Crete 2025

27-31 May
Chania, Greece

Industrial & Hazardous Waste Management

Recovery Potential & Processes

Daily Program
&
Useful Info

27-31 May | Chania, Greece

Industrial & Hazardous Waste Management

Recovery Potential & Processes

Crete 2025

Organized by

TECHNICAL UNIVERSITY OF CRETE

&

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PREFACE

It is with great pleasure that we welcome you to the 8th International Conference on Industrial and Hazardous Waste Management, held once again in Chania. After a 4-year break, this long-anticipated gathering brings together researchers, professionals and stakeholders from around the world to address some of the most urgent environmental challenges of our time.

The years since our last conference in 2021 have been marked by several global developments—ranging from the escalating impacts of climate change and resource scarcity to the growing complexity of waste streams and the urgent need for circular economy solutions. These challenges have only deepened the importance of innovation, collaboration and evidence-based approaches in the field of industrial and hazardous waste management.

Since its inception, this conference has served as a vital platform for the exchange of scientific knowledge and practical experience. The 8th edition continues this tradition, offering a comprehensive program that reflects the diversity, depth and evolving priorities of our field. Keynote lectures, special sessions and workshops, as well as poster presentations will provide space for critical dialogue, new ideas and the formation of collaborations.

We extend our sincere gratitude to all who have contributed to making this event possible—our speakers, authors, reviewers, sponsors and especially the Organizing Committee for their dedication and hard work. Most importantly, we thank you, our participants, for your presence, your insights and your ongoing commitment to environmental stewardship.

We hope this conference serves not only as a forum for academic exchange, but also as a catalyst for meaningful progress toward safer, more sustainable waste management practices worldwide.

Welcome back and enjoy the conference.

Evangelos GIDARAKOS | Conference Chairman
Technical University of Crete (GR)

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Technical University of Crete (GR)

ORAL SESSIONS

WEDNESDAY
MAY 28

OPENING SESSION

9:00 – 11:00 | GRAND IMPERIAL

Welcome Addresses

- Evangelos GIDARAKOS | Technical University of Crete (GR)
- Andreas BARTL | Vienna University of Technology (AT)
- Grzegorz LISAK | Nanyang Technological University (SG)
- Wenjing LU | Tsinghua University (CN)
- Friedrich WENINGER | Austrian Fiber Institute (AT)
- Seung-Whee RHEE | Korea Basel Forum (KR)

Opening Lectures

CHAIRING | E. Gidarakos (GR)

- Michael NELLES | University of Rostock (DE)

Renewable energies & circular economy as central pillars for the climate-neutral industrial society of the future

- Spiros AGATHOS | Catholic University of Louvain (BE)

Revisiting contaminant biodegradation concepts & reassessing tools from synthetic microbial ecology & bioengineering

COFFEE BREAK

11:00 – 11:30

KEYNOTE LECTURES
11:30 – 13:00 | GRAND IMPERIAL

CHAIRING | E. Gidarakos (GR)

- Friedrich WENINGER | Austrian Fiber Institute (AT)

The future of the fiber industry: sustainability & circularity the new way forward

- Grzegorz LISAK | Nanyang Technological University (SG)

Carbon capture and utilization in smart urban systems: a circular approach to waste management

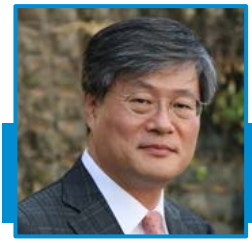
- Seung-Whee RHEE | Korea Basel Forum (KR)

Smart concepts on protective plan of EV (electric vehicle) fires

LUNCH BREAK
13:00 – 15:00

SPECIAL WORKSHOP 1
EV BATTERY CIRCULARITY
Best Practical Plan & Recycling Technology

15:00 – 17:00 | GRAND IMPERIAL



Organized by
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Led by
Seung-Whee RHEE | Korea Basel Forum (KR)

ENHANCING EV BATTERY CIRCULARITY IN KOREA: ANALYSIS OF RECYCLED MATERIAL SUPPLY POTENTIAL
J. Park, I. Go, H.-S. Lim, S. Yi (KR)

EV BATTERY RECYCLING TECHNOLOGIES: CURRENT STATUS & FUTURE
J.-S. Sohn, J. Je, H.-W. Shim, H. Kim (KR)

SAFETY AND RECYCLING OF PORTABLE LIBS IN JAPAN
A. Terazono, M. Oguchi (JP)

PREPARATION OF HIGH-PURITY TIO_2 FROM SPENT SELECTIVE CATALYTIC REDUCTION (SCR) CATALYST
J.-Y. Lee, H.-N. Kang, T.-H. Lee, J. Kang (KR)

COMPREHENSIVE DISCUSSION

SESSION 1
RECOVERY POTENTIAL AND PROCESSES
15:00 – 17:00 | IMPERIAL I

CHAIRING | X. Fei (SG) – M. Aivalioti (GR)

EXPLORING ELECTROCHEMICAL ROUTES FOR PALLADIUM RECOVERY USING CORROSIVE COMPLEXING SOLUTIONS
N. Tsyntsaru, H. Cesiulis (LT)

SUSTAINABLE RECOVERY OF COBALT FROM POLYMETALLURGICAL REFINERY PURGES FOR BATTERY CATHODE MANUFACTURING – PURIFICATION OF WASTE STREAMS
L. Suanzes-Al-Zubaidi, E. Vourdoumpakis, V. Vallés, M. Fernández de Labastida, T. Scarazzato, J.L. Cortina (ES)

FLASH JOULE HEATING FOR WASTE UPCYCLING AND CRITICAL METALS RECOVERY
B. Deng (CN)

WASHING TECHNIQUES FOR HEAVY METAL REMOVAL EFFICIENCY AND REUTILIZATION OF RESIDUAL WASTE MATERIALS: FROM LAB TO PILOT SCALES
Z. Cheng, Z. Yuan, X. Fei (SG)

INSIGHTS INTO THE USAGE OF BIOBASED ORGANIC ACIDS FOR TREATING MUNICIPAL SOLID WASTE INCINERATION BOTTOM ASH TOWARDS METAL REMOVAL AND MATERIAL RECYCLING
Z. Yuan, C. Cao, H. Liu, X. Fei, J. Esteban, Q. She (SG)

SESSION 2
STATUS AND OUTLOOK IN TEXTILE RECYCLING

15:00 – 17:00 | IMPERIAL II

CHAIRING | D. Komilis (GR)

AI BASED ASSESSMENT METHOD FOR EVALUATING VARIOUS FEED UNITS FOR SORTING TEXTILES
A. Tischberger-Aldrian, J. Brantner, A. Ludes, E. Pfund, H. Stipanovic, G. Koinig (AT)

RESTEX: JOSEF RESSEL CENTRE FOR RECYCLING STRATEGIES FOR TEXTILES
C.B. Schimper, B. Herbinger, J. Rudolf-Scholik, A. Grünfelder, D. Lilek, F. Quartinello, J. M. Egan, G. Gübitz, T. Rosenau, W. Ipsmiller, N. Depope, A. Bartl (AT)

IDENTIFICATION OF IMPURITIES IN MIXED FIBER TEXTILES RECYCLING AND THEIR IMPACT ON THE MECHANICAL PERFORMANCE OF RECOVERED POLYMERS
E. Sykacek, R. Rihl, J. Hintenberger, F. Quartinello, Ch. Schimper, A. Mautner (AT)

GREEN SELECTIVE SEPARATION PROCESS FOR TEXTILE WASTE
N. Depope, W. IpsmilLer, A. Bartl (AT)

POTENTIAL RE-ENTRY LEVELS FOR TEXTILES IN A CIRCULAR ECONOMY
S. Rosenbusch (AT)

SESSION 3
TOXICOLOGICAL AND SAFETY ASPECTS
15:00 – 17:00 | IMPERIAL III

CHAIRING | H. Wang (CN) – W. Lu (CN)

VIRUS IN HOUSEHOLD MUNICIPAL SOLID WASTE, WHAT'S THE HEALTH AND ECOLOGICAL RISKS?
W. Lu, B. Kong (CN)

THE MOBILITY OF TRANSPOSONS IN BACTERIA AFTER EXPOSURE OF QUATERNARY AMMONIUM COMPOUNDS
R. Üçel, R. C. Altinbağ, U. Tezel (TR)

SAFETY MANAGEMENT OF GREEN ROCKS TUNNELING WASTES CONTAMINATED BY ASBESTOS
S. Malinconico, F. Paglietti, S. Bellagamba, P. De Simone, G. Bonifazi, G. Capobianco, A. Aurigemma, S. Serranti (IT)

EXPERIMENTAL INVESTIGATION INTO THE EXPLOSION PROPERTIES OF DIRECT REDUCED IRON FINES
A. Semenova, C. Spijker, H. Raupenstrauch (AT)

PREDICTION OF SELF-HEATING FOR DIRECT REDUCED IRON DUE TO REOXIDATION BY CFD-DEM COARSE GRAINING
C. Spijker (AT)

EXPERIMENTAL INVESTIGATION OF THE LOW-TEMPERATURE REOXIDATION OF DIRECT REDUCED IRON FINES
T. Angerler, A. Semenova, C. Spijker (AT)

COFFEE BREAK
17:00 – 17:30

SPECIAL SESSION 1
PLASTIC WASTE CHALLENGES

17:30 – 19:00 | GRAND IMPERIAL

CHAIRING | A. Giannis (GR)

Keynote Lecture

- Dimitrios KOMILIS | Democritus University of Thrace (GR)

Current challenges in microplastics research

MATERIAL FLOW ANALYSIS OF PLASTICS IN EUROPE
O. Gerou, E. Kastanaki, A. Giannis (GR)

THE ACHIEVEMENT OF EU PLASTIC WASTE RECYCLING TARGETS IN A CHALLENGING CONTEXT FOR EUROPEAN PLASTICS RECYCLERS
I. Brikis (GR)

DATABASE THAT SUPPORTS IDENTIFCATION OF CHEMICAL SUBSTANCES OF CONCERN IN THE PLASTICS RECYCLING STREAM
M. Oguchi, T. Inoue, Y. Tamagaki, Y. Imaizumi, Y. Koyama (JP)

ELECTROSPUN RECYCLED PLA FILMS ENRICHED WITH WILD THYME ESSENTIAL OIL: ANTIMICROBIAL AND ANTIOXIDANT ACTIVE PACKAGING FOR CIRCULAR FOOD APPLICATIONS
D. Drettas, S.E. Koskinakis, C. Stergiopoulos, M. Stramarkou, S. Papadaki, M. Krokida (GR)

SESSION 4

WASTE –TO-ENERGY CONCEPTS

17:30 – 19:00 | IMPERIAL I

CHAIRING | G. Lisak (SG)

WASTE FUEL UTILIZATION IN THE CEMENT INDUSTRY
K.E. Lorber, R. Sarc, S.A. Viczek (AT)

IMPACT OF EGGSHELL CONTENT AND PARTICLE SIZE ON THERMAL PROPERTIES OF NOVEL WASTE-BASED PHASE CHANGE MATERIALS
J. Bošnjak Hordov, M. Ćosić, M. Jurčević, I. Čorić, H. Dražić, S. Nižetić (HR)

INCORPORATING CO_2 CAPTURE-UTILIZATION WITH MUNICIPAL SOLID WASTE UPCYCLING THROUGH ISOTHERMAL SORBENT LOOPING-REFORMING
G. Liu, Z. Hu, G. Lisak (SG)

ARTIFICIAL NEURAL NETWORK MODELLING OF HYDROTHERMAL PRETREATMENT AND ANAEROBIC DIGESTION OF BIOMASS
A. Mouzourakis, T. Daras, N.A. Diangelakis, A. Giannis (GR)

THE POTENTIAL OF RAPID DETERMINATION OF PROCESS DYNAMICS DURING IN-SITU BIOMETHANATION WITH NEAR INFRARED REFLECTANCE SPECTROSCOPY (NIRS): LITERATURE REVIEW
S.M. Ng, K. Kuchta (DE)

SESSION 5

ENHANCING SUSTAINABILITY IN TEXTILE PRODUCTION

17:30 – 19:00 | IMPERIAL II

CHAIRING | F. Weninger (AT)

NON-THERMAL PROCESSES IN TEXTILE FINISHING: A SUSTAINABLE REVOLUTION OR A PARTIAL SOLUTION?
H. Ouazani, A. Ibrahim, O. Vermeersch, J. Decaens, V. Izquierdo, H. Lamoudan , N. Gaudette (CA)

FIBRE- AND YARN-BASED APPROACHES TO SIMPLIFY THE RECYCLING OF ELASTIC TEXTILES
J. Thiel, R. Wissel, T. Gries, A. Ludes (DE)

FUNCTIONAL TEXTILES FOR THE ADSORPTION, ENRICHMENT AND RECOVERY OF RESOURCES AND POLLUTANTS
K. Opwis, T. Mayer-Gall, J.S. Gutmann (DE)

SESSION 6
MINES
17:30 – 19:00 | IMPERIAL III

CHAIRING | G. Bonifazi (IT)

VALORIZATION OF SILICATE TAILINGS FOR THE PRODUCTION OF POROUS CERAMICS
K. Komnitsas, C. Gourdomichali, A. Kritikaki (GR)

COST-BENEFIT ANALYSIS THROUGH STOCHASTIC RISK ASSESSMENT ON MINING WASTE MANAGEMENT CONSIDERING THE CIRCULAR ECONOMY'S REQUIREMENTS
E. Machairas, E. Varouchakis (GR)

OPTIMAL EXPLOITATION OF EXTRACTIVE WASTES IN THE GREEK PTOLEMAIS SURFACE COAL MINES
A. Sokratidou, N. Paraskevis, A. Servou, T. Barmpas, A. Christou, C. Roumpos (GR)

EXTRACTIVE WASTE MANAGEMENT - THE CASE OF KASSANDRA MINES IN NE CHALKIDIKI, GREECE
E. Gazea (GR)

COCKTAILS & KARAOKE
20:00 – 22:00

THURSDAY
MAY 29

KEYNOTE LECTURES
9:00 – 10:30 | GRAND IMPERIAL

CHAIRING | S. Agathos (BE)

- Kerstin KUCHTA | Hamburg University of Technology (DE)

Do future cities need a circularity strategy?

- Giuseppe BONIFAZI | La Sapienza University of Rome (IT)

Sorting strategies for a sustainable recycling

- Dimitris KALDERIS | Hellenic Mediterranean University (GR)

Uncertainties and opportunities for the post-war management of land contaminated with explosives

COFFEE BREAK
10:30 – 11:00

SPECIAL WORKSHOP 2

BUILDING RESILIENCE THROUGH INTEGRATED DISASTER RISK AND WASTE MANAGEMENT

Experiencing the Complexity of Risk Communication

11:00 – 13:00 | GRAND IMPERIAL

Led by
Harald RAUPENSTRAUCH
&
Renate RENNER
Montan University Leoben (AT)

Industrial development is vital to maintaining our prosperity, strengthening economic growth, and creating essential jobs. However, there is also a so-called dark side to technological development, as large quantities of hazardous and toxic waste are produced as a by-product. Hazardous wastes and industrial disasters can pollute and destroy our prosperity, public health, and habitat in the immediate and long term.

Disasters always occur at the interface between the socio-cultural system and natural or technological hazards. The more we know about the dangers on the one hand and the patterns of the potentially affected society and individuals, environments, and political settings on the other, the better we can assess the disaster risk, take appropriate measures and effectively communicate risk.

Effective communication is understood to be central to disaster risk reduction. It builds trust and considers the target group's subjective perception of risks, which in turn is closely linked to their vulnerabilities. The language is clear, pictorial, and solution-oriented to increase resilience by informing them comprehensively about the right protective behavior and integrating them into long-term adaptation measures. Only responsible, proactive waste management, including efficient risk communication, can reduce disaster risk, help deal with disruptive events, and build back better.

This session focuses on the interface between disaster risk management and waste management, with a particular emphasis on communicating risks to specific target groups. The workshop is explicitly aimed at young scientists who will experience through an exploratory network analysis how difficult it can be to build trust, communicate consistently and balance different interests. Participants will try to practice sustainable and equitable communication management in the context of disasters and waste-related risks and experience the challenges involved.

Communicating risks becomes even more complex when short and long-term goals are considered in relation to each other. While short-term communication aims at acute adaptation measures and immediate reactions—for example, in the context of early warning systems or crisis management—long-term communication pursues overarching goals such as sustainable development, resilience building, and preparedness.

These different time horizons each have their own requirements in terms of the form, content and tone of communication. Added to this is the challenge of addressing different target groups, especially vulnerable groups - each with specific information needs, access and prerequisites. To be effective, risk communication must, therefore, always consider the objective, target group (needs and vulnerability) and timeline (short and long term) at the same time.

SPECIAL WORKSHOP 3

ALIGNING EU LEGISLATION WITH TEXTILE WASTE MANAGEMENT

11:00 – 13:00 | IMPERIAL II

Led by
Andreas BARTL |
Vienna University of Technology (AT)

The EU is placing increasing emphasis on addressing textile waste. Recent legislative initiatives, such as the proposed amendment to the Waste Framework Directive (COM(2023) 420 final) and the introduction of new Ecodesign requirements for sustainable products (Regulation (EU) 2024/1781), set ambitious and commendable goals for environmental protection and resource conservation.

However, the textile sector faces unique challenges in meeting these targets. Unlike packaging waste, which has been managed and regulated for over three decades, textiles represent a newer and significantly more complex waste stream. The intricate composition of textiles requires advanced sorting and recycling technologies that are still in the early stages of development.

This workshop brings together experts to explore whether the EU's ambitious goals can accelerate innovation in textile waste management. Will these policies spur the development and adoption of cutting-edge technologies? Or will the industry struggle to keep up, leading to production shifts to countries outside the EU?

Participants are encouraged to actively contribute to the discussion, share their perspectives, and engage with the experts. Your input helps shape the conversation and explore practical solutions for aligning legislation with technological advancements.

Join us to gain insights into the intersection of legislation and technology, and take part in shaping the future of textile waste management in Europe.

SPECIAL WORKSHOP 4
CIRCULAR SYSTEMIC SOLUTIONS IN ACTION: TRANSFORMING CRETE INTO A CIRCULAR REGION

11:00 – 13:00 | IMPERIAL III

Led by
George ARAMPATZIS |
Technical University of Crete (GR)

Circular Systemic Solutions (CSS) meet CRETE 2025 Conference in a dedicated workshop on circular economy (CE) under the aspect of CSSBoost Horizon Europe - Boosting Circular Systemic Solutions through Virtual Regional Circular Economy Spaces. In this special workshop, CSSBoost, a Circular Cities and Regions (CCRI) project, bring together CSS solutions and innovative CE approaches to overcome barriers, minimize risks and stimulate the CE transition across EU regions.

The CSSBoost Workshop in CRETE 2025 brings at the frontline the valorization of agricultural, livestock and food processing by-products to implement circular systemic solutions that enhance resource efficiency, reduce waste and empower sustainability. Sheep wool, agricultural residues, and food processing waste become the «raw materials» in the Cretan territory cluster activities, aiming to be transformed into circular value chains, essentially supported by the aligned stakeholders of the chain; local farmers, food processors, regional and local authorities, bakeries. The Cretan value chains deploy a set of exemplary CSSs transition tools, including the CSSBooster, a unique Cyber-Physical System able to boost CE in cities, regions and their groupings.

The CSSBoost CCRI project was launched in June 2024, under the coordination of the Technical University of Crete, focusing on maximizing the adoption and impact of Circular Systemic Solutions (CSSs) in selected value chains across the EU territory for Water, Food and Nutrients, Plastics, Batteries & Vehicles, being aligned with the EU's Circular Economy Action Plan.

This workshop is facilitated by project coordinator George Arampatzis. Technology developers, companies/businesses/actors of agriculture, livestock and food processing area, governmental and regional authorities, researchers, citizens and civil society, and all circular economy related actors have the opportunity to dive into innovative approaches and solutions, challenges and opportunities, to facilitate the transition towards a circular model in regional value chains.

Part 1: The CSSBoost Regional Circularity: Transforming the island of Crete into a Sustainable Circular Region involving the agricultural, livestock and food sector – **Presentations**

ACCELERATING REGIONAL TRANSFORMATION THROUGH THE IMPLEMENTATION OF CIRCULAR SYSTEMIC SOLUTIONS: THE CSSBOOST & CCRI APPROACH
Maria ARYBLIA, Technical University of Crete (GR)

ESTABLISHING A REGIONAL-SCOPE SUSTAINABLE CIRCULAR SYSTEMIC SOLUTIONS ON THE ISLAND OF CRETE WITHIN THE AGRICULTURAL, LIVESTOCK PRODUCTION AND FOOD PROCESSING VALUE CHAINS
Manolis KOUDOUMAS, Mediterranean Agrofood Competence Center (GR)

INSIGHTS INTO THE CIRCULAR SYSTEMIC SOLUTIONS IMPLEMENTATION IN THE PLASTICS SECTOR UNDER THE CONTEXT OF THE CSSBOOST PROJECT: A CLUSTER IN GERMANY
Spiros ALEXAKIS, CAS Software AG (DE)

BOOSTING CIRCULAR SYSTEMIC SOLUTIONS THROUGH DIGITAL INNOVATIONS
Evangelos MARKAKIS, Hellenic Mediterranean University (GR)

Part 2: Boosting Circular Economy Transition in Cities and Regions through Green, Digital and Social Innovation Actions: Opportunities and Challenges – **Moderated discussion with:**

- Athanasios ANGELIS – DIMAKIS, University of Huddersfield (UK)
- Kostas KALABOUKAS, Gruppo Maggioli SPA (IT)
- Konstantinos-Alketas OUNGRINIS, Technical University of Crete (GR)
- Maria PETRANTONAKI, Regional Development Company of Crete SA (GR)

SESSION 7
MANAGEMENT OPTIONS
11:00 – 13:00 | IMPERIAL IV

CHAIRING | R. Pomberger (AT)

Keynote Lecture

- Arne RAGOSSNIG | RM Umweltkonsulenten ZT GmbH (AT)

Challenges in the establishment of clean material cycles in the construction sector - Experiences from Austria

CIRCULAR ECONOMY BUSINESS MODELS AND THEIR PRACTICAL APPLICATION IN DIFFERENT INDUSTRIAL SECTORS
B. Kopacek (AT)

DIGITAL PRODUCT PASSPORT (DPP) INFORMATION AND SYSTEM DESIGNS THAT MEET WASTE TREATMENT REQUIREMENTS
E. Wagner, T.-M. Aigner (DE)

THE ALLEGORY OF STUPIDITY AND GLOBAL WASTE MANAGEMENT
T. Kraffczyk (DE)

ASSESSMENT OF ENVIRONMENTAL PERFORMANCE OF SUSTAINABLE CONCRETE FOR URBAN CONSTRUCTION
M. Doostdar, S. Nanda, K. Kuchta (DE)

LUNCH BREAK
13:00 – 15:00

SESSION 8
WASTEWATER & SLUDGE

15:00 – 17:00 | GRAND IMPERIAL

CHAIRING | E. Diamadopoulos (GR) - G. Rettenberger (DE)

HYDROGEN RECOVERY FROM MUNICIPAL SEWAGE SLUDGE USING THERMAL AND THERMO-CATALYTIC PATHWAYS
A. Veksha, G. Lisak (SG)

DEMONSTRATION OF SEWAGE SLUDGE AND WOOD DUST DERIVED BIOCOKE AS AUXILIARY FUEL IN THE MSW HIGH TEMPERATURE SLAGGING GASIFICATION PROCESS
S. Heberlein, W.P. Chan, S. Al Munawarah Binte Yusoff, H. Tong, S. Higuchi, K. Okuyama, T. Ida, K. Yoshikuni, S. Cherdkeattikul, G. Lisak (SG)

CATALYTIC CONVERSION OF MUNICIPAL SEWAGE SLUDGE AND ANIMAL MANURE INTO BIOGENIC MULTI-WALLED CARBON NANOTUBES AND HYDROGEN VIA PYROLYSIS-CVD: ANALYSIS OF CATALYST PERFORMANCE
J. Lu, A. Veksha, G. Lisak (SG)

IMPLEMENTING LIFE CYCLE ASSESSMENT OF SLUDGE DERIVED BIOCHAR
M. Charalampaki, W.D.C. Udayanga, T.-T. Lim, D. Gournis, I. Yentekakis, A. Giannis (GR)

SUSTAINABLE DEWATERING OF MUNICIPAL SLUDGE USING SLUDGE TREATMENT WETLANDS: A PILOT STUDY IN GREECE
I. Asimakoulas, P. Regouzas, E. Koukouraki, A. Stefanakis (GR)

COMPARING INTEGRATED MICROBIAL FUEL CELL AND MICROBIAL ELECTROLYSIS CELL TREATMENT WETLANDS FOR THE REMOVAL OF MAJOR POLLUTANTS, BENZOTRIAZOLES AND HYDROXYBENZOTHIAZOLE FROM MUNICIPAL WASTEWATER
A. Koukoura, A. Bolas, E. Psalti, G. Gatidou, S. Malamis, M. S. Fountoulakis, A. S. Stasinakis (GR)

SESSION 9
IDENTIFYING TEXTILE MATERIAL FLOWS

15:00 – 17:00 | IMPERIAL II

CHAIRING | K. Opwis (DE)

DYNAMIC MATERIAL FLOW ANALYSIS OF THE TEXTILES' LIFE CYCLE IN GREECE
S. Kondyli, S. Bouliota, D. Komilis (GR)

MATERIAL FLOW ANALYSIS FOR SUSTAINABLE TEXTILE WASTE MANAGEMENT IN THE REGION OF ATTICA WITHIN GREECE'S FIRST HUB FOR CIRCULARITY
S. Georgali, L. Lekawska-Andrinopoulou, C. Manousiadis, K. Chatziioannou, G. Tsimiklis, A. Amditis (GR)

MATERIAL FLOW ANALYSIS OF POST-CONSUMER TEXTILE WASTE MANAGEMENT IN AN ITALIAN REGION
S. Abagnato, M. Grosso, L. Rigamonti (IT)

SURVEY RESEARCH ON HANDLING AND MANAGEMENT OF TEXTILE WASTE IN GREECE
N. Kladas, T. Daras, A. Giannis (GR)

SESSION 10
BIOCHAR PRODUCTION AND USE

15:00 – 17:00 | IMPERIAL III

CHAIRING | K.E. Lorber (AT)

STEAM-ASSISTED ONE-STEP SYNTHESIS OF EFFICIENT BIOCHAR CATALYSTS FOR HYDROGEN PRODUCTION FROM WASTE PYROLYSIS-STEAM REFORMING
J. Guo, J. L.C. Foo, L. Ge, W. P. Chan, A. Veksha, G. Liu, Z. Hu, S. Guo, G. Lisak (SG)

BIOCHAR AS AN AMENDMENT IN BIOFILTERS FOR TREATING AGRICULTURAL WASTEWATER: EFFECT OF FEEDSTOCK AND PYROLYSIS TEMPERATURE ON REMOVAL EFFICIENCY
J. Vacula, A. Sochacki, O. Vorobiova, L. Wimmerová (CZ)

EFFECT OF BIOCHAR FROM SEWAGE SLUDGE/CONSTRUCTED WETLAND BIOMASS AND COMPOST FROM MUNICIPAL SOLID WASTE ON TOMATO GROWTH IN A SOIL BED EXPERIMENT
P. Regkouzas, E. Koukouraki, I. Asimakoulas, K. Koulouri, A. Stefanakis (GR)

EFFECT OF HORTICULTURAL WASTE BIOCHAR WITH DIFFERENT PARTICLE SIZES ON PB REMOVAL CAPACITY AND CHOY SUM (BRASSICA RAPA VAR. PARACHINENSIS) GROWTH IN PB-CONTAMINATED SOIL
X. Yang, L. Ge, W.P. Chan, G. Lisak (SG)

VALORIZATION OF RABBIT MANURE VIA MICROWAVE-ASSISTED HYDROTHERMAL CARBONIZATION
I. Moukazis, F. Simantiraki, E. Gidarakos (GR)

SESSION 11
NON-HAZARDOUS WASTE
15:00 – 17:00 | IMPERIAL IV

CHAIRING | G. Karatzas (GR)

FOOD WASTE AND CIRCULAR PRACTICES IN THE HOSPITALITY SECTOR
E. Klontza, D.-F. Lekkas (GR)

EFFECT OF HOUSEHOLD SOURCE SEPARATION REGULATIONS TO PACKAGING WASTE AND BIOWASTE CONTENT OF THE MIXED WASTE
P. Kouvo (FI)

BIOWASTE COLLECTION AND TREATMENT IN HELSINKI METROPOLITAN AREA
P. Kouvo (FI)

ASSESSING GREENHOUSE GAS EMISSIONS SAVINGS THROUGH THE REUSE OF HOUSEHOLD GOODS: A CASE STUDY IN GERMANY
E. Akhmadieva, K. Kuchta (DE)

EVALUATING THE ENVIRONMENTAL AND OPERATIONAL EFFICIENCY OF WASTE TRANSFER STATIONS USING REAL-WORLD DATA
P. Chazirakis, A. GiannIs, E. Gidarakos (GR)

AMMONIA FERMENTATION PROCESS FOR ORGANIC SOLID WASTES
M. Makian, O. Prakash, M. Mohit, A.A. Joolaei, D.H. Kim (KR)

COFFEE BREAK
17:00 – 17:30

SPECIAL SESSION 2
CHALLENGES OF THE ENERGY TRANSITION FOR WASTE MANAGEMENT INCLUDING RISK MANAGEMENT

17:30 – 19:00 | GRAND IMPERIAL

CHAIRING | M. Aivalioti (GR)

Keynote Lecture

- Roland POMBERGER | Montan University Leoben (AT)

Fire risks ! How to secure our recycling plants

- Harald RAUPENSTRAUCH | Montan University Leoben (AT)

New materials demand new safety requirements

PANEL DISCUSSION

HOW CAN THE TEXTILE INDUSTRY MOVE TOWARDS THE CIRCULAR ECONOMY?

17:30 – 19:00 | IMPERIAL II

CHAIRING | E. Gidarakos (GR)

Keynote Lecture

- Andreas BARTL | Vienna University of Technology (AT)

Towards a circular textile economy: an overview of challenges and progress

Panelists

Friedrich WENINGER |
Austrian Fiber Institute (AT)

Georgios ARAMPATZIS |
Technical University of Crete (GR)

Christian SCHIMPER |
Univ. of Appl. Sc. Wiener Neustadt (AT)

Giuseppe BONIFAZI |
Sapienza University of Rome (IT)

SPECIAL SESSION 3
CONTAMINATED SITES

17:30 – 19:00 | IMPERIAL III

CHAIRING | D.S. Kosson (US)

Keynote Lecture

- Symeon GEORGIADIS | Polyeco (GR)

Decontamination of ammunition manufacturing plant at Elefsis Greece

CASE STUDIES OF IN-SITU AND ON-SITE CHEMICAL (ABIOTIC) REMEDIATION OF EXPLOSIVES CONTAMINATED SOILS
V. Nzengung, S. Nzengung, R. Koler, I. Raz (US)

TREATMENT OF EXPLOSIVES-CONTAMINATED SOIL AND WATER USING HARDWOOD BIOCHAR
P. Papoulias, A. Zografos, V. Bolomytis, D. Gasparatos, S. Georgiadis, P. Papagiannakopoulos, E. Gidarakos, J. Formosi, D. Kalderis (GR)

THERMAL AND ALKALINE DEGRADATION OF TETRAZENE: IDENTIFICATION OF DECOMPOSITION PRODUCTS VIA MASS- SPECTROMETRY ANALYSIS
S.-K. Zervou, T. Triantis, A. Hiskia (GR)

THE STRENGTH OF ECI (EARLY CONTRACTOR INVOLVEMENT) FOR THE REMEDIATION OF A FORMER OIL TERMINAL AT BOWLING NEAR GLASGOW
S. Pensaert (BE)

SESSION 12
WASTE & CLIMATE
17:30 – 19:00 | IMPERIAL IV

CHAIRING | K. Kuchta (DE)

CLIMATE PROTECTION POTENTIAL OF BOTTOM ASH FROM MUNICIPAL SOLID WASTE INCINERATION
J. Zum Brock, K. Kuchta (DE)

SEPARATE BIOWASTE COLLECTION - A GLOBAL OPPORTUNITY
R. Maletz, C. Dornack (DE)

DEVELOPING A UNIVERSAL MODEL FOR PREDICTING THE EMISSION OF GAS MIXTURES USING ARTIFICIAL NEURAL NETWORKS
J. Zhang, S. Heberlein, C. Lemthong, G. Lisak (SG)

A LIFE CYCLE ASSESSMENT APPROACH TO ADVANCING SUSTAINABILITY IN SPORTS EVENTS
M. Semeraro, T. Daddi (IT)

CRETAN NIGHT
20:00 – 23:30

FRIDAY
MAY 30

KEYNOTE LECTURES
9:00 – 10:30 | GRAND IMPERIAL

CHAIRING | W. Clarke (AU)

- Nicolas KALOGERAKIS | Technical University of Crete (GR)

Mitigation measures to tackle microplastic pollution in the marine environment

- Christina DORNACK | Technical University of Dresden (DE)

**How can circular economy lead to more climate protection?
Sufficiency as a 'strategy of enough'**

- Apostolos VOULGARAKIS | Technical University of Crete (GR)

Environmental impacts of wildfires on global, regional and local scale

COFFEE BREAK
10:30 – 11:00

SPECIAL WORKSHOP 5
CHALLENGES OF THE CIRCULAR ECONOMY FOR PLASTICS
11:00 – 13:00 | GRAND IMPERIAL

Led by
Kerstin KUCHTA |
Hamburg University of Technology (DE)

Plastic is everywhere in modern life, and production has been growing exponentially since the 1960s. It is expected to double by 2036. There are over 1,000 types of plastic, but more than 90% of them are derived from virgin fossil fuels. In Europe, the main options for dealing with post-consumer plastic waste are incineration with energy recovery, landfilling and recycling. Plastic production and consumption offer many benefits, such as low production costs, durability and versatility, but also pose significant problems, including loss of material value due to single use, low recycling rates, and adverse effects on nature, climate and human health. Marine litter and microplastics are particularly concerning.

Transforming the plastics value chain into a circular economy is the only way forward. This will involve improving recycling, promoting reuse and refill, and redesigning products to take into account the whole life-cycle of products. This will deliver opportunities, such as enhanced security of supply, economic benefits and reduced pressure on the environment. However, there are also challenges, which this special session addresses.

- Volumes and Material Flows
- Reuse and Re-fill
- De-Inking and Recyclate Quality
- Biobased Solutions

Speakers:

- Willi WAGNER
- Jinyang GUO
- Mahsa DOOSTDAR

SPECIAL WORKSHOP 6
TOWARDS CIRCULAR SOLUTIONS FOR TEXTILE WASTE MANAGEMENT

11:00 – 13:00 | IMPERIAL II

Led by
George ARAMPATZIS |
Technical University of Crete (GR)

The global textile industry contributes significantly to environmental degradation and is responsible for high levels of greenhouse gas emissions, water pollution, and waste generation. The current linear consumption model, which can be described by the "produce-use-disposal" approach, enhanced by the fast and ultra-fast fashion trends, has led to excessive resource use and unsustainable waste disposal. There is however significant room for innovative circular solutions for transforming textile waste into new products, but also significant challenges and barriers that need to be overcome to enable the transition to circular solutions.

The THESEUS H4C project was launched in December 2024, with a view to develop systemic Industrial-Urban Symbiotic solutions in the region of Attica, Greece, with textiles being one of the key value chains where new technologies and symbiotic solutions will be applied in real-life industrial environments. This CRETE 2025 workshop aims at presenting and discussing together with technology developers, researchers, and the industrial end-users, the range of options currently available for the valorization of textile waste, but also the economic and policy enabling conditions that can facilitate the transition towards a circular model for textile waste.

Participants include speakers from the Institute of Communication and Computer Systems, the National Technical University of Athens, the Centre for Research and Technology Hellas, the University of Huddersfield, RECYCOM, one of the main actors for the separate collection of used clothing and textile waste, and two Greek industries, COMO and FIBRAN, pioneers in the use of textile waste in different sectors.

Part 1: The Theseus Hub for Circularity: Testing new technologies and schemes for circular solutions in the textiles' sector – **Presentations**

THESEUS: GREECE'S FIRST HUB4CIRCULARITY AND ITS AMBITION FOR CIRCULAR SOLUTIONS IN THE TEXTILES SECTOR
Stella GEORGALI, Institute of Communication and Computer Systems (GR)

IS OPEN LOOP RECYCLING THE PATHWAY TO CIRCULAR SOLUTIONS FOR TEXTILE WASTE?
Athanasios ANGELIS-DIMAKIS, University of Huddersfield (UK)

TECHNOLOGICAL SOLUTIONS FOR THE UPCYCLING OF TEXTILE WASTE
Magda KROKIDA, National Technical University of Athens (GR)

THE COMO EXAMPLE FOR THE RECYCLING OF TEXTILE WASTE
Sandy TRIFERI, COMO (GR)

Part 2: Technical, economic and policy challenges for circular solutions in the textiles' sector – **Moderate discussion with**:

- Parikshit GOSWAMI, University of Huddersfield (UK)
- George BANIAS, Centre for Research & Technology Hellas (GR)
- George ARAPIS, Recycom (GR)
- Natalia BOEMI, FIBRAN (GR)

SESSION 13
CASE STUDIES
11:00 – 13:00 | IMPERIAL III

CHAIRING | C. Dornack (DE) - T. Kraffczyk (DE)

Keynote Lecture

- William CLARKE | The University of Queensland (AU)

Fire risk posed by batteries in MSW

SAFETY EVALUATION AND COUNTERMEASURES FOR PORTABLE LITHIUM-ION BATTERIES AT WASTE MANAGEMENT FACILITIES
A. Terazono, M. Oguchi (JP)

REMEDIATION OF THE SLETTEBAKKEN LANDFILL IN BERGEN, NORWAY
S. Pensaert (BE)

RISK ASSESSMENT FOR REUSING TREATED INCINERATION BOTTOM ASH AS ROAD SUBBASE: A CASE STUDY IN SINGAPORE
X. Fei, Q. Liu (SG)

PHYTOREMEDIATION POTENTIAL OF LANTANA CAMARA AND ATRIPLEX HALIMUS IN SOILS CONTAMINATED WITH ZINC AND CADMIUM
E. Athanasiadou, E. Koukouraki, A. Stefanakis (GR)

DEMOLITION OF A BUCKET WHEEL EXCAVATOR IN THE AMYNTAION COAL MINING AREA IN GREECE
A. Zarkas, I. Karnaris, K. Grompanopoulos, M. Triantafyllou, A. Sokratidou, A. Christou, N. Paraskevis, A. Servou, T. Barmpas, C. Roumpos (GR)

SESSION 14
TREATMENT OPTIONS
11:00 – 13:00 | IMPERIAL IV

CHAIRING | N. Kalogerakis (GR)

Keynote Lecture

- Sven ANDERSSON | Chalmers University of Technology (SE)

The role of chlorine in hazardous waste incineration

LESSONS LEARNT FROM OLD HAZARDOUS WASTE LANDFILLS IN GERMANY
G. Rettenberger (DE)

CHALLENGES IN RECOVERY OF PRECIOUS METALS FROM SECONDARY RAW IN AN ENVIRONMENTALLY FRIENDLY WAY
H. Cesiulis (LT)

APPLICATION OF PORTABLE XRF FOR MONITORING OF HAZARDOUS ELEMENTS IN PRINTED CIRCUIT BOARDS
L. Ginzinger, S. Salhofer, A. Jandric (AT)

RE-SPINNING OF CELLULOSE FIBERS PROCESSED BY HIGHPERCELL® TECHNOLOGY
A. Ota, M. P. Vocht, R. Beyer, F. Hermanutz (DE)

SMART WASTE FACTORY – DEVELOPMENT OF DIGITALIZED, INTELLIGENT WASTE TREATMENT SOLUTIONS
R. Sarc (AT)

LUNCH BREAK
13:00 – 15:00

SESSION 15
PLASTICS RECOVERY / REUSE
15:00 – 16:30 | GRAND IMPERIAL

CHAIRING | G. Rettenberger (DE)

PYROLYSIS OF A WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) PLASTIC-RICH STREAM: LIQUID FRACTION DECHLORINATION BY MEANS OF METALLURGICAL SLAGS
B.B. Perez-Martinez, A. Lopez-Urionabarrenechea, E. Acha, B.M. Caballero (ES)

CHARACTERIZATION OF SHREDDER RESIDUES FOR MATERIAL RECOVERY
D. Adejunmobi, S. Sorlini, A. Abba, S. Dagreou (IT)

INCORPORATION OF PRETREATED POLYETHYLENE TEREPHTHALATE (PET) AS A SUSTAINABLE MATERIAL IN MORTAR COMPOSITES: SURFACE CHARACTERISTICS AND FAILURE BEHAVIORS
Z.J. Wang, Z.H. Phua, W.P. Chan, G. Lisak (SG)

WASTE TIRE-DERIVED CARBON OBTAINED FROM GREEN HYDROTHERMAL ROUTE AS ANODE MATERIAL FOR ALKALI-ION BATTERIES
L. Berardo, D. Coibion, A. Schrijnemakers, F. Boschini, R. Cloots (BE)

SESSION 16
RENEWABLE ENERGY & WASTE
15:00 – 16:30 | IMPERIAL I

CHAIRING | D.-F. Lekkas (GR)

HYDROTHERMAL TREATMENT FOR ENHANCED SILICON RECOVERY FROM END-OF-LIFE PHOTOVOLTAIC PANELS
A. Schrijnemakers, L. Berardo, R. Cloots, F. Boschini (BE)

HYDROTHERMAL LEACHING OF SILVER USING ORGANIC ACIDS FROM WASTE MONOCRYSTALLINE AND POLYCRYSTALLINE PHOTOVOLTAIC PANELS
E. Kastanaki, R. Athanasiadou, A. Katsifou, A. Giannis (GR)

NOVEL NANAEROBIC DIGESTION TO SURPASS THE CLASSICAL LIMITS OF BIOENERGY HARVESTING
J.A. Natarajan, Z. Wang, R. Zhang, C.N.T. Vicera, L.Y.L. Ho, A.M. Wibowo, X.Y. Lim, Y. Bai, Q. Zhang, G.Y.A. Tan (HK)

THERMODYNAMIC ANALYSIS OF BIOCHARS DERIVED FROM BIOMASS AND PLASTIC WASTE
E. Kontothanasi, A. Veksha, G. Lisak, A. Giannis (GR)

SESSION 17
PFAS CONTAMINATION AND TREATMENT
15:00 – 16:30 | IMPERIAL II

CHAIRING | S. Pensaert (BE) – R. Sarc (AT)

PFAS: A SPREADING THREAT
M. Aivalioti, E. Gidarakos (GR)

THE HYBRID SOIL WASHING SYSTEM FOR THE TREATMENT OF PFAS CONTAMINATED SOILS
S. Pensaert (BE)

EVALUATION OF PFAS RELEASE FROM SOILS AND PAVEMENTS
D.S. Kosson, F. Liu, D. Yawson, I. Real, K. Wu, A.C. Garrabrants, L. Brown, S. Rubin, K.G. Brown, J.L. Guelfo (US)

EVALUATION OF THE PERFORMANCE OF A PILOT-SCALE SEWAGE SLUDGE TREATMENT SYSTEM AND STUDY OF PFAS REMOVAL
A. Koukoura, E. Gkalipidou, G. Gatidou, M. Kostakis, D. T., Gerokonstantis, M. S. Fountoulakis, S. Vakalis, O.I. Kalantzi, N.S. Thomaidis, O.S. Arvaniti, A. S. Stasinakis (GR)

SESSION 18

CATASTROPHES: NATURAL OR NOT

15:00 – 16:30 | IMPERIAL III

CHAIRING | R. Renner (AT)

ENHANCING RESILIENCE AND ADDRESSING VULNERABILITY THROUGH RISK COMMUNICATION IN WASTE MANAGEMENT: TACKLING LANDFILL FIRES AND DISASTER RISKS IN SERBIA
V. M. Cvetković, R. Renner, N. Nikolić, H. Raupenstrauch (RS)

CLIMATE IMPACTS OF FIRE PLUME CHEMICAL PATHWAYS
E. Dovrou, A. Voulgarakis (GR)

ZINC RECOVERY FROM ABANDONED MINE DRAINAGE: LESSONS FROM THE FREIBERG MINING REGION, GERMANY
J. Abeywickrama, N. Hoth, C. Drebenstedt (DE)

LARGE-SCALE IMPACTS OF THE 2023 CANADIAN WILDFIRES ON THE NORTHERN HEMISPHERE ATMOSPHERE
I.-A. Roşu, R.-N. Mourgela, E. Boleti, A. Voulgarakis (GR)

COFFEE BREAK

16:30 – 17:00

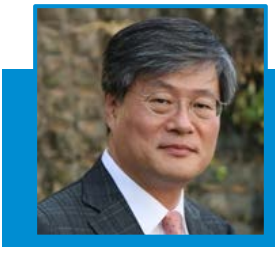
ROUND TABLE DISCUSSION
DISASTER RISK AND WASTE MANAGEMENT
17:00 – 18:30 | GRAND IMPERIAL

Panelists

Harald RAUPENSTRAUCH |
Montan University Leoben (AT)

Apostolos VOULGARAKIS |
Technical University of Crete (GR)

Vladimir CVETKOVIĆ |
University of Belgrade (RS)



Seung-Whee RHEE |
Korea Basel Forum (KR)

CLOSING SESSION

BEACH BARBEQUE
19:30 – 22:00

POSTERS

1. COMPARISON OF CLASSIFICATION MODELS TO EVALUATE CHEMICAL ALTERATIONS IN CANNABIS SATIVA L. EXPOSED TO PFOS AND PFOA BY HYPERSPECTRAL IMAGING
   G. Capobianco, G. Bonifazi, S. Serranti, I. Capitani, P. Cucuzza, M.-L. Antenozio, C. Caissutti, F.-M. Caporusso, D. Marzi, P. Brunetti (IT)

2. ASSESSMENT OF THE SUSTAINABILITY OF GREEN PLASTICS
   L. Wimmerova, J. Vacula, O. Solcova (CZ)

3. PLASTIC LIFECYCLE STRATEGY FOR CARBON NEUTRALITY IN SOUTH KOREA
   S. Yi, I. Go (KR)

4. EXPLORING THE BIODEGRADATION POTENTIAL OF BIOBASED AND SYNTHETIC POLYURETHANES UNDER INDOOR AND OUTDOOR SOIL CONDITIONS
   A. Shaw, L. Wimmerová, M. Lexa (CZ)

5. PROPYLENE PRODUCTION THROUGH THE CO2-ASSISTED OXIDATIVE DEHYDROGENATION OF PROPANE OVER MODIFIED SILICA BASED CATALYSTS
   A. Florou, G. Bampos, A. Kokka, P. Panagiotopoulou (GR)

6. CHARACTERISATION AND MANAGEMENT OF INDUSTRIAL WASTE - A THEORETICAL ANALYSIS OF CLASSIFICATION, REDUCTION AND TREATMENT METHODS
   A. Horzela-Miś, J. Semrau (PL)

7. ADVANCED CHARACTERIZATION TECHNIQUES FOR MAN-MADE VITREOUS FIBRES: A MULTIMODAL APPROACH FOR HAZARD ASSESSMENT AND RECYCLING POTENTIAL
   S. Malinconico, F. Paglietti, U. Grunwald Romera, G. Capobianco, S. Serranti, S. Bellagamba, G. Bonifazi (IT)

8. MINERAL CONTENT OF APPLE POMACE FROM DIFFERENT CULTIVARS
   J. Lidiková, N. Čeryová, A. Vollmannová, A. Bobková, J. Musilová (SK)

9. DETERMINATION OF THE BIOCHEMICAL METHANE POTENTIAL OF ANIMAL–DERIVED WASTE
   I. Moukazis, E. Gidarakos (GR)

10. NOVEL ELECTROLYTIC PROCESS FOR THE PRODUCTION OF COPPER METAL AND ELEMENTAL SULFUR AT 473 K
    H.N. Kang, T.H. Lee, J.Y. Lee, J. Kang (KR)

11. FABRICATION OF PYROCHLORE GLASS-CERAMIC AS POTENTIAL WASTE FORMS FOR TECHNETIUM-99 IMMOBILIZATION USING HOT ISOTATIC PRESS
    T.H. Lee (KR)

12. RECYCLED HIGH SPECIFIC HYDROXYAPATITE OBTAINED BY OXIDATIVE HYDROTHERMAL TREATMENT OF BOVINE BONES
    D. Coibion, L. Berardo, A. Schrijnemakers, F. Boschini, R. Cloots (BE)

13. EFFECTS OF INTERMITTENT MIXING ON METHANE PRODUCTION FROM FOOD WASTE
    O. Prakash, M. Makian, M. A. Mohit, A. A. Joolaei, D. H. Kim (KR)

14. SUGARS, LIPIDS AND PROTEINS – IMPORTANT NUTRITIONAL COMPONENTS OF GRAPE POMACE
    J. Musilova, S. Fedorkova, A. Vollmannova, J. Lidikova, E. Ivanisova (SK)

15. MICRO-FTIR MAPPING COUPLED WITH CHEMOMETRIC FOR MICROPLASTIC IDENTIFICATION IN SOIL MATRIX
    S. Serranti, P. Cucuzza, G. Capobianco, G. Bonifazi (IT)

16. POTENTIAL FOR VALORIZATION OF BY-PRODUCT AFTER TECHNOLOGICAL PROCESSING OF QUINCE FRUIT IN INNOVATIVE FOOD PRODUCTS
    A. Vollmannova, M. Cifrova, J. Lidikova, J. Musilova (SK)

17. DEVELOPMENT OF ECOLOGICALLY APPROPRIATE, WASTE-FREE TECHNOLOGICAL PROCESS FOR TREATMENT OF OIL-POLLUTED WATERS
    N. Mkheidze, N. Kiknadze, R. Davitadze, R. Gotsiridze, A. Khakhutaishvili, N. Megrelidze (GE)

18. FEASIBILITY OF AN UNTREATED PIG MANURE/AGRICULTURAL WASTE BIOCHAR FOR AMELIORATION OF A MEDITERRANEAN TYPE SOIL
    D. Vamvuka, S. Sfakiotakis, E. Geladari (GR)

19. CO-COMBUSTION OF LIGNITE WITH WINERY WASTES. THERMOCHEMICAL BEHAVIOUR AND MODELING.
    D. Vamvuka, S. Sfakiotakis, L. Xylouris (GR)

20. PLANT RESIDUES EFFECT OF THE SOil
    U. Mecione (LT)

21. DISTRIBUTION OF POLYCYCLIC AROMATIC HYDROCARBONS IN VARIOUS ORIGIN COMPOSTS
    K. Barcauskaite, D. Drapanauskaite (LT)

22. LITHUANIAN INFLUENT WASTEWATER CONTAMINATION BY PHARMACEUTICAL, PERSONAL CARE PRODUCTS AND PESTICIDES
    D. Drapanauskaitė, K. Barčauskaitė, G. Žilytė (LT)

23. MITIGATION OF ENVIRONMENTAL IMPACTS IN EXPLOSIVES PRODUCTION: RED WATER REDUCTION AND TNT SUBSTITUTES
    E. Reinhardt, L. Bauer, J. Heidrich, J. Stierstorfer, T.M. Klapötke (DE)

24. LEAD-BASED PRIMARY EXPLOSIVES IN TRANSITION: CURRENT CHALLENGES AND FUTURE REPLACEMENTS
    M. Lommel, J. Stierstorfer, T. M. Klapötke (DE)

EXHIBITION POSTERS

PLASTICS

- Toxicity of Plastic Products
- Potential for Plastics Production Minimization
- Innovative Plastics Collection Practices
- Plastics in the Sea Environment
- Guide of Personal Choices

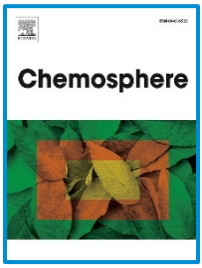
E - WASTE

- E-waste Complexity & Toxicity
- Critical Raw Materials (CRMs) in E-Waste
- E-Waste & Circular Economy: CRMs Recovery
- Improper E-Waste Management

SPECIAL JOURNAL ISSUES

As part of CRETE 2025, two special issues have been confirmed in collaboration with esteemed scientific journals:

- **CHEMOSPHERE**

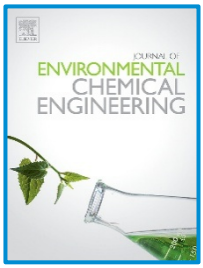


Resource Recovery and Application from Industrial and Hazardous Waste

Submission deadline: 31 August 2025

CiteScore 15.8

- **JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING**



Emerging Green Systems for Industrial and Hazardous Waste Streams

Submission deadline: 31 March 2026

CiteScore 11.4 | Impact Factor 7.4

These special issues will feature selected high-quality contributions presented at the conference, as well as invited papers from leading experts in the field.

More details on the submission process are available at the Journals' official websites.

SOCIAL EVENTS

TUESDAY 27TH MAY

WELCOME RECEPTION
20:00 – 23:00 |
MINOA PALACE POOL BAR
(Conference Venue)

WEDNESDAY 28TH MAY

20:00 – 22:00
MINOA PALACE
(Conference Venue)

THURSDAY 29TH MAY

CRETAN NIGHT
20:00 – 23:30
MINOA PALACE
(Conference Venue)

FRIDAY 30TH MAY

BEACH BARBEQUE
19:30 – 22:00
MINOA PALACE
(Conference Venue)

SATURDAY 31ST MAY

DAY EXCURSION
9:00 – 19:15

09:00 | Departure from MINOA PALACE
to SFAKIA PORT by bus

11:30 | Departure from SFAKIA PORT
to LOUTRO (South Crete) by boat
Arrival at 12:00
(swim - lunch)

16:00 | Departure from LOUTRO
to SFAKIA PORT by boat
Arrival at 16:30
(coffee)

18:00 | Departure from SFAKIA PORT to MINOA PALACE
by bus - Arrival at 19:15