

Program

PYROLIQ III – 2025: Pyrolysis and Liquefaction of Biomass and Wastes

September 14 - 19, 2025

Grand Hotel San Michele

Cetraro (Calabria), Italy

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Pilar Ruiz Ramiro, University of Twente, Netherland

Paola Giudicianni, Institute of Science and Technology for Sustainable Energy and Mobility - CNR - Italy

Manuel Garcia-Perez, Washington State University, USA



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Previous conferences in this series

Pyroliq 2019: Pyrolysis and Liquefaction of Biomass and Wastes

June 16-20, 2019

Cork, Ireland

Conference Chairs:

Franco Berruti, ICFAR, Western University, Canada

Anthony Dufour, CNRS Nancy, France

Wolter Prins, University of Ghent, Belgium

Manuel Garcia-Pérez, Washington State University, USA

Pyroliq II - 2023: Pyrolysis and Liquefaction of Biomass and Wastes

May 7-12, 2023

Schloss Hernstein (near Vienna), Austria

Conference Chairs:

Franco Berruti, ICFAR, Western University, Canada

Anthony Dufour, CNRS Nancy, France

Wolter Prins, University of Ghent, Belgium

Manuel Garcia-Pérez, Washington State University, USA

Sunday, September 14, 2025

16:30 – 18:30	Conference check in (Great Room)
18:30 – 19:30	Welcome reception (Patio off Great Room)
19:30 – 21:00	Dinner

Locations and Notes

- *Technical and poster sessions will be in the Conference Center.*
- *Coffee breaks will be on the patio outside of the Great Room.*
- *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*
- *Turn your mobile telephones to vibrate or off during technical sessions.*
- *After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.*
- *Audiotaping, videotaping and photography of presentations are prohibited.*

Monday, September 15, 2025

7:30am - 8:30am	Breakfast (Breakfast room and patio overlooking the sea)
8:30am – 8:45am	Opening Remarks
8:45am – 9:15am	Keynote: What are the chances for pyrolysis of biomass? Sascha Kersten, University of Twente, Netherlands
9:15am – 9:45am	Keynote: Bridging both practical and theoretical aspects of global chemical kinetics determination Marion Carrier, IMT Mines Albi, France
9:45am – 10:00am	Synthetic lignin oligomers: Analytical techniques, challenges, and opportunities Myriam Rojas, Karlsruhe Institute of Technology, Germany
10:00am – 10:15am	Pyrolysis of cellulose in a fixed bed reactor: Effect of pressure and sweep gas velocity Jana Alkousa, LRGP, Université de Lorraine, Nancy, France
10:15am – 11:00am	Coffee Break
11:00am – 11:15am	The micro-fluidized bed: A versatile device to study the pyrolysis of biomass on a wide range of conditions Anthony Dufour, CNRS Nancy, France
11:15am – 11:30am	Reaction and mass transfer interaction during pyrolysis of polyethylene M. Pilar Ruiz, University of Twente, Netherlands
11:30am – 11:45am	Bioactive compounds' fate in coffee silver skin pyrolysis Paola Giudicianni, National Research Council, Italy
11:45am – 12:00pm	Microwave-assisted pyrolysis of real LDPE waste streams: Influence of thermal gradients in oil properties & gaps and opportunities for technology upscaling Monique Bernardes Figueirêdo, CIRCE Technology Center, Spain
12:00pm – 12:15pm	Pyrolysis of glass reinforced plastic composites and investigation of fiber recovery Cheryl Salameh, Université de Reims Champagne Ardenne, France
12:15 pm – 12:30pm	Mild Upgrading of pyrolysis oils from post-consumer waste with low-cost materials - Towards renewable maritime fuels Moritz Boehme, DTU, Topsoe, Denmark
12:30pm – 2:00pm	Lunch
2:00pm – 3:30pm	Networking / Free time
3:30pm – 4:00pm	Coffee Break
4:00pm – 4:15pm	Hydrothermal liquefaction combined with deep eutectic solvent extraction for olive mill wastewater valorization Boutaina Illoussamen, University of Lorraine LRGP, France

Monday, September 15, 2025 (continued)

- 4:15pm – 4:30pm **Impact of hydrothermal deactivation and metal poisoning on ZSM-5 catalyst performance in biomass pyrolysis**
Stelios Stefanidis, Centre for Research and Technology Hellas, Greece
- 4:30pm – 4:45pm **Pyrolysis and combustion of multilayer packaging waste: Kinetic analysis and compensation law**
Abdul Rehman Khurram, IMT Mines Albi, France
- 4:45pm – 5:00pm **Effects of inorganics during hydrothermal liquefaction of OFMSW**
Edoardo Tito, Politecnico di Torino, Italy
- 5:00pm – 5:15pm **Steam cracking of different plastics in a fountain confined conical spouted bed reactor**
Gartzen Lopez, University of the Basque Country UPV/EHU, Spain
- 5:15pm – 5:30pm Stretch break
- 5:30pm – 5:45pm **Valorisation of multi-component plastic waste via hydrothermal liquefaction: A comprehensive analysis of interactions between PET and PA6 depolymerization**
Guido Ceragioli, Politecnico di Torino, Italy
- 5:45pm – 6:00pm **Towards circular polyurethane via catalytic pyrolysis**
Tim Engels, Rijksuniversiteit Groningen, Netherlands
- 6:00 pm – 6:15pm **Predictive thermodynamic models for fast pyrolysis bio-oil-related molecules: A systematic approach**
Amir Jalalinejad, Karlsruhe Institute of Technology (KIT), Germany
- 6:15 pm – 6:30pm **Hydrotreatment of municipal waste pyrolysis oils for marine fuel**
David McCarthy, Topsoe A/S, Denmark
- 6:30 pm – 7:00pm Short (3 minute) Poster Previews

List of Posters

- 1. Pyrolysis of multilayer films - Recycling from laboratory to pilot**
Tatu Köli, VTT, Finland
- 2. Fractionation of lignocellulosic bio-oil and its application in catalytic hydrodeoxygenation for the production of sustainable aviation fuels**
Arianna Sabina, Universidad de Zaragoza, Spain
- 3. Optimisation of plastics-biomass co-pyrolysis using a two-stage process with reflux, with a view to obtaining better quality oils**
Syrine Jouini, LRGP, CNRS, University of Lorraine, ENSIC, Nancy, France
- 4. How to determine olefins in pyrolysis/HTL oils from waste plastics and tires using GC×GC-FID?**
Miloš Auersvald, UCT Prague, Czech Republic

Monday, September 15, 2025 (continued)

5. **Chemical composition of pyrolytic liquid from sugarcane vinasse biomass previously co-processed with sewage sludge for low-carbon hydrogen production**
Samia Maciel, SergipeTec, Brazil
6. **Elucidating the role of sulfur in NiMo catalyst for the hydrodeoxygenation of guaiacol: A density functional theory study**
Raiza Manrique, Manuel Garcia-Perez, Washington State University, USA
7. **Hydrothermal liquefaction of municipal and tannery sludges: Experimental investigation and lumped kinetic modeling,**
Giusy Marotta, University Federico II Naples, Italy

7:30pm – 9:00pm Dinner

9:00pm – 10:30pm **Poster Session** / Social networking

Tuesday, September 16, 2025

7:30am – 8:30am	Breakfast
8:30am – 9:00am	Keynote: Economic viability of fast pyrolysis processes considering value from biochar co-production with pyrolysis oils Paul Stuart, Polytechnique Montreal, Canada
9:00am – 9:30am	Keynote: Challenges in lignin-pyrolysis and its analysis Frederick Ronsse, University of Gent, Belgium
9:30am – 9:45am	Preliminary investigation of the production of 1,6-anhydro-β-D-glucofuranose by wood pyrolysis Kristine Meile, Latvian State Institute of Wood Chemistry, Latvia
9:45am – 10:00am	Catalytic hydroconversion of lignin into sustainable aviation fuel Camille Pellegrin, CNRS, France
10:00am – 11:00am	Coffee Break
11:00am – 11:15am	Green synthesis of porous carbon from cyanobacteria for value-added products Mingyu Hu, University of Edinburgh, UK
11:15am – 11:30am	Thermochemical valorization of manure digestate via hydrothermal liquefaction and thermal treatment of hydrochar to obtain soil improver Francesca Di Lauro, Istituto di Scienze e Tecnologie per l'Energia e la Mobilità Sostenibili (STEMS-CNR), Italy
11:30am – 11:45am	Catalytic solutions for the chemical recycling of waste plastics via pyrolysis Peter Deuss, University of Groningen, Netherlands
11:45am – 12:00pm	Experimental microwave-assisted EoL wind turbine blades recycling: Role of chemical recycling route on oils quality and process techno-economics Ignacio Julian, CIRCE-Technology Center, Spain
12:00pm – 12:15pm	AD, HTL or both? A techno-economic comparison of biomass valorisation Christian Klüpfel, Deutsches Biomasseforschungszentrum, Germany
12:15pm – 12:30pm	Conversion of spent yerba mate into bio-products by intermediate pyrolysis Peter Deus, Martin Palozzolo, University of Groningen, Netherlands
12:30 pm – 2:00pm	Lunch
2:00pm – 6:00pm	Conference Excursion to Diamante and Belvedere <i>Diamante, a small coastal town not far from Cetraro, is best known for the murals located throughout town. It is also known as the capital of the Calabrian chili pepper.</i>
6:00pm – 7:30pm	Poster Session / Social networking
7:30pm – 9:00pm	Dinner

Wednesday, September 17, 2025

7:30am – 8:30am	Breakfast
8:30am – 9:00am	Keynote: Light organic oil from catalytic fast pyrolysis of biomass: A valuable fraction for chemical industries Tooran Khazraie, Valmet Technologies, Finland
9:00am – 9:15am	Treated red mud as catalyst and iron-based hydrogen source for the hydrothermal liquefaction of pinewood Martina Damizia, Sapienza University of Rome, Italy
9:15am – 9:30am	Smart pyrolysis of polyurethane rigid foam from g to 10 kg/h scale Stefanie Eiden, Covestro Deutschland AG, Germany
9:30am – 9:45am	Industrial-scale continuous chemical recycling of mixed plastic waste into cracker-ready oil via thin-film pyrolysis Shibashish Jaydev, BUSS ChemTech AG, Switzerland
9:45am – 10:00am	Biomass pyrolysis under reactive nitrogen atmosphere to N-heterocyclic aromatics Stef Ghysels, Ghent University, Belgium
10:00am – 10:30am	Coffee Break
10:30am – 10:45am	Pyrolysis of multilayer films - Recycling from laboratory to pilot Joona Lahtinen, VTT, Finland
10:45am – 11:00am	Processing of second generation unconventional oils in petroleum refineries Manuel Garcia-Perez, Washington State University, USA
11:00am – 11:15am	Continuous biomass liquefaction: A step towards commercializing green fuels Swanand Sadashiv Bhatwadekar, Aalborg University, Denmark
11:15am – 11:30am	Hydrothermal liquefaction of micro algae in continuous and batch reactors Anne Roubaud, CEA Grenoble LITEN, Université Grenoble Alpes, France
11:30am – 11:45am	Optimizing biocrude production from straw and manure through methanol co-solvent hydrothermal liquefaction Patrick Biller, Aarhus University, Denmark
11:45am – 12:00pm	Circular solution for complex and hazardous biomass waste Jamie Bakos, Titan Clean Energy Projects Corp., Canada
12:00pm – 12:15pm	Products evolution and HTL conversion mechanism for algal biomass Anne Roubaud, CEA-LITEN, France
12:15pm – 12:30pm	Towards circularity of flame-retarded expanded polystyrene via pyrolysis: Recovering styrene and addressing bromine Razan Alsharqawi, Karlsruhe Institute of Technology (KIT), Germany
12:30pm – 2:00pm	Lunch

Wednesday, September 17, 2025 (continued)

2:00pm – 3:30pm	Networking / Free time
3:30pm – 4:00pm	Coffee Break
4:00pm – 4:15pm	Hydrothermal liquefaction of Dutch digestate: A path to renewable fuels Neeha Brojolall, TU Delft, Netherlands
4:15pm – 4:30pm	Recycling cellulose acetate waste from eyewear production: Pyrolysis vs. hydrothermal liquefaction Benedetta de Caprariis, Sapienza University of Rome, Italy
4:30pm – 4:45pm	Cross-linked polyethylene to naphtha and diesel range hydrocarbons via catalytic pyrolysis Hoda Shafaghat, RISE Research Institutes of Sweden AB, Sweden
4:45pm – 5:00pm	Selective synthesis of carbon nanotubes through microwave-assisted catalytic pyrolysis of polyethylene: A kinetic study Jamal Chaouki, Polytechnique Montreal, Canada
5:00pm – 5:15pm	A comparative study of in-situ and ex-situ catalytic upgrading of plastic-derived pyrolysis oil to maximize naphtha production Petros Soldatos, Aristotle University of Thessaloniki, Greece
5:15pm – 5:30pm	Adapting chemical reaction kinetics of biomass fast pyrolysis to fluidized-bed reactor model Zoé Mercier, IMT Albi – Tapsodee, France
5:30pm – 5:45pm	Short (3 minute) Poster Previews

List of Posters

- 1. Valorization strategies for polyolefin-rich pyrolysis oils**
Miloš Auersvald, UCT Prague, Czech Republic
- 2. Pyrolysis and in-line catalytic cracking of a polyolefin mixture using a commercial HZSM-5 catalyst**
Biagio Ciccone, Politecnico di Torino, Italy
- 3. Numerical modeling of solar-assisted pyrolysis reactor for sustainable aviation fuel production**
Amir Hossein Bashiri, Aalto University, Finland
- 4. Evaluation of performance of Fumecatch® system for recovery of condensate from slow pyrolysis of wood waste**
Cristian Torri, Università di Bologna, Italy
- 5. Investigation of non-catalytic dry reforming of several bio-oil components**
David Amato, STEMS-CNR, Italy
- 6. Displacement of PFAS from municipal biosolids to bio-oils by pyrolysis treatment**
Franco Berruti, University of Western Ontario, Canada

5:45pm – 7:30pm	Poster Session / Social Networking
7:30pm – 10:00pm	Conference Banquet

Thursday, September 18, 2025

7:30am – 8:30am	Breakfast
8:30am – 9:00am	Keynote: Development of an integrated hydrothermal liquefaction and wet oxidation process Patrick Biller, Aarhus University, Denmark
9:00am – 9:15am	Optimization of hydrothermal liquefaction for energy valorization of digestate from OFMSW Edoardo Tito, Politecnico di Torino, Italy
9:15am – 9:30am	The challenge of upgrading renewable HTL Oils for fuels production Christophe Geantet, CNRS, France
9:30am – 9:45am	Upgrading wood and waste fast pyrolysis oils by esterification Begüm Baser, Technical University of Denmark
9:45am – 10:00am	The power of silylation: Toward a molecular description of liquids from pyrolysis and hydrothermal treatments Cristian Torri, Università di Bologna, Italy
10:00am – 10:30am	Coffee Break
10:30am – 10:45am	Input of ultra-high-resolution mass spectrometry for bio-oil characterization and upgrading monitoring Jasmine Hertzog, Université de Lorraine, France
10:45am – 11:00am	Biorefinery strategies for the production and separation of value-added chemicals from biomass pyrolysis liquids Mireia Mora Sanjuan, Forest Science and Technology Centre of Catalonia, Spain
11:00am – 11:15am	Catalytic hydrotreatment as a driver for the circularity of plastics Farah Siddiq, VTT Technical Research Center of Finland, Finland
11:15am – 11:30am	Hydrothermal liquefaction of mixed plastic waste: Conversion and resource recovery Serena Monaco, Sapienza University of Rome, Italy
11:30am – 11:45am	Lignin conversion to OH-enriched oligomers Dorothee Laurenti, CNRS, France
11:45am – 12:00pm	Applications of benchtop nuclear magnetic resonance spectroscopy as a monitoring tool for liquid products Yann Le Brech, CNRS, France
12:00pm – 12:15pm	Characterization of nitrogen compound in tire pyrolysis oils after hydrotreating Warumporn Pejpichestakul, IFP Energies Nouvelles, France
12:30 pm – 2:00pm	Lunch
2:00pm – 3:30pm	Networking / Free time
3:30pm – 4:00pm	Coffee Break

Thursday, September 18, 2025 (continued)

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| 4:00pm – 4:15pm | Hydrocracking of pyrolysis oil from waste polyolefins: increasing the quality of steam cracking feedstock
Miloš Auersvald, UCT Prague, Czech Republic |
| 4:15pm – 4:30pm | Pyrolysis of coconut husk: Temperature influence unveiled by a comprehensive characterization of bio-oil using Appi (–)-FT-Orbitrap MS
Alberto Wisniewski, Federal University of Sergipe, Brazil |
| 4:45pm – 5:00pm | Effect of phase separation on the aging behavior of slow pyrolysis bio-oil
Davide Amato, STEMS-CNR, Italy |
| 5:00pm – 5:15pm | Speciation of heteroatom-containing pyrolysis oils by multidetector GCxGC
Francesco Scorcioni, University of Bologna, Italy |
| 7:30pm – 9:00pm | Dinner |
| 9:00pm – 11:00pm | Poster Session / Results of Poster Competition/ Social Hour |

Friday, September 19, 2025

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|-------------------|------------|
| 7:30 am – 9:30 am | Breakfast |
| | Departures |