

4th Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry

Karlsruhe, Germany, March 20 – 22, 2011

<http://www.abiosus.org/kit-workshop-2011.html>

Sunday, March 20, 2011

Registration

Registration will be opened from 13:00 - 19:00

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| 15.30 | Welcome and Opening |
| 16.00 – 17.30 | <i>First Session</i> |
| 16:00 – 16:30
L1 | Selective transformation of biomass and biogenic platform molecules. (M)
<u>Walter Leitner</u> , RWTH Aachen, Germany |
| 16.30 – 17.00
L2 | Determining the Greenness of Chemical Syntheses. (M)
<u>Marco Eissen</u> , Ganderkesee, Germany |
| 17.00 – 17.30
L3 | Engineered Lipids Produced by Microbes and their Use in Biobased Materials. (M)
<u>Richard Gross</u> , Polytechnic University, Brooklyn, NY, USA |
| 17.30 – 18.00
L4 | Novel Bio-based Plastics, Composites and Coatings from Agricultural Oils and By-products. (M)
<u>Richard Larock</u> , Iowa State University, Ames, IA, USA |
| 18.00 – 20.30 | Poster session and Opening Mixer.
Posters will be displayed until the end of the workshop |

(M) Main Lecture 30 min including discussion

(D) Discussion Lecture 20 min including discussion

Monday, March 21, 2011

8.30 – 10.00 *First morning session*

8.30 – 9.00
L5 **Monomers and commodity chemicals from oleochemicals.** (M)
David J. Cole-Hamilton, Ruben Duque, Ronan le Goff, Marc Furst, Juma Mmongoyo, University of St. Andrews, U. K., and Quintino Mgani, University of Dar-es-Salaam, United Republic of Tanzania

9.00 – 9.20
L6 **Linear Semicrystalline Polycondensates from Plant Oils.** (D)
Florian Stempfle, Dorothee Quinzler, Ilona Heckler, Stefan Mecking, Universität Konstanz, Germany

9.20 – 9.40
L7 **New ways to polymerize castor oil derived platform chemicals.** (D)
Oliver Kreye, Michael A. R. Meier, Karlsruhe Institute of Technology, Germany

9.40 – 10.00
L8 **Catalyst recycling in carbonylation reactions of fatty acids.** (D)
Andreas J Vorholt, Arno Behr, TU Dortmund, Germany

10.00 – 10.30 **Coffee break**

10.30 – 12.20 *Second morning session*

10.30 – 11.00
L9 **Green Approaches toward Plant-derived Monomers and Polymers via Thiol-Ene Click Chemistry.** (M)
Gerard Lligadas, Cristina Lluch, Rodolfo J González, Enrique del Rio, Juan C Ronda, Marina Galià, Virginia Cádiz, University Rovira i Virgili, Tarragona, Spain

11.00 – 11.20
L10 **Synthesis of biobased polyols by click chemistry from vegetable oils and their derivatives.** (D)
Sylvain Caillol, Myriam Desroches, Bernard Boutevin, Remi Auvergne, ENSCM, Montpellier, France

11.20 – 11.40
L11 **Branched macromolecules from plant oils: Towards greener strategies.** (D)
Lucas Montero de Espinosa, Michael A. R. Meier, Karlsruhe Institute of Technology, Karlsruhe, Germany

- 11.40 – 12.00 **Selectivity in Sorption and Hydrogenation of FAMES and Triglycerides on MFI Zeolites. (D)**
L12 An Philippaerts,¹ Sabine Paulussen,¹ Stuart Turner,² Oleg I. Lebedev,² Gustaaf van Tendeloo,² Pierre Jacobs,¹ Bert Sels,¹
¹K.U.Leuven, Heverlee, Belgium; ² University of Antwerp, Antwerpen, Belgium
- 12.00 – 12.20 **Electrochemical Conversion of Fatty Acids and Other Renewables. (D)**
L13 Hans J. Schäfer, University of Münster, Germany
- 12.20 – 14.00 **Lunch break**
- 14.00 – 15.40 *First afternoon session*
- 14.00 – 14.30 **Optimizing wax ester production in oil seed-crops. (M)**
L14 Ivo Feußner, University of Göttingen, Germany
- 14.30 – 14.50 **Continuous Production of 1,3-Propanediol Using Waste Glycerol with Clostridium Beijerinckii NRRL B-593 Immobilized on Glass Beads and Glass Rushing Rings. (D)**
L15 Nuri Azbar, Mine Gungormusler, Cagdas Gonen, Ege University, Izmir, Turkey
- 14.50 – 15.20 **Process Development and Environmental Assessment of Chemoenzymatic One-Pot Processes. (M)**
L16 Harald Gröger, University of Erlangen, Germany
- 15.20 – 15.40 **Chemical Modifications of Sterculia foetida Oil to Highly Branched Products. (D)**
L17 Louis Daniel,¹ H. H. van de Bovenkamp,¹ Teddy Buntara,¹ Siti Maemunah,¹ Gerard Kraai,¹ I. G.B.N. Makertihartha,² Robert Manurung,² Hero J. Heeres,¹ ¹ University of Groningen, Netherlands; ² Bandung Institute of Technology, Indonesia
- 15.40 – 16.10 **Coffee break**

- 16.10 – 18.10 *Second afternoon session*
- 16.10 – 16.40 **Latent Heat Characteristics of Oleochemical Carbonates and their Eutectic Mixtures as Potential Phase Change Materials.** (M)
L18 Jim Kenar, USDA-ARS-NCAUR, Peoria, IL, USA
- 16.40 – 17.00 **Auto-organization and polymorphism properties of pure short and medium chain monoglycerides and glycerol carbonate esters.** (D)
L19 Romain Valentin, Zéphirin Mouloungui, INRA, France
- 17.00 – 17.30 **What is Meant by 'Bio'? The Use of Renewable Raw materials for Lubricants Business.** (M)
L20 Rolf Luther, Fuchs Europe Schmierstoffe GmbH, Mannheim, Germany
- 17.30 – 17.50 **New heterogeneous catalysts for the production of biodegradable lubricants.** (D)
L21 Federica Zaccheria,¹ Nicola Scotti,² Nicola Scotti,³ Gabriele Ricchiardi,³ Nicoletta Ravasio,¹ Rinaldo Psaro,¹ ¹ CNR ISTM, Italy; ² CNR ISTM; ³ NisLabVCO, Italy
- 17.50 – 18.10 **Novel Gemini Surfactants Based on Hydroxycarboxylic Acids.** (D)
L22 Rachid Ihizane, Hans-Josef Altenbach, Manfred P. Schneider, Bernd Jakob, Karsten Lange, and Sukhendu Nandi, University of Wuppertal, Germany
- 19.30 *Conference Dinner*
Renaissance Karlsruhe Hotel

Tuesday, March 22, 2011

8.30 – 10.20 First morning session

- 8.30 – 9.00
L23 **Biodegradable Polymers for Packaging Applications.** (M)
Andreas Künkel, BASF, Ludwigshafen, Germany
- 9.00 – 9.30
L24 **Fatty Acid Methyl Esters as Reactive Diluents in Thermoset Coatings.** (M)
Mats K. G. Johansson, KHT, Stockholm, Sweden
- 9.30 – 9.50
L25 **Biohybrid Silver Nanocomposites as Antimicrobial Surface Coating Materials.** (D)
Deewan Akram,^{1,2} Eram Sharmin,¹ Sharif Ahmad,¹
¹Materials Research Lab., Dept. of Chemistry, Jamia Millia Islamia, New Delhi, India; ²Dept. of Chemistry, Faculty of Science, Jazan University, Jazan, Kingdom of Saudi Arabia
- 9.50 – 10.20
L26 **Production of polyglycerol from renewable sources.** (M)
Marc A. Dubé, University of Ottawa, Canada
- 10.20 – 11.00 **Coffee Break**
- 11.00 – 12.30 Second morning session*
- 11.00 – 11.30
L27 **Glycerol as solvent: a new tool for the design of environmentally friendly catalytic processes.** (M)
F. Jerome, M. Delample, J. Barrault; CNRS-LACCO, Poitiers, France, and J.P. Douliez, BIA-INRA, Nantes, France
- 11.30 – 11.50
L28 **Glycerol/Water Phase as Green Reaction Media for Hydrophobic Bioactive Chelating.** (D)
Zéphirin Mouloungui, Bachar Zebib, University of Toulouse, France
- 11.50 – 12.10
L29 **Acid catalyzed dehydration of glycerol to acrolein.** (D)
Andreas Martin, Hanan Atia, Udo Armbruster, Leibniz-Institut für Katalyse e.V, Rostock, Germany

12.10 – 12.30	New catalysts and processes for the selective synthesis of glycerol ethers or esters. (D)
L30	S. Valange, M.Sivaiah, <u>J.Barrault</u> ; CNRS-LACCO, and S. Petit, CNRS-HYDRASA, Poitiers, France
12.30 – 14.00	Lunch break
14.00 – 16.00	<i>Afternoon session</i>
14.00 – 14.30	Epoxidized Sucrose Ester Resins: A New Highly Functional Biobased Epoxy Resin for Thermosets. (M)
L31	<u>Dean Webster</u> , North Dakota State University, Fargo, ND, USA
14.30 – 14.50	Epoxidation of methyl oleate over Ti(IV) -grafted silica catalysts with hydrogen peroxide.(D)
L32	<u>Elena Gavrilova</u> , ¹ Matteo Guidotti, ¹ Rinaldo Psaro, ¹ Anne Galarneau, ² Nicoletta Ravasio, ¹ ¹ Università degli studi di Milano, Milano, Italy; ² Institut Charles Gerhardt Montpellier, France
14.50 – 15.10	Synthesis of Oleochemical Derivatives via Zinc (II) perchlorate hexahydrate Catalysed Ring Opening Reactions and Co-halogenation on Olefinic Fatty Substrates. (D)
L33	<u>Sukhprit Singh</u> , Guru Nanak, Avinash Bhadani, Raman Kamboj, Bhupinderpal Singh, Dev University, Amritsar, India
15.10 – 15.40	Production, Technologies and Applications of Fatty Alcohols (M)
L34	<u>Klaus Noweck</u> , Brunsbüttel, Germany
15.40	Poster Award and Closing Remarks
	Best Poster Award Award committee
	Closing remarks Michael A. R. Meier
16.00	End of Workshop