

# Scientific Tracks & Sessions

## December 03, 2018

### *Toxicology 2018 & Recycling 2018*



Joint Event

International Conference on  
**Toxicology, Clinical Toxicology & Pharmacology**  
&

6<sup>th</sup> International Conference on  
**Recycling & Waste Management**

December 03-04, 2018 | Dubai, UAE

# Toxicology, Clinical Toxicology & Pharmacology

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6<sup>th</sup> International Conference on

## Recycling & Waste Management

December 03-04, 2018 | Dubai, UAE

### Management of Viper bites in Europe

**Luc De Haro**

Marseille Poison Centre, France

Snakebites are a major public health problem in a number of African, Asian, and Latin American countries, and thousands of deaths are reported every year. By comparison, this risk of venomous snakebite is much lower in Europe, where native species are less dangerous and the number of snakebite cases is low (1,2). Several species of vipers of the genus *Vipera*, *Macrovipera* or *Montivipera* live in Europe. *Vipera berus*, *V. ammodytes* and *V. aspis* are the 3 species which cause the highest number of human envenomations in this continent (3). Recent epidemiologic studies based on a meta-analysis of medical literature showed that with a population of 750 million inhabitants, Europe (including European regions of Turkey and Russia up to the Caucasus and Ural Mountains) records 7500 cases of snakebite per year. Approximately 1000 of these bites are associated with signs of severe envenomation requiring

prolonged hospitalization. Fewer than five deaths are recorded every year in the old continent. In spite of these reassuring findings, several recent studies have been carried out in Europe and have allowed development of specific treatments and protocols for management of envenomed victims (1, 2, 3). As the clinical features of viper envenomation are relatively homogenous through Europe, the gradation table published in 1992 by the Pasteur Institute of Paris is considered as pertinent for evaluating the viper bite severity at the continental level (1).

#### Speaker Biography

Luc De Haro is a clinical toxicologist working in the Marseille Poison Centre where he is the head of the Toxicovigilance unit specialized in the management of patients poisoned or envenomed by natural toxins (Mushrooms, plants or animals toxins including marine toxicology).

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December 03-04, 2018 | Dubai, UAE

## Greening supply chains for enhancing social responsibility

**Rania Shamah**

Suez University, Egypt

### Statement of the Problem:

How could supply chains social responsibility plays a key role in reducing hazards in the community; through establishing a clear strategic vision?

### Findings:

This research aims to provide guidance for the management of green supply chains in order to increase the likelihood of social responsibility being generally adopted for the purposes of protecting the environment, and to examine the potential role required in improving supply chain performance. This study aims to address the impact of social responsibility when it is used in green supply chains, then to address the relevant factors needed to enhance the entire process of chain social responsibility.

The model which is presented here is intended to examine the nature of the relationship between green supply chain social responsibility and environment protection. Consequently it could help to enhance customer satisfaction, increase internal-customer performance; and provide innovative products

### Speaker Biography

Rania Shamah has completed her PhD at the age of 27 years from Ain Shams University, Egypt. Vice Dean for Teaching and Students Affairs- Faculty of Politics & Economics; Suez University. She is a Professor of Operations Management- Faculty of Commerce, Suez University. She got Lean Six Sigma Green Belt, Heriot-Watt University. She did her Doctor of Philosophy in Business Administration, Faculty of Commerce; Business Administration Department; Ain Shams University. Her H-index is 5 and has been serving as an editorial board member of reputed Journals.

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December 03-04, 2018 | Dubai, UAE

## Deltamethrin induced changes in endocrine glands regulating Calcium & Ionic balance in *Heteropneustes fossilis*

Prem Singh Bugasara

SBRM Government College, India


The impact of deltamethrin on the freshwater fish *Heteropneustes fossilis* exposed to two sub lethal concentrations (0.09 mg/L and 0.18 mg/L) for 30 days on the activities of endocrine glands viz. prolactin gland, corpuscles of stannous and ultimobranchial gland. Changes in the structure of endocrine gland lead significant variation in inorganic ions concentration  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  in brain, kidney, gills and intestine of *H. fossilis*.  $\text{Ca}^{2+}/\text{Mg}^{2+}$  ATPase activities significantly decreased in all vital tissues viz., brain, gills, intestine and kidney at both the exposure for 30 days in *H. fossilis*. The ultimobranchial gland exhibited mild histological changes at lower concentration of deltamethrin. At higher concentration decrease in staining response of the cytoplasm, decrease in nuclear volume and degeneration in the cells were noticed. In corpuscle of stannous sever changes observed with increase in granulation, vacuolation and degeneration of cell membrane noticed at higher concentration of deltamethrin. In prolactin

cells sever changes observed at both the concentration for 30 days exposure. Significant changes observed in ionic balance in vital tissues brain > gill> intestine > kidney of the fish exposed to higher concentration of deltamethrin. Significant changes noticed in the vital organs viz. Ionic levels in brain, gills, kidney and intestine. During exposure of deltamethrin endocrine glands, brain and intestine found to be most affected tissues of the fish.

### Speaker Biography

Prem Singh Bugasara is working as a associate professor, department of zoology, Shri Baldev Ram Mirdha Government College, Nagaur, Rajasthan. He has been associated with profession for 16 years. He was awarded Ph.D degree from Maharaja Ganga Singh University, Bikaner for research work on blackbucks. He is passionately engaged in biodiversity conservation and has conducted several seminars and awareness programs to encourage people to protect native flora and fauna. He always tries to improve society and youth by discussing various social issues. He has completed a research project on wildlife conservation and assessment of biodiversity in Rotu Conservation Reserve, Nagaur (Rajasthan) in year 2016-17 and is continuing with another wildlife research project. He has published research papers on various topics in national and international journal.

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**Genomic instability and mitochondrial DNA damage induction by nanoparticles**

**Hanan Ramadan H Mohamed**  
Cairo University, Egypt

Rapid growth in the uses and applications of nanoparticles increases the daily human exposure to nanoparticles in different routes that increasing the interest of scientists in estimating their toxic profile. Despite the varying results obtained on the genotoxicity and carcinogenicity of some nanoparticles, clastogenicity, genotoxicity and mutagenicity of several nanoparticles used daily including nickel oxide, cobalt oxide and calcium hydroxide nanoparticles have been demonstrated in our studies

**Speaker Biography**

Hanan Ramadan H Mohamed is an assistant professor of Molecular Genetics in Zoology Department; Faculty of Science Cairo University and one of the editorial board of both Aperiito journal of Liver and Pancreatic Disease and also Nano Research and application Journal. She obtained the M.Sc (2008) and ph.D degrees (2012) in Cyto and Molecular Genetics from Faculty of Science Cairo University. Now, teaching various courses in Faculty of Science Cairo University and has good experience in various techniques including Comet, micronucleus and chromosomal aberrations analysis assays and single strand conformational polymorphism (SSCP).

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## Garlic as an antimalarial drug in Artemisinin Combination Therapy

**Vathsala P G**

Indian Institute of Science, India

**G**arlic (*Allium sativum*) is one of the popular herbal medicines used worldwide to reduce various risk factors associated with several diseases. Garlic contains a variety of effective compounds that exhibit anticoagulant, antioxidant, antibiotic, hypocholesterolaemic and hypoglycaemic as well as hypotensive activities. To evaluate antimalarial activity of garlic pearl oil and artemisinin in combination therapy, Commercially available  $\alpha$ - $\beta$  Arteether (E MALTM) and Garlic pearl oil (Ranbaxy Laboratories Ltd., New Delhi, India) were tested for its antimalarial activity in *Plasmodium berghei*-infected mouse model. This study demonstrates, for the first time, the in vivo antimalarial activity of arteether and garlic pearl either as individual molecules or in combination at various dosage levels in *Plasmodium berghei*-infected mouse model of malaria. After 72 h (Day 3) when the parasitemia was about 2-4%, infected mice were treated with single dose intramuscular injection of 750  $\mu$ g of arteether in combination with three 100  $\mu$ L oral doses of garlic pearl on Day 3, Day 4 and Day 5 and showed 100% protection against malaria. Giemsa stained blood pictures show inhibition of parasitemia in combination drug treated

animals and the protection during recrudescence interval in arteether monotherapy. This approach shows that arteether and garlic pearl oil combination therapy gives complete protection in *P. berghei*-infected mice. Arteether and garlic combination therapy resulted in a striking increase in anti-parasite antibody IgG contributing protective immunity during the recrudescence phase. These results are also matching with Western Blot analysis, where sera from the recrudescence stage and later period of AE+garlic treated animals interacted with several parasite specific proteins, compared to the controls. There is potential to decrease the dose of artemisinin and in developing low-cost antimalarial drug therapies and for the first time garlic appears to be an ideal antimalarial molecule especially for use in artemisinin combination therapy.

### Speaker Biography

Vathsala P G has been working on combination therapy for malaria for more than two decades and completed her PhD from Indian Institute of Science. She is currently serving in Biology Division of Undergraduate Programme along with research activity. She has published 10 papers in reputed journals on antimalarial drugs

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# 6<sup>th</sup> International Conference on Recycling & Waste Management

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### **Autism: A complete therapeutic approach to ameliorate propionic acid intoxicated mitochondrial complexes dysfunction: Breakthrough to develop a new diagnostic strategies**

**Sidharth Mehan**

IFS College of Pharmacy, India

**M**itochondrial complexes enzymes (I, II, IV & V) dysfunction increases neuroinflammatory cytokines, oxidative stress and alterations of brain metabolic enzymes may be key pathological hallmarks of autism. Propionic acid (PPA), an endogenous metabolite produced by gut bacteria and commonly served as food preservative. Here, first time in the history of this Propionic acid animal model we established and validate the huge range of behavioural, biochemical, neuropathological, morphological and histopathological effects of direct adenylyl cyclase activator Forskolin (FSK) in adult rat's brain tissue homogenate, serum and urine in comparison with control drugs used in Autistic patients. Intraventricular injection of PPA in rats caused impairment in memory, grip strength posture and cognitive function. Biochemical analysis of brain homogenate, serum and urine samples in PPA treated rats showed an increase in altered mitochondrial complexes activities, inflammatory cytokines, oxidative stress and lipid biomarkers. Neurohistological and morphological alterations of hippocampus, basal ganglia and cerebral cortex of PPA treated rats exhibit severe neuronal space, irregular damaged cells, dense pyknotic nuclei associated marked focal diffused gliosis. Forskolin (10, 20 and 30 mg/kg, p.o) once daily treatment for a period of 15 days significantly improved motor performance and cognitive behavior task. Further, Forskolin treatment

significantly improved mitochondrial complexes enzyme activity, attenuated inflammatory and oxidative damage of rat brain. In present research work, neuroprotective effects of direct AC activator Forskolin responsible for activation of cAMP/PKA further leads to CREB activation, and through the repairing in the basal ganglia, cortex and hippocampus functioning associate with mitochondrial dysfunctioning in autism as well as Forskolin effectively reduced the side effects such as weight gain, gastric discomforts, irritation associated with control drugs used in Autistic patients.

#### **Speaker Biography**

Sidharth Mehan is working as Associate Professor in Department of Pharmacology at ISF College of Pharmacy, Moga, Punjab, India, one of the best well renowned and prestigious Pharma education and research institute in India. He has more than 10 years of academics, research and administrative experience to his credit and simultaneously working as Doping Control Officer on empanelment in Ministry of Youth Affairs & Sports, Govt. of India, Delhi and working online as Senior Clinical Dietitian & Nutritionist consultant in Sanjivani Hospital (A Super & Multi speciality Hospital), Sirsa, Haryana as well as in other online medical agencies in India. He has published more than 75 research and review articles in prestigious National and International Journals. His areas of research include molecular pharmacology, Behavioral Pharmacology, Neuropharmacology, Sports Sciences and Traditional and Complementary systems of Medicine. He has so far guided 24 M. Pharm Research projects and 04 Doctoral Theses. Furthermore, he is associated with Animal welfare activities for last 12 years.

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### Identification of toxic metal deposition in food cycle and its associated public health risk

**Masbubul Ishtiaque Ahmed**

Military Institute of Science &amp; Technology, Bangladesh


**F**ood chain contamination by heavy metals has become a critical issue in recent years because of their potential accumulation in bio systems through contaminated water, soil and irrigation water. Industrial discharge, fertilizers, contaminated irrigation water, fossil fuels, sewage sludge and municipality wastes are the major sources of heavy metal contamination in soils and subsequent uptake by crops. The main objectives of this project were to determine the levels of minerals, trace elements and heavy metals in major foods and beverages consumed by the poor and non-poor households of Dhaka city and assess the dietary risk exposure to heavy metal and trace metal contamination and potential health implications as well as recommendations for action. Heavy metals toxicity depends on several factors including the dose, route of exposure, and chemical species, as well as the age,

gender, genetics, and nutritional status of exposed individuals. Because of their high degree of toxicity, arsenic, cadmium, chromium, lead, and mercury rank among the priority metals that are of public health significance. These metallic elements are considered systemic toxicants that are known to induce multiple organ damage, even at lower levels of exposure. This review provides an analysis of their environmental occurrence, production and use, potential for human exposure, and molecular mechanisms of toxicity, and carcinogenicity.

#### Speaker Biography

Masbubul Ishtiaque Ahmed is currently working as a Technical Support Officer (Assistant Engineer) in GPH Ispat Ltd. He completed his Bachelor of Science on Environmental Engineering in Military Institute of Science and Technology (2013-2017).

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### Deep Learning technology in medical science

**Kamal Kumar Sharma**

Lovely Professional University, India


Health is a term used for mental and physical well-being. Life-style, geographical region, diet, physical activity determines the quality of life. Disease is nothing but excessive growth or decay of cells in the body that degrades the mental and physical health. Health monitoring is a challenging task as it needs regular check-up, in-depth analysis of reports, diagnosis and final drug dispersal. History of medical treatment can significantly fast track this process. Electronic health records can play a significant role in it. Pervasive sensors like wrist band can change the way medical data is collected providing proactive, predictive & participatory health. The updated data can be transmitted to the experts for diagnosis and prescription. Not only this, medical imaging can be used for drug discovery, drug amount dispersal, toxicology, precision medicine. Medical imaging has emerged as a significant tool in the early diagnosis of disease associated with different parts of the body hence improve the drug delivery and care to the patient. Electronic Health Report (EHR) can play significant role in it keeping track of medical dosage. Combined effects of various factors like age, medical history, allergy to certain drugs, geographical factor etc. can be studied for better diagnosis and drug- dispersal. Drug approval

takes 15 years of testing and FDI approval. medical imaging can fast track the process. Drug testing & validation from regulatory body takes 15 years. The application of medical imaging in pharmaceutical clinical trials involves its use to determine disease predisposition; to identify likely responder patients; to diagnose lesions and evaluate their severity; and to monitor therapy effects and follow-up. Considerable emphasis has also been placed on linking pre-clinical imaging and clinical data in order to increase the success rate of clinical trials (1). Pre-clinical imaging in appropriate disease animal models can contribute to the identification of new imaging biomarkers, whereby histological correlation can be obtained. It is anticipated that greater use of imaging during pre-clinical stages will facilitate better translation from animal models to human subjects.

#### Speaker Biography

Kamal Kumar Sharma is a technology veteran with 17+ years in academics and administration. He is an Electronics and Communication Engineer and is passionate about competency developments in these areas. He belongs to Haryana and working as Professor in Lovely Professional University, Punjab.

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# Scientific Tracks & Sessions December 04, 2018

## *Toxicology 2018 & Recycling 2018*



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# Recycling & Waste Management

December 03-04, 2018 | Dubai, UAE

## Household waste recycling in Helsinki metropolitan area Finland

**Kouvo Petri**

Lappeenranta University of Technology, Finland

The separate collection system for recyclable wastes in the Helsinki Metropolitan region was ranked the second best in a study comparing recycling schemes of European capitals (European Commission 2015). The collection system includes paper, cardboard, glass, metals, biowaste and plastic package. Residual waste is collected and used in energy production. The collection system, excluding paper, is managed by the Helsinki Region Environmental Services HSY, a public organization owned by four municipalities (Helsinki, Espoo, Kauniainen and Vantaa). Paper collection is handled by the producer responsibility scheme.

The efficiency of the collection system in the Helsinki region relies on a good coverage of door-to-door-collection. All properties with 10 or more dwelling units are required to source separate biowaste and cardboard. This covers about 75% of the population of the area. The obligation is extended to glass and metal in properties with 20 or more dwelling units. Other success factors include public awareness campaigns and a fee system that encourages recycling.

The separate collection of plastic packaging in Finland begun in 2016 within the producer responsibility scheme. HSY is supplementing the curbside collection point system with door-


to-door-collection. Pilot operations begun in the spring 2016 and has continued since then. Currently over 5600 apartment buildings have ordered door-to door plastic package collection service on voluntarily basis. HSY launched a proposal for new regional waste management regulations. In the proposal, the number of dwelling units required to source separate wastes is lowered to 5 or more dwelling units. New regulations are planned to come into force in 2021.

This paper describes the current efficiency of recycling and estimations of increase of recycling rate of household waste due to new regulations as well as results of LCA for cardboard, plastics and biowaste.

### Speaker Biography

Kouvo Petri has published tens of referred technical articles and other technical reports. His PhD. work investigated the modelling of heavy metal emissions during the co-combustion of biomass, peat and waste. In his current position as a director of the Waste Management Division of the Helsinki Regional Environmental Services Authority he is responsible for the waste management of nearly one million people and several commercial properties living and operation in the Metropolitan area. In addition, Kouvo works as an associate professor at the Lappeenranta University of Technology, Finland. Kouvo is Chairman of the Board of Finnish Solid Waste Association (KIVO). In 2010-2012, Kouvo was a Member of the Board of International Solid Waste Association, ISWA.

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December 03-04, 2018 | Dubai, UAE

## Recovery of silver from electronic waste

**Dusan Orac, Jakub Klimko, Matus Szabo, Dusan Klein, Jana Piroskova and Ivana Urban Kobialkova**

Technical University of Kosice, Slovakia

The paper deals with recovery of silver from solution after leaching of electronic waste. Precipitation experiments were performed in 0.1M thiosulphate solution where the silver concentration was 4.7 $\mu$ g/ml and in 0.5M thiosulphate with a silver concentration of 5.98 $\mu$ g/ml. As precipitating agents were chosen: NaBH<sub>4</sub>, Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>, KI, NaCl and Na<sub>2</sub>S. The maximum efficiency of precipitation was 100% specifically in two cases using NaBH<sub>4</sub> in a 0.1M solution at 60°C and precipitation with NaCl with the addition of 2 ml H<sub>2</sub>O<sub>2</sub> also in a 0.1M solution at 20°C. Precipitation efficiency above 95% was achieved with precipitation at 20°C, using NaCl as a

precipitant with the addition of 2 ml H<sub>2</sub>O<sub>2</sub> in 0.5M thiosulphate, Na<sub>2</sub>S in a 0.5M solution and using NaBH<sub>4</sub> in 0.1M solution.

### Speaker Biography

Dusan Orac works as an associate professor and co-director at Institute of Recycling Technologies, Faculty of Materials, Metallurgy and Recycling, Technical University of Kosice. He completed his PhD in 2010 a habilitation in 2014 at Technical University of Kosice, Slovakia in field Environmental Engineering. His scientific and research activities are focused on treatment of industrial as well as municipal wastes. His educational activities are focused on secondary raw materials, hydrometallurgical processes and production of precious and rare metals. He is a co-author of 22 scientific international publications and has more than 100 citations mostly in CC journals and his H-index is 5.

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December 03-04, 2018 | Dubai, UAE

## Efficient demolishing technology and waste management

**Rawaa Al-Muzainy**

Australian College of Kuwait, Kuwait

**E**fficient demolishing technology (EDT) is the process where the building is studied beforehand through structural drawings and programming. The structural drawings are used to determine the steel and metal links that are selected precisely centroid of the building to bear the stresses on the columns on the floor below and in parallel the stress of other structural members, in order to collapse the building safely. Alongside, the concrete beams are recommended to be injected with chemicals so cracking and dispersion happens faster. Then the robot excavator deconstructs the building according to the programming set, managing the construction waste before and after demolishing process. Therefore EDT enhances the environment by reusing the construction waste like ((Masonry and CMU, all untreated wood including lumber and finish materials, wood sheet materials , wood trim, metals, roofing, insulation, carpet and pad, gypsum board, unused (leftover) paint,

and piping and Electrical conduit)) and speeds the deconstruction process with minimum noise and damages to the surroundings. Whereas, the traditional demolishing process, like hydraulic excavators and wrecking ball, take longer and insufficient controlling is done on waste management. Thus, recycling and environmental applications are not targeted. Therefore, having EDT in the construction industry is 60% efficiency in recycling and reusing the construction waste as well as maintaining sustainable solutions within engineering and business

### Speaker Biography

Rawaa Al-Muzainy has completed her Master's Degree with Merit Award in Civil Engineering from Cardiff University, UK. She is accredited by the institutions of Civil and Structural engineering in the London. She has been teaching for 3 years at Australian College of Kuwait and was a structural designer for Gulf Consultancy in Kuwait. She is certified as an active member at Kuwait society of engineering and ACI – Kuwait Chapter. She specializes in buildings, structures and building environment.

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# Recycling & Waste Management

December 03-04, 2018 | Dubai, UAE

## Urban mining of precious metals and copper from mobile motherboards: Recovery studies

K Pavan Kumar Reddy<sup>2</sup>, Kushal Gaddam<sup>1</sup>, Vamshi Chirtha<sup>1</sup>, Akhil V<sup>1</sup>, MRP Reddy<sup>1</sup>, Rajesh Kumar<sup>1</sup> and K Srinivasa Vadayar<sup>2</sup>

<sup>1</sup>Centre for Materials for Electronics Technology, India

<sup>2</sup>JNTUH College of Engineering, India

Globalization of information and communication has not only revolutionized our lives, economies and industries but also led to hazardous wastes generated from electronics. E waste or Electronic waste is a term for electrical and electronic equipment's that have become discarded or obsolete. Almost all E waste contains some or other form of recyclable material including plastic, glass and metal. The need of recycling the e waste is increasing day by day with the increase in production of electronic devices and discarding them after usage. The economics of E-waste recycling lies with the recovery of precious metals. A mobile mother board contains many valuable metals like gold, silver, palladium and copper. Recovery of precious metals and valuable metals is a big challenge as it also contains hazardous substances such as cadmium, bromine, mercury, dioxins, furans etc.

Thermo Gravimetric Analysis (TGA) has performed to study the thermal degradation characteristics of Mobile Mother Board (MMB). MMBs were calcined at 8000°C about two hours in a gas fired furnace for complete combustion of MMB. The flue


gases were treated at 1200°C for removing the organic toxins using a gas cleaning system.

Calcined MMBs are made into fine powder and elemental analysis made for the MMBs. Based on the composition of the elements present in MMBs different types of fluxes were added with different composition to concentrate the precious elements in Black copper during smelting process at temperature of 13000°C where the gangue can be separated as slag. The chemical composition of the smelted copper is presented and discussed. This study reveals that mobile mother boards are rich source of copper and precious metals.

### Speaker Biography

K Pavan Kumar Reddy has completed his bachelor degree in Mechanical Engineering at the age of 21 years from JNTU Hyderabad University, INDIA. He is pursuing his masters in Metallurgical Engineering in JNTU Hyderabad University. He has participated in International conference on Semiconductors and workshop on E waste Management organized by C-MET Hyderabad. He has given oral presentation in All INDIA seminar on "Advances in Metallurgy and Manufacturing Process" organized by The Institute of Engineers – INDIA.

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December 03-04, 2018 | Dubai, UAE

## Bio-electricity generation from waste vegetables (fluted pumpkin, water leaf and cabbage) using MFCs

Ihesinachi A Kalagbor, Emabie K Porokpege and Nyon T

Ken Saro-Wiwa Polytechnic, Nigeria

**B**io-electricity generation from organic wastes through the metabolic activities of microbes using MFCs is a promising Green Technology transforming Waste to Energy. Organic wastes from vegetables are generated daily in large quantities in Port Harcourt from the markets. Baseline survey revealed that if these wastes are not properly managed, their accumulation may lead to serious health problems. The heaps of vegetable waste at the market refuse dump which is our sample collection site, has close proximity to other places of business. This study was carried using these vegetables which are consumed daily by the people. Various weights of 4kg, 6kg, 8kg, 10kg and 12kg were used. Results showed that the 12kg substrates produced the highest voltage of 460 mV, 132 mV and 280 mV for fluted pumpkin, water leaf and cabbage respectively. The pH, DO and BOD values from the substrate solution of

each vegetable waste indicated that the biodegradation efficiency of this process was optimal. The electricity generated was capable of powering small portable devices such as cellphones, rechargeable torches and an electrical bulb of 2V.

### Speaker Biography

Ihesinachi A Kalagbor obtained a Ph.D degree in Analytical Chemistry from University of Port-Harcourt, Rivers State Nigeria in 2006. She is a Chief lecturer and Director, Research & Development Centre, Ken Saro-Wiwa Polytechnic Bori. She has carried out a lot of research on heavy metals in water, soil, fruits, vegetables and crops. To date, she has supervised 67 students to graduation in Chemistry. She is involved with a team of researchers in her institution working on a pilot scheme for the generation of electricity using waste organic materials. She has published 26 papers in reputed journals. She is a Fellow of the Chemical Society of Nigeria (FCSN), Fellow, Institute of Chartered Chemistry of Nigeria (FICCON), Fellow, African Scientific Institute (FASI), Member, Royal Society of Chemistry (MRSC), Member, International Water Association (MIWA) and Affiliate Member of IUPAC. She is currently the coordinator, Women in Chemistry (WIC) Rivers Chapter, Nigeria.

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December 03-04, 2018 | Dubai, UAE

### China plastic import ban and its impact on PET recycling in Bangladesh

**Khadem Mahmud Yusuf**


Bangladesh Petrochemical Company Ltd, Bangladesh

Most of the PET bottle flakes produced in Bangladesh were exported to China till 2017. Bangladesh exported 60,000 MT of PET flakes to China in 2017 (98% of Total Flakes export). Starting from January 1st, 2018 China has imposed plastic import ban resulting total collapse of the PET flakes manufacturing industry. As a result, almost 50% of Bangladesh's use PET bottle stock is lying unsold in the local collection shops. The amount is significantly large- almost 35,000 ~ 40,000 MT of plastic bottles. Since such a large amount of used PET bottle stock is remaining unsold, selling price of used PET bottles is going down and thus waste collectors are losing their interest in collecting used PET bottles to sell. The effect of this phenomenon will be seen soon as bottles will start lying around more than usual on the streets polluting the environment. Thus, it appears that the entrance of local companies into the PET recycling market at this time is good for the country, as the companies will be purchasing additional 30,000 MT of the untouched PET bottle stock from the market. It's a win-win situation for everyone. The price of PET bale has

gone down, giving more opportunities for the companies to lower its production cost. Bangladesh Petrochemical Company Ltd (BPCL) along with few other local companies are planning to increase their recycling capacity to 30,000 MT from current level of 15,000 MT per annum, collecting bottles firstly from Dhaka and Major cosmopolitan cities and later, as required, from all over the country.

#### Speaker Biography

Khadem Mahmud Yusuf is the CEO of Bangladesh Petrochemical Company Ltd (BPCL). He has 25 years of experience working in Silicon valley, USA and in Bangladesh. BPCL is the brainchild of Mr. Yusuf, which established itself as the first post-consumer PET bottle recycling plant in Bangladesh. Prior to forming BPCL, he has worked for 5 years as the Country Manager for Bangladesh at Nokia Siemens Networks. He was also the Founder & CEO of Alap communication and National Data Consultant for Bangladesh Central Bank. Before moving back to Bangladesh in 2005, he worked at Cowave Networks in Fremont, California, Zettacom Inc in San Jose, California, iReady Corp in Sunnyvale, California and National Semiconductor Corporation in Santa Clara, California, USA.

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### Utilization of agricultural wastes in thermal insulators development

**Abu-Jdayil Basim**

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The UAE has one of the highest levels of energy consumption per capita in the world. The commercial and residential buildings in UAE account for almost 70% of the total energy consumption. An on-going search for finding the proper alternatives to preserve energy and minimize energy losses, heat insulators, part of building materials, are steadily getting their importance as a means of saving energy. Extensive use of insulating materials in construction eventually results in lower energy consumption and has positive reflection on the environment by reduction in carbon emission. Heat insulating materials (polyurethane, polystyrene, and mineral wool) available in the local market are relatively expensive and suffer from the low mechanical properties, which limit its application in the construction process. Consequently, there is a necessity to develop and come up with a cheap insulating material that possesses excellent mechanical properties as

far as energy saving, prevention of water leak, and ease of handling and machining are concerned. Cost reduction of the thermal insulation materials can be achieved by using natural materials and/or wastes as a part of the main matrix, which will also contribute in the reduction of CO<sub>2</sub> emission. In this study, focus was made on the formulation and development of polymer-filler composite as an insulating material local agricultural waste materials (Date pits and Date Palm wood) as a filler. The solid samples produced were then subjected to different physical, mechanical and chemical tests to come up with a product formulation having competitive properties.

#### Speaker Biography

Abu-Jdayil Basim has completed his PhD in 1996 from Erlangen-Nurnberg University, Germany. He is a professor of chemical engineering at the UAE University. He has over 75 publications that have been cited over 1800 times, and his publication H-index is 24.

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