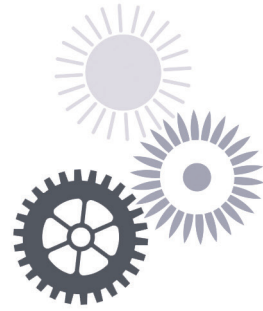


RRB 2026
RENEWABLE RESOURCES & BIOREFINERIES



22nd International Conference on
**Renewable Resources
and Biorefineries**

Innovating today for a sustainable tomorrow

1 – 3 June 2026

Leuven, Belgium



Monday 1 June 2026

| | | |
|---------------|---|--------------------------------------|
| 09.00 – 10.00 | Registration | Foyer of Auditorium Max Weber |
| 10.00 – 10.30 | Official Opening of RRB 2026 Chairs: Pedro Fardim, KU Leuven, BE and Chris Stevens, Ghent University, BE | Auditorium Max Weber |
| 10.00 | Welcome to Leuven Pedro Fardim, KU Leuven, BE Mayor of Leuven, Mohamed Ridouani and Chris Stevens, Ghent University, BE | |
| | Opening Plenary Session Chair: Pedro Fardim, KU Leuven, BE | Auditorium Max Weber |
| 10.30 | Keynote Lecture 1 Connecting fundamental discoveries from microbial carbohydrate metabolism to biotechnological platforms for advanced biorefineries Mário T. Murakami, Brazilian Biorenewables National Laboratory (LNBR) and National Center for Research in Energy and Materials (CNPEM) | |
| 11.15 | Keynote Lecture 2 Bioeconomic Futures: Enabling Tomorrow Today Adrian Leip, EU Commission's Head of the Bioeconomy Sector in DG RTD & Thomas Alexander, EU's Bioeconomy Youth Ambassador | |
| 12.00 – 13.00 | Lunch | Alma 2 |

Monday, 1 June 2026

13.00 - 14.30 Parallel sessions

| Session 1A – Auditorium Max Weber | Session 1B – Auditorium Jean Monnet |
|--|---|
| <p>Biobased chemicals and biodegradable materials I Chair: Chris Stevens, Ghent University, BE</p> <p>13.00 – 13.30 Invited talk: Navigating the complexity of cellulose and lignin Antje Potthast, BOKU, AT</p> <p>13.30 – 13.50 Itaconic acid functionalization for development of biobased surfactants Jevgenij Lazko, Materia Nova Research Center & University of Mons, BE</p> <p>13.50 – 14.10 Sustainable cellulose-based hydrogels with <i>in situ</i> synthesized metal nanoparticles for antimicrobial wound dressings Aleksandra Mikhailidi, BAU International University Batumi, GE</p> <p>14.10 – 14.30 Development of a microbial sensing starch-based material Maria Correia, University of Aveiro, PT</p> | <p>Biorefining I Chair: Ana Xavier, University of Aveiro, PT</p> <p>13.00 – 13.30 Thermal and structural analysis of new lignin-based resins synthesis Raphaëla Süß, Wood K plus – Competence Center for Wood Composites & Wood Chemistry, Kompetenzzentrum Holz GmbH, AT</p> <p>13.30 – 13.50 Supercritical carbon dioxide extraction and fractionation of glycerides and fatty acid methyl esters Hannes Sels, Karel de Grote University of Applied Sciences & Arts, BE</p> <p>13.50 – 14.10 Biodesign4Insulation: Environmental assessment of used cooking oil valorisation into bio-polyols for polyurethane industry Anda Fridrihsone, Latvian State Institute of Wood Chemistry, LV</p> <p>14.10 – 14.30 Establishing structure-acidity-performance relationships in zeolite catalyzed lignin pyrolysis for aromatics production Devanshu Sajwan, Utrecht University, NL</p> |

Monday, 1 June 2026

13.00 - 14.30 Parallel sessions

| Session 1C – Ruth Benedict Room | Session 1D – Aula AV01.12 |
|---|--|
| <p>Biocatalysis & novel fermentation processes I Chair: Benjamin Horemans, KU Leuven, BE</p> <p>13.00 – 13.30 Invited Talk: Mixotrophic microbial consortia in anaerobic fermentation: A biotechnological route to carbon-efficient waste upcycling Sabine Kleinstaub, Helmholtz Centre for Environmental Research, DE</p> <p>13.30 – 13.50 Feeding the future with fungi: Fermentation of algal side streams into sustainable mycoproteins Kasra Khatami, Chalmers University of Technology, SE</p> <p>13.50 – 14.10 Upcycling a methanol rich side stream from pulp and paper industry to bio-based acetic acid with <i>Acetobacterium woodii</i>: Process optimization, CO₂ fixation, and sustainability assessment Hans Marx, TU Wien, AT</p> <p>14.10 – 14.30 Rational strain engineering and bioprocess optimization for enhanced succinic acid production from organic biowaste Vasiliki Korika, Agricultural University of Athens, GR & University of Liège, BE</p> | <p>Sludge: Handling, processing and valorization I Chair: Lise Appels, KU Leuven, BE</p> <p>13.00 – 13.30 Removal of metals from wastewater sludge treatment via electrochemical conditioning to enable land application Tiago Martins, Nijhuis Water Technology B.V., NL & KU Leuven, BE</p> <p>13.30 – 13.50 Investigating the degradation kinetics of carbamazepine via microwave-assisted hydrothermal carbonisation in wastewater treatment sludge Derya Acar, KU Leuven, BE</p> <p>13.50 – 14.10 Valorisation of oil and fat from dissolved air flotation sludge as renewable feedstock for biobased applications Carolien Vermeiren, Karel de Grote University of Applied Sciences & Arts, BE</p> <p>14.10 – 14.30 Stimulation of Diuron anaerobic biodegradation under long-term cultivation and stressful conditions Luca Bucci, KU Leuven, BE</p> |

14.30 – 15.00 Coffee Break

15.00 – 15.45 Poster Tour 1

Alma 2

Alma 2

| Session 2A – Auditorium Max Weber | Session 2B – Auditorium Jean Monnet |
|--|--|
| <p>Biobased chemicals and biodegradable materials II Chair: Anwar Jardine, University of Cape Town, ZA</p> <p>15.45 – 16.15 Re-thinking heritage packaging: Customizable bio-based composite polyurethane foams combined with 3D printed technology: Two case studies Letizia Verdolotti, National Research Council (IPCBC-CNR), IT</p> <p>16.15 – 16.35 Yeast-based industrial bioprocess for converting lipid waste streams into long-chain dicarboxylic acids Iris Cornet, University of Antwerp, BE</p> <p>16.35 – 16.55 Cellulose-based foams via ionic and eutectic crosslinking strategies Bruno B. Ravanello, AlmaScience CoLab, PT</p> <p>16.55 – 17.15 Muconic acid as a bio-based platform chemical for bio-advantage monomer synthesis Lisa De Vriendt, KU Leuven, BE</p> | <p>Biorefining II Chair: Avtar Matharu, University of York, UK</p> <p>15.45 – 16.15 Valorization of sunflower stalks in a multi-product biorefinery for prebiotics and bioethanol Aleta Duque, CIEMAT, ES</p> <p>16.15 – 16.35 Hydroprocessing of high inorganic-content HTL-biocrudes from manure and straw using solid residue catalysts Ole Reinsdorf, RISE-Research Institutes of Sweden, SE</p> <p>16.35 – 16.55 Advanced membrane separations – A key-enabling technology for current and future biorefineries Kristien De Sitter, VITO, BE</p> <p>16.55 – 17.15 Scale-up of a green waste biorefinery: Transferring pressing and fermentation to the technical scale Wolfgang Laudensack, RPTU Kaiserslautern-Landau, DE</p> |

| Session 2C – Ruth Benedict Room | Session 2D – Aula AV01.12 |
|--|---|
| <p>Wood chemistry and engineering Chair: Wout Boerjan, Ghent University, BE</p> <p>15.45 – 16.15 Invited Talk: Surface matters: Controlling lignin and lignin nanoparticle interfaces for enhanced materials performance Monika Österberg, Aalto University, FI</p> <p>16.15 – 16.35 Lignin carbohydrate complexes – Inferring Structure-property relations with artificial intelligence Matthias Stosiek, Technical University of Munich, DE</p> <p>16.35 – 16.55 Turning waste into adsorbents: VOC removal using waste-wood-derived activated carbons Blige Yilmaz, Karadeniz Technical University, TR</p> <p>16.55 – 17.15 Aromatic platforms from industrial lignins for high value materials production Henrik Grénman, Åbo Akademi, FI</p> | <p>Sludge: Handling, processing and valorization II Chair: Raf Dewil, KU Leuven, BE</p> <p>15.45 – 16.15 Harnessing reducing biomolecular fraction from activated sludge for green nanoparticle synthesis Sasmitha Aulia Zahra, Aarhus University, DK</p> <p>16.15 – 16.35 Methodological sensitivities in sludge LCA: Evaluating AD and THP-AD across multiple LCIA frameworks Paniz Pouryaghoubi, KU Leuven, BE</p> <p>16.35 – 16.55 Multivariate approaches to sewage sludge treatment effects and sludge fertilizers properties for sustainable sludge management in Europe Erika Sinisgalli, Université de Montpellier, FR</p> <p>16.55 – 17.15 Pilot-scale EPS recovery and applications from industrial wastewater sludge Maarten Bartels, Karel de Grote University of Applied Sciences and Arts, BE</p> |

17.30 Guided Walk (see page 160)

19.00 Welcome Reception at the Jubilee Hall of the University Halls (see page 160)

Tuesday, 2 June 2026

09.00 Introduction by Bert Sels, KU Leuven, BE
Plenary Keynote Talk 3: Valorisation of bark: A gate opener to forest residues
 Joseph Samec, Stockholm University, SE

Auditorium Max Weber

09.30 Transition break

09.40 – 10.50 Parallel sessions

| Session 3A – Auditorium Max Weber | Session 3B – Auditorium Jean Monnet |
|--|--|
| <p>Session organised by Flanders' FOOD Chair: Maarten Uytendaele, Flanders' FOOD, BE</p> <p>09.40 – 09.55 Introduction BIOECONOMY GIANTS and BIOLLOOP Maarten Uytendaele, Flanders' FOOD & Heidi Vandenhoute, Ghent University, BE</p> <p>09.55 – 10.10 Circular business models for the bioeconomy Alireza Alerasoul, Wageningen University, BE</p> <p>10.10 – 10.25 How to improve acceptance of biotechnology in society: Focus on the importance of co-creation to build trust Nina Kellner, Flanders' FOOD, BE</p> <p>10.25 – 10.40 Scaling industrial residue valorization: Road to commercial biomanufacturing Stef Denayer, Pilots4U @ Bio Base Europe Pilot Plant, BE</p> <p>10.40 – 10.50 Production of the zero-calorie sugar sweetener allulose with starch-rich side-streams from the food industry in Flanders Johan Thevelein, NovelYeast bv, BE</p> | <p>Bioenergy & thermochemical transformations Chair: Maria Westerholm, Swedish University of Agricultural Sciences, SE</p> <p>09.40 – 10.10 Invited Talk: Harnessing anaerobic fungi to enhance anaerobic digestion of natural and synthetic biopolymers Magdalena Calusinska, LIST, LU</p> <p>10.10 – 10.30 Process optimisation of anaerobic digestion using sludge-biochar for biomethane production from industrial sludge Ngoc D. Le, University of Aveiro, PT</p> <p>10.30 – 10.50 Breaking biomass twice: Improving bio-oil production via two-step hydrothermal liquefaction Christyfani Sindhuwati, University of Leeds, UK & Politeknik Negeri Malang, ID</p> |

09.40 – 10.50 Parallel sessions

| Session 3C – Ruth Benedict Room | Session 3D – Aula AV01.12 |
|--|---|
| <p>Carbon capture and utilization Chair: Dominik Bongartz, KU Leuven, BE</p> <p>09.40 – 10.10 Invited Talk: Designing CCUS systems with life cycle thinking: From CO₂ capture to utilization Niklas von der Assen, RWTH Aachen University, DE</p> <p>10.10 – 10.30 CO₂ capture with temperature swing adsorption method - Laboratory and small-scale pilot experiments in biomass combustion Niko M. Kinnunen, LUT University, FI</p> <p>10.30 – 10.50 Ethanol removal as an enabling step for downstream processing of syngas fermentation broths Hanieh Khalili, Technical University of Munich & Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, DE</p> | <p>Seaweed: cultivation, processing and valorization I Chair: Jana Asselman, Ghent University, BE</p> <p>09.40 – 10.10 Cascading biorefinery strategies for industrial algal side-streams Amparo Jiménez-Quero, Chalmers University of Technology, Gothenburg, SE</p> <p>10.10 – 10.30 Ulva aquaculture as a source of high-value chemicals Vanessa Nardini, University of Galway, IE</p> <p>10.30 – 10.50 Post-harvest stabilization treatment's influence on extractability and extract composition of three seaweed species Roberto Garcia Peran, KU Leuven, BE</p> |

10.50 – 11.20 Coffee Break

Alma 2

| Session 4A – Auditorium Max Weber | Session 4B – Auditorium Jean Monnet |
|--|--|
| <p>Pretreatment and transformation of lignocellulose I Chair: Henrik Grénman, Åbo Akademi, FI</p> <p>11.20 – 11.50 Invited Talk: Lignin to thermostets: Insights on structure-reactivity and structure-property relationships Martin Lawoko, KTH Royal Institute of Technology, SE</p> <p>11.50 – 12.10 Deciphering lignocellulose recalcitrance: From genotypic traits and cultivation to advanced fractionation strategies Holger Klose, Forschungszentrum Jülich, DE</p> <p>12.10 – 12.30 Spatio-chemical mapping of lignocellulosic transformations across wood and agricultural biomass Agneta Richter-Dahlfors, Karolinska Institutet & Karlstad University, SE</p> <p>12.30 – 12.50 Bacterial conversion of alkyl glycosides generated by ethanosolv lignocellulosic fractionation Siti Mariyam, Engineering and Technology Institute of Groningen, NL</p> | <p>Catalysis for renewables and kinetics I Chair: Bert Sels, KU Leuven, BE</p> <p>11.20 – 11.50 Invited Talk: Selective depolymerization of lignin: Insights into the selective cleavage of C–O bonds Yuhe Liao, KU Leuven & Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, Guangzhou, CN</p> <p>11.50 – 12.10 Photocatalytic C–H bond activation over metal sulfides for biomass valorization Xuejiao Wu, Xiamen University, Xiamen, CN & KU Leuven, BE</p> <p>12.10 – 12.30 Hydroprocessing of tree bark-derived sterols towards sustainable aviation fuels Norwin Zuidema, University of Technology, Eindhoven, NL</p> <p>12.30 – 12.50 Hydrothermally stable catalysts for the one-pot conversion of cellulose to ethylene glycol Ana Luiza Slama de Freitas, University of Groningen, NL</p> |

| Session 4C – Ruth Benedict Room | Session 4D – Aula AV01.12 |
|---|--|
| <p>Polysaccharides Chair: Pedro Fardim, KU Leuven, BE</p> <p>11.20 – 11.50 Thieme themed Invited Talk: Polysaccharides – basis for green products Thomas Heinze, Friedrich-Schiller-University, Jena, DE</p> <p>11.50 – 12.10 Mechanochemically assisted oxidation of polysaccharides Anwar Jardine, University of Cape Town, ZA</p> <p>12.10 – 12.30 Designing highly porous materials using lignocellulosic nanostructures for water remediation Rubia Figueredo Gouveia, Brazilian Center for Research in Energy & Materials/Brazilian Nanotechnology National Laboratory, BR</p> <p>12.30 – 12.50 Exopolysaccharides production and characterization from cyanobacteria using plastic waste Rebeca Pires, UCIBIO, I4HB, LNEG, PT</p> | <p>Seaweed: cultivation, processing and valorization II Chair: Raf Dewil, KU Leuven, BE</p> <p>11.20 – 11.50 Fungal screening and scale-up of solid-state fermentation to improve nutritional properties of three seaweed species for aquafeed application Isabel Belo, University of Minho & LABBELS, PT</p> <p>11.50 – 12.10 Closing the seaweed biorefinery value chain: Ultrasound-enzymatic extraction of brown seaweed <i>Fucus vesiculosus</i> and residue valorisation as potential pesticide with antifungal properties Carlotta Minardi, KU Leuven, BE</p> <p>12.10 – 12.30 Predicting Corrosion Rates of Carbon Steel in Real-World Aquatic Environments Using Machine Learning Mihret Girma, Antwerp Maritime Academy, Antwerp, BE</p> <p>12.30 – 12.50 Advancing sustainable seaweed biorefinery: Pilot-scale cascade recovery of bioactive compounds from <i>Alaria esculenta</i> using natural deep eutectic solvents Hussein A. Qulatein, Bantry Marine Research Station Ltd., IE & KU Leuven, BE</p> |

| Session 5A – Auditorium Max Weber | Session 5B – Auditorium Jean Monnet |
|--|--|
| <p>Sustainability and circular economy I Chair: Klaus Kümmerer, Leuphana University of Lüneburg, DE</p> <p>14.45 – 15.15 Invited Talk: Deep eutectic systems: Is it a sustainable alternative for the extraction of natural products? Alexandre Paiva, Universidade NOVA de Lisboa, PT</p> <p>15.15 – 15.35 Bioremediation of elastane within textile waste: A chemo-enzymatic approach Lewis Yandle, Aston University, UK</p> <p>15.35 – 15.55 “Trash” to Taste: Erythritol sweetener production from biodiesel crude glycerol Ana M.R.B. Xavier, University of Aveiro, PT</p> <p>15.55 – 16.15 Waste to worth: Converting textile residues into sustainable biopolymers João Matias, NOVA University Lisbon, Caparica, PT</p> | <p>Biorefining III Chair: Monika Österberg, Aalto University, FI</p> <p>14.45 – 15.15 Development of scalable extraction processes for bioactive compounds from underutilized residues such as grape pomace and mushroom stems Winnie Dejonghe, Flemish Institute for Technological Research (VITO), BE</p> <p>15.15 – 15.35 Pilot-scale production of biofuel from lignocellulosic pyrolysis oil Linda Sandström, RISE Research Institutes of Sweden, SE</p> <p>15.35 – 15.55 Subcritical solvents for insect biorefineries: Chitin isolation from black soldier fly and beyond Ruben Smets, KU Leuven, BE</p> <p>15.55 – 16.15 Selective degradation of impurities in sugar syrups using high-frequency ultrasound Shambel Getachew Wasse, Université de Poitiers, FR</p> |

| Session 5C – Ruth Benedict Room | Session 5D – Aula AV01.12 |
|--|--|
| <p>Unlocking chitin: Exploitation of marine resources for high-value applications Organised by B2BE Facilitator Chair: Jasmine Versyck, B2BE Facilitator, BE</p> <p>14.45 – 15.15 Current and expected trends for the marine chitin/chitosan value chain Johan Robbens, ILVO, BE</p> <p>15.15 – 15.35 From shells to cells: Engineering chitin for next-generation energy storage devices Dawid Kasprzak, KU Leuven, BE</p> <p>15.35 – 15.55 Chitosan in wound care: Multiple benefits from a simple product Dominiek Vlaene, Protex Healthcare, BE</p> <p>15.55 – 16.15 From marine resources to plant immunity: A deep dive into chitin/chitosan, chito-oligosaccharides and COS-OGA technology Nicolas De Menten, FytoFend, BE</p> | <p>Seaweed: cultivation, processing and valorization III Chair: Lise Appels, KU Leuven, BE</p> <p>14.45 – 15.15 New insights into <i>Ulva</i> anatomy guide seaweed processing and valorisation Alina Schmidt, Karolinska Institutet & KTH Royal Institute of Technology, SE</p> <p>15.15 – 15.35 Harnessing <i>Saccharina latissima</i> as a biosensor for trace metal contamination in marine environments Caya de Leeuw van Weenen, French Corrosion Institute, FR & KU Leuven, BE</p> <p>15.35 – 15.55 Maximising polysaccharide production in <i>Ulva</i>: The effects of temperature, salinity and light Julie Grivotte, University of Galway, IE</p> <p>15.55 – 16.15 Reliability of seaweed cultivation structures Usman Ali, KU Leuven, BE & Mohammad Hassanzadeh, KU Leuven, BE</p> |

16.20 **Introduction to the pitches**
Philippe Tavernier, 3PT Consult, BE

Auditorium Max Weber

Biocon, KU Leuven
Humasol vzw
Wageningen Food & Biobased Research
Karadeniz Technical University
Purtiso
Epnoe
Eggxpert
Ebba Biotech
Nova Biochem – UGent – Splendor project
KU Leuven SeaChem
KU Leuven INCLUDE
NuReSys – bioSOILUTIONS
VITO

After the presentations you are invited to the Biobased Market and Networking Drink in Alma 2 (SW building)

17.00 **Biobased Market and Networking Drink**

Alma 2

Exhibitors at the Biobased Market:

Biocon, KU Leuven
Humasol vzw
Wageningen Food & Biobased Research
Karadeniz Technical University
Purtiso
Epnoe
Eggxpert
Ebba Biotech
Nova Biochem – UGent – Splendor project
KU Leuven SeaChem
KU Leuven INCLUDE
NuReSys – bioSOILUTIONS
Rejuice
Research Group for Insect Production and Processing, KU Leuven

Wednesday, 3 June 2026

09.00 – 10.20 Parallel sessions

| Session 6A – Auditorium Max Weber | Session 6B – Auditorium Jean Monnet | Session 6C – Ruth Benedict Room |
|---|---|---|
| <p>Pretreatment and transformation of lignocellulose II Chair: Uģis Cābulis – Latvian State Institute of Wood Chemistry, LV</p> <p>09.00 – 09.20 Extraction, separation and concentration of protein from brewery spent grain: A combined alkali pretreatment with SANI membrane technology Mihaela Tanase-Opedal, RISE PFI AS, NO</p> <p>09.20 – 09.40 The power of butylamine as a distillable pretreatment solvent: Efficiently deconstructing plants into bioavailable sugars Blake A. Simmons, Lawrence Berkeley National Laboratory, USA</p> <p>09.40 – 10.00 Development of an electrochemical method to assess the antioxidant capacity of lignin and related depolymerization products Alhemaiti Kayishaer, Université de Strasbourg, FR</p> <p>10.00 – 10.20 Wood2Wood project: Decontamination and material recovery of post-consumer wood by coupling thermochemical and biological processes Coline Giustiniani, University of Lorraine, FR</p> | <p>Catalysis for renewables and kinetics II Chair: Joseph Samec, Stockholm University, SE</p> <p>09.00 – 09.20 Engineering zirconia-based catalysts for renewable chemical production Amin Osatiashiani, University of Leeds, UK</p> <p>09.20 – 09.40 Mechanistic insights into the mild reductive depolymerization of hydrolysis lignin Matteo Deroma, Ghent University, BE</p> <p>09.40 – 10.00 Selective C-O and C-C cleavage of lignin model compounds using titanium-supported Ru-X (X = Mo, Mn, W AND Ni) bimetallic nanocatalysts Marcelo Domine, Universitat Politècnica de València, ES</p> <p>10.00 – 10.20 Towards sustainable biosourced solvents: Can bisfuran alkylation/hydrogenation reconcile performance and environmental friendliness? Gabrielle Terrochaire, University of Poitiers, FR</p> | <p>Valorization of food residues I Chair: Idalina Gonçalves, University of Aveiro, PT</p> <p>09.00 – 09.20 Valorization of lipid and carbohydrate-rich waste through acidogenic fermentation Luisa S. Serafim, University of Aveiro, PT</p> <p>09.20 – 09.40 Integrated extraction and upgrading assessment of banana peel-derived fractions Juan García-Serna, University of Valladolid, ES</p> <p>09.40 – 10.00 Mapping and exploring poultry processing waste stream in high-value applications Ann Vermoesen, Karel de Grote University of Applied Sciences and Arts, BE</p> <p>10.00 – 10.20 Optimization of twin-screw extrusion and enzymatic hydrolysis unit processes for the conversion of animal waste into bio-based fertilizers Julien Lequitte, Université de Toulouse, FR</p> |

10.20 – 11.00 Coffee Break



| Session 7A – Auditorium Max Weber | Session 7B – Auditorium Jean Monnet | Session 7C - Ruth Benedict Room |
|--|---|--|
| Biobased chemicals and materials III Chair: Maarten De Mol, Ghent University, BE 11.00 – 11.20 4-(4,6-dimethoxy-1,3,5-triazin-2-yl)-4-methyl-morpholinium chloride mediated modification of carboxymethyl cellulose for food packaging Valentina Beghetto, University Ca' Foscari & Crossing Srl, IT | Environmental Biotechnology Chair: Benjamin Horemans, KU Leuven, BE 11.00 – 11.20 Optimizing nutrient recovery and algal biomass production from Finnish dairy and animal by-product side streams Sema Sirin, University of Turku, FI | Valorization of food residues II Chair: Luisa Serafim, University of Aveiro, PT 11.00 – 11.20 Valorisation of red beet wastes for sustainable carbon quantum dots synthesis and betalains extraction for food applications Maria Carmen Garrigós, University of Alicante, ES |
| 11.20 – 11.40 The chemical valorisation of insects and microalgae as a sustainable alternative feedstock Joost Matthijssen, Thomas More University of Applied Sciences, BE | 11.20 – 11.40 Turning toxic waste into selective pressure: Toward microbial bioremediation of industrial effluents Catalin Rusnac, University of Applied Sciences KREMS, AT | 11.20 – 11.40 Boosting waste biomass potential for polymeric materials by mild torrefaction on the example of pomegranate and Rosa canina peels Aleksander Hejna, Poznan University of Technology, PL |
| 11.40 – 12.00 Converting biomass with hydrogen chloride gas: From nanoparticles to chemicals Eero Kontturi, Aalto University, FI | 11.40 – 12.00 Techno-economic assessment of cellulose carbamate-based regenerated cellulose films: The role of chemical recovery and side-stream management Waleed Mehmood, Aalto University, FI | 11.40 – 12.00 Circular valorization of green leafy vegetable side streams into active biodegradable packaging Zeinab Qazantfarzadeh, Chalmers University of Technology, SE |
| 12.00 – 12.20 Production of carotenoid and coenzyme Q10 using winery wastewater and purple phototrophic aggregates Jairo Carrillo-Osorio, Universidad Nacional Autónoma de México, MX | 12.00 – 12.20 Proteolytic and non-proteolytic mechanisms involved in keratin degradation by <i>Onygena corvina</i> Siddhi Pavale, Norwegian University of Life Sciences (NIMBU), NO | 12.00 – 12.20 Chitinolytic marine bacteria for crustacean waste valorisation: Linking enzyme activity to genetics potential Raejeong Ryu, Ghent University, BE |

12.20 -13.30 Lunch

Alma 2

13.30 – 14.30 Parallel sessions

| Session 8A – Auditorium Max Weber | Session 8B – Auditorium Jean Monnet | Session 8C - Ruth Benedict Room |
|---|---|--|
| Pretreatment and transformation of lignocellulosics III Chair: Juan Garcia-Sema, University of Valladolid, ES 13.30 – 13.50 Ionic liquids for sustainable lignocellulosic biomass valorisation and biomaterials development Cariny Polesca, Imperial College London, UK | Sustainability and circular bioeconomy II Chair: Valentina Beghetto, University Ca' Foscari & Crossing Srl, IT 13.30 – 13.50 Synthetic, bio-based or recycled textile fibres – Which are the most sustainable options? Hanna Karg, ifeu gGmbH, DE | Biocatalysis and novel fermentation processes II Chair: Wim Soetaert, Ghent University, BE 13.30 – 13.50 From beetle to bioreactor: Engineering microbiomes of wood-eating beetle larvae for lignocellulose valorisation Lilian Prinsen, KU Leuven, BE |
| 13.50 – 14.10 HemiCoat – Conversion of hemicellulose to coatings Otto Laufer, DBFZ, gGmbH, DE | 13.50 – 14.10 Processing of agricultural wastes for local protein production Marcella Fernandes de Souza, Ghent University, BE | 13.50 – 14.10 High cell density fermentation of <i>Yarrowia lipolytica</i> on n-Hexadecane for the valorization of pyrolyzed plastic waste Antonia Keil, Ghent University & Bio Base Europe Pilot Plant, BE |
| 14.10 – 14.30 Deep eutectic systems for lignocellulosic biomass fractionation: Implications for integrated biorefinery development Karo Almassi Tighi, Lappeenranta-Lahti University of Technology, FI | 14.10 – 14.30 Methane pyrolysis for CO₂-free hydrogen: Transient behaviour of carbon catalysts studied within OBIWAN Iliyay Melnikov, Ghent University, BE | 14.10 – 14.30 Development of an integrated electrochemical bioreactor for succinic acid production using engineered <i>Escherichia coli</i> strain and municipal biowaste hydrolysates Apostolos Petropoulos, Agricultural University of Athens, GR |

14.40 Introduction by Wim Soetaert, KU Leuven, BE

Plenary Keynote Talk 4: AI and Data for the Bioeconomy
 Nigel Mouncey, Lawrence Berkeley National Laboratory, USA

15.10 Closing Session

Bert Sels, KU Leuven, BE and Maarten De Mol, Ghent University, BE

Presentation of the Awards for the best PhD talks

Benjamin Horemans, KU Leuven, BE

Presentation of the 14th Golden Crop Award

Lise Appels, KU Leuven, BE and Chris Stevens, Ghent University, BE

Presentation of RRB 2027

Chris Stevens, Ghent University, BE

Auditorium Max Weber

Auditorium Max Weber





Biobased chemicals and biodegradable materials

- P1** **The role of interactions between bioplastics and toxic metals in the mussel farming system**
S. Scozzafava, L. Barra, T. Romeo, Irene Bonadies, A. Di Leo, C. Giommi (IT)
- P2** **Preparation of fermentable pyrolytic sugar by ozonolysis**
Khairul Hadi Burhan, M.A. Palazzolo, G.J.W. Euverink, M.Y. Abduh, H.J. Heeres (NL, RI & RA)
- P3** **Eco-friendly rigid polyurethane foams based on the second-generation renewable feedstock for advanced cryogenic insulation**
Ugis Cabulis, L. Vevere, V. Dhalivala, V. Yakushin (LV)
- P4** **Biopolymer valorisation for a circular economy**
Mymoena Davids, A. McKay, A. Jardine (ZA)
- P5** **Catalytic conversion of bio-based aMVL to 3MdVL and 3MPD as sustainable platform chemicals**
Katrien F.G. De Gussemé, A. Bouriakova, J. De Clercq, J.W. Thybaut, S. Parameswaran (BE & NL)
- P6** **Circular production of polyhydroxyalkanoates in *Cupriavidus necator***
Michael Egermeier, N. Lenkova, M. Mihalic, D. Wielend, G. Spiegel (AT)
- P7** **Investigating the fate of biodegradable plastics in anaerobic digestion systems**
Martine Ernestine Fischbach, J. Moestedt, M. Westerholm (SE)
- P8** **From pints to polymers: Integrated biorefinery of beer spent grain for the production of bio-fillers and functional additives**
Gioele Foltran, S. Conca, V. Beghetto (IT)
- P9** **Redefining the potential of highly-filled polylactide composites as scaffolds for the development of hybrid living materials**
Aleksander Hejna, M. Barczewski, J. Andrzejewski, P. Mietliński, J. Aniśko-Michalak, O. Mysiukiewicz, A. Piasecki, K. Gorynia, C. Gostičar, A. Černoša, A. Gubenšek, J. Sandak, W. Pajerski, P. Zalar, N. Gunde-Cimerman, A. Sandak (PL)
- P10** **Novel arylindane diols as sustainable primary antioxidants from lignin**
Tessy Hendrickx, L. Trullemans, A.J. Heyer, I. Boonen, M. Turkalj, F. Rammal, Y. Su, B. Matranxhi, D. Pully, B.V. Meerbeek, P. Van Puyvelde, M. Elskens, K.L.V. Landuyt, B.F. Sels (BE & USA)
- P11** **Spilling the TEA on a gas phase lactide production method**
Matthew Victor Hickson, G. Pomalaza, W. Arts, A.S. Narmon, M. Rigamonti, B. Lagrain, E. Makshina, M. Dusselier, B. Sels (BE)
- P12** **Sustainable electro-organic synthesis of dicarboxylic acids from biogenic shellac**
Tomas Horsten, E.P. Rayner, S.R. Waldvogel (DE)
- P13** **Selective condensation of small sugars towards the synthesis of polyol-based flame retardants**
Ekaterina V. Makshina, J. Matthijssen, F. Rammal, B. Van Vaerenbergh, B. De Schrijver, A.S. Carreira, R.F.A. Teixeira, B.F. Sels (BE & PT)
- P14** **Ultrafast and controlled depolymerisation of tomato cutin in sub- and supercritical water for bio-based polyesters**
Enkeledo Menalla, A. Quilez, M.J. Cocero (ES)
- P15** **Al-B site cooperativity enhances stability in 1,3-butanediol dehydration for biobased butadiene production**
Yayati Naresh Palai, L. Eloi, G. Fayad, J. Bae, J. Poissonnier, J. Thybaut, A. Verberckmoes, E. Makshina, M. Dusselier, B. Sels (BE)
- P16** **Development of antimicrobial bioplastic catheters**
Maria Pereira, I. Gonçalves, A.F.R. Cerqueira (PT)
- P17** **Sustainable valorisation of chicken feather waste for 3D printing biomedical scaffolds using ionic liquids**
Cariny Polesca, R. Sobreiro-Almeida, H. Passos, J.A.P. Coutinho, J.F. Mano, M.G. Freire, J.P. Hallett (UK & PT)
- P18** **Bio-based thermoset resins from epoxidized soybean oil acrylate and Michael donors derived from organic acids of sustainable origin**
Ralfs Pomilovskis, L. Vasilevska, A. Abolins (LV)



- P19** **Sustainable electrosynthesis at industrial scale: Strategic approaches for scaling laboratory innovations to commercial applications**
Edward Rayner, T. Horsten, S.R. Waldvogel (DE)
- P20** **Optimised enzymatic hydrolysis of cassava peel waste for enhanced sugar recovery and sustainable polyhydroxyalkanoate (PHA) production**
Zeinab Samimi, V. Najdanovic-Visak, P. Blanco-Sanchez, A. Fernandez-Castane (UK)
- P21** **Upscaling liquid-state surface fermentation of mycelium mats to produce sustainable leather-like mycelium materials**
Simon Vandelook (BE)
- P22** **Lignocellulosic inhibitors: Can they force yeasts towards enhanced lipid and carotenoid production?**
Ines Vanderveken, S.E. Vlaeminck, N. Gunde-Cimerman, I. Cornet (BE & SI)
- P23** **INTERREG F-W-VL VALCELMAT Project: Functionalization of cellulose to produce new high-performance materials**
Sofie Verschraegen, A. Spalletta, F. Awada, S. Dropsit, J. Van Rie, I. Gosselin, N. Joly, K. De Clerck, P. Martin (BE & FR)
- P24** **Determination of physicochemical properties of hydrophilic natural deep eutectic solvents as potential sorption media in absorption heat pumps and sorption heat storage units**
Christoph Weinzettl, P. Demmelmayer, L. Pachernegg-Mair, M. Wernhart, R. Rieberer, R. Kalb, M. Kienberger (AT)
- P25** **Valorisation of grape pomace as substrate for the production of lactic acid**
D. Loureiro, C. Funico, A. Oliveira, L.S. Serafim, Ana M.R.B. Xavier (PT)

Biocatalysis and novel fermentation processes

- P26** **A new phenyl azo acetate substrate for spectrophotometric investigation of thermostable carbonic anhydrases**
Justinas Babinskas, T. Kojis, I. Gaubé, L. Baranauskienė, I. Matijošytė (LT)
- P27** **Self-sufficient biocatalytic ester synthesis via hemiacetal oxidation**
Paola Branduardi, S. Ceccarossi, M. Zago, I. Serra (IT)
- P28** **Ending carbon waste with a bang! Syngas-aided thermophilic fermentation to boost MCCA production**
Amber Brouns, S. Kumar, D. Bongartz, B. Horemans (BE)
- P29** **Biocatalytic conversion of CO₂: Production of recombinant β-carbonic anhydrase in the yeast expression system**
Ieva Gaub, T. Kojis, E. Lukauskaitė, J. Babinskas, L. Baranauskienė, I. Matijošytė (LT)
- P30** **Insights into beetle-inspired lignin biorefineries**
Ángela González Álvarez, M. De Pauw, M. Eerlingen, B. Sels, B. Horemans (BE)
- P31** **Process intensification of recombinant xylanase production using *Komagataella phaffii***
Mário Kočenda, M. Legiň, M. Rebros̄ (SK)
- P32** **Recombinant production of microbial carbonic anhydrase for biocatalytic carbonate synthesis**
Tautvydas Kojis, E. Lukauskaitė, I. Gaubé, J. Babinskas, L. Baranauskienė, I. Matijošytė (LT)
- P33** **Harnessing the gut microbiome of *Pachnoda sinuata* for engineering surface-displayed laccases to realize lignin valorisation**
Yan Kong, M. Boon, L. Prinsen, R. Lavigne, D. Springael, H. Lerner, B. Horemans (BE)
- P34** **Fungal degradation strategies during solid state fermentation of cereal brans with white-rot fungi**
Chloe Rantzios, J. Rencoret, J.C. del Rio Andrade, A. Jiménez Quero (SE & ES)
- P35** **Investigating novel reactivity of laccases for biocatalytic oxidation reactions**
Marko Rath, M. Rickert, D. Ribitsch, W. Kroutil (AT)
- P36** **Regio- and stereoselective C-H functionalization of renewables using α-KG dependent enzymes**
Sara Salehi, S. Vrabl, C. Oostenbrink, D. Schönauer, W. Kroutil (AT & NL)
- P37** **Sustainable enzyme production from brewer's spent grain and its use in natural fiber processing**
Bruna F. Silva, L. Machado, A.M. Fernandes, R.N. Pereira, I. Belo (PT)



Bioenergy and thermochemical transformations

- P38 Deep chemical characterization of bio-oils using quantitative ^{13}C , ^{31}P and HSQC NMR techniques**
Hamid Ardeshiri Lordejani, H. Grénman, P.C. Eklund (FI)
- P39 Comparing biomethane production pathways using anaerobic digestion and water electrolysis**
Aldwin-Lois Galvan-Cara, E. Evens, Z. Deng, L. Appels, D. Bongartz (BE)
- P40 Lights out – photosynthetic apparatus on? Screening for strains and substrates for microaerobic H_2 production by dark fermentation within the context of biorefineries**
Simon Krake, G.E.M. Tovar, S. Zibek (DE)
- P41 Two step synthesis of nitrogen-doped carbon microspheres from pyrolysis biooil and its different fractions**
Kalvis Liepins, G. Dobele, A. Zurinsh (LV)
- P42 A thermogravimetric approach to resolving carbonate bias in proximate analysis of marine biomass and its implications for hydrothermal carbonization**
Rezvan Majidi, O.V. Okoro, A. Shavandi (BE)
- P43 Towards a green and sustainable aviation fuel transition: A multi-objective optimization framework for cost-effective advanced biofuels production**
Sergio Martinez-Villarreal, B. Dochy, I. Van De Vreken, K. Vasilakou, P. Nimmegeers, A. Richel (BE)
- P44 Sawdust to liquefied synthetic natural gas through integrated gasification, exergy, life cycle, and economic assessment**
Salman Raza Naqvi, B. Kazmi, S.A.A. Taqvi, S. Banks, Ö. Şahin (SE, PK, UK & TR)
- P45 Solvothermal liquefaction of post compost residue: Experimental investigation of catalyst effect on biocrude quality and yield**
Feyza Özçelik, O.V. Oseweuba, A. Shavandi (BE)

Biorefining

- P46 Conversion of short chain fatty acids to olefins through ketonisation – Thermodynamic approach**
Juha Ahola, T. Ollitervo (FI)
- P47 Can reductive catalytic fractionation biorefinery be a pathway for paper-making pulp?**
Khaled W. Al-Shwafy, B. Lagrain, E. Lemmens, Y. Zhang, B. Hoelbling, N. Schwaiger, B. Sels (BE & AT)
- P48 Citrus by-products as a platform for bioproduct development and territorial bioeconomy opportunities: Quantification of pectin, flavonoids, and essential oils**
Lucía V. Cruz Jirón, L. Villegas Peñaranda, A. Carballo Arce, O. Rojas Carrillo (CR)
- P49 Lab and pilot-scale continuous reductive depolymerization of lignin: Process optimization through catalyst choice and regeneration**
Brent Daelemans, A. Pajares, P. Jusner, B. Sridharan, E. Feghali, K. Vanbroekhoven (BE & LB)
- P50 Green extraction of polyphenols from onion skins using scalable ultrasonic-assisted extraction**
Duncan Deboel, H. Withouck, A. Paelinck (BE)
- P51 Evaluating reclaimed waste wood as a source for lignin-first processes**
Stefan Grasböck, O. Musl, N. Kohlhuber-Musl, L. Scolari, T. Zich, T. Ters, T. Rosenau, A. Potthast (AT)
- P52 Lignin extraction with deep eutectic solvents and electrochemical depolymerization**
Yassine Guarraoui, A. Kayishaer, P.L. Pasquet, D. Trébouet, J. Brandel, V. Hubscher, M. Villain-Gambier (FR)
- P53 Modular modelling framework for techno-economic evaluation of lignocellulosic biorefinery concepts**
Henry Hilker, N. Conen, H. Klose, A. Jupke (DE)
- P54 Conformer diversity over quantity: Improving COSMO-RS predictions for biobased separation processes**
Ilah Joos, S. Müller, J. De Clercq, I. Smirnova, M.K. Sabbe, J. Lauwaert (BE & DE)
- P55 Integrated cascading biorefinery concepts for microalgae: Unlocking selective fractionation with bio-based solvents**
Khalilan Lambangsari, R.H. Wijffels, W.J.J. Huijgen, M.Y. Abduh, I.Z. Boboescu (NL, NO, RI)

- P56 Production and optimisation of oxygenated biofuel blend components via the butanolysis of different lignocellulosic biomass feedstocks**
Ali Alazzawi, A. Ross, V. Dupont, K. Ismail, M. Nahil, A. Tomlin, S. Wiseman (UK)
- P57 Biorefining strategies for the valorisation of cork by-products**
Susana Marques, P. Costa, A. Eusébio, A.C. Oliveira, H. Albergaria, M. Abreu, R. Sousa, B. Ribeiro, C. Penedo, C. Ferreira, T. Diamantino, F. Gírio, P. Moura, C. Maganinho, J. Jesus (PT)
- P58 The effect of tertiary amine alkyl chain length on ionic liquid properties and biomass fractionation in the ionosolv process**
Aleksandra Rabiner, R. Luo, J.P. Hallett (UK)
- P59 From variable inputs to tailored outputs: A robust model for optimized resource efficiency**
Razieh Shafiei Alavijeh, A. Sangosanya, E. Rober, R. Philippini, J. Denayer, K. Karimi, E. Vanden Elsacker, E. Peeters (BE)
- P60 Investigation of solvolytic refinery strategies to valorize agricultural side streams for yeast-based lipid production**
Weiling Su, T. Nicolai, E. Lemmens, V. Vangalis, S. Dockx, G. Van Royen, B. Van Droogenbroeck, K. Patil, G. Zilberman-Schapira, A. Madkaikar, G. Bosch, S. Caspers, N. Snoeck, J. Steensels, S. Vonesch, L. Maroc, V. Imperato, L. Van Dyck, O. Lyzak, A. Jan van der Goot, S. Van den Bosch, K. Verstrepen, M. Van Der Borght, B.F. Sels (BE, UK & NL)
- P61 Selective glycol synthesis from hemicellulose in reductive catalytic fractionation**
Seppe Van Dyck, W. Arts, K. Lagae, Q. Mintiens, S. Van den Bosch, B. Sels (BE)
- P62 Towards a closed-loop pulping process: Lean black liquor as a source of hydroxycinnamic acids**
Iva Zoteva, I. Stals, J. Lauwaert, J. De Clercq (BE)

Carbon capture & utilization

- P63 CO_2 to (m)ethanol**
M.F. Lanting, K.P.H. Meesters, Marieke E. Bruins (NL)
- P64 Building blocks: Acetate, organic acids of short and medium length, lipids by C1-rich mixtures fermentation**
Telma Teixeira Franco (BR)
- P65 Impact of gas deactivation on 13X zeolite CO_2 adsorption capacity**
Sanni Eerika Tuunainen, P. Nevalainen, M. Kortelainen, A. Lähde, O. Sippula, N. Kinnunen (FI)
- P66 Synthesis of new imidazolidinones from 3-amino- β -lactams via CO_2 fixation and subsequent ring rearrangement**
Emma Vandenheede, E. Okpobresi, S. Deketelaere, L. Surdiacourt, R. Thiebaut, R. De Geest, M. D'hooghe (BE)
- P67 PEPC-functionalized multi walled carbon nanotubes as a potential platform for CO_2 capture**
M.N. Shah, R. Magalhães, C.G. Silva, I.M. Luís, A.P.M. Tavares, I.A. Abreu, Ana M.R.B. Xavier (PT)
- P68 Proximity-independent acid-base synergy in a solid ZrO_xH_y catalyst for amine regeneration in post-combustion CO_2 capture process**
Cheng Zhou, M. Torka Beydokhti, F. Rammal, P. Kumar, M. Lacroix, W. Vermeiren, M. Dusselier, Y. Liao, B.F. Sels (BE & CN)

Catalysis for renewables and kinetics

- P70 Electrocatalytic valorisation of industrial black liquor**
Roman Tschentscher, A.D. Vital, J. Mendes (NO)
- P71 Catalytic glucose oxidation applying electrochemically produced green oxidants**
Roman Tschentscher, M. Barros, M. Frøseth, R. Neuber, T. Grassl (NO & DE)
- P72 Addressing deactivation and carbon deposition mechanisms during acetate valorisation to acrylate on alumina-based catalysts**
Simon B. Verstraeten, Y.N. Palai, E.V. Makshina, B.F. Sels (BE)
- P73 Oxidative catalytic fractionation of wood towards self-healing polymers**
Jonathan Woods, L. Trullemans, B.F. Sels (BE)





Environmental biotechnology

- P74 Continuous turbidostat phycoremediation for year-round greenhouse drainwater compliance under Nordic conditions**
Emren Borhan, V. Korhonen, S. Şirin, Y. Allahverdiyeva (FI)
- P75 Anaerobic biodecolorization of Reactive Black 5 by *Clostridium beijerinckii* DSMZ 6422 cultivated in agro-industrial waste-based media**
Sevgi Ertuğrul Karatay, G. Baratalieva, E. Demiray (TR)
- P76 Isolation and screening of halophilic bacteria for biosurfactant production**
Lyudmila Kabaivanova, K. Berberov, I. Boyadzhieva, L. Nacheva, B. Yakimova, I. Stoineva, H. Petkova (BG)
- P77 Selection and identification of potential fungal biosurfactant producers**
Lilyana Nacheva, L. Kabaivanova, K. Berberov, I. Boyadzhieva, B. Yakimova, I. Stoineva, H. Petkova (BG)
- P78 Alginate/chitosan polyelectrolyte beads effectively adsorb pharmaceuticals**
Luca Verelst, P. Fardim, N. Sweygers, L. Appels (BE)

Marine bioeconomy

- P79 Bioinspired materials “periostracum-like”**
Thierry Talou, C. Chastrette, C. Chabanne, W. Tapia, S. Capblancq, M. Aguerre, A. Lung, C. Delgado Raynaud (FR)

Polysaccharides

- P80 Use of bio-composite hydrogels made of natural polysaccharides in sustainable design of sanitary products**
Svetlana Butylina (FI)
- P81 Advanced pullulan biomaterials: Multifunctional hydrogels enabling smart sensing and therapeutic cell interfaces**
Pedro Fardim, F. de Ceulaer, X. Qing (BE)
- P82 Functional bio-based coatings from starch-rich industrial byproducts and PBAT blends**
Idalina Gonçalves, P. Brites, C. Pinheiro, N. Joly, P. Martin (PT & FR)
- P83 Synthesis and characterization of thiolated chitosan nanoparticles**
Adel Charbel Khoudary, G. Van den Mooter, P. Fardim (BE)
- P84 Sustainable chitin production from black soldier fly larvae: A comparative analysis of subcritical fractionation and traditional isolation methods**
Evelynn Vervoort, S. Eyley, G. Hulaj, R. Smets, D. Sakellariou, W. Thielemans, B. Sels, M. Van Der Borght (BE)

Pretreatment and transformation of lignocellulosics

- P85 Biphasic hydrothermal fractionation of alternative feedstocks for man-made cellulose fibers and platform chemicals: Process and scale-up perspectives**
Andrés Acosta, B. Herklotz (DE)
- P86 Integrated multistage fractionation and electrochemical recovery for enhanced *Miscanthus × giganteus* valorization**
Halim Choo, N. Conen, H. Klose, A. Jupke (DE)
- P87 Simultaneous removal of hemicellulose and alkali metals from lignocellulosic biomass using liquid hot water pretreatment**
Diseye Deborah Egberike, F. Mbanusi, H. Ardeshiri Lordejani, L. Hupa, M.J. Dirbeba, H. Grénman, P.C. Eklund (FI)
- P88 Chemical and surface characterisation of enzymatically-treated flax fibres**
Clare Garing, B. Boshuizen, I. de Pril, S. Ghijssels, I. Van de Voorde, Y. Mosleh, A.W. Van Vuure (PH, NL & BE)

- P89 Multi-scale characterization of porosity and diffusion in maize stem internodes**
Firat Goc, A. Habrant, F. Moreau, L. Lemaitre, S. Humbert, G. Paës (FR)
- P90 Pretreatment, minute by minute: Time-resolved extraction in a biphasic acid flow-through system**
Philipp M. Grande, H. Hilker, N. Conen, A. Jupke, H. Klose (DE)
- P91 Xylanolytic-ligninolytic enzyme system of *Bacillus albus* PA3/3: Inducible catalysts for sustainable lignocellulosic biorefineries**
Pan Myint Myat Khin, P.M. Grande, K. Ratanakhanokchai, P. Pason, H. Klose (DE & TH)
- P92 Foam-formed alternative feedstock as sound absorbing material**
Marike Langhans, T. Hänninen, A. Gurra, A. Onur Yürek, T. Lokki, P. Päänttilä, J. Vapaavuori (FI & ES)
- P93 A comparison of pre-treatment approaches for enhancing the biogas yield from water hyacinth**
Andrew Ross, B. Esen, J. Adams (UK)
- P94 Tunable pulp composition design via Ionosolv pretreatment and electrochemical bleaching enables efficient, low-input microfibrillated cellulose production**
Ruihua Luo, A.M. Dezashibi, J.P. Hallett (UK)
- P95 Hot water extraction of hemicellulose from coffee and cocoa residues: A central composite design approach**
Nisansala Mesthrige, J. Havukainen, O. Salcedo-Puerto, K. Melin (FI)
- P96 Pretreatment of heavy-metal-contaminated reed straw for sustainable biorefinery applications**
Neda Rasaeian, W. Wukovits, F. Čacho, R. Nadanyi (AT & SK)
- P97 Functionalized lignin from peatland Grasses: Impact of process severity on lignin quality**
Judith Reinwarth, P.M. Grande, H. Klose (DE)
- P98 Conversion of biochar from spent ivy and its evaluation as a functional additive in bio-epoxy coatings**
Pieter Samyn, W. Verduyck, D. Vandamme (BE)
- P99 Integrating enzymatic treatment and structural analysis to optimize plant fibre properties**
Kora Uellendahl, M. Wrona-Pezo, P. M. Grande, H. Klose (DE)
- P100 Lignin-first biomass fractionation based on a biphasic water/guaiacol solvent system**
Suvi Valkama, M. Mikola, J. Tanskanen, J. Ahola (FI)
- P101 Unraveling the potential of native lignin-derived oligomers for the synthesis of high-performance epoxy resins**
Yingtuan Zhang, S. Stepanova, R. Singh, L. Trullemans, W.E. Dyer, B. Kumru, A. Vananroye, P. Van Puyvelde, B.F. Sels (BE, NL & TH)

Seaweed: cultivation, processing and valorization

- P102 Improved protein recovery from *Palmaria palmata* through integrated mechanical pretreatment and extraction process**
Agusman Agusman, M. Eppink, R. Wijffels, W. Huijgen, A. Kazbar (NL)
- P103 From seaweed to bioactives: Ensilage of *Ulva* sp., extraction of ulvan and enzymatic hydrolysis of ulvan into ulvan oligosaccharides**
Winnie Dejonghe, B. Coleman, A. Fuso, L. Cauwenberghs, I. Sadovskaya, P. De Rechter, T. Gard, A. Caligiani, L. Bastiaens, J. Robbens (BE, IT & FR)
- P104 Valorisation of invasive sargassum in an integrated biorefinery with alginate extraction and anaerobic digestion**
Ryan Longley, A. Ross, K. Ward, A. Mohammed (UK & TT)
- P105 Co-processing sargassum with lignocellulosic biomass by hydrothermal carbonisation: Impacts on hydrochar quality**
Ryan Longley, A. Ross, I. Smith, K. Ward (UK)
- P106 Macroalgal biomass sourcing and biorefinery in the MARMAD project**
Erik-jan Malta, M. Macías (ES)
- P107 Valorization of seaweed biorefinery residues for novel biomaterials preparation**
Federica Zaccheria, J. Paini, A. Vignali, G. Ottolina, F. Bertini (IT)





Sludge: handling, processing and valorization

- P108 PFAS partitioning and ultrasound-enabled sludge management: Adsorption, desorption, and targeted aqueous destruction**
Francisco Javier Ayala Esmoris, D. Cabooter, N. Askari, R. Dewil, J. Kwan (BE & UK)
- P109 Assessing wastewater and sewage sludge treatment efficiency by combining physicochemical characterization and *in vivo* endocrine disruption bioassays**
Sara Cvetković, E. Sinisgalli, A.S. Permal, R. Krimou, S. Guérin, G. Lemkine, D. Patureau, D.D. Pasquier (FR)
- P110 Effect of thermal hydrolysis on target organic micropollutants in waste activated sludge**
Andrea Deiana, J.B. van Lier, M.K. de Kreuk (NL)
- P111 Array-based fluorescence sensing for the detection of micropollutants and ecotoxicity in treated sludge**
Nitin Kumar, C. Felion, C. Gauchotte-Lindsay, W.J. Peveler (UK)

Sustainability and circular economy

- P112 Towards a circular economy: Bioconversion of thermochemical PET hydrolysates from mixed textiles into fibres via *Komagataibacter spp.***
Suksham Chahar, A. Erian, H. Marx, M. Egermeier (AT)
- P113 Sustainable extraction of mushroom bioactives using Natural Deep Eutectic Systems (NADES) for the cosmetic industry**
Carolina Costa, A.R. Duarte, J. Marto, A. Paiva (PT)
- P114 Life cycle assessment of hybrid living material-enabled microbial protein production**
Elina Dace, K. Balina, R. Soloha, V. Schmitz, D. Breite, A. Schulze, R. Karande (LV)
- P115 Sustainable biobased stimulants based on eutectic mixtures to improve the production of pine resin**
Inês S.L. Farias, N. Seixas, C. Vilela, S.A.O. Santos, C.S.R. Freire, A.J.D. Silvestre (PT)
- P116 Utilization of unconventional media for the cultivation of microorganisms**
Emely Sarah Fuderer, D. Holtmann (DE)
- P117 Novel bio-based multi-component plastic additives in the form of granulate**
Aleksander Hejna, M. Barczewski, J. Andrzejewski, J. Aniśko-Michalak, A. Piasecki (PL)
- P118 Sustainable leather dyeing: Influence of natural mordants and substrate type (wet-white and vegetable-tanned leathers) on color performance**
Tatiana B. Schreiner, A.L.N. Zanella, R. Mourão, J. Gaião, M.J. Ferreira, L.M.R. Mesquita, A. Santamaria-Echart, M.F. Barreiro (PT)
- P119 Anaerobic digestion of cannabis waste: Fate of cannabinoids in digestate**
Andrew Ross, R. Longley, R. Silltoe, T. Stoddart, K. Ward (UK)
- P120 Upcycling of orange peels using NADES for the extraction and stabilization of phenolic compounds**
Marta Marques, A.R. Jesus, A.R.C. Duarte, A. Paiva (PT)
- P121 Demonstration of sugar-based biorefineries based on post-consumer textile waste: Efficient conversion into sustainable biopolymers**
Susana Marques, J. Matias, T. Rodrigues, C.A.V. Torres, P. Moura, P. Piedade, M. Abreu, F.M. Gírio, A. Braga, J.C. Dias, F. Freitas, C.J. Silva (PT)
- P122 Development of functional biobased-reinforced composites: Study of the properties of lignin/polymer materials**
Iliyas Melnikov, Julien Estager, C. Lemenu, E. Bovens, B. Goffin, L. Lemkhanter, V. Aguié-Béghin, A. Gainvors-Claisse, T. Domenech, F. Berzin (BE & FR)
- P123 OBIWAN: Converting organic waste into advanced chemicals and sustainable aviation fuels**
Iliyas Melnikov, J.W. Thybaut, J. Estager, X. Liu, A.Y. Khodakov (BE & FR)
- P124 Biobased surfactants from black soldier fly lipid**
Valeria Pappalardo, F. Zaccheria, G. Cappelletti, G. Ballabio, L. Gasco, M. Zoccola, N. Scotti, N. Ravasio (IT)

- P125 Techno-economic assessment of latex-based material from guayule**
N. Vavylas, Apostolos Petropoulos, M. Skoutida, D. Ladakis, A. Koutinas, S.M. Ioannidou (GR)
- P126 The REAL-MAC project: Optimization of the biostimulant's production from laboratory to pilot scale from microalgae biomass cultivated with agri-food effluents**
Justine Chervin, L. Candy, C. Chastrette, W. Tapia, M. Navarro, T. Talou, C. Raynaud (FR)
- P127 AddBio-roadmap for conversion of residual biomass into functional coating additives**
Pieter Samyn (BE)
- P128 Sustainable production of light colored rosin and rosin esters with bio-based antioxidants**
Nalin Seixas, J. Serrano, C. Vilela, S.A.O. Santos, C.S.R. Freire, A.J.D. Silvestres (PT)
- P129 Production of short chain organic acids from defatted and deproteinated insect biomass**
L.G. Ferreira, A. Oliveira, P. Moleiro, M.G. Freire, A.P.M. Tavares, Luísa S. Serafim (PT)
- P130 A sustainable route for gold recovery using kraft lignin-based activated carbon**
Manorma Sharma, F. Pita, M. Sharma, A.J.M. Valente (PT)
- P131 Valorization of coffee husk in a biorefinery: Sustainable production of natural pigments through green chemistry**
Vânia Aparecida Silva, S.D.V.T. Nadaleti, D.H.S. Nadaleti, L.R.M. Jesus, B.S. Bellete, L.L.S. Pereira, T. Junqueira, M.O. Santos (BR)
- P132 Solar-powered hydrothermal carbonization for decentralized biocarbon production: Process simulation of solar-driven hydrochar production for rural water treatment**
Roman Tschentscher, M. Espelund, T. Johansen, P. Mahlambi, S. Zondo, R. Makungo, A. Adeeyo, S. Mngadi (NO& ZA)
- P133 Development of a dissolved hydrogen sensor for real-time monitoring in gas fermentation processes**
Tamara Celina Weiler, M. Mann, J. Magnu (DE)
- P134 Valorisation of plant-based residual streams: Extraction and characterization**
Hannes Withouck, D. Deboel, A. Paelinck (BE)

Valorization of food residues

- P135 Extraction of pigments and phenolic compounds from coffee husks for natural cosmetics: An optimization study**
Barbara Bellete, L.R.M. Jesus, L.L.S. Pereira, S.S. Thomassi, L.S. Maciel, M.O. Santos, V.A. Silva (BR)
- P136 Oil crop residues to functional rapeseed protein and palm starch**
Marieke E. Bruins, P. Geerdink, G.A.H. de Jong, H.W. Elbersen, A.M.J. Kootstra, L.A.M. van den Broek, W.J. Mulder (NL)
- P137 High-pressure and enzymatic processing: A strategy for valorizing food by-products**
Bashar Kabawa, I. Sampers, K. Raes (BE)
- P138 Biological valorisation of agri-food residual streams**
Ana M. López-Contreras, J. Verbokkem, M. Budd, L. Sijtsma (NL)
- P139 Sustainable extraction of pectin from apple residues through mechano-chemical processes and the fabrication of green packaging films**
Vanessa Oliveira Castro, A. Gerhardt, E. Nwanegbo, U. Smailbegović, V. Herdegen, S. Glöser-Chahoud, K. Heise (DE)
- P140 Brazilian coffee by-products as renewable resources: A comparative study on the phenolic content and antioxidant activity of husks, silverskin and green coffee press cake**
Luciana L.S. Pereira, B.S. Bellete, L.R.M. Jesus, F.M. Carvalho, D.S. Maculan, T. Junqueira, M.O. Santos, V.A. Silva (BR)
- P141 Fermentation of rapeseed soapstock by *Aspergillus oryzae***
Witold Pietrzak, A. Głowacki, P.R. Lennartsson (PL& SE)
- P142 Assessing the potential of walnut, plum, cherry, and apricot endocarp as a feedstock for biorefineries**
Sebastian Sandner, E. Crawford, M. Kienberger (AT)





P143 Bacterial cellulose production through fermentation of agricultural waste streams
Annelore Wens, H. Sels, J. Geuens (BE)

P144 Tapping into hazelnut manufacturing residues: Catalytic lipophilization of natural antioxidants
Federica Zaccheria, V. Pappalardo, M. Minnucci, N. Ravasio (IT)

Wood chemistry and engineering

P145 Tailoring cellulose DP via EBI and β -elimination for biorefinery applications
Stefanie Gross Belduma, T. Eichinger, I. Sulaeva, H. Kosonen, T. Rosenau, A. Potthast (AT & FI)

P146 Modelling of vapour-liquid equilibria of a mixture of lignin-derived phenolics
Katelijne Lagae, T. Piot, W. Arts, S. Van Dyck, Q. Mintiens, S. Van den Bosch, B. Sels (BE)

P147 Assessment of rate-limiting steps of solvolytic extraction during Reductive Catalytic Fractionation (RCF)
Quinten Mintiens, W. Arts, K. Lagae, S. Van Dyck, S. Van Den Bosch, T. Nicolai, B. Sels (BE)

P148 Exploring esterification with imidazole derivatives for green modification of wood
Nikolaus Twaroch, P. Jusner, N. Gierlinger, S. Veigel, T. Rosenau, M. Beaumont (AT)

P149 Role of lignin in high-yield fiber property formation
Khashayar Vaezi, J. Sirviö, A. Ämmälä (FI)

