10th International Conference
“Fuel Science - From Production to Propulsion”

Program

Eurogress / Monheimsallee 48, 52062 Aachen
May 10 to 12, 2022
TUESDAY, 10.05.2022

08:00 Registration

Brüsselsaal: Keynote Session I

08:30 Welcome and Introduction Malte Brettel, Stefan Pischinger | RWTH Aachen University

08:50 Keynote I Transformation of European Mobility to GHG Neutrality (Results of FVV Fuels Study IV) Ulrich Kramer | Ford Motor Company

09:35 Keynote II e-Fuels - Hype or Solution? Armin Schnettler | Siemens Energy

10:20 Coffee Break

Brüsselsaal: System Perspective I

10:45 Synthetic Fuels in Transport, Aviation and Shipping – Opportunities and Challenges Sandra Richter | German Aerospace Center

11:10 The Alternative Fuels Market in Europe 2025 and Beyond Robert Jungnickel | RWTH Aachen University

11:35 Development of Liquid Fuels and Energy Ports in Transition Oskar Johansson | Chalmers University of Technology

12:00 Production Cost of E-Fuels Under Different Electricity Price Scenarios Maria Grahn | Chalmers University of Technology

12:25 Lunch Break

Brüsselsaal: Fuel Design

13:25 Towards Characteristic Fuel Numbers for Molecularly-Controlled Combustion Systems Marcel Neumann | RWTH Aachen University

13:50 Comparison of Probabilistic Property Models for the Prediction of Jet Fuel Properties Clemens Hall | German Aerospace Center

14:15 Molecular Design of Spark-Ignition Engine Fuels for Maximal Engine Efficiency Philipp Ackermann | RWTH Aachen University

14:40 Coffee Break

Brüsselsaal: Fuel Combustion I


16:00 Ultra-Low Pollutants and CO₂ Emissions on Demonstrator Vehicles With Advanced Emission Controls and Sustainable Renewable Fuels. Joachim Demuynck | Association for Emissions Control by Catalyst

16:25 Ducted vs. Conventional Diesel Combustion with a Sustainable Hydrocarbon Diesel Fuel and Alkoxalkanoate Blends at Idle and Moderate-Load Conditions Gustav Nyrenstedt | Sandia National Laboratories

16:50 A Decade of Engine Experiments – Efficiency Walk in RWTH Fuel Science Throughout the Years Patrick Burkardt | RWTH Aachen University

17:15 Foyer: Poster Party
Registration
08:00

Brüsselaal: Keynote Session II
08:30
Keynote III Carbon2Chem: Circular C-Sources for Fuels and Chemicals Markus Oles | thyssenkrupp AG
Keynote IV Chemical Hydrogen Storage - Towards a Hydrogen-free Hydrogen Economy Peter Wasserscheid | Forschungszentrum Jülich

Coffee Break
10:00

Brüsselaal: Fuel Synthesis I
10:30
Composite Porosity Mixer Electrodes from Selective Laser Sintering Alexander Limper | RWTH Aachen University
Separation of Diols, Polyols, and Saccharides from Aqueous Solutions Based on Reversible Complexation With Phenylboronates Irina Delidovich | Technische Universität Wien
Biphasic Electrochemical Synthesis of FDCA from HMF Tobias Harhues | RWTH Aachen University
A Microfluidic Platform to Determine Thermophysical Property Data of Synthetic Fuels and Their Production Pathways Felix Weißenberg | RWTH Aachen University

Coffee Break
11:10

Brüsselaal: Fuel Synthesis II
11:45
Investigations on the HMF Electroreduction to Fuel Precursors Ricarda Kloth | Forschungszentrum Jülich GmbH
Flexible Electrochemical Flow-Cell Concept: New Perspectives for Electrochemical Fuel Production Maria Padligur, Jonas Bäßler | RWTH Aachen University
Acceleration of Biodiesel Production From Off-Grade Oil Over Waste-based CaO Catalyst Stefan Pavlovic | University of Belgrade
Generation of a Hybrid Chemistry Model by Combining a Surrogate Fuel Strategy and an Optimisation Method Torsten Methling | Deutsches Zentrum für Luft- und Raumfahrt e. V.

Lunch Break
12:10

Brüsselaal: System Perspective II
13:10
Techno-Economic Analysis of a Biorefinery Process for the Flexible Production of Gamma-Valerolactone and 1,4-Pentanediol Kaan Karacasulu | RWTH Aachen University
Life Cycle Assessment of a Novel Lignin-To-Marine Biofuel Route Svetlana V. Obydenkova | Aachen-Maastricht Institute for Biobased Materials
Biofuels Under Current Legislations and Their Impact on the Environment Nelli Elizarov | Bundesverband der deutschen Bioethanolwirtschaft e.V.

Coffee Break
14:50

K2: Fuel Combustion II
13:35
From Experiments to CFD in a Virtual CFR Engine Karri Keskinen | Aalto University
Optical Investigation and Numerical Simulation of a Singlehole Injector for Pre-Chamber Combustion Applications Maximilian Fleischmann | RWTH Aachen University
Knock Occurrence in Engines Equipped with Pre-Chambers Nathália Santos | Universidade Federal de Minas Gerais
Study of CO2 Neutral Drop-In Fuels on Mixture Formation in Heavy-Duty Applications Jaykumar Yadav | RWTH Aachen University

Coffee Break
14:50

K2: Fuel Combustion III
15:10
Combustion Kinetic Study on Dibutoxymethane – a Bio-Hybrid Fuel for Compression-Ignition Engine Application Florian vom Lehn | RWTH Aachen University
TDLAS Based Time-Resolved NO Measurement in Ammonia Oxidation Denghao Zhu | Physikalisch-Technische Bundesanstalt
Experimental Study on the Three-Stage Ignition of Tetrahydrofuran and 2-Methyltetrahydrofuran Under LPP Conditions Laxmi Sane | Physikalisch-Technische Bundesanstalt

Coffee Break
16:10

K2: Fuel Compatibility II
15:45
A Non-Engine Testbench for Injector Testing with E-Fuels: CoCoS Chandra Kanith Kosuru | Tec4Fuels GmbH
Development of 100% Renewable EN228 Gasoline Formulation and Its Compatibility with Different Elastomeric Materials Claudia Esarte | Repsol S.A.
Synthetic Fuels – How to Successfully Evaluate the Materials Compatibility of Automotive Alloys in OMEs Visheet Arya | Technische Universität Dresden

Coffee Break
16:35
THURSDAY, 12.05.2022

08:00  Registration

Brüsselsaal: Keynote Session IV

08:30  Keynote VII Development of Molecularly-Defined and Nanostructured Catalyts for Selective Hydrogenations Matthias Beller | Leibniz Institute for Catalysis

09:15  Keynote VIII Hydrogen and e-Fuel Solutions for the Second Energy Transition: A Roadmap to Scalable Economies at NEOM Mani Sarathy | King Abdullah University of Science and Technology

10:00  Coffee Break

Brüsselsaal: FSC Report

10:30  FSC Introduction

10:50  FSC Report

12:10  Closing Remarks, Poster & Presentation Awards

12:50  Lunch Break

13:50  International Advisory Board Meeting Members Only

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Save the Date:
23. - 25.05. 2023

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