inhibition against AChE. Moreover, compounds 1-3 showed mixed-type inhibition against BACE1. In addition, the molecular docking simulations of compounds 1-3 demonstrated negative binding energies (-2.7 to -4.3 kcal/mol for AChE and -10.4 to -11.3 kcal/mol for BACE1), indicating a high affinity to AChE and BACE1. The hydroxyl group of compounds 1-3 formed hydrogen bond with the amino acid residues located at the active sites of AChE (Ser200, His440, and Tyr70) and BACE1 (Asp228, Asp32, Gln73, and Thr329), respectively. Our results demonstrated that the compounds 1-3 might be lead compounds for therapeutic and preventive agents for AD.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: “Energy & Biology”

G2006

β -Site Amyloid Precursor Protein Cleaving Enzyme 1 (BACE1)- and Acetylcholinesterase-Inhibitory Activities of Isorhamnetin and Its Glycosides Isolated from *Artemisia Capillaris* and Their Molecular Docking Studies

A Ra Jo, Eun Bi Kuk, Seo In Oh, Hee Sook Sohn, Jae Sue Choi, and Hyun Ah Jung

Chonbuk National University, Republic of Korea

Abstract—β-Site amyloid precursor protein cleaving enzyme 1 (BACE1) and acetylcholinesterase (AChE) are implicated in pathogenesis of Alzheimer’s disease (AD). BACE1- and AChE-inhibitors are potential therapeutic candidates for the treatment of AD. In this study, we performed molecular simulations and enzyme kinetic analyses of four flavonoids, including isorhamnetin (1), isorhamnetin-3-*O*-glucoside (2), isorhamnetin-3-*O*-galactoside (3) and isorhamnetin-3-*O*-robinobioside (4) which were isolated from *Artemisia capillaris* with BACE1 and AChE. In BACE1 analysis, 4 showed noncompetitive inhibition, while compounds 1-3 exhibited mixed-type inhibition. Moreover, compounds 1 and 4 exhibited noncompetitive inhibition, while 3 showed mixed-type inhibition for AChE. The docking simulations demonstrated negative binding energies (-8.1 to -10.0 kcal/mol for BACE1; -6.6 to -9.5 kcal/mol for AChE) indicating a high affinity of flavonoids to the corresponding enzymes. In addition, the aglycone and sugar moiety on flavonoids tightly interacted with BACE1 (Asp228, Thr231, Thr232, Tyr71, and Tyr198) and AChE (Tyr70, Tyr121, His440, Ser122, Ser200, and Phe331), respectively. Our results indicated that *A. capillaris* and flavonoids as natural inhibitors on BACE1 and AChE could be further explored to develop therapeutic agents for the treatment of AD.

January 24, 2016 (Sunday)

Time: 9:00~19:00

Venue: Had-Sai Meeting Room

Poster Session: 13 posters -Topic: "Energy & Biology"

G2007

Pentacyclic Triterpenoids Isolated from the Leaves of *Eriobotrya Japonica* Potently Inhibits α-Glucosidase: Investigation by *in Silico* Docking Simulation with Enzyme Kinetic study

Seo In Oh, Eun Bi Kuk, A Ra Jo, Hee Sook Sohn, Jae Sue Choi, and **Hyun Ah Jung**

Chonbuk National University, Republic of Korea

Abstract—Development of α-glucosidase inhibitors has been needed for treatment of diabetes and hyperglycemia-related diseases. Accordingly, we investigated α-glucosidase inhibitory activity of tritepenoids, including ursolic acid (1), corosolic acid (2), 3-epicorosolic acid (3), euscaphic acid (4), ursolic acid lactone (5), oleanolic acid (6) and maslinic acid (7) which were isolated from *Eriobotrya japonica*. Enzyme kinetic study on α-glucosidase revealed that triterpenoids 1 and 7 showed a mixed-type inhibition, while 2-6 displayed noncompetitive inhibition. The docking simulation of 1, 2 and 3 on α-glucosidase demonstrated that compound 1-3 showed negative binding energies of -8.1 to -8.4 kcal/mol. Enzyme-ligand interactions occurred through hydrogen bond between hydroxyl (C-2 and/or C-3) and carboxyl (C-28) groups on triterpenoids and α-glucosidase amino acid residues (Asp630, Asp232 and Ser497). Also, hydrophobic ring system of triterpene was found to be tightly bound in relatively nonpolar amino acids (Tyr329, Trp432, Phe236, Phe476, Phe601, Asn237, Ala602, Lys506 and Ala628) through van der Waals interaction. In addition, presence of hydroxyl group in C-2 interacted with different amino acid residues. The combination of both hydrogen bonding and van der Waals interactions may contribute to α-glucosidase inhibitory activity of triterpenoids. In conclusion, triterpenoids could be possible candidates for treatment of diabetes.

Dinner	
19:20	**Hotel Restaurant**

Conference Venue

Pattaya Discovery Beach Hotel

489 Soi 6/1, North Pattaya, Pattaya Beach Road,
Pattaya City, Chonburi 20150, Thailand
Tel:+66(0)3841-3833-6,+66(0)3836-1578-80 Fax: +66(0)3836 2491
www.pattayadiscoverybeach.com

Located along Pattaya Beach, Discovery Beach Hotel features an outdoor pool. Also providing a fitness center, the hotel features modern rooms with free Wi-Fi. A 7-minute walk from Central Festival, Pattaya Discovery Beach Hotel is located at the Northern tip of Pattaya Bay, a 30-minute ride from Under Water World. Nong Nooch Garden is a 45-minute drive away. It is a 5-minute drive from Walking Street.

Rooms at Pattaya Discovery Hotel feature balconies overlooking the Gulf of Thailand and tropical landscapes that surround the hotel. They come with a flat-screen cable TV, minibar and tea/coffee maker. The hotel features a children's playground for little ones. Other facilities include a tour desk and business center for guests' convenience.

489 Soi 6/1, North Pattaya, Pattaya Beach Road,
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Tel:+66(0)3841-3833-6, +66(0)3836-1578-80
Fax:+66(0)3836 2491

One-Day Visit in Pattaya

January 25, 2016 (Monday) 9:00-17:00

(Departure from Hotel Lobby)




9:00--- Depart from hotel by bus or van to Sriracha district

9:15-10:00--- A boat (Chulavijai) travel light from Sriracha district, Chonburi province to Sichang research station of ARRIC (Aquatic Resources Research Institute, Chulalongkorn University) at Sri Chang Island

10:00-10:30---Coffee/tea break

10:30-10:45---Welcome to The Aquatic Resources Research Institute, Chulalongkorn University (ARRIC) by Director ARRIC (Assoc. Prof. Warawut Chulaluxananukul)

10:45-12:00---Visit research activities on the island, Discussion for collaboration project

12:00-13:30---lunch

13:30-17:00---Boat trip (Chulavijai) go round the Sichang island as sight seeing (+ transplant coral reef activity near by the coast)

17:00---depart from the Sichang island to Sriracha district and further to Hotel

APCBEES Forthcoming Conferences

http://www.cbees.org/events/

CONFERENCE INFORMATION		PUBLICATION
April 24-25, 2016, Antalya, Turkey		
ICBFS 2016	2016 7th International Conference on Biotechnology and Food Science (ICBFS 2016) http://www.icbfs.org/	International Journal of Food Engineering (IJFE, ISSN:2301-3664) Or International Journal of Life Sciences Biotechnology and Pharma Research (IJLBPR, ISSN:2250-3137)
ICESE 2016	2016 6th International Conference on Environment Science and Engineering (ICESE 2016) http://www.icese.org/	International Proceedings of Chemical, Biological and Environmental Engineering(IPCBEE, ISSN: 2010-4618)
May 25-27, 2016, Jeju Island, Republic of Korea		
ICEEB 2016	2016 5th International Conference on Environment, Energy and Biotechnology (ICEEB 2016) http://www.iceeb.org/	International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE, ISSN: 2010-4618)
June 10-12, 2016, Barcelona, Spain		
ICEST 2016	2016 7th International Conference on Environmental Science and Technology (ICEST 2016) http://www.icest.org/	International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE, ISSN: 2010-4618)
ICPIE 2016	2016 5th International Conference on Petroleum Industry and Energy (ICPIE 2016) http://www.icpie.org/	Journal of Industrial and Intelligent Information (IJIII, ISSN: 2301-3745) Or International Journal of Smart Grid and Clean Energy (IJSGCE, ISSN:2315-4462)
ICBBT 2016	2016 8th International Conference on Bioinformatics and Biomedical Technology (ICBBT 2016) http://www.icbbt.org/	International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221), Or International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638)

June 25-27, 2016, Bali, Indonesia		
ICWT 2016	2016 2nd International Conference on Water Technology(ICWT 2016) http://www.icwt.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618) Or Journal-Water Conservation Science and Engineering (ISSN: 2364-5687) under Springer.
ICBBS 2016	2016 5th International Conference on Bioinformatics and Biomedical Science (ICBBS 2016) http://www.icbbs.org/	Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672) Or International Journal of Pharma Medicine and Biological Sciences (IJPMBS, ISSN: 2278-5221)
July 7-9, 2016, Shanghai, China		
ICAER 2016	2016 2nd International Conference on Advances in Environment Research (ICAER 2016) http://www.icaer.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
CCEA 2016	2016 7th International Conference on Chemical Engineering and Applications (CCEA 2016) http://www.cbees.org/ccea/	Volume of conference proceeding Or International Journal of Chemical Engineering and Applications (IJCEA ISSN: 2010-0221)
ICABC 2016	2016 3rd International Conference on Advances in Biology and Chemistry (ICABC 2016) http://www.icabc.org/	International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638) Or International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221)
July 25-27, 2016, Kuala Lumpur, Malaysia		
ICEEA 2016	2016 7th International Conference on Environmental Engineering and Applications (ICEEA 2016) http://www.iceea.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264) Or Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X)

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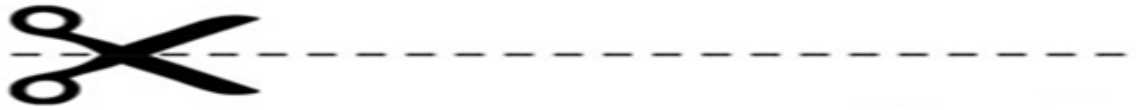
Note

Note



Feedback Information

(Please fill this form and return it to conference specialist during the conference days.)

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E-mail Address	
Area of Research	
Affiliation	

Please indicate your overall satisfaction with this conference with "√"

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
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Did the conference fulfill your reason for attending?	Yes– Absolutely □ Yes- But not to my full extent □No□ (If "No", please tell us the main reason)
Would you please list the top 3 to 5 universities in your city?	
Other Field of Interest	
Any Other Suggestions/Comments	

Thank you for taking time to participate in this conference evaluation. Your comments will enable us to execute future conferences better and tailor them to your needs!