



National
Technical
University
of Athens



CYPRUS2025

25-28 JUNE

PAPHOS, CYPRUS



12th International Conference
on
Sustainable Solid Waste
Management

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12th International Conference on Sustainable Solid Waste Management

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Publications in International Scientific Journals

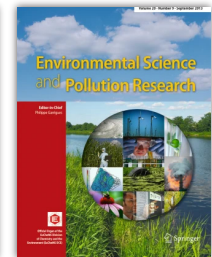
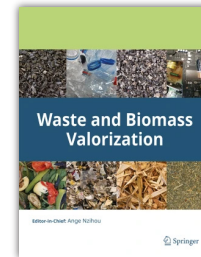
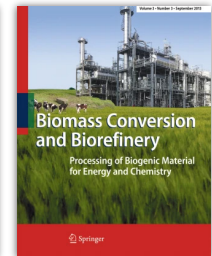
High quality CYPRUS 2025 papers will be published after evaluation in:

Waste Management & Research (SAGE, Impact Factor: 3.7) in collaboration with Prof. Costas Velis, Editor-in-Chief

a Special Issue of **BIOMASS CONVERSION AND BIOREFINERY** (Springer, Impact Factor: 3.5)

a Special Issue of **WASTE AND BIOMASS VALORIZATION** (SPRINGER, Impact Factor: 2.6) in collaboration with Prof. Ange Nzihou, Editor-in-Chief of the Journal

a Special Issue of **ENVIRONMENTAL SCIENCE & POLLUTION RESEARCH** (Springer) with title: "Sustainable waste management in circular cities"



Wednesday, 25 June 2025

All times are in Greek Time

08.00-9.15

Registration

ROOM 1

Welcome Speeches

9.15-9.45

Welcome Speeches

9.45-11.15

Keynote Speakers

Chair: M. Loizidou, K. Moustakas, D. Malamis

Maria Georgiadou, EC Directorate General for Research and Innovation EU support on SAF technologies and policies

Evdokia Achilleos, European Research Executive Agency - European Commission EU Research and Innovation

New Funding Opportunities for the Circular Economy

Nicolas Abatzoglou, Université de Sherbrooke

Preliminary engineering of a plastic waste autothermal pyrolysis technology scaled up two orders of magnitude

Stephen Smith, Imperial College London

Future Direction, Challenges and Opportunities of Bioresource Recovery

Kyriakos Maniatis, International Consultant, Ex Principal Administrator in the Directorate General for Energy of the European Commission

Waste to SAF value chains

11.15-11.45



Coffee Break

Wednesday, 25 June 2025

ROOM 1

SESSION I

**MSW management
Experience of local authorities in waste management
Chair: M. Loizidou**

11.45-12.00	M. Grafakos, General Secretary for the Coordination of Waste Management Solid waste management in Greece
12.00-12.15	M. Loizidou Waste management in Cyprus – Central Facilities and their challenges
12.15-12.30	J. Constantinidou LIFE-IP CYzero WASTE: Intelligent monitoring and efficient waste reduction in Cyprus Island
12.30-12.45	M. Geranis Circular Economy: From theory to practice
12.45-13.00	N. Aggelopoulos Waste management in Peloponnese Region
13.00-13.15	E. Tritopoulou PAYT as an economic tool for circular economy - the case of Aradippou Municipality
13.15-13.30	
13.30-13.45	G. Michalopoulos Adaptation of MBT plants to the RRF concept - Challenges and prospects in MESOGEOS projects
13.45-14.00	
14.00-14.15	
14.15-14.30	C. Dias-Ferreira, D. Bugarim, D. Alcalde, T Coelho, C Silva, E. Almeida, M Rosa, V Sousa, J. Vaz, L Cavique, C Nunes, M Jacquinet Municipal biowaste collection strategies in Portugal: Assessing local approaches to EU-driven separate collection requirements

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14.30-14.45	M. Struk Seasonal variation of paper and plastic collection in the city of Brno – how lockdown influenced the performance?
14.15-15.00	Lunch Break

ROOM 2 SESSION II

PRIMA NEWFEED: NEWFEED - Turn food industry by-products into secondary feedstuffs via circular-economy schemes Chair: **Ev. Achilleos, D. San Martin, E. Barampouti, B. Inarra**



11.45-12.00	D. San Martin, J. Ibarriuri, M. Gutierrez, J. Zufia, B. Inarra NEWFEED - Turn food industry by-products into secondary feedstuffs via circular-economy schemes
12.00-12.15	J. Ibarriuri, D. San Martin, M. Gutierrez, J. Zufia, B. Inarra Assessment of the use of grape stem from wineries as a second-generation feedstuff to produce a new feed ingredient for ruminants (dairy sheep and cattle)
12.15-12.30	S. Mai, E.M.Barampouti, K. Moustakas, M. A. Karatzia, E. Kasapidou Orange peels as a second-generation feedstuff to produce a new feed ingredient for dairy sheep
12.30-12.45	Hassan. A. F. Rahmy, S. Nour El-Deen, F. M. Abosamra, A. M. Khaled, A. S. M. Korayema Valorization of Olive Cake as a By-product as a Solution for Olive waste and validating the obtained ingredients with Poultry
12.45-13.00	F. B. Dilek, D. San Martin, U. Yetis Comparative Life Cycle Costing and Life Cycle Assessment of Animal Feed Ingredient Production from Grape Stems, Orange Peels, and Olive Cake
13.00-13.15	E. Xaxiri, E. Maravelia, El. Tsapa, A. Gavriil, A. Kapetanakou, V. Papadimitriou, D. San Martin Social assessment of turning food industry by-products into secondary feedstuffs via circular-economy schemes (NEWFEED project)

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| 13.15-13.30 | B. Iñarra, J. Ibarruri, M. Gutierrez, J. Zufía, D. San Martin
Business Models for the Circular Economy: Valorisation of Food Industry By-products to produce Animal Feed Ingredients |
| 13.30-13.45 | E. Cárdenas-Hernández, M.L. Chávez-González, R. Matos-Ximenes, T. Gonçalves Silva, C. Torres-León, J.A. Ascacio-Valdés, J.L. Martínez-Hernández, C.N. Aguilar
Revaluation of mango processing by-products: bioactivities in mango seeds |
| 13.45-14.00 | A.P. Djukić-Vuković, J. Grbić, M. Bogdanović, S. Lazović, A. Žugić, V. Tadić, D. Mladenović
Biotech and non-thermal treatments to upgrade value of crop and herbal residues |
| 14.00-14.15 | A. Agraso Otero, A. Tehseen, R. Rebolledo-Leiva, S. González-García
Environmental Assessment of an Integrated Biorefinery for Grape Marc Valorisation |
| 14.15-14.30 | A. Arias, G. Álvarez-Rivera, G. Feijoo, M. Teresa Moreira
Environmental Evaluation of Antioxidant Extraction from Hops Using Innovative Extraction Techniques and Natural Eutectic Solvents |
| 14.30-14.45 | N. Solomakou, D. Fotiou, N. Itskos, I. Roumelioti, A.M. Goula
Sustainable Alternatives in Beer Production: Replacement of Barley Malt with Malt from Unused Beans |
| 14.45-15.00 | D. Fotiou, N. Solomakou, E. Chrysopoulou, P. Charalampidou, A.M. Goula
Utilization of Beetroot By-Products in Pasta Production: A Nutritional and Sustainable Approach |

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ROOM 3
SESSION III

Sustainable Fuels / Hydrogen: solutions & innovations for H₂ production, efficient storage, distribution & applications
Chair: M. Georgiadou, D. Malamis, K. Maniatis

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| 11.45-12.00 | V. Rahimi, D. Gómez-Díaz, M.S. Freire, M. Lazzari, J. González-Álvarez
CO ₂ separation by adsorption with biomass-based carbon adsorbents activated with ZnCl ₂ and H ₃ PO ₄ |
| 12.00-12.15 | A. Dimitriadis, N. Tourlakidis, G. Meletidis, S. Bezergianni
Advanced electrified marine fuel production via hydrotreatment of plastic pyrolysis oil |
| 12.15-12.30 | E.A. Nanaki, S. Kiartzis, A. Koutinas, S.M. Ioannidou, D. Ladakis, S. Awad, J. Prudhomme
Unlocking the Potential of Microalgae SAF Production: An industry approach |
| 12.30-12.45 | L.P. Chrysikou, S. Bezergianni
Marine fuels via plastic waste valorisation: a path to sustainability |
| 12.45-13.00 | J. Hunicz, H. Kuszewski, M.S. Gęca, A. Rybak, L. Yang, A. Jaworski, D. Szpica, M. Mikulski
Hydrotreated vegetable oil blended with waste plastic pyrolysis oil as a renewable alternative to diesel fuel |
| 13.00-13.15 | F. Ferjani, I. Esmā Achouri
Deactivation and Valorization of an inflammable mining residues into a highly efficient catalyst |
| 13.15-13.30 | H. Abdalla, M. Sartaj, M. Abdallah, N. Abdehagh
Assessment and Optimization of In-situ Hydrogen Biomethanation to Enhance Anaerobic Digestion Process |
| 13.30-13.45 | A. Marchetti, M. Villano, M. Zeppilli
Sustainable Hydrogen Production in a Two-Chamber MEC: Effect of Synthetic and Real Substrate Feeding on System Performance |
| 13.45-14.00 | A. Maragkaki, P. Liapis, I. Sabathianakis, E. Kyzakis, N. C. Stratigakis, A. Kaliakatsos, I. Gounaki, D. Venieri, K. Velonia, T. Manios
Biohydrogen Production from Dark Fermentation of olive mill wastewater with a thermal dried mixture of food waste and cheese whey: Effect of HRT and pH |
| 14.00-14.15 | A. Marhetti, M. Villano, M. Zeppilli
Characterization of Microbial Electrolysis Cell's Bioanode Performances through Potentiostatic and Potentiodynamic Techniques |

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| 14.15-14.30 | L. Taboada-Ruiz, E. Ciurcina, R. Pardo, J. Holgado, P. Álvarez Rodríguez, M. Díaz-Somoano, B. Ruiz
Maximising bio-oil yield from industrial dairy sludge: a paradigm on pyrolysis temperature and heating rate in the context of the EU FLEXBY project |
| 14.30-14.45 | R. Pardo, L. Taboada-Ruiz, E. Ciurcina, J. Holgado, P. Álvarez Rodríguez, M. Díaz-Somoano, B. Ruiz
The potential of microalgae biomass from urban wastewater treatment for biofuel production by pyrolysis: flash versus conventional processes in the EU FLEXBY project |
| 14.45-15.00 | Arun P Asokan, Somanath Kukade, Pramod Kumar
HP-COAT: Technology for Single Step Conversion of Crude to Olefins & Aromatics |
| 15.00-15.15 | Sushma Sunkara, Santhoshkumar Reddy S, Srinivasa Rao Ganagalla, Narasimha Rao Kanna, Kanuparth Naga Raja, G. Valavarasu, Sriram S, V K Maheshwari
HP-TriJet: Revolutionizing Waste-to-Fuel with a Single-Step SAF & Green Diesel Process |
| 15.15-15.30 | Ji-Hye Ahn, Tae-Hoon Kim, Yun-Ju Jeon, Yeo-Myeong Yun
Sulfide-Induced Shifts in Biohydrogen Production and Microbial Dynamics during Dark Fermentation |
| 15.30-15.45 | H. Nagendra, K. N. Raja, G. Valavarasu, S. Sriram
Successful demonstration of Indigenous Technology to produce Dearomatized Solvents - HP-DAK |

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ROOM 4

SESSION IV

WEEE, Construction & Demolition Waste & other waste streams

Chair: P. Sospiro, J. L. Hao, A. Piemonti

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| 11.45-12.00 | G. Santomasi, A. Fiorente, G. D'Agostino, F. Todaro, M. Notarnicola
Life-Cycle Assessment of joint technologies for WEEE-cycle closure |
| 12.00-12.15 | C. Magrini, M. Bartoli, F. Drago, F. Verga, C. Fabrizio Pirri, A. Abdel Azim
Advancing biohydrometallurgy: metal extraction from mobile phone PCBs using spent microbial effluent |
| 12.15-12.30 | V. Rahimi, D. Gómez-Díaz, M.S. Freire, M. Lazzari, J. González-Álvarez
Kinetic analysis of selective copper and zinc leaching from printed circuit boards |
| 12.30-12.45 | E. O. Achukwu, M. S. Saharudin, M. M. Owen, R. Salehiyan, A. A. Janjua, J. Njuguna
Wide-range Profiling of WEEE-Derived Polypropylene Using Multi-Technique Analytical Methods |
| 12.45-13.00 | L. M. Martelo, M. A. D. Silva, Hugo A. M. Bacelo, M. M. S. M. Bastos, H. M. V. M. Soares
Holystic recycling of raw materials from waste liquid crystal displays screens of smartphones |
| 13.00-13.15 | M. A.D. Silva, L. Martelo, M.M.S.M. Bastos, H.M.V.M. Soares
Towards a Closed-Loop Alchemy — A Vision for the Cyclical Reclamation of Gold from Integrated Circuits |
| 13.15-13.30 | A. Borthakur
Textile Waste in Emerging Economies: Exploring Circular Economy Characteristics as a Potential Solution with Special Focus on India |
| 13.30-13.45 | Syed Suffia Iqbal, Deblina Dutta
Sustainable Leaching Methods for Gold and Silver Recovery from Mobile Phone PCBs |
| 13.45-14.00 | Sailaja Priyadarsini, Alok Prasad Das
Sustainable Bio-recovery of Lithium Metal from Spent Mobile Batteries |
| 14.00-14.15 | A. Piemonti, G. Plizzari, S. Sorlini, C. Gatti
LIFE CDW CIRCLE: Value added Recycled Materials from Construction and Demolition Waste |
| 14.15-14.30 | S.W. Yu, J.L. Hao, Y. Liu, X. Tang
Key Drivers for Integrating Blockchain and Reverse Logistics in Transforming Construction Waste Management towards a Circular Economy |

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- 14.30-14.45 V. E. Phinikettou, F. Economou, I. Voukkali, A. A. Zorpas
Managing Construction and Demolition Waste in Insular Communities—The Case of Cyprus
- 14.45-15.00 W. Zhao, J.L. Hao
Sustainability performance of construction waste management policies by 2050:
A comparative study of China and Australia
- 15.00-15.15 M. Alint, Z. Zarkada, G. Palantzas, M. C. Samolada
Sustainable WEEE management in academic institutions: The case of Aristotle University
of Thessaloniki

ROOM 1 SESSION V

LIFE CO₂ toCH₄
**Chair: M. Georgiadou, M. Loizidou,
A. Antoniadis, A. Zouboulis**



- 15.00-15.15 P. Asimakidou
Project Overview & Project Management
- 15.15-15.30 P. Kougias
Operation of the Prototype System
- 15.30-15.45 L, Treu
Process optimization using technically advanced systems and control architectures microbial
resource management
- 15.45-16.00 A. Chatzis
Design of the mobile unit for hybrid energy storage
- 16.00-16.15 E. Partheniou
Test operation and optimization of the mobile unit for hybrid energy storage
- 16.15-17.30 Discussion with representatives of companies with high CO₂ emissions
(Eva Nanaki, Hellenic Energy, etc)

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ROOM 1

**SESSION V
PART B**

**Promoting life cycle thinking in
higher education, LIFE-C, Erasmus+ project
Chair: S. Sobek, M. Kyriazi**



Co-funded by
the European Union



17.30-17.45	S. Sobek Challenges and coaching conclusion from delivery of the LIFE-C course module Application of life cycle assessment
17.45-17.55	S. Nateghi Life Cycle Assessment of Airborne Infection Control Strategies in Classrooms
17.55-18.05	H. El Hyani Manufacturing of a torque transmission shaft, made with filament winding method and carbon fibers
18.05-18.15	L. Slobodkina Theoretical environmental impact assessment of repowering of a 50 MW windfarm
18.15-18.25	M. Małysiak, B. Wolny, D. Lubojański Comparative LCA analysis of bicycle frames made from different materials
18.25-18.35	O. Cudnik, A. Suchanek Theoretical analysis of Formula 1 tire life cycle
18.35-18.45	Al. Merkoureas – Karras Life Cycle Assessment of Water Treatment Systems: Reverse Osmosis (RO) and RO+LTE

Wednesday, 25 June 2025

ROOM 2

SESSION VI

Tools in the field of waste management

Chair: D. Fino, A. Arias, M.I. Loizides

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| 15.00-15.15 | S. Sobek, M. Abdulkareem, K. Grönman, L. Lombardi, M. Kyriazi, G. Arcese, C. Elmo, A. Woszczek, M. Khan, K. Moustakas, M. Horttanainen
LIFE-C - Educating non-environmental engineers on life cycle thinking and tools |
| 15.15-15.30 | R.L. Aguiar, C. Dias-Ferreira
AI-Driven Production Optimization: Enhancing Industrial Efficiency, Sustainability and Recycling through Automated Decision Systems |
| 15.30-15.45 | S. Ozgen, L. Saguatti, A. Wu, F. Ruiz
Application of Data-Driven Techniques for Continuous Emission Monitoring in WtE |
| 15.45-16.00 | M. Zoli, E. Tona, I. Biasato, J. Bacenetti
Life Cycle Assessment of insect bioconversion for fish feed production |
| 16.00-16.15 | A. Arias, M. Cineli, G. Feijoo, M. T. Moreira, S. Cucurachi
New composite indicator reporting the Safe-and-Sustainable-by-Design and circularity profiles for bio-based systems |
| 16.15-16.30 | X.I. Loizidou, M.I. Loizides, D.L. Orthodoxou, D. Petsa
Towards green shipping: A decision-support method for (plastic) waste minimisation |
| 16.30-16.45 | H. Jalalaipour, H.A. Abu-Qdais, A. Nassour
Environmental and Economic Assessment of GHG Emissions Mitigation through Improved Waste Management in Jordan |
| 16.45-17.00 | A. Alahmary
Assessing the Economic Viability and Sustainability of Municipal Solid Waste Management Strategies in Riyadh, Saudi Arabia |
| 17.00-17.15 | B. Karolinczak, J. Walczak, M. Żubrowska-Sudoł
Life Cycle Assessment of energy production from sewage sludge and green waste |
| 17.15-17.30 | G. Liberati, S. Pennellini, A. Bonoli, S. Gabriele, V. Lorenzi, M. Roccaro, A. Peli, S. Gallese, F. Mattacchione, F. Fusi, L. Bertocchi
Life Cycle Assessment (LCA) Modeling in Dairy Farm Systems: Multi-Output Approaches for Environmental Impact Evaluation |

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| 17.30-17.45 | A. Amat-Bernabeu, S. Morales-Titos, AB. Muñoz-Milán, E. Orgilés-Calpena
Towards a Predictive Durability Index for Footwear Through Advanced Modelling in Life Cycle Assessment |
| 17.45-18.00 | Allen H. Hu, Chih-Yu Ting, Chien-Hung Kuo, Wei Tse Chen
Comparative Life Cycle Assessment of Recycling Polyethylene Terephthalate (PET)-
A Case Study in Taiwan |
| 18.00-18.15 | Dhruv Singh, P. Sirini, L. Lombardi
Comparative Life Cycle Assessment of Steam Methane Reforming and Dry Methane Reforming from
Landfill Gas for Green Hydrogen Production |
| 18.15-18.30 | L. Melas, St. Skoutida, M. Batsioula, A. Malamakis, Th. Patsakidou, G. Baniias
From Waste to Value: Life Cycle Assessment of Polyphenol Extraction from Second-Grade Fruits |
| 18.30-18.45 | B. Khoshnevisan, S. Khademi, M. Birkved
Global Assessment of Waste Nitrogen Recycling for Microbial Protein Production:
A Prospective LCA and Integrated Assessment Model Approach |
| 18.45-19.00 | A. Peppas, C. Politi, V. Benedetti, F. Patuzzi, M. Baratieri, K. Baldoukas
Wood Waste Management in Europe and the Łódzkie Region: LCA, LCC and S-LCA analysis |
| 19.00-19.15 | H. Monteiro, D. Silva, M. Azevedo, J. Silva, C. Carreira, P. Almeida, M. Almeida
Life Cycle Assessment of Novel Ceramic Pastes Incorporating Secondary Raw Materials |
| 19.15-19.30 | S. Pennellini, S. Zanni, A. Fiorucci, A. Bonoli
Sustainable water filtration: Life Cycle Assessment of recycled Polysulfone membranes within
a Circular Economy framework |
| 19.30-19.45 | M. Tsangas, A. Zorpas, I. Voukkali, M. Stylianou
LCA for the hospitality sector, applications and challenges |
| 19.45-20.00 | H. Bhakta Sharm, B. Kumar Dubey
Techno-economic and life cycle assessment of co-hydrothermal carbonization of food and yard
waste for solid biofuel production |
| 20.00-20.15 | Md Abu Bakar Siddique, Woo Ram Lee, Seungdo Kim
Systematic Review of Models Supporting the Circular Economy Transition in Municipal Solid Waste
Management |

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- 20.15-20.30 Theertha Dhanesh, Padmanaban Velayudhaperumal Chellam
Life cycle assessment of production of Polyhydroxyalkanoates using agro-industrial waste as a carbon source
- 20.30-20.45 K. Sajid, M. H. Javed, A. Ahmad, Ala'a H. Al-Muhtaseb, M. Rehan, M. Ilyas Khan, F. Musharavati, M. Waqas Anjum, M. Naqvi, M. Ali, M. Rizwan Tabassum, A. S. Nizami
Advancing Sustainable Bioethanol Production from Organic Waste by Integrating Life Cycle Modeling

ROOM 3 SESSION VII

Climate change mitigation and adaptation through Nature-Based Solutions Chair: Ev. Achilleos, S. Malamis, G. Baniias

- 15.00-15.15 A. Malamakis, K. Devlioti, Th. Patsakidou, Ch. Karkanias, G. Baniias
Reflexive Monitoring and Impact Assessment of Nature-Based Solutions: Advancing Climate Adaptation and Stakeholder Engagement through Living Labs
- 15.15-15.30 S. Malamis
The CARDIMED project
- 15.30-15.45 A. Al khatib, K. El Kadi, A. Nemmour, I. Janajreh
Multistage Freeze Desalination Process for High-Purity Water Production and Optimized Energy Consumption
- 15.45-16.00 Th. Patsakidou, K. Devlioti, Ch. Karkanias, A. Malamakis, G. Baniias
Enhancing Urban resilience and Sustainability through Rainwater Harvesting: Insights from the enabls Greek Living Lab
- 16.00-16.15 V. Bernasconi, A. Méndez, P. Almendros, G. Gascó
The effect of biochar from pruning wastes on CO₂ emissions, hydrophysical and soil biological properties
- 16.15-16.30 M. A. Vasiliades, A. G. Tsiampartas, M. C. Christodoulou, M. Stylianou, A. Agapiou, A. M. Efstathiou
Investigating the adsorption of greenhouse gases on biomass biochar using transient kinetics and temperature-programmed techniques

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16.30-16.45	M. Romenska EPR contribution for CO ₂ eq savings updated with Eurostat data 2022
16.45-17.00	I. Petrovic New international master study program in the field of environmental geotechnics and geohazards
17.00-17.15	P. J. Inocencio-García, D. D. Otero Meza, J. G. Salcedo Mendoza, C. A. Cardona Alzate Life cycle assessment modifications for understanding the effect of carbon dioxide transformations into high value-added products
17.15-17.30	O. Kosík, T. Macsek, Tatána Halšová, P. Hlavínek Addressing recalcitrant pharmaceuticals at the WWTP effluent using nature-based solutions
17.30-17.45	M. Popova, S. Simeonov, I. Slavchev, Y. Mitrev, P. Shestakova, S. Grozdanova, I. Trendaflova CO ₂ capture on cyclic amino-modified mesoporous silica obtained from biomass wastes
17.45-18.00	G.M. Flavia, A.V. Brenda Direct CO ₂ capture from air using adsorbents made from geothermal residues
18.00-18.15	F. Corona, F. Verdugo, F. Burgoa, D. Hidalgo Best available techniques to recover or recycle fertilizing products from secondary raw materials
18.15-18.30	Adel. M. Khaled Plantation of Landfills Using Economic Trees such as <i>Jatropha curcas</i>
18.30-18.45	Y.F. Ma, P.J. He, F. Lü, H. Zhang Improved accounting of carbon emissions from waste incineration confirmed by 14C test of flue gas
18.45-19.00	So-Yee Park, Jai-Young Lee The Role of Carbon Removal and Certification Standards for Biochar in Climate Change Mitigation
19.00-19.15	Chan-Mi Choi, Young-Soo Han Investigation of Volatilization and Chemical Speciation Transformation of Arsenic in Paddy Soil under Temperature Conditions
19.15-19.30	A. Bisak, Z. Zakrzewski, A. Włodarska-Jurkowska Evaluation of the efficiency of removing residual pollutants from treated wastewater – third stage of wastewater treatment

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ROOM 4

SESSION VIII

Waste Valorisation I

Chair: A. Žgajnar Gotvajn, D. Skrzypczak, A. Agapiou

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| 15.00-15.15 | K. Devlioti, A. Malamakis, Z. Kazlari, I. Kalfas, G. Banias
Unlocking the Potential of Agricultural Residual Biomass for Biochar production and valorisation: A Pathway to Circular Economy and Sustainability |
| 15.15-15.30 | M. Vaccari, D.S. Premathilake, A. Franzetti
Use of Biochar and Biosurfactant in Contaminated Soil Treatment: Environmental Implications and Impacts |
| 15.30-15.45 | B. Ziantoni, F. Demichelis, P. Premchand, C. Galletti, D. Fino, G. Saracco, F. A. Deorsola
Conversion of corncob into high-performance biochar: pyrolysis conditions, activation methods, and adsorption capabilities |
| 15.45-16.00 | G. Dall'Osto, D. Mombelli, S. Scolari, C. Mapelli
Modeling of the biogenic carbon composite agglomerates degree of reduction for effective biochar valorization and utilization |
| 16.00-16.15 | L. V. Moreno, M. O. Bérnago, S. A. Grünwald, K. J. Dussán
Adsorption of phenolic compounds in sugarcane bagasse hydrolysates using spent coffee ground biochar |
| 16.15-16.30 | M. Legan, A. Žgajnar Gotvajn
Mechanical and toxicological aspect of carpentry wood waste biochar in concrete as partial cement replacement |
| 16.30-16.45 | A. Magdziarz, A. Mlonka-Mędrala, I. Kalemba-Rec, W. Jerzak
Investigation of biochar properties – comprehensive review of instrumental techniques |
| 16.45-17.00 | M.A.M. Costa, G. Albini, L.F. Oliveira, A.J.D. Souza, M.O. Bérnago, L.V. Moreno, K.J. Dussan
CO ₂ removal by applying the adsorption process to biochar from waste materials |
| 17.00-17.15 | M. C. Christodoulou, A. G. Tsiampartas, M. A. Vasiliades, A. Agapiou, M. Stylianou
Sustainable odorous VOC mitigation in livestock waste using biomass biochar |
| 17.15-17.30 | Yasir Hamid, Xiaoe Yang
Novel thiol-grafted composite of chitosan and rice straw biochar (TH@CT-BC): A two-step fabrication for highly selective adsorption of cadmium from contaminated water |

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| 17.30-17.45 | Prashant Yadav, Joyabrata Mal
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| 17.45-18.00 | H. Khan, I. Janajreh
Thermochemical Conversion of Palm Woody Biomass: Ways to Reduce the Tar |
| 18.00-18.15 | O. R Dada, M. F Yemba, B. D Ikotun
Investigation of synergistic potential of Fly Ash and Foundry Sand Waste in Sustainable Concrete Production for African Infrastructure |
| 18.15-18.30 | L. Cesoniene, D. Sileikiene, R. Simanaviciute
Degradation intensity of disposable face masks in water of different salinity |
| 18.30-18.45 | J. Alexandre Bogas, R. Cruz, J. Rodrigues, A. Balboa
Towards fully-recycled high sustainable compressed stabilised earth blocks |
| 18.45-19.00 | Ravi Kumar Sonwani, Diwakar Patel
Innovative development of high-performance biochar for efficient dye removal |
| 19.00-19.15 | S. Khamkure, A. Reyes-Rosas, C. Treesatayapun, L. Díaz-Jiménez, L. Samaniego-Moreno, J.A. Gil-Marin
Pecan Shell-Based Magnetic Biochar for Arsenic Remediation: Performance Optimization using a Fuzzy Decision Network and Response surface methodology |
| 19.15-19.30 | I. Orlandella, K. N. Smith, E. Belcore, N. Dilillo, R. Ferrero, M. Pugliese, M. Piras, S. Fiore
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- 02 Juan A. Conesa, S. S. Núñez, A. Fullana, Núria Ortuño, J. Moltó
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- 03 J. A. Conesa, S. S. Núñez, A. Fullana, Núria Ortuño, J. Moltó
Removal of dioxins and polycyclic aromatics from recycled plastic samples
- 04 J. Díaz-Pineda, J. Revert-Vercher, J.B. Giménez, A. Bouzas, J. Ribes
Enhancing Sewage Sludge Management and Resource Recovery with Hydrothermal Carbonization
- 05 P. Sanchis-Perucho, M. Elvira, A. Jiménez-Benítez, A. Robles, A. Encinas, F. Rogalla, J. Ribes
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- 06 T.T.M Phuong, B.L.T. Khiet
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- 07 N. Gkolfinopoulou, S. Spanoudakis
The environmental and educational program "Change habits, Save the planet" of the Environment Directorate of Rethymno Municipality
- 08 D. Fotiou, N. Solomakou, G. Dallas, A. Katsimani, E. Tsachouridou, A.M. Goula
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- 09 B. Josimović, B. Manić, L.J. Bezbradica
Spatial aspects of establishing a sustainable waste management system
- 10 J.M. Martín-Marroquín, D. Hidalgo, F. Corona, M.A. Sánchez-Gatón
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- 11 D. Hidalgo, E. Pérez-Zapatero, J.M. Martín-Marroquín, M.A. Sánchez-Gatón
Assessment of anaerobic sludge from various industries as inoculum for biohydrogen production in dark fermentation processes
- 12 G. Alexopoulou, A.S. Dounavis
Evaluation study of the use of alternative biofuels and waste utilization and management methods: Literature review and techno-economic modelling
- 13 I. Platanos, A.S Dounavis
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- 14 E.D. Argyriou, A.S. Dounavis
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- 15 D. Kontelis, A.S. Dounavis
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- 16 E. Ntoas, A.S Dounavis
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- 17 M. Qiu, L. Sioné, M. R. Templeton
Effect of orthophosphate on anaerobic digestion of simulated human excreta: potential to enhance faecal sludge degradation in wet pit latrines
- 18 J. Milić, D. Karan, A. Dimitrijević, B. Radak, B. Dunjić
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- 19 J. Milić, J. Avdalović, M. Ilić
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- 20 M. Ilić, J. Milić, J. Avdalović, G. Dević, T. Šolević-Knudsen
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- 21 F. Corona, L. Garrote, E. Pérez-Zapatero, J.M. Martín-Marroquín, D. Hidalgo
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- 22 F. Burgoa, F. Corona, D. Hidalgo, J.M. Martín-Marroquín
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- 23 G. C. G. Delaqua, C. C. M. F. Vieira
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- 24 M. Cid-Fernández, A. Ochogavias, A. Paz, J. Manuel Domínguez
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- 27 J. Manuel Domínguez, A. Ochogavias, M. Cid-Fernández, H. Fernandes, N. Muñoz-Seijas, B. Fernández, F. Soto-Beltrán, J. Manuel Salgado, A. Paz
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- 28 D. Hidalgo, F. Burgoa, J.M. Martín-Marroquín, R. Timmers, F. Berride
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- 30 G. Albini, E.A. Oliveira, L.F. Oliveira, A.J.D. Souza, A. Sarti, K.J. Dussan, M.A.M. Costa
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- 31 Roshan Jaiswal, Padmanaban Velayudhaperumal Chellam
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- 36 I. Gómez-Cruz, A. Morales, M.del M. Contreras, I. Romero, E. Castro, J. Labidi
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- 37 J.M. Chang, J.Y. Lee
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- 38 M. Elhag, A. Tawfiq, L. Zhang, N. Yilmaz, S. Boteva, A. Psilovikos, J. Bahrawi, F. Alzaharni
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- 39 M.J. San José, S. Alvarez, R. López
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- 40 M. Gouda Youmna, F. M. Abosamra, F. M. Abo El-Abbas
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- 43 S. Lee, S.J. Lee, W. Cho, J.-Y. Lee
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- 52 Caimiao Zheng, J.L. Hao, Ziyang Wen, L. Di Sarnob, A. Mannisb
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- 107 J. Žaltauskaitė, G. Šidlauskaitė
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- 108 J. Žaltauskaitė, A. Dikšaitytė, G. Sujetovienė, M. Aikas, R. Uscila, J. Eimontas, D. Gimžauskaitė
Remediation of diesel-contaminated soil by means of thermal desorption: effect on soil ecological properties
- 109 O. Semenova, E. Usiatinsky, Z.A. Dargie, E.-O. Sharoni, F. Nakonechny, L. Yadgarov, M. Nisnevitch
Brown grease as a potential source of raw materials for biodiesel production
- 110 L.M. Stefan, A-M. Seciu-Grama, L-A. Bocancia-Mateescu, A-C. Mirica, D. Stan, O. Craciunescu
Biological properties of hybrid hydrogels enriched with algal polysaccharide ulvan as promising wound dressings
- 111 D. Liakos, A. Dimitriadis, L. P. Chrysikou, N. Tourlakidis, S. Bezergianni
Exploring hydrothermal liquefaction of microalgae for sustainable biocrude
- 112 C. Lopes, L.T. Antelo, J.A. Vázquez
Valorisation of marine biomass for the production of functionalised food products – sustainability assessment
- 113 M. T. Santos, T. Trindade
Home and community composting in Portugal
- 114 S. Bravo-Argote, J. C. Solarte-Toro, C. A. Cardona Alzate
Analysis of small scale biorefineries for cocoa residues valorization
- 115 M.J. Lozano, K.J. Salgado, C.A. Arroyo, J.E. Hernández-Ruydiaz, J.G. Salcedo-Mendoza, D.D. Otero Meza, C.A. Cardona Alzate, E.P. Mendoza
Prefeasibility analysis of horticultural and fruit waste valorization through anaerobic digestion to obtain biomethane and biofertilizer
- 116 G. Mitropoulou, I. Prapa, A. Nikolaou, Y. Kourkoutas
Resident Microbial Dynamics During Natural Digestion of Olive Mill Waste
- 117 E. A. Espinosa, A. H. Espinosa, I. R. Cabeza, J. R. Gracia, N. S. Moreno
Selection of Mixed Microbial Cultures to Produce Polyhydroxyalkanoate Polymers from Wastewater Effluents
- 118 G. Liberati, S. Pennellini, A. Bonoli, S. Gabriele, V. Lorenzi, M. Roccaro, A. Peli, S. Gallese, F. Mattacchione, F. Fusi, L. Bertocchi
Life Cycle Assessment (LCA) Modeling in Dairy Farm Systems: Multi-Output Approaches for Environmental Impact Evaluation
- 119 E. Gagliano, S. Spotorno, G. D'Agostino, A. A. Casazza, P. Perego, M. Gallo, A. Del Borghi
LCA study on innovative extraction technique for recovering added-value products from olive pomace waste
- 120 F. Trucco, M. Pugliese
Effects of bio-based fertilizers recovered from biowastes on lettuce development and health in pot experiments and field trials

Poster session

- 121 O. Barouta, P. Dalias, A. Christou, C. Panagiotou, M. Omirou, A. Zorpas, M. Stylianou
Optimizing soil amendment application in agroecosystems using GIS analysis - Review
- 122 M. Stylianou, I. Voukkali, A. Zorpas
Bio-waste exploitation towards agroecological transitions – the ecoFABULAnds project
- 123 A. Tsiampartas, E. Kyriakou, M. Christodoulou, M. A. Vasiliades, A. Zorpas, A. Agapiou, M. Stylianou
Investigation of the effects of different biochar types on seed germination
- 124 L. Alfarano, S. Bellezza Oddon, L. Gasco, M. Pugliese
Valorization of insect frass as a tool for improving tomato plants development and health
- 125 L. Cutroneo, L. Gaggero, T. Rossi, S. Vercelli, M. Di Carro, E. Magi, M. Capello
Benchmarks of asbestos fibres in marine sediments in the Port of Genoa (Italy)
- 126 M.C. Valerin, L. Francescato, F. Illuminati, M. de Hooge, M. C. Lavagnolo, L. Treu, S. Campanaro
Development and characterization of a microbial inoculum for the valorization of hardly degradable by-products through the production of biohydrogen and biomethane
- 127 T. Ramos da Silva, H. Monteiro, M. Camerin, S. Zinck, M. Roderich, D. Penaranda
Circularity Framework for Assessment of Novel Steel Waste Valorisation Technologies
- 128 Tran T. Ho, E. Solomina, H.-M. Heinla, M. Kulp
De-ashing Kraft lignin
- 129 F. Zimbardi, C. Torri
Green retrofitting of a vintage reaction: production of acetone from renewable sources via pyrolysis of acetates
- 130 S. Jurado-Contreras, C. Estrella-Cruz, J.A. Rodríguez-Liébana, F.J. Navas-Martos, M. Dolores La Rubia
From waste to worth: Comparing the recycling potential of olive fiber-reinforced polypropylene and conventional polypropylene for a circular economy
- 131 V. López-Grimau, G. Benveniste, M. Artés, D. Cuesta-Mota, B. Amante
Life Cycle Assessment to promote circularity in the cotton fabric dyeing process
- 131 A. Muñoz-Castillo, S. Bueno-Rodríguez, L. Pérez-Villarejo, D. Eliche-Quesada
Valorisation of Industrial Waste Materials as Sodium Silicate Alternatives in Chamotte-based Alkaline Activated Cements
- 132 J. M. Romero-García, J.C. Solarte-Toro, A. Galán-Martín, E. Ruiz-Ramos, I. Romero-Pulido, C.A. Cardona-Alzate, E. Castro-Galiano
Biorefinery from olive leaves. Technical comparison of two proposals
- 133 J. Grbić, D. Mladenović, M. Bogdanović, P. Kannappan Karthikeyan, T. Radu, S. Lazović, A. Djukić-Vuković
Low-energy alkaline hydrogen peroxide pretreatment for high-value application of corn stalk
- 134 M. Bogdanović, D. Mladenović, J. Grbić, A. Detsi, A. Tzani, A.P. Djukić-Vuković
Whole-cell biotransformation of *Epilobium parviflorum* by-products in natural deep eutectic solvents
- 135 H. Monteiro, D. Silva, D. Teixeira, T. Ramos da Silva
Life Cycle Analysis of Nano-Enabled Bio-Based Materials along BIOMAC Value Chain

Poster session

- 136 B. Zygmunt-Kowalska, P. Zakrzewska, M. Kuźnia, D. Głowacz-Czerwonka
Techniques for recycling fly ash-modified rigid polyurethane foam: grinding, polyol recovery and combustion
- 137 P. Zakrzewska, B. Zygmunt-Kowalska, D. Głowacz-Czerwonka, M. Kuźnia, T. Telejko
Wastewater fat as a valuable by-product in bio-polyol production
- 138 B. Ruiz, R.R. Gil, C. Canals-Batlle, H. Monclús, M. J. Martín, E. Fuente, A. Cabrera-Codony
Upcycling Pyrolyzed Biogenic Waste into High-Performance Adsorbents for H₂S Abatement
- 139 E. Muñiz, P. Diaz, L. Taboada-Ruiz, B. Ruiz, M. Díaz-Somoano
Exploring the potential of hemp seed shells as dye removal from waters to a sustainable economy
- 140 R. Pardo-Fernández, L. Taboada-Ruiz, E. Ciurcina, M. Diaz-Somoano, B. Ruiz
Chemical pre-treatment strategies for enhanced biofuel production from grape stalk biomass
- 141 M. Lassinantti Gualtieri, E. Colombini, P. Veronesi, A.F. Gualtieri
Recycling of metal powder waste and thermally vitrified dismantled mineral wool for the synthesis of ceramic body pigments
- 142 T. Ramos da Silva, H. Monteiro, D. Teixeira, F. Marques
Advancing Circular Polymers: Assessing the Environmental, Economic, and Social Impacts of Recyclable PEX
- 143 S. Fogarasi, F. Imre-Lucaci, M. Fogarasi, A. Imre-Lucaci
Solder mask removal and copper recovery from electronic components free waste printed circuit base boards
- 144 N. Tzortzakis, G. Neofytou, E. Hadjisolomou, M. Koutinas, A. Chrysargyris
Application of municipal biowaste-derived products for the peat cultivation of spearmint
- 145 E. Hajisolomou, G. Neofytou, A. Chrysargyris, N. Tzortzakis
Exploring the effects of biochar and/or mycorrhizal inoculation in soilless cultivation of spearmint
- 146 T. Staněk, M. Nguyen, J. Holub, M. Krejčí Kotlánová, M. Boháč, Z. Krejza
The issue of transforming asbestos-cement waste into a usable product
- 147 St. Skoutida, L. Melas, M. Batsioulas, G. Baniyas
A holistic approach to the valorization of second-grade fruits: Technoeconomic Assessment and Value Chain Integration
- 148 E. Ciurcina, R. Pardo, L. Taboada-Ruiz, J. Holgado, P. Álvarez Rodríguez, M. Díaz-Somoano, B. Ruiz
Balancing quality and yield of biofuel and biochar in the pyrolysis of industrial macroalgae sludge: future perspectives with a circular economy approach in the EU FLEXBY project
- 149 S. Christou, G. Neofytou, M. Oikonomou, A. Chrysargyris, P. Xylia, A. Gregori, N. Tzortzakis
Spent mushroom substrates as a growing media constituent for germination and growth of *Raphanus sativus* L
- 150 E. Moslehi, E. Larsson, G. A. Seisenbaeva, C. Tunsu
Hydrometallurgical recovery of potassium and phosphorus nutrients from bioindustry ashes
- 151 M.C. García-Rico, I.A. Zurita, B. Mayans, S. López-Rayó, C. García-Delgado, L. Hernández-Apaolaza
Potential of Algae wastes from *Caulerpa prolifera* as Biostimulants for Soil microbial activity and Plant Germination in Sustainable Agriculture
- 152 B. Mayans, E. Eymar, C. García-Delgado, S. López-Rayó
Sustainable Agriculture: Impact of Algal Extracts from *Caulerpa prolifera* on Free Amino Acid Content in Lettuce Cultivation
- 153 B. Mayans, E. Eymar, C. García-Delgado, S. Lopez-Rayó
Antifungal Potential of Algal Extracts Against Fruit-Pathogenic Fungi: A Sustainable Approach to Post-Harvest Waste Management

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- 154 S. Jurado-Contreras, Á. García-Ruiz, L. M. Morales-Ocaña, P. González-Torres, Francisco J. Navas-Martos, J. A. Rodríguez-Liévana, S. I. Molina, D. Moreno-Sánchez, A. Sanz de León, J. M. López, R. Escobar-Galindo, J. Sutil, M.D. La Rubia
Compatibility Studies in the Valorization of Olive Grove Wastes for Fused Granular Fabrication
- 155 K. Kalinowska-Wichrowska, M. Franus, A. Masłoń, K. Granatyr, E. Pawluczuk, M. Kosior-Kazberuk, M. Bołtryk
The Influence of Thermal Treatment Temperature on the Physico-Mechanical Properties of Artificial Aggregates Produced from Recycled Concrete Fines and Municipal Waste Incineration Ashes
- 156 Chan-Mi Choi, Young-Soo Han
Investigation of Volatilization and Chemical Speciation Transformation of Arsenic in Paddy Soil under Temperature Conditions
- 157 M. Franus, K. Kalinowska-Wichrowska, A. Masłoń, M. Janek, M. Grzegorzczak-Frańczak
Properties of green concrete manufactured from artificial aggregates
- 158 Sejin Hwang, Yong Jun Choi, Bo Sung Kang, Young-Kwon Park
Application of Ball-Mill Reactor for the Pyrolysis of Acrylic Resin Waste
- 159 M. Hassan Javed, A.-S. Nizami, A. Ahmad
Advancing Circular Economy: Environmental and Economic Analysis of Plastic Waste Gasification
- 160 M. Lassinantti Gualtieri, E. Colombini, C. Leonelli, P. Veronesi
Temperature-induced microstructure evolution of geopolymer-copper slag composites-implications on high-temperature applications
- 161 I. Giannakis, C. Emmanouil, E.E. Golia, S.G. Papadimou, V. Manakou, A. Kungolos
Physicochemical and Ecotoxicological Evaluation of Biosolids for Agricultural Use: A Case Study from Northern Greece
- 162 Jae Won Jeong, Ilho Bae, Changhyeon Park, Ilwoo Kang, Juhee Shin, Jin Mi Triolo, Seung Gu Shin
Methane production from tuna processing waste sludge under fed-batch operation
- 163 Ilwoo Kang, Dae Wook Kim, Jae Won Jeong, Jin Mi Triolo, Seung Gu Shin
Assessment of biochemical methane potential of soy sauce manufacturing by-products
- 164 S. L. Parra-Angarita, M. Essanoussi, H. Ben Hamed, A. Léonard
Geotextile Filter Bags as a Cost-Effective Dewatering Solution for Agri-Food Wastewater Sludge (Applied case – Wallonia (Belgium))
- 165 A. Chatzis, K.N. Kontogiannopoulos, N. Dimitrakakis, A. Zouboulis, P.G. Kougias
Artificial Neural Network Modeling of Pressure and Nutrient Effects on Biological Methanation Performance
- 166 A. Chatzis, A. Xirostylidou, A. Antoniadis, C. Roumpos, K. N. Kontogiannopoulos, P.G. Kougias
From CO₂ to CH₄: Pilot-Scale Biomethanation as a Pathway for Carbon Recycling
- 167 C. Nikolaidou, M. Mola, N. Monokrousos, V. Aschonitis, P.G. Kougias
Enhancing Soil Properties Using Biochar-Digestate Blends as Biowaste-Based Soil Amendments
- 168 Jeong-Hyeon Lee, Min-Ye Seo, So-Yee Park, Seung-Taek Lee, Jai-Young Lee
Preventing Illegal Household Waste Dumping through Crime Prevention Through Environmental Design(CPTED) and Analytic Hierarchy Process(AHP) Principles
- 169 A.J. Tóth, Gy. Kasza, M. Süth, A. Bittsánszky
Reducing Food Waste in Schools: A Path Toward Sustainability

Poster session

- 170 Madan Kumar Kumaravelan, Annaji Rajiv Kumar Tompala
HP HiGAS technology - A first-of-its-kind innovative and process intensification technique revolutionizing in carbon capture
- 171 Bharati Panigrahy, Renny A Moonjely, B Ramachandra Rao, Vipul Kumar Maheshwari
Electrolyzer Technologies for Green Hydrogen Production with reduced CAPEX and OPEX: In-house Development and Demonstration
- 172 Arun Kuniyil, Mr. Bhanu Prasad G, Mr. Pramod Kumar, Mr. Sriram S, Mr. V K Maheshwari
Innovative HCNG Technology for Sustainable Energy Transition and Circular Economy
- 173 Nikesh Samarth, Jyothilakshmi C G, Vinoth Kumar D, Dharun T, Yogesh P. Patil, Bennet Chelliahn
HP-Recpol Revolutionizing Sustainability: Recycling of Plastic Waste
- 174 J. T. Felix-Leyva, R. Antón-Herrero, B. Mayans, C. García-Delgado, S. Lopez-Rayó, M. L. Hernandez-Apaolaza, E. Eymar
Effect on growth of Capsicum annum seedlings of different Biostimulants Derived from Caulerpa prolifera and Frass of Tenebrio molitor
- 175 Xuguang Ma, Yang Li, Tao Zhao, Zhixin Lan, Boming Cao, Xufeng Yuan, Zongjun Cui, Tao Jiang
Comparisons of performance and microbial communities in continuous solid-state anaerobic digesters for lignocellulosic biomass treatment at different total solids and organic loading rates
- 176 G. C. Kortas, M. Stylianou, I. Voukkali, A. A. Zorpas
Evaluating AI-Driven Environmental Impact Assessments: Accuracy and Effectiveness of a Custom Chatbot-Assisted Approach
- 177 F. Economou, I. Voukkali, V. Phinikettou, M. Stylianou, A. A. Zorpas
Technologies and their Role in Reducing Pre-Consumption Food Loss
- 178 E. Pawelczyk, I. Frąckiewicz, A. Gil, J. Karczewski, M.E. Maciejewski, T. Dymerski, J. Gębicki
Plastic Waste to Syngas: Recent Catalyst Developments in Pyrolysis–Dry Reforming
- 179 P. Karachaliou, I. Vyrides
CO₂ Injection into Wastewater/Waste: A Dual Strategy for pH Control and Enhanced Methane Production During Anaerobic Digestion
- 180 E. Peleka, E. Kokkinos, M. Giannakoudi, A. Zouboulis
Acid Mine Drainage neutralization using thermally treated chromite mining waste
- 181 C. N. Aguilar
Microbial bioprocessing for the coffee pulp valorization
- 182 L. Taboada-Ruiz, E. Ciurcina, P. Diaz, R. Forján, M. Díaz Somoano, J.R. Gallego, B. Ruiz, E. Fuente
Sustainable magnetic activated carbon from industrial food waste for the immobilization of arsenic present in contaminated soils according to the principles of the circular economy
- 183 P. Amaechi Ako (formally Ozor), J. Chidiebere Ani
Measured Replacement of Portland cement with Processed Solid Cow-Bone Ash and Stone Dust for Manufacture of Hollow Concrete Blocks in Nigeria
- 184 R. Kalpokaitė-Dičkuvienė, V. Snapkauskienė, V. Makarevičius
Characterization of energy production wastes and their potential applications

Thursday, 26 June 2025

All times are in Greek Time

08.00-9.30

Registration

ROOM 1

9.15-10.45

Keynote Speakers

Chair: K. Moustakas, D. Malamis

Lucile Sever, European Biogas Association

Biogases systems as circular economy hubs: EU market and policy challenges

Steffen Walk, European Compost Network

Evaluating municipal biowaste management: The importance of data on key performance indicators and their influencing factors

Costas Velis, Imperial College London

Plastic pollution global challenge: linking waste sources, emissions, environmental fate and human exposure

Paschalis Alexandridis, University at Buffalo, The State University of New York (SUNY)

Unlocking Value from Plastic Waste with Advanced Sorting and Molecular Recycling

Nick Voulvoulis, Imperial College London

The sustainable circular economy as a destination for system transformation and policy development for green growth

10.45 - 11.15



Coffee Break

Thursday, 26 June 2025

ROOM 1

SESSION IX

Anaerobic Digestion I
Chair: S. Smith, S. Campanaro

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|-------------|---|
| 11.15-11.30 | G. Ghiotto, G. Zampieri, E. Orellana, A. Chazis, P. G. Kougias, S. Campanaro, L. Treu
Microbial and phage dynamics associated with gas retention time and mechanical failure in a pilot-scale CO ₂ biomethanation system |
| 11.30-11.45 | R. Amiri, P. Postacchini, M. Baratieri
Towards optimized syngas biomethanation: tar inhibition and resiliency dynamics of acidogenic glucose fermentation and acetoclastic methanogenesis |
| 11.45-12.00 | M. García-Prats, D. González, A. Sánchez
Unveiling the relationships between biochar characteristics and its beneficial effects in the anaerobic digestion of the organic fraction of municipal solid waste (OFMSW) |
| 12.00-12.15 | J. Colin, A. Sarrion, P. Lorenzo, E. Diaz, A.F. Mohedano, M.A. de la Rubia
Improved anaerobic digestion of organic fraction of municipal solid waste pre-treated by thermal hydrolysis |
| 12.15-12.30 | Ziting Zhou, S. M. Grimes, S. R. Smith
Anaerobic Co-digestion of Fat, Oil and Grease (FOG)/FOG deposits with Sewage sludge |
| 12.30-12.45 | I.A. Fotidis, C. Moulogianni, A.A. Lithourgidis, D. Pitsikoglou, S. Douklias, M-A. Tsitsimpikou, T.A. Kotsopoulos, T. Bournaris
LCA and market analysis of a novel bioaugmentation strategy for co-digesting lignocellulosic- and ammonia-rich biomasses |
| 12.45-13.00 | M. I. Loizides, X. I. Loizidou, O. Papakyriakou, D. Petsa, C. Fessa, M.-C. Constantinou, D. L. Orthodoxou
Safeguarding Halloumi: Reducing Carbon Footprint and Enhancing Anaerobic Digestion Viability through Digestate Co-Composting with green waste |
| 13.00-13.15 | Fei Long, Meicai Xu, Wei Liao, Hong Liua
Machine Learning for Predicting and Optimizing the Performance of an Anaerobic Digester with Diverse Feedstocks and Operating Conditions |
| 13.15-13.30 | R. E. Haro-Torralba, Si. González-Martínez, G. D. Jojoa-Unigarro
Biogas production from wastes from Opuntia ficus indica at different temperatures |

Thursday, 26 June 2025

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| 13.30-13.45 | C. Torri, F. Zimbardi, A. Facchin, V. Spadavecchia, T. Aktas, A. Girolamo Rombolà
Preliminary investigation on Pyrolysis-Anaerobic Digestion Integration for the safe Exploitation of Digestate |
| 13.35-14.00 | L. Vergine, F. Todaro, O. Giustolisi, M. Notarnicola
Digitalization of sewage sludge treatment plants: the case study of Acquedotto Pugliese SpA (Apulia, Italy) |
| 14.00-14.15 | S. Colantoni, D. Molognoni, M. Marin, F. Liendo, M. Mansouri, S. Aamodt, E. Borràs
From Waste to Energy in the Fish Processing Industry: integration of pilot-scale Bioelectrochemically improved Anaerobic Digestion |
| 14.15-14.30 | A. Martis, I. Bassani, E. Mazzocchi, G. Usai, A. Vizzarro, M. Bartoli, N. Vasile, F. Pirri, B. Menin, R. Bellini
Dark fermentation potential in increasing circularity of biotechnological wastes |
| 14.30-14.45 | D.S. Pitsikoglou, A. A. Lithourgidis, M-A. Tsitsimpikou, C. A. Tzenos, S. Douklias, T. A. Kotsopoulos, I.A. Fotidis
Long-term preserved composite methanogenic inocula for bioaugmentation of unwanted biomasses |
| 14.45-15.00 | D. Constantinou, A. Kisouri, I. Vyrides
Enhancing Anaerobic Digestion of Food Waste: Hyperthermophilic Pretreatment and Zero-Valent Iron addition |
| 14.15-15.00 | Lunch Break |

Thursday, 26 June 2025

ROOM 2
SESSION X

Circular Economy & Symbiosis
Chair: N. Voulvoulis, A. Zorpas, D. Hidalgo

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|-------------|---|
| 11.15-11.30 | K. Kalkanis, V. Viziryiannakis, C.S. Psomopoulos
The role of Industrial Symbiosis in Circular Economy |
| 11.30-11.45 | C. Politi, A. Peppas, N.A. Zafeiri, K. Meletis, S. Boutsis
Replication strategy assessment related to the 2030 targets for municipal waste and packaging waste in Greece |
| 11.45-12.00 | Ch. Manousiadis, A. Korba, L. Łękańska-Andrinopoulou, K. Chatziioannou, G. Tsimiklis, A. Amditis
Industrial-Urban Symbiosis Matchmaking Framework integrating Regional Scenery to support Hubs4Circularity approaches |
| 12.00-12.15 | M. Ciro Liscio, F. Perugini, P. Sospiro
Innovations in Waste Management: Mapping the Path Toward a Circular Economy |
| 12.15-12.30 | F. Pinzin, S. Al Hosni, R. Vahidzadeh, M. Domini, E. de Marco, T. Beltrani, S. Scaffoni, L. Cutaia, G. Bertanza, M. Vaccari
Towards Technical Standards for circular economy: a comparative analysis and sustainability implications |
| 12.30-12.45 | J. Snyman
C. Stander, Integrating a Clean Waste Stream Materials Recovery Strategy into a Circular Economy: A Case Study of Gauteng Province |
| 12.45-13.00 | S. Ahmed, M. Ciro Liscio, P. Sospiro, I. Voukkali, A. A. Zorpas
Insights and Case Study in the fashion industry through Organisational Life Cycle Assessment |
| 13.00-13.15 | P. Marcinek, J. Osiadacz, D. Włóka, M. Smol
Circular economy business models as sustainable solutions for forestry biomass recovery in the Baltic Sea Region |
| 13.15-13.30 | P. F. Rizzo, D. Cantabella, O. Mauricio Martínez-Ávila, Y. Chourak, J. Pous, A. Álvarez-Ordoñez, M. Oliveira, E. Garcia, I. Laasri, L. Mejias, L. Llenas
Shaping the future of soil health: The Spanish Living Lab's role in sustainable agriculture |

Thursday, 26 June 2025

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| 13.30-13.45 | R.A. Sirot, Jr., L.J.L. Diaz, M.A. Baccay
Determination of highly-circular upcycled plastic products in the Philippines through product circularity assessment during the design phase |
| 13.45-14.00 | S. Mitrovic, N. Vraneš
End of waste, Symbiosis and Circular economy in Serbia |
| 14.00-14.15 | St. Skoutida, A. Karanasiou, M. Batsioulas, P. Bartocci, I. Burdallo, A. Sundman, S. Patsios, G. Baniyas
Unveiling the flows of key residual streams of the forestry sector towards valorization |
| 14.15-14.30 | F. Burgoa Francisco, R. H.E.M. Koppelaar, D. Hidalgo
Industrial-Urban Symbiosis: Enabling Circular Hubs for Regional Waste-to-Resource Transformation |
| 14.30-14.45 | Á. Ramírez, L. López-Rivilla, M. Muñoz-Morales, E. López-Fernández, J. Llanos
Influence of Electrode Surface Properties in the Valorization of Waste Biomass for Sustainable Hydrogen Peroxide Production |
| 14.45-15.00 | Prakash Kumar Sarangi
Sustainable Valorization of Pineapple Wastes: Potential Resources for Bioenergy and Biochemical Synthesis for circular economy approach |

Thursday, 26 June 2025

ROOM 3
SESSION XI

H2020 WALNUT: Promoting a circular model for nutrient recovery from waste water to produce sustainable bio-based fertilisers
Chair: Ev. Achilleos, F. Corona, M. Loizidou, M. Pugliese



11.15-11.30	F. Corona Introduction of the WALNUT project: objectives, expected results
11.30-11.45	M. Kyriazi Case study 1: Selective magnesium and potassium crystallisation
11.45-12.00	F. Burgoa Case study 2: Hybrid system of photoautotrophic and heterotrophic microalgal cultivation
12.00-12.15	B. Saerens Case study 3: HRAS & adsorption/ion-exchange
12.15-12.30	A. González Case study 4: Ion exchange and membrane contactors for ammonium salts recovery
12.30-12.45	I. Sigurnjak Substitution potential of wastewater derived bio-based fertilizers
12.45-13.00	M. Pugliese, S. Manfrin, F. Trucco Opportunities and challenges of wastewater bio-based fertilizers application on vegetable crops
13.00-13.15	P Papazoglou-Karachontzitis LCA: summary of the project environmental assessment
13.15-13.30	I. González A White Book for bio-based fertilisers: Policy and practice recommendations to overcome gaps in legislation, market acceptance and research
13.30-13.45	M. Avramidi WALNUT Nutrient Platform
13.45-14.00	F. Rizzioli, N. Frison, D. Bolzonella, A. Morandini, R. Artegiani, F. Battista Scaling Up Nutrient Recovery: The Demonstrative Filtration plant (TRL7) of LIFE DIMITRA project

Thursday, 26 June 2025

- 14.00-14.15 Y. L. Yaphary, S. Fong Yau Li
Synergistic treatment of sewage sludge incineration ash and concrete slurry wastewater for recovery of phosphorus and usable water
- 14.15-14.30 Xinmin Zhan, Lin Shi, Jizhong Meng, Wenjing Bai
Nutrient recovery from digestate using electrodialysis technology
- 14.30-14.45 M. Toloueshiviari, M. Sartaj, N. Abdehagh, B. Kruczek
Nutrient (Ammonia) Recovery from Anaerobic Digestate through Coagulation/Flocculation Process
- 14.45-15.00 A. Ramírez, A. Parodi, F. Martín, M. Muñoz-Morales, J. Llanos
Valorization of Sludge Digestate and Biomass Wastes for the Electro-Generation of Hydrogen Peroxide
- 15.00-15.15 V. Proskynitopoulou, A. Vourros, P. Dimopoulos Toursidis, S. Lorentzou, K.D. Panopoulos
Innovative valorization of food processing residues: Sustainable digestate treatment for fertilizers and soil amendments
- 15.15-15.30 Sohyun Park, Yongtae Ahn
Study on a Reductant-assisted Hydrometallurgical Process for Lithium Recovery from Wastewater in Lithium Carbonate Production
- 15.30-15.45 A. Tomar, V.K. Tyagi, A.A. Kazmi, A. Rajpal, A.K. Goel
Innovative High-Performance Bio-Digester for On-site Blackwater Treatment

ROOM 4
SESSION XII

LIFE 2025 Info Day (in the Greek language)
Chair: G. Protopapas, D. Banousis, N. Psimmenos



- 11.15-11.20 Connection - Registrations
- 11.20-11.25 Greetings
Ioannis Androulakis, President of the Green Fund
- 11.25-11.30 Greetings
Ministry of Agriculture, Rural Development and Environment of Cyprus

Thursday, 26 June 2025

11.30-11.40	Trends in the Environmental Field, the European LIFE Programme and the role of the Greek LIFE Task Force plus George Protopapas, LIFE National Contact Point for the Environment, Director of the Green Fund
11.40-11.50	Trends on Climate Change and the European LIFE Programme Chariklia Kloukinioti, LIFE National Contact Point for Climate Change Mitigation and Adaptation, Ministry of Environment and Energy
11.50-12.00	Trends on the Clean Energy Transition and the European LIFE Programme Stelios Alifantis, LIFE National Contact Point for the Clean Energy Transition, Ministry of Environment and Energy
12.00-12.10	European LIFE Programme and evaluation of Cypriot participation Aimilia Chatziprokopiou, Ministry of Agriculture, Rural Development and Environment of Cyprus
12.10-13.30	Presentation of the “Environment” Field: Dimitris Banousis, Environmental Expert, Greek LIFE Task Force plus, Green Fund Presentation of the “Climate Action” Field: Nikos Psimmenos, Climate Action Expert, Greek LIFE Task Force plus, Green Fund
13.30-13.40	Presentation of the “Transition to Clean Energy” Field & Tips for writing a successful proposal Stamatis Sivitos, Project Advisor LIFE Climate & Energy Unit, CINEA Vivian Doriza, Project Advisor LIFE Climate & Energy Unit, CINEA
13.40-13.50	Questions and Answers
13.50-14.00	M. Dionysiou Introduction to project LIFE: The case of LIFE-IP CYzero WASTE (LIFE20 IPE/CY/000011)
14.00-14.10	Introduction to project LIFE: The case of ENERGATE (LIFE21-CET-MAINSTREAM-ENERGATE)
14.10-14.20	Introduction to project LIFE: The case of CIRCforBIO (LIFE18 CCM/GR/001180)
14.20-14.30	Introduction to project LIFE: The case of LIFE PHARMADETOX (LIFE20ENV/CY/000615)
14.30-14.40	Introduction to project LIFE: The case of LIFE DIMITRA (LIFE22-CCM-EL-DIMITRA/101113253)
14.40-14.50	Introduction to project LIFE: The case of LIFE IP Physis (LIFE18 IPE/CY/000006)
14.50-15.00	Discussion

Thursday, 26 June 2025

ROOM 1
SESSION XIII

Anaerobic Digestion II
Chair: J. Dosta, P. G. Kougiyas, I. Vyrides, S. Vakalis

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|-------------|---|
| 15.00-15.15 | J. Vale Machado
Biomethane production: A global technology review for Anaerobic Digestion and landfill biogas upgrading |
| 15.15-15.30 | N. Perez-Esteban, J. Vives-Egea, S. Astals, M. Peces, J. Dosta
Impact of organic loading rate and microbial migration on acidogenic co-fermentation of waste activated sludge and food waste |
| 15.30-15.45 | F. Tanguay-Rioux, F. Matteau Lebrun, F. Ngoundjo, L. Spreutels
Improving methane production during anaerobic digestion of the aqueous phase of hydrothermal carbonization: effect of intermediate treatment and choice of inoculum |
| 15.45-16.00 | M. Casallas-Ojeda, I. Cabeza, M. Lopez, W. Herrera, S. Astals, E. Madejón
Exploring Anaerobic Digestion for Sustainable Urea Substitution Using Dairy Waste Digestate Obtained Under Low-Temperature Conditions |
| 16.00-16.15 | M. Olaya-Rincon, J. Serra-Rada, C. Da Silva, P. Barcelona, J. Dosta, S. Astals, M. Martinez
Thermophilic anaerobic biodegradation of commercial polylactic acid products |
| 16.15-16.30 | Ilho Bae, Juhee Shin, Seung Gu Shin
Enhancing anaerobic digestion efficiency of dried fish waste through C/N ratio adjustment and additive application |
| 16.30-16.45 | R. V. Ramírez-Arriola, S. Gonzalez-Martinez, G. D. Jojoa-Unigarro
Biogas production from codigestión of corn silage and sheep and goat manure |
| 16.45-17.00 | E. Gutiérrez-Domínguez, S. González-Martínez
Startup of a semi-continuous anaerobic reactor operated at variable temperature |
| 17.00-17.15 | E.N. Bahçecioğlu, F.D. Sanin
Fate and Effect of PET Microplastics in Anaerobic Sludge Digestion After Thermal and Pancreatin Enzyme Combined Disintegration |

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| 17.15-17.30 | E. Kartopu, U. Yüzendag, R. Harb, E. Akay, X. Schmidt, Y. D. Yilmazel
Integrating Life Cycle Assessment (LCA) and Process Simulation for Evaluation of Sustainable Biogas Production Units |
| 17.30-17.45 | F. Makamure, P. Mukumba
Design, construction and testing of a temperature control system for household biodigester using Arduino technology |
| 17.45-18.00 | Seonmin Kang, Minjae Kim, Joonyeob Lee
Anaerobic digestion of catechol wastewater in magnetite powder-added AnSBR system |
| 18.00-18.15 | H.L. Lee, B.Y. Kim, H.W. Kim
Cold-plasma application for enhancing methanogenesis in the anaerobic digestion of sewage sludge |
| 18.15-18.30 | P. Cunha, M. T. Santos, T. Trindade
Improvement of biogas production in anaerobic digestion process through numerical model predictions |
| 18.30-18.45 | J. C. Sánchez-Gaitán, M. R. Casallas-Ojeda, N. E. Sánchez-Ramírez, I. O. Cabeza-Rojas
Energy Recovery of Organic Waste by Anaerobic Digestion in Mosquera-Nariño: Methanogenic Potentials and Semi-Continuous Scale Testing |
| 18.45-19.00 | Donggyu Lee, Woohyeok Jang, Seokhwan Hwang
Effect of Inocula from Full-Scale Anaerobic Plants on Thermophilic Bio-gasification of PLA and PBAT |
| 19.00-19.15 | E.Y. Lee, S. Pov, J.W. Jeon, K.J. Min, K.Y. Park
Comparative Evaluation of Digestate Solubilization by Thermal Hydrolysis and Ultrasonication for Anaerobic Digestion |
| 19.15-19.30 | M. Andronikou, I. Vyrides
A Metal-Assisted Circular System for CO ₂ Utilization and Methane Enhancement in Anaerobic Digestion |

Thursday, 26 June 2025

ROOM 2
SESSION XIV

Bioprocesses, Biorefineries in waste management
Chair: C.A. Cardona Alzate, N. Abatzoglou, S. Fiore

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|-------------|---|
| 15.00-15.15 | M. Christou
Solid wastes for Sustainable Aviation Fuels value chains |
| 15.15-15.30 | F. Battista, S. Alfano, G. Salvatori, M. Villano, F. Valentino, P. Pavan, D. Bolzonella
An Italian biorefinery platform for the conversion of food waste into sustainable biobased products: the BIOREFINE project |
| 15.30-15.45 | I. Gómez-Cruz, J. Labidi, E. Castro, A.J.D Silvestre, A.M. Da Costa Lopes
Analysis of different methods of olive tree pruning delignification using deep eutectic solvents |
| 15.45-16.00 | C. Kennes, M. C. Veiga
Bioprocesses for waste, syngas and carbon dioxide valorisation |
| 16.00-16.15 | M. Sbicego, A. Gallipoli, A. Frugis, A. Gianico, M. Lazzazzara, E. Di Censo, F. Angelini, S. Angelini, G. Cecchini, C. M. Braguglia
Sustainable anaerobic conversion of mixed sludge and food waste into marketable carboxylic acids and bioenergy towards green urban biorefineries |
| 16.15-16.30 | I. Chakravarty, S. Deotale, P. Dadhe, D. Gahane, Y. Ninawe, M. Singh, S. Mandavgane, K. Kanth Pulicherla
On-farm Valorization of Waste Nagpur Oranges: A model of Circularity at source |
| 16.30-16.45 | L. Gurreri, M. Calanni Rindina, D. Bonanno, A. Luciano, G. Mancini, D. Fino
LCA of a microalgal plant under alternative scenarios: Photovoltaic energy and cultivation in wastewater |
| 16.45-17.00 | J. C. Solarte-Toro, C. A. Cardona Alzate
Economic and environmental analysis of implementing hybrid renewable energy systems (HRES) for heat and power supply in biorefineries |
| 17.00-17.15 | J.A. Vázquez, R. Moreira, D. Franco, A. Franco-Uría, L.T. Antelo
Biorefinery approach for the integral valorization of chub mackerel (<i>Scomber japonicus</i>) discarded biomass |
| 17.15-17.45 | M. El Zayat
Advancing Climate Resilience through Biomass Conversion – Quantifying Carbon Balance in Biorefinery-Based Compost and Manure Irrigation Systems Using the FAO Ex-Ante Carbon Balance Tool |

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- 17.30-17.45 M. Ortiz-Sánchez, O. A. Mimalchi-Valenzuela, C. A. Cardona Alzate
Sustainability analysis of rural biorefineries to strengthen the cocoa value chain in Colombia
- 17.45-18.00 Á. Galán-Martín, D. Pérez-Almada, I. Romero-Pulido, C. Marzo-Gago
Towards Optimizing Biorefinery Systems with CO₂ Capture: A Circular Economy Approach for Valorizing Olive Pomace in Spain
- 18.00-18.15 M. Cottes, P. Simeoni
Organic waste treatment: anaerobic digestion role as biorefinery
- 18.15-18.30 C. A. Guerrero Fajardo, A. S. Lozano Pérez
Improved Hydrothermal Conversion of Pea Pod Biomass for Production of Platform Chemicals with Organic Acid Catalysts
- 18.30-18.45 B. Sampaio de Mello, L. Vargas-Estrada, A. Sarti, R. Muñoz
The influence of liquid nanoparticles on photosynthetic biogas upgrading, biomass growth and pigments accumulation of *Coelastrella thermophila*
- 18.45-19.00 M.F. Blanco, A.D. Moreno, J.M. Oliva, C. Álvarez, M.J. Negro, R. Iglesias, I. Ballesteros
Enhancing tolerance of *Heyndrickxia coagulans* through adaptive laboratory evolution for efficient conversion of lignocellulosic municipal forest wastes
- 19.00-19.15 G. Srinivasa Rao, G. Valavarasu, S. Sriram, V. K. Maheswari
Production of TDAE grade environmental friendly rubber process oils from lube extracts through new process scheme
- 19.15-19.30 D. P. B. Fernandes, C. Dias-Ferreira
Evaluating the Circularity of Municipal Waste Management in Maputo, Mozambique: A Holistic Approach Using the SGRU-CED Model
- 19.30-19.45 E. Arcos, P. Gerin
H₂/CO₂ addition during microbial batch fermentation of orange peel wastes for chain elongation of short chain carboxylates
- 19.45-20.00 M. Mzobotshe, P. Mukumba, S. Tangwe
Development of a nonlinear response surface model to predict the volume of biogas yield of a fixed dome digester charged with cow manure

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ROOM 3

SESSION XV

Waste Valorization II

Chair: K. Moustakas, A. Karamanov, I. Fotidis

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|-------------|--|
| 15.00-15.15 | P. Dutournié, M. Zbaïr, G. Guicheney
Numerical modelling of Thermochemical heat storage: modelling, model validation and simulations |
| 15.15-15.30 | M.C.M. Santos, H.M. Fogarin, C.V.S. Vechi, D.D.V. Silva, K.J. Dussán
Assessment of adapted and non-adapted <i>Rhodospiridium toruloides</i> strain growth in hemicellulosic hydrolysate from spent coffee grounds |
| 15.30-15.45 | B. Chiguano Tapia, E. Díaz, M.A. De La Rubia, J. Carrasco, A. Barbero-López, A.F. Mohedano
Material and energy recovery from mushroom and lavender stem wastes by hydrothermal carbonization |
| 15.45-16.00 | M. Costa-Pastor, A.B. Muñoz-Milán, F. Arán-Aís, E. Orgilés-Calpena
Recycling process for footwear cross-linked EVA waste using a mechanochemical batch method |
| 16.00-16.15 | Z. Sayouri, S. Abdelmoumen, A. Bourafa, M. Belhachemi, A. A. Zorpas, B. Khiari
Impact of the Medium as a moisture source in the Hydrothermal carbonization of raw olive pruning |
| 16.15-16.30 | A.A. Papa, A. Amado-Fierro, T.A. Centeno, A. Di Carlo, S. Rapagnà
Effect of process water recirculation on hydrochar behavior in gasification of hydrothermally treated organic fraction of municipal solid waste |
| 16.30-16.45 | V. Stefanelli, A. Kiwan, D. Pirini, D. Collini, C. Samori
From waste to biopolymers: sustainable valorization of secondary sludge via hydrothermal carbonization, acidogenic digestion and aerobic fermentation |
| 16.45-17.00 | L. Martinez-Sanchez, M. Solana, E. Esteban, M. Reguera, A. F. Mohedano, M. A. de la Rubia, M. Tobajas
Characterization and application of hydrochars from Co-hydrothermal carbonization of biowaste and sewage sludge |
| 17.00-17.15 | G. Ceragioli, E. Tito, G. Pipitone, S. Bensaid, R. Pirone
Valorisation of multi-component plastic waste via hydrothermal liquefaction: A comprehensive analysis of interactions between PET and PA6 depolymerization |
| 17.15-17.30 | B. Chiguano-Tapia, A.F. Mohedano, M.A. de la Rubia, E. Díaz
Hydrothermal liquefaction of swine manure and food waste: a pathway to sustainable energy and soil improvement |

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| 17.30-17.45 | E. Garcia-Muchart, L. Mejias, N. Peña, O. Martínez-Avila, S. Ponsá
From agro-food waste to biostimulant bacterial exopolysaccharides: solid-state fermentation as a circular bioeconomy tool |
| 17.45-18.00 | L. Castellini, A. Giordana, M. Malandrino, G. Cerrato
Synthesis and characterization of hydroxyapatite nanoparticles from eggshell without thermal treatment |
| 18.00-18.15 | J. Font-Pomarol, A. Sánchez, A. Artola, E. Molina Peñate, Ó. Prado
Valorisation of organic waste through solid-state fermentation for sustainable agriculture: Biostimulant production by <i>Trichoderma harzianum</i> |
| 18.15-18.30 | H. Pérez-Aguilar, M. Bonilla-Espadas, E. Orgilés-Calpena
Transforming Agriculture and Industry: Unlocking the Potential of Bivalve Mollusk Byproducts for High-Value Innovations |
| 18.30-18.45 | L. Taboada, M González-Ingelmo, M. Granda, Z. González, B. Ruiz, U. Sierra, E. D. B. Castro, E. Cuara, P. Álvarez
Utilization of a macroalgae-based industrial waste to prepare graphene derivatives suitable in water filtration systems |
| 18.45-19.00 | D. C. R. Velasco, D. L. R. Oliveira, F. P. D. Lopes, C. M. F. Vieira
Influence of post curing on the flexibility of industrial pipe coatings using solid waste |
| 19.00-19.15 | A. Belasri, A. Boukrim, O. Lakbita, A. Bakka, B. Rhouta, M. Lahcini, R. Beniazza, T. El Assimi
Nano-structuration and functionalization of cellulose acetate membrane for advanced water purification |

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ROOM 4

**SESSION XVI
PART A**

**HORIZON EUROPE CRONUS project:
Capture and Reuse of biogenic gases for
Negative-emission-sustainable biofuels
Chair: M. Georgiadou, D. Malamis,
M. Loizidou**



CRONUS

15.00-15.15	D. Malamis General presentation of the HORIZON CRONUS Project
15.15-15.30	S. Mai Functional Prototype 1 in Athens, Greece
15.30-15.45	P. Kougias Functional Prototype 2 in Thessaloniki, Greece
15.45-16.00	A. Grimalt Alemany Functional Prototype 3 in Copenhagen, Denmark
16.00-16.15	J.-M. Commandré Functional Prototype 4 in Montpellier, France
16.15-16.30	D. Hidalgo Functional Prototype 5 in Boecillo, Spain

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ROOM 4

**SESSION XVI
PART B**

**LIFE2M:
The Future of Sustainable Micromobility
Chair: P. Sospiro, S. Ahmed**



life2m
Long Life to Micromobility

17.00-17.15	D. Vangi Long Life 2 Micromobility project
17.15-17.30	S. Ahmed Comparative assessment of Supercapacitors and batteries
17.30-17.45	M. Laschi Technological innovations and waste reduction
17.45-18.00	P. Sospiro Exploitation and commercialization
18.00-18.15	S. Ahmed Using composite material in micromobility vehicle construction for sustainable waste management
18.15-18.30	R. Caldarulo Innovative Products for Sustainable Micromobility project
18.30-18.45	F.J. Navas New generation of biocomposites based on olive fibers for industrial applications
18.45-19.00	Discussion

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All times are in Greek Time

ROOM 1

SESSION XVII

Waste-to-Energy, Hydrogen & Energy from Waste **Chair: K. Moustakas, C. Psomopoulos, V. Viziryiannakis**

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|-------------|---|
| 8.30-8.45 | Haim Cohen, Yaniv Knop
Municipal Waste Incineration and Ash Utilization in Industrial Concrete |
| 8.45-9.00 | I. Mensah, S. Narra, J.C. Ahiekpor, N.Y. Asiedu
Choosing optimal RDF gasification medium for H ₂ -rich syngas production |
| 9.00-9.15 | J. Čespiva, M. Charvát, J. Skřínský, J. Vereš, J. Ryšavý
Evaluation of the Suitability of Defined SRF in Mixture with Wood and as a Standalone Fuel for Gasification Processes |
| 9.15-9.30 | J.E. Rubiano, I.O. Cabeza, D. Serrano, N.E. Sánchez, R. García
From Urban Waste to Energy Through Performance Analysis of Pruning Residue Gasification in a Pilot-Scale plant |
| 9.30-9.45 | Yang Liu, Ruming Pan, R. Ansart, G. Debenest
Optimizing Biomass Pyrolysis Through Joule Heating with Focus on Reaction Parameters and Product Quality |
| 9.45-10.00 | E. Fassatoui, S. Kordoghli, J. François Largeau, K. Loubar, F. Zagrouba
Valorization of Coffee Grounds and Orange Peels for Sustainable Hydrogen Production via Pyrolysis |
| 10.00-10.15 | L. Halawy, J. Zeaiter
Pyrolysis of Waste Tires over Bi-metallic USY for the Production of Hydrogen |
| 10.15-10.30 | Xueli Chen
Synergy of plastic-paper co-pyrolysis in MSW: Thermal behavior and product characteristics |
| 10.30-10.45 | Longfei Tang
Fixed-bed pyrolysis of twigs Interaction mechanisms between bed layers |
| 10.45-11.00 | E. Fersini, A. Giuliano, F. Todaro, C. Wieth, M. Notarnicola
Technical evaluation of sewage sludge pyrolysis: laboratory and pilot plant tests |

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| 11.00-11.15 | Potential of pyrolytic gas from pelletized residual biomass of rice husk and corncob blends: analysis of non-condensable gas evolution in a batch reactor |
| 11.15-11.30 | D. Sorino, M. Baldelli, L. Bartolucci, S. Cordiner, F. Lombardi, V. Mulone
Multicriterial methodology for mixed plastic waste pyrolysis management |
| 11.30-11.45 | D. Liakos, L. Chrysikou, I. Kosma, A. Dimitriadis, K. Triantafyllidis, S. Bezergianni
HTL of Wheat Straw and Biocrude Refinement for Petroleum Compatibility |
| 11.45-12.00 | E. Emmanouilidou, T. Kikalishvili, A. Lazaridou, S. Mitkidou, A. Agapiou, N. Kokkinos
Advanced characterization of biodiesel produced from spent Greek coffee grounds using gas chromatography-tandem mass spectrometry analysis |
| 12.00-12.15 | A. Tawfik
Mitigation the inhibition effect of antibiotics on hydrogenation of chicken manure by hydroxyapetite@biochar supplementation |
| 12.15-12.30 | P. Ungprasoot, P. Kaewkannetra
Sustainable development goal: Valorisation of sugar cane bagasse toward for biochar production through wet torrefaction |
| 12.30-12.45 | A. Tehseen, S. González-García
Assessing the environmental implications of manure waste management and its application in purple hydrogen production |
| 12.45-13.00 | P. Kannappan Karthikeyan, J. Grbic, F. Iza, H. Chaminda Hemaka Bandulasena, T. Radu
Integrating Fenton Process with Plasma Technology for Enhanced Biogas Production from High-Lignocellulosic Biomass |
| 13.00-13.15 | J. Mikusińska, K. Szkadłubowicz, Z. Prus, M. Kuźnia, I. Kalembe-Rec, E. Kudlek, A. Marszałek, M. Dudziak, G. Cema, M. Wilk
Hydrothermal carbonization of agriculture digestate: the effect of residence time and temperature on chemical and physical properties of hydrochar and process water |
| 13.15-13.30 | M. Wilk, J. Mikusińska, M. Kuźnia, K. Szkadłubowicz, Z. Prus, G. Cema
Wet biowaste from agriculture pretreated by enhanced hydrothermal pretreatment into energy fuels |

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| 13.30-13.45 | A. Białowiec, M. Hejna
Carbon-relative molar mass for the prediction of RDF torrefaction and calorific value of the carbonized solid fuel |
| 13.45-14.00 | D. Urbancl, D. Goricanec, A. Skorjanc, A. Petrovic
Sustainable approach to the thermal conversion of solid residues |
| 14.00-14.15 | E. Bizzotto, D. Sanguineti, G. Zampieri, I. Angelidaki, L. Treu, S. Campanaro
Syngas Biomethanation: metabolic modeling to improve methane production |
| 14.15-14.30 | A. Ramos
Unlocking sustainable futures: exploring feedstock composition for waste-to-energy solutions |
| 14.30-14.45 | S. Ghosh, P. Mondal, A. Fedyukhin
Municipal waste based multi-product energy conversion system with integrated carbon separation and energy storage: Plant models and initial enviro-energetic assessment |
| 14.45-15.00 | Yogesh Kaushik, Pratham Arora
Sustainable energy generation from invasive weed biomass (<i>Lantana camara</i>): a pathway to circular bioenergy solutions |
| 15.00-15.15 | R. M. Ali, M. H. ElGreatly, H. A. Farag, M. S. Mansour, Ab. H. Al-Anazi
Efficient eco-friendly economic esterification for waste cooking oil |
| 15.15-15.30 | E. D. Arroyo-Dagobeth, D. D. Otero Meza, J. J. Cabello – Eras, R. Gómez-Vásquez, J. G. Salcedo – Mendoza, J. E. Hernández-Ruydiaz, C. A. Cardona Alzate
Potential of pyrolytic gas from pelletized residual biomass of rice husk and corncob blends: analysis of non-condensable gas evolution in a batch reactor |

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ROOM 2
SESSION XVIII

LIFE-IP CYzero WASTE: Intelligent monitoring and efficient waste reduction in Cyprus Island: Integrated waste management and circular economy in urban & rural areas
Chair: Ev. Achilleos, M. Loizidou, J. Constantinidou, E. Tritopoulou



9.00-9.15	M. Loizidou Compliant Waste Management Units with Circular Economy and Best Available Techniques – The case of OEDA Koshi and Pentakomo in Cyprus
9.15-9.30	M. Loizidou, E. Tritopoulou Organic waste management in Cyprus with Community Composters, and a New Organic Management Plant in Paphos
9.30-9.45	A. Adamou Reuse and Repair Centres in Cyprus and a network of Reuse Shops in synergy with Green Points
9.45-10.00	M. Alabritis Pay as you Throw in the Municipality of Aradippou in Cyprus
10.00-10.15	P. Mountoukos Hazardous Waste Management
10.15-10.30	P. Hadjicostas Green Kiosks for recyclables in Cyprus, challenges and installation
10.30-10.45	D. Boudouvas EPR in Batteries for use in Vehicles and Industry. The case of Greece
10.45-11.00	T. Prastitou Merdi Revising the EU Waste Framework Directive in 2025: A stepping stone forward or a wasted opportunity?
11.00-11.15	G. Nohales, M. Stinavage, S. Walk Policy and Regulatory Recommendations for Bio-waste Management in the EU

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11.15-12.00	COFFEE BREAK
12.00-12.15	M. Donner, F. Fabiano, V. Amorese, C. Mango, H. de Vries A circular collaborative business model for urban food waste management: the case of Milan
12.15-12.30	G. Hafner, D. Drissner Smart Food BaWue - Food Waste in Private Households
12.30-12.45	M. Kouloumis, V. Savvilotidou, S. Papadopoulos, C. Vatsaris The impact of INTERGEO in remediation and waste management and the upcoming innovative services
12.45-13.00	L. Afxentiou, A. Giannis Implementation of a Pay As You Throw system in the municipality of Aglantzia, Cyprus
13.00-13.15	R. Titos-Guillen, E. Licon, T. Alvariño, A. Taboada, S. Sentellas, M. Reig LIFE CYCLOPS: Upcycling polyphenols from waste
13.15-13.30	G. Sánchez, J. Carlos Fernández, J. Hereza, R. Muñoz, A. González, M. Gil d, Ó. Prado, R. Montes, M. Macarulla, S. Gassó, R. Lebrero Marketable high-performance compact technologies for the abatement of VOCs in EU waste treatment plants, decreasing CO ₂ emissions and energy consumption- LIFE ABATE (LIFE22-ENV-EN-EN-LIFE-ABATE/101113838)
13.30-13.45	F. Liendo, S. Solaro, M. Antonini, E. Montoneri Production of eco-friendly multipurpose Biobased products from Municipal Bio Waste (MBW) – LIFE EBP project
13.45-14.00	K. Tsimaras Climate change and water scarcity, the role of regulators
14.00-14.15	Jiasheng Cai, D. Parmentier, S. W.H. Van Hulle Applying a continuous electrooxidation reactor for the removal of bulk organic matter in biologically treated landfill leachate: influence of operational conditions and online surrogate monitoring
14.15-14.30	Ch. Ketikidis, Z. Gaitanarou, Chr. Makri, S. Plakantonaki PreVEnting and ReDucing the tEXtiles waste mountain in the MED area
14.30-14.45	J. Osiadacz, D. Włóka, P. Marcinek, E. Waluś, M. Smol Bringing science and practice in forestry: Transforming residual biomass into market opportunities

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ROOM 3

SESSION XIX

Recycling & Resources Recovery

Chair: A.B. Ribeiro, E. Castro, Cl. Di Iaconi, G. Izydorczyk

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|-------------|---|
| 9.00-9.15 | A. Martínez, G. Gascó, A. Méndez, P. Almendros
Recovery of zinc from pyrolyzed black mass from zinc-based spent batteries using NH ₃ /glycine and NaOH/glycine-based solutions |
| 9.15-9.30 | S. Hippmann, H.L. Challa, F. Alipour, S. Pavón, M. Bertau, A. Michaelis
Early-stage lithium recovery from EV battery black mass by CO ₂ in pilot scale |
| 9.30-9.45 | S. Gupta, K.K. Pant, G. Corder
Selective separation and in situ recovery of transition metals from lithium-ion battery waste using bifunctional deep eutectic solvent |
| 9.45-10.00 | S. Ahmed, P. Sospiro, M. Ciro Liscio, Michelangelo-Santo Gulino, M. Laschi, D. Vangi
Advancing Urban Micromobility: The Role of Supercapacitors in Enhancing Efficiency and Sustainability |
| 10.00-10.15 | C. Pires, J. Almeida, H. Ponte, E. P. Mateus, M. K. Lenzi, A. B. Ribeiro
Evaluating Energy Consumption in the Electrodialytic Recovery of Lithium from Mineral Sources |
| 10.15-10.30 | M. Bruno, A. Zanoletti, E. Bontempi, S. Fiore
Economic optimization of pre-treatments and operative conditions for leaching of critical raw materials from lithium-ion batteries black mass |
| 10.30-10.45 | L.L. Lassila, M. Bruno, C. Francia, A. Santasalo-Aarnio, S. Fiore
Sustainable Pre-treatment Method for Lithium-ion Production Scrap Material Recovery and Re-utilisation |
| 10.45-11.00 | A. Vizzarro, C. Magrini, N. Santi Vasile, I. Bassani, R. Bellini, F. Drago, L. Baudino, B. Menin, C. Fabrizio Pirri, F. Verga, A. Abdel Azim
Harnessing biomethanation for sustainable lithium depletion from sea water brine and energy generation: an integrated waste management strategy |
| 11.00-11.15 | S. Pavón, S. Hippmann, H.L. Challa, C. Rogoll, P. Fröhlich, M. Bertau, A. Michaelis
Upcycling of NdFeB permanent magnets for green applications |

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| 11.15-11.30 | G. Tarousinof, D. Sinioros, C.S. Psomopoulos
Materials recovery and recyclability evaluation for the Measuring transformers in Medium Voltage Switchgears (20kV) |
| 11.30-11.45 | N.B. Jordanov, E.M.A. Hamzawy, A. Karamanov
Effect of the oxidation stage on the foaming performance of Iron-rich sintered glass-ceramics |
| 11.45-12.00 | C.M.F. Vieira, G.C.G.Delaqua
Effect of adding blast furnace sludge on the physical-mechanical properties of bricks ceramics |
| 12.00-12.15 | Jiahao Li, Yunheng Ding, He Yang, Xiangxin Xue
Preparation of foamed ceramic by boron mud and its leaching residue |
| 12.15-12.30 | A. Karamanov, N.B. Jordanov, V. Savic
Influence of glass compositions, sintering rate and holding temperature on the sinter-crystallization of vitrified industrial wastes |
| 12.30-12.45 | S. Scolari, D. Mombelli, G. Dall'Osto, C. Mapelli
Recycled Arabic Gum as Binder for Self-Reducing Briquettes Made by Steelmaking By-Products |
| 12.45-13.00 | I. Djobov, R. Andreeva, M. Peshova, A. Karamanov
Characterization of main industrial wastes in Bulgaria and possibilities for their utilization |
| 13.00-13.15 | X.L. He, Y. Zhou, X.X. Xue, H. Yang
Straw-type biomass as a clean reductant in magnetized roasting of Bayan Obo tailings |
| 13.15-13.30 | Grzegorz Lisak, Wei Ping Chan, Jiaye Zhang, Stephan Heberlein, Wei Han Tu, Ya Zhao, Preston Tan
Andrei Veksha, Wen Liu
Integrating Carbon Capture with Resource Recovery for Sustainable Urbanization |
| 13.30-13.45 | M. Maniadakis, F. Raptopoulos, G. Alexakis, N. Mavrakis
prMRF: Automating Decentralized Material Recovery from Municipal Solid Waste |
| 13.45-14.00 | L. S. Fressato, A. Salimbeni, L. Bettucci, G. Lotti
Efficient recovery of benzoic acid from the condensed phase of textile residues obtained by slow pyrolysis |

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14.00-14.15

S. E. AbdElhafez, H. A. Hamad, A. H. Al-Anazi, A. Nafady, F. Altawati, R. M. Ali
Exploring a sustainable and economical biosorbent for organic pollutants remediation from real textile wastewater

14.15-14.30

I. Sammas, E. Mylona, P. Oustadakis, A. Kourtis, K. Tsakalakis, A. Xenidis
Development of an integrated processing scheme for the recovery of chromite and platinum group metals (PGMs) from fine chromite tailings

Friday, 27 June 2025

ROOM 4
SESSION XX

Plastics & Bioplastics / Characterisation of waste residues / Hazardous Waste
Chair: P. Alexandridis, C. Velis, S. Mai

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| 9.00-9.15 | Yoonhee Ahn, Minjoo Lee, Wonsik Nam, Gayeon Jang, Jeongmin Yun, Eunjoo Choi, Joonhong Park
Influence of Gas-phase CO ₂ Control on Lactate and Methane Productions from PLA (Poly Lactic Acid)-Degrading Thermophilic Anaerobic Digestion |
| 9.15-9.30 | Donggyu Lee, Woohyeok Jang, Seokhwan Hwang
Effect of Inocula from Full-Scale Anaerobic Plants on Thermophilic Bio-gasification of PLA and PBAT |
| 9.30-9.45 | A.-J. Klasinc
Blockchain and AI for Plastic Solid Waste Management in Ports |
| 9.45-10.00 | B. Lleshi, S. Facchini, M. Occhinegro, M.E. Di Clemente, G. Santomasi, F. Todaro, M. Notarnicola
Circular management of beach litter: densimetric separation of natural and anthropic fractions |
| 10.00-10.15 | V.E. Messerle, A.B. Ustimenko, O.A. Lavrichshev
Using plasma gasification to reduce plastic waste: thermodynamic analysis and experiment |
| 10.15-10.30 | S. Ponis, M. Tsakona, A. Maroutas, D. Tzanetou, G. Plakas, G. Stengos
Block Agrowaste: Traceability, Collection and Processing of Agroplastic Waste Supported by Blockchain Technology and a Smart Mobile Application |
| 10.30-10.45 | S. Hussain Tumrani, Chenghong Feng
Effect of photodegradation on biodegradable microplastic structure and its interaction behavior with antibiotic |
| 10.45-11.00 | Paul Amaechi Ako, Unatshilidzi Benedictus Khangale
Technical specifications for value-added production planning and control of plastic recycling in South Africa |
| 11.00-11.15 | M.-C. Constantinou, X. I. Loizidou, D. L. Orthodoxou
Exploring Marine Litter on Cyprus's Beaches: Microplastic Abundance, Distribution and Seasonal Dynamics |

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| 11.15-11.30 | Ji Young Park, Jae Hwan Yang
Upcycling Waste PET for Efficient Toluene Oxidation Catalyst |
| 11.30-11.45 | P.A. Márquez, M.N. Rojas
Evaluation of the microbiological decomposition of biodegradable, compostable and water-soluble plastic bags in a seawater inoculum |
| 11.45-12.00 | A. Kumar, M. K. Mondal
Sustainable and Cost-Effective Recycling of Thermoset Plastics via Cryogenic Grinding for Composite Manufacturing |
| 12.00-12.15 | Yan Jin, Xinxin Zhao, Guangqing Liu, Chang Chen
Anaerobic degradation of commercially available biodegradable plastics |
| 12.00-12.15 | Xuefeng Wang, Xue Sun, Yan Jin, Chao Song, Chang Chen, Guangqing Liu
Biosynthesis of poly(hydroxybutyrate-co-hydroxyvalerate) using the volatile fatty acid produced from food waste |
| 12.15-12.30 | D. Mombelli, G. Dall'Osto, S. Scolari, C. Mapelli
On the role of Zn/Fe ratio on the mineralogy of Electric Arc Furnace Dust for optimization of Zn recovery |
| 12.30-12.45 | M. Dej, L. Kubonová, J. Ryšavý, P. Musil
The Ash Fusibility of Waste Biomass from the Agricultural Industry |
| 12.45-13.00 | A. R. Zubas, G. Denafas, E. Griškonis, J. Kruopienė
Mechanical and Thermal Treatment for Recycling Photovoltaic Modules |
| 13.00-13.15 | J. Negrete, F. García, A. Tejada, N. R. López, M. R. González, G. Fernández
Characterization of Waste Generated from Discarded or End-of-Life Solar Panels Thermal Delamination Process for Possible Valorization |
| 13.15-13.30 | N. Ratola, F. Bernardo, F. Sánchez-Soberón, L. Vidal, L. Ripoll, A. Alves, V. Homem
Volatile methyl siloxanes in WWTPs: where do they come from? |
| 13.30-13.45 | A.F. Gualtieri, R. Arletti, D. Malferrari, A. Viani, R. Fantini, M. Sisti, F. Colombo, S Conte, C. Zanelli, M. Dondi, F. Dentella, I. Zanatto
Recycling Man-Made Vitreous Fibres hazardous waste for the manufacture of traditional ceramics |

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| 13.45-14.00 | Abhay Kumar, Kunwar D Yadav, Sunil Kumar
Electrochemical reduction of COD and PFAS from hazardous waste landfill leachate using MMO/Ti electrode |
| 14.00-14.15 | M.E. Silva, M.V.R. Azevedo, G.A.V. Silva, B. Cirino-Crema, I.P. Brás
Burned Soils Regeneration Practices: preliminary studies |
| 14.15-14.30 | J. Ryšavý, L. Kuboňová, M. Dej
3D Printed Neutralization Modules for Gas Boiler Condensate: A Scalable Approach to pH Control |
| 14.30-14.45 | G. Kabzhanova, A. Kurmasheva, A. Bissembayev
The use of sustainable pasture management methods based on spatial and temporal analysis for effective, environmentally sound management of natural resources |
| 14.45-15.00 | C. Gutiérrez Palacios
Recovery of the Landfill of the Municipality of Calakmul, Campeche, Mexico |

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ROOM 1
SESSION XXI

EU policies and strategies for solid waste management
Chair: K. Lasaridi, C. Dias-Ferreira, C. Marouli

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|-------------|---|
| 15.00-15.15 | J. Constantinidou
Financial instruments in Cyprus: Pay as You Throw, Landfill Tax, Waste Management Fund, Circular Economy Agency |
| 15.15-15.30 | D. Bregoli, D. Iacobucci, M. Ciro Liscio, P. Sospiro
Waste management in the EUSAIR: an overview of the performance of the Adriatic-Ionian Countries |
| 15.30-15.45 | M. Demoz Tewodros, M. Ciro Liscio, M. Senekane, P. Sospiro
Insights on comparative analyses of solid waste management regulations in Africa |
| 15.45-16.00 | M.M. Narra, K. Agboka, S. Narra, M. Nelles
Exploring Extended Producer Responsibility for Sustainable Tyre Recycling in Togo and West Africa |
| 16.00-16.15 | P. Nowakowski
Evaluation of the separate collection of waste in airport passenger terminals |
| 16.15-16.30 | A. Kunszabó, M. Süth, D. Szakos, G. Kasza
Hungarian residents' habits and willingness to separate food waste at the source |
| 16.30-16.45 | S. Eikenberry, C. Marouli
Student Attitudes on Food Waste at a Higher Education Institution: Insights for Institutional Policy and Strategy |
| 16.45-17.00 | I. Voukkali, E. Yiagkou, I. Papamichael, A.A Zorpas
Fostering Sustainability: The Role of Environmental Education in School Waste Management |
| 17.00-17.15 | T.P. Curran, L. Ní Chléirigh, M. Nic an Bhaire
Developing a bioeconomy education programme for primary, secondary and tertiary level students |
| 17.15-17.30 | A. Koroma, R.E. Scott, J. Esson
The Invisible Workforce: Informal Waste Pickers and the Challenges of Sustainable Waste Management in Freetown, Sierra Leone |

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17.45-18.00	Shengnan Wang, Qian Zhang, Tingting Liu A powerful method to minimize household food waste and its environmental impacts—information interactions via social media
18.00-18.15	M. Khaled, M. Abdallah, R. Tarek, N. Ahmed, S. Elagroudy Quantifying Specific Emission Factors from Organic Waste Management
18.15-18.30	M.F Senekane Understanding the Socio-cultural systems of the rural communities in indigenous management of solid waste
18.30-18.45	T. Nhabe, M. Makgamatha Environmental and Economic Perspectives of Waste Pickers at Landfill Sites in Tshwane Metropolitan Municipality
18.45-19.00	B. Batinić, I. Berežni, T. Marinković, A. Najdanović Measurement of Household Food Waste in Belgrade: Quantification and Composition Analysis for Sustainable Management
19.00-19.15	Ch. Karkanias, A. Malamakis, St. Skoutida, G. Banias Blockchain and megatrends: pathways to sustainable, inclusive and resilient food systems
19.15-19.30	Xiangbiao Yu, Tianyuan Li, Gongjin Cheng, Xiangxin Xue, He Yang Reduction of Solid Waste at Source: High-Proportion Pellet Smelting of Chromium-Bearing Vanadium Titanomagnetite
19.30-19.45	D. R. Pathak, P. Pokhrel Potential and recovery of organic waste through household composting in the cities of developing countries for circular economy
20.00-20.15	Closing Session with the active participation of chair persons – Poster award ceremony – Announcement of the place for the 2026 13th International Conference on Sustainable Solid Waste Management

Friday, 27 June 2025

ROOM 2

SESSION XXII

Agricultural and/or livestock waste - Aerobic biological treatment – composting
Chair: K. Chojnacka, N. Tzortzakis, M. Stylianou

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| 15.00-15.15 | K. Chojnacka
From Biomass to Fertilizer: The Role of Chemical Processes in Addressing Agricultural Challenges of the 21 st Century |
| 15.15-15.30 | F. Economou, I. Voukkali, V. Phinikettou, M. Stylianou, A. A. Zorpas
Developing Standardized Food Loss Audit Protocols for Agricultural Producers |
| 15.30-15.45 | M. Batsioulas, A. Karanasiou, St. Skoutida, E. Papadopoulou, E. Athanasiadou, S. Patsios, G. Banias
Agricultural biomass as a raw material: the case of sustainable particle boards production |
| 15.45-16.00 | G. Neofytou, A. Chrysargyris, N. Tzortzakis
Struvite can substitute phosphorus needs in marigold soilless cultivation in regards to commercial fertilizers |
| 16.00-16.15 | Itamar Kaffman, Roy Posmanik
Hydrothermal Processing Transforms Anaerobic Digestate into Value-Added Hydrochar for Sustainable Applications |
| 16.15-16.30 | G. Theochari, M. Popova, D. Kovacheva, D. Karashanova
Sustainable methane production by CO ₂ hydrogenation on the Ni-Mn-modified mesoporous silicas obtained from rice husks |
| 16.30-16.45 | C. Papachrysostomou, M. Omirou, M. Constantinou, A. Zorpas, M. Stylianou
Coccidiostat compounds present in animal waste |
| 16.45-17.00 | J. E. Hernández-Ruydías, J. Cabello E, M. Ortiz-Sánchez, D. D. Otero Meza, J. G. Salcedo – Mendoza, C. A. Cardona Alzate, C. Meza, S. K. Salgado A, C. Novoa P.
Theoretical energy potential of biogas produced from agricultural waste in Sucre, Colombia: Subregional distribution |
| 17.00-17.15 | F. M. Abosamra, M. Gouda Youmna, A. M. Khaled, H.A.F. Rahmy
From Waste to Wealth: Leveraging Agricultural and Livestock Residues for Climate Action and Sustainability |

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| 17.15-17.30 | I. Orlandella, K. N. Smith, E. Belcore, N. Dilillo, R. Ferrero, M. Pugliese, M. Piras, S. Fiore
Evaluation of Electrooxidation as a Pretreatment for Lignin Extracted from Sugarcane Bagasse for Application in Anaerobic Digestion |
| 17.30-17.45 | C. E. Orrego A., D. K. Jurado-Erazo, J. M. Narvaez-Perez, N. Salgado, J. D. Galvis-Nieto, L. Joana Rodriguez
Utilizing Carbon Footprint Analysis to Optimize Agricultural Practices for Maximizing Capsaicin Content in Rocoto Chili Peppers |
| 17.45-18.00 | M. Samoraj, D. Skrzypczak, M. Mironiuk, G. Izydorczyk, K. Chojnacka
Innovative ecological fertilizers based on waste biomass – concept and in vitro studies |
| 18.00-18.15 | D. Skrzypczak, F. Gil, M. Mironiuk, G. Izydorczyk, K. Chojnacka, M. Samoraj
Final formulations of waste biomass-based fertilizers: evaluation in plant trials |
| 18.15-18.30 | G. Izydorczyk, D. Skrzypczak, F. Gil, M. Mironiuk, K. Chojnacka, M. Samoraj
Bioefficacy of waste biomass-based fertilizers under drought and salinity stress in model crops |
| 18.30-18.45 | C.W. Hu, S.S. Feng, Q.X. Sun
The conversion of silicon contained in agriculture waste to alkoxy silanes |
| 18.45-19.00 | K. Sobieraj
The impact of organic matter content on the carbon monoxide (CO) production during food waste composting: the comprehensive lab-scale evaluation |
| 19.00-19.15 | N. Ahmed, M. Khaled, S. Elagroudy
Technical and Financial Evaluation of Composting Versus Biodrying Treatment Facilities in Egypt |

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ROOM 3

SESSION XXIII

Waste Valorisation III

Chair: G. Mancini, F. Lombardi, A. Luciano

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| 15.00-15.15 | W. T. Stringfellow, M. K. Camarillo, P. F. Dobson, P. S. Nico
Solid and hazardous waste production during geothermal lithium extraction |
| 15.15-15.30 | Huilin Li, L. M. Ottosen
Rare-earth elements extraction from municipal solid waste incineration bottom ash by Electrolytic Process |
| 15.30-15.45 | L. Acampora, G. Costa, I. Verginelli, C. Mensi, S. Malvezzi, F. Lombardi
Evaluation of the Environmental Compatibility of the Use of Waste to Energy Bottom Ash in Porcelain Stoneware Tile Manufacturing through Leaching Tests and Risk Assessment |
| 15.45-16.00 | S. León-Gutiérrez, P. Delgado-Plana, M.A. Gómez-Casero, D. Eliche-Quesada
One-part alkaline activated cements manufactured by the activation of brick dust and biomass bottom ash using a potential sustainable activator from spent diatomaceous earth |
| 16.00-16.15 | A. Masi, G. Costa, F. Lombardi
Valorisation of the fine fraction from EAF steel slag treatment through the application of carbonation-based processes |
| 16.15-16.30 | S. Gómez-Sánchez, A. Montañó, A.P. Ponce-González, R.M. Ramírez-Zamora, B. Alcántar-Vázquez
Geothermal silica waste as raw material for preparing CO ₂ sorbents |
| 16.30-16.45 | R. Arévalo, M. F. Magalhaes
Advanced Simulation of Iron Oxide Reduction Using Hydrogen: CFD-DEM and USCM Integration |
| 16.45-17.00 | Naiqi Shang, D. Mombelli, M. Mariani, G. Dall'Osto, N. Lecis, M. Zago, I. Cristofolini, V. Fontanari
Utilization of Stainless Steel 316L and Red Mud Composite on Binder Jetting for Innovative Direct Carbon Fuel Cell Anode production |
| 17.00-17.15 | A. Hejna, M. Barczewski, A. Bartnicki, J. Andrzejewski, J. Aniśko, R. Malinowski
In pursuit of degradation – seeking beneficial effects of thermal and thermomechanical modification of plant-based materials used in polymeric materials |
| 17.15-17.30 | A. Serra-Toro, S. Peña-Picola, E. Abad, F. Valentino, S. Astals, J. Dosta
Membrane treatment of fermentation liquids to recover ammonia and to concentrate Volatile Fatty Acids |

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| 17.30-17.45 | P. Izák, P. Stanovský, K. Friess
New membranes for mix gas and flue gas separation |
| 17.45-18.00 | E. Moutafis, A.S. Dounavis
Valorization of Recycled Materials and Organic Residues of Agricultural, Livestock and Industrial Origin for Energy and Compost Production within the Circular Economy Framework |
| 18.00-18.15 | H. A. F. Rahmy, S. Nour El-Deen, F. M. Abosamra , A.I. E. M. Mahmoud, A. M. Khaled, A. S. M. Korayema
Valorization of Olive Cake as a By-product in Broiler Ration and its Effect on Growth, Carcass Characteristics and Blood Parameters |
| 18.15-18.30 | S. M. Hailan, Z. Nogellova, A. Popelka, M. Ilcikova, M. Mrlík, A. Minařík, F. Mikulka, G. McKay, I. Krupa
Utilization of polyethylene waste for designing foamy oil sorbents |
| 18.30-18.45 | B. Ben Ali, J. Ait Brahim, N. Haneklaus, R. Beniazza
Phosphogypsum purification: Implications for use in cement production |
| 18.45-19.00 | Guodong Chen, Tinfeng Liu, Wenyi Tan, Yuliang Cao
Mineralization of flue gas desulfurization gypsum in venturi reactor |
| 19.00-19.15 | S. Yadav
Mineral carbonation using natural minerals and industrial waste: a review |
| 19.15-19.30 | Pranav Prashant Dagwar, Deblina Dutta
Comprehensive Assessment of Heavy Metals in Coal Mine Waste: Characterization and Risk Analysis |
| 19.30-19.45 | A. Luciano, L. Petta, L. Gurreri, D. di Trapani, G. Mancini
Energy efficiency in wastewater treatment plant through modelling and process control: the SMART-EE-PLANTS project |
| 19.45-20.00 | D. Bonanno, A. Luciano, G Benina, C. Gatto, G. Mancini
A sustainable treatment of the residues from industrial waste incineration |

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ROOM 4

SESSION XXIV

**Sludge Management & Recovery of materials from wastewater & sludge
Chair: A. G. Capodaglio, P. Hlavinek, M. Smol**

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|-------------|---|
| 15.00-15.15 | Á. Fernández Braña, L. Sánchez Fernández, R. Iglesias Iglesias, J. Fierro Fernández
Practical application and environmental profile of sustainable sludge management by biopolymer valorisation |
| 15.15-15.30 | R. Annelio, C. De Ceglie, S. Murgolo, M. De Sanctis, Ed. Slavik, G. Mascolo, Cl. Di Iaconi
An advanced biological treatment for PFAS removal from landfill leachate |
| 15.30-15.45 | D. Hidalgo, E. Pérez, A. Urueña, D. Díez, M. Andérez, J.M. Martín-Marroquín, M.A. Sánchez, M. Gómez
Hydrothermal carbonization of sewage sludge under different reaction conditions:
Biodegradability and biomethane potential of the generated liquid fraction |
| 15.45-16.00 | C. C. Y. Ling, S. F. Y. Li
Synergistic effects in co-pyrolysis of sewage sludge and polyethylene terephthalate |
| 16.00-16.15 | F. Alizad Oghyanous, C. Eskicioglu
Hydrothermal Liquefaction of Municipal Sludge from Biological Nutrient Removal Plant:
A Process for the Circular Economy |
| 16.15-16.30 | O. Khoury, S. Spatari, R. Posmanik
Hydrothermal Carbonization of Sewage Sludge: A Sustainable Approach for Phosphorus
Recovery and Greenhouse Gas Mitigation in Wastewater Treatment Plants |
| 16.30-16.45 | L. di Bitonto, V. Locaputo, C. Pastore
Solvent-free method for lipid extraction from sewage sludge: a dual and synergistic approach
for reducing emerging pollutants |
| 16.45-17.00 | Z. Prus, K. Szkadłubowicz, J. Mikusińska, X. Badura, J. Worek, K. Kawoń, M. Rugieł, J. Chwiej,
K. Styszko, M. Wilk
The Effect of Hydrothermal Carbonization of Sewage Sludge on Microplastic |
| 17.00-17.15 | Praveen Kumar Vidyarthi, Pratham Arora, Nadège Blond
Sustainability assessment of valorisation for sewage sludge: Indian case study |
| 17.15-17.30 | S. L. Parra-Angarita, H. Ben Hamed, A. Fantasse, A. Leonard
Understanding Dehydrated Sludge Drying: The Role of Viscoelastic Properties |

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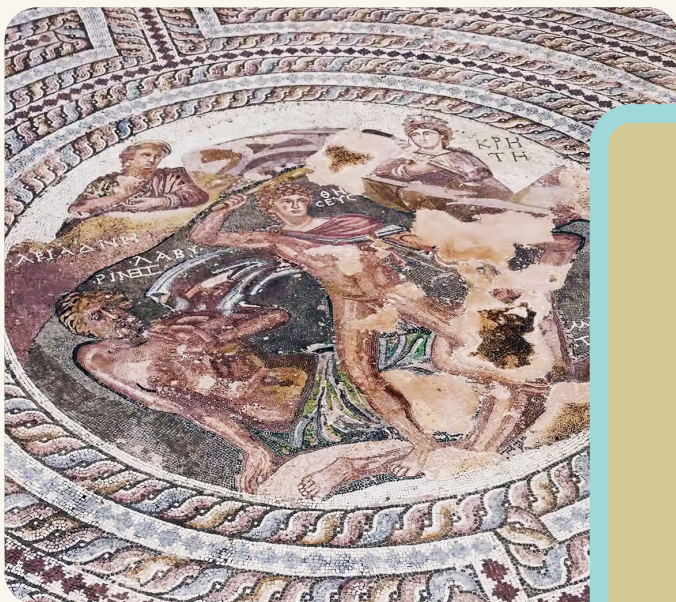
17.30-17.45	S. Durán-Videra, R. Rodríguez-Alegre, L. Pérez Megías, J. Erreyes Piloza, C. Andecochea Saiz, X. You Extraction of Humic and Fulvic acids from sewage sludge at different pH
17.45-18.00	P. Hlavinek, J. Kucerik, T. Chorazy, J. Racek Defining the potential for effective processing and recycling of industrial sludge
18.00-18.15	J. Walczak, A.G. Chmielewski, M. Zubrowska-Sudol Release of Organic Compounds from Sewage Sludge During Hydrodynamic Disintegration: Pilot Prototype System Verification
18.15-18.30	H.B. Hamed, C. Styve, P.A. Sergio, D. Toye, A. Léonard Sewage sludge stabilization through indigenous microalgae promoting growth: performance in a 20L tubular photobioreactor
18.30-18.45	A. Wijatkowska, F. Gil, D. Skrzypczak, K. Chojnacka Biostimulatory potential of waste whey-derived fertilizer: composition, processing and plant response
18.45-19.00	R. Taf, F. Gil, M. Mironiuk, K. Chojnacka Optimization of the acid hydrolysis process of dairy waste for the production of organic-mineral fertilizer
19.00-19.15	D. Szołdrowska, P. Marcinek, E. Walus, M. Smol Organic waste as a source of nutrients in agriculture – the potential of sewage sludge, animal manure and digestate
19.15-19.30	H. Abu-Qdais, W. Taan Promoting Solid Waste Composting Through Policy Reforms: The Case of Jordan
19.30-19.45	S. Chandel, S. Gopakumar, K. Surendra-Gopal, R. Vishnu Vermicomposting of Coconut Corewood Waste: Investigating Maturity and Optimal Mixing Ratios Using UV-Vis, FTIR, and Fluorescence Spectroscopy



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