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2nd Global Summit on

Biomass & Bioenergy

December 05-06, 2016, Dubai, UAE

Theme: On Path to Sustainable Energy

Tentative Program



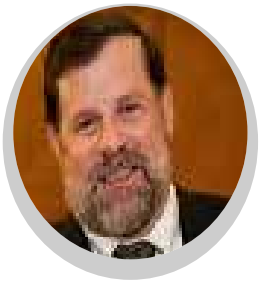
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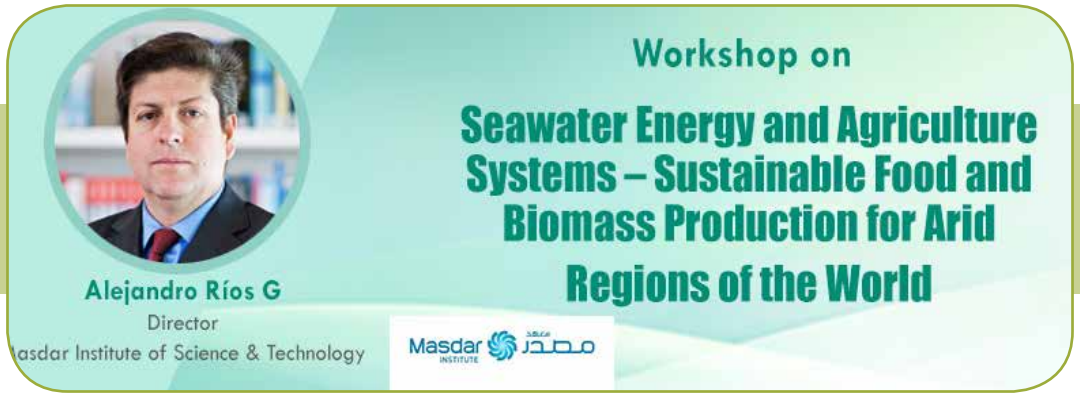


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Morning Sessions	Reception/Registration	08.00-09.00	
		Time	General Session
	Least of 3 Keynote/Plenary Talks	09.00-09.15	Inaugural Address
		09.15-09.45	Keynote/Plenary Talk 1
		09.45-10.15	Keynote/Plenary Talk 2
		10.15-10.45	Keynote/Plenary Talk 3
	Panel Discussions/Group Photo		
	Coffee/Tea Break 10.45-11.00 (Networking)		
	11.00-12.40	Biomass feed stocks for renewable energy generation	
Evening Sessions			
	Lunch Break 12.40-13.30		
	13.30-15.30	Biomass &Renewable Energy	
	Coffee/Tea Break 15.30-15.45 (Networking)		
	15.45-17.25	Bioenergy Conversion	

Day 2

	Time	Session 1	Session 2
Morning Sessions	09.00-10.40	Keynote Forum	
	Coffee/Tea Break 10.40-10.55 (Networking)		
	10.55-12.35	Bioenergy Transition	Processes for Bioenergy
	Lunch Break 12.35-13.25		
Evening Sessions	13.25-15.05	Biogas	Biodiesel
	Coffee/Tea Break 15.05-15.20 (Networking)		
	15.20-17.00	Biofuels	Bioenergy Applications

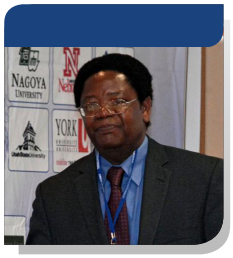
NOTE: Program Shedule is subject to change with final allotment of the speaker slots



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Glimpses of Conferences

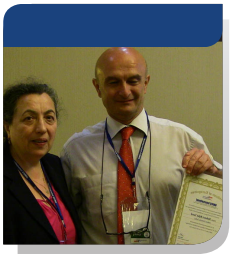


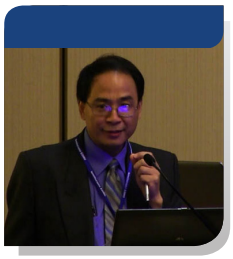








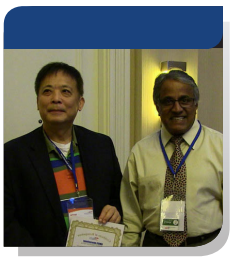








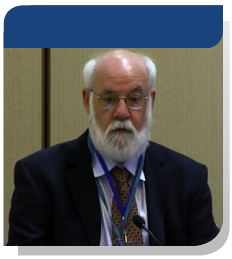


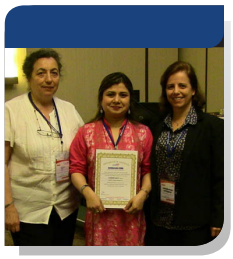



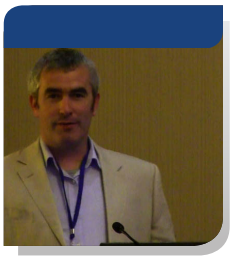













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Biography

Richard Vlosky is Director of the Louisiana Forest Products Development Center and Crosby Land and Resources Endowed Professor in Forest Sector Business Development at the Louisiana State University Agricultural Center in Baton Rouge. He received his Ph.D. in Wood Products Marketing at Penn State University, an M.S. in International Forest Products Trade from the University of Washington and a B.S. in Natural Resources and Forest Management from Colorado State University. His areas of research and consulting include: biofuels/bioprocessing & bioenergy, domestic and international forest products marketing and business development, certification & green marketing, eBusiness and eCommerce. He has authored or co-authored over 135 refereed publications, 19 book chapters and 4 books, and has made over 360 presentations on a variety of topics in the U.S. and 29 countries.

Dr. Vlosky is President-Elect of the Forest Products Society, Member of the Boear of the Louisiana Forestry Association, Board Member of CORRIM (Consortium for Research on Renewable Industrial Materials (CORRIM), Sector Leader-Wood Products for the Louisiana Institute for Biofuels and Bioprocessing (LIBBi), and Louisiana Representative for the Southern U.S. Bioenergy Working Group.

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Abstract

Wood Pellets: opportunities and challenges in the global market

Richard P. Vlosky
Louisiana State University Agricultural Center
USA

Fifteen years ago, the global wood pellet market was almost negligible. What occurred in the following span of time has been truly remarkable exponential growth; the global market was valued at almost $US 7 billion in 2014. If current economic, environmental, and governmental structural support continues, the sector is expected to grow at a Compound Annual Growth Rate of 11.1% during 2015 - 2020. Europe accounts for the largest share of the global wood pellet market with an estimated 20,000 million tons consumed in 2014. On the supply side, the primary wood pellet exporting regions to Europe are the United States, Canada and Russia. In addition, intra-Europe trade accounts for almost half of Europe's pellet consumption. Within Europe, the United Kingdom is currently burning 33% of the world's wood pellet imports. The major reasons behind growth of the market in the region were the creation of environmental goals of lowering greenhouse gas emissions by transitioning from fossil fuels to renewable energy sources including wind, solar, and biomass. These goals were fostered by increased government initiatives and mandates for renewable technologies and implementation of subsidies, incentives and legislation. This presentation will provide a global overview of wood pellet supply, demand and trade flows. In addition, constraints, challenges, and sector drivers will be discussed in this rapidly evolving global forest products industry sector.

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Biography

Dr Hussam Jouhara is an associate profesor in Brunel University London. Since obtaining his PhD from Manchester University in 2004, he worked in academia and industry in the UK where he developed extensive expertise in working on applied energy-related research activities with direct support from various UK and international industry partners. He has proven expertise in designing and manufacturing various types of heat exchangers, including heat pipes and heat pipe-based systems, for low, medium and high temperature applications (from -170°C to 1500°C). So far he has received over £5.2M in research funding (as a Principal Investigator or Co-Investigator) from various UK/EU based research councils and from British, European and international industrial partners. His work has resulted in over 23 innovative industrial heat exchangers for controlled cooling/heating thermal systems, waste heat recovery systems, waste treatment/biomass production, HVAC units, cryogenic cooling/preservation and in food industries. These systems are now being used by small to large scale companies world-wide.

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Abstract

Heat pipe based waste treatment system for biomass production from municipal waste

Hussam Jouhara.,
Institute of Energy Future, College of Engineering
UK

The paper describes the benefits of implementing heat pipe technology in the pyrolysis process to facilitate an efficient, cost effective and space saving waste treatment unit. The concept's goal is to convert hazardous substances of municipal waste to inert components (biomass) that can be furtherly used in various industries. The pyrolysis principles, the state-of-the-art thermal treatments of waste management, the types of treated waste and the properties of the post-pyrolysis products are reviewed in the paper. Moreover, the paper includes the experimental findings of an innovative pyrolysis reactor design, in regards to its performance, in terms of the temperature distribution inside the reaction chamber and the power consumption of the chamber, as well as the thermo-chemical characterisation of the bio-chars and pyro-oils obtained from the process.

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Biography

Prof. Irene M. C. Lo is currently a full professor in the Department of Civil and Environmental Engineering at The Hong Kong University of Science and Technology (HKUST) and has been joining HKUST since 1992. Prof. Lo is an elected Academician of the European Academy of Sciences and Arts (EASA). She is the first Hong Kong scholar inducted into the EASA. She is an elected Fellow of the Hong Kong Institution of Engineers (FHKIE), and elected Fellow of the American Society of Civil Engineers (FASCE), She received her Ph.D. degree in Civil (Environmental) Engineering from the University of Texas at Austin in 1992. She is also Adjunct Professor of Tongji University, Tianjin University, Jilin University and Harbin Institute of Technology in China. She had been Visiting Professor of Technical University of Denmark and the University of Wisconsin at Madison. Prof. Lo was the recipient of the 2004 ASCE James Croes Medal, the 2007 ASCE Samuel Arnold Greeley Award, the 2008 EWRI Best Practice-Oriented Paper Award, the 2009 ASCE Wesley W Horner Award, and the 2012 ASCE EWRI Best Practice-Oriented Paper Award. Prof. Lo has held 2 Patents, edited 7 technical books, and published over 260 SCI journal articles and conference papers with citation of 4500+ and H-index of 35. Her research areas include biomass waste treatment and management; remediation technologies for river sediment, contaminated soils and groundwater; magnetic nano- and microparticles for environmental pollution control; and pollutant migration in soils.

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Abstract

Turning food waste into different forms of energy use for climate change mitigation in Hong Kong

Irene M. C. LO
Hong Kong University of Science and Technology
Hong Kong

According to the Food and Agriculture Organization of the United Nations, about 1.3 billion tonnes of food produced is lost or wasted each year. Meanwhile, food waste is a valuable resource with great potential for energy production. Among the available methods for food waste treatment, anaerobic digestion is a viable option for turning food waste into energy in the form of biogas. Nowadays, there has been increasing interest in using anaerobic digestion for food waste treatment because this renewable energy can replace the use of fossil fuels for energy production and thereby reduces greenhouse gas emissions and mitigates climate change. However, turning biogas into different forms of energy use can have different degrees of impact on climate change. Therefore, it is important to quantify the impact and identify the most favorable one. In this study, the options for turning food waste into various types of energy use, including electricity and heat, city gas for household use, and biogas fuel for vehicle use, are evaluated using life cycle assessment (LCA). This assessment is mainly based on the specific data in Hong Kong. The results show that biogas fuel as a petrol substitute for vehicle use has advantageous over other options in regard to climate change. It is estimated that converting one-third of food waste produced each day in Hong Kong to biogas fuel would reduce ~1.9% of greenhouse gas emissions in transport sector. The findings indicate the significance of turning biogas for vehicle fuel use for reducing the greenhouse gas emissions.

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Biography

Richard Vlosky is Director of the Louisiana Forest Products Development Center and Crosby Land and Resources Endowed Professor in Forest Sector Business Development at the Louisiana State University Agricultural Center in Baton Rouge. He received his Ph.D. in Wood Products Marketing at Penn State University, an M.S. in International Forest Products Trade from the University of Washington and a B.S. in Natural Resources and Forest Management from Colorado State University. His areas of research and consulting include: biofuels/bioprocessing & bioenergy, domestic and international forest products marketing and business development, certification & green marketing, eBusiness and eCommerce. He has authored or co-authored over 135 refereed publications, 19 book chapters and 4 books, and has made over 360 presentations on a variety of topics in the U.S. and 29 countries.

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Abstract

An overview of wood-based energy in North America

Richard P. Vlosky
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Louisiana, USA

Historically, global energy consumption has been dominated by non-renewable fossil fuels such as oil, natural gas and coal. Alternative renewable, non-extractive sources of power, such as wind and solar, have gained momentum in growth. In addition, over the past two decades, there has been significant and growing attention globally to what is general termed the “Advanced Bioeconomy”. This includes research, development, and commercialization in the use of cellulosic materials to create new fuels, feedstock for electricity generation, and other value-added co-products and materials. The development of the nascent bioeconomy is primarily driven by a desire to reduce global greenhouse gas emmissions such as carbon dioxide (CO2), nitrous oxide (N2O) and methane (CH4). This presentation will focus on wood-based renewable energy in North America. Topics include the current landscape, sources of woody biomass, and options for wood-based bioenergy and biofuels. In addition, the drivers for this emerging sector as well as successes and failures will be examined. Although the focus is North America, the Advanced Bioeconomy is global and many of the lessons learned in North America have implications in other regions and countries.

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Biography

Dr. Bauer has been on the faculty at Michigan State University since 1988 and was named University Distinguished Professor in 2007. He served as Chairperson of the Department of Physics and Astronomy from 2001 to 2013 and in 2009 became the Founding Director of the Institute for Cyber-Enabled Research. Since 2013 he is serving as Senior Consultant in the Office of the Executive Vice President for Administrative Services. He is co-owner of several biofuel power plants and businesses. He has authored over 210 refereed publications, conference proceedings, and books, holds 4 patents, and has given over 370 seminars, colloquia, and presentations at national and international conferences.

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Abstract

Biogas for electricity and transportation fuel production

Wolfgang Bauer
Michigan State University
USA

Biofuels can provide a significant contribution to the global renewable energy portfolio, in particular since they do not have the intermittency challenges of solar and wind power. This keynote provides a life cycle analysis of biogas and bioethanol technologies and compares their net energy ratio, their greenhouse gas budgets, and their potential as transportation fuels. Based on these results, generating biogas via anaerobic digestion is superior to distilling ethanol from energy crops.

Biofuels are made through the use or conversion of biomass (referring to recently living organisms, most often referring to plants or plant-derived materials). This biomass can be converted to convenient energy-containing substances in three different ways: thermal conversion, chemical conversion, and biochemical conversion. This biomass conversion can result in fuel in solid, liquid, or gas form. This new biomass can also be used directly for biofuels.

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Biography

Prof Vladimir Strezovis currently Professor at the Department of Environmental Sciences, Macquarie University. He has completed his PhD in 2000 from the Department of Chemical Engineering at the University of Newcastle, Australia. He conducted his postdoctoral studies at the same university before joining Macquarie University. Prof Strezov is coordinator of the environmental science postgraduate program at Macquarie University. He is advisor for the Australian Renewable Energy Agency (ARENA) providing advice to support development and selection of projects for funding. Prof Strezov has published over 150 papers in reputed journals and conferences.

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Abstract

Characterisation of pyrolysis behaviour and bio-fuel products from bio-solids

a.Vladimir Strezova,T. Kana
a Macquarie University,Australia.
b. Lina F. Yousef
b. Masdar Institute of Science
United Arab Emirates.

Energy and fuel production from waste, such as bio-solids, is becoming one of the essential parts for developing sustainable communities. Bio-solids can be utilised to generate high value bio-fuels through the pyrolysis thermal processing technology. The aim of this study was to characterise the pyrolysis behaviour of bio-solids from the United Arab Emirates and the derived bio-fuel products. The bio-solid was heated under inert atmosphere from room temperature to 1000°C at a heating rate of 10°C/min. Thermogravimetric analysis indicated the loss of moisture before 150°C, the major mass loss during 150–530°C due to the intensive pyrolysis reactions, and slow charring after 530°C. The maximum mass loss rate of 0.9 wt%/°C occurred at ~ 345°C. Advanced computer aided thermal analysis was applied to determine the specific heat of the bio-solid and the reaction heats during the pyrolysis process. Gas chromatography analysis results suggested CO2, CO and H2 were the main gas species evolved before 400°C with the CO2 peak evolution rate of 1.1 wt.%/min at ~ 345°C. After 400°C, H2 was the primary gas component with its evolution rate fluctuating between 0.35 and 1.3 wt.%/min. The gas chromatography–mass spectrometry analysis of the bio-oil product showed that palmitic acid (13%), 9,12-octadecadienoic acid (Z,Z)- (6.2%), stearic acid (5%), and 11-octadecenoic acid, cis and trans isomers (4.6%) were the most abundant compounds. Fourier transform infrared spectroscopy results clearly exhibited the reduction of functional groups in the raw bio-solid after pyrolysis. The understanding of the pyrolysis behaviour of the bio-solid and properties of bio-fuel products will benefit more elaborate control of bio-solid pyrolysis to produce energy and biofuels.

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Biography

Prof. Rafał KOBYŁECKI graduated from Tokyo University of A&T, Japan, in 2002. His professional interests are associated with various aspects of energy conversion from renewable and fossil fuels, advanced energy conversion systems, polygeneration technologies, carbon-fuelled fuel cells, fluidized bed applications, waste incineration, as well as the reuse/disposal of combustion byproducts and reduction of the emission of SO2, NOx, Hg and other pollutants. So far, he has published or presented over 100 papers on those isses. Actually, he is the Deputy Head of the Dept. of Energy Engineerig at the Czestochowa University of Science and Technology.

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Abstract

Thermolysis of biomass for sustainable development

Rafał Kobylecki
Czestochowa University of Science and Technology
Poland

The thermolysis i.e. thermal processing of solid biomass and/or waste, is a promising technology for sustainable generation of power and efficient reduction of anthropogenic emission of carbon dioxide. The thermolysis is focused on the transformation of biomass into the solid post-processing residue called the 'biochar' or 'biocarbon'. It enables to decrease the individual emission of CO2 from the energy conversion process, and to get rid of fuel moisture and reduce the amount of some easily-evaporating unwanted substances, particularly chlorine, mercury, and alkali.
Author's own research results and new ways for the application of the biochar are also presented including its application as a fuel for direct carbon fuel cells, or a substitute of liquid hydrocarbons in fuel emulsions. The deposition of biochar in soil and carbon sequestration is also discussed as a simple way to combine highly-efficient and low-emissive generation of electricity with relatively simple decrease of the net emission of CO2. The idea provides good possibilities not only to improve the plant growth, but also to achieve other benefits associated e.g. with the existence of sustainable agriculture, prevention of soil degradation, or the reclamation of the degraded soils.
The combination of thermolysis with e.g. steam boiler and electricity generator provides profitable conditions to realize a relatively simple concept of polygeneration that may become an interesting option for sustainable electricity generation with simultaneous reduction of the emission of CH4 and N2O that are formed due to uncontrolled decomposition and putrefaction decay of organic matter.

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Biography

Dr. Muhammad Ashraf is Associate Professor and Acting Dean at Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia. His research interests include: Evironmental Monitoring & Assessment, Industrial Effluent Treatment and Environmental Chemistry. He has about 55 international publications and H-index of 15 with about 950 citations for published papers.Dr. Ashraf has successfully carried out funded research projects related to environmental issues in the Kingdom, funded by King Abdulaziz City of Science & Technology (KACST) and SABIC. He has presented his research work at various renowned international conferences held at England, Italy, Canada, Greece and the Netherland. He acts as a reviewer for KACST and other reputed scientific journals. Dr.Ashraf is an active member of Environmental Technology & Management Association (ETMA) and American Chemical Society (ACS) Saudi Arabian Chapter.

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Abstract

Selective removal of methylene blue dye from industrial waste efluents by using supported liquid membrane technology

Muhammad Waqar Ashraf
Prince Mohammad Bin Fahd University
Kingdom of Saudi Arabia

Membranes and membrane-based processes have attained technical and commercial importance with respect to their industrial and environmental applications. In the present work, Supported liquid membrane (SLM) technology has been applied to investigate the removal and recovery of a cationic dye (Methylene Blue) from aqueous solutions. Methylene blue is a cationic dye heavily used by printing industry. It is also used as a stabilizer and indicator in chemical industry. The molecules present in the textile effluent belong to very diverse chemical classes. Hence, textile wastewater presents a challenge to conventional physico-chemical and biological treatment methods. Natural and non-toxic vegetable oils have been used as membrane carriers. A microporous flat sheet film made from polyvinylidene fluoride (PVDF), impregnated with vegetable oils has been used for selective transport of the dye. Fundamental parameters influencing the transport, like pH of feed, acid concentration in the strip solution, initial dye concentration oil types and stirring speeds have been studied. Highest value of flux (1.7x10-5 mg-cm-2 sec-1) for the dye was obtained with sunflower oil as membrane liquid with pH 12 in the feed solution and 0.3M hydrochloric acid in the strip solution. It took 6 hours to transport maximum amount of dye under optimum conditions. Vegetable oils have been proved to be effective in the recovery of the dye from aqueous solution. The dye transport is influenced by number of variables like pH of source phase, hydrochloric acid concentration in the receiving phase, suitable membrane liquids and dye concentration etc.

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Biography

Dr Abrar Inayat has completed his PhD at the age of 32 years from Universiti Teknolgi PETRONAS, Malaysia in the reaearch area of Biomass Converstion Technologies, and masters studies from Mälardalens University, Sweden in the area of Sustainable Energy Systems. He is working as Assistant Professor in the Department of Sustainable and Renewable Energy Engineering, University of Sharjah, UAE. He has published more than 30 papers in reputed journals in the arae of biomass and bioenergy and also has been presented his reaserch in many international conferences. He has obtained several international awards.

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Abstract

Simulation for the production of synthetic natural gas (SNG) from palm waste via Gasification

a.Abrar Inayat, Chouki Ghenai
a. , University of Sharjah, United Arab Emirates
b. Muhammed Ayoub, Ebtehal Eisa
Universiti Teknologi PETRONAS, Bandar Seri Iskandar
Malaysia

Due to abundance of oil palm waste as biomass, it is a good candidate to be used as a feedstock for synthetic natural gas (SNG) production. Biomass gasification one of the promising methods for SNG production. This work focuses on the gasification with in-situ CO2 capture using CaO as absorbent materials for SNG production from palm oil empty fruit bunch (EFB). Three parameters (temperature, biomass/steam ratio and pressure) has been studied on the production of SNG via simulation approach in Aspen HYSYS. The model has been also validated with literature and showed good agreement. The results showed that the current study gives higher value of SNG at lower temperature. The higher value of SNG is obtained due to the lower concentration of CO2 caused by using CaO as sorbent material.

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Biography

Dr. J. Radaideh has completed his PhD at the age of 30 years from Technical University of Aachen in Germany (RWTH- Aachen). He worked many years as designer and operator of conventional wastewater treatment plants at Ministry of water and Irrigation/ Jordanand.
In 2000 he joined the Balqa Applied University as faculty member. He is now associated Prof teaching subjects related to water and wastewater issues.
He has published more than 15 scienfific papers in reputed journals and has been serving as an editorial board member of repute

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Abstract

Recovery of renewable energy at wastewater treatment plants

Jamal A. Radaideh
King Faisal University
Saudi Arabia

This present experimental st6ydy focuses on the production of Methane gas from biomass generated at wastewater treatment plants during operation process. The methane will be used to generate electricity used to cover energy that is consumed in the operation and maintenace of treatment facilities.
Experiments were performed under laboratory conditions to quantify and evaluate the methane gas production as a result of anaerobic sludge digestion.
Different types of sludge were used as substrate feeding a series of batch fermentation reactors. These experiments are aiming to fix the most suitable mixture of sludge for the maximum biogas yield.

It was shown that batches of highest seeding sludge portion mixed with primary sludge tend to develop the maximum biogas yield. As primary sludge rate decreases the amount of gas evolved decreases. Best results were obtained by a sludge mixture having 2/3 seeding sludge mixed with 1/3 primary sludge. Primary sludge is more effective than secondary sludge in regard of gas production

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Biography

Roberto Gabbrielli has a PhD in Energy Power Systems and is assistant professor in Industrial Plants at the Department of Civil and Industrial Engineering of the University of Pisa (Italy). His research activity concerns the development and experimentation of renewable combined heat and power plants, such as small scale biomass gasification systems and concentrated solar power plants.

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Abstract

Comparison between equilibrium and kinetic models applied to a full scale biomass gasification plant

Roberto Gabbrielli, Stefano Frigoa
Università di Pisa, Italy

The development of numerical simulation models is an important tool in order to provide more accurate qualitative and quantitative information on biomass gasification. The modelling of the gasification process can be generally executed adopting one of the following approach: steady state models (equilibrium models), transient state models (kinetic models) and models based on the computational fluid dynamics.

This paper shows a comparison between an equilibrium model and a kinetic one, built within the study and applied to a full-scale woody biomass gasification plant with fixed-bed downdraft gasifier using Aspen Plus. The models include the technical characteristics of all the plant components (gasifier, cyclone, exchangers, piping, etc.) and works following the main control logics of the real plant, that have been implemented in it.

The simulation results have been validated using those obtained during an extensive experimental activity. The kinetic model assures a reliable estimation of the hydrogen and methane concentration in the syngas, that are not properly evaluated with the equilibrium model.

After the model validation, the influence of operating parameters as equivalent ratio, biomass moisture content and gasifying air temperature on syngas composition, lower heating value and cold gas efficiency have been analyzed in order to assess the operative behavior and energy performance of the experimental plant. Recovering the sensible heat of the syngas at the outlet of the gasifier, it is possible to obtain high values of the gasifying air temperature and an improvement of the overall gasification performances.

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Biography

Dr. Pillay's academic career spans more than 30 years. He is skilled in a wide range of instrumental techniques including Neutron Activation, XRF, PIXE, Gamma-ray Spectroscopy, ICP-MS, Atomic Absorption and UV-Vis Spectrophotometry. He is experienced in the area of analytical and environmental chemistry, and has supervised postgraduate students. He has lectured widely in these areas and in general chemistry, and is keen on promoting cross-disciplinary teaching and research. He has more than 130 peer-reviewed journal articles, and several conference presentations. He was Guest Editor and member of the Editorial Board of the International Journal of Environmental Studies between 2005 and 2009. He is presently member of the Editorial Boards of the Open Hydrology Journal and the Journal of Research and Environment. He has contributed to the proposal of the MSc program in the Chemistry Department at the PI.

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Abstract

Micro-beam laser ablation/mass spectrometry for materials depth-profiling and elemental surface distribution studies – polymers, waxes, asphaltenes, steels

Avin Pillay
Petroleum Institute
UAE

Our group has developed a sensitive, semi-quantitative technique for evaluating the distribution of bulk metals in certain matrices (such as polymers, steels), and precisely locating points on the surface of materials for studying spatial distribution. This paper is an overview of the capabilities of laser ablation, which has evolved into an excellent tool for scanning the surface of rigid materials to determine surface homogeneity. It is equally useful for 'drilling' beneath the surface of a solid matrix to assess the composition of the substrate. The technique has been known to be suitable for semi-quantitative analysis of dense, compact samples, but recently we revealed that soft samples can also be studied by pre-treating them with liquid nitrogen. Samples subjected to this treatment (such as asphaltenes, waxes) tend to thaw, so analysis must be quick and accurate, within the 'thaw' time. The laser itself is attached to a high performance ICP-MS system. A 213-nm micro-beam is deployed to perform iterative surface scans at randomly selected points to determine compositional consistency. The technique is also capable of ablating depths up to 50 µm at selected intervals (usually 10 µm), and measuring characteristic intensities of elements of interest. These studies are mainly qualitative, in the absence of standardization. Suitable software is used to program the micro-beam to delve to specific depths in sample matrices, and the technique is subject to rigorous calibration and background correction. Minor perturbations in instrumental performance are adjusted by internal standards. Overall, the technique is of considerable use in materials analysis.

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Biography

Dr. Mande completed my PhD at the age of 30 years from the University Putra Malaysia and presentlying running another PhD and with an offer of postdoctoral studies from Institute of Tropical Forest University Putra Malaysia. I have published more than 27 papers in reputed journals of impact factor and presented various papers in International conferences, won alots of award and International grants.

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Abstract

Forest biomass recovering and soil respiration rate

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Forest biomass which is use for renewable energy also play a significant role in soil nutrients to influence soil respiration. This study was conducted to investigate the rate of soil respiration from a recovering forest biomass of the tropics and it relationship to changes environmental factors after years of deforestation. Soil respiration measurement was conducted using the continuous open flow chamber technique connected to a multi gas-handling unit and infrared gas analyser while the forest biomass and soil properties were directly measured and further quantified using the Kjeldahl method and Walkley-black wet oxidation technique. The average means soil respiration rate were 341.23, 383.07, 340.30, 308.12, 286.07, 256.05 mg m-2 h-1 between June and December and the recovering forest biomass was found to hosts an estimated TAGB, BGB, SOCs and SOCstock of 1.8 x 103, 1.0 x 103, 2.4 x 103 mg and 52.28 mg ha-1 respectively. Soil respiration exhibited a variation pattern that was similar to soil temperature pattern and forest carbon input from biomass and soil properties as they were found to be significantly correlated with soil respiration to provide nutrients for microorganism to emit soil CO2. The remarkable soil CO2 emission from the recovering forest was attributed to changes environmental factors and forest biomass. The correlation and multiple regression model proved forest biomass and environmental factors to influenced the high rate of soil CO2 emission indicating a strong positive relationship (0.94; $p<0.01$). These results suggest forest recovering could still emit considerable percentages of soil CO2 due to impact from deforestation which could have a great implication on environmental factors and the atmospheric carbon balance.

Contact Us

Important Dates

Abstract submission opens: July 15, 2015

Registration opens: July 29, 2015

Early bird registration: July 15, 2016

On spot registration: December 05, 2016

Venue

JW Marriott,

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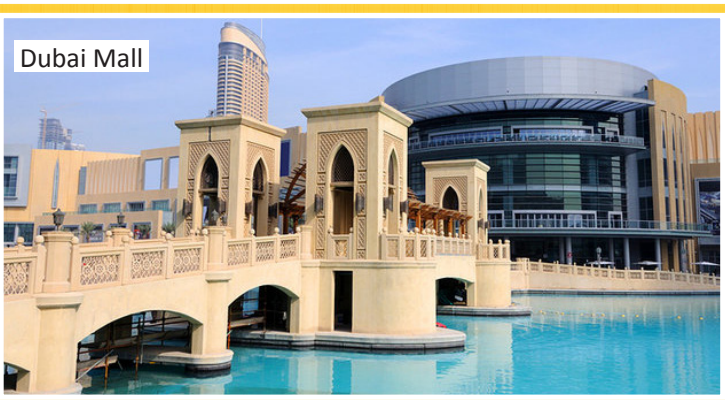














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