



cascatbel

CASCATBEL workshop

Thermochemical lignocellulose conversion technologies

18-20 May 2016

Porto Carras, Chalkidiki, Greece

<http://cascatbel.cperi.certh.gr/>





CERTH
CENTRE FOR
RESEARCH & TECHNOLOGY
HELLAS



CPERI
Chemical
Process and
Energy
Resources
Institute



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Organizers

TUHH

Hamburg University of Technology



Aim of the Workshop

The Workshop aims to present the most up-to-date technological and research fields advances in the field of lignocellulosic biomass valorization via thermochemical process routes.

This three-day workshop will feature talks by prominent researchers on a wide range of topics in thermochemical lignocellulose conversion technologies. The lectures will be separated by a break-out session during which participants can meet in small groups to discuss ideas presented in the lecture.

Cascatbel Project

The CASCATBEL project (CASCATBEL: CASCade deoxygenation process using tailored nanoCATalysts for the production of Bio-fuELs from lignocellulosic biomass) aims to design, optimize and scale-up a novel multi-step process for the production of second-generation liquid biofuels from lignocellulosic biomass in a cost-efficient way through the use of next-generation high surface area tailored nano-catalysts.

Speakers



Dr. Jiri Cejka

J. Heyrovský Institute
of Physical Chemistry
Czech Republic



Prof David Serrano

IMDEA Energy
Spain



Prof Dr. Gunther Kolb

Fraunhofer ICT-IMM
Germany



Dr. Rune Lødeng

Institute SINTEF
Materials & Chemistry
Norway



Prof Gianfranco Pacchioni

University Milano Bicocca
Italy



Prof Kevin Van Geem

University of Ghent
Belgium



Prof Karen Wilson

Aston University
UK



Ass Prof Eleni Heracleous

International Hellenic Uni-
versity - Centre for Re-
search and Technology
Greece



Prof Javier Perez-Ramirez

ETH
Switzerland



Prof Martin Kaltschmitt

TU Hamburg-Harburg
Germany



Dr. Daniele Bianchi

ENI S.p.A.
Italy



Dr. Gilbert Anderer

AVA-CO2 Forschung
GmbH
Germany

Speakers



Dr. Gerald Weber

BIOENERGY 2020+ GmbH

Austria



Perry E. Toms

Steeper Energy

Denmark



Prof. Dimitrios Kondarides

University of Patra

Greece



Prof. Tanja Barth

University of Bergen

Norway



Dr. Tijs Lammens

BTG

Netherlands



Prof. Foster Agblevor

Utah Science Technology and Research

USA



Sara Karki

Fortum

Finland



Dr. Chrysoula Michailof

Centre for Research and Technology

Greece



Dr. Stanley J. Frey

UOP

USA



Prof. Hero Jan Heeres

University of Groningen

Netherlands



Dr. Kristiina Iisa

NREL

USA



Wednesday, May 18 (Day 1)

09:00 – 09:15	Welcome Dr. Angelos A. Lappas, Centre for Research and Technology, Greece
09:15 – 10:00	Synthesis of novel zeolites for thermochemical biomass conversion technologies Dr. Jiri Cejka, J. Heyrovský Institute of Physical Chemistry, Czech Republic
10:00 – 10:30	Introduction to the CASCATBEL project Prof David Serrano, IMDEA Energy, Spain
10:30 – 11:00	Coffee Break
11:00 – 11:30	BIO-GO: Catalytic Partial Oxidation of Bio Gas and Reforming of Pyrolysis Oil for an Autothermal Synthesis Gas Production and Conversion into Fuels Prof Dr. Gunther Kolb, Fraunhofer ICT-IMM, Germany
11:30 – 12:00	Reaction pathway elucidation in phenolic HDO in the gas and liquid phase over supported MoO₃ and its pre-carburized analogues Dr. Rune Lødeng, Institute SINTEF Materials and Chemistry, Norway
12:00 – 12:30	TiO₂ and ZrO₂ catalytic materials in biomass conversion. A computational chemistry perspective Prof Gianfranco Pacchioni, University Milano Bicocca, Italy
12:30 – 13:00	First principles based microkinetic modeling of biomass fast pyrolysis Prof Kevin Van Geem, University of Ghent, Belgium
13:00 – 14:00	Lunch
14:00 – 14:30	Tuning solid acid catalysts for bio-oil esterification Prof Karen Wilson, Aston University, UK
14:30 – 15:00	Upgrading of bio-oil via vapor phase ketonization Ass Prof Eleni Heracleous, International Hellenic University & Centre for Research and Technology, Greece
15:00 – 15:30	Novel catalysts for aldol condensation Prof Javier Perez-Ramirez, ETH, Switzerland
15:30 – 16:00	Techno-economic and environmental assessment of biofuel production processes Prof Martin Kaltschmitt, TU Hamburg-Harburg, Germany
16:00 – 16:30	Coffee Break
16:30 – 18:30	POSTER SESSION
19:30	Workshop dinner



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Thursday, May 19 (Day 2)

09:00 – 09:30	Research activities on advanced biofuels in ENI Dr. Daniele Bianchi, ENI S.p.A., Italy
09:30 – 10:00	Advances in biocoal and biochemicals production by AVA-CO₂ hydrothermal processes Dr. Gilbert Anderer, AVA-CO ₂ Forschung GmbH, Germany
10:00 – 10:30	BtL production based on Biomass steam gasification—From lab scale to one barrel per day pilot plant Dr. Gerald Weber, BIOENERGY 2020+ GmbH, Austria
10:30 – 11:30	Coffee Break & POSTER SESSION
11:30 – 12:00	Biomass to Hydrocarbon: HTL's Progress to Commercial Application Perry E. Toms, Steeper Energy, Denmark
12:00 – 12:30	Steam reforming of bio-oil Prof Dimitrios Kondarides, University of Patra, Greece
12:30 – 13:00	Comparison of solvolytic lignin conversion in 25 ml and 5 L reactors – yield improvements, mass balance and product compositions Prof Tanja Barth & Solmaz Ghoreishi, University of Bergen, Norway
13:00 – 14:00	Lunch
14:00	Cruise to Mountain Athos & Greek Dinner

Friday, May 20 (Day 3)

09:00 – 09:30	Biomass feedstock for thermochemical processing: results from the s2biom EU project Dr. Tijs Lammens, BTG, Netherlands
09:30 – 10:00	Advances in catalytic biomass pyrolysis and oil upgrading Prof Foster Agblevor, Utah Science Technology and Research, USA
10:00 – 10:30	Overview of the conventional and advanced analytical methods for decoding the bio-oil's composition Dr. Chrysoula Michailof, Centre for Research and Technology, Greece
10:30 – 11:00	Coffee Break
11:00 – 11:30	Commercialization of Fortum's fast pyrolysis bio-oil production – Bio-oil applications Sara Karki, Fortum, Finland
11:30 – 12:00	Co-processing ligno-cellulosic pyrolysis oil in a petroleum refinery Fluidized Catalytic Cracking unit Dr. Stanley J Frey, UOP, USA
12:00 – 12:30	Novel insights in the catalytic hydrotreatment of fast pyrolysis liquids Prof Hero Jan Heeres, University of Groningen, Netherlands
12:30 – 13:00	Ex situ catalytic pyrolysis research at the National Renewable Energy Laboratory Dr. Kristiina Iisa, NREL, USA
13:00	END OF WORKSHOP

Organizing Committee

Dr. Angelos A. Lappas	CPERI/CERTH
Dr. Eleni Heracleous	IHU- CPERI/CERTH
Prof Martin Kaltschmitt	TUHH
M.Sc. Lisa Thormann	TUHH

Contact

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