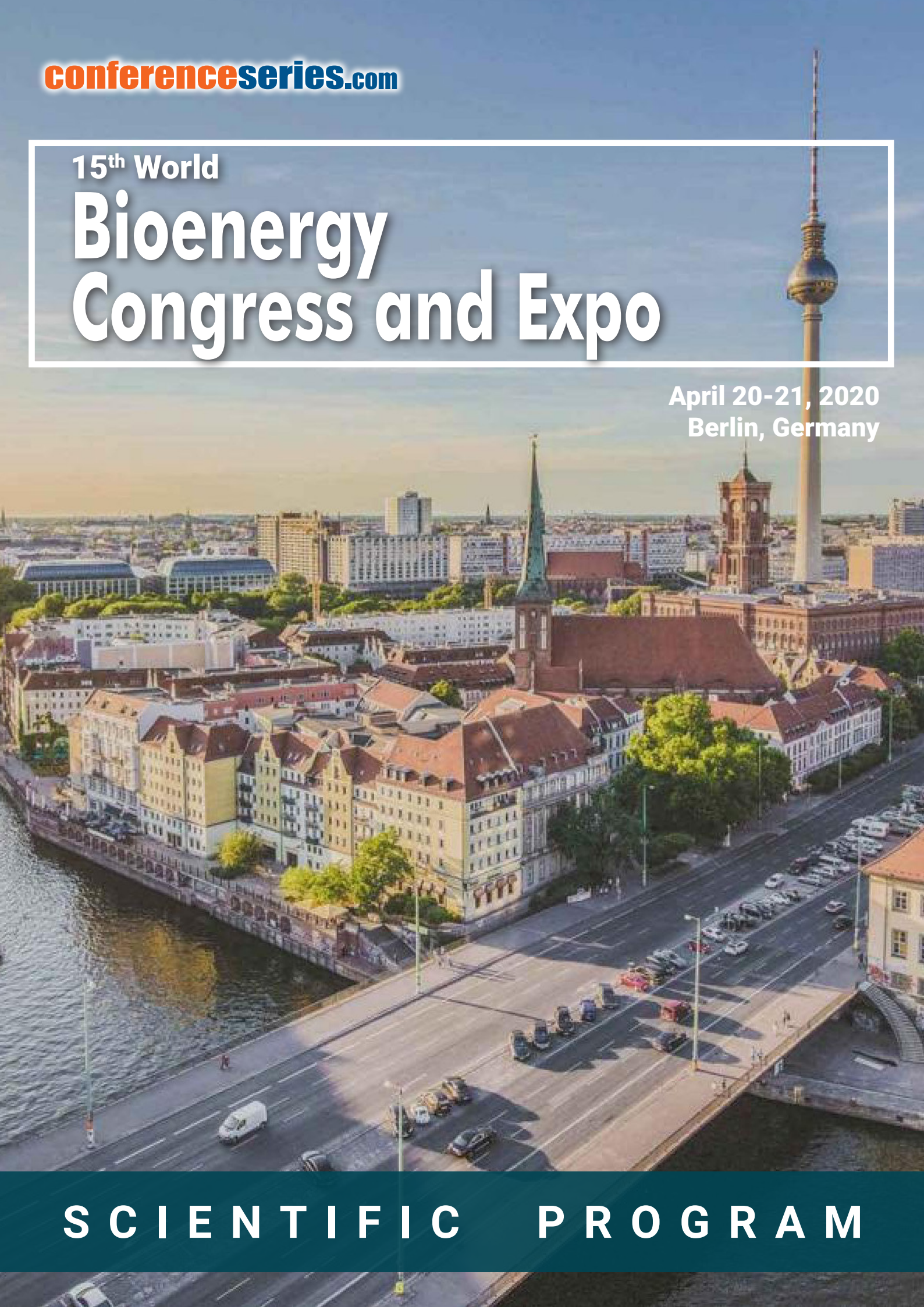
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15th World Bioenergy Congress and Expo

April 20-21, 2020
Berlin, Germany



SCIENTIFIC PROGRAM

DAY 1
Monday, 20th April

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: Biomass	**Talks On:** Renewable Energy
Agriculture biomass	Energy-from-waste
Waste Biomass to energy	Renewable chemicals
Conversion technologies	Waste energy
Sustainable feedstock development	Nuclear Energy

13:10-13:15 GROUP PHOTO

13:15-14:00 LUNCH BREAK

14:00-16:00

MEETING HALL 01	MEETING HALL 02
Talks On: Biogas	**Talks On:** Biofuels
Biogas from agriculture waste	Biofuels production and utilisation
Advances in biogas technology Biogas from algae	Algae Biofuels
Advances in biogas process	Aviation Biofuels
designBiogas technologies Biogas from waste vegetables	Biofuels impact on food security
Biogas plants	Nonfood crops for biofuels productionAdvances in biofuel production
Mass spectrometry techniques	Advances in biofuel production

16:00-16:20 COFFEE BREAK

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

DAY 2
Tuesday, 21st April

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: Green energy and economy	**Talks On:** Solar energy
	Macroeconomics	Wind Energy
	Sustainable Agriculture	Tidal Energy
	Emission Reduction	Compressed Natural Gas
	Recycling role in Green Economy	Electricity Production
	Prologue Green Banking	Fuel Production
	Green Energy Labeling	Energy Storage Method

12:50-13:35 LUNCH BREAK

13:35-15:55	MEETING HALL 01	MEETING HALL 02
	Talks On: Bioenergy Conversion Methods	**Talks On:** Sustainability and Climate Change
	Thermal Conversion of Biomass	Sustainable urbanization
	Combustion and Co-firing	UN framework on Climate change
	Chemical conversion from oil-bearing crops	Minimum ecological disruption
	Biochemical Conversion of Biomass	Challenge of de-carbonization
	Latest Conversion Technologies in Biomass	Sustainable management of natural resources
	Power Plants	Sustained technology

15:55-16:15 COFFEE BREAK

MEETING HALL 01 (16:15-17:00)	MEETING HALL 01 (17:00-18:00)
Poster Presentations	Workshop

Awards & Closing Ceremony

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AGENDA

Title: **Seawater-to-Biomass: the process and mechanism of efficiently producing limnetic algal biomass with seawater and wastewater**

Haiyan Pei
Shandong University, China

Microalgae are considered a promising feedstock for biofuel, but expansion of algal lipid production commercially is still on its way, blocking by its demand on chemical nutrients and freshwater. Inexhaustible seawater, with a little wastewater added, has great potential to optimize microalga production so that biodiesel production can thrive cost-effectively and sustainably. In comparison to regular medium, limnetic Chlorella SDEC-18 achieved fast growth, high lipid content, enlarged cells, fragile cell walls and efficient settling in this cultivation method referring seawater, together with anaerobically digestion effluent of kitchen waste

Title: **The role of microtubules in microalgae: Inspirations for lipid accumulation and extraction**

Lijie Zhang
Shandong University, China

Microtubules have been verified to be able to regulate the precursors in microalgal cells. With the aim of testing the assumption that microtubule disruption could regulate precursors for complex organic matters and redirect carbon flow to promote lipid accumulation, Chlorella sorokiniana SDEC-18 was pretreated with different concentrations of oryzalin. Strikingly, microalgae, pretreated with 1.5 mM of oryzalin, accumulated 41.06% of lipid content which was 1.4 times higher than that without pretreatment, attributed to the cellular cross-talk in carbon partitioning induced by microtubule destruction

Title: Longer cooling time and lower air velocity is an energy efficient way to decrease the amount of fines during pellet production

Magnus Ståhl,
Karlstad University, Sweden

Manufacturers of pellet equipment has asked for that the question of pellets cooling are investigated. The purpose is to examine how the temperature, cooling time and the velocity of the cooling air affects the durability of the pellets and the amount of fines during production. Wood fuel pellets have been produced at Karlstad University in a Pilot pellet production unit. Two cooling devices have been used, a custom built cooling tower and smaller cooling boxes where temperature, humidity, fan speed etc. are measured.

SPEAKER SLOTS AVAILABLE

Title: Bioresources for a sustainable fuel pellet production in Sub-Saharan Africa

Jonas Berghel
Karlstad University,
Sweden

In Sub-Saharan Africa, traditionally charcoal and agricultural residues, accounts for 65,3% of energy consumption. In Zambia, for example, 86% of rural residents and 55% of urban residents depend on charcoal as their main energy source. Deforestation in Zambia is estimated between 250,000 and 300,000 hectare per year, which is one of the ten highest deforestation rates in the world.

Title: Fermentation of food waste for ethanol

Cecila Hodúr,
University of Szeged,
Hungary

The aim of our research was to investigate the fermentation process of hydrolysates originated from the biodegradation of various cellulose-containing biomass products, and to determine the maximum achieavable ethanol yield during different fermentation conditions. Our earlier experiments verified that the cellulose content of lignocellulosic biomass can be effectively converted into sugar (glucose) monomers with pre treatment-supported enzymatic digestion, but the final sugar yield strongly depended on the applied enzymes and the raw material itself.

Title: Batch and fixed bed column studies for bio-sorption of Lead Pb(+2) from an aqueous solution using Gracilaria Corticata

G. Kavitha,
Andhra University, India

Batch and fixed bed column bio-sorption studies were conducted for the removal of lead from aqueous solution using *Gracilaria corticata* algae powder as bio-sorbent. The effects of agitation time, size and dosage of adsorbent, pH, initial concentration of lead and temperature of aqueous solution are studied in this work.

SPEAKER SLOTS AVAILABLE

Title: Revaluation of plastic waste and biomass mixture to produce liquid

Raiana Tomazini
Universitat Rovira i Virgili, Spain

Increasing consumption of traditional fossil energy resources has caused serious environmental problems, which increases the interest in alternative renewable energy. In this context, the biomass has attracted attention as the only renewable energy resource that can be converted to liquid fuels.

Title: The effect of microwave and ultrasonic pretreatment on the degradation of cellulose.

Sándor Beszédes
University of Szeged, Sweden

Cellulose-containing wastes are very promising raw materials for bioconversion processes such as bioethanol production. The process of cellulose degradation (saccharification) is carried out in an environmentally friendly way, using enzyme complexes, but in order to increase the efficiency of the process, pretreatment is required to make the cellulose molecule available to the enzymes.

Title: Combined chemically enhanced sedimentation and ultrafiltration for wastewater treatment

Szabolcs Kertesz
University of Szeged, Sweden

The increasing waste water production, is one of the most serious problems in the world, which has to be tackled effectively in the near future. Proper management of different kind of wastewaters such as food and dairy wastewater is a necessity, not an option. Membrane separation technology has many advantages over traditional treatment methods such as less required space, energy and can be easily combined with other methods, like chemical treatments.

SPEAKER SLOTS AVAILABLE

Title: Investigating the role of parameters in dairy wastewater treatment with VSEP ultrafiltration

Szabolcs Gyula Szerencses,
University of Szeged, Sweden

Protecting our natural environment has never been more urgent than nowadays. Population growth implies an increase in consumption which makes a constant threat for nature from various pollutants. Our drinking waters indirectly and living waters are directly exposed to the effect of various wastewaters from industrial activities.

Title: Application of microwave-assisted Fenton's reaction for wastewater treatment and utilization

Zoltán Jákói,
University of Szeged, Sweden

Wastewater originated from all different sources is generated in an excessive amount annually. These contain complex – often toxic and/or microbiologically dangerous – compounds, therefore a proper wastewater treatment is always needed before the further reuse or outplacement of the water.

Title: Charcoal production from alternative agroforestry woody residues typical of Southern Europe

Félix Ricardo Charvet,
Universidade of Aveiro, Spain

Charcoal production in Portugal is presently mostly based on the valorization of wood residues from cork oak and holm oak stands. Nevertheless, since wildfire prevention became a priority, in Portugal like in other south-European countries like Spain and Greece, especially after the dramatic wildfires of 2017 and 2018, urgent actions are being conducted to reduce the amount of biomass available in the forests as well as to valorize partially-burn residues during post-fire recovery actions

SPEAKER SLOTS AVAILABLE

Title: Recycling and reuse of human excreta For energy generation: a critical review

Anil k. Shrivastava
DRDO, India

Almost a billion people in developing world have no access to toilet and practice open defecation. But that waste should not go waste. Rather than tainting the environment and transmitting diseases, it could actually be harnessed to heat or power for millions of homes. The review paper will discuss about utilization of human excreta to produce biogas/energy as an alternative renewable energy

Title: Enzymatic pre-treatment of biomass for improvement of biogas production

Giuliano Degrassi
ICGEB, Italy

Production of biogas from biomasses and organic residues by anaerobic digestion using methanogenic bacteria is an important biotechnological process for sustainable production of biofuel. One of the limiting factors of this process is the poor conversion rate into biogas of the energy contained in the biomass

Title: Optimization of energy consumption in land leveling using GIS, genetic and pso (particle swarm optimization) algorithms

Isham Alzoub
University of Tehran, Iran

One of the most important steps to prepare soil is land leveling. Land leveling with machines require considerable energy. To increase the accuracy of the calculations, the point height collected from mapping (50 m × 50 m) insert into the GIS environment. rest of the unknown coordinates were obtained using interpolation and a triangular network model (TIN) was used to determine the exact volume of earthworks.

SPEAKER SLOTS AVAILABLE

Title: Exploring the Opportunity for Organic Household Waste (OHW) Management Technology Options: An Empirical Investigation for Muharraq Governorate

Sumaya Abbas,
University of Bahrain,
Bahrain

Organic Household Waste (OHW) fraction of the Municipal Solid Waste (MSW) has become a point of focus globally due to its harmful effects on the environment if it is not managed properly. OHW represents the highest waste composition amongst most of the high-income developing countries including Bahrain, signifying a major opportunity in the realm of conversion technologies

Title: Examining, Identifying and Classifying Hazardous Wastes (Case Study: Oil and Gas Exploitation Complex).

Mandana Yavari,
Islamic Azad University, Iran

Background and Aim: Industrial waste production is almost an inevitable consequence of population growth, which is based on industry technology. In the meantime, the oil industry is one of the most extensive industries in Iran, and the need to understand its hazardous and non-hazardous waste is felt in order to reduce environmental hazards.

Title: Development of catalyst from waste egg shell For biodiesel production from waste vegetable oil

Raphael Eze
University of Benin,
Nigeria

The increase in price of petroleum and environmental concerns has made the search for alternative fuels to gain importance. Biodiesel is one of several alternative fuels that is renewable and can be manufactured from vegetable oils. The main objective of the research is to produce biodiesel from waste vegetable oil using activated egg shell waste as solid catalysts

SPEAKER SLOTS AVAILABLE

Title: Effect of heavy metals in the performance of anaerobic digestion of Olive mill waste

Khalideh Al bkoor Alrawashdeh
Al-Huson University, Jordan

This study presents an investigate the effect of heavy metals on the production of biogas during the process of anaerobic digestion (AD) for the OMW. The poisonous effect and the inhibitory influence of Fe, Ni, Pb, Zn, Cu, and Cr on the digestion process are investigated and determined

Title: Analyzing Sustainability of Energy in 3 E Framework: Ecological, Economic and Environmental Perspective.

Pooja Sharma

University of Delhi, India

Analyzing Sustainability of Energy in 3 E Framework: Ecological, Economic and Environmental perspective.The paper explores the issues and concerns related to the sustainability of energy use adopting a 3 E framework for energy flow

Title: Molecular sieve for upgrading biogas via pressure swing adsorption to biogas green energy

Goldy Shah, IIT
India

Besides many other problems, the world is challenged by global warming, and the target is to reduce greenhouse gas emissions. Moreover, biogas has potential as a renewable source of energy for rural areas because the majority of the rural population is agrarian, thereby generating substantial agricultural waste throughout the year.

SPEAKER SLOTS AVAILABLE

Title: Development of low cost desulfurization systems for efficient biogas purification

Shivali, IIT
India

Biogas is arguably a clean renewable energy source due to its determinate energy value and abundant biomass availability. The main hurdle for implementing the technology for vehicular application is that biogas contains certain concentration of impurity of Hydrogen Sulfide (H2S), which leads to the corrosion of expensive metal parts inside the plants and engines due to its high corrosiveness and toxicity.

Title: Unlocking the limitaiton of wastewater on algal viability and biomass accumulation with phytohormone.

Liqun Jiang
Shandong University, China

Wastewater has historically been seen as an efficient and economically alternative medium for microalgal biofuels, however, algae currently suffered from low viability and biomass productivity and required pretreatment of wastewater

Title: Biogas Upgrading Techniques

Chukwuemeka Uzukwu
Biorecylio Ltd, Nigeria

One of the current challenges facing the world is global warming which is a direct consequence of CO2 emitted from the combustion of fossil fuels. Research is already undergoing on transformative technologies to produce energy from renewable sources and more efficient use of energy from fossil fuels

SPEAKER SLOTS AVAILABLE

Title: Bioenergy is the major industry for the development of health, basic need of daily life, create employment, generate income, stronger economy, reducing financial crises, global Poverty and hunger in the developing countries of the world particularly in south Asia.

Muhammad Usman,
Pakistan

The aim of presentation consist of bioenergy, industry, life, employment, income, economy, global poverty and hunger were studied and reported that. Bioenergy is the major industry for the development of health, basic need of daily life, create employment, generate income, stronger economy, reducing financial crises, global Poverty and hunger in the developing countries of the world particularly in south Asia. The study reported that bioenergy can be produced from plant, plant derived materials, renewable in nature, derived from biomass and used directly for heating known as biomass fuels.

Title: Conversion of Ligno Cellulose to Biofuel.

Nishchal Baniya
Zhejiang University, China

A two-stage process using aqueous ammonia and hotwater has been investigated to fractionate corn stover. To optimize the fractionation process so that hemicellulose recovery and purity in the liquid hydrolysate were maximized, the experiments were carried out employing response surface methodology (RSM)..

Title: A comprehensive review on bioenergy production from cellulose

Korrapati Narasimhulu,
NIT, India

Biofuel is an emerging fuel to replace the conventional fuel used in transportation. With intensive research efforts, a new number of novel technologies with high potential for sustainable development have been developed to extensively utilize the biomass with zero waste and zero pollution.

SPEAKER SLOTS AVAILABLE

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Glimpses of Bio Energy Conferences

















Berlin Attractions

