2014 APCBEES SAN DIEGO CONFERENCES SCHEDULE

2014 2nd International Conference on Pharmaceutical and Biological Sciences (ICPBS 2014)
2014 5th International Conference on Biology, Environment and Chemistry (ICBEC 2014)
2014 2nd International Conference on Sustainable Environment and Agriculture (ICSEA 2014)
2014 4th Journal Conference on Environmental Science and Development (JCESD 2014 4th)

San Diego, USA

October 29-30, 2014

COURTYARD SAN DIEGO MISSION VALLEY/HOTEL CIRCLE

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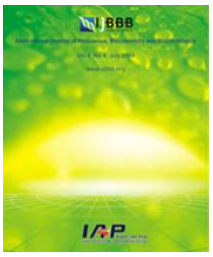
www.cbees.org

2014 San Diego Conferences Introduction

Welcome to CBEES 2014 conferences in San Diego, USA. The objective of the San Diego, USA 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 Sustainable Environment and Agriculture, Biology, Environment and Chemistry, and Pharmaceutical and Biological Sciences, Environmental Science and Development.

2014 2nd International Conference on Pharmaceutical and Biological Sciences (ICPBS 2014)



❄ **Paper publishing and index:** All ICPBS 2014 papers will be published in the **Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796) or International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638)**, and all papers will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, WorldCat, Google Scholar, Cross ref and sent to be reviewed by Ei Compendex and ISI Proceedings.

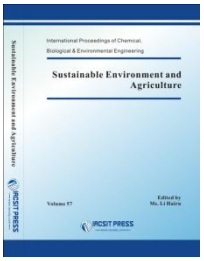
❄ **Conference website and email:** http://www.icpbs.com/; icpbs@cbees.net.

2014 5th International Conference on Biology, Environment and Chemistry (ICBEC 2014)

❄ **Paper publishing and index:** ICBEC 2014 papers will be published **APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)**, and will be included in ScienceDirect and sent to be reviewed by Scopus, Ei Compendex and ISI Proceedings.

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

2014 2nd International Conference on Sustainable Environment and Agriculture(ICSEA 2014)



❄ **Paper publishing and index:** ICSEA 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, 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.icsea.org/; icsea@cbees.net

2014 4th Journal Conference on Environmental Science and Development (JCESD 2014 4th)

❄ **Paper publishing and index:** JCESD 2014 4th papers will be published into **International Journal of Environmental Science and Development. (IJESD, ISSN: 2010-0264, available at: http://www.ijesd.org/list-6-1.html)** by IACSIT Press, and indexed by Chemical Abstracts Services (CAS), CABI, DOAJ, Ulrich Periodicals Directory, Crossref, ProQuest.

❄ **Conference website and email:** http://www.ijesd.org/jcesd/4th/index.htm; ijesd@vip.163.com

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 October 30, 2014.

Brief Schedule for Conferences

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

⇩

October 30, 2014
8:20am-6:10pm
Registration and Conference Presentation

⇩

Inspire B

Opening Remarks	8:20am~8:30am
Keynote Speech I	8:30am~9:10am
Keynote Speech II	9:10am~9:50am
Coffee Break&Photo Taking	9:50am~10:10am

⇩

Inspire B
Session 1: 10:10am~12:00pm
ICSEA&ICBEC&JCESD 4th 2014 for 11 presenters (Environment topic)

⇩

Lunch 12:00pm~1:00pm

⇩

Inspire B
Session 2: 1:00pm~3:20pm
ICSEA 2014 for 14 presenters (Agricualture topic)

⇩

Coffee Break 3:20pm-3:40pm

⇩

Inspire B
Session 3: 3:40pm~6:10pm
ICSEA&ICBEC&ICPBS 2014 for 15 presenters (Biology and chemistry topic)

⇩

Dinner 6:20pm

⇩

October 31, 2014 9:00am-6:00pm
Academic Official Visit in University of California and the one day tour

Detailed Schedule for Conferences

October 29, 2014 (Wednesday)

Venue: 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 October 30, 2014.

Morning, October 30, 2014 (Thursday)

Venue: Inspire B

8:20am-8:30am		**Opening Remarks** Prof. Khaled M. Bali University of California, San Diego, USA
8:30am-9:10am		**Keynote Speech I** Prof. Jun F. (James) Liang Department of Chemistry, Chemical Biology, and Biomedical Engineering Stevens Institute of Technology, Castle Point on Hudson, Hoboken, New Jersey 07030, USA Speech Title: "Biofouling Treatment Using Plasma"
9:10am–9:50am		**Keynote Speech II** Prof. Khaled M. Bali University of California, San Diego, USA Speech Title: "Reuse of Wastewater and Drainage Water for Irrigation"
9:50am-10:10am	**Coffee Break&Taking Photo**	

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.

Presentation Tracking Contents

SESSION–1 (ICSEA&ICBEC&JCESD 4th 2014---11 Presenters) Venue: Inspire B Session Chair: to be added Time: 10:10am-12:00pm			**SESSION–2 (ICSEA 2014---14 Presenters) Venue: Inspire B Session Chair: Prof. Khaled M. Bali Time: 1:00pm-3:20pm**		
PAGE	**PAPER ID**	**PRESENTER**	**PAGE**	**PAPER ID**	**PRESENTER**
7	T0001	Mahmoud Nasr	11	T0003	William B. Richard Graham
7	T0021	Awotoye Olusegun Olufemi	12	T0007	Jane Chah
7	T1009	A S Devakumar	12	T0008	Somayeh Farshbaf-Jafari
8	T0054	Ayse Ozcan	12	T0009	Takashi Hamasaki
8	Z0013	Ching-Yao Huang	13	T0014	Mohamed A. Fennir

9	Z0030	Ademola M. Rabiu	13	T0015	Mohamed A. Fennir
9	Z3002	Adelaja O. Osibote	13	T0018	Oscar Blumetto
9	CD0195	Shohreh Azizi	14	T0020	Omolara Titilayo Aladesanmi
10	CD0196	Soud Al-Mutairy	14	T0025	Ifeoma Irohibe
10	CD0199	Nasser Hamdan	14	T0039	Wailare M.A.
10	CD0200	Mohamed Galal Awad Eltarabily	15	T0050	Mohammed Alyemeni
			15	T1005	Marian Osazoduwa Ekebafe
			16	T2001	Alok Tripathi
			16	T3003	Faith Debaniyu Ibrahim

SESSION–3 (ICSEA&ICBEC&ICPBS 2014---15 Presenters)
Venue: Inspire B
Session Chair: Prof. Jun F. (James) Liang
Time: 3:40pm-6:10pm

PAGE	PAPER ID	PRESENTER
17	T4008	Asmi Citra Malina AR Tassakka
17	Z0003	J. David
17	Z0005	V. Parthasarathy
18	Z0006	Yanjun Guo
18	Z0009	C.Chellaram
19	Z0016	Brenda Cruz-Ortiz
19	Z0018	Brenda Cruz-Ortiz
19	Z0019	Hsiao-Ting Hsueh
20	Z0029	Iakov A. Masiutin, Alexander V. Golyshkin, Artem A. Litvin
20	Z0031	Nakkeeran E
20	Z0037	Mohammed Alshanqiti
21	Z0041	Sajjad Shamaila
21	Z1003	V. Parthasarathy
21	B0007	Ivan Vuletic, Alison Ren, Jiaxuan Li
22	B2001	Sridevi Chigurupati

Attention Please:

1. Each presenter has about ten minutes (including question and answer time) for answering the question, please control your presentation time.
2. Please kindly prepare your PPT or poster according to your research and the time regulation before the conference and take it to the conference site.
3. Please arrive at the conference room (Inspire B) before your session begins.

Hoping you have a good time during the conference.

Morning, October 30, 2014 (Thursday)

SESSION–1 (ICSEA&ICBEC 2014&JCESD 4th)

Venue: Inspire B

Session Chair: to be added…

Time: 10:10am-12:00pm

T0001	Application of Stabilization Ponds in the Nile Delta of Egypt **Mahmoud Nasr** Faculty of Engineering, Alexandria University, Egypt *Abstract*—In this study, domestic wastewater treatment via stabilization ponds, in the Nile Delta of Egypt, was investigated. The plant was implemented by the German Technical Co-operation (GTZ) project in water and wastewater sectors with the Egyptian consultant. The treatment system, of El-Moufty village, contains a series of stabilization ponds operated at a total hydraulic retention time (HRT) of 39.3 d. The anaerobic, facultative and maturation ponds were operated at an organic loading rate (OLR) of 29.4 g-BOD/m^3.d, 141.1 kg-BOD/ha.d and 41.9 kg-BOD/ha.d, respectively and achieved total BOD removal of 89.4%. Additionally, due to nitrification process in the facultative ponds ammonia levels decreased from 46.2 to 28.6 g/m^3 (i.e. 38.1% removal), corresponding to ammonia removal rates of 1,478 mg-N/m^2.d. Economic evaluation revealed that construction costs, including land, lining and excavation prices, was 35.6 €/P.E.y. Moreover, the land price accounts for more than 96% of the construction costs. Based on the environmental and economic findings, the proposed stabilization pond is a recommended treatment system in the Nile Delta.
T0021	Bioaccumulation of Heavy Metals in Fish (Clarias gariepinus) Organs from Selected Streams in South Western Nigeria Aladesanmi Omolara Titilayo and **Awotoye Olusegun Olufemi** Obafemi Awolowo University *Abstract*—The study assessed the heavy metal content in the organs/tissues of *Clarias gariepinus* from Yah, Arula and Rara Streams and their associated fish ponds in Osun state, South West Nigeria. The analysis was carried out using atomic absorption spectrophotometer. A significant ($p<0.05$) difference was observed in the heavy metal concentrations across the organs/tissues of *C. gariepinus.* Liver showed the highest concentration of all the detected heavy metals, followed by the gills and muscle, while the fins had the lowest metal concentration. In addition, locational variation of the metal content in the fish showed highest concentration of most metals in the tissues of fish collected from Yah stream and the associated fish pond in Ilesha. In the three locations, the fish fins appeared to be the least preferred site for the bioaccumulation of metals while the liver appeared to be the most preferred site for bioaccumulation. This study, however, confirms *C. gariepinus* as a good bio-indicator for environmental pollution monitoring.
T1009	Green House Gas Emission of Major Agriculture Crops of Southern India. Pardis and **A S Devakumar** University of Agricultural Sciences, GKVK, Bangalore, India.

	Abstract—Agriculture is one of the major sectors that contribute towards increasing GHG concentration in the atmosphere. To develop strategies to mitigate climate change, primarily it is essential to identify the sources of emissions from various agriculture practices at regional levels. State of Karnataka with 21.90 Million hectares of cultivated land has a production of 17.29 Million tones of grain yield with a carbon footprint of 7.25tCE/ha/year and 5.98 TgCE/year for bulk production respectively. This accounts for 1.75% of the country's emission from agriculture sector. Among the crops grown, cereals recorded 5.04TgCE annually and rice among the cereals, grown under flooded conditions contributed the maximum of 4.1 tCE/ha/year. Among two cropping systems, crops grown with irrigation emitted 4.21 TgCE/year from an area of 1.74 Mha, while rainfed crops emitted 1.76 TgCE/year from 20.15 Mha. Carbon efficiency was more under rainfed conditions with low carbon intensity which was otherwise under rainfed conditions. However yields were low under rainfed conditions. Among the various carbon inputs, use of inorganic nitrogen fertilizer contributed 72% of total emission. Hence, nitrogen source of plant nutrient need amendments from current practices to reduce emission levels. Current cultivation practices which are labor intensive than carbon intensive and hence showed very high sustainability.
T0054	Environmental Impact Assessment (EIA) in Protected Areas of Turkey and Sustainability Dilemma: The Case of National Parks **Ayse Ozcan** and Eric J. Strauss Giresun University *Abstract*—The EIA Directive was entered into force in 1993 and has been changed several times in Turkey. This study presents a conceptual perspective on the EIA practices in protected areas of Turkey. The study emphasizes the importance of the EIA process in all protected areas, particularly in the areas of national parks. The study also draws attention to the importance of the elimination of political, economic, sectoral pressures on the EIA process in Turkey. In this context, it is required to generate an active and balanced protection usage against encountered difficulties during environmental impact assessment (EIA) of either protected areas or investments near these areas. The aim of this study is start a debate on the relationship between protected areas and the EIA process.
Z0013	Carbon Footprint Assessment of Accommodation Service: Case of an International Hotel Allen H. Hu, **Ching-Yao Huang**, Chi-Fu Chen Institute of Environmental Engineering and Management, National Taipei University of Technology, Taiwan *Abstract*—The travel and tourism industry is one of the largest industries in the world and a large contributor of greenhouse gas (GHG) emissions. This study quantified the carbon emissions of energy and non-energy consumption from an international hotel in Taiwan to estimate the GHG emissions from the accommodation services of hotels holistically through complete life cycle inventory. Results showed that the carbon emission of a one-night hotel stay in a standard room was 147.94 $kgCO_2eq$, and the carbon emission of accommodation services in the gross floor area was 166.16 $kgCO_2eq/m^2$/year. Energy consumption, especially for electrical use, was the main source of carbon emissions. However, non-energy consumption accounted for 11.33% of the total carbon emissions, which is greater than the 5% cut-off rule according to PAS 2050. Although this study is based on a case study in Taiwan,

	the findings and recommendations for improvements are generic enough to be applied elsewhere.
Z0030	Pollution Reduction in Petroleum Refinery using Pinch Analysis **Ademola M. Rabiu**, Joe M John Cape Peninsula University of Technology, South Africa *Abstract*—Today, reducing gaseous emissions is one of the greatest challenges facing the petroleum refinery industries. The use of Pinch Technology (PT) to retrofit the heat exchanger network of petroleum refineries has been found to give considerable saving in utilities usage through better process integration. This will translate into a direct reduction in the emission of fuel-related gaseous pollutants. This study employed the techniques of Pinch analysis to retrofit the heat exchanger networks (HEN) of the crude distillation unit of a refinery to improve the process heat recovery. The existing HEN was re-designed using the remaining problem analysis making maximum use of the existing exchangers as much as possible to maintain the existing plant topology whilst achieving improved process energy recovery. The new network was relaxed trading heat recovery with number of heat transfer unit so as to optimize the total cost. These were implemented in AspenPlus V8.2 environment. Compared to the existing plant, the optimised network exhibit a 28 per cent and around 30 per cent reduction in the energy requirement and gaseous pollutant emission respectively.
Z3002	Assessment of Heavy Metals Contamination at Cape Town Landfill Sites. **Adelaja O. Osibote**, Ademola M. Rabiu Cape Peninsula University of Technology, South Africa *Abstract*—Heavy metals (HM) contents of municipal solid waste (MSW) are of immense concern in their management and disposal system around the world. Landfilling (and in worse case dumping) remains the preferred disposal method for MSW in majority of Africa countries. Consequently, the HMs, also found in household, medical and industrial waste, ends up in landfills and dumpsites. Over time, if not properly managed, these metals present a contamination risk to the nearby soil, ground and surface water, as well as the biodiversity that depends on these resources; this may contaminate the food chain. This paper reported the spatial distribution of heavy metal concentrations in the topsoil from Cape Town landfill sites using the Inductively-Coupled Plasma Optical Emission Spectrometry (ICP-OES). The results show that the concentrations of the heavy metals found decreases with distance from the landfill sites except for Cd which have the concentration to be high close to the road. Recommendations on proper management and monitoring systems of the existing waste sites that will limit the exposure of the populations to these elements were made.
CD0195	Use of Electro–Chemical Process for Waste Sludge Generated from Moving Bed Bioreactor **Shohreh Azizi** and Nomathamsaqa P. Sithebe North-West University, South Africa *Abstract*—The rapid population growth in South Africa has increased the requirement of waste water treatment facilities. This study was conducted to assess the moving bed bio reactor receiving from Mafikeng sewage treatment plant .The experiment was undertaken on a continue laboratory scale and analytical data was collected before and after treatment. The reduction of 83.21 COD, 87.64BOD was achieved in optimum Hydraulic retention time. The efforts also made an attention into potential technology for waste sludge reduction. The study

	was undertaken the use of electrochemical process as pre-treatment for waste sludge. It is observed 60% of digestion period was decreased through the Electro-chemical treatment. Basic data obtained through the experimental research are demonstrated that the MBBR may be used in an extremely compact high-rate process (<3 h total HRT) for secondary treatment process and the combination of electrochemical and aerobic digestion system is proposed to overcome all the disadvantages of aerobic and anaerobic digestion system. The complete system offers a most advance and improved sewage treatment plant.
CD0196	Management, Treatment and Disposal of Wastewater (sewage) Plan at Kuwait Oil Company (KOC) Abdurrahman AL-Enizi, Khulood Yousef, Haitham Fouzy, and **Soud Al-Mutairy** Kuwait Oil Company, Kuwait *Abstract*—This paper presented and discussed the management, treatment and disposal of wastewater plan (sewage) at KOC to maintain the Kuwaiti Environment Eco – System clean and healthy. The treated wastewater has been suggested for KOC irrigation, landscaping purposes and conserving the freshwater. We comply with KEPA develops the methodologies, standards and KOC procedure for management of wastewater discharge. The sewage treated in three sewage treatment plants (STP) within KOC operational areas. Each plant having a capacity of 300 m^3/day. In this study, the physical, chemical and biological characteristic of the wastewater samples were studied and continuously analyses before feeding to the plant and after the treatment. The benefits and values of wastewater treatment at KOC shows as following: Reduce pollution due to transportation; Reduce Economic Expenses; Reduce the fuel usage; Reduce the demand of freshwater for irrigation in KOC etc. Reduce the greenhouse gas emission.
CD0199	Elemental and Chemical Analysis of PM_{10} and $PM_{2.5}$ Indoor and Outdoor Pollutants in the UAE **Nasser Hamdan**, Hussain Alawadhi, and Najeh Jisrawi American University of Sharjah, United Arab Emirates *Abstract*—Knowledge of both the size distribution and elemental composition of different size fractions of aerosol particles is useful not only in providing information about the chemical composition and source apportionment of pollutants, but also in understanding the transformation chemistry of pollutants during transport in the atmosphere. We have used a low pressure-multistage inertial impactor and a double stage low volume sampler for particulate matter with aerodynamic diameter between 10 μm, and 2.5 μm respectively (PM_{10} and $PM_{2.5}$) to collect both indoor and outdoor samples. We have integrated various spectroscopic techniques to obtain complementary information about the composition of various size fractions of pollutants, their transformation and their possible sources. Our results show that the coarse fraction of PM is mainly due to natural sources such as dust storms crustal matter and seas salts, while the fine and ultrafine fractions of PM matter contains compounds created through reactions of the natural coarse pollutants with anthropogenic emissions such as sulfur dioxide (SO_2) and nitrogen oxides (NOx), during transport in the atmosphere. The major phase of such new compounds was ammonium sulfate.
CD0200	Numerical Simulation of Fertilizers Movement in Sand and Controlling Transport Process via Vertical Barriers

	Mohamed Galal Awad Eltarabily and Abdelazim M. Negm Egypt Japan University of Science and Technology (E-JUST), Egypt *Abstract*—Intensive application of inorganic compounds for agriculture activities leads to increased percolation into the subsurface and can end up in the groundwater. Nitrate is considered a moderate solute in soils and could move quickly through the soil especially on sandy or permeable soils profile leading to groundwater pollution. This paper presents an application of numerical models in order to investigate the migration process of nitrates through sand. Two software products, SEEP/W and CTRAN/W, are used to analyze the contaminant transport. These models can be used to optimize agricultural practice aiming to minimize the impact on the environment. Nitrate sorption in the sand is influenced by environmental conditions which contributing to the migration process of nitrate in soil. The behavior of nitrate transport through sand is tested when vertical wall of sheet pile is used as a barrier. The involved parameters are the penetration depth of protection wall, location of wall from the pollution source, and the head deference of the water level. The results show that the physical properties of soil have significant effect on the movement of the contaminant. Also, the results indicate that the change in head difference has insignificant effect on the contaminant migration process. Finally, the best location and depth of the vertical barrier are determined to minimize the proportion of the reached contaminant to attain the maximum possible protection of the drain's water.

12:00pm-1:00pm	**Lunch**
Inspire B	

Afternoon, October 30, 2014 (Thursday)

SESSION–2 (ICSEA 2014)

Venue: Inspire B

Session Chair: Prof. Khaled M. Bali

Time: 1:00pm-3:20pm

T0003	Farmers Adaptation to Climate Change: An Evaluation of Small-Scale Upland Irrigation in The Sokoto-Rima Basin, Nigeria **William B. Richard Graham**, Vanacius Chinaemerem Ama and Simon Chibuzor Ekwealor WAZIRI UMARU FEDERAL POLYTECHNIC *Abstract*—Climate change is a major problem affecting the sustainability of agricultural production. This study assesses the soil/water quality and water productivity of irrigated dry season upland farms in northwestern Nigeria. The soils were predominantly coarse textured and the fertility indicators (organic-C, Total-N, Available-P and exchangeable bases) all fell below the critical limits reported for soils in the area. Another major concern being the

	moderate-high levels of ESP. The water quality was however, excellent in all regards. With the exception for one farm which had very low relative water supply, most of the farms indicated very excessive applications of irrigation. The onion farms had high crop water productivity (CWP). While the maize farms had low CWP, which is however consistent with crop production practices within the region.
T0007	Constraints to Indigenous Chicken Production in Enugu State, Nigeria **Jane Chah**, Ifeoma Irohibe and Cynthia Itodo Department of Agricultural Extension, University of Nigeria, Nsukka *Abstract*—This study sought to ascertain perceived constraints to indigenous chicken production in Enugu State, Nigeria. A total of 100 poultry farmers were selected using multi-stage sampling technique. Data were analyzed using percentage, frequency, factor analysis and multiple regression. Results of the study revealed that the respondents kept an average of 14 birds annually indicating that they were small scaled producers. Findings of the multiple regression analysis showed that sex ($t = -3.606$; $p < 0.001$) had a significant and negative influence on the flock size of the birds. The respondents perceived poor disease and parasitic control (M=2.98), low body weight of birds (M=2.94) and predators such as hawks, cats, dogs, mongoose, snacks etc (M=2.92) among others, as constraining factors to indigenous chicken production. The study therefore recommended that the government should provide incentives to extension agents so that they can adequately educate the farmers on improved management practices of indigenous chicken so as to increase its sustainable production.
T0008	Effects of water supply and plant density on leaf characteristics of amaranth (Amaranthus caudatus L.) **Somayeh Farshbaf-Jafari**, Alireza Pirzad, Mehdi Tajbakhsh and Kazem Ghassemi-Golezani Department of Agronomy, Faculty of Agriculture, Urmia University, Iran. *Abstract*—In order to evaluate the effects of water supply and plant density on leaf characteristics of amaranth (*Amaranthus caudatus* L.), a split plot experiment was conducted based on randomized complete block design with three replications at the University of Tabriz in 2013. Treatments were irrigation intervals (I_1 and I_2: irrigations after 70 and 140 mm evaporation from class A pan, respectively) as main plots and plant densities (4, 8 and 12 plants/m^2) as sub plots. The results showed significant interaction of irrigation × plant density for leaf area index (LAI), leaf area ratio (LAR), and specific leaf area (SLA) and leaf weight ratio (LWR). All these traits decreased with decreasing water availability. The difference between well irrigation and water deficit for LAI, LAR and LWR decreased, but for SLA increased as plant density increased. The highest LAI, LAR and LWR under both irrigation treatments were observed at 8 plants/m^2. It was concluded that optimum density for improving leaf area index, leaf area ratio and leaf weight ratio of amaranth under well and limited irrigations is 8 plants/m^2.
T0009	Efficacy of Yeast Cell Wall Extract, a Byproduct of Beer Brewing, in Tomato (Solanum lycopersicum) Culture **Takashi Hamasaki**, Takanori Kitagawa and Takaomi Yasuhara Asahi Group Holdings, Ltd.

	Abstract—The beer brewing process produces surplus yeast, and yeast cell wall extract (YCWE) is an unutilized byproduct of brewing. In this study, we developed a new phosphorus and potassium liquid fertilizer, CW1, containing YCWE, investigated the effects of CW1 application, and observed that CW1 treatment reduced physiological disorders in fruits of tomato (*Solanum lycopersicum*). CW1 spray on leaves of tomato reduced the incidence of blossom-end rot and increased the total yield of fruits by increasing total number of harvested fruits and average fruit weight. There was no significant difference in Brix or acidity. These results suggest that YCWE exerts plant-activating effects and that the application of CW1 is a new means of using a food residual substance effectively in agriculture.
T0014	Potential of unrefrigerated storage of onions in the Western Mountain (WM) region of Libya **Mohamed A. Fennir** Tripoli University *Abstract*—Potential use of unrefrigerated means for onion storage in the WM region of Libya was investigated. Two onion cultivars; Red Amposta and Yellow Spanish were stored in shade and underground bunker-like traditional house (UGH). Temperature and relative humidity profile for both sites were recorded throughout the storage period. Temperature and relative humidity inside UGH were stable while those measured in the shade exhibited wide variations. UGH conditions reduced losses and maintained good quality, yet did not prevent sprouting, perhaps due to the cultivar itself. Red Amposta onions were kept in both sites for 100 days, mass losses were about 27% and 21% in shade and in UGH, respectively. However, Yellow Spanish onions were better in term of losses and storage duration in both sites, they kept sprout free for 152 days, mass losses were 18% and 16% in shade and in UGH, respectively. Onion storage in larger scales using shed structure and ventilated UGH in the WM region of Libya may deserve further investigations.
T0015	Respiration rates of ten Libyan date cultivars (Phoenix dactylifera) measured at Balah stage **Mohamed A. Fennir**, Mohamed T. Morgham and Somaia E. Raheel Tripoli University *Abstract*—Respiration rates for ten Libyan date cultivars were measured at 'Balah' stage. They were five soft cultivars selected from the coastal region and five semidry cultivars from Jufra region located 750 km south of Tripoli. Respiration rates were measured at 1, 10, 20, 30 and 40˚C as CO_2 produced and O_2 consumed. Rates were found in good agreements with those reported in literature at 20˚C. Respiration rates followed general fruit respiration trends, and exhibited second order polynomial pattern (R^2>0.95). Respiration quotients were also determined for the two groups, they were within reported limits for other fruits, but no specific pattern was exhibited. Further investigations of respiration rates for other cultivars and under controlled atmosphere conditions is recommended.
T0018	Management strategies for a win-win relationship between increasing productivity an environmental protection: proposal bases and first results **Oscar Blumetto**, Andrés Castagna, Felipe García, Santiago Scarlato and Gerónimo Cardozo INIA (National Institute of Agriculture Research) *Abstract*—Most of Uruguay land is under agricultural use, which remarks the necessity to think about lands with productive systems within a general strategy for biodiversity

	conservation and ecosystem services preservation. Extensive livestock production is able to reach this objectives but needs to improve productivity for not to compromise economic viability. We present a model for evaluate sustainability in a co-innovation work with 16 pilot farms distributed all around the country. Base line levels of productivity, water quality and biodiversity were established and are periodically monitored. The first results of a study case are presented. The base line of water quality was optimal for streams with a 96 WQI. Regarding to biodiversity a large number of wild species were registered: herbaceous plants (47), trees (25), birds (69) and spiders (19). Ecosystem integrity index was 3.8 for this farm. After diagnosis, a redesign of productive system was accorded with the farmer and one year later productivity has increased 24 % with no environmental changes detected in short term monitoring.
T0020	Seasonal Limnological Variation of Selected Streams and their Associated Fish Ponds in Osun State, Nigeria **Omolara Titilayo Aladesanmi**, Femi KayodeAgboola and Isaac Funsho Adeniyi Institute of Ecology and Environmental Studies, Obafemi Awolowo University, Ile-Ife, Nigeria *Abstract*—Chemical and physical water quality indicators are useful in assessing and/or protection of aquatic ecosystem integrity. This study assessed the seasonal trend in the physical limnology of three water bodies (Stream Yah at Ilesha, Stream Arula at Osogbo and Stream Ewuru at Yakoyo) in Osun state of Nigeria. The water sampling was carried out in the dry (November and February) and rainy (May and August) of the annual cycle for two consecutive years. Variations in the parameters were recorded across the three locations and between the two seasons. The oxygen parameters (Dissolved Oxygen (DO), DO saturation, Biological Oxygen Demand and Organic Matter) were significantly higher ($p<0.05$) in the rainy season than in the dry season, while TDS-a salinity parameter, was significantly higher ($p<0.05$) in the dry season than in the rainy season. The water quality indices in the sampled fish ponds indicated that the water is suitable for aquaculture production.
T0025	Determinants of Rural Women's Access to Food Security Information in the Niger Delta, Nigeria Agwu Ekwe Agwu and **Ifeoma Irohibe** University of Nigeria, Nsukka *Abstract*—This study sought to determine factors influencing rural women's access to food security information, using Tobit model. Multi-stage sampling technique was used to select 120 for the study. Majority (55%) of the respondents had low access to food security information. Results of the Tobit model showed that information seeking behaviour ($t = 2.22$; $p < 0.01$) had a positive significant influence on rural women's access to food security information, while household size ($t = -2.87$; $p = 0.004$) negatively, influenced rural women's access to food security information significantly. Improved access to credit services and loan ($M = 1.60$) and capacity building and training of women on food security issues ($M = 1.47$), among others were perceived as strategies to improve access to food security information. The study therefore recommends that training programmes on food security issues should be organized so as to increase rural women's access to food security information.
T0039	Maize Germplasm Exploration and Collection in the Northern Guinea, Sudan and Sahel

	Savanna Agro-Ecological Zones of West and West Central Africa. **Wailare M.A.**, Abdullahi U.S., Umar I., Gaya A.G and Y.B.Daraja Kano University of Science and Technology, Wudil, Kano state, Nigeria *Abstract*—Four West and West Central African countries were visited to collect maize germplasm to be used in the development of drought resistant maize varieties for the Savanna agro ecologies of Nigeria. The countries were Niger Republic, Burkina Faso, Cameroun and Nigeria. Collections were carried out in open markets, from Research Institutes, seed companies, agro dealers and on farmers' fields with the help of country guides and station guides. A total of fifty five (55) samples were collected from Niger Republic, fourteen (14) from Burkina Faso, seven (7) from Cameroun and two hundred and eighty two (282) From Nigeria, making a total of three hundred and fifty eight accessions (358). The samples were in form of maize kernels and cobs with various colours and sizes.
T0050	Salicylic acid enhances the efficiency of nitrogen fixation and assimilation in Cicer arietinum plants grown under cadmium stress **Mohammed Alyemeni** and Shamsul Hayat King Saud University *Abstract*—The aim of this study was to determine the effect of salicylic acid (SA) on nitrogen fixation and assimilation under conditions of cadmium stress in chickpea plants. Chickpea seeds were sown in pots containing 0, 25, 50, or 100 mg of cadmium per kilogram of soil. The foliage of the 30-day-old plants was sprayed with 10 microMol SA, and the activities of nitrogenase, nitrate reductase, glutamine synthetase, glutamate synthase, and glutamate dehydrogenase were investigated. SA exposure increased the number of nodules, fresh and dry nodule masses, leghemoglobin content, and activity of the nitrogen-fixing enzyme nitrogenase compared with the control conditions. Furthermore, SA application enhanced the activities of the enzymes involved in nitrogen assimilation, in both the control and cadmium-stressed plants. The overall results indicate that SA increases the fixation and assimilation of nitrogen regardless of whether the plants are grown in the presence or absence of cadmium.
T1005	Effect of Indigenous Palm Fronds and Cow dung Biochar and its Blends on Soil Properties. II. Growth Assessment of Oil Palm Seedlets **Marian Osazoduwa Ekebafe**, Philip Oviasogie, and Napoleon Osasuyi Aisueni NIGERIAN INSTITUTE FOR OIL PALM RESEARCH (NIFOR) *Abstract*—Biochar being an important tool to addressing a wide range of the major challenges of soil degradation and food insecurity, climate change, sustainable energy generation and waste management is a carbon rich product obtained when biomass such as wood, manure or leaves is heated in a closed vessel with little or no air. The objective of this study was to determine the effects of biochar and its blends on soil properties and its effects on the growth assessment of oil palm seedlets. The palm fronds and cow dung biochar produced at 300^{o}C for three hours and the soil prepared were analyzed for physico-chemical properties in the laboratory using standard techniques. The growth, soil physico-chemical properties and water holding capacity of the biochar–soil mixture samples in which sprouted oil palm seedlets have been planted were measured. The biochars showed good improvement in the soil water holding capacity at 20-35% more with $40tha^{-1}$dry biochar application than the control. The

	results of the soil-biochar analysis on the growth of the oil palm and physico-chemical properties of the biochar–soil mixture samples showed significant ($p<0.05$) improvement.
T2001	Integrating Renewable Energy to Cold Chain: Prospering Rural India Veena Sinha and **Alok Tripathi** Energy Access and Solar Thermal Division, Ministry of New & Renewable Energy, Govt. Of India *Abstract*—India is the largest producer of fruits and milk, second largest producer of vegetables, and third largest producer in the fishing sector in the world. Post harvest losses mainly on account of lack of proper storage and transit facility, account for about 25-30% losses, besides deterioration in quality. Perishable nature of produce requires a cold chain arrangement to maintain quality and extend the shelf life if consumption is not meant immediately after the harvest. Due to unreliable grid power supply, most of the current cold storages use grid power hybridized with DG sets. This paper attempts to provide information on renewable energy based solutions available for providing and maintaining the chamber temperature in range of -7 to 18 degree along with meeting other loads, which may also include village electrification load if so desired. This will ensure self-sustained, environment friendly, economical development of GREEN COLD CHAIN in long run facilitating further the increasing production.
T3003	Assessment of Consumer Preference for Cowpea Quality Characteristics and Price Trends in Niger State, Nigeria **Faith Debaniyu Ibrahim**, Job Nda Nmadu, Kpotun Mohammed Baba, Nehemiah Danbaba and Philip Audu Ibrahim School of Agriculture and Agricultural Technology, Federal University of Technology Minna Niger State, Nigeria *Abstract*—This study assessed the consumer preference for cowpea quality characteristics and price trends in Niger State. The study employed a random sampling technique to select three markets from three different regions across the State. Systematic selection of 5 retailers from each market was carried out every month for twelve months. Information on relevant cowpea grain quality characteristics most preferred by consumers and its price trend is limited at present in the study area. Results revealed that consumers showed a preference for quality characteristics such as rough texture, white eye, white testa colors and minimum insect damaged grains. Price trends showed increase in prices of cowpea grains from January to July in all markets. It was recommended that Government should provide cowpea grains encompassing all the qualities preferred by consumers. Good storage mediums to combat insect damage to cowpea grain and price stability can be achieved through government intervention.

3:20pm-3:40pm	**Coffee Break**

Afternoon, October 30, 2014 (Thursday)

SESSION–3 (ICSEA&ICBEC&ICPBS 2014)

Venue: Inspire B

Session Chair: Prof. Jun F. (James) Liang

Time: 3:40pm-6:10pm

T4008	Analysis of Expressed Sequence Tags (EST) Obtained from Common carp, Cyprinus carpio L., Head Kidney Cells After Stimulation by CpG oligodeoxynucleotides **Asmi Citra Malina AR Tassakka** and Masahiro Sakai Hasanuddin University *Abstract*—We analyzed genes expressed from head kidney of common carp *Cyprinus carpio* L. treated with CpG oligodeoxynucleotides. The results of single-pass sequencing of expressed sequence tags (ESTs) from 88 clones (AU312478-AU312561) from kidney cDNA are presented. Out of 88 clones 84 (95.5 %) matched with nucleic acid and/or amino acid sequences, whereas the remaining 4 (4.5 %) clones did not show any significant homology to the sequences in the databases. Immune related cDNA clones identified from kidney were granulin2, CCAAT/enhancer binding protein, immunoglobulin heavy chain variable region, lectin, lysozyme C, interleukin-4 receptor alpha chain, cathepsin L preproprotein, CD9 protein and Granulin 1 were identified.
Z0003	Antioxidant Properties of Fibre Rich Dietetic Chocolate Cake Developed by Jackfruit (Artocarpus heterophyllus L.) Seed Flour **J. David** Shiats University, India *Abstract*—Food is a subject of vital interest to everyone in the world. A majority of consumers shown concern regarding restrictions for limiting of high calorie and cholesterol in daily diet, as higher intake of fat is linked with development of cardiovascular disease stated by American Cancer Society. Due to compositional benefit of Jackfruit seeds i.e., being rich in protein and Carbohydrate, low in fat and calorific value, it is pertinent to convert Jackfruit seed into flour to be used in several functional foods. Conversely, an attempt has been made to blend 5-15% jackfruit seed flour (JFSF) for cake preparation by partial replacement of wheat flour. In the present investigation jackfruit seed flour and wheat flour were used to formulate low calorie chocolate cake. The refined wheat flour and jackfruit seed flour were mixed in the ratio of 95:5, 90:10, 85:15 and 100% refined wheat flour (control). The total dietary fibre content increased from 3.43 – 9.06% with incorporation of 15% Jackfruit seed flour. The antioxidant activity increased from 52.42 – 97.82 mg/g. The chocolate cake samples of different treatments and control were analyzed for protein, fat, ash, dietary fibre and antioxidant for estimating its content and food safety. Organoleptic characteristics (flavour and taste, body and texture, colour and appearance, overall acceptability) were checked by hedonic scale. The treatment containing 10% level of jackfruit seeds scored the highest value. Thus, product acceptability judged by organoleptic evaluation and therapeutic value, the treatment can be rated as $T_2 > T_0 > T_1 > T_3$
Z0005	Performance Evaluation of FMMS using Underwater Sensor Network

	V. Parthasarathy, S. A.Kalaiselvan, S. Hemalatha, G. Venkata Swaroop Veltech Multitech Dr Rangarajan Dr Sakunthala Engg College, India *Abstract*—The radical growth in sensor network technology has paved way to many applications with socio economic implications. Development of new types of sensors for various parameters has increased the scope for data collection and has also lead to the manipulation of data for useful inferences. The need to study the behavior of fish movement in aquatic systems is imperative, because this will help the fishermen to identify possible catchment area for fishing. Precise methods to monitor the movement of fishes will definitely help the fishermen to save time and resources. This paper proposes a novel system, which will study the movement of fishes in water, by considering few defined parameters. This was observed using specific sensors placed along the length, breadth and depth of earmarked areas under water. The acquired information was manipulated to understand the movement of fishes in the catchment area. The simulation results obtained show that the proposed system for fish movement monitoring works effectively under certain presumed conditions.
Z0006	Variations of leaf epicuticular wax in grasses on alpine meadows at two altitudes **Yanjun Guo**, Na Guo, Jianhua Gao, Yuji He Southwest University, China *Abstract*—Understanding the intraspecific variation of alpine plants along altitude gradients will be beneficial to estimate their vulnerability to predicted climate changes. In the current study, ten plant species located in alpine meadow at the east side of Qinghai-Tibet Plateau were sampled under two altitudes, 3447m and 4845m, aiming to analyze the intraspecific variations of leaf epicuticular wax to altitudes. The amounts of total epicuticular wax varied greatly among plant species. Averagely, the total epiculticuar wax amount was 8.35 μg/cm^2 at high altitude and 5.78 μg/cm^2 at low altitude. Different plant species had different responsive mechanisms of wax deposition to altitudes. Altitudes influenced the percent of wax constituents, while no consistent changes could be observed among the ten investigated plant species. High altitude had a trend in reducing $ACL_{alkanes}$, CPI_{alkane}, and $ACL_{alcohos}$ in most plant species, contributing to higher relative contents of long chain n-alkanes in plants under low altitude than high altitude.
Z0009	Screening of Antagonistic Effect of Bacteria Associated with Sea Fan Coral **C.Chellaram**, A.Alex John, D.Kesavan, M.Mark Praveen Vel Tech Multi Tech Dr. RR Dr.SR Engineering College, India *Abstract*—The objective of the present study is to isolate antagonistic potent marine bacteria from coral reefs against selected human pathogens. Hence the present investigation was undertaken to isolate the bacteria from marine environment of tuticorin coast of tamil nadu and to examine their inhibitory action against selected human pathogens. 245 epibiotic bacteria were isolated from different coral samples collected at tuticorin, gulf of mannar in south east coast of India. All the bacteria were subjected to primary screening against Methicillin resisted *Staphylococcus aureus* (MRSA), *Klebsiella pneumoniae, Pseudomonas aeruginosa and Escherichia coli* and secondary screening were selectively carried out using well diffusion assay. The strain HC1 shows inhibition properties against *Staphylococcus aureus and E.coli*. Its phylogenetic position was in the genus Marinobacterium and the closest

	related species was *Vibrio brasilliensis* strain. The investigation shows that the epibiotic bacteria are a good source of antibacterial compound. This compound can be purified and further used as antibiotic drugs.
Z0016	Characterization and Biotechnological Clean-up Process of a Spent TiO_2 Catalyst **Brenda Cruz-Ortiz**, Lourdes Díaz-Jiménez, Dora Cortés-Hernández Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico *Abstract*—TiO_2-based catalysts are widely used in Claus units in natural gas-processing plants, for the conversion of hydrogen sulfide to elemental sulfur. As a result of the constant reaction cycles the catalyst suffers sulfur deposition on its active sites, resulting in a decrease of its catalytic activity. In this work a biodesulfurization process on a spent TiO_2 catalyst was performed. Physicochemical characterization of the catalyst by scanning electron microscopy, X-ray diffraction, atomic absorption spectroscopy, specific surface BET, and sulfur content (LECO analysis) was performed. *Thiobacillus thiooxidans* was the microorganism employed to eliminate the sulfur from the spent TiO_2 catalyst. A sulfur reduction of 60 % w/w was obtained following 30 days of treatment.
Z0018	*E. coli* Disinfection Using $TiO_2/CaSiO_3$-Based Materials **Brenda Cruz-Ortiz**, Lourdes Díaz-Jiménez, Dora Cortés-Hernández Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico *Abstract—E. coli* is an enteric pathogen found in untreated water, being one of the mainly causes of gastrointestinal diseases. According to the latest estimates of the WHO/UNICEF more than 700 million people still use unsafe drinking water sources. In recent years, the use of photocatalytic materials has attracted attention for water disinfection. In this work, $TiO_2/CaSiO_3$-based materials were obtained by solid-state reaction and characterized by X-ray powder diffraction (XRD). Following step involved its evaluation on the disinfection of *E. coli*. The results showed a 5-log reduction in *E. coli* concentration in 60 min of treatment with $TiO_2/CaSiO_3$ under UV-light at an initial composition 80/20 wt.%. Furthermore, a 1-log reduction was observed in absence of UV-light, i.e. only material.
Z0019	Improved photocurrents of Photosystem II-based biosensor for herbicides by polyacrylamide gels Ting-Ru Lin, **Hsiao-Ting Hsueh**, Pu-Sung Huang, Li-Hsiu Hou, Hsiu-An Chu, and Chih-Ting Lin National Taiwan University, Taiwan *Abstract*—Photosystem II (PSII) complexes in the chloroplast have been researched as a biomaterial in the filed of fast herbicides detection because of high affinity and low cost. According to past studies, photocurrents of Photosystem II-based biosensors, however, demonstrated only 3~35 nA reference photocurrents with log signal-to-noise ratio when detecting inhibitors. Herein, photocurrents of PSII were promoted through an employment of polyacrylamide gels and consequently the variation of photocurrents corresponding to the inhibitor DCMU of 50 μM was enhanced. The utilization of polyacrylamide gels guaranteed the activity and motility of PSII in a Trizma buffer solution at pH value of 9 and the porous gel structure provided protons and other counterions with multiple conducting paths for vectorial currents in the medium. This mechanism asserts 106 nA reference photocurrent

	under illumination and demonstrated 1.55 nA photocurrent after the introduction of DCMU. The primitive result of a herbicide test by this device indicates the potential of further research as an advanced photosynthetic biosensor.
Z0029	Pretreatment of cellulosic substrates by acetate- and chloride-based ionic liquids and their mixtures **Iakov A. Masiutin**, **Alexander V. Golyshkin**, **Artem A. Litvin**, Andrei A. Novikov, Vladimir A. Vinokurov Gubkin Russian State University of Oil and Gas, Russia *Abstract*—Cellulose has a complex structure that seriously hinders its processing. Ionic liquids (ILs) have the ability to dissolve cellulose, thus modifying its structure. A series of acetate- and formate-based ILs was synthesized from their chloride analogues and tested for dissolution of microcrystalline cellulose. Investigation of cellulose solubility in 1-butyl-3-methylimidazolium acetate, 1-ethyl-3-methylimidazolium acetate, 1-butyl-3-methylimidazolium chloride and their mixtures was made. The optimal weight ratio of a chloride-based IL to an acetate-based IL was found to be 6:4. The solubilizing power of that mixture was maximal and for butyl-substituted ILs it exceeds the solubilizing powers of individual compounds. The application of IL mixtures enhances cellulose dissolution due to combined action of the chloride-based and acetate-based ILs. The former effectively destruct intra- and intermolecular hydrogen bonds in cellulose and form new, stronger intermolecular bonds between cellulose and chloride anions; while the latter lower the melting point and viscosity of the resulting mixture due to the presence of acetate anions.
Z0031	Betacyanin Extraction from Opuntia Fruits Using Non-Thermal Processes **Nakkeeran E**, Jaibiba P, Kabilan S, Anusiya P Department of Biotechnology, Sri Venkateswara College of Engineering, India *Abstract*—Extraction of betacyanin from *Opuntia* fruits was attempted by non-thermal processes, ultrasonication and homogenization. Under optimum process conditions, ultrasonication exhibited highest betacyanin extractability of 578 mg/L and purity of 5.06 fold. While homogenization showed maximum betacyanin extractability of 458 mg/L with 3.96 fold purity. Ultrasonication exhibited slightly greater extractability of 161 g/L total carbohydrates, 1.97 g/L total phenolic content than homogenization. However, the extractability of 0.327 g/L ascorbic acid and 72% antioxidant activity obtained by ultrasonication was similar to homogenization. The results suggested the suitability of ultrasonication process for greater extraction of betacyanin from *Opuntia* fruits.
Z0037	Occurrence and identification of bisphenol A and other alkylphenols in drinking water and sea creatures using GC-MS and GC-FID. **Mohammed Alshanqiti**, Joseph Michael, and Yuegang Zuo University of Massachusetts Dartmouth, United States. *Abstract*—Recent health concerns have given rise to the study of Bisphenol A and other Alkylphenols that cause endocrine disrupting processes in the human body. Bisphenol A and other alkylphenols are extensively used in industrial consumer products and plastics. The exposure of these compounds in the water supply and foods contaminated at high concentrations is harmful to human health. The purpose of this study is to identify bisphenol A

	and other alkylphenols in sea creatures such as crab and drinking water. A GC-FID method was developed to separate and quantify bisphenol A and alkylphenol derivatives in crab. The analytical method included sample homogenization, organic solvent extraction, ultrasonication, centrifugation, filtration, and GC-FID determination. The calibration curves showed good linearity for the BPA and other APs with R2 values greater than 0.997 %, indicating that the *process* is accurate and precise. The developed method was successfully applied to determine BPA, 4-Cumylphenol, and 2,4-Bisphenol in crab samples.
Z0041	A visible light sensitive CeO_2/TiO_2 nanocomposite as a photocatalyst **Sajjad Shamaila**, Summer Faiza, Ahmed Khan Leghari Sajjad Department of Physics, International Islamic University Islamabad, Pakistan *Abstract*—Titanium oxide (TiO_2) is synthesized by the combined sol–gel and hydrothermal routes to develop novel properties. Cerium oxide is incorporated on the surface of titania to enhance its quantum efficiency. Pure TiO_2 and CeO_2/TiO_2 nanocomposites exhibits anatase phase. CeO_2/TiO_2 nanocomposites show positive response toward the visible light absorption owing to the photo-sensitizing effect of CeO_2. Ti-O-Ce linkages are responsible for the more hydrophilic sites which can trap the holes in valence band. The samples loaded with CeO_2 show better photocatalytic activity as compared to pure TiO_2. 2.0 %CeO_2/TiO_2 have highest decomposition rate due to small crystal structure, band gap value, mixed valence Ce^{+3}/Ce^{+4} and reduced recombination rate of electrons and holes.
Z1003	Measurements of pattern identification accuracy using Brain Computer Interface technology for Neurological disability patients **V. Parthasarathy**, G. Saravana Kumar, C. Sujeet Blessing, S. Sivasaravana Babu and S. Sudhakar Veltech Multitech Dr Rangarajan Dr Sakunthala Engg College, India *Abstract*—Brain-Computer Interface (BCI) is a thought process mapping technology to empower humans afflicted by prolonged neurological disability to pursue independent life and offers immense exploration scope to the researchers. The Biosignal originated from brain has the key parameters to diagnosis and identify the thought process of a human being. Many applications are derived from these biosignals to arrive at the kind of treatment to be provided and solution to circumvent the human inabilities. The driving signal for BCI does the brain to various stimuli presented generate the electrical activity. Among various types of brain signals P300 signal exhibits high degree of representative information. With an effective feature classification scheme this signal can be used to implement an efficient Speller BCI system. This paper proposes a scheme to assess the efficiency of P300 signal based speller BCI. It employs two types of visual stimuli presentation schemes namely Single Set Character (SSC) and Multiple Set Character (MSC). The former scheme presents one character for an instant and the later scheme presents a set of characters for an instant. The experimental set up comprises of exposing multiple subjects to single specific stimuli and repetitive stimuli application. The evoked P300 response data set is subjected to statistical comparison models. The proposed scheme infers that MSC stimulus paradigm possess the potential to evoke 100% pattern identification accuracy and it also concludes that variation of 60% for single presentation is increased to almost 100% for tenth re-presentation.
B0007	Whole-Body Imaging of Bacteria Expressing mKate2 Fluorescence **Ivan Vuletic**, **Alison Ren**, **Jiaxuan Li**, Yichen Ding, and Jun Li

	Peking University *Abstract*—We established and validated a non-pathogenic bacteria to express a far red fluorescence protein mKate2 for in vivo studies in mice. Using the fluorescence reflectance imaging (FRI) system, the bacteria expressing mKate2 was tested non-invasively and in real-time in different mouse body compartments, including subcutaneous, abdominal, and gastrointestinal tract. Our results suggested that bacteria colonization could be clearly visible and successfully monitored over time in live animals. This method could be a prospective approach for further studying of either pathogenic or non-pathogenic bacterial infection, antibiotic therapy or bacteria as drug-gene delivery for tumor therapy in small animal model such as mice.
B2001	Designing New Vanillin Schiff Bases and their Antibacterial Studies **Sridevi Chigurupati** AIMST University *Abstract*—The antimicrobial drugs occupy a unique niche in the history of medicine. A series of vanillin substituted Schiff bases (SB-1 to SB-6) were synthesized using vanillin and various aromatic amines in presence of a basic catalyst, triethyl amine. The synthesized compounds were authenticated by Thin Layer Chromatography (TLC), Ultraviolet-Visible, Fourier Transformer-Infrared (FT-IR), Nuclear Magnetic Resonance (NMR) and mass spectroscopic techniques. The Antibacterial activity of the synthesized compounds was studied using disc diffusion method and the concentration was fixed using Minimum inhibitory concentration by test tube dilution method using Gentamicin as standard drug. The antibacterial study revealed that compounds SB-5 and SB-6 showed excellent activity against gram positive bacteria: B.subtilis and S.aureus and gram negative bacteria: P.aeruginosa and K.pneumoniae. All the six Schiff bases showed excellent activity against B.subtilis.

6:20pm	**Dinner**
Inspire B	

October 31, 2014 (Friday)
Academic Visit and One Day Tour

Please note that one day tour is for who registered for it.
(Please note that the departure time will be 9:00am, please kindly arrive at the hotel before 9:00am, we will depart on time. Thank you for your cooperation!)
Welcome to register for one day tour.

Conference Venue

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APCBEES FORTHCOMING CONFERENCES

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

DATE	NAME		PUBLICATION
Jan. 10-11, 15, 2014, Dubai, UAE	**ICEBE 2015**	The aim objective of the 2015 International Conference on Environment and Bio-Engineering http://www.icebe.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)/ International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638)
	ICPPE 2015	2015 2nd International Conference on Petroleum and Petrochemical Engineering http://www.icppe.org/	International Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
	ICGCE 2015	2015 2nd International Conference on Geological and Civil Engineering http://www.icgce.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
Jan. 24-25, 2015, Taipei, Taiwan	**ICFEE 2015**	2015 5th International Conference on Future Environment and Energy http://www.icfee.org/	Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X)
	ICBBB 2015	2015 5th International Conference on Bioscience, Biochemistry and Bioinformatics http://www.icbbb.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICCCH 2015	2015 4th International Conference on Climate Change and Humanity http://www.iccch.org/	APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708)
Feb. 08-09, 2015, Rangoon, Burma	**ICOGE 2015**	2015 International Conference on Geological Engineering http://www.icoge.org/	International Journal of Geological Engineering (IJGE, ISSN: 2301-3818)
	ICERE 2015	2015 International Conference on Environment and Renewable Energy http://www.icere.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
	ICFES 2015	2015 International Conference on Food and Environmental Sciences http://www.icfes.org/	International Journal of Food Engineering (IJFE, ISSN: 2301-3664)
Feb. 14-15, 2015, Amsterdam, Netherlands	**ICESD 2015**	2015 6th International Conference on Environmental Science and Development http://www.icesd.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)

	ICCCP 2015	2015 5th International Conference on Chemistry and Chemical Process http://www.cbees.org/events/	International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221)
	ICCGE 2015	2015 4th International Conference on Clean and Green Energy http://www.iccge.org/	Journal of Clean Energy Technologies (JOCET, ISSN: 1793-821X)
Mar. 10-11, 2015, Seoul,South Korea	**ICFEB 2015**	2015 6th International Conference on Food Engineering and Biotechnology http://www.icfeb.org/	International Journal of Food Engineering (IJFE, ISSN: 2301-3664); Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)
	ICBET 2015	2015 5th International Conference on Biomedical Engineering and Technology http://www.icbet.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICEII 2015	2015 5th International Conference on Environment and Industrial Innovation http://www.iceii.org/	International Journal of Innovation, Management and Technology (IJIMT, ISSN: 2010-0248); International Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
Mar. 19-20, 2015, Florence, Italy	**ICCBS 2015**	2015 2nd International Conference on Chemical and Biological Sciences http://www.iccbs.org/	International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221); International Journal of Bioscience, Biochemistry and Bioinformatics (IJBBB, ISSN: 2010-3638)
	ICCUE 2015	2015 2nd International Conference on Civil and Urban Engineering http://www.iccue.org/	International Journal of Engineering and Technology (IJET, ISSN:1793-8236)
	ICFSN 2015	2015 2nd International Conference on Food Security and Nutrition http://www.icfsn.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
Apr. 6-7, 2015, Kyoto, Japan	**ICCOE 2015**	2015 2nd International Conference on Coastal and Ocean Engineering http://www.iccoe.org/	Journal of Environmental Science and Development (IJESD, ISSN:2010-0264)
	ICCFE 2015	2015 2nd International Conference on Chemical and Food Engineering http://www.iccfe.org/	International Journal of Chemical Engineering and Applications (IJCEA, ISSN:2010-0221); International Journal of Food Engineering (IJFE，ISSN: 2301-3664)

	ICBAE 2015	2015 International Conference on Biotechnology and Agriculture Engineering http://www.icbae.org/	Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737); Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)
Apr. 24-25, 2015, Istanbul,Turkey	**ICESE 2015**	2015 5th International Conference on Environment Science and Engineering http://www.icese.org/	Volume of Journal (IPCBEE, ISSN: 2010-4618)
	ICLST 2015	2015 5th International Conference on Life Science and Technology http://www.iclst.org/	Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672)
	ICBFS 2015	2015 5th International Conference on Biotechnology and Food Science http://www.icbfs.org/	International Journal of Food Engineering (IJFE , ISSN: 2301-3664); Journal of Medical and Bioengineering (JOMB, ISSN: 2301-3796)
May. 12-13, 2015 Warsaw, Poland	**ICCMP 2015**	2015 International Conference on Chemical Materials and Process http://www.iccmp.org/	Advanced Materials Research (ISSN: 1022-6680)
	ICBPE 2015	2015 2nd International Conference on Biomedical and Pharmaceutical Engineering http://www.icbpe.org/	The Journal of Medical and Bioengineering(JOMB, ISSN: 2301-3796)
	ICFAE 2015	2015 International Conference on Food and Agricultural Engineering http://www.icfae.org/	The Journal of Advanced Agricultural Technologies (JOAAT, ISSN:2301-3737)
May. 23-24, 2015 Singapore	**ICEST 2015**	2015 6th International Conference on Environmental Science and Technology http://www.icest.org/	International Journal of Applied Environmental Sciences (ISSN: 0973-6077)
	ICBBT 2015	2015 7th International Conference on Bioinformatics and Biomedical Technology http://www.icbbt.org/	Information and Communication Technologies (ISSN: 1743-3517)
	ICPIE 2015	2015 4th International Conference on Petroleum Industry and Energy http://www.icpie.org/	the Journal of Industrial and Intelligent Information (JIII, ISSN: 2301-3745)

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