

4th International Conference on **Biofuels and Bioenergy**

Day 1 October 12, 2023

Meeting Hall: **Event 2&3**

09:00 - 09:40 Registration

09:40 - 10:00 Introduction

Keynote Presentations

10:00 - 10:40 The Combined Electro-Thermo-Chemical Cycle – Benefits and Challenges
Leonid Tartakovsky, Technion – Israel Institute of Technology, Israel

10:40 - 11:20 Introducing the Laser-Based C14-SCAR Analyzer for the Measurement of the Biogenic Fraction in Fuel Blends
Amelia Detti, PPQ Sense, Italy

Group Photo 11:20 - 11:30

Networks & Refreshments 11:30 - 11:45 @ Foyer

Oral Presentations

Session Chair **Leonid Tartakovsky**, Technion – Israel Institute of Technology, Israel

Sessions Bioenergy with carbon capture and storage | Bioenergy | Biomass Technology | Biofuel Future and market scope | Bioenergy Conversion | Production of Biofuels

11:45 - 12:15 Availability and Accessibility of Biomass Residues in the Tropics
Filip Vandeputte, SEE Performance Engineering bvba, Belgium

12:15 - 12:45 Participation of Small-Scale Sugarcane Farmers in the Bioenergy Sector in South Africa
Tagwi Aluwani, University of South Africa (UNISA), South Africa

12:45 - 13:15 Hybrid Decision-Making (DEMATEL-AHP) for Prioritizing Biofuel Supply Chain Challenges in Norway: A Circular Economy Perspective
Zahir Barahmand, University of South-Eastern Norway, Norway

Lunch 13:15 - 14:15 @ Gallery

14:15 - 14:45 Laboratory Studies of the Combustion of Terpenes Biofuels and Pollutants Characterization
Philippe Dagaut, Centre National De La Recherche Scientifique, France

14:45 - 15:15 Newly Developed Catalysts for Environmentally Friendly Catalytic Processes
Rawaz A. Ahmed, De Montfort University, UK

15:15 - 15:45 Multiscale Modelling and Experimental Studies on Algal Photobioreactors for Wastewater Treatment and Bioenergy Production
Saikat Chakraborty, Plaksha University, India

15:45 - 16:15 The Preparation of Nitrogen-Doped High-Yield Biochar Carbon Material and its Potential Applications
Shuchao Cheng, Southeast University, China

Networks & Refreshments 16:15 - 16:45 @ Foyer

16:45 - 17:15 Bioenergy PR Strategy Utilizing the Metaverse
Kihoon, Lee, Orca Korea, Sogang University Graduate School, South Korea

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17:15 - 17:45	CFD-DEM Simulation of Heat Transfer During the Biomass Combustion Process in a Bubbling Fluidized Beds Zifeng Luo , Southeast University, China
17:45 - 18:15	Waste Valorization Technology Option for Egg Shell Sheeba Jilani , ZHCET AMU Aligarh, India
18.15 - 18.45	The impact of Torrefaction Particle Morphology of Pulverized Biomass Hongfang Zhou , Southeast University, China

Day 1 Concludes followed by Awards Ceremony

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Day 2 October 13, 2023

Meeting Hall: Event 2&3

Keynote Presentations

09:30 - 10:10 Novel Catalyst and Reactor for Biodiesel Production
Katherine Huddersman, De Montfort University, UK

Oral Presentations

Session Chair **Gordon McKay**, Hamad Bin Khalifa University, Qatar

Session Chair **Katherine Huddersman**, De Montfort University, UK

Sessions Biomass Technology | Biogas | Biodiesel | Biofuels vs Fossil fuels | Production of Biofuels | Algae biofuels | Environmental impacts of Biofuels | Bioenergy

10:10 - 10:40 Impact of Second Generation of Biodiesel on Engine Performance and Emissions
Ornella Chiavola, ROMA TRE University, Italy

Networks & Refreshments 10:40 - 11:00 @ Foyer

11:00 - 11:30 Waste-to-Biofuel via Catalyzed Pyrolysis and Bio-Oil Upgrading
Gordon McKay, Hamad Bin Khalifa University, Qatar

11:30 - 12:00 Gasification of Densified Paraserianthes Falcataria (L.) Sawdust for Energy Production
Randell U. Espina, Ateneo De Davao University, Philippines

12:00 - 12:30 Investigating the Feasibility of Producing Quality Biodiesel from used Cooking Oil (UCO) in Port Moresby, Papua New Guinea
Linta Aquillah Qalopui, Pacific Adventist University, Papua New Guinea

12:30 - 13:00 Biological Conversion of Methane to Polyhydroxyalkanoates (PHA)
Woong Kim, Kyungpook National University, South Korea

Lunch 13:00 - 14:00 @ Gallery

14:00-14:30 Comparison of Biofuel from Food Waste and Crops by Applying Life Cycle Analysis and Land Change Analysis
Abrar Almalki, King Abdulaziz University, Saudi Arabia

14:30 - 15:00 Performance and Emission Profiles of Petroleum Nut (Pittosporum Resineferum Hemsl.) Biodiesel in Combustion Ignition Engine-Generator for Power Generation
Shawn Zedrick G. Taguling, University of the Philippines Diliman, Philippines

15:00 - 15:30 Anaerobic Digestion of Sludge Filtrate using Anaerobic Baffled Reactor Assisted by Symbionts of Short Chain Fatty Acid-Oxidation Syntrophs and Exoelectrogens: Pilot-Scale Verification
Tao Wang, Wuyi Univerisity, China

15:30 - 16:00 Biogas from Simple Reactors to cutting-edge Bio-Methanation Technologies
Jin Mi Triolo, Gyeongsang National University, South Korea

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Networks & Refreshments 16:00 - 16:20 Foyer

16:20 - 16:50 Physiological Modulations of Gamma-Ray Mutants of Oleaginous Microalgae
Chlorella sp. KM504965 for Enhanced Biofuel Production
Senthamilselvi Dhandapani, Tamil Nadu Agricultural University, India

16:50 - 17:20 Comparative Evaluation and Selection of a Stress Condition for Newly Isolated
Rhodococcus Bacteria to Enhance Biodiesel Production.
Rekha Singh, Jawaharlal Nehru University, India

Poster Presentations

PP-01 The Economic Potential of Industrial Hemp in South Africa
Sibongile Tekana, University of South Africa (UNISA), South Africa

PP-02 Catalyst-Assisted IVDV Pretreatment of Industrial Hemp Hurds for Enhancement of
Enzymatic Hydrolysis
Maria El Hage, La Rochelle University, France

PP-03 Newly Developed Catalysts for Environmentally Friendly Catalytic Processes
Rawaz A. Ahmed, De Montfort University, UK

PP-04 Novel Catalyst and Reactor for Biodiesel Production
Katherine Huddersman, De Montfort University, UK

PP-05 Analysis of Biomass Plug Velocities in Multi-Plug Systems through Aeration Time
Constant Investigation
Hossein Rajabnia, The University of Newcastle, Australia

PP-06 Conversion of Glucose into Platform Compounds using Microwave Heating Method
and Application in Biorefinery of Plant Biomass Materials
Chung-Yu Guan, National Ilan University, Taiwan

Day 2 Concludes

Panel Discussion - Awards & Closing Ceremony followed by Vote of Thanks