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ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ
REGION OF CRETE



Hellenic
Mediterranean
University

HERAKLION 2019

26-29 June 2019

7th International
Conference

on

Sustainable Solid Waste
Management

www.heraklion2019.uest.gr

Committees

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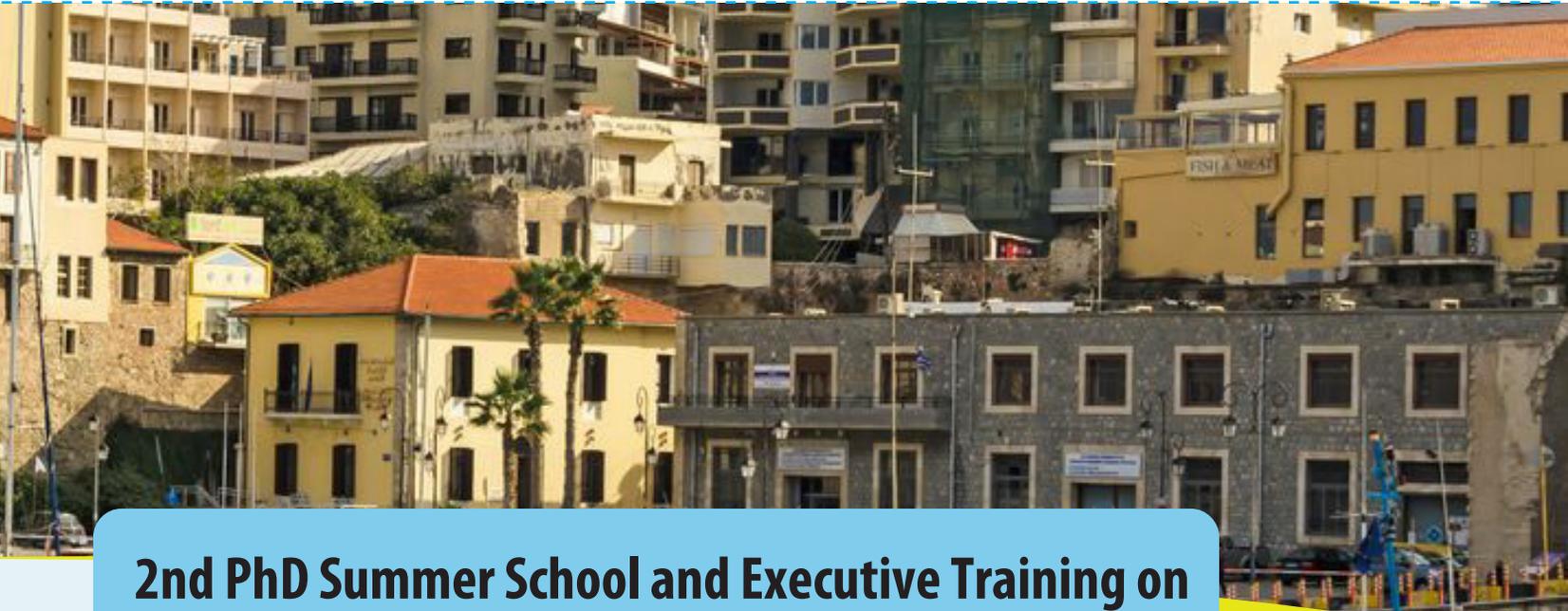
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2nd PhD Summer School and Executive Training on Solid Waste Management



2nd PhD Summer School and Executive Training on Solid Waste Management, 24 & 25 June 2019

The PhD summer school will cover the following topics:

Legal Framework and Policy, Municipal Solid Waste Management, Treatment Technologies, Anaerobic Digestion, Circular Economy, Waste-to-Energy, Sustainable Management.

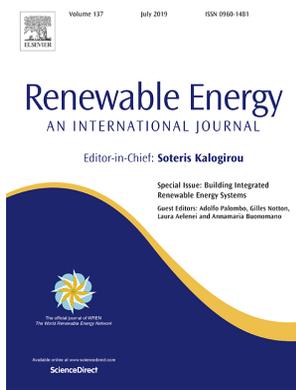
The summer school will include 16 teaching hours in total on 24th & 25th of June 2019. On June 26th, 2019, the participants will attend the Poster Session of the "HERAKLION 2019 7th International Conference on Sustainable Solid Waste Management" and a final session roundtable with the main topic being the "State-of-the-art and future directions of Sustainable Solid Waste treatment: the pathway to Circular Economy". Individual final assignments will be assigned to the participants and the grading of the course will be done on a Pass/ Fail basis. All the attendees will be given a certificate of attendance.

Wednesday 26th June 2019 (after the end of the sessions) Welcome Cocktail

Thursday 27th June 2019 at 20.30 Gala Dinner

Publishing in Journals

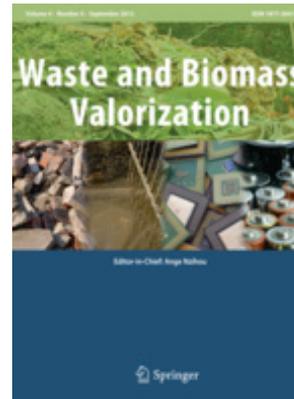
The high quality HERAKLION 2019 papers will be published after evaluation in:



a Special Issue of
RENEWABLE ENERGY
(ELSEVIER, Impact Factor: 4.900)



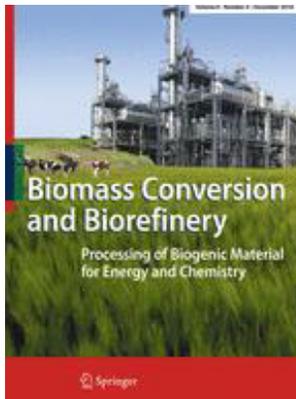
a Special Issue of
**SCIENCE OF THE TOTAL
ENVIRONMENT** (ELSEVIER,
Impact Factor: 4.610)



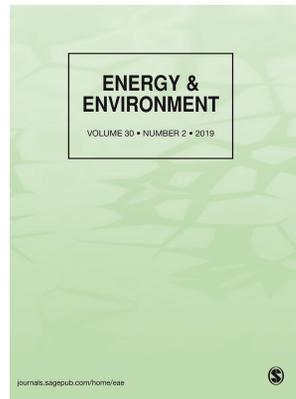
a Special Issue of
**WASTE AND BIOMASS
VALORIZATION** (SPRINGER,
Impact Factor: 1.874)



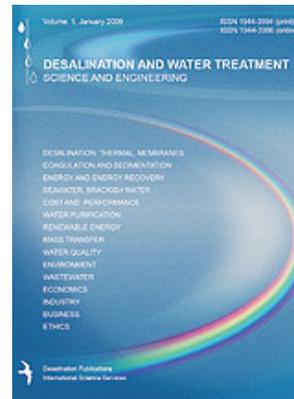
a Special Issue of
**ENVIRONMENTAL SCIENCE and
POLLUTION RESEARCH**
(Springer, Impact Factor: 2.800)



a Special Issue of **BIOMASS
CONVERSION AND BIOREFINERY**
(Springer, Impact Factor: 1.310)



a Special Issue of
ENERGY & ENVIRONMENT
(SAGE, Impact Factor: 0.568)



a Special Issue of
**DESALINATION & WATER
TREATMENT**
(Impact Factor: 1.631)



a Special Issue
**Materials for Clean Processes
in Energy**
(Impact Factor 2.467)



THE APPLICATION OF CIRCULAR ECONOMY IN AGRICULTURE & LIVESTOCK PRODUCTION



29-30 June 2019
Rethymnon, Crete



National
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ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ



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Δήμος
Αμαρίου
Municipality of Amari

THE APPLICATION OF CIRCULAR ECONOMY IN AGRICULTURE & LIVESTOCK PRODUCTION

29 June 2019 Site visit to Heraklion and Rethymnon

8:30

Departure from the conference venue

9.00-10.00

Visit at the Food4Feed LIFE project pilot unit in Heraklion, where food wastes from hospitality units are transformed into animal feed, utilizing solar energy. The units consists from a pretreatment area where food wastes are hand sorted and grinded and a solar drying hall, with two drying corridors and automated turning systems.

10.00-11.00

Visit at a Biogas Power Plant of 999 kW, located at the Industrial Area of Heraklion. The plant started its commercial operation in 2017 at 500 kWel and expanded in 2018 up to 999 kWel. The biogas plant applies cutting-edge technologies at the most critical points of production process. It is the first waste to energy power plant for municipal organic waste in Greece with collection to the source (expired packaged food from super markets, restaurants, hotels etc.).

11:00

Departure from Heraklion to Rethymnon

13:00-13:30

Light lunch

13:30-18:00

Implementation of circular economy in agriculture and livestock production - Site Visits

- Transfer to a creamery in Amari, Rethymno
- Transfer to an olive oil mill in Rethymno.
Description of the process of using plant residues as animal feed.
- Demonstration of circular economy practices in a lamb fattening plant using plant and animal waste.

Coordination: Maria Gerakianaki

18:00-18:30

Registration at "HOUSE OF CULTURE"

18:30-19:00

Opening Addresses

Stavros Arnaoutakis, Regional Governor of Crete

Georgios Kremlis, Honorary Director European Commission

In charge for DGENV of circular economy and insularity

Member of the environmental and social advisory council of the EBRD

Georgios Marinakis, Mayor of Rethymno

Pantelis Mourtzanos, Mayor of Amari

THE APPLICATION OF CIRCULAR ECONOMY IN AGRICULTURE & LIVESTOCK PRODUCTION

19:00-21:00

«The Implementation of Circular Economy in Agriculture and Livestock Farming - Best Practices - National and European Success Stories - Circular Economy & Insularity- Climate change impacts and adaptation in the agricultural sector of Crete»

Moderators: Georgios Kremlis & Maria Loizidou

«Best Circular Economy Best Practices in Agriculture and Livestock in Crete»

Dr. Alexandros Stefanakis President GEOTEE

«Circular Economy and Agrofood Sector. Financial Instruments and Alternative Mechanisms at a Local and Regional Scale»

Dr Eleni Hatziyanni, Director of Environment and Spatial Planning, Coordinator of EU Projects at the Region of Crete

LIFE15 ENVGR000257 (F4F): «Food for Feed: An Innovative Process for Transforming Hotels' Food Wastes into Animal Feed»

Kalliopi Bormpoudaki, Chemical Engineer MSc, United Association for the Solid Waste Management in Crete (ESDAK)

21:00-23:00

Dinner with a traditional Cretan menu
Traditional Cretan Evening

30 June 2019 Rethymnon, Crete

09:30

Departure from Rethymno to Anogia Crete

11:00-16:00

Visit to Psiloritis Natural Park –member of Global Geoparks of UNESCO

Organization: AKOMM – PSILORITIS DEVELOPMENT AGENCY S.A,
ORGANIZATION OF LOCAL GOVERNMENT

17.00

Return to Heraklion





THE APPLICATION OF CIRCULAR ECONOMY IN AGRICULTURE & LIVESTOCK PRODUCTION



29-30 June 2019
Rethymnon, Crete

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ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ



Agenda 2019

Wednesday, 26 June 2019

Room 1

Welcome Speeches - Keynote session 1 9.15-11.15

Room 1

MSW management - Experience of local authorities in waste management 11.30-14.15

Lunch Break 14.00-15.00

Anaerobic Digestion I 15.00-19.30

Room 2

Circular Economy & Symbiosis Networks 11.30-14.45

Lunch Break 14.00-15.00

Tools in the field of waste management 15.00-20.15

Thursday, 27 June 2019

Room 1

Keynote session 2 9.00 - 10.45

Room 1

Bioprocesses, Biorefineries in waste management I 11.15-14.45

Anaerobic Digestion II 15.00-18.45

Room 2

Agricultural Waste Management 11.15-14.45

Policy, Prevention, Socio economic Issues 15.00-19.00

Friday, 28 June 2019

Room 1

Waste-to-Energy 9.00-14.30

Lunch Break 14.15-15.00

Energy from Waste 15.00-18.30

Closing Session
Conclusions & Poster Awards Ceremony 19.00-19.30

Room 5

Young stakeholders networking session 15.00-17:30

Room 2

Recycling & Resources Recovery I 9.00-13.30

Lunch Break 14.15-15.00

Hazardous Waste 15.00-18.45

Agenda 2019

Room 3

Construction & Demolition Waste	11.30-14.00
Lunch Break	14.15-15.00
Waste Valorization I	15.00-19.15

Room 4

Waste from Electrical & Electronic Equipment, End-of-Life Vehicles	11.15-15.00
Lunch Break	14.15-15.00
Marine Litter, Plastics & Bioplastics	15.00-18.45

Room 3

Waste Valorisation II	11.15-14.45
Waste Valorization III	15.00-19.30

Room 4

H2020 - LIFE Master-class on Horizon 2020: How to win funds for your project?	11.15-14.00
Food Waste Management & Waste Management in island & Isolated areas	15.00-19.30

Room 3

Bioprocesses, Biorefineries in waste management II	9.00-14.45
Lunch Break	14.15-15.00
Characterisation of Waste Residues	15.00-18.45

Room 4

Aerobic Treatment & Waste management in general	9.00-14.15
Lunch Break	14.15-15.00
Recovery of materials from wastewater & sludge - Sludge Management	15.00-18.30

circular economy ethanol biotechnology food waste
biowaste valorization recycling materials glass
specific waste streams metal paper biofuels
waste-to-energy composting anaerobic digestion
gasification pyrolysis incineration biopolymers
energy tools prevention reuse landfill biomass WEEE
C&D waste plastics marine litter bioplastics
biorefineries innovation agricultural waste zero
to policy strategy islands isolated areas



HERAKLION 2019
agenda

8.00-9.15

Registration

ROOM 1

Welcome Speeches

9.15-9.45

Welcome Speeches

9.45-11.15

Keynote Speakers

Chair: M. Loizidou, A. Nzihou, S. Smith

Patrik Kolar, EASME, Department B: LIFE and H2020 Energy, Environment, Resources
"Latest developments in H2020 SC5 and LIFE"

Antonis Mavropoulos, International Solid Waste Association
"IND4.0 and the transformation of the waste sector"

Nickolas Themelis, Columbia University
"Waste Management in Milan, China, E.U. and Greece"

Stephen Smith, Imperial College London,
"The environmental resources embodied in food waste"

Maria Loizidou, National Technical University of Athens
"Current trends and future potential of biowaste and biomass"

11.15-11.30



Coffee Break

ROOM 1 SESSION I

MSW management - Experience of local authorities in waste management

Chair: G. Patoulis, M. Loizidou

11.30-11.45	M. Georgiou, P. Panteli, K. Borboudaki, I. Giakoumaki, N. Stylianidis, C. Mamoulakis, G. Zervas, J. Zentek, K. Lasaridi, T. Manios Food for Feed' Project: Design and operation of the pilot unit for transforming hotels' food wastes into animal feed
11.45-12.00	K. Tsiptsias, Director of Planning and Development - Waste Management of Western Macedonia S.A. Development of a collection at source network for biowaste: The case of Western Macedonia
12.00-12.15	I. Leontiadis, Ch. Zilidis, G. Dounias, O. Skiadi, C. Tsakalou, P. Markesini Epidemiological research and estimation of occupational and environmental hazards in the Fyli's solid waste management site and close resident people health effects
12.15-12.30	K. Paterakis, DEDISA Sustainable municipal solid waste management in Chania
12.30-12.45	D. Malamis, V. Panaretou, C. Tsouti, K. Moustakas, M. Loizidou Maximizing recycling in remote areas using the PAVEtheWAYSTE system
12.45-12.55	G. Papadakis, FODSA of Boreias Pediadas Waste Management in Boreia Pediada in Crete
12.55-13.05	A. Mavraganis Solid waste management in the Municipality of Vrilissia
13.05-13.15	M. Kavrakos Recycling in the Municipality of Vari-Voula-Vouliagmeni – The beginning of the circular economy application
13.20-13.30	A.C. Bourtsalas, V. Triantafyllou Assessment of advanced Mechanical Biological Treatment plants in Europe
13.30-13.45	G. Konstantzos, K. Moustakas, D. Malamis, M. Loizidou Minimisation of carbon footprint in municipal solid waste management
13.45-14.00	P. Mourgos, Managing Director, TEXAN / ENVIPCO Presentation of the Ecological Park of Athens & new separate collection & recycling technologies. How to reach recycling targets
14.00-14.15	Discussion - Conclusions
14.00-15.00	Lunch Break

ROOM 2

SESSION II

Circular Economy & Symbiosis Networks

Chair: H.-G. Baum, F. Battista, S. Vakalis

- | | |
|-------------|---|
| 11.30-11.45 | E. Chioatto, P. Sospiro
The EU Roadmap: from Waste Management (WM) to Circular Economy (CE) |
| 11.45-12.00 | P. Morone, F. Govoni
Sustainability assessment schemes and evidence-informed policy making to create the circular bio-based economy: the case of STAR-ProBio |
| 12.00-12.15 | P. Bartocci, Mauro Zampilli, F. Liberti, V. Pistolesi, S. Massoli, G. Bidini, F. Fantozzi
LCA analysis of waste food co-digestion, in the framework of i-REXFO LIFE project |
| 12.15-12.30 | C.G. Ide, A. Godoy-Faundez
Understanding the material recovery by material flows in food retailers: Jumbo supermarket, a Chilean case linking consumption to materials |
| 12.30-12.45 | J. Bossu, M. Reis, N. Le Moigne, H. Angellier-Coussy, V. Guillard
GLOPACK Project – New generation of bio-based and fully degradable composite food-trays made of biopolymers and fibres from agrowastes. Materials optimization for upscaled productive solutions |
| 12.45-13.00 | M. Gutierrez, S. Etxebarria, M. Revilla, S. Ramos, A. Ciriza, L. Sancho, J. Zufia
Strategies for the minimization of highly polluted effluents and secondary raw material procurement to achieve a Circular Economy in fish canning industry |
| 13.00-13.15 | H.-G. Baum
Design for a Circular Economy – Some Comments about implementing a successful Concept |
| 13.15-13.30 | S. Maryam Sadeghi, J. Jesus, E. A.C. Pinto, Agostinho A. Almeida, H. M. V. M. Soares
Efficient recycling of La (and Al) from fluid cracking catalysts using environmental friendly strategies: a contribution to the circular economy |
| 13.30-13.45 | B. Ruiz, A. Anfruns, R.P. Girón, A. Cabrera-Codony, E. Fuente, I. Suárez-Ruiz, M. J. Martín
Circular economy in a pulp biofactory: valorization of the fly ash from forest biomass waste combustion. Efficient activated carbons in VOCs removal |
| 13.45-14.00 | P. Kafasis
Circular economy in fur and wood industry: Material Match Making Platform (M3P/LIFE15/IT) |

- 14.00-14.15 A. Cabrera-Codony, B. Ruiz, R.R. Gil, L. Alexandra Popartan, E. Santos-Clotas, M. J. Martín, E. Fuente, Circular economy in the leather industry: from biocollagenic wastes to efficient activated carbons. Application for biogas energy recovery
- 14.15-14.30 G. Mancini, A. Luciano, P. Viotti, D. Fino
The Water-Waste-Energy Nexus: Closing the loop while contrasting the nimby syndrome
- 14.30-14.45 D. Hidalgo, F. Corona, J.M. Martín-Marroquín
Nutrients recycling: from waste to crop

ROOM 3

SESSION III

Construction & Demolition Waste

Chair: A. Luciano, C. Gutiérrez, J. Li Hao

- 11.30-11.45 Y.C. Tang, W.X. Feng, L.J. Li, J.M. Chen, L.Y. Ma, D.J. Bao
Mechanical performance of waste-rubber modified recycled-aggregate-concrete subjected to elevated temperature
- 11.45-12.00 C. Gutiérrez, J.A. Araiza
Evaluation of final disposal sites for construction and demolition waste in Mexico City
- 12.00-12.15 L. Rigamonti, S. Pantini
Assessment of the CDW management system implemented in Lombardy region (Italy)
- 12.15-12.30 J. L. Hao, B.Q. Cheng, H. P. Yuan, G. L. Zhu, X.Y.Li, F.Y. Guo, W.Q. Xing
Reducing Construction Waste through Prefabrication during Design Stage: A Simulation Approach
- 12.30-12.45 Y. Sánchez, M. Mariño, O. Hernández, M. S. Fernández
Obtaining a lightened concrete based on recycled paper and glass for the manufacture of blocks and prefabricated panels
- 12.45-13.00 A. González, K. Manquian-Cerda, P. Sepúlveda, M.E. González, N. Arancibia-Miranda
Synthesis and characterization of imogolite from cement kiln dust: Potential use as arsenite adsorbent

- 13.00-13.15 M. D. Kamitsou, D.G. Kanellopoulou, A. Christogerou, G. N. Angelopoulos
Byproducts valorisation in sulfobelite cements
- 13.15-13.30 A. Luciano, L. Cutaia, F. Cioffi, C. Sinibaldi
Demolition and construction recycling unified management:
the DECORUM platform for improving resource efficiency in construction sector
- 13.30-13.45 Xiaomeng Ding, Zhongfan Chen, Jianan Qi, Meloni Marco, Yang Chen
New design method for C30 recycled concrete using mixed source concrete coarse aggregates
- 13.45-14.00 C.M.F. Vieira, G. C. G. Delaqua, L. F. Amaral
Incorporation of glass polishing sludge waste into clay bricks

ROOM 4

SESSION IV

Waste from Electrical & Electronic Equipment, End-of-Life Vehicles

K. Lasaridi, A. Zorpas

- 11.15-11.30 B. Ruffino, D. Panepinto, M. Zanetti
A circular approach for recovery and recycling of automobile shredder residues (ASRs)
- 11.30-11.45 Ha Bich Trinh, Sookyung Kim, Rajiv Ranjan Srivastava, Jae-chun Lee
Total recycling of all constituent metals from a spent auto-catalyst
- 11.45-12.00 Meihan Yu, Siqin Xiong, Xiaoming Ma
Environmental and economic assessment of combined recycling method for electric vehicle lithium-ion battery in closed loop supply chain
- 12.00-12.15 C. Chroni, A. Lekkas, C. Drakouli, C. Abeliotis, E. Terzis, C. Angelakopoulos, K. Lasaridi
Assessment of EEE service lifetime, storage, and disposal in Greek households
- 12.15-12.30 K. Lasaridi, C. Chroni, C. Abeliotis, G. Protopapas, P. Kirkitsos, A. Dalamaga, R. Charitopoulou, K. Kalafata, C. Angelakopoulos
Preliminary results from the operation of the first WEEE sorting centres in Greece
- 12.30-12.45 R.Z. Rebello, M.T.W.D.C. Lima, L.H. Yamane, R.R. Siman
Recovery of silver in waste led lamps by thiourea leaching

12.45-13.00	E. Benzal, A. Cano, M. Solé, C. Lao, X. Gamisans, A.D. Dorado E-waste valorisation by recovering valuable metals with microorganisms
13.00-13.15	S. Mat Taib, F. Asyikin Alias, N. Nazleatul Najiha M.N, Mohd Fadhil Md Din Fluorocarbon refrigerant management and its co-Benefit in Malaysia and selected ASEAN Countries
13.15-13.30	J. Snyman, J. Snyman Developing a circular economy model for e-waste in the global economy
13.30-13.45	K. Boikou, K. Abeliotis, K. Lasaridi Household behaviour towards end-of-life mobile phones in Greece
13.45-14.00	M. Bogacka, M. Potempa, D. Lewandowski, K. Pikon, K. Klejnowska, P. Sobik Thermal treatment of the silicon photovoltaic cells waste covered with EVA and ETFE foil
14.00-14.15	A. Borthakur, P. Singh How E-waste is perceived in contemporary urban India: An in-depth Analysis of publics' understandings and awareness
14.15-14.30	L.H. Yamane, V.C.N. Motta, M.T.W.D.C. Lima, R.R. Siman Optimization of copper leaching from PCB tablets using central composite rotatable design
14.30-14.45	E.R. Lewis, P. Douglas, R.G. Charles, G. Liversage, D. Bates-Moss Evaluation of methods for sampling and analysis of copper when present in high weight percent in recycled material
14.45-15.00	D. Dutta, S. Goel Toxicity Characteristic Leaching Procedure (TCLP) of waste residue of Printed Circuit Boards (PCBs) of personal computers

ROOM 1

SESSION V

Anaerobic Digestion I

Chair: S. Smith, B. Ruffino, C. Eskicioglu

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|-------------|--|
| 15.00-15.15 | B. A. Alagöz, O. Yenigün, A. Erdinçler
Towards sustainable waste management: reuse and energy recovery potentials from waste water sludges and agro-waste |
| 15.15-15.30 | J. Mosquera, W. Beltran, N.D. Alvarez, S.D. Nova, A. Santis, P. Acevedo, I. Cabeza
Biogas production assessment for a semi-continuous anaerobic co-digestión pilot plant |
| 15.30-15.45 | D. Hidalgo, S. Sanz-Bedate, J.M. Martín-Marroquín, I. Alvarellós, R. Piñero, P. Acebes, G. Antolín
Biogas upgrading using micro-porous hollow fibre membrane contactors |
| 15.45-16.00 | A. Agarwal, P. Gehlot, P. Dangayach, N. Pareek, V. Vivekanand
Comparative appraisal of pretreatment strategies for improving the biogas yield from flower waste |
| 16.00-16.15 | M. Dimitropoulou, V. Stergiou, M. Chionidis, G. Giannakis, G. Iliopoulos
Circular economy-zero waste anaerobic digestion plant in Greater Amman Municipality |
| 16.15-16.30 | A. Eftaxias, C. Michailidis, V. Diamantis, A. Aivasidis
Anaerobic co-digestion of oleic acid and whey protein: the role of emulsification |
| 16.30-16.45 | Jingxin Zhang, Kai-Chee Loh, Yen Wah Tong
Optimizing mixing time to lower the energy consumption of an anaerobic digestion waste-to-energy system for food waste management |
| 16.45-17.00 | G. Chinellato, M. M. Properzi, D. Bolzonella, C. Cavinato
Single-phase anaerobic digestion of the organic fraction of municipal solid waste without dilution: reactor stability and process performance for small size and decentralized plants |
| 17.00-17.15 | G. Kor-Bicakci, T. Abbott, E. Ubay-Cokgor, C. Eskicioglu
Occurrence and fate of endocrine disrupting antimicrobial triclocarban in municipal sludge during advanced anaerobic digestion using microwave pretreatment |
| 17.15-17.30 | L. Zhang, K.-C. Loh, J. Zhang, L. Mao, Y.W. Tong, C.-H. Wang, Y. Dai
Multi-stage anaerobic co-digestion of food waste and waste activated sludge |
| 17.30-17.45 | N. Boontian, C. Piasai, T. Phorndon, M. Padri
Acetic acid by product from various fermentations of fermented biogas excess sludge and acidic sludge substrate |

17.45-18.00	M. Zeppilli, E. dell'Armi, L. Cristiani, M. Majone Bioelectromethanogenesis reaction in a tubular Microbial Electrolysis Cell (MEC) for biogas upgrading
18.00-18.15	A. Eftaxias, D. Georgiou, V. Diamantis, A. Koumara, M. D. Koskinari, A. Aivasidis Integrated process for anaerobic digestion of dairy manure combined with ammonia recovery and biogas purification
18.15-18.30	Xinyi Zheng, Ruying Li, Min Ji Optimization of Temperature-separated Two-stage Anaerobic Fermentation Process Treating waste activated sludge and food waste
18.30-18.45	W. Merkle, A. Lemmer, H. Oechsner Two-stage high pressure anaerobic digestion for biomethane production
18.45-19.00	J.W. Lim, Y.W. Tong Comparing different strategies for start-up of thermophilic anaerobic digestion: Reactor stability and microbial community structure
19.00-19.15	K. Vardas, N.-I. Batistatos, P. Gikas Dry stage anaerobic digestion of fine sieved solids from municipal wastewater
19.15-19.30	I. Janajreh, K. Elkadi, O. Makanjuola, S. El-Agroudy Molding of Bio-hydrogen production from anaerobic digestion of solid waste

ROOM 2 SESSION VI

Tools in the field of waste management

Chair: A. Erdinçler, J. Quoden, M. Doula

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| 15.00-15.15 | V. Sousa, A. Drumond, M.J. Bonnet, P. Leal, I. Brites, I. Meireles, C. Dias-Ferreira
The impact of the 2008 economic crisis on waste production in Portugal |
| 15.15-15.30 | M. K. Doula
Development of transferability plans for environmental projects related to resources conservation and waste reuse |
| 15.30-15.45 | R.R. Siman, J.L.N. Zon, W.M.R. Günther, G.R. Besen, L.H. Yamane
Indicators of sustainability of selective collection municipal programs and recyclable material picker organizations |
| 15.45-16.00 | M. Romenska, J. Quoden
EXPRA Packaging and Recyclability online tool: P4R |
| 16.00-16.15 | P. Nowakowski, A. Król
Investigating the influence of preliminary processing of waste tires on collection and transportation costs and vehicle emissions |
| 16.15-16.30 | N. I. Magleo, M.A. B. Promentilla
Understanding the barriers in implementing waste-to-energy technologies in the Philippines using Analytic Hierarchy Process |
| 16.30-16.45 | Z. Juznic-Zonta, A. Guisasola, J. A. Baeza
Decision support system for selecting the optimal WWTP configuration including resource recovery units |
| 16.45-17.00 | Sridhar Pilli, K.S.S.V.V. Prasad, R.D. Tyagi, R.Y. Surampalli
Decision support system for wastewater treatment plants |
| 17.00-17.15 | S. Spiliotakou, M.Dimitropoulou, A. Bourka, G. Iliopoulos, D. Bourkas
Smart recycling & rewarding platform for schools |
| 17.15-17.30 | W. Bauer, H. Vielreicher
Thoughts about RRR-Communication - How well meant intentions in "Reduce - Reuse - Recycle" are an inadequate basis for a successful development of international waste management |
| 17.30-17.45 | E. Quéheille, F. Taillandier, N. Saiyouri
Optimization tool of waste management in building deconstruction with environmental criteria |

17.45-18.00	B. Riesco Garcia, C. Fernández González, L. Saralegui Gómez, E. González Prieto, B. Montes Parra The solution for a safe & automatic Municipal Waste Sorting: the Smart Autonomous Robot with Artificial Intelligence
18.00-18.15	R. Bacci, E. Rossi, N. Frasi, I. Pecorini, R. Iannelli, G. Ferrara Economic evaluation of biofiltration technologies for emissions mitigation from aftercare landfill sites
18.15-18.30	E. Bemporad, A. Guercio, A. Ledda, F. Mauro Using smart personal protective equipment in waste management: advantages and disadvantages
18.30-18.45	L. Biganzoli, L. Rigamonti, M. Grosso, G. Dolci LCA evaluation of different recycling options for incineration bottom ash
18.45-19.00	A. Maalouf, M. El-Fadel Impact of management alternatives on GHG emissions from waste
19.00-19.15	M. Tsangas, A. A. Zorpas Life Cycle Assessment of the framework of Cyprus Energy Policy
19.15-19.30	V. Kouloumpis, R. Pell, X. Yan Eliminating plastics and the potential trade-offs with mitigating climate change: An LCA perspective on Southwest England
19.30-19.45	K. Abeliotis, K. Lasaridi, C. Chroni, C. Angelakopoulos Life Cycle Assessment of the first WEEE sorting centre in the region of Attica, Greece
19.45-20.00	P. Loizia, V. Inglezakis, A. Zorpas Measuring environmental performance in local level in the framework of the targets set on Waste Framework Directive
20.00-20.15	K. Mahmood Satellite based Segregation of MSW dumping sites using digital image processing

ROOM 3

SESSION VII

Waste Valorization I

Chair: K. Chojnacka, P. Rusek, A. P. Galvin

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| 15.00-15.15 | A.P. Galvín, A. López-Uceda, A. Barbudo, M. Cabrera, J. Rosales, A. Lozano-Lunar
Assessment of environmental aspects of using biomass bottom ashes as stabilising agent of expansive clays |
| 15.15-15.30 | K. Gorazda, B. Tarko, H. Kominko, Z. Worek, A.K. Nowak
Phosphate industry in the balance of sustainable development and circular economy |
| 15.30-15.45 | A.I. Vavouraki, L. Makratzis, D. Pentari, K. Komnitsas
Adsorption of heavy metals from aqueous solutions on synthetic zeolites produced from Greek fly ash: Equilibrium and kinetic studies |
| 15.45-16.00 | S. Schab, A. Zdunek, M. Borowik, M. Mikos-Szymańska
Study of the possibility of using meat and bone meal ash for the production of granular fertilizers |
| 16.00-16.15 | M. Kalaw, J. Adiarte, R. Dela Cruz, K.A. Martinez, C.A Vega, M. Promentilla
On valorization of volcanic ash, waste pen shells and red clay to synthesize geopolymers |
| 16.15-16.30 | B. Yigit, G. Salihoglu, A. Mardani-Aghabaglou, S. Kilic, N.K. Salihoglu, S. Ozen
Recovery of sewage sludge incinerator ash by geopolymerization |
| 16.30-16.45 | A. Soultana, A. Valouma, A.I Vavouraki, K. Komnitsas
Mechanical and durability properties of alkali activated materials produced from brick waste and metallurgical slag |
| 16.45-17.00 | M. Benzerzour, M. Amar, N.-E. Abriak
The optimization of waste material reuse in concrete using innovative combination method based on mathematical model and AI |
| 17.00-17.15 | K. Chojnacka, A. Witek-Krowiak
Controlled release micronutrient fertilizers for precision agriculture |
| 17.15-17.30 | H. Kominko, K. Gorazda, Z. Wzorek
Closing the nutrients cycle by using organo-mineral fertilizers based on secondary raw materials |
| 17.30-17.45 | P. Rusek, K. Borowik, M. Mikos-Szymańska, S. Schab
Development of a technology of innovative microbiologically enriched mineral fertilizers (BIO-FERTIL) |

- 17.45-18.00 A. Witek-Krowiak, K. Chojnacka, B. Ligas, D. Skrzypczak
Valorization of post-extraction biomass residues as carriers of bioavailable micronutrients for plants and livestock
- 18.00-18.15 T. Klammsteiner, V. Turan, S. Oberegger, H. Insam, M. Fernández-Delgado Juárez
Black Soldier Fly (*Hermetia illucens*, Diptera: Stratiomyidae) frass as plant fertilizer
- 18.15-18.30 X. Guimera, D. Gabriel, A. D. Dorado, A. Bonsfills, X. Gamisans
A novel two-stage bioscrubber for elemental sulfur valorization: Optimization of the SO₂ and NO_x sequential wet-absorption step
- 18.30-18.45 R. M. Novais, J. Carvalheiras, L. Senff, M. P. Seabra, R. C. Pullar, J. A. Labrincha
Cork-containing alkali activated composites: a multifunctional ultra-light building material
- 18.45-19.00 A. Ronda, P. Haro, S. Nilsson, D. Fuentes, I. Pardo, A. Gómez-Barea
Management of solid residue from sewage sludge conversion in Waste-to-Energy Plants
- 19.00-19.15 A. Viretto, N. Gontard, H. Angellier-Coussy
Green wastes of urban parks and gardens as sustainable fillers for biocomposite materials

ROOM 4

SESSION VIII

Marine Litter, Plastics & Bioplastics

Chair: N. Gontard, E. Iacovidou

- 15.00-15.15 N. Gontard
Plastic waste: between threat, addiction and miracle solutions, a range of complementary knowledge-based actions are emerging
- 15.15-15.30 E. Xu, V. Maisuria, R. Cheong, L. Hernandez, N. Tufenkji
Investigations of micro- and nanoplastic toxicity using a model aquatic invertebrate and a model insect
- 15.30-15.45 D. Couceiro, V. Oliveira, D. Tobaldi, A. Branha, C. Dias-Ferreira
Microplastics occurrence on sandy beaches of Southeast coast of Angola
- 15.45-16.00 A. Reboa, L. Cutroneo, G. Besio, F. Borgogno, L. Canesi, S. Canuto, K. Djaoudi, F. Enrile, I. Forioso, G. Greco, V. Lenoble, A. Malatesta, S. Mounier, M. Petrillo, A. Stocchino, J. Tesan, M. Capello
SPlasH! - Stop to plastic in H₂O! An EU Project to investigate the state of the port environment

- 16.00-16.15 D. Sarigiannis, S. Karakitsios, M. Kermenidou, I. Frydas, I. Moschoula, D. Kousis
The fate of Microplastics in the Aquatic Environment: The case of the Thermaic Gulf
- 16.15-16.30 L. Pazdur, C. Vande Velde, P. Billen
A new process scheme for 100% chemical recycling of polyurethanes
- 16.30-16.45 J.C. Fradinho, J. Almeida, E. Serrano, A. Oehmen, E. Lara, M.A.M. Reis
Converting HRAP into phototrophic purple bacteria ponds for polyhydroxyalkanoates production from wastewater
- 16.45-17.00 E. Foschi, A. Bonoli
Scenario of the plastic waste recycling in Emilia Romagna Region (Italy) as effort for the recent European Strategy for plastics in a circular economy
- 17.00-17.15 E. Iacovidou, N. Ebner, B. Orsi, A. Brown
Plastic packaging - How do we get to where we want to be?
- 17.15-17.30 K. Ragaert, S. Sfez, S. Hubo, S. Huysveld, M. Roose, S. De Meester, J. Dewulf
A Design for circularity case study: Replacing PVC in temporary information carriers
- 17.30-17.45 D. Briassoulis, A. Pikasi, M. Hiskakis
Techno-economic sustainability criteria and indicators for End-of-Life options of biobased plastics
- 17.45-18.00 Jie Yu, Tao Chen, Dingshun Wang, Lushi Sun
The behavior of heteroatom compounds during the pyrolysis of waste computer casing plastic under various heating conditions
- 18.00-18.15 A.B. Beltran, M.R.M. Delgado, A.E. Nebres, K.M.O. Yap, Hirofumi Hinode, M.A.B. Promentilla
Preparation and characterization of porous "Baluko" (Local Pen Shell)/Fly Ash/Titania composite geopolymer sphere
- 18.15-18.30 F. Petracchini, G. Di Carlo, S. Genova, C. Giuliani, D. Borin, V. Paolini, L. Tomassetti, M. Torre, M. Segreto, P. Tratzi
Plastic waste recovery: the project PLASMARE
- 18.30-18.45 L. Calin, A. Catinean, M. Bilici, A. Samuila, L. Dascalescu
Electrostatic separation of plastic mixtures ABS/HIPS and ABS-PC/HIPS from IT equipment using fluidized bed tribocharging

Poster session

1. M.H. Zheng, G.R. Liu, L.L. Yang, Y.Y. Zhao
Polybrominated dibenzo-p-dioxins and dibenzofurans emission from a cement kiln co-processing solid waste
2. M.A. Stylianou, I. Erotokritou, A. Agapiou
Composition of volatile organic compounds (VOCs) emitted from coffee residues
3. S. Alexandrakis, D.Vamvuka, V. Papadakis, K. Komnitsas
Thermal valorization of sewage sludge through combustion in a fluidized bed unit
4. S.Z. Zhang, W.N. Wan
Occurrence and distribution of organophosphorus esters in soils and wheat plants in a plastic waste treatment area in China
5. L. Mojović, D. Mladenović, A. Djukić-Vuković, M. Stankovic, S. Kocić-Tanackov, J. Pejin
Utilization of agro-industrial residues as immobilization carriers in lactic acid production
6. A.P. Galvín, A. López-Uceda, A. Barbudo, M. Cabrera, J. Ayuso
Evaluation of heavy metal availability in playground surfacing based on leaching procedures for environmental assessment
7. Byeong-Kyu Lee, Ryeo Gyeong Youn, Min-Hee Park, Seol-Hwa Yun, Sang Yong Jang
A Proposal of Classification Criteria as Designated or General Waste of Chemicals Emitted from Chemical Accidents
8. A. Fernández-Agulló, M.S. Freire, C. Ramírez-López Ramallal, J. Fernández-Moya, J. González-Álvarez
Valorization of residual biomass from forest management and wood processing for the production of bioactive compounds
9. M. Zubrowska-Sudol, J. Walczak, A. Garlicka, K. Sytek-Szmeichel, K. Umiejewska
Hydrodynamic disintegration by means of the method of improvement of the biogas potential of waste
10. P. Tzatsi, S. Athanasiou, E. Chezanoglou, A. Kalapouti, E. Sferopoulou, E. Sidera, K. Kaderides, A.M. Goula
Encapsulation of antioxidant compounds extracted from unused chokeberries by extrusion, co-crystallization, and freeze-drying
11. P. Keramidas, L. Papaikononou, A.M. Goula
Peanut shell as new biosorbent of phenolic compounds from olive mill wastewaters
12. E. Sastre, A. García, M.P. Rodríguez, T. Monin, M.E. Hernández, A. Gómez, P. Gutiérrez
Production of yeast extract from spent brewer's yeast at pilot scale
13. L. Stabili, M.I. Acquaviva, R.A. Cavallo, E. Cecere, C. Gerardi, M. Narracci, G. Portacci, A. Petrocelli
The REMEDIA-Life project and the cultivation of macroalgae as bioremediators: exploitation of their biomass for biotechnological purposes
14. V. Aristizábal-Marulanda, J. C. Solarte-Toro, C. A. Cardona A.,
Experimental production of bioethanol, biogas, syngas and electricity under biorefinery concept
15. F. Corona, D.Hidalgo, J.M. Martín-Marroquín
Transition towards a more carbon and nutrient efficient agriculture in Europe
16. K.R. Duarte, J.P.S.Q. Menezes, M.M.V.M. Souza
Effect of magnesia addition in cobalt catalysts supported on alumina for hydrogen generation by glycerol steam reforming
17. E. Morillo, M. Rubio-Bellido, J. Villaverde, F. Madrid
Biodegradation of nonylphenol by novel bacterial strains isolated from sewage sludge
18. F. Madrid, M. Rubio-Bellido, J. Villaverde, E. Morillo
Removal of nonylphenol, pyrene and phenanthrene from sewage sludge and biosolids by cyclodextrins and rhamnolipids

Poster session

19. L. di Bitonto, H.E. Reynel-Avila, D.I. Mendoza-Castillo, C. Pastore, A. Bonilla-Petriciolet
Valorization of mexican waste biomasses for bioenergy applications
20. L. Zhang, K.-C. Loh, S. Sarvanantharajah, Y. Shen, Y.W. Tong, C.-H. Wang, Y. Dai
Recovery of N and P nutrition from anaerobic digestate by natural superabsorbent fiber
21. Ml. Mogotsi, Hd. Vivian, A. Motha, Rc. Jg. Emery
WASTEFLAGSHIP Programme- The diversion of municipal solid waste away from landfills in six south African municipalities
22. R. Erhatic, T. Peremin-Volf, S. Janček
The effect of compost on the growth and development of *Calendula officinalis* L. seedlings
23. Y.D. Seo, S.Y. Oh
Biochar-mortar composites for carbon sequestration and environmental application
24. Y.F. Sun, Y.W. Liu, J.W. Song, X.G. Diao
DBD plasma enhanced catalytic reforming of toluene to hydrogen-rich syngas
25. D.I. Mendoza-Castillo, H.E. Reynel-Ávila, L. di Bitonto, C. Duran-Valle, A. Milella, C. Pastore, A. Bonilla-Petriciolet
Preparation of lanthanum functionalized adsorbents from a lignocellulosic biomass and their application in arsenic adsorption
26. F.J. Villalobos-Delgado, L. di Bitonto, C. Pastore, H.E. Reynel-Ávila, D.I. Mendoza-Castillo, A. Bonilla-Petriciolet
Green solvent extraction of lipids from sewage sludge of wastewater treatment plants
27. E. F. Ledesma, A. López-Uceda, J.R. Jimenez, J.M. Fernandez
Durability of sustainable mortars made with filler from different industrial by-products
28. M.A. Cardete, J. Mata-Álvarez, J. Dosta, R. Nieto-Sánchez
Sludge settling enhancement in petrochemical activated sludge systems focused on organic matter removal
29. A. G. Pantziaros, C. Flougekou, G. Vamvarapis, M. Vlachogiannis, C. A. Paraskeva
Design of a prototype antioxidant isolation unit from espresso coffee beverage production waste
30. G. Strazzer, D. Bolzonella, S. Rossetti, F. Battista
Optimization of Volatile Fatty Acids production from household food waste for the biorefinery supply chain
31. Kyung Sob Choi, Byung-Su Kim, Soo Bok Jeong, Hyun Sik Park, Jae-chun Lee, Jinki Jeong
A Novel Method for Recovering Iron from Waste Slag Generated in Top Submerged Lance (TSL) Plant at Zinc Refinery
32. L.M. Queiroz, R.M.M.C. Silva, G.A. Castro, V.M. Zanta
Use of biosolids in maize cultivation in small rural farms in Northeastern Brazil: Quantitative Microbial Risk Assessment Approach
33. V.F. de Almeida, A. Ronda, I. Pardo, A. Gomez-Barea
Partitioning of contaminant and inorganic species during thermal devolatilization of dried sewage sludge
34. Tai Gyun Kim, Jong Hyun Kim, Rajiv Ranjan Srivastava, Jae-Chun Lee
Copper recovery by reverse flotation of Cu-bearing plastic waste generated through air-table separation of the end-of-life copper wires
35. E. Carnevale, A. De Risi, L. Lombardi, B. Mendecka, F. Micali
Energy efficiency of hydrothermal carbonization of olive pomace: scaling up from a laboratory to industrial scale
36. R. Madureira, C. Dias-Ferreira
Technological solutions for data communication for pay-as-you-throw (PAYT) waste tariffs
37. Dezhi Wang, Jiacheng Li, Yuchan Feng, Yinyan Zhang,
Freezing-thawing resistance of recycled coarse aggregate concrete containing fly ash
38. V.M. Zanta, A.R.P. Guedes L.M. Queiroz
Nutrient recovery from human urine by small scale composting process

Poster session

39. A Leahu, S. Ropciuc, C. Ghinea, M-A. Oroian
Yogurt enrichment with pumpkin powder: color, sensory and rheological properties
40. B. Hülsemann, L. Zhou, H. Oechsner
Residual gas potential difference between the summer and winter samples
41. M. Domżał-Kędzia, J. Suchodolski, I. Szmigiel, D. Konkol, M. Korczyński, M. Łukaszewicz, A. Krasowska
Fermented rapeseed meal by *Bacillus subtilis* is a promising feed component with pro and prebiotic properties
42. G. Xanthopoulou, S. Tungatarova, G. Vekinis, T. Baizhumanova, M. Zhumabek, G. Kaumenova, B. Kazhdenbek, Zhang Xuliang, D. Murzin
Production of synthesis gas from biogas on composite materials prepared by combustion synthesis method
43. Kyung Sob Choi, Byung-Su Kim, Soo Bok Jeong, Hyun Sik Park, Jae-chun Lee, Jinki Jeong
A Novel Method for Recovering Iron from Waste Slag Generated in Top Submerged Lance (TSL) Plant at Zinc Refinery
44. Yan Hu, Lin-Lin Zhu, Zong-Nan Li, Shuai You, Sheng Sheng, Jun Wang
Isoquercitrin synthesis with recombinant *Escherichia coli* pRSFDuet1-rhaB1-egfp biofilm in a microreactor
45. Jingxin Zhang, Kai-Chee Loh, Yen Wah Tong
Conversion of digestate from anaerobic digestion of food waste into fertilizers
46. Peng-Yuan Wang, Qing-Bo Tu, Sheng Sheng, Fu-An Wu, Jun Wang
Inhibitory effect of plant essential oil on the biological activity of *Ralstonia solanacearum*
47. Shuai You, Chen Xie, Jun Wang
Catalytic performance and thermostability improvement of a GH10 xylanase by module substitution
48. P.A. Casciatori, F.P. Casciatori, R. Silva
 β -glucosidase production by *Trichoderma reesei* and *Thermoascus aurantiacus* by solid state cultivation in sugarcane bagasse
49. Sook-Hyun Nam, Jae-wuk Koo, Eunju Kim, Minhwan Kwon, Tae-Mun Hwang
2-MIB removal of algal organic matter derived from the bloom-forming cyanobacterium *Microcystis Aeruginosa* in UV/H₂O₂ process
50. V. Kumar Vaidyanathana, K. Saikiab, J. L. Folch-Malloch, R. A. Batista-Garciad, H. Cabanaa, V. Vinoth Kumar
Cost-effective production of *Trichoderma viride* lignocellulolytic enzyme cocktail by solid-state fermentation using wood biorefinery sludge: Effects of fermentation inhibitors and organic contaminants
51. V. Lopes, A.R. Ferreira, S. Peters, F.J. Pazzaglia, N. Couto, S. Pamukcu, A.B. Ribeiro
Characterization of coal related matrices and assessment as a source of rare earth elements
52. J.W. Koo, S.H. Nam, E.J. Kim, T.M. Hwang
Feasibility study on membrane capacitive deionization system to highly concentrated sewage and wastewater for controlling phosphorus and nitrogen
53. Ting Huang, Fan Zhang, Hua Wang, Shuai You, Jun Wang
Synergistic study on the conversion of rutin from pomelo peel extract to isoquercitrin in a droplet microreactor
54. Hong Sok Oh, Seon Hong Kang, Tae-Mun Hwang
Application of coagulant originated from natural materials using cyclonic-DAF reactor for algae removal
55. D. Drózdź, K. Malińska, M. Kacprzak, M. Mrowiec, A. Szczypiór, P. Postawa, T. Stachowiak
Potentials of fish pond sediments composts as organic fertilizers
56. S. Panić, N. Đurišić-Mladenović, M. Milanović, I. Stijepović, M. Tomić
Characterization of biochar samples produced by pyrolysis of agricultural and woody biomass
57. A. Shukla
Temperature effect on engineering properties of fly ash
58. L. Díaz, C. González, C. Aliaga
SCALIBUR: Leading a Revolution in Biowaste Recycling

Poster session

59. A. Angeli, A. Zorpas
Sustainable Management and Valorization of Spent Coffee Grounds (SCGs) in the Framework of Circular Economy
60. D. Stamatakis, A. Zorpas
Wastewaters in the framework of Circular Economy: The case study of Crete
61. D. D. München, H. M. Veit
Influence of sulphuric acid concentration and solid/liquid ratio on leaching efficiency of rare earth elements from NdFeB postconsumer magnets
62. A. Chrysargyris, M. Prasad, O. Antoniou, N. Masou, A. Kavanagh, N. Tzortzakis
Exploitation of Biochar type and ratio as a peat additive/ partial peat replacement in growing media
63. M. Mikos-Szymańska, M. Borowik, S. Schab, P. Rusek, K. Borowik, M. Wyzińska
Fertilising potential of a mineral compound fertilizer based on struvite recovered from the liquid fraction of digestate
64. E. Nikolaivits, A. Agrafiotis, R. Siaperas, A. Termentzi, N. Fokialakis, J. Ouazzani, E. Topakas
Exploiting marine fungal biodiversity for the bioremediation of chlorinated aromatic pollutants and discovery of novel enzymes
65. A. Chrysargyris, O. Antoniou, P. Xylia, G. Akinci, N. Tzortzakis
Exploitation of paper waste as a substitute growing medium component for the production of Brassica seedlings in nurseries
66. G. Dedes, A. Karnaouri, K.S. Triantafyllidis, E. Topakas
Development of novel chemo-enzymatic processes for the conversion of lignocellulosic biomass towards the production of furans
67. A. Chrysargyris, Omiros Antoniou, P. Xylia, S. Petropoulos, N. Tzortzakis
The use of coffee waste in growing media having biostimulants effects on the production of Brassica seedlings in nurseries
68. R.M. Deus, R.A.G. Battistelle, B.S. Bezerra, F.D. Mele
Municipal Solid Waste and its environmental impacts: changing reality of small Brazilian municipalities through better managerial practices
69. K. Philippou, A. Konstantinou, I. Pashalidis
Thorium adsorption by oxidized biochar pine needles - The effect of particle size
70. Wei Wang
Solving Waste Lead-acid Battery Problems in China: Risk and Challenges
71. M.E. Taheri, E. Salimi, E.M. Barampouti, S. Mai, K. Moustakas, D. Malamis, M. Loizidou
Valorization of restaurant food waste under the concept of a biorefinery
72. A. Paz, A. Karnaouri, C. Templis, N. Papayannakos, E. Topakas
Biorefinery of olive pomace waste: optimization of Organosolv pretreatment process
73. C. E. Nascimento, P.C.G. Mól, E. Gomes, R. da Silva
Use of food industry waste in the production of a thermostable cellulase
74. P.R. Dias, L. Schmidt, G. Spier, M. Lunardi, J. Bilbao, R. Corkish, H.M. Veit
Recycling waste solar modules using organic solvents
75. D. Fang
Isolation of filamentous fungi *Penicillium simplicissimum* for improved sludge filterability and dewaterability
76. H. Azaizeh, S. Abdelhadi, H. Jradat, G. Rytwo, C. G. Dosoretz
Production of biochar and activated biochar from olive mill solid waste for the removal of heavy metals and calcium from water
77. M. Dadras-Chomachayi, F.R. Beltrán, A. Jalali-Arani, E. Pérez, M.U. de la Orden, J. Martínez Urreaga
Utilization of organic nanofillers from renewable resources in the recycling of poly(lactic acid)
78. J. Martínez Urreaga, F.R. Beltrán, J. Acosta, T. Aguinaco, C. Fonseca, A. Ochoa, J. A. Oliet Palá, M.U. de la Orden
Tube shelters from agricultural plastic waste: an example of circular economy

Poster session

79. J. Ramos, F.R. Beltrán, M. Rodriguez, J. Martínez Urreaga, M.U. de la Orden
Use of nanoclays for the valorization of poly(lactic acid) wastes
80. M. Drdlová, V. Prachař, O. Sviták
Utilization of waste steel fibres from tires in slurry infiltrated fibre concrete for blast protective elements
81. M. Della Zassa, A. Ronda, G. Gianfelice, P. Canu
Study of temperature profiles and weight loss during sludge smouldering with a macro TGA
82. D. Skrzypczak, K. Mikula, A. Witek-Krowiak, D. Podstawczyk
Hydrogel biocomposites as eco-friendly fertilizers for slow release of micronutrients
83. M.A. Sadenova, G.B. Zhakupova, T.B. Anuarbekov
Characteristics of some solid industrial wastes and prospects for their disposal
84. M.A. Sadenova, N.A. Kulenova, Zh.S. Onalbayeva
New approaches in hydrometallurgical processing of Kazakhstan's low-grade mineral and technogenic raw materials
85. Zh.S. Onalbayeva, M.A. Sadenova, G.S. Pestova, N.A. Kulenova
Recycling of heat from the metallurgical industry wastes
86. V. Szűcs, J. Hámori, R.P.F. Guiné
Environmental aspects of Hungarian consumers' food choice
87. J. Carneiro, D.M. Tobaldi, M.N. Capela, R.M. Novais, M.P. Seabra, J.A. Labrincha
Waste-based ceramic pigments prepared from: electroplating sludge, marble and granite sawing dust
88. C. A. Delgado López, G. Fernández Villagómez, I. C. Gavilán García, M. T. Orta Ledesma, P. I. Romero Mares
Anaerobic biodegradation as a treatment of the agro-plastics used in protected agriculture in the Mexican crops
89. M. San Martin Ruiz, M. Reiser, M. Kranert
Recycling of coffee by-products by composting regarding climate relevant emissions and products
90. G. Stavridis, D. Venieri
Landfill site selection with GIS and Multi-Criteria analysis: Case study for Zakynthos Island
91. N.A. Kulenova, M.A. Sadenova, S.A. Vaynberger
Prospects for the utilization of liquid waste from metallurgy for the synthesis of new materials
92. A. Kavadia, D.A. Fasoula, M. Omirou, I.M. Ioannides
Impact of animal manure and compost on maize growth in association with mycorrhizal fungi
93. M. Omirou, I. Anastopoulos, C. Stephanou, I.M. Ioannides,
Agricultural Wastes are affecting the abundance of denitrifying community and the short term N₂O emissions
94. I.M. Ioannides, C. Stephanou, L. Philippot, I. Anastopoulos, M. Omirou
The effects of tetracycline on bacterial communities responsible for denitrification and nitrous oxide production in agricultural soils
95. B. Ruiz, N.Ferrera-Lorenzo, I. Suárez-Ruiz, E. Fuente
The sustainable management of macroalgae "Gelidium Sesquipedale" waste from the Agar-Agar industry. Its feasibility for CO₂ capture
96. D. Beltrame, M. Della Zassa, N. Zanetti, E. Agusson, G. Carraro, P. Canu
Solvents removal from solid waste: an experimental investigation on the mechanisms and supporting conditions
97. E. Carpus, A. Dorogan, C. Stroe, A. Sandu, C. Grosu
Flexible technologies of processing textile wastes into high added value products
98. G. Gianfelice, M. Della Zassa, P. Canu
Experimental investigation of controlled thermal degradation of unconventional fuels
99. N. Zanetti, M. Della Zassa, G. Carraro, P. Canu
Ignition and inertization of metal powder waste
100. K. Morvay Karakas
Food waste management in luxury hotels – best practices

Poster session

101. M. Adame-Pereira, M. Alexandre-Franco, C. Fernández-González, V. Gómez-Serrano
Adsorption of bisphenol A by activated carbon developed from PET by KOH activation
102. C. Troca-Torrado, M. Alexandre-Franco, C. Fernández-González, M. Alfaro-Domínguez, V. Gomez-Serrano
Carbonaceous adsorbents from single and mixed rubber and plastic wastes. Adsorption of methylene blue
103. A. P. Ingle, R. R. Philippini, S. Silvério da Silva
Pretreatment of lignocellulosic biomass using two different acid-functionalized magnetic nanoparticles
104. G. Papanikolaou, M. Stylianou, A. Agapiou
Use of different sampling inlets for the analysis of VOCs from solid waste samples by GC-MS
105. A. Pantelopoulos, A. Svanbäck, H. Aronsson
Agronomical and environmental implications of on-farm slurry management based on two-step separation and acidification treatment
106. U. Pathak, S. Kumari, A. Kumar, D. D. Mandal, P. Saha, T. Kumar, T. Mandal
Optimisation of process parameters for augmentation of silica purity using artificial neural network and Taguchi methodology coupled with membrane desalination - A compendious approach
107. P.R.F. Marcelino, F.G. Barbosa, N. Aizawa, J.G. Barbosa, R.R. Philippini, S.E. Martiniano, S.S. da Silva
Study of the tolerance of *Cutaneotrichosporon mucoides* to phenolic compounds aiming to its use to produce biosurfactants in lignocellulosic biorefineries
108. S. Rodríguez-Sánchez, B. Ruiz, D. Martínez-Blanco, I. Suárez-Ruiz, M.A. Diez, J. A. Blanco, E. Fuente
Magnetic activated carbons from chestnut lignocellulosic industrial wastes as sustainable adsorbents for gas storage at high pressure
109. J. Mokrzycki, P. Rutkowski
Agricultural waste valorization – pyrolysis and torrefaction of leaves and stems obtained from tomato (*Solanum lycopersicum* L.)
110. E. Cárdenas-Aguilar, B. Ruiz, E. Fuente, G. Gascó, A. Méndez
Improving mining soil phytoremediation with *Sinapsis alba* by addition of hydrochars and biochars from manure wastes
111. Jeongho Kim, Heechan Cho
Processing of PV Modules Using Microwave Heating and Density Separation for Recovery of Valuable Materials
112. H. Mendez, D. Clauss, C. Maurer, M. Kranert
Investigation on the behaviour of plastics during the biological treatment of organic waste
113. M. Zubrowska-Sudol, J. Walczak, A. Garlicka, K. Sytek-Szmeichel, K. Umiejewska
Hydrodynamic disintegration by means of the method of improvement of the biogas potential of waste
114. J. Domínguez, M. Gómez-Brandón, M. Aira
Vermicomposting of red winemaking grape marc increases microbial diversity and function yielding a high quality plant biostimulant
115. M. Stylianou, E. Montel, I. Gavriel, V. J. Inglezakis, A. Agapiou
Volatile organic compounds (VOCs) emitted in abandoned sulfide mines
116. E. Cárdenas-Aguilar, G. Gascó, A. Méndez
Soil biological properties of two mining soils amended with mixtures of biochar and compost
117. F. Tsiolaki, M. Stylianou, A. Zorpas
Evaluation of the effectiveness and the performance of EIA studies in Greece
118. Dong Shin, T. Nshizirungu, J.H. Park
Improvement of acidic soil quality using red mud and biochar
119. D.A. Sarigiannis, S. Karakitsios, I. Zarkadas
Utilization of enzymatic pretreatment for improving efficiency in the bio-methanation of mixed substrates
120. S. Elkhailifa, P. Parthasarathy, H.R. Mackey, T. Al-Ansari, G. McKay
A study on the drying of food waste prior to the production of biochars through pyrolysis

Poster session

121. H. Sahin Akkurt, N. Elginöz, G. Iskender, F. Germirli Babuna
Appraisal of environmental impacts for a large-scale water treatment plant through life cycle assessment
122. M. Lores, J.P. Lamas, M. Celeiro, R. Arcas
Wood processing industry by-products as a source of natural bioactive compounds
123. T.J. Robshaw, A.M. James, D.B. Hammond, R. Dawson, M.D. Ogden
Hydrophilic hypercrosslinked polymers for remarkably efficient fluoride capture
124. J. Steinbrenner, H. Oechsner
Evaluation of an automatized technical scale anaerobic leachbed reactor system for VFA production with scheduled removal of leachate
125. C. Fernando-Foncillas, M. M. Estevez, C. Varrone, H. Uellendahl
Revalorization of sewage sludge and other organic wastes by co-digestion
126. F. Bessa, M. Valančiūtė, J. Vaz, P. Sobral, J. Marques
Marine litter trends of beaches with different human-induced pressures on the European Atlantic coast (Portugal)
127. J.J. Ascencio, L.F.O. Flores, R.R. Philippini, P. Abdeshahian, S.S. Da Silva, A.K. Chandel
Comparative analysis of 2G sugars production from sugarcane bagasse after pre-treatment with nitric acid and sodium hydroxide
128. J.L. R. Rama, N. Mallo, M. Biddau, F. Fernandes, T. de Miguel, L. Sheiner, A. Choupina, M. Lores
Exploring the powerful phytoarsenal of white grape marc against bacteria and parasites causing significant diseases
129. P. Abdeshahian, A. Solon de Carvalho, S. Silvério da Silva
Valorization of lignocellulosic biomass in production of B-glucans
130. F. Santos, M.T. Santos
Anaerobic co-digestion of water and wastewater sludges
131. B. Bayindir, N. Elginöz, F. Germirli Babuna
Environmental impacts of a renewable energy source: The case of a Turkish wind farm
132. Guoying Wang, Jing Yuan, Guoxue Li
Phytotoxicity mechanisms of seed germination during co-composting of chicken manure and tobacco powder
133. D. G. Vela-Aparicio, D.F. Forero, P. Acevedo, P.F.B. Brandão, M.A. Hernandez, I.O. Cabeza
Evaluation of compost from chicken manure and lignocellulosic materials as packing material in a biofiltration system for the removal of H₂S and NH₃
134. L. T. D. Cappelini, P. F. M. Eugênio, J. V. Alberice, A. C. Urbaczek, N. A. Assunção, P. L. Ramos, F. C. Sala, E. Carrilho, L. Juliano, E. N. V. M. Carrilho
Compost from plant and animal residues of a zoo park improves the fertility of soils and increases the growth and production of lettuce
135. I. Szmigiel, M. Domżał-Kędzia, R. Pluskota, A. Krasowska, M. Łukaszewicz
Solid state fermentation of a waste rapeseed meal leading to production of surfactin, biopolymers and feed enzymes
136. V. Kumar Vaidyanathana, H. Cabanaa
Elimination of Trace organic contaminants (TrOCs) from biosolids: Influence of different pretreatment methodologies prior to *Bacillus subtilis* digestion
137. K. Christofi, M. Stylianou, A. Zorpas
Public awareness on the concept of circular economy
138. M.L. Álvarez, G. Gascó, A. Méndez
Remediation of mining soils by addition of manure waste biochars
139. É. Erdélyi
Steps towards carbon footprint, and its reduction – focusing on frozen products
140. Soon Woong Chang, Jin Tae Kim
CO₂ methanation based on carbon recycling system using electrolysis treatment

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141. Zhu Puli, Feng Jing, Zhang Rui, Bai Hui, Bu Duo, Dan Zeng, Li Wei, Lu Xuebin
Understanding how the poly aluminum chloride affects anaerobic fermentation of waste activated sludge for short chain fatty acid production
142. Feng Jing, Bai Hui, Zhang Rui, Zhu Puli, Bu Duo, Dan Zeng, Li Wei, Lu Xuebin
Recycling of iron and aluminum from drinking water treatment sludge for synthesis of a magnetic nanosorbent (ALCS-Al-Fe) to remove fluoride from drinking water
143. S.H. Nam, J.W. Koo, J.W. Sim, E.J. Kim, T.M. Hwang
Characterization of organic foulants in pressure retarded osmosis using fluorescence excitation-emission and PARAFAC
144. S.H. Nam, J.W. Koo, E.J. Kim, T.M. Hwang
Fluorescence Excitation-Emission and PARAFAC to monitor natural organic matter change in pilot scale UV/H₂O₂-GAC process
145. M. N. Anwar, A. Fayyaz, N. F. Sohail, M. Baqar, M. Iftikhar, M. Rehan, M. Waqas, A. S. Nizami
Investigation of Carbon Dioxide Sequestration Potential of Pure and Nano Particles Doped Biochar
146. Z. Asam, M. Ajmal, R. Saeed, M. Abbas, M. Ahmad, A. Nizami
Assessment of opportunities and challenges in raising awareness for efficient community participation and role in source segregation based solid waste recycling project
147. I. Ali, H. Bahaitham, M. Saleem, A. Salam, R. Naebulharam, A.-S. Nizami, M. Rehan
Linear versus Non-linear Adsorption Kinetics of Methylene Blue on Raw and Chemically Activated Sawdust
148. B. A. Karamanova, S. K. Veleva, A. E. Stoyanova, M. Schipochka, R. K. Stoyanova, P. Polrolniczak
Activated carbon obtained by pyrolysis of coconut shells as electrode material for hybrid non-aqueous supercapacitor cells
149. T. Nshizirungu, D. Shin, Y.T. Jo, J.H. Park
Recovery of Lithium and Cobalt from spent Lithium-ion batteries and dechlorination of chlorinated polyvinyl chloride (CPVC) in hydrothermal treatment
150. H.R. Modesto, S.G. Lemos, J.S. Komatsu, M. Gonçalves, W.A. Carvalho, E.N.V.M. Carrilho, G. Labuto
Activated carbon production from yeast residues to boost up circular bioeconomy
151. M. Wzorek, R. Junga, R. Hoinka
Energy application of paper industry by-products
152. Hongwei Li, Zhigang Tang, Xian-Zhong Mao
Capture CO₂ using Steel Slag combined with high salt effluent
153. Li Danyang, Qi Chuanren, Wei Yanan, Li Guoxue, Yuan Jing
Effect of different amendments on nitrogen conservation during simulated composting
154. J.C. Fradinho, M. Palhas, J. Almeida, A. Oehmen, M.A.M. Reis
Polyhydroxyalkanoates production from agricultural wastes using phototrophic purple bacteria operated in non-aerated systems
155. Hong Chen, Ying Wu, Erping Cui, Yiru Zuo
The fate of antibiotic resistance genes and Class 1 Integrons during two-phase anaerobic digestion
156. C. Ghinea, A. Butnariu, A. Lobiuc, A. Leahu
Composting of fruits and vegetable wastes: physical-chemical and microbiological analyses
157. I. Gómez-Cruz, I. Romero, C. Cara, E. Ruiz, A. Lama-Muñoz, F. Espínola, E. Castro
Enzyme-assisted aqueous extraction of extracted olive pomace
158. P. Sridhar, R.D. Tyagi, R.Y. Surampalli
Mass-Energy balance for the Anaerobic Digestion of the Ultrasonicated Sludge
159. P. Gkotsis, Ch. Pechlivani, Z. Kotsia, E. Peleka, A. Zouboulis
The use of bentonite in a pilot-scale Membrane Bio-Reactor (MBR) for membrane fouling mitigation
160. E. Pagona, E. Tzamos, K. Simeonidis, A. Zouboulis, M. Mitrakas
Characterization and evaluation of magnesite ore mining procedures by-products from Gerakini mines, Chalkidiki, Greece

Poster session

161. Tingting Liu, Yaru Liu, Shangyun Wu
What influence residents' willingness towards "Internet+" recycling behaviour
162. L. Steinhauer, E. Kraft, K. Lasaridi
Comparative evaluation of monitoring tools for food waste prevention in the hotel sector
163. E. Santos-Clotas, A. Cabrera-Codony, M. J. Martin
Coupling adsorption with biotechnologies for biogas upgrading: technical and economical evaluation
164. A. Agapiou, M. Stylianou, P. Mochalski, G. Botsaris, K. C. Makris
Spatial and seasonal variability of BTEX and microbial quality in seawater
165. M. Aslam, A. Laeeq Khan, A.-S. Nizami, M. Rehan, J. Kim
Anaerobic Treatment of Domestic Sewage using Novel Anaerobic Fluidized Bed Membrane Bioreactor under Energy Recovery and Biofouling Control
166. E. Tzamos, G. Grieco, A. Zouboulis, A. Xenidis, M. Mitrakas, A. Godelitsas
Mineral processing by-products characterization and Critical Raw Materials availability of chromite ores from Vourinos mines, Greece
167. M. Stylianou, E. Montel, K. Dermentzis, M. Papapetrou, A. Agapiou
Electrochemical treatment of cattle waste with the use of Al-Al electrodes
168. M. Mariño, Y. Sánchez, O. Hernández, M. Fernández
Energy valuation of municipal solid waste for energy obtaining in Santiago de Cuba city
169. D. Palimeri, S. Maina, K. Papadaki, A. Koutinas, A. Vlysidis
Design, construction and operation of two anaerobic digestion pilot scale units for the production of biogas from MSW
170. P. Moraiti, A. Manali, P. Gikas
Removal of ammoniacal nitrogen from landfill leachate by adsorption on activated zeolite
171. S. Möllnitz, K. Khodier, R. Sarc, R. Pomberger
Grain size dependent distribution of plastic types in coarse-shredded commercial and municipal waste
172. P. Fajs, V. Ž. Bogataj, M. Omahen, A. Henttonen
Mechanical and thermal properties of recycled mixed waste polymers reinforced with reclaimed newsprint fibres
173. I. Janajreh, K. Elkadi, O. Mekanjuola, S. El-Agroudy
Equilibrium gasification of spent pot lining from the aluminum industry
174. D.A. Sarigiannis, S. Karakitsios, I. Zarkadas
Bio-valorization of olive mill wastewater: balancing the carbon to nitrogen ratio with high protein substrates
175. M. Rose Farah, T. Jabbour, S. Ghanimeh
Treatment of Car Wash Wastewater Using Crushed Glass as Granular Filter Media
176. T. Rosa, M.T. Santos, A. Martins, N. Nunes, T. Trindade
Valorisation of coal fly-ash residue as adsorbent for the removal of dyes from aqueous media
177. N. Yilmaz, M. Elhag, S. Boteva
Determination of the Water Quality and Phytoplankton Composition in the coastal region of Lake Terkos (Istanbul, Turkey)
178. D. A. Sarigiannis
Circular economy and health: examples from Greece with a focus on plastics
179. V. Vasilaki, V. Conca, N. Frison, F. Fatone, E. Katsou
Use of GHGs emission data to smarten up our water systems (Ad-Bio)
180. N. Tofalli, A. Zorpas
Measuring Environmental Performance in Primary Schools
181. J. Lapão, I. Dinis, C. Dias-Ferreira
Waste management strategies for the mitigation of climate change on small scale farming
182. D. Xevgenos, G. Gzyl, M. Mortou, M. Loizidou
Coal mining wastewater treatment in Poland in view of circular economy

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183. I.K. Lappa, A. Papadaki, M.-N. Efthymiou, D. Koulougliotis, E. Eriotou, N. Kopsahelis
Freeze dried non-dairy LAB strains as novel starter cultures with potential applications in dairy products
184. A. Papadaki, I.K. Lappa, V. Kachrimanidou, D. Kleisiari, M.-N. Efthymiou, E. Eriotou, N. Kopsahelis
Evaluation of screening methods for biosurfactants production by Lactobacillus strains
185. F. Verdugo, A. Aguado
Recycled glass fibre as a raw material in asphalt pavements
186. J. Domínguez
Earthworms and wine: circular economy in the wineries
187. K. Passadis, V. Fragoulis, J. Novakovic, E.M. Barampoti, S. Mai, K. Moustakas, D. Malamis, M. Loizidou
Study of valorization routes of spent coffee grounds
188. D. Xevgenos, M. Mortou, D. Bakogianni, E. Skourtanioti, M. Loizidou
Brine releases from process industries and desalination plants: the case of The Netherlands
189. K. Valta, J. Novakovic, K. Katsibouras, G. Antonopoulou, M. Alexandropoulou, M. Loizidou, G. Lyberatos, E. Topakas
Investigating the utilisation of Household Food Waste for the production of biogas and ethanol in the context of circular economy
190. B. Abylkhani, B. Aiymbetov, A. Yagofarova, C. Venetis, Y. Sarbassov, V. Inglezakis, A. Zorpas
Compositional and microsampling analysis of MSW of Astana city and application of a predictive Waste Generation Artificial Neural Network Model
191. M. Ali, M. Aslam, A. Khan, M. Amjad Gilani, A.-S. Nizami, A. Laeeq Khan
Mixed Matrix Membranes incorporated with Sonication-assisted ZIF-8 Nanofillers for Industrial Wastewater Treatment
192. C. Padilla-Rascón, C. Cara, I. Romero, P. Manzanares, J.M. Oliva, E. Castro, E. Ruiz
Sugar production from olive stones by autoclave acid pretreatment followed by steam explosion
193. M. Waqas, M. Rehan, M. N. Anwar, M.D. Khan, A. S. Nizami
Agronomic and Environmental Remedial Benefits of Biochar: Current Challenges, and Future Perspectives
194. M. Aslam, M. Yasin, A. Laeeq Khan, A.-S. Nizami, J. Kim
Hybrid Membrane Bioreactor for the Treatment of Industrial Wastewater
195. D. Xevgenos, P. Alexopoulos, H.C. Yu, G.J. Witkamp
Design of Eutectic Freeze Crystallization for the recovery of pure Na_2SO_4 salts from RO brines
196. P. Lovecká, A. Macůrková, K. Demnerová, Z. Wimmer
Biologically active substances from unused plant materials
197. E. Skourtanioti, D. Bakogianni, D. Meimaris, D. Xevgenos, M. Loizidou
An industrial symbiosis knowledge model for the saline wastewater domain
198. M. Margaritis, A.G. Thanos, M. Loizidou
The effect of vermiculite on the process of domestic composting and the quality of the product produced
199. T. Massara, O. Komesli, E. Katsou
Overview of the Ad-Bio project: Advanced biological wastewater treatment processes
200. V. Vasilaki, T. Massara, O. Komesli, E. Katsou
Use of GHG emission data to smarten up our water systems (Ad-Bio)
201. G. Konstantzos, A. Vasilopoulos, I. Antoniou, F. Salta, K. Moustakas, M. Loizidou
A user friendly approach for decreasing carbon footprint in food industries: The case study of Greece
202. A. Vasilopoulos, F. Salta, G. Konstantzos, E. Moschopoulou, K. Moustakas, M. Loizidou
Towards a circular economy in food industries
203. L. Stabili, M.I. Acquaviva, R.A. Cavallo, E. Cecere, C. Gerardi, M. Narracci, G. Portacci, A. Petrocelli
The REMEDIA-Life project and the cultivation of macroalgae as bioremediators: exploitation of their biomass for biotechnological purposes

8.00 - 9.30

Registration

9.00 - 10.45

ROOM 1

Keynote Speakers

Chair: M. Castaldi, A. Nzihou

Ange Nzihou, Ecole des Mines d'Albi

"The Catalytic Effect of Inherent and Adsorbed Metals on the Pyrolysis and gasification of Biomass"

Abdul-Sattar Nizami, King Abdulaziz University

"How Far are We from Integrating the Waste-to-Energy Technologies?"

Marco Baratieri, Free University of Bolzano

"Perspectives on the evolution of gasification: from CHP to integrated poly-generative technology"

Heribert Insam, University of Innsbruck

"Microbes in organic waste management"

Vivian Tam, Western Sydney University

"CO₂ Concrete: A New Recycled Material"

Irini Angelidaki, Technical University of Denmark

"Biotechnology as a tool for upcycling wastes and residues to products in a bioeconomy approach"

Marco Castaldi, City University of New York

"The Solution to Managing Plastic Waste in the United States of America"

10.45 - 11.15



Coffee Break

ROOM 1
SESSION IX

Bioprocesses, Biorefineries in waste management I

Chair: D. Rossi, A. Djukic-Vukovic, J. Wang

- | | |
|-------------|---|
| 11.15-11.30 | E. Tsouko, S. Maina, A. Koutinas
Integrated biorefinery development: Valorisation of orange peels for the production of bacterial cellulose and various value-added products |
| 11.30-11.45 | D. Mladenovic, A. Djukic-Vukovic, S. Lazovic, J. Pejin, S. Kocic-Tanackov, L. Mojovic
Evaluation of pre-treatment methods for Improving the enzymatic hydrolysis of lignocellulosic waste |
| 11.45-12.00 | P. A. Marín-Valencia, E. Carmona-Garcia, J. A. Poveda Giraldo, N. P. Arias Duque, C. A. Cardona Alzate
Integral use of aromatic plants: prefeasibility comparison of stand-alone and biorefinery processes using thyme (<i>Thymus vulgaris</i>) as base case |
| 12.00-12.15 | M.N. Efthymiou, C. Pateraki, H. Papapostolou, A. Koutinas
Biorefinery development for the production of succinic acid and value-added coproducts from sunflower meal |
| 12.15-12.30 | M. Ortiz-Sanchez, J.C. Solarte-Toro, C.E. Orrego-Alzate, C.D. Acosta-Medina, C.A. Cardona
Orange peel waste management alternatives to obtain value-added products and energy vectors through the biorefinery concept |
| 12.30-12.45 | M. Menini, V. Tosi, D. Bolzonella, N. Frison, F. Fatone
Volatile Fatty Acids production as PHAs precursors from candy manufacturing wastewater |
| 12.45-13.00 | J. Venus, J.P. López-Gómez
Bioconversion of municipal solid waste into lactic acid |
| 13.00-13.15 | F. Battista, M. Andreolli, S. Zanzoni, D. Bolzonella
The cascade biorefinery approach for the valorization of the Spent Coffee Grounds |
| 13.15-13.30 | L.-L. Zhu, S. You, Q.-B. Tu, S. Sheng, F.-A. Wu, J. Wang
Effects of different domains on the activity of a GH78 α -L-rhamnosidase |
| 13.30-13.45 | C. Vaneekhaute, E. Belia
Nutrient and energy recovery from pig manure and sludge:
Economic optimization using a new process model library |

13.45-14.00	S. Vakalis, S. Ail, M. Castaldi 3-step evolution modeling of the SWPS-GIPO Devolatilization Reactor
14.00-14.15	A. Chalima, A. Karnaouri, E. Topakas Optimization of DHA production from the heterotrophic microalga <i>Cryptocodinium cohnii</i> utilizing a dark fermentation effluent
14.15-14.30	E. Mitsiakou, A. Margellou, K. Rekos, K.S. Triantafyllidis Valorization of hemicellulose-biomass side streams via catalytic hydrogenation into value added chemicals and fuels
14.30-14.45	G. Antonopoulou, I. Ntaikou, M. Alexandropoulou, D. Vayenas, G. Lyberatos Assessment of electrocoagulation as a pretreatment method of olive mill wastewater for biofuels production in a biorefinery concept
14.15-15.00	Lunch Break

ROOM 2

SESSION X

Agricultural Waste Management

Chair: K. Komnitsas, D. Lekkas, M. Wzorek

11.15-11.30	P. Kostopoulos, A. Papadopoulos, Y. Troyanos, Ch. Kolovos, S. Kosmidis, M. Psychogiou, M.K. Doula Lettuce irrigation with wastewater from pistachios processing. Effect on soil properties
11.30-11.45	Wen-Jing Li, Hang-Xing Ding, Shuai You, Fu-An Wu, Jun Wang Effect of ultrasonic and microwave treatment on protein properties and hydrolysis of mulberry seed meal
11.45-12.00	E. Samara, T. Matsi, N. Barbayiannis, A.S. Lithourgidis Effect of liquid cattle manure on corn yield, macronutrients' content and uptake and on soil fertility, in comparison to common and recommended inorganic fertilization

12.00-12.15	S. Kavasilis, A.A. Zorpas, M.K. Doula Production of acidic / neutral composts by using large animal mortalities and other agricultural additives to serve circular economy of agro-livestock holdings
12.15-12.30	F. Xeni, I. Gavriel, M. Tsangas, M. Doula, A. A. Zorpas A preliminary assessment of sustainable agricultural practices in Cyprus
12.30-12.45	Xue Wei, Xiaodong Li, Lin Tang Biochar supported magnetite and zerovalent iron nanoparticles for selenium removal
12.45-13.00	M. Zubrowska-Sudol, A. Garlicka, K. Sytek-Szmeichel, J. Walczak, K. Umiejewska Distillery residue – waste with high biochemical methane potential
13.00-13.15	A. Vannarath, A. Kumar Thalla Bifurcation of lignocellulosic biomass (Areca catechu) using alkaline pretreatment: An efficient method
13.15-13.30	H. Stiborova, B. Branska, P. Patakova, M. Jiru, J. Poustka P. Kastanek, O. Kronusova, K. Demnerova Valorization of waste products from poultry industry
13.30-13.45	H. Cay, Gozde Duman Tac, G. Balmuk, I. Cem Kantarli, J. Yanik Mediterranean agricultural wastes: As renewable source
13.45-14.00	M. Donner, R. Gohier, H. de Vries What types of circular business models for creating value from agro-waste?
14.00-14.15	M. Wzorek, E. Yilmaz, A. Król Combustion behaviour of agro-industrial and livestock wastes blends
14.15-14.30	D.F. Lekkas, M. Fountoulakis, A. Stasinakis, E.E. Klontza, I. Daskaloudis An integrated methodology for treatment and valorisation of agricultural wastes in Lesvos, Greece
14.30-14.45	H. Coarita Fernandez, R. Teixeira Franco, R. Bayard, P. Buffiere Mechanical pre-treatments of cattle manure before anaerobic digestion

ROOM 3

SESSION XI

Waste Valorisation II

Chair: P. Champagne, V. Tam, D. Hidalgo

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| 11.15-11.30 | J. Pesonen, E. Sauvola, T. Hu, H. Prokkola, S. Tuomikoski
Use of sidestream based $MgSO_4$ as chemical coagulant in the simultaneous removal of nitrogen and phosphorus from wastewaters |
| 11.30-11.45 | A.A. Azzaz, B. Khiari, M. Jeguirim, S. Jellali
Hydrothermally converted biomass for wastewaters treatment |
| 11.45-12.00 | P. Myllymäki, J. Pesonen, P. Tynjälä, T. Hu, U. Lassi
The use of calcined paper mill sludge as a chemical precipitant in the simultaneous removal of nitrogen and phosphorus from wastewaters |
| 12.00-12.15 | J.C. José, T.E. Abilio, B.C. Soares, G. Labuto, E.N.V.M. Carrilho
Yeast-based magnetic bionanocomposite for the removal of Zn(II) in aqueous medium |
| 12.15-12.30 | D. Zingaretti, A. Lieto, G. Costa, F. Lombardi, R. Gavasci
Humic substances extracted from a bio-stabilised waste applying different operating conditions |
| 12.30-12.45 | R.R. Siman, S.F.A. Lessa, R.L. Baldam, L.H. Yamane
Operational activities for recyclable material picker organizations: Priority matrix |
| 12.45-13.00 | F. Corona, D. Hidalgo, J.M. Martín-Marroquín, E. Meers
Study of pig manure digestate pre-treatment for subsequent valorisation by struvite |
| 13.00-13.15 | Cheng-Hai Yan, Jin-Zheng Wang, Sheng Sheng, Fu-An Wu, Jun Wang
Antibacterial activity enhanced nanoparticles loaded with MC and CAPE mixed proportion against <i>Ralstonia solanacearum</i> |
| 13.15-13.30 | E. Towa, V. Zeller, W.M.J. Achten
Assessing the life cycle environmental impacts of reuse with preparation in bulky waste management in Brussels |
| 13.30-13.45 | T.J. Robshaw, K. Bonser, G. Coxhill, R. Dawson, M.D. Ogden
Towards a combined leaching and ion-exchange system for valorisation of spent potlining waste |
| 13.45-14.00 | D. Basalp, F. Tihminlioglu, A. Sofuoglu, S.C. Sofuoglu, F. Inal
Utilization of Municipal Bulky Plastics and Wood Wastes in Industrial Manufacturing of Wood Plastic Composites |

14.00-14.15	M. Hijab, P. Li, H. Mackey, J. Saleem, P. Parthasarathy, G. McKay Two Stage batch adsorber optimisation for malachite green removal using activated waste biomass
14.15-14.30	P.B. Himbane, L.G. Ndiaye, A. Napoli, J.F. Rozis Study of the influence of the intrinsic parameters of charcoal pellets and relative humidity on compressive strength and moisture absorption
14.30-14.45	Guohua Wu Preparation of efficient and recyclable regenerated silk fibroin film and sericin carbon aerogel for water pollution treatment

ROOM 4
SESSION XII

H2020 - LIFE
Master-class on Horizon 2020:
How to win funds for your project?
Chair: P. Kolar

11.15-14.00	P. Kolar Introduction to H2020 G. Protopapas LIFE Programme - Call 2019 & Establishment and operation of the Greek LIFE Task Force P. Papazoglou Horizon 2020: General Introduction & Structure, Funding Mechanisms & Partner Search, Proposal Preparation & Support K. Moustakas, D. Malamis, M. Loizidou The experience of the NTUA Unit of Environmental Science & Technology in LIFE & H2020 projects Discussion
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ROOM 1

SESSION XIII

Anaerobic Digestion II

Chair: L. Lombardi, A.S. Nizami, R. Bayard

15.00-15.15	L. Lombardi, G. Francini, M. Lasagni Comparison of biogas upgrading technologies: an Italian study case
15.15-15.30	D. Bolzonella, F. Battista, A. Mattioli, C. Nicolato, S. Lampis Biological post hydrolysis of digestate enhances the biogas production in anaerobic digestion of agro-waste
15.30-15.45	J. Morais de Araujo, P. Buffière, R. Gourdon, J. Bonnet, J.Mehu, R. Bayard Urban bio-waste valorization – resource evaluation and characterization for energy recovery by anaerobic digestion
15.45-16.00	I. Ntaikou, S. Siankevich, M. Alexandropoulou, G. Antonopoulou, G. Lyberatos Enhancement of digestibility of olive oil mill residues through different thermo-chemical pretreatment approaches
16.00-16.15	D. Thanos, A. Maragkaki, M. Fountoulakis, T. Manios Biogas production in pilot digesters treating a mixture of olive mill wastewater and agro-industrial by-products
16.15-16.30	A. Espejo, P. Torres, J. Mosquera, C. Rangel, I. Cabeza, N. Ortiz, P. Becerra, P. Acevedo Evaluation of the environmental, technical and economic performance of anaerobic codigestion processes in Colombian scenarios
16.30-16.45	N. E. Papastefanakis, A. E. Maragkaki, M. Fountoulakis, C. Tsompanidis, T. Manios Biogas production from co-digestion of food waste with liquid pig manure and olive mill wastewater
16.45-17.00	C.J. Rangel, J.D. Mosquera, Y. Castro, A. Rodríguez, M. Hernández, P. Acevedo Production of hydrogen by dark fermentation from pig manure, cocoa mucilage and coffee mucilage
17.00-17.15	A. Kumar, S.R. Samadder Effect of cow dung Inoculum on biogas generation from anaerobic digestion of organic fraction of municipal solid waste – A case study of India
17.15-17.30	M. Sagarika, P. Venkateswara Rao Anaerobic digestion of Rice Straw for biogas production
17.30-17.45	Á. Szilágyi, Á. Szepesi, A. Bodor, K. Laczi, V. Markó, K. Perei, G. Rákhely Tomato plant waste as a new substrate in biogas fermentation

- 17.45-18.00 A. Cerutti, G. Campo, M.C. Zanetti, G. Scibilia, E. Lorenzi, B. Ruffino
Performance comparison between mesophilic and thermophilic anaerobic digestion processes carried out on waste activated sludge
- 18.00-18.15 A.H. Orbecido, M.E.F. Chua, J.C.V. De Guzman, A.P.L. Pagunsan, M.A.B. Promentilla
Prioritization of sludge management alternatives in the Philippines using Calibrated Fuzzy ANP
- 18.15-18.30 G. Capson-Tojo, M. Rouez, M. Crest, J.-P. Steyer, N. Bernet, J.-P. Delgenès, R. Escudié
Stabilizing food waste anaerobic digestion
- 18.30-18.45 Zhongzhong Wang, Shun Wang, Yan Jiang, Guangxue Wu, Zhenhu Hu, Xinmin Zhan
Effect of total solids contents on the performance of anaerobic co-digestion of pig manure and food waste

ROOM 2

SESSION XIV

Policy, Prevention, Socio economic Issues

Chair: T. Manios, C. Dias-Ferreira, N. Frison

- 15.00-15.15 L. Lombardi, E. Civai, F. Cristo
Separate collection of MSW: effective recycling percentages for paper and plastics
- 15.15-15.30 M. Vitoraki
Implementation of pay-as-you-throw schemes in Greece: major benefits and future potential
- 15.30-15.45 C. Tsompanidis, T. Lolos, E. Ieremiadi, I. Apostolova, K. Oikonomou, A. Aoun
Establishment of strategic management plan and awareness & change management plans for the solid waste management – The case study of Al Fayhaa Cities in North Lebanon

15.45-16.00	D. Rossi The Farmers Mind Map and the food & drink industry collaboration: some results in a Food 4 Growth 2030 approach and new skills required to manage and to innovate in Agrifood Waste
16.00-16.15	P. Loizia, I. Voukalli, Antonis A. Zorpas The State of EMAS in Cyprus in the Framework of Environmental Performance
16.15-16.30	A. Mouratidis, P. Nikolidakis Chemical composition and strength characteristics of bauxite residue
16.30-16.45	L. Milios, C. Dalhammar Ascending the Waste Hierarchy: Re-use potential in Swedish recycling centres
16.45-17.00	H. Cohen Coal Ash: The New Golden Treasure
17.00-17.15	L. Rigamonti, L. Biganzoli, C. Tua, M. Grosso Packaging re-use in the circular economy: an LCA evaluation
17.15-17.30	N. Ferronato, G.E Guisbert Lizarazu, M.A. Gorritty Portillo, V. Torretta Analysis of citizens' behaviour with respect to formal and informal solid waste selective collection in Bolivia
17.30-17.45	E. M. Mylonopoulou, K. M. Keramitsoglou, K. P. Tsagarakis The effect of color on the attitude towards using the paper-recycling bin
17.45-18.00	P. Llanquileo – Melgarejo, M. Molinos - Senante Evaluation of efficiency and eco-efficiency waste management services in Spanish municipalities
18.00-18.15	M. Tsakona, L. Godfrey, F. Jones, G. Nitzsche, G. Garces Status of women in the global waste management sector
18.15-18.30	Gen Li, Toshihiko Masui Assessing China's Environmental Policies Using CGE Model with Disaggregated Environmental Management Sectors
18.30-18.45	J. Faitli, B. Csoke, R. Romenda, Z. Nagy, S. Nemeth Industrial Tests with a New Mechanical – physical RMSW Processing Plant in Búslakpuszta, Hungary
18.45-19.00	M. Struk Waste Management Incentive Programs and Municipal Finance

ROOM 3

SESSION XV

Waste Valorization III

Chair: A.G. Capodaglio, J. Yanik, E. N. V. M. Carrilho

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| 15.00-15.15 | P. Bisquert, P. Buche, F. Fort, R. Gohier, V. Guillard, A. Valle Rey
Wine waste management and opportunities for new valorisation technologies |
| 15.15-15.30 | M. Vannini, P. Marchese, L. Sisti, A. Celli, M. Ferri, S. Monari, A. Tassoni, M. Ehrnell, L. Eliasson, E. Xanthakis, T. Mu, H. Sun
From wine pomace and potato wastes to novel PHA-based bio-composites: examples of sustainable routes for full valorisation of the agro-wastes |
| 15.30-15.45 | J. Sierke, D. Heath, B. McGraw, A.V. Ellis
Nanocellulose reinforced polyurethane hydrogels |
| 15.45-16.00 | C. Alvarez-Ossorio, M. Orive, C. Bald
Valorisation of the by-product of the grape seed oil extraction |
| 16.00-16.15 | J. Paini, V. Benedetti, M. Scampicchio, M. Baratieri, F. Patuzzi
Thermochemical valorization of spent apple seeds: preliminary assessment by thermogravimetric analysis coupled with evolved gas characterization |
| 16.15-16.30 | T. E. Abilio, B. C. Soares, J. C. Jose, J. T. T. Carvalho, G. Labuto, E. N. V. M. Carrilho
Synthesis, characterization, and use of nanomodified sugarcane bagasse for the sorption of hexavalent chromium |
| 16.30-16.45 | A.A. Azzaz, M. Issaoui, M. Jeguirim, C. Ghimbeu, S. Bennici, S. Jellali, L. Limousy
Conversion of olive oil by-products into carbon rich chars using hydrothermal carbonisation process |
| 16.45-17.00 | H. Azaizeh, S. Abdelhadi, H. Jradat, G. Rytwo, C. G. Dosoretz
Production of biochar and activated biochar from olive mill solid waste for the removal of heavy metals and calcium from water |
| 17.00-17.15 | Qing-Bo Tu, Peng-Yuan Wang, Jun Wang, Sheng Sheng, Shuai You, Fu-An Wu
Extraction of essential oil and its fumigation toxicity against Spodoptera litura (Lepidoptera: Noctuidae) |
| 17.15-17.30 | R. Ibrahim, S. N. Ardeh, H. Cabana
Biological treatment of hydrogen sulphide from landfill site biogas |

17.30-17.45	V. Aristizábal-Marulanda, C. A. Cardona A. Comparison of processing lines to convert lignocellulosic C5 sugar platform to furfural and biogas
17.45-18.00	R. Peretz, E. Sterenzon, Y. Gerchman, V. Kumar Vadivel, T. Luxbacher, H. Mamane Production of cellulose nanocrystal from Israeli paper mill sludge by ozonation pretreatment followed by recyclable maleic acid hydrolysis
18.00-18.15	A. Zerva, A. Limnaios, P. Taoukis, E. Topakas Discovery of a novel thermophile β -galactosidase, TtbGal1, for the production of prebiotic oligosaccharides from acid whey
18.15-18.30	G. Duman Tac, J. Yanik Synthesis of magnetic biochar for utilization in Fenton based process
18.30-18.45	V. Benedetti, E. Cordioli, F. Marchelli, F. Patuzzi, M. Baratieri Valorisation of char residues from biomass gasification in adsorption applications
18.45-19.00	J. Mokrzycki, P. Rutkowski Influence of pyrolysis conditions on the properties of bio-chars produced from aquatic biomass – algae and hornwort
19.00-19.15	G. Salihoglu, S. Yenikaya, N.K. Salihoglu, G. Yenikaya Sewage sludge drying with microwave irradiation: Influence of salt addition and energy consumption
19.15-19.30	J. Santos, M. Ouadi, A. Hornung Thermo-Catalytic Reforming (TCR) of Lignocellulosic Biomass using Steel Slags (SS) as Catalyst

ROOM 4

SESSION XVI

Food Waste Management & Waste Management in island & Isolated areas

Chair: K. Abeliotis, E. Ranieri, D. San Martin

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| 15.00-15.15 | L. Papaoikonomou, K. Labanaris, K. Kaderides, A.M. Goula
Adsorption - desorption of phenolic compounds from olive mill wastewater using a novel low cost biosorbent |
| 15.15-15.30 | J. T.E. Lee, H. T.W. Tan, Y. Wah Tong
Looping the waste chain: From food waste to food |
| 15.30-15.45 | K. Pikula, A. Zakharenko, V. Chaika, A. Stratidakis, M. Kokkinakis, G. Waissi, V. Rakitskii, A. Wallace Hayes, M.D. Coleman, S. Karakitsios, A. Tsatsakis, K. Golokhvast, D.A. Sarigiannis
Ecotoxicity of biodiesel derived from waste cooking oil |
| 15.45-16.00 | D. San Martin, M. Orive, E. Martinez, B. Iñarra, A. Estévez, R. Fenollosa, J.M. Martinez, A.M. De Smet, J. Zufía
Brewers' spent yeast and grain as second-generation feedstuff for aquaculture feed |
| 16.00-16.15 | S. Kavasilis, Ch. Kolovos, G. Bartzas, A. Papadopoulos, Y. Troyanos, A. Matiatos, G. Stavropoulos, M.K. Doula
Perspective of Greek farmers and policy makers towards agribusinesses sustainability |
| 16.15-16.30 | D. San Martin, M. Orive, B. Iñarra, A. García, J. Urkiza, J. Zufía
Spent coffee ground as second-generation feedstuff for dairy cattle |
| 16.30-16.45 | N. Strøm-Andersen
Developing a knowledge-based bioeconomy: A network analysis of the Norwegian food processing industry |
| 16.45-17.00 | D. Szakos, B. Szabó-Bódi, Gy. Kasza
Consumer awareness campaign to reduce household food waste based on PLS-SEM behaviour modelling |
| 17.00-17.15 | C. Chroni, T. Kritikou, K. Abeliotis, T. Manios, K. Lasaridi
Food waste prevention under the lens of source reduction, redistribution for human consumption and animal feeding |
| 17.15-17.30 | C. Gkikas, C. Marouli
Food waste in a Greek Higher Education institution: Students' attitudes, compositional analysis and environmental impacts |

- 17.30-17.45 K. Kaderides, I. Patsopoulou, L. Sorovakou, A.M. Goula
Extract from pomegranate wastes as an alternative natural additive in foods
- 17.45-18.00 P. Tzatsi, D. Fotiou, D. Karipoglou, E.G. Stampinas, K. Kaderides, A.M. Goula
An integrated process for utilization of unused chokeberries
- 18.00-18.15 T. Kritikou, D. Panagiotakos, K. Lasaridi
Investigating the determinants of Greeks' food waste prevention behaviour
- 18.15-18.30 C. Vaneekhaute, D. Styles, T. Prade, P. Adams, G. Thelin, L. Rodhe, T. D'Hertefeldt
Decentralized recycling of digested wastes in agricultural regions:
A multi-dimensional sustainability assessment
- 18.30-18.45 I. Vardopoulos, I. Konstantopoulos, A.A. Zorpas
Sustainable cities perspectives by municipal waste sustainability indicators assessment
- 18.45-19.00 M. Segreto, M. Torre, P. Tratzi, L. Tomassetti, V. Paolini, D. Borin, F. Petracchini
Small scale anaerobic digesters: application to the case study of Calabria, Southern Italy
- 19.00-19.15 J. Vaz, V. Sousa, C. Dias-Ferreira
Benefits of introducing door-to-door separate collection in rural and low populated areas
- 19.15-19.30 S. Ospina, D.L. Ortiz, C.E. Orrego
Avocado puree production and waste management can offer interesting options for
avocado commercialization

ROOM 1

SESSION XVII

Waste-to-Energy

Chair: N. Themelis, M. Castaldi, K. Aravossis

9.00-9.15	K. Aravossis, C. Mouselimos, E. Strantzali Evaluation of available Energy Recovery Technologies for non recyclable Plastic Waste
9.15-9.30	I.D. Charisteidis, A.I. Zouboulis, K.S. Triantafyllidis Valorization of hazardous organic solid wastes towards fuels and chemicals via pyrolysis
9.30-9.45	P. Mondal, S. Das, S. Ghosh MSW fired indirect combined cycle: A novel solution to waste management and power for India
9.45-10.00	S.A. Viczek, R. Sarc, A. Aldrian, R. Pomberger Analytical determination of recycling quota through RDF co-processing in the cement industry
10.00-10.15	E. Posada, G. Saenz Possibilities of waste to energy systems based in the co-gasification of municipal solid waste and coal in Colombia
10.15-10.30	A. Bertacchini Decentralised energy from waste plants based on organic ranking cycle technology
10.30-10.45	M. M. Rokni Waste to energy system based on solid oxide fuel cells: department store case
10.45-11.00	S. Consonni, F. Viganò, M. Spinelli, L. Mastropasqua, S. Campanari Waste-to-Energy with carbon capture via molten carbonate fuel cells
11.00-11.15	G. James, S. K. Nema, T. S. Anantha Singh, P. Vadivel Murugan A comparative study on energy recovery from tyre waste using plasma pyrolysis and plasma gasification process
11.15-11.30	J. Haydary, P. Šuhaj, J. Husar Waste biomass to methanol – optimisation of the gasification agent to feed ratio
11.30-12.00	 Coffee Break
12.00-12.15	J. C. Solarte-Toro, J. A. Poveda-Giraldo, C. A. García-Velásquez, C. A. Cardona-Alzate Gasification, pyrolysis and combustion technologies as process alternatives for woody biomass valorization

12.15-12.30	X.B. Wang, L. Zhang, Y.M. Zhu, S.H. Deng, Z.M. Lv, R.H. Ruan, H.Z. Tan A case study of biomass co-firing in a 55 MW pulverized coal fired furnace
12.30-12.45	M. Padri, N. Boontian, C. Piasai, T. Phorndon Microalgae dynamic in municipal and industrial waste and wastewater
12.45-13.00	K. Yoshikawa, Commercial demonstration of solid fuel production from municipal solid waste and sewage sludge employing the hydrothermal technology
13.00-13.15	V.I. Kuprianov, P. Ninduangdee, C. Se Effects of (co-)combustion techniques and operating conditions on the performance and NO emission reduction in a biomass-fueled twin-cyclone fluidized-bed combustor
13.15-13.30	K. Yu. Vershinina, V. V. Dorokhov, D. S. Romanov Utilizing wastes of related industry branches in composition of water-containing fuel slurries
13.30-13.45	S. Spatari, V. Larnaudie, M.C. Wheeler, C.A. Mullen, A.A. Boateng Life Cycle Assessment of renewable diesel using catalytic pyrolysis and upgrading
13.45-14.00	S. Bennici, L. Limousy, K. Haddad, M. Jeguirim Influence of minerals' nature and concentration on the gasification of cypress wood sawdust chars
14.00-14.15	P. Šuhaj, J. Husár, J. Haydary Gasification of RDF in two-stage reactor unit, comparison of two reactor configurations
14.15-14.30	O. Gao, E. Zhang Current status of China's waste-to-energy industry
14.15-15.00	Lunch Break

ROOM 2

Recycling & Resources Recovery I

Chair: A. Ribeiro, S. W. H. Hulle, P. Gikas

SESSION XVIII

9.00-9.15	S. W.H. Van Hulle Decentralised water and waste treatment in view of resource recovery
9.15-9.30	A. Aguado, F. Verdugo, C. Domínguez Glass fibre from sustainable recycling of useless wind powered generator blades
9.30-9.45	J. Morón-López, S. Molina Recycled-Membrane Biofilm Reactors based on end-of-life reverse osmosis membranes as a novel low-cost alternative for microcystins removal
9.45-10.00	M. Benzerzour, M. Amar, N.-E. Abriak The use of flash calcined dredging sediments in cementitious matrix
10.00-10.15	V. Lopes, N. Couto, A.R. Ferreira, E.P. Mateus, S. Pamukcu, A.B. Ribeiro Electro-assisted extraction of critical raw materials from coal ashes
10.15-10.30	A. López-Uceda, E. F. Ledesma, J.R. Jimenez, J.M. Fernandez Mechanical performance of sustainable mortars made with filler from different industrial by-products
10.30-10.45	J. Almeida, A. Rosário, R. Craveiro, E. P. Mateus, A. Paiva, S. Barreiros, A. B. Ribeiro Tungsten recovery and arsenic removal from secondary resources - DES in the electro-dialytic process
10.45-11.00	P. Guedes, E.P. Mateus, A.N. Alshwabkeh, A.B. Ribeiro Ultrasonic-assisted extraction of critical raw materials from tungsten carbide waste
11.00-11.15	F. Liendo, F.A. Deorsola, S. Bensaid, G. Saracco Utilization of the cement industry CO ₂ in the production of calcium carbonate nanoparticles through precipitation process intensification on a packed bed reactor
11.15-11.30	Xiuqing Li, Changhui Wang, Yuansheng Pei Research on recycling of drinking water treatment residuals in environmental remediation: The past and future
11.30-12.00	 Coffee Break
12.00-12.15	M. Probst, M. Fernández-Delgado Juárez, M. Gómez-Brandón, V. Turan, H. Insam Ashes from fast pyrolysis bio-oil production of different waste streams may be suited as soil amendment

12.15-12.30	M. Kumar Awasthi, Z. Zhang Biofiltration of hydrogen sulfide: Trends and challenges
12.30-12.45	R. Satish Babu, P. Venkateswara Rao Modeling and optimization of bioleaching process to recover heavy metals from spent catalyst
12.45-13.00	J. Jimenez, M. Grigatti, D. Patureau, N. Bernet Impact of biogas digestate typology on nutrient recovery for plant growth: accessibility indicators for fertilization prediction
13.00-13.15	T.C. Weissenbach, R. Sarc Composition of mixed commercial waste with focus on recyclable fractions
13.15-13.30	P. Billen, S. Spatari, S. Tavernier Biodegradation of polyethylene by macro-organisms such as mealworms and greater wax moth larvae: new findings and technological application potential

ROOM 3

SESSION XIX

Bioprocesses, Biorefineries in waste management II

Chair: I. Angelidaki, C. Cardona, G. Antonopoulou

9.00-9.15	P. G. Kougias, L. Treu, S. Campanaro, X. Zhu, I. Angelidaki Genome-centric resolution of anaerobic digestion microbiome in biogas reactors fed with Long Chain Fatty Acids
9.15-9.30	A. Djukić-Vuković, D. Mladenović, C. Gusbeth, L. Mojović Valorization of microalgal extracts obtained by pulsed electric field in lactic acid fermentation
9.30-9.45	Songyan Zhang, Yangsheng Chen, Heidi Qunhui Xie, Li Xu, Bin Zhao A novel reporter gene-based bioassay system for dioxins determination in solid waste
9.45-10.00	Zong-Nan Li, Jin-Zheng Wang, Sheng Sheng, Fu-An Wu, Jun Wang Fermentation of <i>Phellinus linteus</i> by using abandoned defatted silkworm pupa hydrolysates as nitrogen source
10.00-10.15	S. Campanaro, G. Luo, L. Treu, P. G. Kougias, X. Zhu, I. Angelidaki Genome-Contric metagenomic investigation of 134 samples collected from biogas reactors revealed important functional roles for microbial species belonging to unexplored Taxa

10.15-10.30	N. Yadav, S. K. Khare Impact of ionic liquid on isolated <i>Lactobacillus</i> sp. strains growth and simultaneous production of lactic acid from paddy straw
10.30-10.45	G. Asimakopoulou, A. Karnaouri, D. Perraki, K. Kalogiannis, A. Lappas, E. Topakas Efficient lactic acid production through conversion of organosolv pretreated lignocellulosic biomass by Lactic Acid Bacteria
10.45-11.00	E. Santos-Clotas, A. Cabrera-Codony, E. Boada, F. Gich, M.J. Martin Biotrickling filtration as sustainable technology for biogas upgrading to renewable fuel
11.00-11.15	A. Karnaouri, P. Kostopoulos, A. Chalima, K. Kalogiannis, A. Lappas, E. Topakas Utilization of lignocellulosic biomass for the production of omega-3 fatty acids by the marine microalgae <i>Cryptocodinium cohnii</i>
11.15-11.30	Xue-Jiao Zhou, Chang-Tong Zhu, Sheng Sheng, Fu-An Wu, Jun Wang Enzymatic transformation of mulberry red pigments in microfluidic ATPS
11.30-12.00	 Coffee Break
12.00-12.15	F. Silva, M. Matos, G. Carvalho, M. Reis Production of PHA with mixed cultures from fermented food waste rich in ammonia
12.15-12.30	D. Blair, P. Champagne, B. Sanders, A. Gnananayakan Rapid bacteriological quantification using fluorescent enzymatic activity in municipal wastewater
12.30-12.45	L. di Bitonto, C. Pastore A sustainable pathway to convert volatile fatty acids coming from fermented food waste into bio-based solvents
12.45-13.00	G. Antonopoulou, I. Ntaikou, M. Alexandropoulou, S. Bebelis, G. Lyberatos Using cheese manufacturing wastes in a single chamber Microbial Fuel Cell
13.00-13.15	N. Frison, V. Conca, C. Da Ros, A. L. Eusebi, F. Fatone Polyhydroxyalkanoates and phosphorus recovery at pilot scale through the SCEPPHAR system
13.15-13.30	M. Kyriakou, V.K. Chatziiona, C.N. Costa, M. Kallis, L. Koutsokeras, G. Constantinides, M. Koutinas Use of vineyard prunings biochar as a carrier for cell immobilization and ethanol overproduction by <i>Saccharomyces cerevisiae</i>
13.30-13.45	P. Dutournié, S.M. Miron, A. Ponche Protein adsorption in pores of ultrafiltration membranes

13.45-14.00	V. Stoumpou, J. Novakovic, N. Kontogianni, E.M. Barampouti, S. Mai, K. Moustakas, D. Malamis, M. Loizidou Assessing straw digestate from anaerobic digestion as feedstock for sugars production
14.00-14.15	N. Đurišić-Mladenović, S. Panić, M. Tomić Heterogeneous synthesis of biodiesel: comparison of alkaline catalysts supported by pyrolytic biochar
14.15-14.30	A. Iovine, P. Casella, S. Chianese, D. Karatza, D. Musmarra, T. Marino, A. Molino Effect of mechanical pretreatment on microalgae for the extraction of carotenoids by using ASE technology
14.30-14.45	E. Righetti, S. Nortilli, N. Frison, D. Bolzonella Biorefinery pilot plant for resources recovery from agricultural waste

ROOM 4

SESSION XX

Aerobic Treatment & Waste management in general

Chair: H. Insam, J. Dosta, A. Agapiou

9.00-9.15	M. Kumar Awasthi, Z. Zhang Aerobic composting reduces antibiotic resistance genes in manure and the resistome dissemination in agricultural soils
9.15-9.30	A. Joshi, D. Reeve, L. N. Ngeh, J. D. Orbell A scientific evaluation of the Takakura Composting Method (TCM)
9.30-9.45	Á. Fernández-Braña, V. Sousa, C. Dias-Ferreira A structured methodology to understand waste generation at local level with minimised effort. Development and case of study
9.45-10.00	A. Hernández-Gómez, D. Gordillo, F. Gómez, A. Calderón, C. Medina, V. Sanchez-Torres, E. R. Oviedo-Ocaña Implementation of strategies to optimize the co-composting of green waste and food waste in developing countries. A case study: Colombia
10.00-10.15	F. Paillet, R. Escudié, C. Couhert Barrau, N. Bernet, E. Trably Influence of ions accumulation on hydrogen production from Organic Fraction of Municipal Solid Waste (OFMSW)
10.15-10.30	Á. Fernández-Braña, G. Feijoo-Costa, C. Dias-Ferreira Optimisation of material waste fluxes of a Portuguese city from a life-cycle costing perspective

10.30-10.45	T. Mohanta, S. Goel Optimization of process variables for enhanced organic matter degradation and nitrogen conservation during food waste composting at an academic campus
10.45-11.00	M. Fadhil Md Din, S. Mat Taib, S. Krishnan, N. Hanafi, W. Omar, S. Chelliapan, C. T. Lee Smart Waste Recycling Framework within the Sustainability Operation, Services and Management at Higher Educational Institution
11.00-11.15	B. O'Regan, W. Horan, S. Shawe, S. Byrne, R. Moles Developing Tools to Reduce Carbon Emissions from Universities and Promote Outreach Activities to Promote Sustainability in Communities
11.15-11.30	V. Sousa, J. Vaz, C. Dias-Ferreira Energy intensity in waste collection services
11.30-12.00	 Coffee Break
12.00-12.15	A. Agapiou, A. Vasileiou, M. Stylianou, K. Mikedi, A. A. Zorpas Correlating Compost Physicochemical Properties with Processing
12.15-12.30	O. Skiadi, A. Pantazopoulos, A. Angelis-Dimakis, C. Tsakalou, I. Vyrides, M. Doumi, V. Angelis, A. Alexopoulos, N. Panagou Balkan industrial solid waste reuse: The SWAN digital ecosystem developments
12.30-12.45	J.B. Zhang, L. Mazza, X.P. Xiao, M.M. Cai, L.Y. Zheng, Z.N. Yu Influences of symbiotic bacteria on black soldier fly larvae vermicomposting efficiency and nutrient accumulation in chicken manure
12.45-13.00	V. Zeller, C. Lavigne, P. D'Ans, E. Towa, W. M.J. Achten Assessing the environmental performance of circular economy options for biowaste flows at city-region level
13.00-13.15	Xiangyu Zhang, Ruying Li, Min Ji Voltage optimization and antibiotics removal in a microbial electrolysis cell treating concentrated sludge
13.15-13.30	G. Croxatto Vega, J. Voogt, A. Ekman Nilsson, J. Sohn, M. Birkved, S. Irving Olsen Lessons from combining techno-economic and life cycle assessment – a case study of polyphenol extraction from waste resources
13.30-13.45	M. Tsakona, C. Velis, J. Cotton, E. Iacovidou Advances in quantifying marine litter to support waste management decision-making in local authorities of the Global South

- 13.45-14.00 J. Sohn, G. Croxatto Vega, M. Birkved, S. Irving Olsen
Incorporating Relative Importance: selecting a polyphenol production method for agro-waste treatment in an environmental and economic multi-criteria decision making context
- 14.00-14.15 D. Tsivas, A. Vlysidis, G.K. Lamprou, K. Tzathas, A.G. Vlyssides
Control of a III-phase olive pomace composting process using the Cielab calorimetric method

ROOM 1

SESSION XXI

Energy from Waste

Chair: S. Consonni, A. Nzihou, M. Baratieri

- 15.00-15.15 D. Urbancl, M. Simonic, D. Goricanec
Torrefied biofuels production using different biomasses
- 15.15-15.30 L. di Bitonto, H.E. Reynel-Ávila, D.I. Mendoza-Castillo, C. Duran-Valle, A. Bonilla-Petriciolet, C. Pastore
Synthesis, characterization and applications of carbon-based calcium catalysts deriving from avocado seeds for biodiesel production
- 15.30-15.45 V. Gasquet, B. Kim, H. Benbelkacem
H₂S adsorption from biogas with thermal treatment residues
- 15.45-16.00 Qiang Hu, Ye Shen, Jia Wei Chew, Tianshu Ge, Chi-Hwa Wang
Adsorption enhanced chemical looping gasification of biomass with Fe₂O₃/CaO: Oxygen carrier activity and process optimization study
- 16.00-16.15 M.L. Mastellone
The integrated plastic waste management: a technical-economical assessment of an integrated sorting – feedstock recycling system
- 16.15-16.30 J. Husár, P. Šuhaj, J. Haydary, K. Gazdov
Tire pyrolysis char as tar cracking catalyst for gasification of RDF in dual pyrolysis-gasification reactor
- 16.30-16.45 D. L. Ortiz, S Ospina, C. E. Orrego
Orange peel management can make the shift to cleaner small-scale orange juice industries. A Colombian case study
- 16.45-17.00 I. Cañete Vela, J. Maric, M. Seemann
Valorisation of textile waste via steam gasification in a fluidized bed reactor

17.00-17.15	L. Menin, S. Vakalis, V. Benedetti, M. Baratieri The feasibility of integrating biomass steam gasification and syngas biomethanation to store renewable energy as methane gas
17.15-17.30	T. R. Oliveira, K. Tannous Pyrolysis kinetics modeling of hybrid sugarcane IACSP95-5000
17.30-17.45	F. Rezaei Tavabe, S. Sadat, N. Talebbeydokhti Biohydrogen production from food waste by a co-culture of <i>Clostridium acetobutylicum</i> and <i>Rhodobacter sphaeroides</i>
17.45-18.00	T. Phorndon, N. Boontian, C. Piasai, U. Yingchon, M. Padri Increasing chemical oxygen demand removal to enhance biogas of distillert slops wash
18.00-18.15	L.N.B. Menezes, J. V.S. Manzoni, N. S. Parachin, P.A.Z. Suarez Biofuels and biomaterials from primary and activated sludge
18.15-18.30	J. Novakovic, N. Kontogianni, E.M. Barampouti, S. Mai, D. Malamis, M. Loizidou NaOH alkaline pretreatment for Improvement of Enzymatic Digestibility of wheat straw as Alternative Sugar Source
19.00-19.30	Closing Session with the active participation of all chair persons - award ceremony

ROOM 2

SESSION XXII

Hazardous Waste

Chair: K. Moustakas, G. Mancini, S. Bennici

15.00-15.15	C. Galletti, M. Dosa, N. Russo, D. Fino Zn^{2+} and Cd^{2+} removal from wastewater using clinoptilolite as adsorbent
15.15-15.30	G. Mancini, A. Luciano, P. Viotti, D. Fino Partial stabilization of hazardous wastes: An approach for a safe landfill disposal
15.30-15.45	A. Garlicka, M. Zubrowska-Sudol, K.Umiejewska, O. Roubinek, J.Palige, A. Chmielewski The effects of thickened excess sludge pretreatment using hydrodynamic cavitation for methane fermentation

15.45-16.00	Chengdong Zhang A new concern of nanowaste: A case study of bacterial pathogenic evolution
16.00-16.15	K. Haarstad Should we use (more) wetlands to monitor environmental pollutants? With examples from landfill leachate
16.15-16.30	R. Ionce, A. Ionce, N.N. Ardeleanu Remanent pollution in the area of the former Sulphur exploitation site in the Calimani Mountains, Suceava County, Romania
16.30-16.45	S. Dudek, D. Kołodyńska Removal of arsenic on sorbents containing iron oxide and titanium oxide modified with lanthanide ions
16.45-17.00	M. Vaclavikova, J. Tomcova, D. Kupka, G.P. Gallios Water and Soil Decontamination from Mixed Contaminants
17.00-17.15	P. Guadarrama Guzmán, G. Fernández Villagómez, M. T. Alarcón Herrera, J. L. Martínez Palacios, F. Sánchez Pérez Determination of risk of mine tailings from a mine in the state of Durango, Mexico
17.15-17.30	E. Rossi, N. Frasi, I. Pecorini, R. Iannelli, G. Ferrara Biofiltration of low levels of landfill gas: Human Health Risk Assessment of volatile and malodorous compounds emissions
17.30-17.45	L. Tomassetti, V. Paolini, M. Segreto, M. Torre, D. Borin, P. Tratzi, F. Petracchini A study on available technologies to treat asbestos
17.45-18.00	U. Pathak, A. Jhunjunwala, P. Mogalapalli, D. Dasgupta Mandal, P. Das, T. Kumar, T. Mandal Intensive insight into the bio attenuation of phenol and cyanide using co-culture microbial strain - Kinetic and Toxicity analysis
18.00-18.15	Q. Zhan, V. Chatain, M. Gautier, C. Drapeau, G. Lipeme-Kouyi, L. Lassabatère, C. Delolme Iron geochemistry in a contaminated urban soil dedicated to stormwater infiltration
18.15-18.30	A. Jhunjunwala, U. Pathak, K. Kumar Sarkar, S. Majee, D. Dasgupta Mandal, T. Mandal Treatment of Levosulpiride from pharmaceutical wastewater using an advanced integrated treatment strategy
18.30-18.45	S. Mahgoub, H. Abdelbasit, H. Abdelfattah, S. Salam Biodegradation of phenol by co-cultural of bacteria isolated from liquid or solid industrial waste

ROOM 3
SESSION XXIII

Characterisation of Waste Residues

Chair: B. D. Škrbic, J. Faitli, M. Kumar Awasthi

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| 15.00-15.15 | K. Lasaridi, S. Fortatos, E. Terzis, C. Chroni, M. Kyriacou, K. Abeliotis, F. Galliou, T. Manios
Microbiological profile of food waste-amended animal feed using a solar drying process |
| 15.15-15.30 | A. Lieto, I. Chiapperini, I. Verginelli, D. Zingaretti, F. Lombardi
Total organic carbon as a proxy for metal release from bio-stabilised MBT wastes |
| 15.30-15.45 | K. Joensuu, H. Hartikainen, S. Karppinen, A.-K. Jaakkonen, M. Kuoppa-aho
Developing statistical food waste data collection from primary production of fruits and vegetables |
| 15.45-16.00 | S.A. Viczek, K. Khodier, R. Sarc, R. Pomberger
Grain size dependent distribution of contaminants in coarse-shredded commercial waste |
| 16.00-16.15 | P Sridhar, Mohammed Bin Zacharia K, R Sarath Kumar, Siddharth T, Sai Krishna Venna
Evaluation of the environmental impacts of Thermocol using life cycle assessment: a study in India |
| 16.15-16.30 | I. Voukkali, P. Loizia, N. Tofalli, A. A. Zorpas
The Influence of waste generation in Tourist Areas in the Framework of City Metabolism:
A case study from Cyprus |
| 16.30-16.45 | H. Muñiz, M. Šyc, J. Výravský
Characterization of the fine fraction of the Municipal Solid Waste Incineration Bottom Ash
(MSW IBA) focused in the metal recovery. |
| 16.45-17.00 | G.F. Dai, X.B. Wang, J. Du, S.J. Bai, X.W. Sun, S.S. Li, H.Z. Tan
Combustibility analysis of high-carbon ash from entrained flow gasifiers |
| 17.00-17.15 | K. Hu, D. Reed, R.M. Smith, M.D. Ogden
Characterization of aluminium black dross before and after stepwise salt-phase dissolution with
glycerol and ethanol washing |
| 17.15-17.30 | J. Faitli, R. Romenda
Detailed Sampling Protocol for the Analysis of Residual Municipal Solid Wastes |
| 17.30-17.45 | K. Lasaridi, E. Terzis, C. Chroni, K. Abeliotis, F. Galliou, T. Manios
Quantitative and qualitative assessment of food waste in Greek hotels |
| 17.45-18.00 | M. Sadeckas, N. Striūgas, H. Wang
Investigation of Emission of Alkali Radicals during the Combustion of Single Wood and Straw
Biomass Pellet under High Temperature using FES method |

- 18.00-18.15 I. Tiseanu, I. Porosnicu, C. Dobrea, A. Sima, M. Lungu
Applications of X-ray microtomography in microstructural analysis of materials resulting from waste processing
- 18.15-18.30 B. D. Škrbic, V. B. Marinkovic, S. B. Spaic, V. J. Milanko
Emissions of BTEX from combustion and thermal decomposition of selected biomass
- 18.30-18.45 Sheng Zhang, Linlin Feng, Xiaolong Peng, Mengmei Mao, Fei Wang
Influence on combustion and ash characteristics during co-combustion of municipal solid waste and pelleted sewage sludge

ROOM 4 SESSION XXIV

Recovery of materials from wastewater & sludge - Sludge Management

Chair: A. Zouboulis, C. Di Iaconi, P. G. Kougias

- 15.00-15.15 C. Torri, C. Samori, A. Kiwan, E. Torricelli
Production of polyhydroxyalkanoates from anaerobically digested sewage sludge: the B-PLAS proof of concept
- 15.15-15.30 Yen-Keong Cheah, C. Vidal-Antich, J. Dosta, J. Mata-Álvarez
Improvement of VFA production from food waste using biological pretreatments
- 15.30-15.45 A. G. Pantziaros, X. A. Trachili, A. D. Zentelis, V. Sygouni, C. A. Paraskeva
A new olive oil production scheme with almost zero wastes
- 15.45-16.00 J. Raček, T. Chorazy, R. Komendová, J. Kučerík, P. Hlavínek
Characteristics of a solid carbonaceous product of microwave torrefaction of sewage sludge
- 16.00-16.15 A. Guisasola, C. Chan, O. Larriba, M. E. Suárez-Ojeda, J.A. Baeza
Prospects for phosphorus recovery from mainstream: experimental and modelling studies
- 16.15-16.30 H. I. Gomes, R. L. Gomes
Advanced electrochemical oxidation of antibiotics in dairy slurry
- 16.30-16.45 A. Callegari, S. Bolognesi, A. G. Capodaglio
Biochar production from sewage sludge and microalgae combination: properties, sustainability and possible role in a circular economy
- 16.45-17.00 M. De Sanctis, V.G. Altieri, C. Di Iaconi
An innovative system for reducing sewage sludge production

17.00-17.15	J.P. Bezzina, M.D. Ogden Valorisation of Sewage Sludge by Removal of Heavy Metals
17.15-17.30	A.S. El-Gendy, A.G. Ahmed Pilot-scale Water Hyacinth Bed for Dewatering of Sewage Sludge
17.30-17.45	G. Ravenni, Z. Sárossy, J. Ahrenfeldt, U.B. Henriksen Characterization of char produced by pyrolysis and activation of wastewater sludge
17.45-18.00	F.E. Sayın, A. Khalvati, A. Erdiñçler Effect of Arbuscular Mycorrhizal Fungi (G. Mosseae and G. Intraradices) Interactions and Sewage Sludge Addition on Heavy Metal Phytoremediation in Mine Tailings
18.00-18.15	G. Campo, A. Cerutti, M.C. Zanetti, G. Scibilia, E. Lorenzi, B. Ruffino Application of semi-continuous pilot-scale AD tests to assess biochemical methane potential and hydrolysis rate constant of raw and pre-treated sludge
18.15-18.30	L. Lorini, F. Valentino, G. Bifulchi, A. Martinelli, M. Majone Downstream processing for Polyhydroxyalkanoates from mixed microbial cultures: study of microbial activity inhibition, polymer recovery and characterization

ROOM 5

SESSION XXV

Young stakeholders networking session

Chair: D. Malamis, M. Zeppilli, N. Gontard

15.00-15.30	D. Malamis, Introducing Horizon2020 NoAW project and its Young Researchers
15:30-16:00	M. Zeppilli, Connecting Young Researchers
16:00-17:20	N. Gontard, M. Loizidou, Mini-Project preparation
17:20-17:30	Conclusions and Prospects for beyond this Session

This session is a unique networking opportunity bringing together a broad range of young professionals to share their work experiences and R&D interests aiming to foster interaction and build contacts that will lead to follow-on collaborations. This initiative has been developed within the framework of NoAW Horizon 2020 project which aims to generate innovative efficient approaches to convert growing agricultural waste issues into eco-efficient bio-based products opportunities with direct benefits for the environment, economy and EU consumer.

HERAKLION 2019



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Sustainable Solid Waste
Management

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Aquila Atlantis Hotel, Heraklion
Crete Island, Greece

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