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11th World Congress and Expo on Recycling

June 13-14, 2019
Edinburgh, Scotland



SCIENTIFIC PROGRAM

conferenceseries LLC Ltd

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AGENDA

Abstract

Title: Opportunities for recycling and reuse of FRP composites for construction in a circular economy

Lawrence C Bank
City University of New York, USA

Sustainability and green engineering have evolved into a more comprehensive framework known as the Circular Economy. The importance to this shift in thinking to the FRP composites for construction industry will be discussed. The aerospace and automotive sectors of the composites industry are moving rapidly to embrace the circular economy concepts such as design for reuse, adaptability, modularity, recycling, reclamation, life cycle assessment, materials flow analysis and industrial ecology.

Title: Technological advances in resource recovery and recycling

Brajendra Mishra
NSF Center for Resource Recovery & Recycling, USA

Metals and materials production from primary sources, such as ore, are highly energy intensive, expensive and environmentally unfriendly. Materials are non-renewable and, therefore, their supply is limited. Post-consumer as well as manufacturing wastes are valuable secondary resources. Most structural and functional materials used today, can be reprocessed and put back into service at a much lower cost and energy consumption through conscious recycling and recovery programs.

Title: Recycling and combating air pollution in Naryn

Shabnam S. LutafaIi
University of Central Asia

Town of Naryn is a poster child for recycling and creating sustainable environment. In the last 10 years the town's population has grown from about 35,000 to 53,000 with little planning to address the population's needs for civic services including recycling and garbage collection. The problem is inflamed by open garbage burning; some garbage (batteries etc.) is poisonous, and when burnt, emit poisons in the atmosphere. Additionally, the coal burning power plant further pollutes the environment. This has negative health consequences for citizens.

SPEAKER SLOTS AVAILABLE

Title: Wastewater recycling in the light of nexus thinking

Hiroshan Hettiarachchi
United Nations University (UNU-FLORES), Germany

Water and soil are two key resources associated with agriculture and food production and they are closely related to each other. Recent dialogues on nexus thinking has shed some light on how waste can also play an important role to alleviate some of the resource scarcity issues that we face specially in the agricultural sector. Recycling of treated wastewater in agricultural irrigation demonstrates how the sustainable management of one resource in a nexus can benefit the other resources in the same nexus.

Title: Investigation of biogas generation from of a vegetable and cattle market of Bangladesh under daily feed condition

Md. Abdul Jalil
Bangladesh University of Engineering & Technology (BUET)

The results of two sets of laboratory experiments on biogas generation from the wastes of a rural vegetable and cattle market of Bangladesh under daily feed condition at ambient temperature are reported in this paper. Only the easily biodegradable wastes were used as the feed for biogas production. Cow dung, fish waste, ginger, cursed lobe, guava, and banana leaf were found to be the major biodegradable wastes of the market. Daily average composition of the wastes was used in the experiments.

Title: Rethinking recycling as an environmental solution and wider business for circular economy. The curitiba case study for C&D waste

Borges
Federal University of Paraná, Brazil

Earth's natural resources are finite and should be used in a rational and balanced way. To be environmentally sustainable, resources must be efficiently and effectively managed. In waste streams these can be repaired, recycled, reused. The recycling provides a link between reuse and mitigation of environmental problems saving resources and producing new products providing a win-win and wider solution that enables more efficient use of resources, stimulating the growth of economic and social development.

SPEAKER SLOTS AVAILABLE

Title: Process concept based on pyrolysis for integration of Shredder light fractions (SLF) in the recycling of waste electrical and electronic equipment

Fabian Diaz
RWTH- Aachen University,
Germany

Yearly production of rest fractions like shredder light fractions (SLF) in the preconditioning of waste electric and electronic equipment (WEEE) accounts almost the 4.22% in a state of the art preprocessing company for this sort of wastes. This amount together with other shredder residues e.g. automobile recycling industry accounts the 4% of the total waste generated in Europe (2.5 billion tons)..

Title: Solid wastes recycled, reused for the increased in the wealth management

Raaginii Jaain
Geetanjali Envirotech
India

Our rapid bioremediation process through the usage of GE bio-culture on fresh waste and old waste stabilizes the waste faster with 40% reduction in volume and with near-zero emission of harmful gases into the atmosphere and no leachate (A leachate is any liquid that, in the course of passing through matter, extracts soluble or suspended solids, or any other component of the material through which it has passed). The contamination of soil and groundwater from leachate is hence prevented.

Title: Cost-benefit analysis of agricultural waste recycling in Taiwan

Esher Hsu
National Taipei University,
Taiwan

Along with the development of circular economy, the waste recycling of agriculture in Taiwan has received much attention. Major recycling types of agricultural waste including energy recovery and compost which can not only reduce waste pollution, but also create economic benefits. However, the cost efficiency of agricultural waste recycling has been argued in Taiwan. This paper intends to evaluate the feasibility of recycling agricultural waste in Taiwan through cost-benefit analysis of different recycling types, and further provides policy suggestions of recycling.

SPEAKER SLOTS AVAILABLE

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Title: Evaluation of the reduction of stabilization times of closed sites for the final disposal urban solid waste, through the recirculation of inoculated leachates

Dayanira Jovita Gutiérrez Hernández,
National Autonomous University of Mexico, Mexico

The garbage is disposed in a dump in the open air, is the most common way to eliminate municipal solid waste in Mexico, such is the case of the former ex drump called "Bordo Xochiaca" which has received more than 1,200 ton of municipal solid waste from Mexico city, who has operated since 1975, but in 2006 was definitely closed and sanitized, today this site is a mall and sport center.

Title: Radiation degrading effects on butyl rubber compounds properties

Sandra R. Scagliusi
IPEN/CNEN
Brazil

The understanding of Chemistry involved in degradation induced radiation is becoming more and more relevant in re-use of polymerical materials, as well in beneficial radiation uses. Degrading radiation effects have been considered from viewpoint of controlled degradation for isoprene/isobutene in rubbers for recycling purposes. Butyl rubber (IIR) is an isobutylene/isoprene copolymer, with a lot of applications even in tires air-chambers.

Title: Recycling of cellulosic waste to prepare construction materials

Hugo Alberto Quintero Navarro,
National Autonomous University of Mexico, Mexico

During the manufacturing of paper products, waste is generated that requires proper reuse or recycling, among which is the sludge from its WWTPs composed mainly of cellulosic waste. The sludge consists of organic fibers, inorganic materials, and about 60% water. Daily production and the limited capacity of sanitary landfills cause social and environmental problems.

SPEAKER SLOTS AVAILABLE

Title: Recycling dredged sediment and potential energy harvest by nitrate induced biostimulation

Dickson Y.S. Yan,
THEi,
Hong Kong

Marine and river sediments have been subject to urban, industrial, agricultural and various anthropogenic contaminations. High concentration of nutrients and pollutants are often found, resulting in sticky sediment. One of the common practices to deal with the sediment in Hong Kong is regular dredging and followed up either marine dumping or landfill disposal depending on the contamination level of the sediment. Recycling sediment is not a common way, not until recent years.

Title: Related scientific session: Reduce, reuse, recycle and recovery

Filomena Compagno
Terracina Zero Waste Committee, Italy

Terracina is a bath town of 46.000 inhabitants. In 2015 it became a Zero Waste Municipality with a Zero Waste Observatory. In the same year Terracina adopted the door-to-door collection reaching 59,17% of Recycling, while in 2016 it reached 73%, becoming the first “Comune Riciclone” of Latium. How was it possible to reach this important goal? It was possible because the local City Adminitration works together with citizens, local sanitation transfer station and associations, including our Zero Waste Committee.

Title: Status of solid waste & society in India: Challenges for future

Jagbir Singh
University of Delhi
India

India is rapidly shifting from agricultural-based nation to industrial and services-oriented country. About 31.2% population is now living in urban areas. As per census 2011, over 377 million urban people are living in 7,935 towns/cities. India is a vast country divided into 29 States and 7 Union Territories (UTs). There are three mega cities - Greater Mumbai, Delhi, and Kolkata—having population of more than 10 million, 53 cities have more than 1 million population, and 415 cities having population 100,000 or more.

SPEAKER SLOTS AVAILABLE

Title: Evaluation and analysis of municipal solid wastes in Tehran, Iran

Mohammad Hadi,
Tehran University of Medical Sciences (TUMS)

Waste management for municipal solid waste is considered a public health services, providing citizens with a system of disposing of their waste in an environmentally sound and economically feasible way. The amount and composition of waste generated comprise the basic information needed for the planning, operation and optimization of waste management systems. In this study, paper and plastic quantity changes in the MSW (municipal solid waste) of the region 10 of Tehran city were evaluated. This study was conducted in 6 months, in the summer and autumn seasons, at the region 10 of Tehran city.

Title: Recycling aluminum chips derived from mechanical sawing by powder metallurgy techniques

Adriana Esguerra Arce
CIMSER,
Colombia

Statement of the Problem: A vast amount of resources are used in mining and refining virgin metals. This process poses environmental risks, due to the potential release of harmful substances into the soil, air, and water. Aside from this, metals are non-renewable resources, meaning that there is finite amount of them in the earth. Sawing is the most common technique used to break down metals before manufacturing processes, and it produces a considerable amount of wasted aluminium in form of chips. These chips are small and semi continuous, so they are not suitable for recycling by melting.

Title: Reuse of duralumin chips by means of powder metallurgy

Johanna Esguerra Arce
CIMSER,
Colombia

The extraction of metals has negative environmental effects, including emissions of carbon dioxide and hazardous gases, and the destruction of natural landscapes (Gaustad et al., 2012). The recycling of non-ferrous metals has a series of benefits, such as reducing the extraction of virgin minerals, thus preserving non-renewable resources. Machining is one of the processes used to manufacture engineering parts, with advantages such as good tolerances and excellent surface finishes. However, it is a process for removing material which produces waste products in the form of chips.

SPEAKER SLOTS AVAILABLE

Title: Solid waste management: Challenges and opportunities in Delhi

Virat Jolli,
University of Delhi
India

Municipal solid waste (MSW) is poorly managed in India. It is a major problem of urban areas which affect quality of life. Delhi being a metropolitan city experience serious challenge to manage solid waste. Delhi generates approximately 9500 tonnes of waste per day, out of which only 80% of it is transported to designated landfill sites. Solid waste is comprised of recyclable and biodegradable waste material, if it is managed professionally; it can open avenues for recycling industry which has immense potential for employment generation.

Title: Recycling and recyclability index for end-of-life jeepneys

Noemi Torre,
University of Asia and the Pacific, Philippines

Each year, millions of motor vehicles reach their end-of-life. The Recyclability Index of End-of-Life of these vehicles is a rating system to quantify the recyclability and recovery of the vehicles. Through this measure, one can determine the environmental impact of the vehicle. The computation of which is elaborated in the ISO 22628 (International Organization for Standardization). The ISO, is a federation of national standards acknowledged worldwide.

Title: A new recycling mode of WEEE under the background of "Internet +" in China

Li Peng
Xi'an University of Technology, China

With the technological innovation and market expansion, the update of electric and electronic equipment (EEE) is continuously accelerate. China is the largest emerging market region in the world with both global manufacturing and consuming market. Rapid economic growth, coupled with urbanization and growing demand for consumer, is expected to increase the consumption of EEE, thus increase the waste electric and electronic equipment (WEEE) rapidly in this region, posing a severe threat to the environment and sustainable economic growth.

SPEAKER SLOTS AVAILABLE

Title: Industrial-based kinetic modelling of scrap tyre pyrolysis through the Modified Chemical Percolation Devolatilization (M-CPD)

Vincent Tan
Monash University
Australia

The disposal of waste tyres has been an inevitable problem around the world. Approximately 800 million used tyres are dumped annually, with a projected growth rate of 2%. Pyrolysis is as an attractive thermochemical technique for recycling the abundance of waste tyres while at the same time allowing energy fuel production.

Title: Recycled eggshells and fish scales waste for the removal of inorganic contaminants from water

Morlu G. F. Stevens
Botswana International University of Science and Technology

Most inhabitants of urban and most especially rural areas in most part of Africa do not have access to the expensive conventional treatment technologies that are usually employed to purify water for use for household or daily purposes. This infers that their health is at risk as a result of possibly consuming or their animals, water that is contaminated with high concentration of inorganic contaminants.

Title: Preparation of RDF plates to replace fossil fuels

Mehrdad Hadipour
University of Kharazmi

Today, with increasing population and urban development, human need for consumables has increased. Consumption growth has led to production and disposal problems, due to the lack of suitable and suitable space for landfill and the release of pollutants such as greenhouse gases due to unconventional waste, to find better waste disposal facilities with less negative environmental impacts In addition, the issue of energy shortages is a matter of day, and the use of other energies, such as energy recovery, is considered as an alternative fuel.

SPEAKER SLOTS AVAILABLE

Title: Leaching process for recovery of base and precious metals from crushed waste printed circuit boards (WPCBs)

Nanthanat Sriprasert
Mahasarakham University
Thailand

This research aimed to study various factors that influenced on the efficiency of leaching process and to assess the optimum conditions to achieve the efficient leaching method for base and precious metals from crushed waste printed circuit boards (WPCBs). Electrolyte solution receiving from leaching approach aim to further be used for base and precious metals recovery or refining processes.

Title: Use of grapevine pruning residues as a renewable energy solution, remedies heavy metal contaminated vineyard soils in Iran

Siamak Shirani Bidabadi,
Plant Biotechnology and Horticultural Sciences

The heavy metal contamination in vineyard soils rises due to human activities and has become a noticeable environmental problem because it poses a serious threat not only to human health by entering into food chains, but also to environmental security by leaching into groundwater.

Title: Recycling and utilisation of solid organic wastes in agriculture for sustainable environment

Prabhu Prasadini P
ANGR Agricultural University

The solid waste produced in urban areas of India is approximately is about 62 million tonnes per year, and is expected to increase by 4% per year out of which nearly 50% of the total waste is organic (McKinsey Global Institute 2010). With landfills ranking third in terms of greenhouse gas emissions in India, the vision for waste management in India is the recycling and reuse of wastes as resources. Improper handling of solid wastes results in serious environmental pollution of soil, water and air. Proper waste management generates useful by-products and creates a circular economy.

SPEAKER SLOTS AVAILABLE

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Abstract

Title: Sustainable development and environment of biomass from agriculture residues

Abdeen Omer
Energy Research Institute (ERI), UK

The demand for energy continued to outstrip supply and necessitated the development of biomass option. Residues were the most popular forms of renewable energy and currently biofuel production became much promising. Agricultural wastes contained high moisture content and could be decomposed easily by microbes. Agricultural wastes were abundantly available globally and could be converted to energy and useful chemicals by a number of microorganisms.

SPEAKER SLOTS AVAILABLE

DAY 1
Thursday, 13th June

08:30-09:00 **Registrations**

09:00-09:30 **Introduction**

09:30-09:50 COFFEE BREAK

09:50-11:50 Meeting Hall 01 **KEYNOTE LECTURES**

11:50-13:10	MEETING HALL 01	MEETING HALL 02
	Talks On: Solid Waste Management	**Talks On: Agriculture Waste Recycling**
	Paper Recycling	Recycling Market
	Municipal solid waste Recycling	Biodegradable waste Recycling
	Demolition waste Recycling	Organic Waste Recycling

13:10-13:15 GROUP PHOTO

13:15-14:00 LUNCH BREAK

14:00-16:00	MEETING HALL 01	MEETING HALL 02
	Talks On: Waste Management Techniques	**Talks On: Plastic recycling**
	Waste Water Recycling	Physical recycling
	Commercial waste Recycling	Waste plastic pyrolysis to fuel oil
	Hazardous waste management	Chemical recycling

16:00-16:20 COFFEE BREAK

MEETING HALL 01 (16:20-17:00)	MEETING HALL 01 (17:00-18:00)
Young Researchers in Recycling conference	Workshop

DAY 2
Friday,14th June

09:00-10:30 Meeting Hall 01 — **KEYNOTE LECTURES**

10:30-10:50 COFFEE BREAK

10:50-12:50	MEETING HALL 01	MEETING HALL 02
	Talks On: E-Waste Recycling And Management	**Talks On:** Home Waste Management
	Electronic waste (e-waste) Recycling	Recycling: Eco-Balance
	Radioactive waste	Food waste Recycling
	Hazardous waste	Household waste Recycling

12:50-13:35 LUNCH BREAK

13:35-15:55	MEETING HALL 01	MEETING HALL 02
	Talks On: Metal Recycling	**Talks On:** Chemical Waste Recycling
	Biomedical waste Recycling	Sewage Treatment
	Marine debris Recycling	Inorganic waste Recycling
	Mineral waste Recycling	Industrial waste treatment

15:55-16:15 COFFEE BREAK

MEETING HALL 01 (16:20-17:00)	MEETING HALL 01 (17:00-18:00)
Poster Presentations for Recycling Conference	Workshop

Awards & Closing Ceremony

Edinburgh Attractions



















Glimpses of Recycling Conference 2018















