

5th International Conference on

Renewable Energy, Resources and Sustainable Technologies

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Biopolymers and Bioplastics

Day 1 – November 13th, 2023

Meeting Hall: **Rome**

08:00 -08:40 Registrations

08:40 - 09:00 Introduction

Keynote Presentations

09:00 - 09:40 An Acrostic Approach to Zero Exergy Buildings

Arif Hepbasli, Yasar University, Turkey

09:40 - 10:20 A Framework for Establishing a Resource Circulation Society

Dai-Yeun Jeong, Asia Climate Change Education Center, South Korea

Exhibitor Presentation

10:20 - 10:45 SEWAT - Sustainable Energy by Waves Trap

Giulio Teodoro MAELLARO, GECO -Global Engineering Constructions s.r.l., Italy

Networking and Refreshments 10:45 -11:05 @ Rome

Oral Presentations

Session Chair **Dai-Yeun Jeong**, Asia Climate Change Education Center, South Korea

Session Chair **Arif Hepbasli**, Yasar University, Turkey

Sessions: Hydrogen Energy & Fuel Cells | Smart Grid | Hydro Energy | Energy in Buildings | Renewable Energy & Resources | Bioremediation and Biodegradation | Biopolymers & Bioplastics | Sustainable Engineering and Energy Technologies

11:05 - 11:30 The Hydrogen Flagship Project TransHyDE: Transport and Storage Infrastructure for Green Hydrogen

Dorothea Müschenborn, Max Planck Institute for Chemical Energy Conversion, Germany

11:30 - 11:55 Interpreting Public Security Requirements into Engineering Characteristics on Smart Grid Deployment

Amy Poh Ai Ling, The University of Tokyo, Japan

11:55 - 12:20 Preparation of New Bio-based Epoxide-Amine Coatings with Their Nanocomposite Derivatives as Replacements for BPA

Ilknur Babahan-Bircan, Aydin Adnan Menderes University, Turkey

12:20 - 12:45 Design and Development of an Autonomous Intelligent Robot for Distribution Center Operations: A Case Study

Bariş Çetinkaya, ADM Electricity Distribution Inc. ,Turkey

Group Photo (12:45 - 13 :00)

Lunch 13:00 - 14:00 @ Escale

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14:00 - 14:25	Analysis of the Production Process of Sand-Lime Bricks with Shortened Autoclaving Time Anna Stepien , Kielce University of Technology, Poland
14:25 - 14:50	Barriers to the Adoption of Energy-Efficient Technologies in the Brazilian Building Sector Talita Mariane Cristino , São Paulo State University (UNESP), Brazil
14:50 - 15:15	Novel Method for Manufacturing an Alcohol Chemically Resistant Cosmetic Packaging Made from Industrial Coffee Waste and Vegetable Binder Franciele Saorin , Cencoderma Instituição de Pesquisa e Desenvolvimento de Cosméticos Ltda, Brazil
15:15 - 15:40	Evaluation of Hydroelectric Energy Generation in Turkey via Polynomial and Logarithmic Regression Analysis Ezgi GÜLER , Bilecik Şeyh Edebali University, Turkey
15:40 - 16:05	Spectrophotometric-Based Assay to Quantify Relative Enzyme-Mediated Degradation of Commercially Available Bioplastics Matthew Hoekstra , Food Cycle Science, Canada
Networking and Refreshments 16:05-16:30 @ Rome	
16:30 - 16:55	Synthesis of Trans-Limonene Dioxide by Dioxirane using Chiral Catalyst Y. Mahmat Ahmat , Université Laval, Canada
16:55 - 17:20	Smart Cities: Recent Advancement and Challenges Gaydaa AlZohbi , Prince Mohammad Bin Fahd University, Saudi Arabia
17:20 - 17:45	Modulating the Properties of Saccharina-Based Fibres using Natural Cross-Linkers Ishrat Jahan Badruddin , Cranfield University, United Kingdom
17:45 - 18:10	Analysis of the Efficiency and Temperature Profiles of A Solar Thermal Energy Storage System Operating in A High Mountain Climate Victor Lizcano-González , Universidad Industrial de Santander, Colombia
End of Day 1 Presentations, Certificate Felicitation and Closing Ceremony	

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Day 2 – November 14th, 2023

Meeting Hall: **Rome**

Keynote Presentations

9:00 - 9:40	Renewable Ammonia for the Global Energy Transition Angela Kruth , CAMPFIRE, Germany
9:40 - 10:20	Sustainable Microbial Production, Properties and Biodegradation of Lactate-Based Polymers from Various Carbon Sources Seiichi TAGUCHI , Kobe University Integrated Research Center, Japan
10:20 - 11:00	Fatty Acid Cellulose Esters (Faces) – from Synthesis and Characterization to Applications Nicolas Joly , Unité Transformations & Agroressources, France

Networking and Refreshments 11:00 -11:15 @ Rome

Oral Presentations

Session Chair	Angela Kruth , CAMPFIRE, Germany
Session Chair	Nicolas Joly , Unité Transformations & Agroressources, France
Sessions:	Renewable Energy & Resources Solar Energy Global Industrial Processes and Sustainable Development
11:15 -11:40	Life Cycle Assessment of Bio-Fermentation Ethanol Production and Its Influence in China's Steeling Industry Lingyun Zhang , University of Nottingham, United Kingdom
11:40 - 12:05	Comparison between MPPT P&O and MPPT Fuzzy controllers for Photovoltaic Maximum Power Point Tracking Youb Lamia , University of Batna-2, Algeria
12:05 - 12:30	PLA synthesis using Response Surface Methodology (RSM) Cristian Valdés , Universidad Católica del Maule, Chile
12:30 - 12:55	Effects of Nanocellulose Addition on Natural Rubbers Compounds Jordão Gheller Junior , Instituto SENAI de Inovação em Engenharia de Polímeros, Brazil

Lunch 12:55 - 14:00 @ Escale

14:00 - 14:25	The Impact of Using High Impact Polystyrene in the Production of Aerated Concrete (ACC) Ryszard Dachowski , Kielce University of Technology, Poland
14:25 - 14:50	Accelerating New Business Models In Malaysia's Electricity Sector: Key Drivers & Strategies Thiagaleetchumi V Maniam , University of Nottingham Malaysia, Malaysia
14:50 - 15:15	Self-Immolative Polymers for Nanoparticles with Unique Degradation Profiles in Biomedical Applications Kedafi Belkhir , Centrale Lille Institut, France

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15:15 - 15:40 How the Leading PV Module Manufacturers Address Topcon-Module Degradation Sensitivities

Goetz Fischbeck, Smart Solar Consulting, Germany

15:40 - 16:05 Soil Microorganisms in Mixed Forest and Pure Forests of Ulmuspumila - Robinia Pseudoacacia Based on Metagenomics

Fengyun Ma, Shandong Agricultural University, China

Networking and Refreshments 16:05 - 16:30 @ Rome

16:30 - 16:55 Smart Biopolymers: From 3D to 4D printing

Daining Fang and Zeang Zhao, Institute of Advanced Structure Technology, Beijing Institute of Technology, China

Poster Presentations

PP - 001 Development of A Hydrothermal Energy Utilization System using Wastewater in Reverse Osmosis Membrane

Inhong Min, Korea Water Resources Corporation, South Korea

PP - 002 Influence of the Addition of Acetyl Tributyl Citrate and Reprocessing on The Biodegradability of Polyhydroxybutyrate

Karen V. Enríquez-López, Universidad de Guadalajara, Mexico

PP - 003 Biodegradation of Biodegradable Biobased Plastics: Domestic Composting and Sector Development

Jules BELLON, Institut Polytechnique UniLaSalle, France

PP - 004 The Potential of Lignin-Based Foams as Sustainable Alternatives to Conventional Insulation Materials

Taiwo Kayode Fagbemigun, Aloes Research Education and Development Hub., Germany

PP - 005 Empowering Malaysia's Solar Energy Landscape: Exploring the Prospect of Peer-to-Peer Energy Trading

Thiagalechumi V Maniam, University of Nottingham Malaysia, Malaysia

PP - 006 Simulation of Methylammonium Lead Iodide Perovskite Solar Cell with Different EtI Using Scaps 1d Simulator

Meriem Chadel, University of Tlemcen, Algeria

Video Presentation

VP - 001 Integrating Early Childhood Education to Reduce the Ecological Footprint

Hen Friman, Holon Institute of Technology, Israel

VP - 002 Polylactic Acid Biocomposites Reinforced with Starch from Mountain 'S Yam (*Dioscorea Remotiflora Kunth*)

V.V.A. Fernández, Universidad de Guadalajara, México

End of Day 2 Presentations, Certificate Felicitation and Closing Ceremony