



Scientific Program



SciKnowledgeTM
European Education Scientific Conferences

Welcoming Message

Dear Colleagues,

The 2022 International Conference on Green Energy and Environmental Technology (GEET-22) is organized by academics and researchers belonging to different scientific areas of the University Complutense of Madrid, University Carlos III of Madrid, University of Extremadura and University of Las Palmas de Gran Canaria with the technical support of Sciknowledge European Conferences.

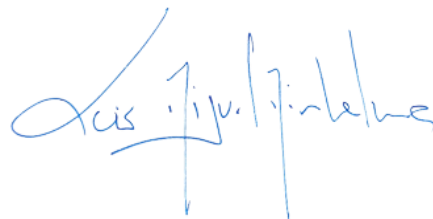
This event aims to create an international forum for academics, researchers and scientists worldwide to discuss worldwide results and proposals regarding the soundest issues related to Green Energy and Environmental Technologies.

This event will include the participation of renowned keynote speakers, oral presentations, poster sessions, technical conferences related to the topics dealt with in the Scientific Program, and an attractive social and cultural program.

The papers will be published in the Abstracts E-book of the Conference. Those communications with enough quality can be further considered for publication in International Conference Journals. At the authors' choice, those works unsuitable for publication in any congress journals will be published in the Extended Abstracts E-book.

To finish, I hope that all of you will enjoy the Conference, and I wish our visitors from abroad will have an enjoyable stay in Rome.

Thank you

A handwritten signature in blue ink, which appears to read 'Luís Miguel Minhalma'.

Prof. Luís Miguel Minhalma PhD
GEET-22 Chairman
Instituto Superior de Engenharia de Lisboa
Instituto Politécnico de Lisboa, ISEL, Portugal

Organizing Committee

Chairman

Prof. Luís Miguel Minhalma PhD
GEET-22 Chairman
Instituto Superior de Engenharia de Lisboa
Instituto Politécnico de Lisboa, ISEL, Portugal

Co-Chairman

Prof. Ana Maria de Matos Charas PhD
Instituto de Telecomunicações, Portugal

Members

Prof. Elisenda Pulido Melián PhD
Chemical Department
University of Las Palmas de Gran Canaria, Spain

Prof. Juan García Rodríguez PhD
Chemical Engineering Department
University Complutense of Madrid, UCM, Spain

Prof. Raviraj M. Kulkarni, PhD
Department of Chemistry,
Gogte Institute of Technology, India

Prof. Vahid Jabbari
Chemistry Department
The University of Texas at El Paso, USA

Prof. Avelino Nuñez-Delgado PhD
Department of Edafology and Agricultural Chemistry. University of Santiago de Compostela, Spain

Prof. Mario Monzón Verona PhD
Mechanical Engineering Department
University of Las Palmas de Gran Canaria, Spain

Prof. Silvia Álvarez Torrellas PhD
Chemical Engineering Department
University Complutense of Madrid, Spain

Prof. Israel González Carrasco PhD
Computer Sciences Department
University Carlos III of Madrid, Spain

Prof. Gabriel Ovejero Escudero PhD
Chemical Engineering Department
University Complutense of Madrid, Spain

Prof. Marcos Larriba Martínez PhD
Dpto. Ingeniería Química y de Materiales
University Complutense of Madrid, Spain

Prof. Joaquin R. Dominguez PhD
Chemical Engineering Department
University of Extremadura, Spain

Prof. Yaoyu Zhou
College of Resources and Environment
Hunan Agricultural University, China

Elza Bontempi PhD
Department of Chemistry
University of Brescia, Italy

Helder Teixeira Gomes PhD
Coordinator Professor at the Department of Chemical and Biological Technology.
Polytechnique Institute of Bragança, Portugal

Prof. Marco Race PhD
Department of Civil and Mechanical Engineering
The University of Cassino and Southern Lazio, Italy

Provisional GEET-22 PROGRAM

Three-day event

Important Note:

Conference attendees have accepted in the terms and conditions of their registration that their presentation will take place on any day and hour of the schedule established by the Conference Organization.

The day and order of presentation assigned by the Organization to the speakers and poster-type presenters may not be altered by particular requests. Changes will only be accepted for reasons of **delay in the visa or flight**, which must always be **previously accredited documentary**.

Presenters who are not in their place in the assigned time slot will lose the right to present the work and obtain their certificate.

Attention! The use of FFP2 mask is mandatory in the Niccolo Cusano University

Oral communications

(12 minutes for presentation + 3 minutes for questions)

Wednesday, 27th July 2022 (afternoon)

SCHEDULE	MAIN ROOM (ground floor)	ROOM 2 (ground floor)
15.30-16:15 <i>(afternoon)</i>	Documentation delivery	
16:15-16:30	Opening sesión	
16:30-17.15	Plenary Talk 1 Phytoremediation of particulate matter from the air. How plants can fight air pollution Robert Popek Warsaw University of Life Sciences Poland	
17:15 – 18:30	In parallel recovery of high-value solids and biocrude from hydrothermal liquefaction of wastewater grown algae: A sustainable waste biorefinery Farah Naaz Indian Institute of Technology Delhi India	Valorization of agro-industrial wastes through submerged fermentation using mushroom mycelium Mandira Kapri Indian Institute of Technology Delhi India

	<p>Combined role of granular formulations of <i>Kinnetetia asachharophila</i> and organic amendments in bioremediation of RDX contaminated soils Mohd Aamir Khan Indian Institute of Technology Delhi India</p>	<p>Decarbonization of the gas sector in Poland & Europe presents status and challenges Stanislaw Nagy AGH University of Science & Technology Poland</p>
	<p>Long-Lived Phosphors in the Oxidation of Aromatic Alcohols Darlan MacLean Saint Francis Xavier University Canada</p>	<p>Effects of light intensity on microalgal cultures stress for lipid and carbohydrate accumulation: potential biofuels production Ana Esteves Universidade do Porto Portugal</p>
18:30-19:15	<p>DINNER COCKTAIL POSTERS SESSION-1</p>	<p>DINNER COCKTAIL POSTERS SESSION-1</p>
	<p>Hybrid electrocoagulation-laccase process for the treatment of textile dye effluents Shweta Kalia Indian Institute of Technology Delhi India</p>	<p>Emissions Reduction Of HC, CO and NOx Gases in Gasoline bi-mode SI/HCCI Engine by TWC Converter Ahmad o hasan Jordan work Al-Hussein Bin Talal University Jordan</p>
19:15 -20:30	<p>Lignin degradation of lignocellulosic biomass by efficient fungal strains Akansha Gupta Indian Institute of Technology Delhi India</p>	<p>Active roof covering with integrated solar and heat transfer layer Petr Bibora Research Institute for Building Materials Czech Republic</p>
	<p>A Life Cycle Assessment study of Paddy straw valorized with de-oiled neem cake for production of cellulase-free xylanase and utilization of residual spent as biofertilizer Garima Singh Indian Institute of Technology India</p>	

Oral communications

(12 minutes for presentation + 3 minutes for questions)

Thursday, 28th July 2022 (morning)

SCHEDULE	MAIN ROOM	ROOM 2
09:15-10:00	<p style="text-align: center;">Plenary Talk 2 Research on near-isothermal compressed air energy storage Yasser Mahmoudi Larimi University of Manchester UK</p>	
10:00 – 11:30	<p style="text-align: center;">Insight into the use of seaweed ash as a soil stabilizing material for earthen construction Manal Bouasria ESITC France</p>	<p style="text-align: center;">Active roof covering with integrated solar and heat transfer layer Petr Bibora Research Institute for Building Materials Czech Republic</p>
	<p style="text-align: center;">ETV as a tool to facilitate providers of innovative environmental technologies reach the market Albert Serra CETAQUA - Water Technology Center Spain</p>	<p style="text-align: center;">Materials science challenges of the maintenance of offshore wind energy Leon Mishnaevsky Technical University of Denmark Denmark</p>
	<p style="text-align: center;">Nano-Fe/SiO₂ Catalysts Prepared by Facile Colloidal Deposition: Enhanced Durability in Fischer-Tropsch Synthesis Yaqian Liu Wuhan University China</p>	<p style="text-align: center;">Effect of temperature on the structure of ScYSZ thin films prepared via PLD as electrolyte for solid electrochemical cell applications Jennet Rabo University of the Philippines Diliman Philippines</p>
	<p style="text-align: center;">Degradation of phenanthrene in soil washing eluent by photo-Fenton process using Fe (III)-citric acid complex Yufang Tao Hui Zhang Wuhan University China</p>	<p style="text-align: center;">Present And Future Trends In Phytoremediation Of Urban Particulate Matter Pollution By Roadside Vegetation Robert Popek Warsaw University of Life Sciences Poland</p>
11:30-12:00	<p style="text-align: center;">Coffee-break POSTERS SESSION-2</p>	<p style="text-align: center;">Coffee-break POSTERS SESSION-2</p>

12:00 – 13:30	<p>Phytoremediation of Particulate Matter and Volatile Organic Compounds by Active Living Wall Chairat Treesubstorn King Mongkut's University of Technology Thonburi Thailand</p>	<p>Decarbonization in the Industrial Sector: the use of Piezoelectricity Barbara Ribeiro Universidade de Lisboa Portugal</p>
	<p>Remediation of diesel contaminated humus-rich soil in the thermal plasma environment Dovile Gimzauskaite King Lithuanian Energy Institute Lithuania</p>	<p>SWOT analysis of an LWS as a replacement for the outer cavity leaf Timothy Rowe University of Antwerp Belgium</p>
	<p>The Potential of Proline as a Key Metabolites to Design Real-Time Plant Water Deficit and Low Light Stress Detector in ornamental plants Piyatida Kittipornkul Pilot Plant Development and Training Institute Thailand</p>	<p>GIS-Based Suitability Analysis of Waste-to-Energy from Sugarcane Bagasse, and Cow and Pig Manures for Electricity Generation in Jamaica Richards University of Tsukuba Japan</p>
	<p>Molecular dynamics study on interfacial structures of a choline chloride-based deep eutectic solvent Elisabete Ferreira REQUIMTE Portugal</p>	<p>Remote sensing and Fire Vulnerability of Forest Ecosystems in the Arganeraie Biosphere Reserve and Adaptation and Prevention Scenarios IDRASSEN HALA Cadi Ayyad University Morocco</p>
13:30-15:00	LUNCH	
15:00-20:30	<p>ROME TOURISTIC BUS, DURATION 1h30 MIN (when you wish, an individual ticket for each attendant)</p> <p>Ticket delivery for each registered attendant: Thursday, 28th July from 9:30 to 13:15 at Registration Desk</p>	
21:00-22:30	<p>VATICAN NIGHT TOUR</p> <p>(Ask for the Meeting Point at the registration Desk)</p>	

Oral communications

(12 minutes for presentation + 3 minutes for questions)

Friday, 29th July 2022 (morning)

SCHEDULE	MAIN ROOM	ROOM 2
10:00-11:30	<p>Recycled fresh pavement to mitigate urban heat island Bechara Haddad Ecole superieure d'ingenieurs des travaux de la construction de Caen France</p>	<p>Variant Analysis of Heat Receivers Dedicated to CPVT System Karolina Papis-Fraczek AGH University of Science and Technology Poland</p>
	<p>Heavy Metal Ion Separation from Industrial Wastewater using Stacked Graphene Membranes M. Natalia LAQV-REQUIMTE/University of Porto Portugal</p>	<p>Porous materials for development of a near-isothermal liquid piston gas compressor for compressed air energy storage application Yasser Mahmoudi Larimi University of Manchester UK</p>
	<p>Prediction of Air Quality with Bezier Search Differential Evolution Algorithm Optimized Artificial Neural Network Sakhidad Faizi Nigde Omer Halisdemir University Turkey</p>	<p>Modeling and experimentation of a pottery kiln: Impact of exchangers on heat consumption Maha BAKKARI Mohammed V University Morocco</p>
		<p>Feasibility Assessment of Biomethane Production from Deer Manure Using Biogas Slurry as Inoculum Jayen Aris Kriswantoro Feng Chia University Taiwan</p>
11:30-12:00	<p>Coffee-break</p> <p>POSTERS SESSION-3</p>	<p>Coffee-break</p> <p>POSTERS SESSION-3</p>
12:00 – 13:15	<p>Automated Field infiltrometer for Wireless Measurement of Saturated Soil Hydraulic Conductivity Jose Antonio Gutierrez Tecnologico Nacional de Mexico/Instituto Tecnologico de</p>	<p>Control of Virus Infection and thermal comfort in a School Classroom with natural ventilation Seyedkeivan Nateghi Silesian University of Technology Poland</p>

	Morelia Mexico	
	Synthesis and Applications of Cu₂O Nanoparticle Functionalized TiO₂ for Photocatalyzed Glaser Coupling Geniece Hallett Tapley Saint Francis Xavier University Canada	Spatial Mapping of Jamaica's High-resolution Wind Atlas An Environmental-socio-economical Account Richards University of Tsukuba Japan
	Visible Light Mediated Refinery Waste Degradation using Noble Metal Nanoparticle Composites Megan Ethier Saint Francis Xavier University Canada	Removal of ibuprofen and diclofenac from water matrices by continuous CWPO using a magnetic catalyst Ysabel Huacalco Aguilar Complutense University Madrid Spain
13:15-15:00	MUSIC CHAMBER CONCERT <i>Flute and Piano Duet</i> <i>and</i> CLOSING COCKTAIL	

POSTER SESSIONS

TOPIC 2: ENVIRONMENTAL MANAGEMENT; ENVIRONMENTAL ENGINEERING

TOPIC 1: ENERGETIC INSTALLATIONS AND RENEWABLE ENERGIES

Wednesday, 27th July 2022				
SESSION 1 - 18.30-19.15 (afternoon)				
TITLE	NAME	SURNAME	ID	TOPIC
How do country-specific R&D environments affect CCUS research performance and efficiency	Junhee	Bae	62	2
Life cycle comparison of novel sequential microbial-based anaerobic-aerobic reactor technology (SMAART) with conventional activated sludge process for treatment of real textile effluent	Saurabh	Samuchiwal	70	1
A study on the flow distribution of 1kWe SOFC stack according to the channel heights in separators	Youngjin	Kim	47	1
Oxidative degradation of vancomycin by UV and pulsed corona discharge in combination with oxidants: hydrogen peroxide, peroxymonosulfate and peroxydisulfate	Dmitri	Nikitin	76	1
Evaluation of hydrothermally synthesized green Co-carbon-smectite catalyst for oxidative degradation of dye in the presence of Oxone	Stefan	Pavlovic	58	1
Anaerobic digestion of Chlorella sp. wastes from energy use processes	Douglas Jimmy	Escalante Ayala	48	2
Assessment of the impact of coal-fired power plants in Serbia on air quality during Covid-19 lockdown and unlocking	Sandra	Petkovic	49	1
Biodiesel production by heterogeneous catalysis: Effect of the free fatty acid type and content in the feedstock	K. E.	Rodriguez	50	1
Biodiesel production from off-grade oil by transesterification over differently granulated waste-based CaO catalysts	Stefan	Pavlovic	51	1
Hydrogenation of carbon dioxide: Study of different type of catalyst on the reaction conversion and selectivity	Douglas Jimmy	Escalante Ayala	64	1
Response surface methodology for the deacidification of oils by adsorption of free fatty acids on carbon obtained from Pongamia	Karina Elvira	Rodriguez Espinoza	81	1

pinnata husks				
Decarbonization of the gas sector in Poland & Europe -present status and challenges.	Rafal	Wisniowski	156	1
Thursday, 28th July 2022				
SESSION 2 - 11.30-12.00 (morning)				
TITLE	NAME	SURNAME	ID	TOPIC
Biogas Production of Pretreated Bioplastic Waste Using Sodium Hydroxide and Zinc Acetate	Chen-Yeon	Chu	119	2
Comparison of wind energy technologies using TOPSIS to provide an aggregated score for life cycle sustainability assessment	Astrid	Buchmayr	55	2
Machine-learning identification of the variability of mean velocity and turbulence intensity for wakes generated by onshore wind turbines:	Giacomo	Valerio Iungo	112	96
Enhancing the electrical conductivity of PEDOT:PSS with oxetane-based additives for applications in organic photovoltaics as transparent thin film electrodes	Ana	Charas	118	107
A wind-tunnel study of the effect of dust emission from ash-slag dumps of energy facilities with technological solutions	Sandra	Petkovic	134	117
Activated carbon from malt bagasse for water remediation	Elisenda	Pulido Melián	124	1
An enzymatic membrane reactor for oligodextran production: effects of enzyme immobilization strategies on dextranase activity	Manuel	Pinelo	166	1
Techno-economical assessment of ultrafiltration/nanofiltration concentration of tannins in cork wastewater for use in the leather industry	Miguel	Minhalma	136	1
Degradation of benzoic acid in water by UVC-sulfite system: Process and mechanism	Kexin	Song	121	1
Oxidation of As(III) by visible light/methylene blue/ascorbic acid activated molecular oxygen in water	wenyu	wang	133	1
Oxidation of dexamethasone by photochemical processes in aqueous matrices: A comparative study	Liina	Onga	75	1
Optimization of soil washing process for remediation of phenanthrene-Cu co-contaminated soil by response surface methodology	Yufang Hui	Tao Zhang	132	1
A novel heterogeneous system for sulfate radical generation through sulfite activation by	Juntao	Guo	126	1

Fe ₂ TiO ₅				
Photodegradation of p-Arsanilic acid in goethite-oxalate heterogeneous system under UVA irradiation	Zuyou	Sun	127	1

Friday, 29th July 2022

SESSION 3 - 11.30-12.00 (morning)

TITLE	NAME	SURNAME	ID	TOPIC
Energy system optimization considering EVs as energy storage for the TR5 building of UPC-Terrassa	Edwin S.	Pinto	160	1
Theoretical and experimental investigation of geothermal energy in Madagascar : case of vakinakaratra region	Rasoanoavy	Faliniaina	87	2
Theoretical studio of stong enrgy indiced using microfiber piezoelectric heterostructure under external stress for New technologie applications	Rasoanoavy	Faliniaina	88	2
Biomass characterization and pyrolysis towards bio-oil production	Gabriel de Freitas	Batista	120	1
Effective removal of emerging contaminants from real aqueous matrices by CWPO Removal of ibuprofen and diclofenac from water matrices by continuous CWPO using a magnetic catalyst	Ysabel	Huacallo Aguilar	98	1
Autonomous and Decentralized Energy Markets in DC Microgrids	Nishkar	Rajan Naraindath	28	1
Seed germination and seedling growth of Lavandula 'Hidcote Blue' in heavy metal contaminated solutions	Apostol	Maria	42	1
Inhibitory response of basil (Ocimum basilicum L.) seeds to cadmium and nickel applied in single and binary mixture treatments	Apostol	Maria	44	1
Heating of agricultural greenhouses by a geothermal heat exchanger Earth - Water Air Case study, numerical simulation of an exchanger in Biskra	Karim	Dehina	60	2
Life Cycle Assessment of innovative photovoltaic modules	Gabriela	Benveniste	69	2