

### 4<sup>th</sup> 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 Impact of Second Generation of Biodiesel on Engine Performance and Emissions  
**Ornella Chiavola**, ROMA TRE University, Italy

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 **Ornella Chiavola**, ROMA TRE University, Italy

Session Chair **Philippe Dagaut**, Centre National De La Recherche Scientifique, France

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 Laboratory Studies of the Combustion of Terpenes Biofuels and Pollutants Characterization  
**Philippe Dagaut**, Centre National De La Recherche Scientifique, France

Lunch 13:15 - 14:00 @ Gallery

14:00 - 14:30 Newly Developed Catalysts for Environmentally Friendly Catalytic Processes  
**Rawaz A. Ahmed**, De Montfort University, United Kingdom

14:30 - 15:00 Multiscale Modelling and Experimental Studies on Algal Photobioreactors for Wastewater Treatment and Bioenergy Production  
**Saikat Chakraborty**, Plaksha University, India

15:00 - 15:30 The Preparation of Nitrogen-Doped High-Yield Biochar Carbon Material and its Potential Applications  
**Shuchao Cheng**, Southeast University, China

15:30 - 16:00 Bioenergy PR Strategy Utilizing the Metaverse  
**Kihoon Lee**, Orca Korea, Sogan University Graduate School, South Korea

Networks & Refreshments 16:00 - 16:30 @ Foyer

16:30 - 17:00 CFD-DEM Simulation of Heat Transfer During the Biomass Combustion Process in a Bubbling Fluidized Beds  
**Zifeng Luo**, Southeast University, China

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17:00 - 17:30	Waste Valorization Technology Option for Egg Shell <b>Sheeba Jilani</b> , ZHCET AMU Aligarh, India
17:30 - 18:00	The impact of Torrefaction Particle Morphology of Pulverized Biomass <b>Hongfang Zhou</b> , Southeast University, China
18.00 - 18.30	Physiological Modulations of Gamma-Ray Mutants of Oleaginous Microalgae Chlorella sp. KM504965 for Enhanced Biofuel Production <b>Senthamilselvi Dhandapani</b> , Tamil Nadu Agricultural University, India
Day 1 Concludes followed by Awards Ceremony	

## 4<sup>th</sup> International Conference on Biofuels and Bioenergy

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, United Kingdom

Oral Presentations

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

Session Chair **Katherine Huddersman**, De Montfort University, United Kingdom

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

10:10 - 10:40 Waste-to-Biofuel via Catalyzed Pyrolysis and Bio-Oil Upgrading  
**Gordon McKay**, Hamad Bin Khalifa University, Qatar

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

11:00 - 11:30 Biocatalyzed Electrolysis Assisted Anaerobic Digestion (BEAD) : Research and Application  
**Tao Wang**, Wuyi University, China

11:30 - 12:00 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

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

12:30 - 13:00 Comparison of Biofuel from Food Waste and Crops by Applying Life Cycle Analysis and Land Change Analysis  
**Abrar Almalki**, King Abdulaziz University, Saudi Arabia

Lunch 13:00 - 14:00 @ Gallery

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

14:30 - 15:00 Biogas from Simple Reactors to cutting-edge Bio-Methanation Technologies  
**Jin Mi Triolo**, Gyeongsang National University, South Korea

15:00 - 15:30 Characterization of Molecules of Interest for Algal Biofuel  
**Hela Friha**, Polytechnic Institute of Advanced Science: IPSA, France

15:30 - 16:00 Biomass to Value: Synthesizing High-Value Products through Advanced Gasification  
**Zahir Barahmand**, University of South-Eastern Norway, Norway

Networks & Refreshments 16:00 - 16:30 @ Foyer

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### Poster Presentations

Poster Judge	<b>Gordon McKay</b> , Hamad Bin Khalifa University, Qatar
PP-01	The Economic Potential of Industrial Hemp in South Africa <b>Sibongile Tekana</b> , University of South Africa (UNISA), South Africa
PP-02	Catalyst-Assisted IVDV Pretreatment of Industrial Hemp Hurds for Enhancement of Enzymatic Hydrolysis <b>Maria El Hage</b> , La Rochelle University, France
PP-03	Newly Developed Catalysts for Environmentally Friendly Catalytic Processes <b>Rawaz A Ahmed</b> , De Montfort University, United Kingdom
PP-04	Novel Catalyst and Reactor for Biodiesel Production <b>Katherine Huddersman</b> , De Montfort University, United Kingdom
PP-05	Analysis of Biomass Plug Velocities in Multi-Plug Systems through Aeration Time Constant Investigation <b>Hossein Rajabnia</b> , 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 <b>Chung-Yu Guan</b> , National Ilan University, Taiwan
PP-07	Wittig Salt Renewable Route Production Processing Optimization: Application of Genetic Algorithm Techniques <b>Jose Fernando Cuadros Bohorquez</b> , Estacio de Sa University, Brazil
PP-08	Use of Factorial Experimental Design for the Production of Biofuel from Pyrolytic Bio-Oil of Aquatic Macrophytes <b>Paulo Renato dos Santos</b> , Senai Institute for Biomass Innovation, Brazil

### Video Presentations

VP-01	The Combined Electro-Thermo-Chemical Cycle – Benefits and Challenges <b>Leonid Tartakovsky</b> , Technion – Israel Institute of Technology, Israel
VP-02	Gasification of Densified <i>Paraserianthes falcataria</i> (L.) Sawdust for Energy Production <b>Randell U. Espina</b> , Ateneo De Davao University, Philippines
VP-03	Comparative Study on Production and Characterization of Bioethanol from Agricultural Waste Materials <b>Adeloye Olalekan Michael</b> , University of Agriculture and Environmental Sciences, Nigeria
VP-04	Production and Characterization of Bio Oil from Bamboo <b>Adeloye Olalekan Michael</b> , University of Agriculture and Environmental Sciences, Nigeria

### Day 2 Concludes

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