PYRO2026

25TH EDITION OF THE INTERNATIONAL SYMPOSIUM ON ANALYTICAL AND APPLIED PYROLYSIS

JUNE 7-11 2026

PISA

POLO DELLA MEMORIA SAN ROSSORE 1938

UNIVERSITÀ DI PISA

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA | DEPARTMENT OF CHEMISTRY "GIACOMO CIAMICIAN"

https://pyro26.dcci.unipi.it

GOLD SPONSOR

SILVER SPONSOR

BRONZE SPONSOR

ACADEMIC SUPPORTING JOURNAL

Oral presentations

Keynote presentations will have a total duration of 30 minutes, including discussion (25 minutes for the presentation and 5 minutes for discussion).
Regular oral presentations will last 15 minutes, followed by an additional 5 minutes for discussion.
Presenters will be provided with a projector and a computer. Presentations should be prepared in PowerPoint using a 16:9 aspect ratio, and any video content should follow the same format. Apple users are advised to bring any necessary adapters.
The presentation can be uploaded in the designated stand on the day before the session of interest takes place.

Poster presentations

The conference will include three poster sessions. At least one Author per poster must be present during the poster session to answer questions and discuss the content of the poster.
Maximum allowed poster sizes are 85 cm width and 120 cm height. Pins to hang the posters will be provided.

Sunday, 7th June 2026

17:00 – 21:00 **Registrations**

19:00 – 21:00 **Welcome cocktail**

Monday, 8th June 2026

08:30 – 09:00 **Registrations**

ROOM A – GROUND FLOOR (streaming in Room B, GROUND FLOOR)

09:00 – 09:20 **Opening Ceremony**

09:20 – 09:50 **KN1 Yuyang Li**, Shanghai Jiao Tong University, China *"Pyrolysis-Driven Combustion Energy and Flame Synthesis Research: A Review of Experimental, Kinetic Modeling, and Application Advances"*

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation (S1.1) – Chairs:

09:50 – 10:10 **O-S1.1-1** *Water leaching of wood barks for biocarbon production: Analysis of extractives*
Z. Czégény, I. Sándor Czirok, G. Szabó, B. Babinszki, Z. Sebestyén, L. Wang, Ø. Skreiberg - HUN-REN Research Centre for Natural Sciences, Institute of Materials and Environmental Chemistry, Hungary

10:10 – 10:30 **O-S1.1-2** *Valorization of brewer's spent grains through cascaded protein recovery and fast pyrolysis of its residues*
Y. Wei, S. Ghysels, F. Ronsse - Ghent University, Belgium

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S1.1-3** *Thermal Conversion Regulation of Reconstituted Tobacco and Product Application Evaluation*
C. Wang, Y. Li, Q. Zhang, Y. Wen, L. Wang, B. Li, **L. Fu** - Zhengzhou Tobacco Research Institute of CNTC, China

11:20 – 11:40 **O-S1.1-4** *Efficient catalytic pyrolysis of biomass to light aromatic hydrocarbons over Zn/ZSM-5*
J. Cao, N. Yao, H. Wang - China University of Mining and Technology, China

11:40 – 12:00 **O-S1.1-5** *Physico-chemical properties of biochars from four different caribbean biomasses*
M. Dranéé, M. Zbair, D. Boeuf, F. Ferrer, R. Gadiou, Y. Rogaume - Société Anonyme de la Raffinerie des Antilles, France

12:00 – 12:20 **O-S1.1-6** *Catalytic and inhibitory effects induced by noncovalent interactions between cellulose and lignin during fast pyrolysis*
F. Sakirler, D. Tekbas, **H. Wong** - University of Massachusetts Lowell, United States

12:20 – 12:40 **O-S1.1-7** *Activated carbon-based catalyst supports for dry methane reforming and coke formation*
K. Januszewicz, B. Barczak - Gdańsk University of Technology, Poland

12:40 – 13:00 **O-S1.1-8** *Production of hydrogen-rich syngas from catalytic reforming of biomass gasification tar coupled with in-situ CO2 capture*
C. Quan, S. Feng, N. Gao - Xi'an Jiaotong University, China

ROOM A1 – FIRST FLOOR

Parallel Session: Analytical Pyrolysis: Cultural heritage (S1.2) – Chairs

09:50 – 10:10 **O-S1.2-1** *Optimizing Multifunctional Py-GC/MS Workflows for Historical Gold Varnishes: First Application to a 17th-Century Gilt Leather Panel*
V. Pintus, K. Lari, C. Bonnot-Diconne, P. Londero, E. Bourguignon - Louvre Abu Dhabi, United Arab Emirates

10:10 – 10:30 **O-S1.2-2** *Exploring the oxidative polymerization of polyunsaturated methyl esters by EGA-MS: a molecular approach to investigate lipid-based polymer networks in historical paint models*
G. Caroti, S. Pizzimenti, C. Duce, I. Bonaduce – University of Pisa, Italy

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S1.2-3** *Advances in the investigation of cultural heritage materials through the coupling of pyrolysis with GCxGC-MS*
M. Sablier, H. Bin – UMR CBI, Laboratoire des Sciences Analytiques, Bioanalytiques et Miniaturisation, ESPCI, France

11:20 – 11:40 **O-S1.2-4** *Analytical Investigation of Cyclohexanone Resins for Cultural Heritage by Evolved Gas analysis-MS and Double-shot Py-GC/MS*
A. Micheluz, U. Baumer, C. Hoffman, E. S.B. Ferreira, W. Neugebauer, P. Dietemann, M. Pamplona – Deutsches Museum, Germany

11:40 – 12:00 **O-S1.2-5** *Comparison of EGA and py-GCMS Data from naturally and artificially aged polyester urethane*
E. Gómez-Sánchez, **S. Kunz**, R. Chand Guditi – Deutsches Bergbau-Museum Bochum | Leibniz Research Museum for Geo-resources, Germany

12:00 – 12:20 **O-S1.2-6** *PY-GC-MS as a method for evaluating degradation of paper during material suitability testing*
M. Samide, J. Garcia, G. Smith – Butler University, United States

12:20 – 12:40 **O-S1.2-7** *Influence of Progressive and Instantaneous Heating on the Pyrolysis Products of Silk*
C. Campi, I. Degano, I. Bonaduce – University of Pisa, Italy

12:40 – 13.00 **O-S1.2-8** *Analytical pyrolysis promotes organic residue analysis in China*
B. Han – University of Chinese Academy of Sciences, China

ROOM C1 – FIRST FLOOR

Parallel Session: Fundamental pyrolysis reactions and kinetics/modelling (S1.3) – Chairs

09:50 – 10:10	**O-S1.3-1** *Peeling and Subsequent Radial Degradation Pathways during Cellulose Pyrolysis below 320 °C: Insights from Isothermal TG-MS Analysis* Y. Masuda, E. Minami, **H. Kawamoto** – Kyoto university, Japan
10:10 – 10:30	**O-S1.3-2** *Modeling approach for the electromagnetic field and heating of biomass in a microwave reactor using OpenFOAM* **A. Dernbecher**, L. Ohm, A. Dieguez-Alonso– TU Dortmund University, Germany
10:30 – 11:00	**Coffee Break**
11:00 – 11:20	**O-S1.3-3** *Kinetic analysis of biochar formation by Py-GC/MS during fast pyrolysis of lignocellulosic biomass* J. Uwizeye, Z. Mercier, **M. Carrier** – CNRS, France
11:20 – 11:40	**O-S1.3-4** *Integrated Computational, Experimental, and Kinetic Modeling Study of the Pyrolysis Mechanisms of Hemicellulose Molecular Constituents* **B. Ballotta**, C. Maria Grottola, P. Giudicianni, M. Turco, J. Ren, H. Keelan, M. Pelucchi, R. Ragucci, S. Dooley – School of Physics, Trinity College Dublin, Ireland
11:40 – 12:00	**O-S1.3-5** *Framework for reaction mechanism investigation of pyrolysis process for carbon-based fuels with reactive molecular dynamics simulation* **M. Zheng,** X. Li – State Key Laboratory of Mesoscience and Engineering, Institute of Process Engineering, Chinese Academy of Sciences, China
12:00 – 12:20	**O-S1.3-6** *Multiscale and AI-Enabled Investigation of Biomass/Plastic Fast Pyrolysis in Fluidized Bed Reactors* **X. Gao** – Guangdong Technion, Israel Institute of Technology, China
12:20 – 12:40	**O-S1.3-7** *Thermal Reactivity of the Cellulose Crystalline Core: Insights into Metal Cation Effects via Deuterium Labeling and TG-MS Analysis* **Y. Maruichi,** Y. Masuda, E. Minami, H. Kawamoto – Kyoto University Graduate School of Energy Science, Japan
12:40 – 13.00	**O-S1.3-8** *Kinetic Modelling of Wood Pyrolysis Using in-situ Natural Components* **C. Branca** – National Research Council of Italy (CNR), Italy
13:00 – 14:00	**Lunch**
14:00 – 15:00	**POSTER Session 1** (info pp. 24-35)

ROOM A – GROUND FLOOR

15:00 – 15:30	**KN2 Clemens Schwarzinger**, Johannes Kepler University Linz, Austria, *"Derivatisation in Analytical Pyrolysis"*

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation (S1.4) – Chairs:

15:30 – 15:50	**O-S1.4-1** *Decomposition kinetics and product distribution of a very fast pyrolysis of algal biomass* **G. Ji** – Dalian University of Technology, China

15:50 – 16:10 **O-S1.4-2** *Simultaneous pyrolysis-activation-doping of biomass for porous N-doped biochar*
W. Chen, Z. Fang, L. Wang – Nanjing Agricultural University, China

16:10 – 16:30 **O-S1.4-3** *In-situ Pyrolysis Vapor Recirculation in a Continuous Auger Reactor: Characterization of Bio-oil from Pyrolysis of Pine Bark*
Y. Tolunay Kilic, M. Dal Belo Takehara, K. Umeki – Luleå University of Technology, Sweden

16:30 – 17:00 **Coffee Break**

17:00 – 17:20 **O-S1.4-4** *Pyrolysis of C5 Cyclic Hydrocarbons and Derived High-Energy-Density Fuels: Kinetic Modeling and Aromatics Formation Mechanisms*
H. Wang, J. Cao - China University of Mining and Technology, China

17:20 – 17:40 **O-S1.4-5** *Pyrolysis of marine biomasses with different heating technologies: The case of study of Posidonia Oceanica fibrous spheres*
D. Licursi, R. Gallorini, S. Fulignati, L. Rosi, A. Maria Raspolli Galletti, C. Antonetti – University of Pisa, Italy

17:40 – 18:00 **O-S1.4-6** *Effect of hydrothermal carbonization conditions on carbon partitioning and catalytic pyrolysis of fish-based biomass*
T. R. Siddhartha, P. Heynderickx, F. Ronsse – Ghent University, Belgium

18:00 – 18:20 **O-S1.4-7** *Spatial evolution of mineral phases within pine bark particles during pyrolysis under inert and weakly oxidizing atmospheres*
E. Arango Durango, A. Valizadeh, M. Dal Belo Takehara, H. Wiinikka, K. Umeki – Luleå Tekniska Universitet, Sweden

ROOM A1 – FIRST FLOOR

Parallel Session: Analytical Pyrolysis: Cultural heritage (S1.5) – Chairs

15:30 – 15:50 **O-S1.5-1** *Air quality monitoring in museum environment using magic chemisorbers*
L. Barchi, A. Micheluz, R. De Lorenzo, G. Giraldo, M. Rovea, G. Formenton, M. Pamplona - Conservation Science Department, Deutsches Museum, Germany

15:50 – 16:10 **O-S1.5-2** *Understanding the ageing of polyurethane foams in art and design: a thermoanalytical approach*
G. Biale, A. Rughi, A. Ferretti, J. La Nasa, F. Modugno, I. Degano – University of Pisa, Italy

16:10 – 16:30 **O-S1.5-3** *Layer-specific identification of organic binders in 17th–18th century korean dancheong by Pyrolysis-GC/MS*
J. Yu – National Institute of Cultural Heritage, South Korea

16:30 – 17:00 **Coffee Break**

Parallel Session: Analytical Pyrolysis: Natural materials (S1.5) – Chairs

17:00 – 17:20 **O-S1.5-4** *Detailed characterization of leather solid wastes using analytical Py-GC/MS and TG-IR to evaluate resource recovery potential*
R. Vinu, V. Mozhiarasi, P. Babu, S. Srinivasan, D. Weichgrebe, S. Pal - Indian Institute of Technology Madras, India

17:20 –17:40 **O-S1.5-5** *Characterization of modified lignin for applications in sustainable biobased formulations*
M. Traoré, V. López, T. Nóvoa, M. Osorio, C. Santos, M. Gonzalez, V. Regueira, A. Mallo, M. del Mar Castro, R. Noguerol - Fundación Centro Tecnológico de Investigación Multisectorial, Spain

17:40 –18:00	**O-S1.5-6** *High-Performance software for deconvolution and annotation of py-gc/ms data for lignocellulosic biopolymer characterization* **O. Ilchenko**, J. Takahashi-Schmidt, T. Niittylä, H. Stenlund - Swedish University of Agricultural Sciences, Sweden
18:00 – 18:20	**O-S1.5-7** *Py-GC/MS investigation of the formation of various anhydrosugars from carbohydrates for efficient green chemical synthesis* **K. Meile,** G. Dobele, V. Jurkjane, A. Zhurinsh - Latvian State Institute of Wood Chemistry, Latvia

ROOM C1 – FIRST FLOOR

Parallel Session: S1.6 Fundamental pyrolysis reactions, kinetics/modelling (S1.6) – Chairs

15:30 – 15:50	**O-S1.6-1** *From gas-phase chemistry to carbon formation and deposition: validation of a kinetic framework for light hydrocarbons pyrolysis* **L. Giardini**, L. Pratali Maffei, A. Frassoldati, T. Faravelli, M. Pelucchi - Politecnico di Milano, Italy
15:50 – 16:10	**O-S1.6-2** *Effect of coal macromolecular network fragments on char during coal pyrolysis* **H. Yang**, Y. Yang, Z. Song, L. Jin, Y. Li, H. Hu - Dalian University of Technology, China
16:10 – 16:30	**O-S1.6-3** *A comprehensively experimental and kinetic modelling investigation of C6 ketone isomers pyrolysis and oxidation: Insight into effects of isomerism* **X. Sun,** H. Wang, J. Cao, X. Zhao - China University of Mining and Technology, China
16:30 – 17:00	**Coffee Break**
17:00 – 17:20	**O-S1.6-4** *Resolving formic acid pyrolysis: integrating automated generation with high-fidelity theory* **A. Grinberg Dana** - Technion - Israel Institute of Technology, Israel
17:20 – 17:40	**O-S1.6-5** *A robust NLSM-based kinetic approach for pyrolysis valorization: application to polymers, biopolymers, and biomass* **N. Kouraa,** S. Abderafi, L. Abdelouahed - Mohammadia School of Engineers, Mohammed V University in Rabat, Rabat, Morocco
17:40 – 18:00	**O-S1.6-6** *Cellulose carbonization pathways studied using reactive force field methods* **O. Pakarinen,** A. Paajanen, E. Virtanen, L. Fliri, C. Guizani, M. Hummel, J. Vaari - VTT Technical Research Centre of Finland Ltd., Finland
18:00 – 18:20	**O-S1.6-7** *Strategy for revealing thermolysis mechanism of CL-20 cocrystals by ReaxFF MD simulations* **C. Ren,** X. Li, M. Zheng - State Key Laboratory of Mesoscience and Engineering, Institute of Process Engineering, Chinese Academy of Sciences, China

Tuesday, 9th June 2026

08:30 – 09:00 **Registrations**

ROOM A – GROUND FLOOR

09.00 – 09.30 **KN3 Marja Lamoree**, Vrije Universiteit Amsterdam, Netherlands
"Progress and challenges in quantification of micro- and nanoplastics in human blood"

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation; Fundamental pyrolysis reactions and kinetics/modelling (S2.1) – Chairs**:**

09:30 – 09:50 **O-S2.1-1** *Heating rate and solid residence time effects on carbon transformation pathways in slow and fast pyrolysis of woody and herbaceous residues*
C. M. Grottola, M. Troiano, D. Amato, R. Solimene, P. Salatino, P. **Giudicianni -** CNR-STEMS, Italy

09:50 – 10:10 **O-S2.1-2** *Analysis of biocompounds released in the gaseous effluent during slow pyrolysis of hemp*
L. Marrot, K. Meile, M. Zouari, R. Herrera - Slovenian National Building And Civil Engineering Institute (ZAG), Slovenia

10:10 – 10:30 **O-S2.1-3** *Can the pyrolysis kinetics of cellulose, hemicellulose and lignin serve as building blocks to describe the behavior of physical mixtures and real biomass?*
E. Benedetto, V. Piazza, A. Guarnieri, L. Carlomaria Pariani, P. D'Arrigo, A. Frassoldati, T. Faravelli, L. Lietti, A. Beretta - Politecnico di Milano, Italy

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S2.1-4** *Effect of extraction pretreatments on composition and porosity of biochar from Quercus robur bark*
R. Herrera Diaz, M. Zouari, A. Selmanovic, L. Marrot - University of the Basque Country, Spain

11:20 – 11:40 **O-S2.1-5** *Polycyclic aromatic hydrocarbon formation from β–β motif: phenyl-naphthalene capture under catalysis-assisted pyrolysis*
J. Wang, E. Minami, H. Kawamoto - University of Tokyo, Japan

11:40 – 12:00 **O-S2.1-6** *Important role of thermal ejection in condensable volatiles formation during cellulose pyrolysis*
Y. Yu, H. Wu - Curtin University of Technology, Australia

12:00 – 12:20 **O-S2.1-7** *Evolution characteristics and mechanism of products from large-particle biomass pyrolysis in molten salt media*
L. Zhang, X. Song, G. Yu - Ningxia University, China

12:20 – 12:40 **O-S2.1-8** *Gas-phase thermal stability of levoglucosenone derived from biomass pyrolysis*
S. Kudo, R. Akai, J. Hayashi - Kyushu University, Japan

12:40 – 13:00 **O-S2.1-9** *Biomass-driven engineering of conductive biochars: linking feedstock, structure, and electrical performance at constant density*

S. Taktak, R. El Hage, A. Serghei, L. David, G. Sudre, F. Thevenon, J. Beigbeder, A. Taguet - IMT Mines Alès, France

ROOM A1 – FIRST FLOOR

Parallel Session Analytical Pyrolysis: Environment (S2.2) – Chairs

09:30 – 09:50 **O-S2.2-1** *Expanding the pyrolysis toolkit: Automated comparative analysis complex materials using Py–GC×GC–TOF MS and advanced chemometrics*
A. Buchanan, **L. McGregor**, J. Ogden - SepSolve Analytical, United Kingdom

09:50 – 10:10 **O-S2.2-2** *Assessment of Conventional and Biodegradable Microplastics in Agricultural Soils applying Py-GC/MS*
E. López Rodríguez, J. Marín Sáez, R. Romero González, A. Garrido Frenich - University of Almeria, Spain

10:10 – 10:30 **O-S2.2-3** *Evolved Gas Analysis (EGA-MS) for polyethylene quantification in compostable bioplastics shopping bags*
M. Filomena, P. Venditti, M. Mattonai, E. Ribechini - University of Pisa, Pisa, Italy

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S2.2-4** *What are we breathing at home? - Household Micro- and Nanoplastics: Composition, Differences, potential Sources & Determinants*
B. Scholz-Böttcher, A. Durkin, L. Charlotte Balding, B. van Santbrink, V. Lenters, R. Zou, U. Gehring, R. Vermeulen - Carl von Ossietzky Universität Oldenburg, Germany

11:20 – 11:40 **O-S2.2-5** *Unravelling the chemical complexity of artificially aged tire wear particles by Py-GCxGC-ToFMS*
G. Dumont, M. Mattonai, J. La Nasa, M. Velimirovic, J. Jordens, P. Stefanuto, J. Focant, F. Modugno, **S. Lievens** – ACESSS - OBiAChem, University of Liège, Belgium

11:40 – 12:00 **O-S2.2-6** *Quantification of polyvinyl chloride in atmospheric particulate matter using Pyrolysis GC/MS: Matrix effects and marker behavior*
H. Mizuguchi, Y. Moriguchi, T. Ogawa, H. Takeda, T. Maekawa, M. Takeuchi, T. Takayanagi, N. Teramae, A. Watanabe, C. Watanabe - Tokushima University, Japan

12:00 – 12:20 **O-S2.2-7** *Splitless analytical pyrolysis of museum foraminifera tests: historical insights on oceanic plastic pollution*
M. Mattonai, L. J. Cotton, R. N. Glud, F. Modugno, M. Yasuhara, E. G. Xu - University of Pisa, Italy

12:20 – 12:40 **O-S2.2-8** *Molecular characterisation of the environmentally labile fraction of biochars by hydropyrolysis*
W. Meredith, C. Snape, C. Uguna, A. Khairy, P. Ascough - University of Nottingham, UK

12:40 – 13:00 **O-S2.2-9** *Py-GC-MS method development and validation for micro- and nanoplastics in human biological fluids*
F. Nardella, M. van Velzen, V. Lenters, H. Roest, L. van der Laan, M. Lamoree – Vrije Universiteit Amsterdam, Netherlands

ROOM C1 – FIRST FLOOR

Parallel Session: Catalytic pyrolysis: Biomass valorisation (S2.3) – Chairs

09:30 – 09:50 **O-S2.3-1** *PyroFriction - New low-temperature biomass pyrolysis technology*
M. Klaptocz - Ekotrend Sp. z o.o., Poland

09:50 – 10:10 **O-S2.3-2** *Exploring the role of acid-modified and metal (Ni, Co, Ni/Co) impregnated chilean natural zeolite during catalytic co-hydropyrolysis of biomass/plastics*
B. Puentes-Navarro, **S. Alejandro-Martín**, L. Azocar-Ulloa - Universidad del Bío-Bío, Chile

10:10 – 10:30 **O-S2.3-3** *Ex-situ catalytic pyrolysis of paper sludge to bio-BTX on a staged free-fall reactor using three commercial catalysts*
Y. Chen, N. Li, Z. Zhang, A. Bijl, G. Iannetti, E. Gucho, J. Li, H. Jan Heeres, S. He - Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S2.3-4** *Upgrading of slow pyrolysis oil via mild and deep hydrodeoxygenation for green marine fuels*
E. Ekici, D. Yalic, K. Raffelt, N. Dahmen – Karlsruhe Institute of Technology, Germany

11:20 – 11:40 **O-S2.3-5** *Catalytic hydrotreatment efficiency on HTL bio-crudes from two microalgae strains, Chlorella sorokiniana and Chlorella vulgaris, evidenced by FT-ICR MS*
J. Hertzog, R. Checa, B. da Costa Magalhães, V. Carré, F. Aubriet, P. Afanasiev, D. Laurenti, C. Geantet - Université de Lorraine, France

11:40 – 12:00 **O-S2.3-6** *Investigation of bones waste catalytic pyrolysis for bio-based compounds production*
R. N. State, G. Ionescu, A. Magdziarz, **C. Marculescu** - National University of Science and Technology POLITEHNICA Bucharest, Romania

12:00 – 12:20 **O-S2.3-7** *Biomass pyrolysis with Fe-Ni-CaO char-based catalyst for efficient green hydrogen generation and bio-oil upgrading via coupled C–H/O–H activation*
Q. Lu, H. Zhang - Southeast University, China

12:20 – 12:40 **O-S2.3-8** *Pressure effect on catalytic pyrolysis of eucalyptus over hierarchical BETA zeolite*
A. M. Montero-Csanady, M. I. Ávila, J. Cueto, L. Briones, A. Peral, J. M. Escola, D. P. Serrano, G. Gómez-Pozuelo, J. A. Botas - Rey Juan Carlos University, Spain

12:40 – 13:00 **O-S2.3-9** *Role of active phases based on Fe, Zn and $MgCl_2$ for in-situ upgrading of bio-crude during hydrothermal liquefaction of tannery sludge*
G. Marotta, F. Di Lauro, M. Balsamo, R. Migliaccio, F. Montagnaro, P. Salatino, R. Solimene - University of Naples Federico II, Italy

ROOM B – GROUND FLOOR

Parallel Session: Applied pyrolysis: Polymers and recycling (S2.4) – Chairs

09:30 – 09:50 **O-S2.4-1** *Machine Learning based Optimization of Pyrolysis Oil Yield from Waste Plastics under Sensitivity and Uncertainty Analysis Frameworks*
J. Gul, M. N. A. Khan, **S. R. Naqvi** - Karlstad University, Sweden

09:50 – 10:10 **O-S2.4-2** *Influence of additives, fillers and pigments via thermo-catalytic pyrolysis of polypropylene and polyethylene over HZSM-5 zeolites*
K. Klemencová, B. Grycová, A. Inayat, P. Leštinský - Technical University of Ostrava, Czechia

10:10 – 10:30 **O-S2.4-3** *Impact of Intra-Particle Heat Conduction on Waste Plastic Pyrolysis*
F. Zhang, M. Li, P. Bleile, S. Tavakkol, T. Zirwes, D. Stapf - Karlsruhe Institute of Technology, Germany

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S2.4-4** *From Lab to Reality: Pyrolysis in Action – Two Decades After PYRO 2006*
C. Ludlow-Palafox - Greenback Recycling Technologies, United Kingdom

11:20 – 11:40 **O-S2.4-5** *Trade-offs between pyrolysis oil quality and valuable chemicals: the case of the co-pyrolysis of HDPE and PET*
D. C. Ruiz Flores, A. Chaudhuri, M. P. Ruiz - Maastricht University, Netherlands

11:40 – 12:00 **O-S2.4-6** *Stepwise Thermochemical Conversion Strategies for Waste Plastics: Coupling Auger and Fluidized Bed Reactors for PE and PVC Valorization*
J.-W. Kim, C.-W. Park, J.-S. Kim - University of Seoul, South Korea

12:00 – 12:20 **O-S2.4-7** *Heating rate of the rotary-kiln reactor on the pyrolysis of waste plastics*
K. Deng, X. Shi, F. Li, W. Xue, **W. Piao**, S. He – Dalian Institute of Chemical Physics, China

12:20 – 12:40 **O-S2.4-8** *Hydrogen and syngas production from plastic waste pyrolysis and in line sorption enhanced steam reforming*
P. Comendador, S. Arias, K. Santin, F. Atashi, **G. Lopez**, M. Amutio, M. Artetxe - University of the Basque Country, Ikerbasque, Spain

12:40 – 13:00 **O-S2.4-9** *Validating solar relevant PHC: biomass ratios in fluidized bed fast pyrolysis*
G. Costa, **F. Viteri,** J. Manuel López, M. Soledad Callén, M. Colombi, M. Binotti, T. García and R. Murillo - Instituto de Carboquímica (ICB-CSIC), Spain

13:00 – 14:00 **Lunch**

14:00 – 15:00 **POSTER Session 2** (info pp. 24-35)

ROOM A – GROUND FLOOR

15:00 – 15:30 **KN4 Osvalda Senneca**, CNR - STEMS, Italy, *"Why lignocellulosic components make thermochemical conversion of biomass so interesting?"*

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation (S2.5) – Chairs

15:30 – 15:50 **O-S2.5-1** *Slow pyrolysis under recirculated exhaust gas atmospheres: effect of steam on biochar and co-products*
C. M. Grottola, P. Giudicianni, D. Amato, L. Stanzione, R. Ragucci – CNR - STEMS, Italy

15:50 – 16:10 **O-S2.5-2** *Oxidative torrefaction of biomass in a fluidized bed to produce biochar with high grindability*
M. Zhang, K. Yang, C. Wang, G. Song, Z. Wang, Z. Han, X. Jia, G. Xu – Shenyang University of Chemical Technology, China

16:10 – 16:30 **O-S2.5-3** *Influence of Wood Anisotropy on Pyrolysis Behavior: Experimental and Numerical Study*
F. Ryll, A. Dernbecher, R. Zielke and A. Dieguez-Alonso - TU Dortmund University, Germany

16:30 – 17:00 **Coffee Break**

ROOM A1 – FIRST FLOOR

Parallel Session Analytical Pyrolysis: synthetic polymers; Py instrumentation and methodology (S2.6) – Chairs

15:30 – 15:50 **O-S2.6-1** *Extending the Analytical Power of Applied Pyrolysis for Polymers through Online FT-ICR MS Analysis of Heavy Thermo-desorption and Pyrolysis Products*

P. Pacholski, T. Voellinger, S. Schramm, L. Cadona, U. Ugur Ozkose, P. Magri, F. David-Quillot, B. Améduri, F. Progent, **F. Aubriet** - Université de Lorraine, France

15:50 – 16:10 **O-S2.6-2** *Fundamental Study on Abnormal Peak Appearance in the Mid-Boiling Point Range in Pyrolysis-GC/MS*

A. Watanabe, P. Shokeitei, N. Teramae, C. Watanabe, Y. Ishida - Frontier Laboratories Ltd., Japan

16:10 – 16:30 **O-S2.6-3** *Evaluation of recycling potential of wind turbine blade using catalytic pyrolysis and its life cycle assessment*

M. Giridara Srinivaas, R. Vinu - Indian Institute of Technology Madras, India

16:30 – 17:00 **Coffee Break**

ROOM C1 – FIRST FLOOR

Parallel Session: Catalytic pyrolysis: Biomass valorisation (S2.7) – Chairs

15:30 – 15:50 **O-S2.7-1** *Low pressure catalytic hydropyrolysis of chlorella vulgaris*

A. Diaz, J. Cueto, D. P. Serrano, **I. Moreno** - IMDEA Energy Institute, Spain

15:50 – 16:10 **O-S2.7-2** *Characterization of Ilmenite Mining Waste as a Geocatalyst for Sugarcane Bagasse Pyrolysis*

P. A. Villegas-Bolaños, **O. D Gutiérrez** - Instituto Tecnológico Metropolitano, Colombia

16:10 – 16:30 **O-S2.7-3** *Ex-situ catalytic co-pyrolysis of Bamboo and Polystyrene with Nickel, Molybdenum and cobalt impregnated Red Mud for bio-oil synthesis*

A. Mugundan Chandran, K. Mohanty, R. Vinu - Indian Institute of Technology Madras, India

16:30 – 17:00 **Coffee Break**

ROOM B – GROUND FLOOR

Parallel Session: applied pyrolysis: Polymers and recycling (S2.8) – Chairs

15:30 – 15:50 **O-S2.8-1** *Impact of Minerals on the Pyrolysis Behavior and Product Distribution of Polystyrene*

T. Kurtz, D. Merz, K. Garbev, R. Alsharqawi, P. Stemmermann, S. Tavakkol, D. Stapf - Karlsruhe Institute of Technology, Germany

15:50 – 16:10 **O-S2.8-2** *Simulation of plastic pyrolysis in a fluidized bed reactor under batch-wise and continuous feeding mode*

M. Li, F. Zhang, T. Zirwes, O. T. Stein, S. Tavakkol, D. Stapf - Karlsruhe Institute of Technology, Germany

16:10 – 16:30 **O-S2.8-3** *The role of branching in polyethylene pyrolysis*

M. Denton, F. Çalık Ulu, R. J. Varghese, K. Van Geem - Ghent University, Belgium

16:30 – 17:00 **Coffee Break**

17:00 – 19:00 **EXCURSION**

Wednesday, 10th June 2026

08:30 – 09:00 **Registration**

ROOM A GROUND FLOOR

09:00 – 09:30 **KN5 Alba Dieguez-Alonso**, TU Dortmund University, Germany
"Progressive development of the understanding of transport–reaction interactions in pyrolysis over the years and current challenges associated with plastic waste conversion"

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation (S3.1) – Chairs

09:30 – 09:50 **O-S3.1-1** *Hydrogen-Rich Syngas Production from Biomass via Low-Temperature Pyrolysis coupled Gasification of Biochar-oil briquette fuels*
H. Su, W. Hua, S. Wang - Zhejiang University, China

09:50 – 10:10 **O-S3.1-2** *Pressure carbonisation of iron doped cellulose Pickering Emulsions towards catalytical applications*
L. Nowack, F. D'Acierno, S. Eyley, V. Oliveira Castro, W. Thielemans, P. Knüpfer, S. Kureti, Y. Joseph, K. Heise - TU Bergakademie Freiberg, Germany

10:10 – 10:30 **O-S3.1-3** *Biomass valorization to furfural: minimizing humin byproduct to enhance furfural yield*
M. Yang, G. Xu - Shenyang University of Chemical Technology, China

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S3.1-4** *Fermentability of water-soluble products from HTC-Py-AD processes: comparison of fast and intermediate pyrolysis*
A. Facchin, F. Zimbardi, D. Fabbri, C. Torri – University of Bologna, Italy

11:20 – 11:40 **O-S3.1-5** *Exploiting Fast Pyrolysis Conditions for one-step synthesis of Carbon Dots from Biomass*
C. Russo, F. Cerciello, M. Maddalena Oliano, O. Senneca, **B. Apicella** – National Research Council of Italy

11:40 – 12:00 **O-S3.1-6** *Experimental and Modelling Studies on Biomass Pyrolysis in Molten Salts*
A. Hommes, J. Osorio Velasco, P. Badr, R. Venderbosch, H. Jan Heeres – University of Groningen, Netherlands

12:00 – 12:20 **O-S3.1-7** *Integrating Hydrothermal Treatment and Microalgal Cultivation for Brewery Spent Grains Valorization*
M. Gobbo, M. Ciani, A. Adessi, M. Daghio, L. Rosi – University of Florence, Italy

12:20 – 12:40 **O-S3.1-8** *Assessment of heterogeneous secondary reactions and the role of char loading in fluidized bed pyrolysis of biomass*
M. Troiano, R. Solimene, P. Salatino – University of Naples Federico II, Italy

12:40 – 13:00 **O-S3.1-9** *Long-Duration Low-Temperature Pyrolysis of Wood: From Polymer Degradation to Char Formation*
C. Preimesberger, D. Gansterer-Heider, A. Grausam, C. Pfeifer, C. Hansmann - Kompetenzzentrum Holz GmbH, Austria

ROOM A1 – FIRST FLOOR

Parallel Session: Applied pyrolysis: Fossil fuels (S3.2) – Chairs

09:30 – 09:50 **O-S3.2-1** *Performance and synergistic mechanism on co-pyrolysis of PVC/ PVC-containing mixed plastics and coal*
J. Yang, Y. Li, H. Yang, L. Jin, **H. Hu** - Dalian University of Technology, China

09:50 – 10:10 **O-S3.2-2** *Investigation on sulfur distribution and chemical forms in products from co-pyrolysis of coal and waste tire*
Y. Wen, X. Ning, H. Yang, Y. Li, W. Lv, H. Hu, **L. Jin** - Dalian University of Technology, China

10:10 – 10:30 **O-S3.2-3** *In-situ detection of catalytic cracking of Naomaohu pyrolysis volatiles over Fe and Al components in red mud,*
X. Zheng, Y. Li – Dalian University of Technology, China

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S3.2-4** *Hydropyrolysis: towards fluorescence-free Raman analysis of internal diesel injector deposits*
J. Viggars, S. Angel Smith, G. Rance, A. Khairy, W. Meredith, A. Davies, J. Barker, J. Reid, D. Scurr, **C. Snape** – University of Nottingham, England

11:20 – 11:40 **O-S3.2-5** *Carbon-Catalyzed Methane Pyrolysis in Fluidized-Bed Reactors: Analytical Investigation of Polyaromatic Hydrocarbon Formation and Two-Phase Reactor Modeling*
S. De Langhe, S. Fragkiskatos, P. Yazdani, I. Lengyel, P. Perreault, J. W. Thybaut and K. M. Van Geem – Ghent University, Belgium

11:40 – 12:00 **O-S3.2-6** *Catalytic Methane Pyrolysis in Molten Media: From Bubble Dynamics to Tailored Solid Carbon Synthesis and Process Scale-up*
Z. Shi, Q. Yu - Shanghai Institute of Microsystem and Information Technology, China

12:00 – 12:20 **O-S3.2-7** *Multi-scale investigation of methane pyrolysis for the simultaneous production of COx-free hydrogen and valuable carbonaceous materials for the steelmaking sector*
M. Orsenigo, V. Piazza, L. Castoldi, G. Groppi, M. Maestri, C. Negri, G. Dall'Osto, C. Mapelli, A. Beretta - Politecnico di Milano, Italy

12:20 – 12:40 **O-S3.2-8** *Leaching and enrichment behaviors of hazardous heavy metal elements in the process of coal gasification*
X. Wang – East China University of Science and Technology, China

12:40 – 13:00 **O-S3.2-9** *Catalytic selective hydrogenolysis of coal-based aromatic ethers*
Z. Huang, **X. Chen**, C. Liang - Dalian University of Technology, China

ROOM C1 – FIRST FLOOR

Parallel Session: Catalytic pyrolysis: Polymers and recycling (S3.3) – Chairs

09:30 – 09:50 **O-S3.3-1** *Catalytic pyrolysis of polyethylene: Effects of shaping zeolite particles and of reactor configuration (in-situ and ex-situ)*
S. Denghezli, J. Dhainaut, A. Dufour, S. Duquesne, J. Lamonier - University of Lille, Lorraine & CNRS, France

09:50 – 10:10 **O-S3.3-2** *Sustainable valorization of plastic waste via zeolite-catalyzed pyrolysis and in-line CO2 reforming over Ni-Co-based catalysts*
S. Das, A. Martaus, D. Fridrichova, R. Wdowkova, P. Lestinsky, A. Inayat - Institute of Environmental Technology, CEET VSB - TUO, Czech Republic, Czechia

10:10 – 10:30 **O-S3.3-3** *Mechanisms of Different Carbon Sources in the Catalytic Preparation of Carbon Nanotubes via Plastic Pyrolysis*
H. Xiao, H. Heeres, H. Yang – Shandong University, China

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S3.3-4** *Reliability of milligram-scale high-throughput screening for evaluating polyolefin chemical recycling in the melt with heterogeneous catalysis*
B. Smeyers, K. Vikanova, J. Van Waeyenberg, M. Aerts, T. Van Vaerenbergh, O. Akin, Q. He, A. Eschenbacher, R. John Varghese, J. Henrotte, A. Ginzburg, K. Van Geem, B. Sels - KU Leuven, Belgium

11:20 – 11:40 **O-S3.3-5** *High-throughput on-line mass spectrometry screening of catalytic fast pyrolysis of cellulose over ZSM-5 zeolites*
N. Traullé, T. Lemaître, T. Voellinger, V. Carré, J. Hertzog, S. Schramm, Y. Le Brech, A. Dufour, L. Pinard, F. Aubriet - Université de Lorraine, France

11:40 – 12:00 **O-S3.3-6** *Catalytic pyrolysis of E-waste plastics using red mud*
M. Madhukar Borker, S. Seethamraju – Indian Institute of Technology, India

12:00 – 12:20 **O-S3.3-7** *Thermogravimetric insights into polyethylene degradation: effect of clay-based catalyst acidity and textural properties*
M. Ifeoma Uzochukwu, D. Grekov, S. Awad - IMT Atlantique, France

12:20 – 12:40 **O-S3.3-8** *Optimization of catalytic hydrocarbon aromatization to BTX in a lab-scale fluidized bed reactor*
J. Ordonez Loza, J. Dijk, H. Jan Heeres, A. Hommes – University of Groningen, Netherlands

12:40 – 13:00 **O-S3.3-9** *Pyrolytic modification of wood enhances its cascaded use*
C. Knill, **D. A. Agar** - Swedish University of Agricultural Sciences, Sweden

ROOM B – GROUND FLOOR

Parallel Session: Applied pyrolysis: Polymers and recycling (S3.4) – Chairs

09:30 – 09:50 **O-S3.4-1** *Mechanistic insights and bifunctional effects in Pd/TiO_2–ZrO_2-catalyzed conversion of pyrolytic limonene to cymene*
J. Poblete, S. Ghysels, F. Ronsse, D. Gómez, R. Jiménez, **L. Arteaga-Pérez** - Universidad de Concepción, Chile

09:50 – 10:10 **O-S3.4-2** *Molten k2co3-assisted thermal reorganization of pyrolysis char derived from mixed plastic waste toward hard carbon anodes*
J. Yoon, J. Kim, E. E. Kwon, S. Jeong – Korea Institute of Industrial Technology, South Korea

10:10 – 10:30 **O-S3.4-3** *Comprehensive Upgrading of Plastic-Derived Pyrolysis Oil to Improve the Quality of Steam Cracking Feedstock*
M. Auersvald, P. Straka, V. Vyskočil, A. Jamil Abdulrahman, A. Zayoud, K. M. Van Geem - UCT Prague and LCT, Czech Republic

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S3.4-4** *Pyrolysis of end-of-life paddle balls: assessing the kinetics and the recovery of value-added product,*
J. Daniel Martinez Angel, M. Victoria Navarro, A. Veses, S. Ledesma, J. Manuel López, M. Soledad Callén, T. García, R. Murillo - Instituto de Carboquímica (ICB-CSIC), Spain

11:20 – 11:40 **O-S3.4-5** *Exploring the thermochemical recycling of polystyrene waste using thermo-oxidative degradation*
C. Natalia Arenas, **M. Victoria Navarro**, J. Daniel Martinez Angel, O. Sanahuja, M. Betancur, M. Soledad Callén, J. Manuel López, T. García, R. Murillo - Instituto de Carboquímica (ICB-CSIC), Spain

11:40 – 12:00 **O-S3.4-6** *Comprehensive characterization of pyrolysis oil using GCxGC-TOFMS, FD-TOFMS, and blank tube FI-TOFMS*
R. Green – JEOL Europe

12:00 – 12:20 **O-S3.4-7** *Triple Synergy in Waste Plastic Upcycling: Enhanced BTEX Production via Plasma-Assisted Catalysis over Ga-Modified β-Zeolites*
J. Gu, W. Paul – University of Leeds, England

12:20 – 12:40 **O-S3.4-8** *Effect of Water Content in Activated Carbon on the Low-Temperature Microwave-Assisted Pyrolysis of HDPE*
M. Vastyl, A. Inayat, P. Lestinsky, J. M. Hill, L. Matejova - Institute of Environmental Technology, Czech Republic

12:40 – 13:00 **O-S3.4-9** *High-value products produced from plastic waste via thermal chemical conversion processes*
Y. Zhang – University of Aberdeen, Scotland

13:00 – 14:00 **Lunch**

14:00 – 15:00 **POSTER Session 3** (info pp. 24-35)

ROOM A – GROUND FLOOR

15:00 – 15:30 **KN6 Stef Ghysels**, Ghent University, Belgium
"Thermochemistry for selective production of platform chemicals"

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation (S3.5)– Chairs

15:30 – 15:50 **O-S3.5-1** *Effect of acid and basic pretreatment on the performance of hydrothermal liquefaction of sewage sludge and olive oil pomace as real waste biofeedstocks*
C. Prestigiacomo, E. Ciccarello Cicchino, F. Proietto, O. Scialdone, A. Galia - University of Palermo, Italy

15:50 – 16:10 **O-S3.5-2***Thermochemical synthesis of tin-containing hard carbons from waste hemp hurd for sodium-ion battery anodes*
D. Antoran, D. Alvira, **J. J. Manyà** - Universidad de Zaragoza, Spain

16:10 – 16:30 **O-S3.5-3** *Characterization of Volatile Carbonyl Compounds in Biorefinery Streams using SPME-GC: Implications for Occupational Health and Safety*
P. Bulsink, S. Sant'Anna, B. Bronson, B. Spencer, G. Gagnon-Caya, J. Jeaidi - Natural Resources Canada, Canada

16:30 – 17:00 **Coffee Break**

17:00 –17:20 **O-S3.5-4** *Value added products obtained from pilot scale waste pyrolysis and gasification for circular economy*
N. Miskolczi, V. Zsinka, B. Csutorás - University of Pannonia, Hungary

17:20 – 17:40 **O-S3.5-5** *Production and characterization of biocrude oil from hydrothermal liquefaction of sludge digestate: findings from an intensive experimental campaign*

D. Gbenga Oke, **G. Manente**, G. Agostino Mele - University of Salento, Italy

17:40 – 18:00 **O-S3.5-6** *Untreated Bamboo-derived carbons as sustainable anode material for sodium-ion batteries*

O. Ginoble Pandoli, R. Proietti Zaccaria, **V. Sperati**, H. Darjazi, C. Gerbaldi, G. Antonio Elia - IIT-Genova, Italy

ROOM A1 – FIRST FLOOR

Parallel Session: Applied pyrolysis: Fossil fuels (S3.6)– Chairs

15:30 – 15:50 **O-S3.6-1** *Role of solvent-separated group components and their sub-fractions on coal caking properties*

L. Wei, **J. Yan**, H. Shui - Anhui University of Technology, China

15:50 – 16:10 **O-S3.6-2** *Pressure-Dependent Pyrolysis of Cyclopropanated Fuel exo-TCN: Experiments and Kinetic Modeling*

H. Fu, X. Zhang, L. Wang, G. Liu - Tianjin University, China

16:10 – 16:30 **O-S3.6-3** *Insight into the pyrolysis behavior of tar-rich coal via infrared fast heating*

Q. Zhang, C. Li, W. Huang, J. Liu, H. Bai - Taiyuan University of Technology, China

16:30 – 17:00 **Coffee Break**

17:00 –17:20 **O-S3.6-4** *Carbon Formation on Surfaces during Methane Pyrolysis: Effects of Temperature, Methane Flow Rate, and Operation Time*

E. Busillo, M. P. Bracciale, P. De Filippis, B. de Caprariis - Sapienza Università di Roma, Italy

17:20 – 17:40 **O-S3.6-5** *Molecular-Level Investigation of Hydrocarbon Cracking and Early Coke Formation Enabled by an Enhanced Sampling Framework*

J. Guo, Y. Wang, G. Liu - Tianjin University, China

17:40 – 18:00 **O-S3.6-6** *Characteristics and mechanism for ex-situ catalytic pyrolysis of oil-based drill cuttings (OBDC) using OBDC pyrolysis slag*

Z. Zhang, K. Nie, G. Wan, J. Du, C. Li, C. Li, L. Sun, L. Xu - Huazhong University of Science and Technology, China

ROOM C1 – FIRST FLOOR

Parallel Session: Biochar (S3.7)– Chairs

15:30 – 15:50 **O-S3.7-1** *Tailored biochar based composited for electromagnetic enhanced composite preparation*

M. Bartoli, M. Giorcelli - Fondazione Istituto Italiano di Tecnologia, Italy

15:50 – 16:10 **O-S3.7-2** *Insight into the pyrolytic characteristic and heavy metal immobilization during the co-pyrolysis of phytoremediation biomass with duckweed*

W. Cheng, H. Jiang, J. Shao, H. Yang, H. Chen - Huazhong University of Science and Technology, China

16:10 – 16:30 **O-S3.7-3** *Synthesis, characterization and catalytic activity in dry reforming reaction of Ni/C catalysts prepared from different biomasses*

E. Ghomri, Y. Le Brech, **M. Guilmont**, M. Hechmi Aissaoui, Y. Bouizi, A. Dufour, R. Gadiou - IS2M, CNRS-University of Haute-Alsace, France

16:30 – 17:00 **Coffee Break**

17:00 –17:20 **O-S3.7-4** *Effect of pyrolysis kiln design on the structural and chemical formation of macadamia nut shell biochar for iron-based surface functionalisation*

J. Asingsamanunt, C. Chiemchaisri, P. Dontree, C. Areeprasert - Kasetsart University, Thailand

17:20 – 17:40 **O-S3.7-5** *Sustainable bamboo-derived biochar as a functional enzyme support: effect of pyrolysis conditions on biocatalytic polymerization*

L. M. Moreno Pascual, A. Pellis, O. Ginoble Pandoli, N. Nicotra - University of Genova, Italy

17:40 – 18:00 **O-S3.7-6** *Aqueous-Phase and Acid-Modified Biochar for Sustainable and Resilient Soils*

A. El-Aradi, D. Nowakowski, A. Nowak, T. Kasim, D. Webb - Aston University (EBRI), UK

ROOM B – GROUND FLOOR

Parallel Session: Applied pyrolysis: Polymers and recycling (S3.8) – Chairs

15:30 – 15:50 **O-S3.8-1** *Chemical recycling of nylon-6 via catalytic pyrolysis for the selective recovery of ε-caprolactam*

M. Moschos, S. Stefanidis, E. Vouvoudi, D. Achilias, A. Lappas – CPERI/CERTH, Greece

15:50 – 16:10 **O-S3.8-2** *Impact of stabilizers on the pyrolysis mechanism in chemical recycling of polyvinyl chloride waste*

G. Straczewski, R. Hesse, K. Garbev, S. Tavakkol, D. Stapf – KIT, Germany

16:10 – 16:30 **O-S3.8-3** *Chemical recycling of mixed plastic waste via a two-step process combining hydrothermal liquefaction pretreatment and pyrolysis for fuel oil production*

B. de Caprariis, M. Damizia - Sapienza University of Rome, Italy

16:30 – 17:00 **Coffee Break**

17:00 –17:20 **O-S3.8-4** *Chemical Recycling of Polypropylene via Heterogeneously Catalyzed Dehydrogenation and Metathesis*

J. Becker, **N. Meyer**, J. Bunt, H. Neomagus - North-West University, South Africa

17:20 – 17:40 **O-S3.8-5** *Interaction mechanism of organic components during decommissioned pv laminates oxidative pyrolysis for sustainable recycling*

Y. Lei, A. Li, Y. Huang, Q. Deng, M. Deng, G. Luo - Huazhong University of Science & Technology, China

17:40 – 18:00 **O-S3.8-6** *Chemical Recycling of Waste Plastics Through Microwave-assisted Thermochemical Conversion*

L. Dai - Southeast University, China

Thursday, 11th June 2026

08:30 – 09:00 **Registration**

ROOM A GROUND FLOOR

09:00 – 09:30 **KN7 Hongwei Wu**, Curtin University, Australia, *"Pyrolysis-derived Bioproducts from Biomass for Future Sustainable Development"*

ROOM A – GROUND FLOOR

Parallel Session: Applied pyrolysis: other; biomass valorisation (S4.1) – Chairs

09:30 – 09:50 **O-S4.1-1** *The power of silylation: toward a molecular description of liquids from thermochemical processes*
C. Torri, R. Bao, A. Facchin, D. Fabbri, F. Zimbardi, J. Hertzog, A. Rombolà - Università di Bologna, Italy

09:50 – 10:10 **O-S4.1-2** *Experimental investigation of non-catalytic dry reforming of representative bio-oil compounds*
M.V. Manna, G. Battista Ariemma, **D. Amato**, G. Fabozzi, P. Sabia, R. Ragucci, M. de Joannon - CNR - STEMS, Italy

10:10 – 10:30 **O-S4.1-3** *Representation of lignin derived oligomers in pyrolysis bio-oil: Advances towards improved prediction of vapor liquid equilibria for controlling bio-oil quality*
A. Funke, A. Correa de Araujo, A. Jalalinejad, N. Dahmen – KIT, Germany

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S4.1-4** *Analytical NMR framework with synthetic lignin oligomers for surrogate modelling of fast pyrolysis bio-oils and pyrolignin fractions*
M. Rojas, A. Funke - Institute of Catalysis Research and Technology (IKFT); Karlsruhe Institute of Technology (KIT), Germany

11:20 – 11:40 **O-S4.1-5** *Pyrolysis-driven combustion of polylactic acid in hybrid aerospace propulsion*
B. Apicella, **F. Cerciello,** T. de Angelis, G. Gargiulo, F. Saverio Marra, F. Renzulli, C. Russo, O. Senneca and M. Sirignano - Consiglio Nazionale delle Ricerche, Italy

11:40 – 12:00 **O-S4.1-6** *Experimental and atomistic-molecular modeling contributions to selective carbonization and biochar engineering*
V. Sierra Jimenez - Washington State University, United States of America; University of Lorraine, France

12:00 – 12:20 **O-S4.1-7** *High-Performance biochar: Transforming filler technology in plastics*
S. Schönfeld, C. Graf-Kick - Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Germany

12:20 – 12:40 **O-S4.1-8** *Model for Cellulose Pyrolysis Combining Kinetic Monte Carlo Simulation and Vapor-Liquid Equilibrium*
S. Vattaparambil Sudharsan, N. Erland L Haugen, X. Zhang and K. Umeki - Luleå. University of Technology, Luleå, Sweden

ROOM A1 – FIRST FLOOR

Parallel Session: Applied pyrolysis: Biomass valorisation; Fossil fuels (S4.2) – Chairs

09:30 – 09:50 **O-S4.2-1** *Effect of steam and solid residence time on wood pyrolysis-gasification products*
M. Hechmi Aissaoui, A. Dufour, Y. Le Brech and G. Mauviel- LRGP/CNRS, France

09:50 – 10:10 **O-S4.2-1** *In-situ release detection and mechanism of alkali metals during coal and biomass co-pyrolysis/gasification*
X. Song, L. Zhang, G. Yu - Ningxia University, China

10:10 – 10:30 **O-S4.2-2** *Eucalyptus biomass valorization: evaluation of the influence of slow pyrolysis bio-oil inclusion in refining processes*
N. Pontes, Y. Pedro, A. Borges, A. Pinho, V. Santos, R. Silva, G. Vanini, D. Azevedo - Federal University of Rio de Janeiro, Brazil

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S4.2-3** *Thermochemical conversion of digestate waste for hydrogen-rich syngas production using tga*
V. Belandria, S. Bostyn, M. Ben Bouabsa, B. Sarh, T. Boushaki - Institut de Combustion, Aérothermique, Réactivité, et Environnement (ICARE)-CNRS UPR3021, Orléans, France

11:20 – 11:40 **O-S4.2-4** *Advanced molecular elucidation of biogenic contributions from pyrolysis bio-oil co-processed in conventional refining: a viable and sustainable pathway for the energy transition,*
R. Vieira Santana da Silva, A. Rezende Pinho, D. Almeida Azevedo - Federal University of Rio de Janeiro, Brazil

11:40 – 12:00 **O-S4.2-5** *Nanoscale Mixing of Cellulose and Lignin Alters Their Pyrolysis Interactions and Derived Carbon Reactivity*
C. Guizani, A. Paajanen, J. Vaari, M. Hummel – VTT, Finland

12:00 – 12:20 **O-S4.2-6** *Study on biocarbon produced from untreated and water leached bark*
L. Wang, J. Bakken, Z. Czégény, Y. Tolunay Kili, Ø. Skreiberg, B. Babinszki, R. Johnson, K. Umeki, S. Q Turn - SINTEF Energy Research, Norway

12:20 – 12:40 **O-S4.2-7** *Conversion of cellulose into azaheterocycles through pyrolysis under a reactive NH3 atmosphere*
E. Kooy, S. Mangelinckx, F. Ronsse, S. Ghysels - Universiteit Gent, Belgium

ROOM C1 – FIRST FLOOR

Parallel Session: Catalytic pyrolysis (S4.3) – Chairs

09:30 – 09:50 **O-S4.3-1** *A Tandem Micro Reactor–GC/MS Approach to Probing Catalytic Pyrolysis and High-Pressure Hydropyrolysis of Biomass*
Y. Kim, S. Kumagai, Y. Park, N. Teramae, A. Watanabe, C. Watanabe - Daegu University, South Korea

09:50 – 10:10 **O-S4.3-2** *Evaluation of operating conditions on the pyrolysis and in-line catalytic cracking of HDPE over a ZSM5 zeolite catalyst*
K. Santin, G. Lopez, L. Olazar, F. Atashi, **M. Amutio,** M. Artetxe - University of Basque Country, Spain

10:10 – 10:30 **O-S4.3-3** *Understanding Nitrogen-Induced Catalyst Deactivation in Plastic Waste Pyrolysis from Lab to Pilot Scale*
J. Vogt, E. Rusu, D. Merz, G. Straczewski, V. Fraaije, S. Mihan, S. Tavakkol, D. Stapf - Karlsruhe Institute of Technology (KIT), Germany

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S4.3-4** *Highly efficient selective co-hydrodeoxygenation of bio-oil and plastic wastes to naphthenes over Co/HZSM-5*
X. Yin, Y. Lv, H. Su, S. Wang - Zhejiang Univerisity, China

11:20 – 11:40 **O-S4.3-5** *Operation and results of a pilot-plant carbon-moving-bed methane cracking reactor for the production of sustainable hydrogen and solid carbon*
A. Riorda, A. Sanad, V. Negro, A. Miniati, A. Maria Rizzo, D. Chiaramonti - Politecnico di Torino, Italy

11:40 – 12:00 **O-S4.3-6** *Impact of Oxygen Content on the Storage Stability of Catalytic Fast Pyrolysis Oils: Insights from Pilot Scale Production*
T. Khazraie - Valmet Technologies, Finland

12:00 – 12:20 **O-S4.3-7** *Influence of fluid bed operating conditions on waste pyrolysis products*
P. Arendt Jensen, B. B. Hansen, A. Asif, G. Mannente, G. Mele, A. D. Jensen - DTU, Chemical Engineering, Denmark

ROOM B – GROUND FLOOR

Parallel Session: Applied pyrolysis: Polymers and recycling (S4.4) – Chairs

09:30 – 09:50 **O-S4.4-1** *Inline High-Sensitivity Analysis of Brominated Pyrolysates from TBBPA-Containing Polystyrene Using Py-GC/NICI-MS*
S. Kumagai, K. Akaike, S. Borjigin, P. Phanthong, Y. Saito, S. Nakamura, A. Watanabe, C. Watanabe, N. Teramae, T. Yoshioka - Tohoku University, Japan

09:50 – 10:10 **O-S4.4-2** *Unraveling the Pyrolytic Degradation Mechanisms and Recycling Potential of Non-Isocyanate Polyurethanes*
A. Bukowczan, P. Zając, K. Pielichowski - Cracow University of Technology, Poland

10:10 – 10:30 **O-S4.4-3** *A Novel Strategy for Recycling Waste Wind Turbine Blades under Steam and Air Conditions: Chemical Recovery and Char Removal*
C. Ma, G. Huang, X. Huang, Y. Shao, J. Ran - Chongqing University, China

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **O-S4.4-4** *Multi-phase kinetic modeling of LDPE pyrolysis: From condensed-phase degradation to secondary gas-phase reactions*
K. Wu, A. Locaspi, A. Frassoldati, C. Pappijn, B. da Costa Magalhaes, M. Dunkle, G. Bellos, T. Faravelli - Department of Chemistry, Materials, and Chemical Engineering “G. Natta”, Politecnico di Milano, Italy

11:20 – 11:40 **O-S4.4-5** *Chemical recycling of biaxially oriented PP (BOPP) films*
M. Teresa Nogueira, A. C. Marques, F. Lemos, M. Amélia Lemos - CERENA/IST, Portugal

11:40 – 12:00 **O-S4.4-6** *High Temperature Vortex Pyrolysis of Polyethylene for Ultra High Light Olefin Yields*
H. Khakpour, Y. Wang, P. Yazdani, R. John Varghese, Y. Ouyang, K. Van Geem - Laboratory for Chemical Technology (LCT), Belgium

12:00 – 12:20 **O-S4.4-7** *Heteroatom Transfer and Product Composition of Plastic Waste Pyrolysis*
F. Calik Ulu, M. Denton, R. John Varghese, M. Sabbe, K. Van Geem - Ghent University, Belgium

12:20 – 12:40 **O-S4.4-9** *Co-pyrolysis of Polypropylene and asphalt waste: insights into synergistic effects and oil yield optimization*
Y. Ech'Chalh, R. Michels, V. Vitzthum, C. Lorgeoux - Lorraine University, France

ROOM A – GROUND FLOOR

12:40 – 13:00 **Closing Ceremony**

LIST OF POSTER CONTRIBUTIONS

Monday June 8th 14:00 – 15:00: POSTER SESSION 1
Tuesday June 9th 14:00 – 15:00: POSTER SESSION 2
Wednesday June 10th 14:00 – 15:00: POSTER SESSION 3

Maximum allowed poster sizes are 85 cm width and 120 cm height.

Poster Session 1, Monday June 8th, Floor 0 (P-S1F0) Fundamental pyrolysis reactions and kinetics/modelling; Applied pyrolysis: Biomass valorisation			
P-S1F0-01	58	Thermal Decomposition and Kinetics of a Nitrochitosan-Based Energetic Composite	M. Dourari
P-S1F0-02	263	Effects of phase separation and storage temperature in slow pyrolysis bio-oils: insights from a 145-days monitoring study	D. Amato
P-S1F0-03	30	Structure–Activity Relationships in the Reductive Amination of Furfural over Pd/ZrO_2–TiO_2 Bifunctional Catalysts	L. Arteaga-Pérez
P-S1F0-04	37	Pressurised pyrolysis of sugarcane bagasse for hydrogen-rich syngas production	Q. Sun
P-S1F0-05	39	Development of new forms of carbonaceous adsorbents suitable for water purification: activated biochar for Congo red adsorption	R. Marsalek
P-S1F0-06	84	Study of liquid and solid product formation after hydrothermal processing of carbohydrate and aromatic biomass derivatives	A. Zhurinsh
P-S1F0-07	108	Design and characterization of a promising chitin-based energetic polysaccharide	S. Ouahioune
P-S1F0-08	116	Energetics of torrefied droppings of ZOO animals	B. Taraba
P-S1F0-09	124	Process integrated valorization of fast pyrolysis co-products: enhancing the textural and environmental quality of biochar via post-pyrolysis treatment.	I. Aziz
P-S1F0-10	130	Torrefaction of the ZOO animals droppings	M. Mucha
P-S1F0-11	135	Co-pyrolysis of greenhouse tomato plant waste contaminated with plastics: influence of process parameters and biochar potential for thermal plasma treatment	A. Castagna
P-S1F0-12	160	Green hydrothermal synthesis of catechol from 2 acetylfuran	S. Ghysels
P-S1F0-13	168	Plasma and ball milling pretreatment for enhanced production of levoglucosenone from catalytic conversion of cellulose over a sulfonated carbon catalyst	X. Huang

P-S1F0-14	183	Acid washing and carbonization of biomass bottom ash for recycling into bio-coke	U. Chung
P-S1F0-15	184	Structure–Performance relationships in Ni/C catalysts for Power-to-Gas applications	A. Cleemput
P-S1F0-16	217	Effect of pre- and post-treatments on the pyrolysis condensate of pine bark	Z. Sebestyén
P-S1F0-17	226	Effects of biomass pretreatment on biochar characteristics and hydrogen yield during gasification	V. Zsinka
P-S1F0-18	242	Pretreatment-catalytic hydrothermal liquefaction of Spirulina: toward high-yield, low-nitrogen biocrude and its prospects as an aviation-fuel precursor	L. Lu
P-S1F0-19	258	Characterization and antifungal activity of wood vinegar produced from slow pyrolysis of canola stalk	T. Aktas
P-S1F0-20	276	Turning agro-industrial pruning residues into biochar: insights from slow pyrolysis and value chain analysis	P. Giudicianni
P-S1F0-21	285	Effects of pyrolysis temperature on biochar yield, CO_2 adsorption capacity and kinetic from coconut husk biomass	R. Chamnanmor
P-S1F0-22	149	Optimized lignin-derived pyrolytic oils enhance oxidative aging resistance of asphalt binders	J. R. Colina
P-S1F0-23	293	Biomass pyrolysis in a fixed-bed reactor: effect of pressure and sweep gas velocity	A. Dufour
P-S1F0-24	299	Energy recovery from slaughterhouse waste: gasification performance and digestate valorization	V. Belandria
P-S1F0-25	311	Pyrolysis-driven iron redox systems: a multifunctional approach to hydrogen, biofuels, and carbon capture	O. Senneca
P-S1F0-26	368	Thermo-catalytic co-pyrolysis of waste rain tree pods and natural rubber: influence of temperature, feed ratio, and catalysts on bio-oil yield and its properties	R. Mishra
P-S1F0-27	377	Unraveling the characteristics and pyrolysis mechanism of energetic cellulose carbamate nitrate supplemented with organic stabilizers.	L. Boumaza
P-S1F0-28	82	Enabling a global view of reaction class in hydrocarbon pyrolysis with ReaxFF MD and machine learning	X. Li
P-S1F0-29	199	Accounting for structural variability of lignin in CRECK-S-B kinetic models for pyrolysis across different extraction methods	M. Suleiman
P-S1F0-30	249	Evaluating the ReaxFF reactive force field for simulations of cellulose carbonization	E. Virtanen

Poster Session 1, Monday June 8th, Floor 1 (P-S1F1) Analytical Pyrolysis			
P-S1F1-01	142	Analytical pyrolysis of bamboo residues: a case in point of climate variation in North China Plain during 4th century BC	B. Han
P-S1F1-02	350	Cosmetic Residues in Greek Lekythoi from the Necropolis of Spina Investigated by Analytical Pyrolysis	A. Rombolà
P-S1F1-03	306	Thermoanalytical techniques for the knowledge of plastic heritage: from chemistry to conservation	A. Ferretti
P-S1F1-04	204	Scientific analysis of lacquerware bearing stamp patterns excavated from different archaeological sites	R. Tanaka
P-S1F1-05	274	Artificial and natural UV aging of beeswax: new insights into its chemical composition from Py-GC/MS and SPME-GC/MS	I. Bertelli
P-S1F1-06	17	Comprehensive utilization for hydrothermal conversion products of food waste	R. Bao
P-S1F1-07	62	Field applicability evaluation of size-segregated microplastics in air in representative metropolitan areas using analytical pyrolysis–GC/MS	S. Kim
P-S1F1-08	65	Characterization of microplastics in ambient air and their relationship with PM2.5 organic components using pyrolysis–GC/MS	S. Kim
P-S1F1-09	76	Microwave-assisted treatment to convert commercial polyethylene microbeads into a liquid suspension used as reference material for Py-GC-MS	R. Domingues
P-S1F1-10	95	Soot formation and polycyclic aromatic hydrocarbons in soot during p-cymene pyrolysis	K. Alexandrino
P-S1F1-11	139	Multi-analytical and multi-matrix approach for microplastics characterization: the synergy of Py-GC/MS and μ-FTIR	E. Gregoris
P-S1F1-12	155	Characterization and quantification of tire and road wear particles (TRWP) in environmental samples: Integration of Py-GC/MS and Rock-Eval® techniques	P. Cologon
P-S1F1-13	166	Quantitative analysis of trace PTFE in polymer materials by double-shot pyrolysis-GC/MS	M. Soll
P-S1F1-14	172	Chronological characterization of airborne microplastics in Kanagawa, Japan by Pyrolysis-Gas Chromatography/Mass Spectrometry	H. Shirata
P-S1F1-15	191	A comparative study of GHG reduction assessment by pyrolysis and combustion technology of waste biomass	H. Jang
P-S1F1-16	194	Unravelling the impact of microwave-assisted pre-treatment on tire wear particles by Py-GC-MS	G. Dumont
P-S1F1-17	232	Optimization of pre-treatment protocols for micro- and nanoplastics detection in human keratinous and blood tissue samples using analytical Py-GC/MS	S. Charushree

P-S1F1-18	236	Characterization and quantification of microplastics in water in mid-Atlantic watersheds in the United States by pyrolysis GC-MS	K. Sam
P-S1F1-19	251	Exploring the potential of one-pot microwave-assisted pretreatments coupled with PY-GC-MS for the quantification of mps and associated contaminants	J. La Nasa
P-S1F1-20	267	Analytical pyrolysis for the characterization of hypercrosslinked polymers	C. Schwarzinger
P-S1F1-21	277	Preliminary application of pyrolysis and TD-GC-MS/MS to study additive leaching from plastics induced by sediment abrasion and fragmentation	F. De Falco
P-S1F1-22	328	Assessing airborne microplastics concentrations in indoor working environments using Py-GC-MS	L. Barlucchi
P-S1F1-23	341	Quantification of nano/microplastic in urban atmospheric deposition using pyrolysis-GC-MS	I. Coralli
P-S1F1-24	380	Chemical markers for tyre wear particles using pyrolysis-GC-MS	G. D. Abbott
P-S1F1-25	347	Biodegradable bioplastics in soil: multi-analytical evidence of fragmentation and soil organic matter changes	A. Rombolà
P-S1F1-26	356	Decoding subsurface biomarkers in a Mars-analogue lava tube through analytical pyrolysis and isotope fingerprints	A. Miller
P-S1F1-27	381	From pyrolysis to application: long-term evaluation of sewage sludge biochar (greenchar) in green roof substrates	V. Frišták
P-S1F1-28	114	Enhanced processing ability with a newly designed underwater microparticle collection device for Pyrolysis-GC/MS of microplastics	A. Watanabe
P-S1F1-29	147	Addressing matrix effects in micro- and nanoplastic quantification using Pyrolysis-GC-cIMS-HRMS	K. Houthuijs
P-S1F1-30	316	Overcoming matrix and oligomer interferences in pyrolysis GC-MS analysis of microplastics in animal tissue	S. Böhmdorfer
P-S1F1-31	241	Metagenomic analysis of key methanogenic pathways in solid-state co-anaerobic fermentation of weathered coal and cattle manure	B. Song
P-S1F1-32	291	Improving the determination of atomic mass balances of biochars produced from biomass pyrolysis	A. Dufour

Poster Session 2, Tuesday June 9th, Floor 0 (P-S2F0) Catalytic pyrolysis			
P-S2F0-01	12	Catalytic co-hydropyrolysis of biomass/plastic over Chilean natural zeolite modified with acid and impregnated with mono- and bimetallic nickel - cobalt	B. Puentes-Navarro
P-S2F0-02	14	The mechanism of biomass pyrolysis quality improvement catalyzed by calcium oxide-based catalysts	G. Yu
P-S2F0-03	77	Comprehensive utilization of corn cob (Zea Mays) for the production of biofuels and platform molecules through a hybrid bio-thermocatalytic conversion route	D. Bustos-Martinez
P-S2F0-04	117	Valorization of non-edible vegetable oil through zeolite-catalyzed pyrolysis: a model study on oleic acid for aromatics and SAF precursors production	W. Piao
P-S2F0-05	148	Performance of Ni/Al_2O_3, Ni/SiO_2, and Ni/ZrO_2 in the biomass pyrolysis and in-line oxidative steam reforming process for hydrogen production	F. Atashi
P-S2F0-06	196	Preparation of carbon nanosheet from molten salts assisted pyrolysis of biomass towards to carbon-negative technology	S. Xia
P-S2F0-07	221	Enhanced hydrocarbons generation of cyclic catalytic pyrolysis of acid-washed sweet sorghum stalk through Mo/HZSM-5	D. Chen
P-S2F0-08	331	Thermal and catalytic pyrolysis of olive stone to produce phenol-rich bio-oils	R. Migliaccio
P-S2F0-09	355	Thermo-metallic engineering of MOF-derived catalysts: Influence on selectivity during biomass-plastic co-hydropyrolysis	S. Alejandro-Martín
P-S2F0-10	361	Advances in catalytic pyrolysis of lignocellulosic biomass for bio-oil upgrading	E. Ramirez
P-S2F0-11	364	Sustainable bio-oil production from sugarcane bagasse via catalytic pyrolysis using acid-modified natural zeolites	O. Gutiérrez
P-S2F0-12	379	Polymer to fuel-range hydrocarbons: an investigation of thermal and β-zeolite-catalyzed pyrolysis of polypropylene (PP) using Py-GC-MS and Py-FT-IR techniques	Ł. Korzeniowski
P-S2F0-13	64	Tailoring hierarchical nanocrystalline zeolite NaY: a template-free hydrothermal strategy for advanced catalytic pyrolysis applications	C. Ayoub
P-S2F0-14	129	Thermal decomposition and energetic behavior of ammonuim nitrate modified with nitrocellulose-coated AlMg–NGO@nFe_2O_3 Nanothermite	F. Gahfif

P-S2F0-15	170	Spray pyrolysis synthesis of Cu-CeO2-ZrO2 catalysts with enhanced oxygen storage capacity for reverse water-gas shift reaction	I. Jeon
P-S2F0-16	171	Structurally stable methanation-resistant catalysts for the reverse water-gas shift reaction	C. Yoon
P-S2F0-17	296	Catalytic fast pyrolysis of biomass over hierarchical zeolites: comparison of mordenite, beta and ZSM-5	A. Dufour
P-S2F0-18	320	Catalytic pyrolysis of organic waste over nanosponge zeolite for enhanced aromatic hydrocarbon production	Y. Park
P-S2F0-19	324	Catalytic co-pyrolysis of woody biomass and waste plastics: mechanistic insights into selective BTX production	Y. Park
P-S2F0-20	374	Catalytic co-conversion of biodegradalbe polymer and plastics over hierarchical zeolite catalyst	Y. Park
P-S2F0-21	9	N-doped reduced graphene oxide supported Fe_2O_3: a high-performance catalyst for AN-based propellants	N. Manel
P-S2F0-22	163	Effect of nano structuring on the decomposition kinetics of cellulose nitrate	S. Touidjine
P-S2F0-23	203	Zn-Fe Co-modified HZSM-5/MCM-41 catalytic co-pyrolysis of miscanthus and polystyrene to produce aromatic-rich oil	Y. Wang
P-S2F0-24	225	Structural tailoring of pyrolysis-derived carbon from thermo-catalytic methane decomposition	S. Bazri
P-S2F0-25	107	Microwave-assisted catalytic pyrolysis of mixed medical plastic waste: sustainable hydrocarbon, fuel gas, and carbon material recovery	K. Kumar
P-S2F0-26	162	Thermal conversion of heterogeneous marine polymer waste via catalytic pyrolysis using waste-derived catalysts: assessment of conversion efficiency and product quality for future applications	M. Sajdak
P-S2F0-27	209	Zeolite catalysed upgrading of CFRP pyrolysis vapours for enhanced hydrogen production	H. Llona
P-S2F0-28	40	Enhancing Syngas production from plastic waste via catalytic steam gasification	A. Fivga

Poster Session 2, Tuesday June 9th, Floor 1 (P-S2F1), Pyrolysis instrumentation and methodology, Applied pyrolysis - other			
P-S2F1-01	59	Optimizing activated carbon properties: the role of precursor source, carbonization and activation parameters	A. Volperts
P-S2F1-02	141	Bromination mechanism of typical metallic radionuclides on defective graphite surface by HBr：insight from first principles	M. Chen
P-S2F1-03	152	Hydrothermal carbonization of sewage sludge for thermal plasma treatment: influence of process parameters on energy and mineral recovery in hydrochars	A. Castagna
P-S2F1-04	181	Oxidative slow pyrolysis in an auger reactor: autothermal operation and process intensification	G. Lombardi
P-S2F1-05	214	Evaluation on the migration and occurrence mechanism of impurities in decommissioned nuclear graphite by multi-halogen synergistic roasting	Z. Ma
P-S2F1-06	235	Biochar from intermediate pyrolysis for enhanced cementitious grouts	D. Nowakowski
P-S2F1-07	314	Upgrading fast-pyrolysis chars through thermal stabilization: analytical insights and implications for their use	A. Rizzo
P-S2F1-08	336	Rapid biochar quality screening using hyperspectral imaging and machine learning	A. El-Aradi
P-S2F1-09	351	Study on CO2 activation on properties of biochar	L. Wang
P-S2F1-10	360	Modeling of residence time for screw conveyors and auger reactors	E. Aschenbrenner
P-S2F1-11	378	Evolution mechanism of mechanical properties of recycled glass fibers during pyrolysis–oxidation treatment of waste wind turbine blades	Y. Hu
P-S2F1-12	21	Comprehensive characterization of pyrolytic aqueous phases for valorization via aqueous phase reforming	L. Nossova
P-S2F1-13	53	Hydrogen evolution through ammonia borane hydrolysis over iron tailored pig manure biochar catalyst	M. Bartoli
P-S2F1-14	106	Corn stalk pyrolysis: process characterization and properties of products	J. Kluska
P-S2F1-15	143	Sustainable valorisation of almond residues to hard carbon cathodes for aqueous zinc hybrid supercapacitors	J. Manyà
P-S2F1-16	215	Gas composition dynamics in biomass gasification processes	R. Panizio
P-S2F1-17	216	Effect of CaO Loading on in-situ CO_2 capture during pruning biomass gasification	B. Rijo

P-S2F1-18	234	Valorisation of intermediate pyrolysis oils from woody biomass towards marine residual fuels	D. Nowakowski
P-S2F1-19	348	Evolution of magnetic and paramagnetic behavior in pyrolyzed bamboo: influence of thermal treatment and iron incorporation	O. Pandoli
P-S2F1-20	353	Integrating hydrothermal carbonization and pyrolysis for the revalorization of sewage sludge digestate: a hybrid thermochemical-biological perspective	Y. Küçükağa
P-S2F1-21	366	Pyrolytic conversion of rubber fig leaves into porous carbon material for environmental application	B. Tripathy
P-S2F1-22	156	High-temperature pyrolysis of pine sawdust using metallurgical slag as oxygen carrier and gasification of solid residues	Y. Li
P-S2F1-23	86	Pyrolysis of carbonaceous xerogels synthesized via polycondensation of m-substituted phenols with furfural: thermogravimetric and thermomechanical investigation	P. Bulavová
P-S2F1-24	131	A novel application of the spontaneous liquid-gas imbibition method for pore structure characterization in pyrolytic porous materials	Y. Wu
P-S2F1-25	300	Thermal-analysis-based characterization of the heating-combustion boundary in biomass systems	L. Fu
P-S2F1-26	46	Fluidised-bed pyrolysis of contaminated biomass – process parameters and product analysis	P. Wąsik
P-S2F1-27	176	Residual energy recovery from digestate via Py-AD approach: water-soluble fraction of bio-oil as feedstock and its molecular characterization by silylation-GC-MS	F. Zimbardi
P-S2F1-28	301	The influence of physical parameters and puffing conditions on the thermal characteristics of cigar combustion cones	Q. Zhang

Poster Session 3, Wednesday June 10th, Floor 0 (P-S3F0), Applied pyrolysis: Polymers and recycling			
P-S3F0-01	25	Improving liquid and BTEX production via co-pyrolysis of polystyrene and road asphalt waste	Y. Ech'Chalh
P-S3F0-02	180	Co-pyrolysis characteristics of polyethylene and biomass in a bubbling fluidized bed	A. Taehwi
P-S3F0-03	270	Development and Validation of a Py-GC/MS method for the simultaneous determination of microplastics and biomicroplastics in seawater	E. Rodríguez
P-S3F0-04	10	Synthesis and characterization of a promising energetic nitrochitosan	M. Hamouche
P-S3F0-05	212	Unveiling interactions of enzymatic hydrolysis lignin and waste tires during co-pyrolysis	S. Cui
P-S3F0-06	188	Design of experiments for PS pyrolysis in a conical spouted bed reactor	S. Sivanandan
P-S3F0-07	278	Deep insights into fluorine transformation mechanisms during pyrolysis of retired photovoltaic backsheets: experimental validation and ReaxFF molecular dynamics simulations	S. Deng
P-S3F0-08	305	Experimental and modelling investigation of primary and secondary reactions in LDPE Pyrolysis	L. Marchetti
P-S3F0-09	313	Modulating neat and catalytic polyolefin pyrolysis using Damköhler numbers	H. Wong
P-S3F0-10	266	Characteristics of pyrolysis products from waste polyolefin plastics using 15 kg/hr continuous auger system	K. Su
P-S3F0-11	247	One-pot synthesis of hierarchical ZSM-5 for lifetime improvement in catalytic conversion of plastic waste	C. Ke
P-S3F0-12	79	Thermal pyrolysis characteristics and kinetics of organic components in spent ternary lithium-ion battery	Y. Ma
P-S3F0-13	105	Chemical upcycling of waste plastics over metal–acid bifunctional catalysts	C. Liang
P-S3F0-14	144	Pretreatment improving in-situ catalytic pyrolysis of plastic waste feedstocks	H. Leuven
P-S3F0-15	219	Waste-to-jet upgrading of aromatic-rich pyrolysis oil from cotton/polyester textile waste into high-density cycloalkane SAF	X. Jin
P-S3F0-16	222	Catalytic pyrolysis of polystyrene over zeolite materials toward BTEC fraction production	K. Vikanova
P-S3F0-17	231	Utilization of plastic waste-derived heavy hydrocarbons as steam cracking feedstock	B. Csutorás
P-S3F0-18	286	Pyrolysis as the gateway thermochemical route for plastic-to-hydrogen-rich gas valorization	M. Muñoz-Batista

P-S3F0-19	288	Bifunctional magnetic Co3O4-B/C catalysts for the thermochemical conversion of non-reciclable plastic waste	M. Muñoz-Batista
P-S3F0-20	322	Pyrolysis of multilayer plastic packaging to yield steam cracking feedstock	M. Auersvald
P-S3F0-21	344	On the purification of tire pyrolysis oil using a lab-scale TRL-4 packed distillation column for limonene and BTEX recovery	J. Angel
P-S3F0-22	363	Pyrolysis of multilayer plastics: optimising the process	J. Lahtinen
P-S3F0-23	375	Steam cracking of HDPE over different FCC catalysts in a fountain-enhanced conical spouted bed reactor	J. Alvarez
P-S3F0-24	167	Synergistic Effects of co-hydrothermal carbonization of PVC and spent coffee grounds for enhanced dechlorination and fuel quality	S. Lee

Poster Session 3, Wednesday June 10th, Floor 1 (P-S3F1), Applied pyrolysis: Fossil fuels, Applied pyrolysis: Biomass valorisation, Applied pyrolysis - other			
P-S3F1-01	337	Catalytic pyrolysis of biomass using BECCS-derived ash: enhanced biochar yield, carbon retention, and process performance	J. Sun
P-S3F1-02	373	Tuning pyrolysis temperature to engineer bamboo biochar for laccase immobilisation and water treatment	O. Pandoli
P-S3F1-03	56	Spent coffee biochar contained poly(dimethylsiloxane) composites as membranes for gas separation	R. Salvo
P-S3F1-04	112	Biowaste valorization using a pilot scale continuous pyrolysis unit within the ENREGAT large research infrastructure	B. Grycová
P-S3F1-05	44	Novel activated bonechar prepared by microwave pyrolysis of waste animal bones for xylene adsorption from air	Z. Jankovská
P-S3F1-06	52	Iron tailored biochar for waterborne bacteriar treatment	M. Bartoli
P-S3F1-07	101	Valorisation of reindeer bone via pyrolysis: Product distribution and characterisation for environmental applications	P. Premchand
P-S3F1-08	173	Selective condensation behavior of biomass pyrolysis vapors at wide condensation temperatures: component evolution,prediction, and validation	W. Ge
P-S3F1-09	292	Effect of pyrolysis temperature on the Cristal Violet adsorption performance of ball-milled functionalized biochar	C. Grottola
P-S3F1-10	294	Effect of blends of hydrochar and straw during co-pyrolysis for biochar production	C. Grottola
P-S3F1-11	195	Wood cell wall ultrastructure investigated via hydrolyzable sugars in char and TG-MS analysis	H. Kawamoto
P-S3F1-12	202	Study on the recovery method for lacquer films in epoxy resin-embedded samples for stratified analysis by py-GC/MS	K. Tsubouchi
P-S3F1-13	281	Conceptual pathways for the valorisation of gasification-derived biochars	R. Panizio
P-S3F1-14	308	Untreated pyrolysed 3D Bamboo as a solar steam generation device	O. Pandoli
P-S3F1-15	96	Volatile composition and thermal behavior of hydrochars produced from carbohydrates and wood biomass	B. Babinszki
P-S3F1-16	120	Impact of process conditions on hydrochars derived from the hydrothermal carbonization of goat manure	Z. Sebestyén

P-S3F1-17	304	Comparative thermal degradation analysis of pomegranate, walnut, and pistachio biomasses: influence of drying method on thermochemical stability and volatile content	S. Shaghaghi
P-S3F1-18	367	Hydrothermal liquefaction of the invasive macroalga chaetomorpha linum: parametric optimization and product characterization	R. Giannelli
P-S3F1-19	38	Thermochemistry as synthesis tool for new chemical building blocks from isosorbides and isomannides	S. Ghysels
P-S3F1-20	83	Comparative study on the hydrothermal carbonization of glucose and levoglucosan: understanding carbon sphere formation pathways	A. Plavniece
P-S3F1-21	321	Pyrolysis characteristics and thermo-kinetic parameters for hydrochars produced from agricultural industries	V. Belandria
P-S3F1-22	357	Valorizing blended spent coffee grounds and date seeds for hydro-gen production: pyrolysis, kinetics, and machine learning applications	S. Kordoghli
P-S3F1-23	365	Thermogravimetric and kinetic study of pomegranate peel, prickly pear peel, and their mixture for bioenergy applications	S. Haddad
P-S3F1-24	16	In-situ study of particle evolution at different stages during coal gasification process	Y. Gong
P-S3F1-25	23	Effect of lignite thermal dissolution solubles addition on coke reactivity and its dissolution loss kinetics under a hydrogen-rich atmosphere	H. Shui
P-S3F1-26	190	Unlocking lignite's value through structure-guided alkaline depolymerization and electro-oxidative upgrading	Z. Wang
P-S3F1-27	18	Study on the modification of coal gasification fine slag for corn-stalk pyrolysis catalysts	Q. Guo
P-S3F1-28	28	Catalytic reforming of lignite pyrolysis volatiles over metal oxide and zeolite tandem catalysts for light aromatics production	J. Cao
P-S3F1-29	335	Thermal and catalytic co-pyrolysis of olive stone and LDPE in a spouted bed reactor for sustainable drop-in hydrocarbon	R. Migliaccio
P-S3F1-30	137	Hydrogen transfer and reaction mechanism during gradient temperature pyrolysis of coal under steam atmosphere	H. Hu

GOLD SPONSOR

SILVER SPONSOR

BRONZE SPONSOR

ACADEMIC SUPPORTING JOURNAL