

# 12<sup>th</sup> Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry

Dortmund, Germany, June 03 – 05, 2024  
Hotel Dorint An den Westfalenhallen, Room Picasso 1-3

## Monday, June 03, 2024

### Registration

*Registration will be open from 15:00 - 19:00*

15.45	<b>Welcome and Opening</b>
16.00 – 17.30	<i>First Session</i>
16.00 – 16.30	<b>Conversion of Fatty Acids Using Alpha-Dioxygenases and Engineered Lipxygenases to Valuable Compounds (M)</b>
L1	<u>Uwe Bornscheuer</u> , University of Greifswald, Greifswald, Germany
16.30 – 17.00	<b>Provision of Medium-Chain Fatty Acids (C12 - C18) from Local Circular Economy with Insect Biotechnology (M)</b>
L2	<u>Heinrich Katz</u> , Hermetia Baruth GmbH, Baruth, Germany
17.00 – 17.30	<b>Polyfunctional Renewable Monomers and (their Multicomponent Reaction Derived) Thermosets (M)</b>
L3	<u>Michael A. R. Meier</u> , KIT, Karlsruhe, Germany
18.30 – 21.00	<b>Opening Mixer and Poster Session</b>
	<b>Introduction to Poster Session</b>
	<u>Thomas Seidensticker</u> , TU Dortmund University, Dortmund, Germany

Posters will be displayed until the end of the workshop

(M) Main Lecture 30 min. including discussion  
(D) Discussion Lecture 20 min including discussion

## Tuesday, June 04, 2024

- 9.00 – 10.30 *First morning session*
- 9.00 – 9.30 **VerBioChem – Ethenolysis as a New Tool for the Chemical Industry (D)**  
L4 Andreas Kohl, Verbio, Leipzig, Germany
- 9.30 – 10.00 **Biobased Chemically Recyclable Aliphatic Polyesters Prepared by Metathesis Polymerization (M)**  
L5 Kotohiro Nomura, Tokyo Metropolitan University, Hachioji, Tokyo, Japan
- 10.00– 10.20 **Towards Practical Applications: Ethenolysis of Technical Methyl Oleate and FAME with Ruthenium Catalysts at Part-Per-Million Level (D)**  
L6 Karol Grela, University of Warsaw, Warsaw, Poland
- 10.20 – 10.40 **For a World That's Bright, Use the Biodiesel Right, Don't Ignite – A Renewable Platform Chemical Enabled by Partial Hydrogenation (M)**  
L7 Thomas Roth, Alexander Kühl, M. L. Spiekermann, H. W. Wegener, Dieter Vogt, Thomas Seidensticker, TU Dortmund University, Dortmund, Germany
- 10.40 – 11.10 *Coffee break*
- 11.10 – 12.50 *Second morning session*
- 11.10– 11.40 **Quo vadis Photodecarboxylase? (M)**  
L8 Frank Hollmann, Delft University of Technology, Delft, The Netherlands
- 11.40 – 12.10 **Nylon-12 from Safflower Oil? A Biocatalytic Concept Study (M)**  
L9 Anna Coenen, Valentin Gala Marti, Ulrich Schörken, TH Köln, Leverkusen, Germany
- 12.10 – 12.30 **Feedstock- and Product Diversification Technologies for Yeast Oil Production en-route to Commercialization (D)**  
L10 Jan Lorenzen, Thomas Brück, Technical University of Munich, Garching, Germany
- 12.30 – 12.50 **Oleic Acid-Based Biodegradable Lubricants: Synthesis via Hydroformylation and Enzymatic Oligomerization & Rheological properties (D)**  
L11 Luisa Koch,<sup>1</sup> Alina Guntermann,<sup>1</sup> Katharina Hirschbichler,<sup>2</sup> Carmen Plass,<sup>1</sup> Tobias Betke,<sup>1</sup> Ling Ma,<sup>2</sup> Thomas Kiltbau,<sup>2</sup> Harald Gröger,<sup>1</sup>  
<sup>1</sup> Bielefeld University, Bielefeld, Germany;  
<sup>2</sup> Klüber Lubrication München GmbH & Co. KG, München, Germany
- 12.50 – 14.00 *Lunch break*

- 14.00 – 15.30 *First afternoon session*
- 14.00 – 14.30 **Exploring Bio-based Chemical Markets: Focus on Production and Feedstock Use in the EU (M)**  
L12 Viktorya Sturm, Thünen-Institute of Market Analysis, Braunschweig, Germany
- 14.30 – 14.50 **Sustainability Without Performance Compromise: Novel surfactants solutions (D)**  
L13 Poorva Ramadas, Clariant Produkte (Deutschland) GmbH, Burgkirchen, Germany
- 14.50 – 15.10 **Synthesis, Characterization, and Evaluation of Antibacterial Properties and Anion Removal Properties of Cationic Derivatives of Waste Cooking Oils (WCOs) (D)**  
L14 Gökhan Çayli, Istanbul University-Cerrahpasa, Istanbul, Turkey
- 15.10 – 15.30 **Influence of Branching on the Physicochemical Properties of Saturated Fatty Acid Esters Synthesized from Linear and Branched Diols (D)**  
L15 Michele Emanuele Fortunato, Rosa Vitiello, Vincenzo Russo, Francesco Taddeo, Martino Di Serio, University of Naples Federico II, Napoli, Italy
- 15.30 – 16.00 *Coffee break*
- 16.00 – 17.40 *Second afternoon session*
- 16.00 – 16.30 **Biobased Polycarbonates – Candidates for a Novel Class of Sustainable Engineering Plastics? (M)**  
L16 Andreas Greiner, University of Bayreuth, Bayreuth, Germany
- 16.30 – 17.00 **Fatty Acid and Terpene Oxides as Versatile Precursors for Biobased Engineering Macromolecules (M)**  
L17 Francesco Della Monica,<sup>1</sup> Arianna Brandolese,<sup>1</sup> Ilaria Grimaldi,<sup>1</sup> Lorenz Dittrich,<sup>1</sup> Carles Bo,<sup>1</sup> Alba Villar-Yanez,<sup>1</sup> Fernando Bravo,<sup>1</sup> Arjan W. Kleij,<sup>1,2</sup>  
<sup>1</sup> Institute of Chemical Research of Catalonia (ICIQ-Cerca),  
<sup>2</sup>Barcelona Institute of Science & Technology (BIST), Tarragona, Spain
- 17.00 – 17.20 **Terpene-Based Hybrid Polycarbonates via Co/Terpolymerization of Biobased Epoxides and CO: Access to Cross-Linked Polycarbonates with Enhanced Thermal Stability and Functionality (D)**  
L18 Thirusangumurugan Senthamarai,<sup>1</sup> Arjan W. Kleij,<sup>1,2</sup>  
<sup>1</sup> Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain;  
<sup>2</sup> Catalan Institute of Research and Advanced Studies (ICREA), Barcelona, Spain

17.20 – 17.40 **Vegetable Oil-Based Hyperbranched Materials – Synthesis and Derivatization Towards New Properties (D)**

L19 Guillaume Chollet,<sup>1</sup> Marie Reulier,<sup>1</sup> Etienne Grau,<sup>2</sup> Henri Cramail,<sup>2</sup> Boris Bizet,<sup>1</sup>

<sup>1</sup>ITERG, CANEJAN, France ;<sup>2</sup>LCPO, Université de Bordeaux – CNRS – PESSAC, France

19.00 *Conference Dinner*  
**Restaurant Davidis**

## Wednesday, June 05, 2024

9.00 – 10.30 *First morning session*

9.00 – 9.30 **New (Sustainable) Pathways to Integrate Sulfur Functional Groups into Renewable Based Polymers (M)**

L20 Cuong-Minh-Quoc Le, Adam Woodhouse, Yagmur Deniz Karatas, Bercis Pektas, Rayane Toutaoui, Gautier Schrodj, Hatice Mutlu, CNRS/Université de Haute Alsace, Mulhouse, France

9.30 – 9.50 **Optimisation of the RAFT Polymerisation of Pendant Fatty Acid Acrylamide Monomers Synthesised via the Base Catalysed Transesterification of Plant Oils (D)**

L21 Oliver Harris, Ryan Larder, Helen Willcock, Fiona Hatton, Loughborough University, Loughborough, United Kingdom

9.50 – 10.10 **Non-Isocyanate Polyurethanes from Terpene and Erythritol Feedstock using Organocatalysis and Thiol-Ene Reaction (D)**

L22 Clara Scheelje, Michael A. R. Meier, KIT, Karlsruhe, Germany

10.10 – 10.30 **Fatty Acid Valorization via Isomerizing Metathesis and Decarboxylative Ketonizations (D)**

L23 Lukas Gooßen, University of Bochum, Bochum, Germany

10.30 – 11.00 *Coffee Break*

11.00 – 12.30 *Second morning session*

11.00 – 11.30 **Homogeneous Catalysis for the Functionalization of Oleochemicals and Their Derivatives Into Value-Added Products (M)**

L24 Sébastien Tilloy, Université d'Artois, CNRS, Lens, France

11.30 – 12.00 **Photoexcited Nitroarenes as Ozone Surrogates. (M)**

L25 Daniele Leonori, RWTH Aachen University, Aachen, Germany

12.00 – 12.30 **Fats and Oils - An Important Part of Transforming Chemistry to a Circular Economy (M)**

L26 Manuel Häußler, Max-Planck-Institute of Colloids and Interfaces (MPI-CI), Potsdam, Germany and Center for the Transformation of Chemistry (CTC)

12.30 – 12.45

**Best Poster Award and Closing Remarks**

12.45

**End of Workshop**, followed by *Closing Lunch*