

Program

CHEMREC II: 2nd International Conference on Thermochemical Recycling of Plastics

September 13 - 17, 2026

Porto, Portugal

Conference Co-Chairs

M. Pilar Ruiz, Maastricht University, The Netherlands
Sascha Kersten, University of Twente, The Netherlands
Erik Heeres, University of Groningen, The Netherlands



Engineering Conferences International

369 Lexington Ave., Suite 389 - New York, NY 10017, USA

Phone: 1 - 212 - 514 - 6760

www.engconfintl.org – info@engconfintl.org

Hilton Porto-Gaia Hotel

**R. de Serpa Pinto 124
Vila Nova de Gaia, 4400-307
Portugal
Tel: +351 22 244 9200**

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

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Previous conferences in this series:

CHEMREC I – 2024: 1st International Conference on Thermochemical Recycling of Plastics

April 28 – May 2, 2024

Malaga, Spain

Conference Chairs:

Sascha Kersten, University of Twente, The Netherlands

M. Pilar Ruiz, Maastricht University, The Netherlands

Erik Heeres, University of Groningen, The Netherlands

Sunday, September 13, 2026

17:00 – 18:00	Conference check-in (Ground Floor Lobby, near Guest Relations desk)
18:00 – 19:00	Welcome reception (Restaurant Lobby, Ground Floor)
19:00 – 21:00	Dinner (Hotel Restaurant)

Locations and Notes

- *Technical sessions and poster sessions will be in Ballroom I.*
- *Meals will be in the hotel restaurant.*
- *The ECI on site office is the AR 1 room.*
- *Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless the author and ECI have granted prior permission.*
- *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*
- *Speakers – Please leave at least 3 minutes for questions and discussion.*
- *Please do not smoke at any conference functions.*
- *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.*
- *Emergency Contact Information: Because of privacy concerns, ECI does not collect or maintain emergency contact information for conference participants. If you would like to have this information available in case of emergency, please use the reverse side of your name badge.*

Monday, September 14, 2026

07:30 – 08:30 Breakfast

08:30 – 08:45 Welcome and Conference Opening

08:45 – 09:25 **PLENARY: Chemical recycling of plastics: From constraint to opportunity**
Ahmad Al Farra, TotalEnergies, France

09:25 – 10:05 **PLENARY: The chemistry and engineering of plastic waste upgrading**
Matias Alvear Cabezon, John Hopkins University, USA

10:05 – 10:45 **PLENARY: From household waste to pyrolysis feedstock: Contaminants and pretreatment**
Marcel van Eijk, NTCP and Maastricht University, The Netherlands

10:45 – 11:30 Coffee Break

TOPIC: CATALYTIC PYROLYSIS

11:30 – 11:55 **Catalytic pyrolysis of polyurethane rigid foam: From laboratory to pilot scale development**
Leonie Golka, Covestro Deutschland AG, Germany

11:55 – 12:20 **Rotary kiln pyrolyzer equipped with fixed-bed catalytic reactor: From design to continuous operation for recycling plastic waste**
Hoda Shafaghat, RISE Research Institutes of Sweden AB, Sweden

12:20 – 12:45 **Catalytic pyrolysis of mixed plastic waste in a two-stage fluidized bed reactor: Comparison of different catalysts**
Piotr Trochimczyk, Warsaw University of Technology, Martex, Poland

12:45 – 14:15 Lunch

TOPIC: GLYCOLYSIS / HYDROLYSIS / HYDROTHERMAL

14:15 – 14:40 **Glycolysis toward elastane recycling**
Antoine Vardon, Aalborg University, Denmark

14:40 – 15:05 **Development of a continuous lab-scale reactor for solvent-assisted glycolysis of PET**
David Palacios Garcia, Maastricht University, The Netherlands

15:05 – 15:30 **Techno-economic evaluation of hydrothermal liquefaction for chemical recycling of synthetic textile waste**
Guido Ceragioli, Politecnico Di Torino, Italy

15:30 – 15:55 **Water efficient chemical recycling of poly(ethylene) terephthalate (PET) rich waste via neutral hydrolysis**
Aiman Shabbir, Aalborg University, Denmark

Monday, September 14, 2026 (continued)

TOPIC: CHARACTERIZATION

15:55 – 16:20 **Identification and tracing of contaminants in plastic waste pyrolysis oils using comprehensive 2D GC and ultrahigh resolution FT-ICR MS**
Gilles Dossche, Laboratory for Chemical Technology, Ghent University, Belgium

16:20 – 17:50 **Poster Session** and Reception with drinks and hors d'oeuvres

Poster only presentations

1. **Role of nickel loading on zsm-5 in the catalytic cracking of hdpe pyrolysis volatiles**
Gartzen Lopez, University of the Basque Country, Spain
2. **Waste-to-aromatics: Benzene & Toluene recovery from textiles**
Carlos Mourao Vilela, TNO, The Netherlands

Dinner on your own

Tuesday, September 15, 2026

07:30 – 08:30	Breakfast
08:30 – 09:10	PLENARY: Chemical recycling at scale – Status and opportunities Helge Jaensch, ExxonMobil Chemical Europe, Inc., Belgium
09:10 – 09:50	PLENARY: Downstream processing of sustainable aromatics towards (bio)plastics Andre Heeres, Hanze, The Netherlands
09:50 – 10:15	Commercializing chemical recycling: Enablers and barriers Muhammad Saad Qureshi, Lamor, Finland
	<u>TOPIC: PYROLYSIS</u>
10:15 – 10:40	Lessons learned on pyrolysis of plastics Sascha Kersten, University of Twente, The Netherlands
10:40 – 11:10	Coffee Break
11:10 – 11:35	Understanding and managing oil quality from variable feedstocks in pilot scale chemical recycling Geoff Smith, Itero, UK
11:35 – 12:00	Pyrolysis of PVC-contaminated plastic waste Giulia Boccaccini, University of Groningen, The Netherlands
12:00 – 12:25	Promoting circularity through scalable plastic pyrolysis technology Tooran Khazraie, Valmet Technologies, Finland
12:25 – 12:50	Pyrolysis of lead-acid battery plastic waste for hydrogen production and halogen capture Maddalena Laghezza, ICFAR/Western University, Canada
12:50 – 13:15	Enhancing chemical recycling efficiency by integrating minor waste streams: A case study on tennis ball pyrolysis Manuel Nather, Karlsruhe Institute of Technology, Germany
13:15 – 14:45	Lunch
14:45	Meet in hotel lobby for excursion
15:00	Depart for conference excursion
15:00 – 17:30	Excursion – Brief guided walking tour of Porto followed by guided tour of the Fonseca Port Wine Cellar with port tasting Dinner on your own

Wednesday, September 16, 2026

07:30 – 08:30 Breakfast

08:30 – 09:10 **PLENARY: Thermal versus catalytic pyrolysis: The good, the bad and the ugly**
Kevin van Geem, Ghent University, Belgium

09:10 – 09:50 **PLENARY: Scaling chemical recycling: From 3 to 21 to 70 kta**
Rik Goldsmits, BlueAlp, The Netherlands

TOPIC: GASIFICATION / THERMAL CRACKING

09:50 – 10:15 **Understanding polymer effects in thermal cracking of mixed plastic waste**
Surika Van Wyk, TNO, The Netherlands

10:15 – 10:40 **A catalytic tar cracker for the hot syngas clean-up section of a large pilot scale gasifier**
Umberto Arena, University of Campania "Luigi Vanvitelli", Italy

10:40 – 11:10 Coffee Break

11:10 – 11:35 **Evaluation of operating conditions on the pyrolysis and in-line steam dry reforming of plastic waste for syngas production**
Gartzen Lopez, University of the Basque Country, Spain

TOPIC: CONTAMINANTS

11:35 – 12:00 **A hybrid modeling framework for plastic pyrolysis: Tracing the fate of contaminants**
Kevin van Geem, University of Ghent, Belgium

12:00 – 12:25 **Preparation and decontamination of household plastic packaging waste as benchmark feedstock for pyrolysis**
Homer Genuino, NTCP, The Netherlands

12:25 – 12:50 **The effects of fillers, functional additives, and pigments on mixed plastic pyrolysis**
Jesper Thygesen, Aalborg University, Denmark

12:50 – 14:20 Lunch

TOPIC: CATALYTIC CONVERSION / UPGRADING

14:20 – 14:45 **Self-cleaning catalysts to enable film recycling**
Steven Crossley, University of Oklahoma, USA

14:45 – 15:10 **Decreasing reaction times for hydrogenolysis of polyolefins by overcoming mass transfer limitations**
Louis van der Ham, University of Twente, The Netherlands

15:10 – 15:35 **Steam gasification of plastics: A CO₂ capture system from polymer to monomer**
Leandro Leucci, Polytechnic of Turin, Italy

15:35 – 16:00 **Improved H-ZSM-5 catalysts for aromatics formation from polypropylene**
Erik Heeres, University of Groningen, The Netherlands Coffee Break

16:00 – 16:30 Coffee Break

Wednesday, September 16, 2026 (continued)

16:30 – 16:55	Upgrading waste plastic pyrolysis oil via sequential adsorption and hydrotreatment Farah Siddiq, VTT Technical Research Centre of Finland, Finland
16:55 – 17:20	Uncovering and addressing internal transport limitations in polyolefin hydrogenolysis Preethi Venugopal, University of Twente, The Netherlands
17:20 – 17:45	Decoupling halogen capture and hydrogen production via carbonate-assisted double-stage pyrolysis of lead-acid battery plastic waste Maddalena Laghezza, ICFAR/Western University, Canada
17:45 – 19:00	Break
19:00 – 19:30	Reception with entertainment
19:30 - 21:30	Gala dinner

Thursday, September 17, 2026

07:30 – 08:30	Breakfast
08:30 – 09:10	PLENARY: The mass balance methodology: Pyrolysis can make a bright future for plastics recycling Ronald Korstanje, ISPT, The Netherlands
09:10 – 10:10	<u>Roundtable</u>: Current trends and challenges for industrialization of chemical recycling technologies
10:10 – 10:40	Coffee Break
10:40 – 11:05	Aramazing – Chemical recycling of aromatic polyamides: Fast kinetic studies in autoclave reactors Niels Hakkert, University of Twente, The Netherlands
11:05 – 11:30	Optimization of plastic pyrolysis vapor aromatization using model hydrocarbons Arne Hommes, University of Groningen, Netherlands
11:30 – 11:55	Life cycle GHG emissions of plastic pyrolysis: The role of reactor modelling and end-of-life choices Akram Al-Absi, University of Calgary, Canada
11:55 – 12:20	MMAtwo: successful development of a commercialized continuous PMMA depolymerization process Bert Heesink, Demcon Suster, The Netherlands
12:20 – 12:30	Closing remarks
12:30	Boxed lunches available
	Departures

Upcoming ECI Conferences

2026

CHEMREC II – THERMOCHEMICAL RECYCLING OF PLASTICS

September 13 – 17, 2026

M. Pilar Ruiz, Maastricht University; S/ Kersten, University of Twente; E. Heeres, University of Groningen
Porto, Portugal

NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT X

October 4 – 9, 2026

Verena Maier-Kiener, Montan Universität Leoben, Austria
Rhodes, Greece

SINGLE USE TECHNOLOGIES VIII

October 12 – 15, 2026

N. Montenay, Sartorius; G. Gillespie, North Carolina State University; P. Smith, GSK
Montreal, P.Q., Canada

BIOLOGICAL, PHARMACEUTICAL AND COSMETIC COMPLEX FLUIDS IV

October 25 – 30, 2026

S. Amin, University of Miami
Calabria, Italy

2027

MICROBIAL ENGINEERING IV

February 14 – 18, 2027

E. Keshavarz-Moore, University College London; T. Sauer, Sanofi; D. Dikicioglu, University College London
Malta

ENG2WINE II: INDUSTRY CHALLENGES AND INNOVATIVE ENGINEERING SOLUTIONS

March 21-25, 2027

D.E. Block, University of California Davis; D. Durner, University of Applied Sciences Kaiserslautern;
D. K. Kundiyana, E. & J. Gallo Winery
Alba, Italy

CELL CULTURE ENGINEERING XX

May 1-7, 2027

Inn Yuk, Genentech/Roche; M. Antoniewicz, University of Michigan; N. Abu-Absi, Abbvie
Quebec City, Canada

ULTRA-HIGH TEMPERATURE CERAMICS: MATERIALS FOR EXTREME ENVIRONMENT APPLICATIONS VII

May 16 – 20, 2027

C. Weinberger, Colorado State University
Estes Park, Colorado

BIO-CHAR V

May 23 – 27, 2027

J. Lehmann, Cornell University; M.R. Acocella, University of Salerno; O. Masek, University of Edinburgh;
N. Klinghoffer, Western University
Giardini Naxos, Sicily, Italy

Upcoming ECI Conferences

INNOVATIVE MATERIALS & METHODS FOR ADDITIVE MANUFACTURING IV (IM2AM)

June 6-11, 2027

B. Compton; University of Tennessee, Knoxville; E. Eastwood, KCNSC; N. Gupta, New York University; D. Schmidt and J. Gonzalez-Gutierrez, Luxembourg Institute of Technology; P. Cortes, University of Texas at El Paso
Espoo, Finland

ADVANCES IN OPTICS FOR BIOTECHNOLOGY, MEDICINE AND SURGERY IX

June 13-17, 2027

T. Durduran, IFCO; B. Choi, University of California Irvine; J. Ramella-Roman, Florida International University
Castelldefels, Spain

MICRO- AND NANOPLASTICS IN WATER: CHARACTERIZATION, CURE AND PREVENTION II

July 4 – 8, 2027

D. Hunkeler, Aqua+Tech; K. Bell, Hazen & Sawyer
Davos, Switzerland

2027 INTERNATIONAL CONFERENCE ON SEMICONDUCTOR TECHNOLOGY FOR ULTRA LARGE SCALE INTEGRATED CIRCUITS AND THIN FILM TRANSISTORS (ULSIC VS TFT 10)

July 25-29, 2027

Y. Kuo, Texas A&M University
Tomar, Portugal

MIXED CONDUCTING AND NONSTOICHIOMETRIC COMPOUNDS IX

August 8 – 13, 2027

M. Elm, University of Giessen
Hernstein, Austria

PYROLIQ IV – 2027: PYROLYSIS AND LIQUEFACTION OF BIOMASS AND WASTES

September 5 – 9, 2027

P. Biller, Aarhus University; B. DeCaprariis, Spaienza University of Rome; M. Garcia-Perez, Washington State University
Irsee, Germany

INTEGRATED CONTINUOUS BIOMANUFACTURING VIII

September 12-16, 2027

M. Brower, Merck; E. Gefroh, JustBio-Evotec; T. Villiger, University of Applied Sciences and Arts Northwestern Switzerland
Whistler, BC, Canada

INTERNATIONAL HYDROGEN CONFERENCE: UNDERSTANDING HYDROGEN-MATERIALS INTERACTIONS

October 3 – 7, 2027

M. Martin, NIST; J. Burns, University of Virginia
Whitefish, MT

ENZYME ENGINEERING XXIX

October 17-22, 2027

J. Lewis, Indiana University; E. Master, University of Toronto; M. Kerr, Eli Lilly
Montreal, Canada

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

ECI Mission

To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

ECI Purposes

The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

ECI Encouragement of New Conference Topics

The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

ECI Works With You

ECI works with conference chairs in two complementary ways. First, an experienced member of the Conferences Committee acts as your technical liaison from the proposal stage through the conference itself. He or she is always available to consult with you on any conference issue.

Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

Your primary responsibilities will be recruiting the organizing committee, developing the technical program and securing third-party funding necessary to support the travel of key speakers.

The responsibilities of ECI's "full service" staff include -- but are not limited to -- the following:

- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org