Monday 1 June 2026

RRB 2026
RENEWABLE RESOURCES & BIOREFINERIES

09.00 – 10.00 Registration

10.00 – 10.30 **Official Opening of RRB 2026**

10.30 – 12.00 **Opening Plenary Session**

12.00 – 13.00 Lunch

13.00 – 14.30 Parallel sessions

Session 1A	**Session 1B**
Biobased chemicals and biodegradable materials I Chair: Chris Stevens, Ghent University, BE	**Biorefining I**
Invited talk: Navigating the Complexity of Cellulose and Lignin Antje Potthast, Boku, AT	**Thermal and structural analysis of new lignin-based resins synthesis** Raphaela Süss, Wood K plus – Competence Center for Wood Composites & Wood Chemistry, Kompetenzzentrum Holz GmbH, AT
Itaconic acid functionalization for development of biobased surfactants Jevgenij Lazko, Materia Nova Research Center & University of Mons, BE	**Supercritical carbon dioxide extraction and fractionation of glycerides and fatty acid methyl esters** Hannes Sels, Karel de Grote University of Applied Sciences & Arts, BE
Sustainable cellulose-based hydrogels with*in situ* synthesized metal nanoparticles for antimicrobial wound dressings Aleksandra Mikhailidi, BAU International University Batumi, GE	**Biodesign4Insulation: Environmental assessment of used cooking oil valorisation into bio-polyols for polyurethane industry** Anda Fridrihsone, Latvian State Institute of Wood Chemistry, LV
From biomass to thermoplastic: Liquefied woody biomass for circular thermoplastic composites and coatings Shikha Gupta, University of Twente, NL	**Establishing structure-acidity-performance relationships in zeolite catalyzed lignin pyrolysis for aromatics production** Devanshu Sajwan, Utrecht University, NL

Session 1C	**Session 1D**
Biocatalysis & novel fermentation processes I Chair: Benjamin Horemans, KU Leuven, BE	**Sludge: Handling, processing and valorization I**
Invited talk: Mixotrophic microbial consortia in anaerobic fermentation: A biotechnological route to carbon-efficient waste upcycling Sabine Kleinsteuber, Helmholtz Centre for Environmental Research, DE	**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
Feeding the future with fungi: Fermentation of algal side streams into sustainable mycoproteins Kasra Khatami, Chalmers University of Technology, SE	**Investigating the degradation kinetics of carbamazepine via microwave-assisted hydrothermal carbonisation in wastewater treatment sludge** Derya Acar, KU Leuven, BE
Upcycling a methanol rich side stream from pulp and paper industry to bio-based acetic acid with *Acetobacterium woodii*: Process optimization, CO_2 fixation, and sustainability assessment Hans Marx, TU Wien, AT	**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
Rational strain engineering and bioprocess optimization for enhanced succinic acid production from organic biowaste Vasiliki Korka, Agricultural University of Athens, GR & University of Liège, BE	**Stimulation of Diuron anaerobic biodegradation under long-term cultivation and stressful conditions** Luca Bucci, KU Leuven, BE

14.30 – 15.00 Coffee Break

15.00 – 15.45 **Poster Tour 1**

15.45 – 17.15 Parallel sessions

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

Session 2C	Session 2D
Wood chemistry and engineering Chair: Gunnar Henriksson, KTH, SE	**Sludge: Handling, processing and valorization II**
Invited talk: Surface matters: Controlling lignin and lignin nanoparticle interfaces for enhanced materials performance Monika Österberg, Aalto University, FI	**Harnessing reducing biomolecular fraction from activated sludge for green nanoparticle synthesis** Sasmitha Aulia Zahra, Aarhus University, DK
Lignin carbohydrate complexes – Inferring Structure-property relations with artificial intelligence Matthias Stosiek, Technical University of Munich, DE	**Methodological sensitivities in sludge LCA: Evaluating AD and THP-AD across multiple LCIA frameworks** Paniz Pouryaghoubi, KU Leuven, BE
Turning waste into adsorbents: VOC removal using waste-wood-derived activated carbons Bilge YILMAZ, Karadeniz Technical University, TR	**Multivariate approaches to sewage sludge treatment effects and sludge fertilizers properties for sustainable sludge management in Europe** Erika Sinisgalli, Université de Montpellier, FR
Aromatic platforms from industrial lignins for high value materials production Sanja Vucetic, Åbo Akademi, FI	**Pilot-scale EPS recovery and applications from industrial wastewater sludge** Maarten Bartels, Karel de Grote University of Applied Sciences and Arts, BE

17.30 Guided Walk

19.00 Welcome Reception at the Jubilee Hall of the University Halls

Tuesday 2 June 2026

09.00 **Plenary talk**

09.30 Transition break

09.40 – 10.50 Parallel sessions

Session 3A	**Session 3B**
	Bioenergy & thermochemical transformations Chair: Maria Westerholm, Swedish University of Agricultural Sciences, SE
	Invited talk: Harnessing anaerobic fungi to enhance anaerobic digestion of natural and synthetic biopolymers Magdalena Calusinska, LIST, LU
	Process optimisation of anaerobic digestion using sludge-biochar for biomethane production from industrial sludge Ngoc D. Le, University of Aveiro, PT
	Breaking biomass twice: Improving bio-oil production via two-step hydrothermal liquefaction Christyfani Sindhuwati, University of Leeds, UK & Politeknik Negeri Malang, ID

Session 3C	**Session 3D**
Carbon capture and utilization Chair: Dominik Bongartz, KU Leuven, BE	**Seaweed: cultivation, processing and valorization I**
Invited talk: Designing CCUS systems with life cycle thinking: From CO_2 capture to utilization Niklas von der Assen, RWTH Aachen University, DE	**Cascading biorefinery strategies for industrial algal side-streams** Amparo Jiménez-Quero, Chalmers University of Technology, Gothenburg, SE
CO_2 capture with temperature swing adsorption method - Laboratory and small-scale pilot experiments in biomass combustion Niko M. Kinnunen, LUT University, FI	***Ulva* aquaculture as a source of high-value chemicals** Vanessa Nardini, University of Galway, IE
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	**Post-harvest stabilization treatment's influence on extractability and extract composition of three seaweed species** Roberto Garcia Peran, KU Leuven, BE

10.50 – 11.20 Coffee Break

11.20 – 12.50 Parallel sessions

Session 4A	**Session 4B**
Pretreatment and transformation of lignocellulosics I Chair: Henrik Grénman, Åbo Akademi, FI	**Catalysis for renewables and kinetics I** Chair: Bert Sels, KU Leuven, BE
Invited talk: lignin to thermosets: insights on structure-reactivity and structure-property relationships Martin Lawoko, KTH Royal Institute of Technology, SE	**Invited talk: Selective depolymerization of lignin: insights into the selective cleavage of C–O bonds** Yuhe Liao, KU Leuven
Deciphering lignocellulose recalcitrance: From genotypic traits and cultivation to advanced fractionation strategies Holger Klose, Forschungs-zentrum Jülich, DE	**Photocatalytic C−H bond activation over metal sulfides for biomass valorization** Xuejiao Wu, Xiamen University, Xiamen, CN & KU Leuven, BE
Spatio-chemical mapping of lignocellulosic transformations across wood and agricultural biomass Agneta Richter-Dahlfors, Karolinska Institutet & Karlstad University, SE	**Sustainable 5-HMF production from waste biomass over Nb_2O_5 and $NbOPO_4$ catalysts** Elisa I. García-López, Università di Palermo, IT
Bacterial conversion of alkyl glycosides generated by ethanosolv lignocellulosic fractionation Siti Mariyam, Engineering and Technology Institute of Groningen, NL	**Hydrothermally stable catalysts for the one-pot conversion of cellulose to ethylene glycol** Ana Luiza Slama de Freitas, University of Groningen, NL

Session 4C	**Session 4D**
Polysaccharides Chair: Pedro Fardim, KU Leuven, BE	**Seaweed: cultivation, processing and valorization II**
Invited talk: Polysaccharides – basis for green products Thomas Heinze, Friedrich-Schiller-University, Jena, DE	**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
Mechanochemically assisted oxidation of polysaccharides Anwar Jardine, University of Cape Town, ZA	**Closing the seaweed biorefinery value chain: Ultrasound-enzymatic extraction of brown seaweed *Fucus vesiculosus* and residue valorisation as potential pesticide with antifungal properties** Carlotta Minardi, KU Leuven, BE
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	**From seaweed to bioactives: Ensilage of *Ulva* sp., extraction of ulvan and enzymatic hydrolysis of ulvan into ulvan oligosaccharides** Winnie Dejonghe, Flemish Institute for Technological Research (VITO), BE
Exopolysaccharides production and characterization from cyanobacteria using plastic waste Rebeca Pires, UCIBIO, i4HB, LNEG, PT	**Advancing sustainable seaweed biorefinery: Pilot-scale cascade recovery of bioactive compounds from *Alaria esculenta* using natural deep eutectic solvents** Hussein A. Qulatein, Bantry Marine Research Station Ltd., IE & KU Leuven, BE

12.50 – 13.45 Lunch

13.45 – 14.45 **Poster Tour 2** & Coffee Break

14.45 – 16.15 Parallel sessions

Session 5A	Session 5B
Sustainability and circular economy I Chair: Klaus Kümmerer, Leuphana University of Lüneburg, DE	**Biorefining III**
Invited talk: Deep Eutectic Systems: Is it a sustainable alternative for the extraction of natural products? Alexandre Paiva, Universidade NOVA de Lisboa, PT	**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
Circular lignin epoxies: Activation and functionalisation for BPA-free, self-healing thermosets Giorgio Tofani, National Institute of Chemistry, SI	**Pilot-scale production of biofuel from lignocellulosic pyrolysis oil** Linda Sandström, RISE Research Institutes of Sweden, SE
"Trash" to Taste: Erythritol sweetener production from biodiesel crude glycerol Ana M.R.B. Xavier, University of Aveiro, PT	**Subcritical solvents for insect biorefineries: Chitin isolation from black soldier fly and beyond** Ruben Smets, KU Leuven, BE
Policy vs Science: Do real advanced biofuels have a future if fraud can't be prevented? Filip Boeckx, DG Energy, Federal Public Service Economy, BE	**Selective degradation of impurities in sugar syrups using high-frequency ultrasound** Shambel Getachew Wasse, Université de Poitiers, FR

Session 5C	Session 5D
Session organised by ILVO	**Seaweed: cultivation, processing and valorization III**
Details to follow.	**New insights into *Ulva* anatomy guide seaweed processing and valorisation** Alina Schmidt, Karolinska Institutet & KTH Royal Institute of Technology, SE
	Harnessing *Saccharina latissima* as a biosensor for trace metal contamination in marine environments Caya de Leeuw van Weenen, French Corrosion Institute, FR & KU Leuven, BE
	Maximising polysaccharide production in *Ulva*: The effects of temperature, salinity and light Julie Grivotte, University of Galway, IE
	Reliability of seaweed cultivation structures Usman Ali, KU Leuven, BE

16.20 – 17.00 Biobased Market pitches

17.00 – 18.45 Biobased Market

19.30 Conference Dinner at 'De Hoorn'

Wednesday 3 June 2026

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09.00 – 10.20 Parallel sessions

Session 6A	Session 6B	Session 6C
Pretreatment and transformation of lignocellulosics II	**Catalysis for renewables and kinetics II**	**Valorization of food residues II**
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	**Engineering zirconia-based catalysts for renewable chemical production** Amin Osatiashtiani, University of Leeds, UK	**Valorization of lipid and carbohydrate-rich waste through acidogenic fermentation** Luísa S. Serafim, University of Aveiro, PT
The power of butylamine as a distillable pretreatment solvent: Efficiently deconstructing plants into bioavailable sugars Blake A. Simmons, Lawrence Berkeley National Laboratory, USA	**Conversion of furfural to furfuryl alcohol on CuZnAl mixed oxides with different copper contents using isopropanol as a hydrogen donor** Oleg Kikhtyanin, University of Chemistry and Technology, CZ	**Integrated extraction and upgrading assessment of banana peel-derived fractions** Juan García-Serna, Åbo Akademi University, FI
Development of an electrochemical method to assess the antioxidant capacity of lignin and related depolymerization products Aihemaiti Kayishaer, Université de Strasbourg, FR	**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	**Mapping and exploring poultry processing waste stream in high-value applications** Ann Vermoesen, Karel de Grote University of Applied Sciences and Arts, BE
Wood2Wood project: Decontamination and material recovery of post-consumer wood by coupling thermochemical and biological processes Coline Giustiniani, University of Lorraine, FR	**Towards sustainable biosourced solvents: Can bisfuran alkylation/hydrogenation reconcile performance and environmental friendliness?** Gabrielle Terrochaire, University of Poitiers, FR	**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

10.20 – 11.00 Coffee Break

11.00 – 12.20 Parallel Sessions

Session 7A	**Session 7B**	**Session 7C**
Biobased chemicals and materials III	**Environmental Biotechnology**	**Valorization of food residues** III
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	**Optimizing nutrient recovery and algal biomass production from Finnish dairy and animal by-product side streams** Sema Sirin, University of Turku, FI	**Valorisation of red beet wastes for sustainable carbon quantum dots synthesis and betalains extraction for food applications** Maria Carmen Garrigós, University of Alicante, ES
The chemical valorisation of insects and microalgae as a sustainable alternative feedstock Joost Matthijssen, Thomas More University of Applied Sciences, BE	**Developing a continuous fermentation process for the recovery of Rare Earth Elements (REE) from electronic waste** Golnaz Memari, University of Applied Sciences Krems, AT	**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
Converting biomass with hydrogen chloride gas: From nanoparticles to chemicals Eero Kontturi, Aalto University, FI	**Techno-economic assessment of cellulose carbamate–based regenerated cellulose films: The role of chemical recovery and side-stream management** Waleed Mehmood, Aalto University, FI	**Circular valorization of green leafy vegetable side streams into active biodegradable packaging** Zeinab Qazanfarzadeh, Chalmers University of Technology, SE
Production of carotenoid and coenzyme Q10 using winery wastewater and purple phototrophic aggregates Jairo Carrillo-Osorio, Universidad Nacional Autónoma de México, MX	**Proteolytic and non-proteolytic mechanisms involved in keratin degradation by *Onygena corvina*** Siddhi Pavale, Norwegian University of Life Sciences (NMBU), NO	**Chitinolytic marine bacteria for crustacean waste valorisation: Linking enzyme activity to genetics potential** Raejeong Ryu, Ghent University, BE

12.20-13.30 **Lunch**

13.30 – 14.30 Parallel sessions

Session 8A	Session 8B	Session 8C
Pretreatment and transformation of lignocellulosics III	**Sustainability and circular bioeconomy II**	**Biocatalysis and novel fermentation processes II**
Ionic liquids for sustainable lignocellulosic biomass valorisation and biomaterials development Cariny Polesca, Imperial College London, UK	**Synthetic, bio-based or recycled textile fibres – Which are the most sustainable options?** Hanna Karg, ifeu gGmbH, DE	**From beetle to bioreactor: Engineering microbiomes of wood-eating beetle larvae for lignocellulose valorisation** Lilian Prinsen, KU Leuven, BE
HemiCoat – Conversion of hemicellulose to coatings Otto Laufer, DBFZ, gGmbH, DE	**Processing of agricultural wastes for local protein production** Marcella Fernandes de Souza, Ghent University, BE	**High cell density fermentation of *Yarrowia lipolytica* on n-Hexadecane for the valorization of pyrolyzed plastic waste** Antonia Keil, Ghent University & Bio Base Europe Pilot Plant, BE
Mycocomposites for reducing the weight of concrete structures Paul Langlois, Université de Lorraine, FR	**OBIWAN: Converting organic waste into advanced chemicals and sustainable aviation fuels** Iliyas Melnikov, Ghent University, BE	**Development of an integrated electrochemical bioreactor for succinic acid production using engineered *Escherichia coli* strain and municipal biowaste hydrolysates** Apostolos Petropoulos, Agricultural University of Athens, GR

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

15.10 **Closing Session**

Presentation of the Awards for the best PhD talks

Presentation of the 14th Golden Crop Award

Presentation of RRB 2027