

Tailor-Made Fuels

From Production to Propulsion

4th International Conference

Program

June 21st – 23rd, 2016 / Eurogress, Aachen



www.fuelcenter.rwth-aachen.de

with support of



Tuesday, 21.06.2016

Brüsselsaal: **Keynote Session**

08:30
15 min.

Welcome and Introduction **S. Fischinger** / RWTH Aachen University

08:45
45 min.

“Electrofuels” – Electrochemistry as a Tool for a Sustainable Biofuel Synthesis **U. Schröder** / Technical University Braunschweig

09:30
45 min.

Low Temperature Depolymerisation of Lignin. Where are the Bottlenecks? **J. de Vries** / University of Rostock

 **10:15**

Coffee Break

Brüsselsaal: **Fuel Design**

10:45
30 min.

RON Prediction Models for the New Fuels and Vehicles Systems Optima Initiative **C. Hudson** / Sandia National Laboratories

11:15
30 min.

Green Toxicology for Green Biofuels – Integrating Bioassays in the Development of Novel Fuels **S. Heger** / RWTH Aachen University

11:45
30 min.

Synthesis, Formulation and Combustion of Ethanollic Fuels from Lignocellulose **S. Dooley** / University of Limerick

12:15
30 min.

Tailoring Solvents for Energy-Efficient Production of Bio-Based Platform Chemicals **J. Scheffczyk** / RWTH Aachen University

 **12:45**

Lunch Break

Brüsselsaal: **Selective Biomass Conversion**

13:45
30 min.

Solvent Effects in Carbohydrate-Based Biomass Conversion with Porous Catalysts **L. Qi** / University of California

14:15
30 min.

Recombinant Acetone Production in E.coli **D. Bittner** / Westfälische Hochschule Recklinghausen

14:45
30 min.

Oxidative Dehydrogenation of Lactic Acid Over MoO₃-TiO₂ Catalysts **K. Liu** / Eindhoven University

15:15
30 min.

Light Naphtha Alkanes from (Ligno)Cellulose: a Chemocatalytic Approach **A. Deneyer** / KU Leuven

 **15:45**

Coffee Break

Poster Session

16:00
60 min.

 **17:00**

Coffee Break

Brüsselsaal: **Keynote Session**

17:15
45 min.

The Outlook for Fuels for Internal Combustion Engines **G. Kalghatgi** / Saudi Aramco, Dhahran, Saudi Arabia

 **18:00**

Evening Reception - Soccer, Snacks and Drinks at the Eurogress

Wednesday, 22.06.2016

Brüsselsaal: **Keynote Session**

08:30
45 min.

Better Biofuel Blending – Strategies for Optimal Blending of Biofuels with Petroleum Fuels to Improve Engine Combustion Performance **R. Dibble** / King Abdullah University of Science and Technology

09:15
45 min.

Combustion Challenges in Designing Fuels for Modern Engines **R. Cracknell** / Shell Global Solutions, UK

 **10:00**

Coffee Break

Brüsselsaal: **Biomass Fractionation**

10:30
30 min.

Intensify Electrochemical Lignin Depolymerisation by Ceramic Membranes **D. Di Marino + R. Sengpiel** / RWTH Aachen University

11:00
30 min.

Catalytic Reductive Fractionation of Lignocellulose: Concept and Process Optimization **T. Renders** / KU Leuven

11:30
30 min.

Understanding Cellulose Dissolution Using Molecular Simulation **Ph. Grande** / RWTH Aachen University

12:00
30 min.

Renewable Gasoline and Diesel from Solid Waste Biomass by Thermo-Catalytic Reforming and Refining **J. Neumann** / Fraunhofer Umsicht

 **12:30**

Lunch Break

Brüsselsaal: **Keynote Session**

13:30
45 min.

Emission Neutrality in the Transport Sector **H. Pengg** / Audi AG

 **14:15**

Coffee Break

Brüsselsaal: **Fuels from Renewable Electricity**

14:45
30 min.

BTL and PTL Processes – Two Options for Future Fuel Production **R. Peters** / Forschungszentrum Jülich

15:15
30 min.

Technical and Environmental Comparison of Options for Introducing Renewable Hydrogen **D. Bongartz** / RWTH Aachen University

15:45
30 min.

Electrofuels: a Review of Pathways and Production Costs **M. Grahn** / Chalmers University of Technology

 **16:15**

Coffee Break



Wednesday, 22.06.2016

Brüsselsaal: **From Biomass to Biofuels**

Biotechnological Production of Itaconic Acid Via in Situ Product Removal by Reactive Extraction, Back Extraction and Crystallization **A. Eggert** / RWTH Aachen University

Lignocellulosic Butanol Production from Corn-Cobs, Switchgrass and Phragmites **L. Rehmann** / Western University of Ontario

Simple Lignin Conversion to Marine Diesel
J. Nielsen / Technical University of Denmark

Algae as Advanced Biofuels
D. Behrendt / Forschungszentrum Jülich

K2: **Biomass Processing**

Tackling Major Challenges of 2,5-Dimethylfuran Production: 5-Hydroxymethylfurfural Extraction and Catalyst Design **L. Blumenthal** / RWTH Aachen University

Multi-Scale Processes During Liquid Wood Disintegration and Pretreatment in Ionic Liquids
J. Viell / RWTH Aachen University

Scale-up and Optimization of Catalytic Biomass Processing **D. Pufky-Heinrich** / Fraunhofer CPB

Computational Minimization of the Specific Energy Demand of Large-Scale Aerobic Fermentation Processes Based on Small-Scale Data
D. Kreyenschulte / RWTH Aachen University

forumM, Buchkremerstrasse 1-7: **Conference Dinner**

Thursday, 23.06.2016

Brüsselsaal: **Keynote**

BioRefinery: New Jobs with Limited Capital Requirements at Small Scale and High Rates of Innovation to Limit Climate Change under Economic Conditions

J. Sanders / Wageningen UR

Brüsselsaal: **TMFB Report 1**

TMFB Status Update Integrated Research Field A "From Biomass to Biofuels"

W. Leitner / RWTH Aachen University

Coffee Break

Brüsselsaal: **TMFB Report 2**

TMFB Status Update Integrated Research Field B "From Biofuels to Propulsion"

H. Pitsch / RWTH Aachen University

TMFB Status Update Core Interaction Field "Fuel Design"

S. Pischinger / RWTH Aachen University

Closing Remarks

S. Pischinger / RWTH Aachen University

Lunch Break

End of the Public Part of the Conference

K2: **IAB – Meeting of the TMFB International Advisory Board**

16:45
30 min.

17:15
30 min.

17:45
30 min.

18:15
30 min.

 **19:30**

08:30
45 min.

09:15
45 min.

 **10:00**

10:30
45 min.

11:15
45 min.

12:00
15 min.

 **12:15**

13:30