2014 APCBEES HONG KONG CONFERENCES SCHEDULE

2014 International Conference on Food and Nutrition Technology (ICFNT 2014)
2014 International Conference on Advances in Biology and Chemistry (ICABC 2014)
2014 International Conference on Environment and Natural Resources (ICENR 2014)

Hong Kong

July 29-30, 2014

The Charterhouse Causeway Bay Hotel, Hong Kong

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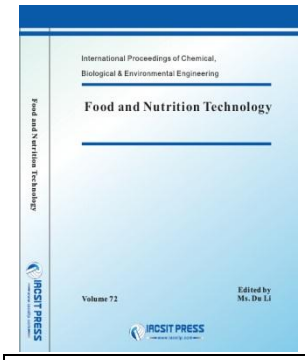
www.cbees.org

2014 APCBEES Hong Kong Conferences Introduction

Welcome to CBEES 2014 conferences in Hong Kong. The objective of the Hong Kong 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 Food and Nutrition Technology, Advances in Biology and Chemistry, and Environment and Natural Resources.

2014 International Conference on Food and Nutrition Technology (ICFNT 2014)



❄ **Paper publishing and index:** All ICFNT 2014 papers will be published in the Volume of Journal (IPCBEE, ISSN: 2010-4618), and all papers will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase(Elsevier), Ulrich's Periodicals Directory, Ulrich's Periodicals Directory, EBSCO, CNKI(中国知网), WorldCat, Google Scholar, Cross ref and sent to be reviewed by Compendex and ISI Proceedings.

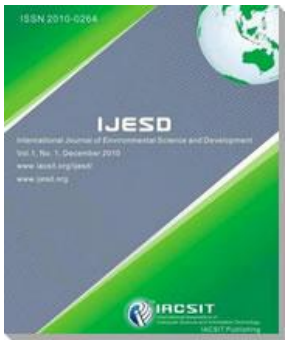
❄ **Conference website and email:** http://www.icfnt.org/; icfnt@cbees.net.

2014 International Conference on Advances in Biology and Chemistry (ICABC 2014)

❄ **Paper publishing and index:** All papers of ICABC 2014 will be published International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221), and all papers will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, WorldCat, Google Scholar, Cross ref, ProQuest , CABI and sent to be reviewed by EI Compendex and ISI Proceedings.

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

2014 International Conference on Environment and Natural Resources (ICENR 2014)



❄ **Paper publishing and index:** All ICENR 2014 papers will be published in the Journal of Environmental Science and Development (IJESD, ISSN:2010-0264), and all papers will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, WorldCat, Google Scholar, Cross ref, ProQuest, CABI and sent to be reviewed by EI Compendex and ISI Proceedings.

❄ **Conference website and email:** http://www.icenr.net/; icenr@cbees.net.

Excellent Paper Award

❄ One excellent paper will be selected from each oral presentation sessions, and the Certificate for Excellent Papers will be awarded at the end of each session on July 30, 2014.

Instructions for Oral Presentations

Devices Provided by the Conference Organizer:

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

Materials Provided by the Presenters:

PowerPoint or PDF files (Files shall be copied to the Conference Computer at the beginning of each Session)

Duration of each Presentation (Tentatively):

Regular Oral Presentation: about 8 Minutes of Presentation and 2 Minutes of Q&A
Keynote Speech: 30 Minutes of Presentation and 10 Minutes of Q&A

Instructions for Poster Presentation

Materials Provided by the Conference Organizer:

The wall to put poster

Materials Provided by the Presenters:

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

Brief Schedule for Conferences

July 29, 2014
10:00am-5:00pm
Arrival and Registration

July 30, 2014
8:30am-6:00pm
Registration and Conference Presentation

Unicorn and Phoenix (Basement Two)

Opening Remarks	08:30am~08:40am
Keynote Speech I	08:40am~09:20am
Keynote Speech II	09:20am~10:00am
Coffee Break&Photo Taking	10:00am~10:20am

Session 1 10:20am-12:00pm
ICENR 2014 for 10 presenters

Lunch 12:00pm~1:30pm

Phoenix (Basement Two)
Session 2 1:30pm-3:10pm
ICENR 2014 for 10 presenters

Unicorn (Basement Two)
Session 3 1:30pm-4:00pm
ICFNT 2014 for 15 presenters

Coffee Break 4:00pm-4:20pm

Unicorn (Basement Two)
Session 4 4:20pm-6:00pm
ICABC 2014 for 10 presenters

Dinner 6:30pm

Detailed Schedule for Conferences

July 29, 2014 (Tuesday)

Venue: Hotel Lobby

10:00am-5:00pm	**Arrival and Registration**

Note: (1) You can also register at any time during the conference.
(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.
(3) One excellent paper will be selected from each oral presentation sessions, and the Certificate for Excellent Papers will be awarded at the end of each session on July 30, 2014.

Morning, July 30, 2014 (Wednesday)

Venue: Unicorn and Phoenix (Basement Two)

8:30am-8:40am	**Opening Remarks** Dr. Saji Baby Environmental Manager (Research and Consultation) & Principal Scientist, GEO Environmental Consultation, Kuwait
8:40am-9:20am	**Keynote Speech I** Prof. Sezai Ercisli Ataturk University Agricultural faculty Dept. Horticulture, Turkey  "Food and Nutrition Characteristics of Wild and Cultivated Fruits"
9:20am–10:00am	**Keynote Speech II** Dr. Saji Baby Environmental Manager (Research and Consultation) & Principal Scientist, GEO Environmental Consultation, Kuwait  "Coastal Sensitivity, Carrying Capacity and Protection Strategies"
10:00am-10:20am	**Coffee Break&Taking Photo**

Morning, July 30, 2014 (Wednesday)

SESSION–1 (ICENR 2014)

Venue: Unicorn and Phoenix (Basement Two)

Session Chair: Dr. Saji Baby

Time: 10:20am-12:00pm

M0003	Substance Flow Analysis of Phosphorous in China **Bing Li**, Wei Yu and Boiarkina Irina University of Auckland *Abstract*—Phosphorous is an essential natural resource that is projected to run out rapidly. Environmental pollution and resource scarcity pressures require the development of a phosphorous management system in China. One of the fundamental steps to achieve this is to understand the way that phosphorous flows throughout the country. It helps to find out the current phosphorous utilization conditions and provide reliable evidence for both technology and strategy development. Based on these reasons, substance flow analysis of phosphorous was thus conducted to investigate phosphorous flow types and quantify stream values for China. The result indicates that phosphate rock resources in china will run out within 35 years at the current consumption rate, which indicates the urgency of phosphorous recovery. The substance flow analysis will also provide a guide for efficient recovery schemes design in future work. Overall, with a phosphorous crisis approaching in China, it is suggested that work be carried out into phosphorous recovery techniques and management policies.
M0007	Assessment Level of Severity of Environmental Disturbance Caused by Aquaculture Activities Using Abundance-Biomass Curves of Polychaete Assemblages **Sapto Purnomo Putro**, Widowati, and Suhartana Diponegoro University *Abstract*—Abundance-Biomass comparison (ABC) was applied to assess the level of environmental disturbance by the changes in the pattern of abundance and biomass of macrobenthic assemblages taken from various types of sediments. In the most sedimentary habitats, polychaetes usually dominate the structure and considered the most tolerant to stress associated with organic loading and low oxygen levels, thus effective as environmental indicator using ABC curve. The aim the study is to assess the environmental changes caused by Aquaculture activities using ABC curve of polychaetes assemblages as presented using the Shannon-Wiener (H') index at the studied areas. The results showed that approach to multivariate and graphical methods, especially using ABC curves can sensitively detect any environmental change, particularly changes in polychaetes assemblages, water quality and sediment over time.
M0008	Linking Benthic Macroinvertebrates and Physicochemical Variables for Water Quality Assessment in Lower Dongnai River System, Vietnam **Pham Anh Duc**, Le Phat Quoi, and Le Phi Nga Ton Duc Thang University

	Abstract—The benthic macroinvertebrates living on the bottom channels are one of the most promising of the potential indicators of river health for the Lower Dongnai River System with hydrochemistry playing a supporting role. An evaluation of the interrelationships within this approach deems necessary. This work identified and tested these relationships to improve the method for water quality assessment. Data from over 10,000 km^2 watershed were used as a representative example for Lower Dongnai River and tributaries. The data covered the period March, 2007 to 2010. To implement this evaluation, the analyses were based on accepted MRC method and the studies of scientific group for the biological status assessment. Selected environmental variables were compared with ecological indices, based on benthic macroinvertebrates. Correlation analyses showed significant relationships. The highest scores were found for organic pollution (dissolved oxygen, biological oxygen demand), nutrients (total nitrogen, total phosphorus), and microorganisms (coliform, *E. coli*). Both univariate and multivariate analyses were used to examine the ecological quality of the Lower Dongnai River System using benthic macroinvertebrates seems to be the most sensitive indicator to correlate with physicochemical variables. This demonstrated that it could be applied to describe the water quality in the Lower Dongnai River System.
M0013	Experimental Study of Particle Collection Efficiency of Cylindrical Inlet Type Cyclone Separator **Ganegama Bogodage Sakura** and Andrew Y. T. Leung City University of Hong Kong *Abstract*—The performance of collection efficiency of cylindrical inlet-type cyclone separator for relatively low solid loading rate conditions is reported. Cyclone separators usually operate under high solid loading conditions, but the demand of air pollution control at outdoor densely polluting activities as construction sites and application of power generators, it is advantageous to use cyclone separators to control outdoor air pollution by cyclone separators. Grade efficiencies and overall collection efficiencies have been investigated from 0.008g/m^3 to 0.2g/m^3 solid loading rates at 5m/s and 10m/s inlet velocity conditions. Experimental data were compared with two theoretical predictions based on empirical and mechanistic relationships, developed by Smolik and Muschelknautz. To achieve a better understanding of particle separation efficiency, particle cut size diameter for selected loading rate were considered with theoretical approached by Muschelknautz model. Both experimental and theoretical results showed that with the increase of solid loading rate and inlet velocity, the particle collection efficiency of cyclone separator increases.
M0014	Evaluation on Landscape Change Using Remote Sensing and Landscape Metrics: A Case Study of Sakaerat Biosphere Reserve (SBR), Thailand **Intareeya Sutthivanich** and Suwit Ongsomwang Suranaree University of Technology *Abstract*—Biosphere reserve is designed as an international model for exchange knowledge and experiences on sustainable development innovations across national and continental borders. To provide baseline information for future planning and management on biodiversity and environmental conservation this research investigated and evaluated the changes on landscape pattern in the Sakaerat Biosphere Reserve (SBR) of Thailand from 1980 to 2010. Multi-temporal remote sensing, geographic information system, and landscape metrics were

	applied to classify and analyze changes on landscape types and patterns. SBR landscape was classified into 6 landscape types and then four aspects of landscape metrics were applied to measure SBR landscape structure. The results showed that the natural forest landscape was the major landscape type, followed by the agriculture and the disturbed forest landscapes. Landscapes change occurred mostly in the disturbed forest, forest plantation and the urban landscapes. For landscape metrics measurement, it was found that the SBR landscape pattern variations occurred in increasing of fragmentation and diversity whereas decreasing occurred in core area and shape complexity at landscape level. Concurrently, at class level the indices indicated distinctively the trend of fragmentation, isolation, aggregation and extent of core area in the urban, forest plantation, agriculture, and the disturbed forest class.
M0017	Effect of Electric Voltage on the Photocatalytic Oxidation Disinfection of Water Used in Real Estate **C. W. Kan**, Y. N. Pan, and H. Chua The Hong Kong Polytechnic University *Abstract*—In this study, a photocatalytic oxidation system was used for the disinfection of water used in a real estate in Hong Kong, two types of domestic water namely fountain water and flushing water were used in study to test the disinfection effectiveness done by photocatalytic oxidation system. Chlorine was used in the photocatalytic oxidation system for disinfection which is using RuO_2 electrolytic and TiO_2 photocatalytic system. This study was used to evaluate the formation and the disinfection efficiency of the free chlorine generated by the photocatalytic oxidation system under different electric voltages of 10, 20 and 30V. Experimental results revealed that under electric voltage of 25 to 30V, the best disinfection effect could be achieved.
M0020	The Evaluation of Fuel Briquettes Produced from Municipal Wastes **Naruephat Tangmankongworakoon** and Patcharee Preedasuriyachai Srinakharinwirot University *Abstract*—This study aimed to turn municipal wastes from industries and households into fuel briquettes, namely coffee residue, tea residue, and fat dregs. The experiments were set up in three groups of the following mixture: Group I consisted of fat dregs and coffee residue; Group II comprised fat dregs and tea residue; Group III contained tea residue and coffee residue. The study discovered that in Group I and Group II, the ratio of 50:50 provided the highest heating value of 6,493 cal/g (Group I), and 5,727 cal/g (Group II), while in Group III, the ratio of 30:70 provided the highest heating value of 4,786 cal/g. The study also discovered that the biomass wastes rendered their moisture content (3-8%), the amount of ash (1-5%), volatile matter (71-87%) and fixed carbon(7-15%). The study also found that the fuel briquettes produced from Group I and Group II had desirable characteristics to produce fuel briquettes for households since they were easily moulded, inflammable with low amount of smoke and odour while those produced from Group III were easily moulded, yet hardly inflammable with high amount of smoke. Responses from the survey indicated that briquettes made from fat dregs mixed with coffee residue were easy to ignite, left no stains on hands, burned for a long time, and had good heat output. The respondents also commented that the briquettes did not give off sparks and had less smoke and ash content than those of charcoal they normally used.

M0023	Investigation of Anti-Alga and Anti-Bacteria Properties of Composite Nanofiltration Membranes Based on Chitosan Derivatives **Jing Miao**, Hechun Lin, and Lai-Chang Zhang Edith Cowan University *Abstract*—The anti-alga properties and anti-bacteria effects of composite nanofiltration (NF) membranes prepared from sulfated chitosan (SCS) and N, O-carboxymethyl chitosan (NOCC) were investigated in this study. The base membranes, polyacrylonitrile (PAN) and polysulfone (PS) ultrafiltration (UF) membranes, were used to be as the controls. Compared with the controls, the adsorptions of the alga on the composite NF membranes were less severe. It suggested that the SCS and NOCC composite NF membranes have anti-alga and antifouling abilities. The chosen bacteria were escherichia coli, bacillus subtilis, staureus, penicillium chrysogenum, and streptomyces jinyangensis. By comparing the colony diameters of different bacteria on various membranes and the growth of bacteria after different time periods, the qualitative conclusions of the anti-bacterial effects of the membranes were drawn. It suggested that all the investigated membranes have some anti-bacterial effects on the five kinds of bacteria and the anti-bacterial effects are related to the active layer material of the composite NF membrane and the cross-linking agent.
M0025	A Study on How to Utilize Waste Paper and Coffee Residue for Briquettes Production **Patcharee Preedasuriyachai** and Naruephat Tangmankongworakoon Srinakharinwirot University *Abstract*—Some residues from industries and households were used to turn into briquettes. In this research, waste paper and coffee residues could be practically used to produce fuel briquettes by adding starch as a binder before performing a molding cold process. The optimal ratios between waste paper and coffee residue were considered to be 70:30, 60:40, 50:50, 40:60, and 30:70. Their calorific values ranged from 3,708.5 to 4,347.1 cal/g. These values were almost equivalent to the amount of the heat from the firewood. The study also discovered that the briquettes rendered their moisture content (7-9%), the amount of ash (3.8-8.5%), and the amounts of fuel elements (45.56% carbon, 6.48% hydrogen, 45.41% oxygen, 0.75% nitrogen, and 0.08% sulfur) within the acceptable values of biomass standards. The briquettes were readily molded, not easily shattered, and inflammable with low amount of smoke and odor. Therefore, the production of fuel briquettes from waste paper and coffee residue could be one of the viable alternatives for community energy generation.
M0027	Effect of Irradiation Wavelength on Kinetics of Direct Photodegradation of Estrone **Yiwei Deng**, Paul Diven, and Padma Kadiyala University of Michigan–Dearborn *Abstract*—Natural and synthetic estrogens present a potential threat to aquatic life. This is due to their alarming effects on reproduction and developmental processes of aquatic organisms. These estrogens disrupt the organisms' endocrine systems and decreased their fertility. The estrogens reach the aquatic environment through urban and industrial waste discharges. Irradiation of the wastewater under ultra-violet light showed that these estrogens could be degraded. In this study, Estrone (E1) was chosen as a representative of the estrogens. The photochemical behavior of E1 was investigated under ultra-violet irradiation

	at 254 nm and 350 nm. The photodegradation of E1 yielded several intermediates. The concentrations of estrone and the intermediates were monitored during photodegradation using a high performance liquid chromatography (HPLC) method. The photodegradation of E1 at both wavelengths followed pseudo-first-order kinetics with respect to E1 concentration. The HPLC chromatograms indicated that three peaks were sequentially formed with time through plausible consecutive reactions. Further study is needed to identify the reaction intermediates/products in order to propose the detailed reaction mechanisms.

12:00pm-1:30pm	**Lunch**
The Gazebo Restaurant (1F)	

Afternoon, July 30, 2014 (Wednesday)

SESSION–2 (ICENR 2014)

Venue: Phoenix (Basement Two)

Session Chair: Associate Prof. Yiwei Deng

Time: 1:30pm-3:10pm

M0028	Utilization of Dredged Sediments from Lumsai Canal with Rice Husks to Produce Bricks **Nuta Supakata**, Wipawan Tangprasert, and Siridhorn Jaikaew Chulalongkorn University *Abstract*—The laboratory-scale study was conducted to assess the feasibility of using dredged sediments from Lumsai canal with rice husks to produce bricks. This study was investigated into three different proportions of dredged sediments with rice husks ranging from 0, 5, 10, 15, and 20 percent (by weight of rice husks or rice straws) as raw materials in producing bricks. The characteristics of the dredged sediments, rice husks, and fired bricks were analyzed using X-ray fluorescence (XRF) and X-ray diffraction (XRD), respectively. The physical-mechanical properties of fired bricks were found to comply with the criteria for bricks (Thai Industrial Standards 77-2545). The obtained results indicated that major chemical compositions of dredged sediments were silica (SiO_2) 56.27 percent, alumina (Al_2O_3) 11.76 percent and iron oxide (Fe_2O_3) 7.84 percent, and heavy metal contents including Cr, Cu, Zn, As, Cd, Hg, Pb, Mn, Sr, and Ni were lower than the soil quality standard. Results of this study showed that bricks made from dredged sediments with 5 percent of rice husks were suitable as primary raw materials in the production of bricks without harmfulness.
M0031	A Study for Renewable Energy Generation and Sustainable Development in China **Qianyu Dong** and Tohru Futawatari The University of Kitakyushu *Abstract*—China is faced with significant challenges in the economic growth, energy consumption and environmental crisis, which severely restrict its sustainable development.

	Meanwhile the promotion of renewable energy is used to be regarded as the key solution to tackling those issues. However, it is not clear whether the RE generation really related with China's sustainable development or not. Therefore, in this paper, we elaborated the current status and trends of renewable energy generation in China both from the installed capacity and generation by sources. Then, based on a correlation analysis, we found the development of renewable energy generation has a greater correlation with GDP growth while less related with fossil fuel electricity consumption decrease and CO2 emissions reduction. Accordingly, we considered that to improve energy efficacy of fossil fuel power will be more helpful for China's sustainable development rather than promoting renewable energy generation in the short term. At last, some suggestions for China's renewable energy generation and sustainable development were presented.
M0032	Women in Natural Resource Management: A Case Study of Women Managed Forest Protection Committees of Bankura District, West Bengal **Bhaswati Thakurta** University of Calcutta *Abstract*—The area of devolution in Natural Resource Management (NRM) in most countries has been marked in forest management. The reason behind it is a growing awareness regarding forest degradation and its impacts on environment and the rural society in particular. This is because in most Asian and African countries colonial regimes, in order to exploit the rich forest resources had established highly centralized forest management system which was continued by the countries even post colonial era. The National Forest Policy , 1988 made a dramatic shift in the approach of government towards forest dwelling communities and envisaged people's involvement in the development and protection of forests. This policy for the first time mentioned the involvement of forest communities, thereby creating space for the participation of women along with men in forest management. It was followed by subsequent government resolutions the Joint Forest Management (JFM) Resolution, 1990 and 2000, each trying to adopt more participatory approach to forest management, with greater powers devolved to the forest communities. The eco-feminist approach depicts women's privileged position whereas feminist environmentalism argues that people's relationship shaped with material reality. Based on this idea the study of selected Female Forest Protection Committee (FPC) in the degraded forest of Bankura district of West Bengal depicts the women's concern about the forest management. This study attempts to understand both the positive and negative aspect of women's role in this management starting from the origin of this female managed committee through qualitative and quantitative analysis. The policy level transformation and the migration of men resulted in such a way that woman more visible in the future to forest management in this region.
M0033	Determination of the Content of Hazardous Heavy Metals on *Lycopersicon esculentum* Mill. Grown around a Contaminated Area **Napattaorn Buachoon** Valaya Alongkorn Rajabhat University *Abstract*—The content of copper, lead, cadmium, and zinc on tissues of *Lycopersicon esculentum* Mill. grown around a contaminated area. Rhizomes showed a high content of the metals, followed by the leaves, and finally the stems, which had the lowest content of the

	metals. Lead concentrations in rhizomes, stems, leaves were 430 mg/Kg, 180 mg/Kg, and 120 mg/Kg, respectively, while copper concentrations were 810 mg/Kg, 463 mg/Kg, and 250 mg/Kg, respectively. In contrast, cadmium and zinc concentrations were lower and varied from 30 mg/Kg on rhizomes, 58 mg/Kg on leaves, and 46 mg/Kg on stems for cadmium, and the content of zinc found ranged from 31 mg/Kg on rhizomes, 35 mg/Kg on stems, and 42 mg/Kg on leaves. Soil concentrations were high in site 3 for lead and copper, 4,621 mg/Kg and 5,631 mg/Kg, respectively; lower concentrations were found for cadmium and zinc, 223 mg/Kg and 57 mg/Kg, respectively. As expected, those sections which contained higher levels of heavy metals in the soil also showed to have higher heavy metal uptake by various parts of *Lycopersicon esculentum* Mill. These data demonstrate *Lycopersicon esculentum* Mill. ability to uptake copper and lead, and to some extent cadmium and zinc, from heavy metal contaminated soils.
M0036	A Choice Experiment Study on Fuel Preference of Kibera Slum Households in Kenya **Aya Yonemitsu**, Mary Njenga, Miyuki Iiyama, and Shusuke Matsushita University of Tsukuba *Abstract*—In Kenya, charcoal is an important energy resource for cooking. As better energy alternatives become available and affordable in developing countries, households tend to switch from traditional biomass to modern fuels such as liquid petroleum gas, kerosene, and electricity. Meanwhile, fuel briquettes recycled from charcoal dust are gaining popularity as alternate fuel in urban poor households. The valuing of energy services is important for policy planning and for improving the socioeconomic conditions and environments of households. The objective of this study is to better understand the relative importance of fuel substitution, especially with regard to charcoal, fuel briquettes, and kerosene, and the factors associated with their choice. To estimate the product-specific factors, we conduct a choice experiment study in Kibera slums of Nairobi, Kenya, by applying a conditional logit model and random parameter logit model. The study revealed household preferences for modern energy sources and several characteristics affecting consumer choice.
M2002	Water Quality Monitoring and Cadmium Contamination in the Sediments of Mae Tao Stream, Mae Sot District, Tak Province, Thailand **Pimchanoke Weeraprapan**, Somporn Chantara, Munetsugu Kawashima, and Chitchol Phalaraksh Chiang Mai University *Abstract*—Some lands and streams at Mae Sot District, Tak Province, Thailand are polluted by cadmium (Cd) which leach from the zinc mine. The objectives of present study were to evaluate physico-chemical parameters of Mae Tao Stream and Cd concentration in the sediments. The water and sediment samples were collected from the upstream and downstream of Mae Tao Stream from April 2011 to February 2012. The downstream sites are affected by the water from the zinc mine. Physico-chemical parameters such as Temperature, Water Velocity, pH, Electrical Conductivity, Total Dissolved Solid, Dissolved Oxygen, Nutrients (Nitrate, Ammonium and Orthophosphate), Suspended Solids, Alkalinity and Total Hardness were measured. Judged from the parameters, Mae Tao Stream was classified to Type III of the Surface Water Quality Standard of Thailand for agriculture at all sampling sites. Cd concentrations in the sediments were measured in the range of 0.84-7.86 mg kg^{-1}. In

	the sediments of polluted sites, Cd concentrations exceeded the European maximum permissible level of 3.0 mg kg^{-1} for Agricultural Soil. It is important to continue to monitor the physico-chemical parameters and the cadmium concentrations in the sediments, and the bio-assessment should be begun around the stream.
M3006	Biodiversity Conservation through Peoples Protected Areas (PPA) **Garima Tiwari** Guru Ghasidas University *Abstract*—The health and vitality of the forest ecosystem is needed to evolves package of peoples friendly minimal damage forest management practice which could contribute to avoid the destruction of the forest and enhance the well being of the people. As part of strategy to translate above philosophy into implementable action programme Chhattisgarh state of India is the first state in the country to have enunciated Peoples oriented state forest policy which provides new direction to forest management. Chhattisgarh as 'Herbal state'- has initiated efforts on conservation, development, non destructive harvesting, processing and marketing of herbal medicine in the forest of the state. The paper presents a case study of steps after implementation of this management programme. The study was conducted on three sample villages of Chhattisgarh state. PRA, RRA methods were used for primary data collection. After the analysis study concluded that the villagers are not able to get true value of the forest produce because of inadequate marketing facilities available to them. Thus proper development of marketing infrastructure is must. Improvement of the economic conditions of forest dwellers will reduce villagers dependency over forest which will be beneficial for protection of biodiversity of forest.
M3007	Dynamics of M^{x+} Salts of Fatty Acids Adsorption onto Metallic Ores **Itodo Adams Udoji** and Emmanuel Edet Etim Federal University Wukari *Abstract*—Iron ore as possible adsorbent for metallic salts of fatty acid (M^{x+}-SFA) oils was investigated. Experimental constants from several kinetic models were used to interpret M^{x+}-SFA uptake. Mode of diffusion was also studied. Applicability tests for adopted models favors the Pseudo second order kinetics which presented high R^2 values > of 0.9; high precision or least qcal/qexp values of ratio within 1.0 for the K^+-SFA, Ca^{2+}-SFA and Al^{3+}-SFA sorption. The Pseudo second order equation also gave least values for the three error functions viz: 9.6×10^{-4} to 5.4×10^{-3}, 3.1×10^{-2} to 7.4×10^{-2} and 4.6×10^{-3} to 2.5×10^{-3} for EABS, SSE and X^2 respectively. Multiple linearity presented by intra-particle diffusion plots is of three distinct stages of linear initial, linear intermediate and linear last portions. These stages are coupled with the non- passage of lines through the origin being an indication that other diffusion models such as mass transfer or film diffusion exists and that the intra-particle diffusion is not the only rate factor controlling M^{x+}-SFA sorption.
M4002	Reproductive Performance of Growing Female Rabbits (Oryctolagus cuniculus) Fed Diets Supplemented with Cerium Oxide **Francis A. Gbore**, Iyabo W. Akinmuyisitan, and Olufemi A. Adu Adekunle Ajasin University *Abstract*—In a four-month feeding experiment, 32 growing female rabbits (Oryctolagus

	cuniculus) of an average weight of 1366.56±37.54 g were used to evaluate the inclusion of different dietary concentrations of cerium oxide (CeO) on fertility and post-partum performance of animals. The animals were randomly allotted to four dietary groupssupplemented with 0, 100, 200 and 300 ppm CeO, each consisting of eight animals and were fed for eight weeks before mating.At the end of the 1st trimester, 16 out of the 32 mated does were sacrificed and their uteri cut open and the remaining 16 pregnant does were raised to full gestation to evaluate the fertility and post-partum parameters, respectively. The results revealed that the dietary REE, especially at 200 ppm/kg feed significantly ($P<0.05$) increased the litter size, litter weight, total litter weight, embryo survival rate, average litter size and weight post−partum except for the conception rate, gestation length, foetal crown-rump length and embryo weight that were not significantly ($P>0.05$) influenced. Dietary REE is therefore capable of enhancing fertility in rabbits particularly at 200 ppm/kg feed and at the same time reduce mortality in kittens by 20.88 - 68.01 % and 34.14 - 45.10 % at 100-200 ppm/kg feed.
M4004	Environmentally Friendly Biosorbent from *Moringa oleifera* Leaves for Water Treatment **Eman N. Ali**, Sabreen R. Alfarra, Mashita Mohd Yusoff, and Md Lutfor Rahman Universiti Malaysia Pahang *Abstract*—In this study *Moringa oleifera* leaves (biosorbent) is used for Cadmium (II) removal from water as a natural alternative for synthetic sorbents. Synthetic water was used to find optimum conditions for water treatment using biosorbent. The effect of biosorbent dosage and particle size, contact time, and pH effect were studied. Atomic Absorption Spectroscopy (AAS) was used to monitor the Cd (II) concentration before and after treatment with biosorbent. Fourier Transform Infrared Spectroscopy (FTIR) was used to monitor biosorbent structure changes before and after loading with Cd (II). Many parameters were studied such as: dosage of biosorbent (1 – 10 g/L), contact time (2 – 20 min), particle size (2 mm, 1 mm, 500 µm, 250 µm, and <250 µm), pH range (4-10), and Cd (II) concentrations (1, 3, 5, and 7 ppm). The statistical analysis of studied parameters showed that all parameters has an effect on Cd (II) removal with *p* values <0.05 except pH. FTIR result showed changes in the finger print area of biosorbent functional groups due to adsorption of Cd (II). As a conclusion, *Moringa oleifera* leaves can be used as an effective, low cost, and environmentally friendly biosorbent for the removal of Cd(II) from water.

Afternoon, July 30, 2014 (Wednesday)

SESSION–3 (ICFNT 2014)

Venue: Unicorn (Basement Two)

Session Chair: Prof. Sezai Ercisli

Time: 1:30pm-4:00pm

F0001	Antioxidant Activities of Solvent Fractions from Root of *Ulmus davidiana* **Ki Hyeon Sim**, Hye Jeoung Sim, Hyun Jung Lee

	Sookmyung Women's University, Seoul, Korea *Abstract*—The antioxidant potentials of various solvent fractions from root of *Ulmus davidiana* were evaluated using the following assays: DPPH radical scavenging, superoxide anion radical scavenging, ABTS radical scavenging, superoxide dismutase activity, and lipid peroxidation inhibition. The ethyl acetate fraction of *U. davidiana* showed significant effects in all the antioxidant assays, and contained high levels of total phenolics and flavonoids. Among the other solvent fractions, the n-butanol fraction exhibited significant activity, presenting the highest activities for superoxide anion and ABTS radical scavenging. These activities were superior to those of commercial synthetic and other natural antioxidants that were tested. Overall, the ethyl acetate and n-butanol fractions of *U. davidiana* were most effective.
F0003	Antimicrobial Activity of Bio Enzyme Extract from *Garcinia mangostana* Peel, *Morinda citrifolia* Fruit and *Hibiscus sabdariffa* Petal Helen Teh, **Ai Chee Chan**, Nurul Fazzliana Kamal, Nur Izaati Shahidan, Wahimah Abdul Wahid Polytechnic of Sultan Haji Ahmad Shah, Malaysia *Abstract*—Bio-enzyme extracts are a mixture of juices prepared from several of fruits that can be consumed as nutritional or health supplements. These fruits, which include goji berries, maqui berries and acai berries, are difficult to source thus escalating the cost of the product. The purposes of this paper were to investigate the antimicrobial activity of the bio-enzyme extracts and the level of acceptance of the bio-enzyme drink when compared with a commercial brand bio-enzyme drink. The bio-enzyme extracts in this research were prepared from mangosteen peel, noni fruit and roselle petals. Disc diffusion method was used to determine the antimicrobial activity of the bio-enzyme extracts. Five microorganisms, namely *Staphylococcus aureus*, *Bacillus cereus*, *Escherichia coli*, *Candida albicans* and *Pseudomonas aruginosa*, were used for the investigation. Thirty panelists were chosen for the sensory evaluation conducted through a hedonic test and a scoring test. The data obtained were analyzed using a paired sample t-test using "Statistical Package for Social Science" (SPSS) software. The bio-enzyme extracts showed inhibitory activity against the tested microorganisms. It had a better antimicrobial activity compared to a commercial bio-enzyme extract. The sensory evaluation showed no significant difference in overall acceptance between the bio-enzyme extract prepared and the commercial bio-enzyme extract. The findings of this research suggest that bio-enzyme extracts can prepared from selected local plant parts in Malaysia at a much lower cost and yet comparable to commercial bio-enzyme extracts in taste, aroma, colour, overall acceptance and antimicrobial acitivity.
F0004	Effects of Gamma Irradiation and X-ray Irradiation on Quality, Sensory Characteristics of Beef Patties **Youn Kyung Ham**, Hyun Wook Kim, Choong Hee Lee, and Cheon Jei Kim Konkuk university, Seoul, Korea *Abstract*—The physicochemical properties (pH, color, and texture) and sensory properties of beef patties that irradiated by gamma ray and X-ray were evaluated and compared. Ground beef patties were cooked and vacuum-packaged before irradiation by gamma ray and X-ray at

	0, 2.5, 5, 7.5, 10 kGy. The redness of beef patties decreased by irradiation regardless of irradiation method compared to control ($p < 0.05$). Since gamma irradiation affected the sensory quality more than X-ray irradiation, gamma irradiated samples got lower scores on the sensory evaluation (flavor and overall acceptability) compared to X-ray irradiated samples ($p < 0.05$). The result of this study suggests that X-ray is more effective irradiation method than gamma irradiation to improve the flavor and overall acceptability of beef patties.
F0006	Effect of Adlay (Coxi lachrymal-jobi) to Increase the Shelf-Life of Low-Fat Frankfurters **Choong-Hee Lee**, Youn-Kyung Ham, In-Jun Yeo, Cheon Jei Kim Konkuk university, Seoul, Korea *Abstract*—This study was carried out to investigate the effect of adlay (*Coxi lachrymal-jobi*) to increase the shelf-life of low-fat frankfurters. The pH of low-fat frankfurters significantly increased stored for 20 days ($p<0.05$). The lightness, redness and yellowness were not affect by added adlay ($p>0.05$). TBARS values are increased for 20 days ($p<0.05$) and the low-fat frankfurter by added adlay was the lowest value compared with other samples over 15 days ($p<0.05$). The VBN values of frankfurters are significantly increased for 20 days ($p<0.05$). However VBN values of frankfurters were not affected by the added adlay.
F0007	Characteristics of Low-Salt Emulsion Sausage with Added by Soybean Fiber and Sugar Cane Fiber **Dong-Heon Song**, Hyun-Wook Kim, Yun-Bin Lim and Cheon-Jai Kim Konkuk university, Seoul, Korea *Abstract*—This study was to evaluate the effects of fiber hydrate on quality characteristics of low-NaCl emulsion sausage. The low- NaCl emulsion sausages were formulated with 10% soybean fiber hydrate or 10% sugar cane fiber hydrate based on total weight. Emulsion sausage was produced with five different formulations: control (only 1.5% NaCl), SB12 (Soybean fiber hydrate with add NaCl 1.2%), SB10 (Soybean fiber hydrate with add NaCl 1.0%), SC12 (Sugar cane fiber hydrate with add NaCl 1.2%), SC10 (Sugar cane hydrate with add NaCl 1.0%). The SB12 and SB10 higher than other treatments in pH value of emulsion sausage ($p<0.05$). The cooking yields of emulsion sausage with 1.2% NaCl treatments (SB12 and SC12) were higher than the control ($p<0.05$). The SB12 had the highest hardness ($p<0.05$), and other treatments did not show any difference between ($p>0.05$). Springiness of control and other treatments had no significantly difference ($p>0.05$). In this study, control and low-NaCl sausages were not significantly different color, flavor and juiciness of sensory properties. Thus, quality characteristics of reduced low-NaCl emulsion sausage can enhance the physical properties with adding fiber hydrate.
F0008	Effect of Different Drying Conditions on Quality Characteristics of Restructured Duck Tender Jerky **Yong-Jae Kim**, Ko-Eun Hwang, Fu-Yi He and Cheon-Jei Kim Konkuk university, Seoul, Korea *Abstract*—Aim of this study is to evaluate quality characteristics of restructured duck tender jerky that was made with three different drying conditions. Drying condition divided normal type, stair type and reverse stair type. Chemical composition, water activity, pH value, instrumental color, sensory test were evaluated. Stair type drying showed lower water activity

	and pH value (p<0.05) than normal type while it maintain similar moisture contents. In lightness redness, all treatments showed no significant difference (p>0.05). However, jerky dried by reverse stair type show highest yellowness (p<0.05). Stair type drying presented lowest pH value and CIE b* value and superior score at tenderness and juiciness (p<0.05).
F0012	Fish scale collagen peptide protects colon inflammation an experimental ulcerative colitis mouse model **Kazuo Azuma**, Tomohiro Osaki, Norihiko Itoh, Ichiro Arifuku, and Yoshiharu Okamoto Faculty of Agriculture, Tottori University, Japan *Abstract*—The aim of this study was to understand the effects of fish scale collagen peptide (SC) on an ulcerative colitis (UC) mouse model. SC suppressed shortened colon length, decreasedd colon weight/length ratio, and ameliorated histological tissue injury in dextran sulfate sodium (DSS)-induced acute UC mice. SC suppressed inflammation in acute UC by decreasing myeloperoxidase-dependent activation of inflammatory cells such as leukocytes. SC suppressed the activation of nuclear factor–kappa B (NF-κB) in colon and serum monocyte chemotactic protein-1 in the DSS-induced acute UC mouse model. Gelatin, on the other hand, did not suppress clinical symptoms, colon inflammation, and colon fibrosis in the DSS-induced acute UC model. These results revealed that SC has anti-inflammatory effects in the DSS-induced acute UC model. Our results indicate that SC could be a new functional food for patients with inflammatory bowel disease.
F0016	Selenate Exerts the Formation of Skin Fibril through Regulation of TGF-β Signaling Pathway **Myung-Soo Shon**, Ji-Hye Song and Gyo-Nam Kim Kyungnam University, Changwon, Republic of Korea *Abstract*—Selenium has been reported to possess potent anti-oxidant, anti-hyperglycemic and anti-carcinogenic properties. However, the precise biological role of selenium in formation of skin fibril remains unknown. Selenium exists in various forms such as selenate, selenite, and methylseleninic acid. Among them, we found that selenate treatment dose-dependently enhanced mRNA expression levels of skin fibrillar genes such as pro-collagen, collagen I, collagen III, and fibronectin. The type III collagen is the predominant collagen in the granulation tissue of skin health. In addition, we elucidated that the transcriptional growth factor beta (TGF-β) is required in selenate-induced expression of collagen III. TGF-β has long been believed to be the most critical in the process of tissue remodeling. Upon TGF-β binding to its receptor at the cell surface, cytoplasmic transmitters (Smad2 or Smad3) are phosphorylated and then form a heterodimer with a common Smad (Smad4). A few studies have shown activation of TGF-β1 by nutrient in the formation of skin fibril. These results implicate that the selenate could exert the formation of skin fibril through activating TGF-β signaling pathway. Our results also reveal a novel function of selenate in formation of skin fibril and these evidences also provide useful information for the development of skin-related nutraceuticals and nutri-cosmetics design.
F0022	Adsorption of Ovomucoid as Allergenic Protein onto Surfaces **Nasser A. Al-Shabib** King Saud University, Saudi Arabia *Abstract*—Cleaning of processing equipment in the food manufacturing and of surfaces in

	catering and food establishments is a key issue in prevention of accidental exposure of individuals with a food allergy to allergens. In this study, ovomucoid was adsorbed onto different surfaces (stainless steel, formica and glass) in various amounts for different periods of time. The results indicated, when ovomucoid was in contact with any of the surfaces, more protein remained on the surface (as determined using the Bradford method) and more immunoreactivity remained (as determined by ELISA) when more protein was put on the surface or when it was left for a longer time. Ovomucoid adsorbed onto stainless steel and formica yielded higher protein remaining and immunoreactivity than was observed for the glass. To our knowledge, this is this the first time that antibody-based methods have been applied for the detection of ovomucoid adsorbed onto different surfaces under various conditions. The results obtained suggest the processors need to be aware of specific problems generated by particular food matrices and the type of surfaces and processes involved.
F0028	Effects of Sucrose on Opioid Peptide Gene Expression in the Rat Brain **Eun-Mee Kim**, Catherine C. Welch, Martha K. Grace, Allen S. Levine, Eugene O'Hare University of Ulster, Coleraine, United Kingdom *Abstract*—Opioid peptide neurotransmitters stimulate feeding and are involved in mediating the rewarding aspects of feeding, as well as in energy regulation in the brain. The effects of sucrose diets on opioid peptide gene expression were measured in the arcuate nucleus (ARC) and the paraventricular nucleus (PVN) of the rat. Rats were fed a cornstarch-based diet or a low (16.7%), medium (33.4%), or high (50%) sucrose containing diet for 7 days. Analyses of the ARC and PVN demonstrated that sucrose in the diet had no effect on mRNA levels of opioid peptides. The lack of an opioid response in the ARC and PVN suggests that opioids in the ARC and PVN are involved in energy regulation rather than in mediating hedonic aspects of feeding.
F0031	Effect of Fructooligosaccharide Fortification on Quality Characteristic of Some Fruit Juice Beverages (Apple & Orange Juice) **Reihaneh Ahmadzadeh Ghavidel** and Mehdi Davoodi Department of Food Science and Technology, Islamic Azad University, Quechan, Iran *Abstract*—Today, using of Prebiotic and probiotic products is growing in many advanced countries because of their special functional properties. Fortification of selected fruit juice beverages (Apple and Orange juice) with fructooligosaccharides (FOSs), have been discussed. Smaple1 contain only sucrose, sample 2, 3 and 4 contain 2/3, 1.2 and 1/3 sucrose and 1/3, 1/2 and 2/3 FOS respectively. Sample 5 contained only FOS. The FOS and sugar content of fruit juice beverages are 0, 72.33, 108.5, 144.66 and 217 g/1000mL, 70, 46.6, 35, 23.33 and 0 g/1000mL respectively. Fruit juice beverages were evaluated for physicochemical, microbial and sensory attributes during 2 months of storage at refrigeration temperature (4˚C). The pH, TSS, titratable acidity and color did not change significantly ($P \geq 0.05$) during storage. Overall quality of the fruit juice beverages fortified with FOS for 2 months of storage at (4˚C) temperature were acceptable as indicated by sensory, physicochemical and microbial analysis.
F3004	The Anti-fatigue Effect of the Extract from Rusa Deer (*Cervus timorensis*) Velvet Antler in Male Wistar Rats **Ratsa Sripirom** and Rungurudee Srisawat

	Suranaree University of Technology, Thailand *Abstract*—Velvet antler has been used as a traditional animal based medicine to prevent or treat various diseases, promote growth, strengthen body and systematic exhaustion, prevent and repair muscle damage, increase muscular strength and endurance. Thus, the anti-fatigue effects of the rusa deer velvet antler extract (DAV) were investigated in male Wistar rats. Rats received ddd water (1 ml/kg) and DAV (100, 200 or 400 mg/ml/kg) orally once daily for 9 days. After last dose on day 9, rats were tested by forced swimming test. The swimming time to exhaustion was used as the index of the forced swimming capacity. Immediately after exhaustion, blood samples were collected for determination of serum lactate dehydrogenase (LDH), plasma glucose and creatinine using an automatic analyzer. The swimming time to exhaustion was significantly increased in middle and high dose groups (200 and 400 mg/kg DAV) when compared to control group and low dose group (100 mg/kg DAV). Creatinine and glucose levels were significantly increased in middle and high dose groups when compared to control group and low dose group, respectively. No significant difference was found in LDH levels among groups. DAV appears to promote anti-fatigue effects, however, the underlying mechanisms are still not fully understood.
F3005	Whole Grain Consumption among Adolescents (13-14 years) in Kuala Lumpur, Malaysia **Shanthi .D**, Low Choon Hui ; Lim Shan Di, Lor Jia Ping International Medical University, Malaysia *Abstract*—The aim of the study is to find out the whole grain consumption among adolescents (13 -14 years) in Kuala Lumpur, Malaysia. Methods: Data was collected from 105 adolescents aged 13-14 years from a national school in Kuala Lumpur and were categorized in to low, medium and non whole grain consumers. Dietary intake was estimated through 3 day food record. Original Healthy Eating Index (HEI) was used to determine the diet quality of the subjects. Anthropometry measurements were used to find out their BMI and a questionnaire was administered to access lifestyle factors and socio-demographic status of the subjects. Results: Only 26 % of subjects consume whole grain food products and the mean intake was 0.20±0.34 servings per day. Sixty three percent of non whole grain consumers engaged in physical activity and consume multivitamin respectively. The subjects who consumed more servings of whole grains achieved a higher HEI score. HEI score and dietary fibre intake was positively correlated with whole grain intake of subjects and there was significant association between parents educational level and taste preference of whole grain. Conclusion: The mean intake of whole grain among adolescents (13-14years) was much lesser than the recommended intake by Malaysia Dietary Guidelines 2010.
F4001	Detection of Staphylococcus aureus from Packed Dried Siganids **Corazon P. Macachor**, Jean F. Nebrea, and Cecilio S. Baga CTU Main Campus, Cebu City *Abstract*—Taboan Market in Cebu City, Philippines is the most famous source of dried *danggit*, *pusit* and *mangsi* which served as pasalubong for local and foreign tourists in Cebu City. The study aimed to determine the appropriate packaging material of dried siganids to reduce its microbial density. Samples of dried siganids were packed using polyethylene plastic bags, buri bags and carton and analyzed as to bacterial and fungal total plate count with the detection of

	Staphyloccoccus aureus, in colony forming unit, using 3M-Petrifilm and pour plate method. The pH and water activity levels of the products were determined. The dried *danggit* packed in buri bags had longer shelf life with lower microbial count. The *Staphylococcus aureus* count of 30 cfu/g sample for packed dried siganids using buri bags were within the acceptable standards of Bureau of Food and Drug Administration. The pH level of dried fish samples was within 6.1 to 6.5, while the water activity of the dried products is 0.98 based on Lupin's water activity (Aw) mathematical calculation. Buri bag as packaging material for dried siganids ensure microbial reduction.
F4003	Chemical Constitutions and Antioxidant Activity of *Ziziphora clinopodioides* Lam Ecotypes from Turkey Hulya Dogan and **Sezai Ercisli** Agricultural Faculty, Department of Horticulture, Ataturk University, Erzurum-Turkey *Abstract*—The chemical composition of essential oil from eight ecotypes of Ziziphora clinopodioides grown in Coruh valley located in Northeastern Turkey was determined and its total phenolic content and antioxidant activities were evaluated. Seventeen components, representing 88.56-96.83% of the oil were identified by gas chromatography mass spectrometry. D*ifferences* for essential oil compositions and antioxidant activity were observed *among ecotypes.* The main components of all samples include (+)-pulegone, 1,8-cineole, limonene, menthol, β–pinene, menthone, piperitenone and piperitone. *Ziziphora clinopodioides* essential oil showed remarkable total phenolic content and antioxidant activity. The present study provides a theoretical basis for the potential application of essential oil from Ziziphora clinopodioides to be used as a natural resource of antioxidant agents in food industry. The results also support the traditional use of *Ziziphora clinopodioides* use in traditional medicine in Turkey.

4:00pm-4:20pm	**Coffee Break**

Afternoon, July 30, 2014 (Wednesday)

SESSION–4 (ICABC 2014)

Venue: Unicorn (Basement Two)

Session Chair: Lecturer Rachain Kosanlavit

Time: 4:20pm-6:00pm

A0002	Comparison of Fractionated and Non-Fractionated Eucalyptus in Organic Solvent Subsequence Hydrolysis Reaction to Sugar Production **T. Klamrassamee**, V. Champreda, W. Wiyaratn, and N. Laosiripojana King Mongkut's University of Technology Thonburi, Thailand *Abstract*—Fractionation process of lignocellulosic biomass are a primary step for converting multi-structure biomass to biofuels and other industrial products in integrated biorefinery processes. This research was performed in order to study the effect homogeneous and

	heterogeneous acid promoter (H_2SO_4 and H_3PO_4-activated carbon (AC-H_3PO_4) respectively) and subsequence hydrolysis reaction in the presence of solid acid catalyst to enhance the yield and purity of sugar production. Clean fractionation (CF), a single-step aqueous-organosolv fractionation and subsequence hydrolysis reaction, of eucalyptus wood chips was studied. The operating of fractionation process contained 16.7% w/v biomass in a ternary mixture of methyl isobutyl ketone:methanol:water (25:42:33) with 5% AC-H_3PO_4 and incubated at 180 ℃ for 60 min and subsequence hydrolysis reaction contained at 200 ℃ for 5 min. Under these conditions, it was found that the optimized conditions that maximize the yield of sugar production are the hydrolysis of fractionated eucalyptus in the presence of AC-H_3PO_4 at 200 ℃ for 5 min let to 10% (35 % of substrate) glucose yield. Importantly, the great benefits of fractionation prior to the hydrolysis are the achievement of high sugar yield and the capability to separate glucose and xylose in the final product.
A0005	Synthesis and Evaluation of Some Novel Semicarbazones Based Benzimidazole Derivatives as Anticonvulsant Agent **Harish Rajak** Institute of Pharmaceutical Sciences, Guru Ghasidas University, India *Abstract*—The use of current antiepileptic drugs has been questioned due to their non selectivity and undesirable side effects. In pursuit of better anticonvulsant drug and the significance of semicarbazones as anticonvulsant pharmacophore, a series of novel benzimidazole substituted semicarbazones were designed, synthesized and evaluated for their anticonvulsant activity. Semicarbazones based benzimidazole analogues are hitherto unreported for their promising anticonvulsant activity. The synthesized molecules were characterized using elemental and spectral (IR, ^{1}H NMR, ^{13}C NMR and MS) analysis. The anticonvulsant activities of the compounds were investigated using maximal electroshock seizure (MES) model. The rotarod test was employed for neurotoxicity evaluation. Efforts were also made to establish structure-activity relationships among synthesized compounds. The results of these investigations confirmed that the pharmacophore model with four binding sites is vital for antiepileptic activity.
A0006	Nanogold Mediated the Neuroprotection in Mutant Huntingtin Expressing Neuronal Cells **Ming-Chang Chiang**, Shiang-Jiuun Chen, Chia-Hui Yen, Rong-Nan Huang and Han-Min Chen Fu Jen Catholic University, Taiwan *Abstract*—Huntington disease (HD) is an autosomal dominant neurodegenerative disease caused by a CAG trinucleotide expansion in the Huntingtin (Htt) gene. The resultant mutant Htt protein (mHtt) forms aggregates in the brain and causes devastating neuronal degeneration. However, to date, no well describe the effects of nanogold on neurodegenerative disease. The protective effects *appeared to be exerted by a direct activation of* nanogold *protected* N2A *cells from the mHtt-evoked* mHtt aggregates in fluorescence microscope, proteasomes dysfunction by proteasome assay kit *and* HSP profiles by Q-PCR. *Moreover,* we report here that nanogold normalized the cell survivability by MTT assay and activity of caspase-3 by caspase fluorometric protease kit in the mHtt expressing N2A cells. These findings and project will extend our understanding of the protection and molecular mechanism of nanogold in mHtt expressing N2A cells. *Based on* this results

	provide novel insights into the functions of nanogold in HD, and might facilitate the concept that the nanogold can be a *potential therapeutic* target in treating HD.
A0008	Self-Assembled Nanomaterials Based on Perfluorophenyl-Capped Dipeptides Yu-Chun Lin, Shu-Min Hsu, Jui-Wen Chang, Yu-Hao Liu and **Hsin-Chieh Lin** Department of Materials Science and Engineering, National Chiao Tung University, Taiwan. *Abstract*—Herein, we report a series of low-molecular-weight hydrogelators and prove that the phenyl-perfluorophenyl pair in the structure of the hydrogelators can be used to promote the formation of the supramolecular hydrogels in physiological condition. Further spectroscopic study indicates the aromatic-aromatic and hydrogen-bonding interactions might be the major driving force behind the self-assembly of the nanostructured hydrogels. Biocompatible experiments of the hydrogelators were carried out on HeLa and MCF-7 cells which indicate the newly discovered hydrogelators are potential biomaterials.
A0009	The Scheduling of Anti-Retroviral Drugs Production Line **S. Bositthipichet**, S. Prombanpong, and T. Somboonwiwat King Mongkut's University of Technology Thonburi, Thailand *Abstract*—The Government Pharmaceutical Organization (GPO), a state enterprise under the Ministry of Public Health is one of the pharmaceutical manufacturers in Thailand. The GPO produces various different dosage forms of medical products such as solid, semi-solid, liquid and injection dosage form. A nowadays solid dosage form which is the main product type is confronted with backorder problem. Anti-Retroviral (ARV) drugs also face with this problem. The ARV production line can be divided into 4 stages, mixing, compression, coating and packing. Each process is designed as a job shop environment. The production of ARV drug is considered complex and must comply with regulations such as GMP/PICs in order to prevent contamination between drugs and quality of drugs. Thus, sequencing and assigning the task is tedious but crucial. This paper aims to develop a mathematical model for a job shop scheduling problem with sequence dependent setup times. The developed model utilizes a binary linear programming technique whose objective is to minimize a maximum completion time of all the jobs.
A0011	Enhancement of Lipid Production from *Ankistrodesmus sp.* **Sukkrom K.**, Bunnag B., and Pavasant P. The Joint Graduate School of Energy and Environment, Thailand *Abstract—Ankistrodesmus sp.* was cultivated for the production of microalgal lipid. It was proven that batch culture provided a better biomass and lipid productivities than continuous cultures where the achievable maximum cell and lipid productivities were 279.80 and 87.10 mg L^{-1} d^{-1}. pH in the range from 6 to 8 was not found to give significant effects on growth and lipid production where the culture seemed to grow best at pH 8. Although the algal growth remained unaltered, lipid production could be enhanced when the culture was aerated with additional CO_2. It was found that as much as 30% lipid could be enhanced when 5% by vol. of CO_2 was mixed with the air supply, i.e. lipid productivity increased from 87.10 to 104.43 mg L^{-1} d^{-1}. Analysis indicates that CO_2 helped promote the accumulation of palmitic acid which is the dominant lipid species.
A1001	Development of Calibration and Standard Addition Polarographic Determination of Ascorbic

	Acid **Dr (Ms) Swaroopa Rani N. Gupta** Brijlal Biyani Science College, India *Abstract*—Aims-Effect of pH on polarographic waves of ascorbic acid were studied by recording polarograms of ascorbic acid solution, between 0 to 400 mV at different pH (0.065 to 9.6) using 0.008% solution of gelatin and 0.05 M potassium hydrogen phthalate buffer (containing 0.25% oxalic acid) as maxima suppressor and supporting electrolyte respectively. Methods-Ascorbic acid is strong reducing agent and produces an anodic wave which shifts with pH. There is no significant change in height of wave with change in pH from 2.25 to 4.85. For determination of ascorbic acid pH 4.0 is chosen. Ascorbic acid present in synthetic sample is determined by calibration, external standard addition and internal standard addition methods. The results obtained are in good agreement with the quoted values. Result-The number of electrons taking part in the reversible reaction is found to be 2. The half-wave potential is found to be independent of the ascorbic acid concentration.
A1002	Polarographic Methods for Determination of Ascorbic Acid in Pharmacetical Preparations **Swaroopa Rani N. Gupta** Brijlal Biyani Science College, India *Abstract*—Ascorbic acid is determined polarographically present in various types of medicinal samples by internal standard addition method. Potassium hydrogen phthalate buffer (pH 4.0) containing 0.25% oxalic acid and 0.008 % gelatin solution used as supporting electrolytes and maxima suppressor. Presence of colouring matters does not interfere, and sample handling and solution preparation for analysis can be carried out sufficiently fast to prevent appreciable oxidation. Polarographic determination of ascorbic acid can be carried out even in presence of comparable amounts of other ingredients such as Vitamins A, B, C, D, and E. Results of estimation of ascorbic acid present in different multivitamin medicinal samples by internal standard addition method obtained are in good agreement with the quoted values. The method is precise as indicated by low values of standard deviation. Comparative study of ascorbic acid estimation by polarographic internal standard addition method with respect to their manufacturing company was also done.
A1004	The Efficiency of nZnO for Remediation of Trinitrotoluene Contaminated Water **Waraporn Kosanlavit**, Wanna Saikeaw and **Rachain Kosanlavit** Nakhon Ratchasima Rajabhat University, 340 Suranarai Rd. Muang district, Thailand *Abstract*—This study was aimed to determine the optimal dosages of nZnO, removal efficiency, degradation rate, kinetic removal rates and photocatalytic effects on remediation of TNT-contaminated water by nZnO. The varying concentrations of nZnO were used at 1,000, 2,000 and 3,000 ppm for remediation. The results were found that the removal efficiency were similar at 2,000 and 3,000 ppm of nZnO concentrations (29.20 % and 29.43 %, respectively). The times were varied at 10, 20 and 30 minutes. The nZnO with the concentration of 2,000 ppm was added to TNT-contaminated water and the mixture was left for required periods of time. It showed that the removal efficiency was increased with times. However, the highest efficiency was found only 34.35 % with the time point of 30 minutes.

	The photocatalytic effect on remediation of nZnO for TNT-contaminated water was carried out by exposing the mixture to the sunlight at one of three different times for 30 minutes. The results demonstrated that the highest removal efficiency was found at 71.93 % in the afternoon. This study concluded that the remediation of TNT-contaminated water by nZnO can be enhanced by exposure to the sunlight as a photocatalyst.
A1005	Heterogeneous Catalytic Oxidation of Cyclohexane with H_2O_2 Catalyzed by Cs- and TBA-salts of Cu- and Mn-Polyoxotungstates on MCM-41 **Wimonrat Trakarnpruk** Chulalongkorn University, Thailand *Abstract*—Cs-and tetrabutyl ammonium (TBA) salts of Cu- and Mn-polyoxotungstates were synthesized. They were loaded on MCM-41 support (by impregnation method in 20-30 wt%) to increase surface area of the catalysts. The supported catalysts were characterized by inductive coupled plasma emission (ICP), Fourier-Transform Infrared Spectroscopy (FT-IR), X-ray diffraction (XRD) and nitrogen adsorption-desorption. Their catalytic activities for oxidation of cyclohexane were compared using green oxidant H_2O_2 under mild reaction conditions. The oxidized products are cyclohexanol and cyclohexanone. The activities follow the order: TBA-CuPOM/MCM > TBA-MnPOM/MCM > Cs-CuPOM/MCM > Cs-MnPOM/MCM. The Mn containing catalysts gave higher cyclohexanone selectivity than Cu containing catalysts. The Cs salt catalysts can be reused without loss of activity due to its insolubility in the reaction medium. The 30wt%Cs-CuPOM/MCM and 30wt% Cs-MnPOM/MCM gave comparable activity (16-17 % conversion with 75-76 %selectivity using H_2O_2/cyclohexane mole ratio = 4 at 80 ˚C in 12 h. The oxidation reaction appears to be radical process, since it was inhibited in the presence of radical scavenger.

6:30pm	**Dinner**
The Gazebo Restaurant (1F)	

Conferences ending, thanks !

Conference venue

The Charterhouse Causeway Bay Hotel, Hong Kong

http://hongkonghotel.charterhouse.com/eng/

Address: 209 – 219 Wanchai Road, Hong Kong
Contact Person: Sherin Lau (Senior Sales Manager)
Direct line: 852 2892 3336
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PS: Please mention the conference name when you reserve the hotel room.

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

DATE	NAME		PUBLICATION
Sep 15-16, 2014 Paris, France	**ICBEE 2014**	2014 6th International Conference on Chemical, Biological and Environmental Engineering (ICBEE 2014) **http://www.icbee.org/**	APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)
	ICECS 2014	2014 7th International Conference on Environmental and Computer Science (ICECS 2014) **http://www.icecs.org/**	International Journal of Modeling and Optimization (IJMO, ISSN:2010-3697)
	ICBEM 2014	2014 4th International Conference on Biotechnology and Environmental Management (ICBEM 2014) **http://www.icbem.org/**	Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672) Or Volume of Journal (IPCBEE, ISSN: 2010-4618)
Sep 27-28, 2014 Bali, Indonesia	**ICREE 2014**	2014 2nd International Conference on Renewable Energy and Environment (ICREE 2014) **www.icree.net/**	Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X)
	ICCAE 2014	2014 2nd International Conference on Civil and Architecture Engineering (ICCAE 2014) **www.iccae.net/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICBMS 2014	2014 2nd International Conference on Biological and Medical Sciences (ICBMS 2014) **www.icbms.org/**	Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)
Oct 8-9, 2014 Jinju, South Korea	**ICAAS 2014**	2014 5th International Conference on Agriculture and Animal Science (ICAAS 2014) **http://www.icaas.net/**	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737)
	ICEBS 2014	2014 4th International Conference on Environment and BioScience (ICEBS 2014) **http://www.icebs.org/**	APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)
	ICAFS 2014	2014 International Conference on Advances in Food Sciences(ICAFS 2014) **http://www.icafs.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
Oct 29-30, 2014 California, USA	**ICBEC 2014**	2014 5th International Conference on Biology, Environment and Chemistry (ICBEC 2014) **www.icbec.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICPBS 2014	2014 2nd International Conference on Pharmaceutical and Biological Sciences (ICPBS 2014) **www.icpbs.com/**	Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)

	ICSEA 2014	2014 2nd International Conference on Sustainable Environment and Agriculture (ICSEA 2014) **www.icsea.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
Nov 12-13, 2014 Auckland, New Zealand	**ICFAS 2014**	2014 2nd International Conference on Food and Agricultural Sciences (ICFAS 2014) **http://www.icfas.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICMEB 2014	2014 2nd International Conference on Medical, Environmental and Bio-technology (ICMEB 2014) **http://www.icmeb.org/**	Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)
	ICEPP 2014	2014 2nd International Conference on Environment Pollution and Prevention (ICEPP 2014) **http://www.icepp.org/**	International Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
Nov 29-30, 2014 Mauritius	**ICCEN 2014**	2014 3rd International Conference on Civil Engineering (ICCEN 2014) **www.iccen.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICECB 2014	2014 3rd International Conference on Environment, Chemistry and Biology (ICECB 2014) **www.icecb.org/**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICFSH 2014	2014 International Conference on Food Sciences and Health (ICFSH 2014) **www.icfsh.org/**	Journal of Advanced Agricultural Technologies (JOAAT ISSN: 2301-3737)
Dec. 13-14, 2014, Kuala Lumpur, Malaysia	**ICESR 2014**	2014 International Conference on Environmental Systems Research (ICESR 2014) **www.icesr.org**	APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)
	ICLSE 2014	2014 3rd International Conference on Life Science and Engineering (ICLSE 2014) **www.iclse.org**	Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672)
	ICFB 2014	2014 3rd International Conference on Future Bioengineering (ICFB 2014) **www.icfb.org**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
Dec. 27-28, 2014, Phuket, Thailand	**ICABT 2014**	2014 2nd International Conference on Agriculture and Biotechnology (ICABT 2014) **www.icabt.org**	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICESB 2014	2014 4th International Conference on Environment Science and Biotechnology (ICESB 2014) **www.icesb.org**	APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)
	ICCSE 2014	2014 3rd International Conference on Chemical Science and Engineering (ICCSE 2014) **www.iccse.org**	International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221)

Welcome to submit papers or participate in our upcoming conferences.

Presentation Tracking Contents

SESSION–1 (ICENR 2014)
Venue: Unicorn and Phoenix (Basement Two)
Session Chair: Dr. Saji Baby
Time: 10:20am-12:00pm

TIME	PAPER ID	PRESENTER
10:20am-10:30am	M0003	Bing Li
10:30am-10:40am	M0007	Sapto Purnomo Putro
10:40am-10:50am	M0008	Pham Anh Duc
10:50am-11:00am	M0013	Ganegama Bogodage Sakura
11:00am-11:10am	M0014	Intareeya Sutthivanich
11:10am-11:20am	M0017	Chi-wai Kan
11:20am-11:30am	M0020	Naruephat Tangmankongworakoon
11:30am-11:40am	M0023	Jing Miao
11:40am-11:50am	M0025	Patcharee Preedasuriyachai
11:50am-12:00pm	M0027	Yiwei Deng

SESSION–2 (ICENR 2014)
Venue: Phoenix (Basement Two)
Session Chair: Associate Prof. Yiwei Deng
Time: 1:30pm-3:10pm

TIME	PAPER ID	PRESENTER
1:30pm-1:40pm	M0028	Nuta Supakata
1:40pm-1:50pm	M0031	Qianyu DONG
1:50pm-2:00pm	M0032	Bhaswati Thakurta
2:00pm-2:10pm	M0033	Napattaorn Buachoon
2:10pm-2:20pm	M0036	Aya Yonemitsu
2:20pm-2:30pm	M2002	Pimchanoke Weeraprapan
2:30pm-2:40pm	M3006	Garima Tiwari
2:40pm-2:50pm	M3007	Itodo Adams Udoji
2:50pm-3:00pm	M4002	Francis A. Gbore
3:00pm-3:10pm	M4004	Eman N. Ali

SESSION–3 (ICFNT 2014)
Venue: Unicorn (Basement Two)
Session Chair: Prof. Sezai Ercisli
Time: 1:30pm-4:00pm

TIME	PAPER ID	PRESENTER
1:30pm-1:40pm	F0001	Ki Hyeon Sim
1:40pm-1:50pm	F0003	Ai Chee Chan
1:50pm-2:00pm	F0004	Youn Kyung Ham
2:00pm-2:10pm	F0006	Choong-Hee Lee
2:10pm-2:20pm	F0007	Dong-Heon Song
2:20pm-2:30pm	F0008	Yong-Jae Kim
2:30pm-2:40pm	F0012	Kazuo Azuma
2:40pm-2:50pm	F0016	Myung-Soo Shon
2:50pm-3:00pm	F0022	Nasser A. Al-Shabib
3:00pm-3:10pm	F0028	Eun-Mee Kim
3:10pm-3:20pm	F0031	Reihaneh Ahmadzadeh Ghavidel
3:20pm-3:30pm	F3004	Ratsa Sripirom
3:30pm-3:40pm	F3005	Shanthi D.
3:40pm-3:50pm	F4001	Corazon P. Macachor
3:50pm-4:00pm	F4003	Sezai Ercisli

SESSION–4 (ICABC 2014)
Venue: Unicorn (Basement Two)
Session Chair: Lecturer Rachain Kosanlavit
Time: 4:20pm-6:00pm

TIME	PAPER ID	PRESENTER
4:20pm-4:30pm	A0002	T. Klamrassamee
4:30pm-4:40pm	A0005	Harish Rajak
4:40pm-4:50pm	A0006	Ming-Chang Chiang
4:50pm-5:00pm	A0008	Hsin-Chieh Lin
5:00pm-5:10pm	A0009	S. Bositthipichet
5:10pm-5:20pm	A0011	Sukkrom K.
5:20pm-5:30pm	A1001	Swaroopa Rani N. Gupta
5:30pm-5:40pm	A1002	Swaroopa Rani N. Gupta
5:40pm-5:50pm	A1004	Waraporn Kosanlavit
5:50pm-6:00pm	A1005	Wimonrat Trakarnpruk

Note