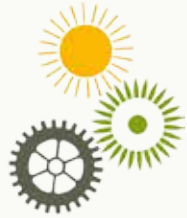


RRB-11

RENEWABLE RESOURCES & BIOREFINERIES



11th International Conference on
Renewable Resources
and Biorefineries

3 - 5 June, 2015 - York, UK

Final Program



UNIVERSITY *of York*

www.rrbconference.com

Welcome to RRB-11

With the increasing awareness and concern about our dependency on fossil resources and the depletion of crude oil reserves in the near future, this conference aims to give an impetus to the bio-based economy.

Delegates from university, industry, governmental and non-governmental organizations will present their views on industrial biotechnology, sustainable (green) chemistry and agricultural policy related to the use of renewable raw materials for non-food applications and energy supply. This will be presented in plenary and oral presentation sessions and poster tours. New research concepts but also society aspects related to renewable resources will be transferred to the public and exchanged with several industrial companies, and vice versa.

From 3 to 5 June 2015, York will host the 11th edition of the **International Conference on Renewable Resources and Biorefineries**.

This specialist forum for industrial biotechnology, renewable resources, green chemistry, nutrient recycling and biorefineries will stimulate the transition from the fossil-based to the bio-based economy.

The conference program is organized in 3 parallel sessions and includes 2 plenary talks, 2 keynote lectures, 17 invited lectures and 79 high quality presentations by international experts, covering both technical and policy aspects of the bio-based economy.

The sessions deal with these topics:

- Bioactive compounds from biomass
- Biobased materials (I & II)
- Biomass fractionation and product purification
- Biocatalysis for bioresource transformation (I & II)
- Bioenergy
- Bioproducts from woody biomass
- Biorefineries (I & II)
- Chemical platform molecules (I & II)
- Downstream processing
- Metabolic engineering of fermentation processes
- Micro and macro algae technology
- Nutrient and energy cycling (I & II)
- Plant cell wall modification
- Policy and standards
- Pretreatment and transformation of lignocellulosics (I & II)
- Thermochemical transformations of biomass
- Valorization of biomass waste streams (I & II)

The ten previous conferences were a big success, thus proving the importance of these conferences and the willingness to imply industrial biotechnology and green chemistry in the world industry.

All information on the preceding conferences can be found at www.rrbconference.com.

We hope that you will enjoy the Conference and the hospitality of York!

The Organizing Committee

Prof. Wim Soetaert
Prof. Christian Stevens
Ir. Philippe Tavernier
Prof. Erick Vandamme
Prof. Erik Meers

The Local Organizing Committee

Prof. James Clark
Dr. Avtar Matharu
Dr. Joe Ross
Dr. Fabien Deswarte
Prof. Simon McQueen-Mason

Wednesday, 3 June 2015

09.00 – 10.10 Registration

10.10 – 10.30 **Official Opening of RRB-11 & Welcome Address**

Henley Suite

Christian Stevens and Wim Soetaert, Ghent University, BE

James Clark, Green Chemistry Centre of Excellence, University of York, UK

Welcome to York

Cllr Sonja Crisp, Rt Hon Lord Mayor of York, UK

Prof. Brian Fulton, Dean of the Faculty of Sciences, University of York, UK

Opening Plenary Session

Chair: James Clark, Green Chemistry Centre of Excellence, University of York, UK

10.30 – 11.15 **Brazilian Biorefinery: An evolving model**

Paulo Coutinho, Braskem, Brazil

11.15 – 12.00 **Changing paradigms: Making the transition towards a bio-based economy possible**

Piergiuseppe Morone, Dept. of Law and Economics, Unitelma Sapienza - University of Rome, Italy

12.00 – 13.00 Lunch

Exhibition Area

Wednesday, 3 June 2015

13.00 - 14.40 Parallel sessions

Henley Suite - Session 1A	Ridings Suite - Session 1B	Castle Howard Suite - Session 1C
<p>Biobased materials - I Chair: Carlos Vaca Garcia Université de Toulouse, FR</p> <p>13.00 – 13.25 Supported palladium catalysts for the conversion of furfuryl alcohol into 2-methylfuran at room temperature Gemma L. Brett, Cardiff Catalysis Institute, UK</p> <p>13.25 – 13.50 Physico-mechanical properties of enr-phenolic-glas fibre composite from liquified oil palm empty fruit bunch fibre (EFB) Sarani Zakaria, Universiti Kebangsaan, MY</p> <p>13.50 – 14.15 Enzymatic production of acetylated cello-oligomers from water-soluble cellulose acetate Stefanie Kluge, AVT - RWTH Aachen University, DE</p> <p>14.15 – 14.40 Supported gold catalysts for the selective oxidation of bio-renewable furfural Sarwat Iqbal, Cardiff Catalysis Institute, UK</p>	<p>Valorisation of biomass waste streams - I Chair: Apostolis Koutinas Agricultural University of Athens, GR</p> <p>13.00 – 13.25 Zirconia based catalysts for the valorisation of waste sugars Karen Wilson, Aston University, UK</p> <p>13.25 – 13.50 Microalgae cultivation using liquid waste streams from fruit and vegetables processing plants as growth medium for biomass and biofuel production Oscar Ivan Candia Avello, Centro de Estudios en Alimentos Procesados, CL</p> <p>13.50 – 14.15 Electro-fermentation: Production and recovery of volatile fatty acids from thin stillage with zero chemical input Stephen J. Andersen, Ghent University, BE</p> <p>14.15 – 14.40 Efficient bioconversion of glycerol to malate Joerg M Buescher, BRAIN AG, DE</p>	<p>Biomass fractionation and product purification Chair: Wim Soetaert Ghent University, BE</p> <p>13.00 – 13.25 Downstream processing and biorefinery separation challenges: New perspectives on chromatographic methods Vania Zuin, Federal University of São Carlos, BR</p> <p>13.25 – 13.50 Separation and purification, the missing link between biomass deconstruction and commercial product Anthony Lloyd, Novasep Process, UK</p> <p>13.50 – 14.15 Towards a sugar beet pulp biorefinery for high value chemicals manufacture Max Cardenas-Fernandez, University College London, UK</p> <p>14.15 – 14.40 Ketone-based organosolv fractionation of lignocellulosic biomass Raimo van der Linden, ECN, NL</p>

14.40 - 15.15 Coffee Break and Exhibition

Exhibition Area

15.15 - 15.45

Keynote Lecture 1: Sigma-Aldrich's greener alternatives platform

Jane Murray, Sigma-Aldrich, UK

Henley Suite

Henley Suite - Session 2A	Ridings Suite - Session 2B	Castle Howard Suite - Session 2C
<p>Biobased materials - II Chair: Carlos Vaca Garcia Université de Toulouse, FR</p>	<p>Bioactive compounds from biomass Chair: Avtar Matharu Green Chemistry Centre of Excellence, University of York, UK</p>	<p>Plant cell wall modification Chair: Simon McQueen-Mason University of York, UK</p>
<p>15.45 – 16.10 A sustainable freeze drying route to porous polysaccharides with tailored hierarchical meso- and macroporosity Mario De Bruyn, University of York, UK</p>	<p>15.45 – 16.10 Fruits and vegetables wastes: Potential sources for aromatic vegetal oils and flavored flours Thierry Talou, Université de Toulouse, FR</p>	<p>15.45 – 16.10 Engineering plants to generate more biomass, better suited for bioprocessing Simon Turner, University of Manchester, UK</p>
<p>16.10 – 16.35 Development of composite films based on achira starch, cellulose microcrystalline and natural antimicrobial agents for preserving double cream cheese slices Margarita María Andrade-Mahecha, National University of Colombia, CO</p>	<p>16.10 – 16.35 Bioactive carotenoids from peach palm fruit (bactris gasipaes) under different pre-treatments and storage condition Hugo Alexander Martínez-Correa, National University of Colombia, CO</p>	<p>16.10 – 16.35 Screening for novel genes to improve lignocellulosic biomass Leonardo Gomez, University of York, UK</p>
<p>16.35 – 17.00 Screening of microbial strains that possess the ability to simultaneously produce polyhydroxyalkanoates and rhamnolipids Constantina Kourmentza, University of Nova Lisboa, PT</p>	<p>16.35 – 17.00 Bioactive derived from biomass in the development of plant biostimulants Juan Carlos Cabrera, Materia Nova, BE</p>	<p>16.35 – 17.00 Identifying genetic factors linked to cell wall recalcitrance using an association genetic approach in a model grass population Caragh Whitehead, University, of York, UK</p>
<p>17.00 – 17.25 Fibre biocomposite stiff boards for sound proofing and thermal insulation Alessia Patrucco, ISMAC-ISTM, IT</p>	<p>17.00 – 17.25 Conversion of lignocellulosic sugars into glycolipid biosurfactants by yeasts Cesar Fonseca, LNEG, PT</p>	<p>17.00 – 17.25 Highly efficient production of nanocellulose from lignocellulosic biomass Matjaž Kunaver, National Institute of Chemistry, SI</p>

17.25 **Guided City Tour (see page 106)**19.00 **Welcome Reception at the Guildhall (see page 106)**

Welcome Address by Prof. Koen Lamberts, Vice-Chancellor, University of York, UK

Thursday, 4 June 2015

09.00 - 10.40 Parallel sessions

Henley Suite - Session 3A	Ridings Suite - Session 3B	Castle Howard Suite - Session 3C
<p>Biocatalysis for bioresource transformation - I Chair: Vania Zuin Federal University of São Carlos, BR</p>	<p>Bioproducts from woody biomass Chair: Simon McQueen-Mason University of York, UK</p>	<p>Chemical Platform Molecules - I Chair: Chris Stevens Ghent University, BE</p>
<p>09.00 – 09.25 Building a renewable chemicals business Preben Krabben, Green Biologics, UK</p>	<p>09.00 – 09.25 A biorefinery approach for new products based on wood David Blomberg, Processum, SE</p>	<p>09.00 – 09.25 Conversion of lignocellulosic biomass to the platform chemical 5-hydroxymethylfurfural in water David Steinbach, Karlsruhe Institute of Technology (KIT), DE</p>
<p>09.25 – 09.50 Demonstrating the feasibility and economic potential of enzymatic glycosylation at the Bio Base Europe Pilot Plant Emile Redant, Bio Base Europe Pilot Plant, BE</p>	<p>09.25 – 09.50 Plastics containing unprecedented 85–100% levels of methylated softwood lignin compare favourably with polystyrene Simo Sarkanen, University of Minnesota, US</p>	<p>09.25 – 09.50 Dehydration of fructose over sulfated titania silicates Selahattin Yilmaz, Izmir Institute of Technology, TR</p>
<p>09.50 – 10.15 Increased saccharification yields by inclusion of lytic polysaccharide monoxygenases in cellulase mixtures Svein Jarle Horn, Norwegian University of Life Sciences, NO</p>	<p>09.50 – 10.15 Characterization of kraft lignin from energy crops Carina Costa, University of Porto, PT</p>	<p>09.50 – 10.15 Green synthesis of succinic acid in heterogeneous catalysis Simona Margareta Coman, University of Bucharest, RO</p>
<p>10.15 – 10.40 Statistical analysis of Arundo donax saccharification by Pleurotus ostreatus cellulase and xylanase Vincenza Faraco, University of Naples “Federico II”, IT</p>	<p>10.15 – 10.40 Short-Chain Fatty Acids production through acidogenic fermentation of Hardwood Sulphite Spent Liquor Diogo Queirós, University of Aveiro, PT</p>	<p>10.15 – 10.40 Effect of trace element addition and pH value on the production of carboxylate platform chemicals from maize silage Heike Sträuber, UFZ – Helmholtz Centre for Environmental Research, DE</p>

10.40 - 11.15 Coffee Break and Exhibition

Exhibition Area

Henley Suite - Session 4A	Ridings Suite - Session 4B	Castle Howard Suite- Session 4C
<p>Pretreatment and transformation of lignocellulose – I Chair: Andrew Hunt University of York, UK</p>	<p>Bioenergy Chair: Cesar Fonseca LNEG, PT</p>	<p>Nutrient & energy cycling – I Chair: Erik Meers Ghent University, BE</p>
<p>11.15 – 11.40 Green chemical conversion of lignocellulosic biomass in QIBEBT Xindong Mu, QIBEBT, CN</p>	<p>11.15 – 11.40 The Acea Pinerolese experience in the management of municipal biowastes and research on their valorization as source of biofuel and added value products Davide Mainero, ACEA, IT</p>	<p>11.15 – 11.40 Towards a zero-cost-biorefinery using a new model library and global sensitivity analysis Céline Vaneckhoute, Université Laval, CA</p>
<p>11.40 – 12.05 Towards enzymatic pretreatment of lignocellulosic plant materials prior to saccharification Yi-ru Chen, University of Minnesota, US</p>	<p>11.40 – 12.05 Optimized conditions for enhanced ethanol production during carbon monoxide fermentation by clostridium autoethanogenum Harris Nalakath Abubakar, University of La Coruña, ES</p>	<p>11.40 – 12.05 Nitrogen mineralization potential of bio-based fertilizers Ivona Sigurnjak, Ghent University, BE</p>
<p>12.05 – 12.30 Factors affecting the recalcitrance of pretreated biomass to enzymatic digestion David Johnson, National Renewable Energy Laboratory, US</p>	<p>12.05 – 12.30 Cassava stem wastes as potential feedstock for fuel ethanol production Maogui Wei, Swedish University of Agricultural Sciences, SE</p>	<p>12.05 – 12.30 Phosphorus recovery from pig slurry and digestate in Flanders Viooltje Lebuf, Flemish Coordination Centre for Manure Processing (VCM vzw), BE</p>
<p>12.30 – 12.55 Biological treatment of lignocellulosic waste – wheat straw – in order to improve bio-methane production: Addition of selected hydrolytic rumen fungus (orpinomyces sp.) and hydrogen producing bacteria Giulia Massini, Laboratory of Biomass and Bioenergy, IT</p>	<p>12.30 – 12.55 Simultaneously methanogenesis facilitated and manganese oxides generated in anaerobic wastewater digestion by adding element manganese Sen Qiao, Dalian University of Technology, CN</p>	<p>12.30 – 12.55 Recycling nutrients and valorise side streams in local biorefineries Rommie van der Weide, WageningenUR, NL</p>

12.55 - 13.45 Lunch

13.45 - 14.45 **Poster Tour 1**

Exhibition Area

Exhibition Area

Henley Suite - Session 5A	Ridings Suite - Session 5B	Castle Howard Suite - Session 5C
<p>Biocatalysis for bioresource transformation – II Chair: Juan Garcia-Serna University of Valladolid, ES</p>	<p>Thermochemical transformations of biomass Chair: Karen Wilson Aston University, UK</p>	<p>Nutrient & Energy Cycling – II Chair: Erik Meers Ghent University, BE</p>
<p>14.45 – 15.10 Membrane reactors in process intensification of yeast biosurfactants production from sugars Marisa Santos, University of Lisbon, PT</p>	<p>14.45 – 15.10 Microwave technology – From lab to industrial scale Marilena Radoiu, SAIREM, FR</p>	<p>14.45 – 15.10 Valorization of food waste for bio-colorant (Monascus dye) production Md. Ariful Haque, City University of Hong Kong, HK</p>
<p>15.10 – 15.35 Transketolase and transaminase catalyzed upgrading of carbohydrates from sugar beet pulp Fabiana Subrizi, University College London, UK</p>	<p>15.10 – 15.35 Monitoring biomass autohydrolysis process using an on-line simple parameter Florescia M. Yedro, University of Valladolid, ES</p>	<p>15.10 – 15.35 Farmers' reasons to accept bio-based fertilizers: A choice experiment in 8 different European countries Juan Tur-Cardona, Ghent University, BE</p>
<p>15.35 – 16.00 Mixed cultures of fungi for conversion of lignocellulose into bioproducts Mette Lübeck, Aalborg University Copenhagen, DE</p>	<p>15.35 – 16.00 Multifunctional heterogeneous catalysts supported on CSPW for the conversion of biomass into low oxygenated biofuel Cherif Larabi, Université de Lyon, FR</p>	<p>15.35 – 16.00 Anaerobic co-digestion of dewatered sludge (DS) and food waste: Synergistic enhancement and digestate characterization Lei Zhang, Dalian University of Technology, Dalian, CN</p>
<p>16.00 – 16.25 Incubation at 25°C prevents acid crash and enhances alcohol production in clostridium carboxidivorans p7 Sara Ramió-Pujol, University of Girona, ES</p>	<p>16.00 – 16.25 Supercritical water gasification of microalgae in a continuous downflow reactor Giuseppe Caputo, University of Palermo, IT</p>	<p>16.00 – 16.25 Sustainable airport cities – Closing the phosphorus cycle at Amsterdam airport Schiphol Kees Roest, KWR Watercycle Research Institute, NL</p>

16.25 - 16.45 Coffee Break and Exhibition

Exhibition Area

Henley Suite - Session 6A	Ridings Suite - Session 6B	Castle Howard Suite- Session 6C
<p>Biorefineries – I Chair: James Clark Green Chemistry Centre of Excellence, University of York, UK</p>	<p>Chemical platform molecules – II Chair: Chris Stevens Ghent University, BE</p>	<p>Policy and standards Chair: Philippe Tavernier Development Agency of West Flanders (POM), BE</p>
<p>16.45 – 17.10 Building BioVale biorefineries Joe Ross, Biorenewables Development Centre, UK</p>	<p>16.45 – 17.10 Integrating bio based materials in the chemical value chain Alistair Reid, Akzo Nobel, UK</p>	<p>16.45 – 17.10 Policy options for a bio-based economy Michael Carus, Nova-institute, DE</p>
<p>17.10 – 17.35 Beyond dedicated crops: The waste bio refinery Federica Zaccheria, ISTM CNR, IT</p>	<p>17.10 – 17.35 Morphine – A sustainable platform molecule from biomass Nicholas Gathergood, Tallinn University of Technology, EE</p>	<p>17.10 – 17.35 Are there other methods than radiocarbon dating to determine the bio-based content of products? Ben van den Broek, Wageningen University, NL</p>
<p>17.35 – 18.00 Fractionation of hardwood biomass using modified hydrotropic treatment Konstantin Gabov, Abo Akademi University, FI</p>	<p>17.35 – 18.00 Olefinic biobased monomers Jacco van Haveren, Wageningen UR Food and Biobased Research, NL</p>	<p>17.35 – 18.00 End-of-life options for bio-based products: Current status and future challenges Lorenzo Herrero Davila, University of York, UK</p>
<p>18.00 – 18.25 Organic acids from lignocellulose: candida lignohabitans as a novel microbial cell factory Martina Bellasio, University of Natural Resources & Life Sources, AT</p>	<p>18.00 – 18.25 Base-catalyzed etherification and esterification of glycerol to polyglycerol and polyglycerol esters Joel Barrault, University of Poitiers, FR</p>	<p>18.00 – 18.25 Financial analysis of a biochemical sugar platform biorefinery Martin Kügemann, UNU Maastricht, NL</p>

20.00 Conference Dinner at the National Railway Museum (see page 106)

Friday, 5 June 2015

09.00 - 10.40 Parallel sessions

Henley Suite - Session 7A	Ridings Suite - Session 7B	Castle Howard Suite - Session 7C
<p>Biorefineries - II Chair: James Clark Green Chemistry Centre of Excellence, University of York, UK</p>	<p>Downstream processing Chair: Anthony Lloyd Novasep Process, UK</p>	<p>Valorisation of biomass waste streams – II Chair: Erick Vandamme Ghent University, BE</p>
<p>09.00 – 09.25 Green biorefinery concept producing local feed protein – Feasibility study and comparison of central vs. decentral implementation Morten Ambye-Jensen, Aarhus University, DK</p>	<p>09.00 – 09.25 Catalytic approaches for converting plant biomass to precursors for fuels, polymers, and lubricants Nathan Mosier, Purdue University, USA</p>	<p>09.00 – 09.25 Life+12 env/it000439 GreenWoolF: Green hydrolysis conversion of wool wastes into organic nitrogen fertilisers Rafaella Mossotti, Institute for Macromolecular Studies, IT</p>
<p>09.25 – 09.50 Improving the biorefinery process of rice bran Weibin Kong, Beijing University of Chemical Technology, CN</p>	<p>09.25 – 09.50 Fractionation of complex liquid mixtures using supercritical CO₂ with solid supports Ray Marriott, Bangor University, UK</p>	<p>09.25 – 09.50 Bioconversion of tomato paste byproduct into a value-added bacterial polysaccharide Filomena Freitas, Universidade Nova de Lisboa, PT</p>
<p>09.50 – 10.15 A robust oleaginous yeast as a platform for an industrial biorefinery Christopher Chuck, University of Bath, UK</p>	<p>09.50 – 10.15 Decarbonization of transportation fuels via co-hydroprocessing bio-based feedstocks with petroleum fractions Stella Bezerigianni, CERTH-CPERI, GR</p>	<p>09.50 – 10.15 Lactic acid fermentation based on residues from a sugar mill Joachim Venus, Leibniz-Institute for Agricultural Engineering, DE</p>
<p>10.15 – 10.40 Integrated biorefinery concepts for polypropylene production from palm oil and wood residues Merten Morales, ETH Zürich, CH</p>	<p>10.15 – 10.40 Microbial protein production from straw Filipe Silva, Avecom NV, BE</p>	<p>10.15 – 10.40 Comparison of different selection strategies for the bioconversion of crude glycerol derived from second-generation biodiesel Cristiano Varrone, Aalborg University, DK</p>

10.40 - 11.30 Coffee Break, Exhibition & Poster Tour 2

Exhibition Area

11.30 - 12.15 **Keynote Lecture 2: AICI3-catalyzed conversion of renewable carbohydrates into platform chemicals**
Changwei Hu, Key Laboratory of Green Chemistry and Technology, Ministry of Education, Sichuan University, P.R. China

Henley Suite

Henley Suite - Session 8A	Ridings Suite - Session 8B	Castle Howard Suite - Session 8C
<p>Pretreatment and transformation of lignocellulosics – II Chair: Joel Barrault University of Poitiers, FR</p>	<p>Micro and macro algae technology Chair: Andrew Ross University of Leeds, UK</p>	<p>Metabolic engineering of fermentation processes Chair: Marjan De Mey Ghent University, BE</p>
<p>12.15 – 12.40 Steam explosion pretreatment of cynara cardunculus for bioethanol production Ana M.R.B. Xavier, University of Aveiro, PT</p>	<p>12.15 – 12.40 Design of microalgal biorefinery: Challenges and opportunities Giuseppe Olivieri, Wageningen University, NL</p>	<p>12.15 – 12.40 Glycolipids-by-design: Advances in metabolic engineering production platform Magda Fajjes, IQS, University Ramon Llull, ES</p>
<p>12.40 – 13.05 Lignocellulose degradation for sustainable biofuel production - learning from marine wood borers Katrin Besser, University of York, UK</p>	<p>12.40 – 13.05 Extraction of lipids and functional components from wet algae by liquefied dimethyl ether Motonobu Goto, Nagoya University, JP</p>	<p>12.40 – 13.05 Metabolic engineering for itaconic acid production Michael Sauer, ACIB GmbH, AT</p>
<p>13.05 – 13.30 Extrusion methodology for biogas and bioethanol pretreatment of lignocellulosic biomasses Susanne F. Nielsen, Aarhus University, DK</p>	<p>13.05 – 13.30 Continuous hydrothermal liquefaction of microalgae and hydroprocessing of bio-crude to high quality fuels Patrick Biller, University of Leeds, UK</p>	<p>13.05 – 13.30 Metabolic modelling of cupriavidus necator DSM 545 in PHB production from glycerol Chenhao Sun, University of Manchester, UK</p>
<p>13.30 – 13.55 OrCaCel - OrganoCat plant and pulping combinations for the full valorization of lignocellulose from marginal land grown perennial plants Holger Klose, RWTH Aachen University, DE</p>	<p>13.30 – 13.55 Ultra-scale down techniques for predicting the centrifugal separation of algal flocs and their scale-up verification Hadiza Auta, University College London, UK</p>	<p>13.30 – 13.55 Assessment of hotelling's T² control charts based on reputed individual process status indicators to ease the monitoring of anaerobic reactors Sébastien Lemaigre, Luxembourg Institute of Science and Technology, LU</p>

13.55 - 14.00

Presentation of the 4th Golden Crop Award
Thierry Talou, Université de Toulouse, FR

Henley Suite

14.00 - 14.15

Closing Remarks and Presentation of RRB-12
Philippe Tavernier, Development Agency of West Flanders (POM), BE

Henley Suite

14.15 **Farewell Lunch**

Exhibition Area

15.00

Optional visit of the Green Centre of Excellence (GCCE) and Biorenewables Development (BDC) (see page 26)

Poster List – Poster Tour 1

Bioactive compounds from biomass

- P1 Extraction of flavored coriander vegetable oil through extrusion technology**
Evelien Uitterhaegen, O. Merah, T. Talou, C.V. Stevens, L. Rigal, P. Evon (FR & BE)
- P2 Chemical composition of fixed oils from Algerian *Nigella sativa* seeds biomass recovered after hydrodistillation**
Farid Benkaci-Ali, J.P. Wathelet, M. Marlier (DZ & BE)
- P3 Evaluation of different procedures for obtaining bioactive compounds from globe artichoke wastes**
Lia Gerschenson, E. Fissore, S. Bottini, A.M. Rojas, P. Hegel, C. Santo Domingo (AR)
- P4 Dietary fibre obtained from wastes of peach (*Prunus persica* L.) industrialization**
Lia Gerschenson, M.F. De Escalada Pla, J.E. Nieto Calvache (AR)
- P5 Supercritical CO₂ extraction of phenolic compounds from piñuela seed (*Bromelia plumieri*)**
Hugo Alexander Martínez-Correa, A.F. Rodríguez Ballesteros (CO)
- P6 Chitin and chitosan: From shellfish waste to a sustainable crop protection**
Maha Attjioui, N.E. El Gueddari, B. Moerschbacher, N. Chtaina (DE & MA)
- P7 Influence of operating conditions of flash distillation on the recovery of 1,8 cineole from eucalyptus extract**
D.J. Agudelo, L.M. Díaz, M.A. Gómez, Y.M. Melo, M.M. Andrade-Mahecha, Hugo Alexander Martínez-Correa (CO)
- P8 Evaluation of agro-industrial and synthetic carriers for immobilization of *Aureobasidium pullulans* cells for fructooligosaccharides production**
Cristiana C. Castro, C. Nobre, M.E. Duprez, A.L. Hanston, G. De Weireld (BE & PT)
- P9 Optimisation of extraction and analysis of red yeast rice**
Hannes Sels, M. Bartels, J. Geuens (BE)
- P10 Supercritical fluid extraction of carrot peels**
Micael De A. Lima, A. Chatzifragkou, D. Charalampopoulos (UK)

Biobased materials

- P11 Novel amphiphilic cellulose microbeads**
Poonam Trivedi, J. Trygg, P. Fardim (FI)
- P12 Chemo-enzymatic syntheses and polymerizations of bio-based aromatic monomers derived from ferulic acid: An access to novel renewable copolyesters, polyurethanes, polyphenols and poly(ester-alkenamer)s**
F. Allais, F. Pion, A.F. Reano, M.Z. Oulame, I. Barbara, Amandine Flourat, P.H. Ducrot (FR)
- P13 Conversion of olive oil destillate into mcl-PHA by *P. resinovorans***
M. Cruz, D. Araújo, Filomena Freitas, V.D. Alves, M.A.M. Reis (PT)
- P14 Efficient cellulose dissolution in organic electrolyte solutions**
Remigius Wirawan, M. Johns, D.A. Patterson, J.L. Scott (UK)
- P15 Characterization of the chitin-glucan complex extracted from *Komagataella pastoris* cell wall**
I. Farinha, P. Duarte, A. Pimentel, E. Plotnikova, B. Chagas, L. Mafra, C. Grandfils, Filomena Freitas, E. Fortunato, M.A.M. Reis (PT & BE)
- P16 Edible coating based on achira starch, microcrystalline cellulose and garlic oil for extending shelf life of double cream cheese**
Margarita María Andrade-Mahecha, J.B. Molina Hernandez, A.M. Gutiérrez Terán, H.A. Martínez-Correa (CO)
- P17 Evaluating edible coatings based on achira starch, microcrystalline cellulose and oregano oil on the quality of double cream cheese**
Margarita María Andrade-Mahecha, A. Echeverri-Castro, J.B. Molina Hernandez, A.M. Gutiérrez-Terán, H.A. Martínez-Correa (CO)

- P18 Exploring mannosylerythritol lipids as highly versatile biosurfactants**
S. Zibek, M. Günther, Paula Carillo-Riveros, T. Hirth, S. Rupp (DE)
- P19 Purification and biocatalytic enhancement of the fermentation product of *Pseudozyma aphidis*: Mannosylerythritol lipid biosurfactants**
Eliane Goossens, F. Lemière, M. Wijnants (BE)
- P20 Enzymatic synthesis of poly (glycerol sebacate) from crude glycerol**
B. Godinho, R. Santos, N. Gama, R. Silva, Artur Ferreira (PT)

Biocatalysis for bioresource transformation

- P21 Catalytic synthesis of a novel transport fuel substitute from industrially produced fermentation broths**
Joseph Donnelly, C.J. Chuck, P. Dominguez de Maria (UK & DE)
- P22 Thermal stability of immobilized biocatalysts by sol-gel techniques**
Cristina Paul, P. Borza, F. Péter (RO)
- P23 Sour orange's (*Citrus aurantium var Amara*) peel essential oil biotransformation by yeasts**
Gelson Jose Andrade Conceicao, J.F. Santana, L.G. Sia, E.S. Kamimura (BR)
- P24 Production of high value succinic acid from acid hydrolysed fructan in rye grass juice by *Actinobacillus succinogenes***
N. Nazly Kaderbhai, A.L. Winters, Joseph B. Gallagher, A. Charlton (UK)

Bioenergy

- P25 The feasibility of using upland hay meadow vegetation for anaerobic digestion**
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