September | 7th-9th | 2010
Leipzig | Germany

# I|C|P|S 10

International Conference on Polygeneration Strategies
with special Focus on Integrated Biorefineries

# PROGRAMME

www.icps-conference.eu

## TOPICS

- Gasification technologies
- Gas cleaning
- Synthesis of biofuels and bulk chemicals
- Combination with other biomass conversion options
- Biorefinery concepts

## CHARGES

| | |
|---|---|
| Regular: | € 450,-- |
| Students: | € 350,-- |

## SCIENTIFIC COMMITTEE

Hermann Hofbauer, *Vienna University of Technology*
Martin Kaltschmitt, *German Biomass Research Centre / Hamburg University of Technology*
Johan Einar Hustad, *Norwegian University of Science and Technology*
Pier Ugo Foscolo, *University of L'Aquila*
Samuel Stucki, *Paul Scherrer Institut*
Ausilio Bauen, *Imperial College London*
André Faaij, *Utrecht University*
Miroslav Miller, *Wroclaw University of Technology*
David Serrano, *IMDEA Energia Institute*
Mehri Sanati, *Lund University*

## AIM OF THE CONFERENCE

Biomass gasification is a key technology for a high efficient biomass utilisation in the future. All different types of energy currently used within our energy system can be provided by the conversion of solid biomass into syngas: heat, electricity and biofuels. Therefore such polygeneration systems have become more and more important within energy policy and industry in recent years. This is the reason why this topic has been discussed on several conferences. But slowly it is realised that for economic and environmental reasons as well as due to limited biomass resources such polygeneration systems could be much more promising if they are part of integrated biorefineries. Such biorefineries are characterised by a wide range of different biomass feedstock as well as a broad variety of different products to be used as a raw material as well as an energy carrier.

Against this background the main aim of the conference is it to present the current state-of-the-art of syngas production from different biomass feedstock and in various capacities, the syngas cleaning and syngas utilisation for the provision of e.g. biofuels and bulk chemicals. Additionally ideas and concepts of such integrated biorefinieries are presented, discussed and assessed. Furthermore a platform for the exchange of information, results and experiences is offered. Therefore researchers as well as industrial representatives are invited to participate within this conference.

## ADDRESS

**Zeitgeschichtliches Forum Leipzig**
Grimmaische Str. 6
D-04109 Leipzig
www.hdg.de/leipzig

## MAP


## CONFERENCE VENUE


Photo: Bertram Kober

## SOCIAL EVENT

Tuesday
7th September 2010
Reception at the
Old Mercantile Exchange ("Alte Handelsbörse Leipzig")
Naschmarkt 2
D-04109 Leipzig

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|---|---|---|---|
| | **SESSION "INTRODUCTION"** | | |
| 10:00 | **Opening & welcome address** | M. Kaltschmitt | German Biomass Research Centre, Hamburg University of Technology (Germany) |
| | | H. Hofbauer | Vienna University of Technology (Austria) |
| 10:15 | **Integrated Biorefineries - Current status and perspectives** | | |
| | | R. van Ree | Wageningen University and Research Centre (Netherlands) |
| 10:35 | **Classification and assessment of biorefinery concepts in IEA Bioenergy Task 42 "Biorefineries"** | | |
| | | G. Jungmeier et al. | Joanneum Research (Austria) |
| | **SESSION "FEEDSTOCK & FEEDSTOCK PRETREATMENT"** | | |
| 11:00 | **Thermo-chemcial pretreatment options - Possibilities and constraints** | | |
| | | M. Klemm, R. Schmersahl, A. Ortwein | German Biomass Research Centre (Germany) |
| 11:30 | **2nd generation lignocellulosic bioethanol: Is torrefaction a possible approach to biomass pretreatment** | | |
| | | D. Chiaramonti | University of Florence (Italy) |
| 12:00 | **Upgrading biomass via hydrothermal carbonisation in the CarboREN-process to facilitate gasification** | | |
| | | T. Wittmann | SunCoal Industries (Germany) |
| 12:30 | **Lunch break** | | |
| | **SESSION "GASIFICATION"** | | |
| 13:30 | **Gasification technologies for biomass - An overall analysis** | | |
| | | A. Bauen | Imperial College London (UK) |
| 14:00 | **Gasification of residues and waste wood in a dual fluidized bed steam gasifier** | | |
| | | V. Wilk | Bioenergy2020+ (Austria) |
| | | H. Kitzler, H. Hofbauer | Vienna University of Technology (Austria) |
| 14:30 | **Factors controlling gasification rates of biomass chars** | | |
| | | T. Suzuki et al. | Kansai University (Japan) |
| 15:00 | **Experimental investigation of affecting parameters on the gasification of biomass fuels in a 20 kW fluidized bed** | | |
| | | N. Poboss, A. Schuster, G. Scheffknecht | Stuttgart University (Germany) |
| 15:30 | **Catalysts for fluidized bed biomass gasification - Overview on recent developments and applications** | | |
| | | C. Pfeifer, S. Koppatz, H. Hofbauer | Vienna University of Technology (Austria) |
| 15:20 | **Coffee break & Poster presentation** | | |
| | **SESSION "GAS CLEANING"** | | |
| 16:45 | **Chemical hot gas cleaning of syngas from biomass gasification for production of biofuels** | | |
| | | M.Stemmler, M. Müller | Forschungszentrum Jülich (Germany) |
| 17:15 | **Preparation of catalyst for carbonyl sulfide hydrolysis at the moderate temperature** | | |
| | | Ju Shangguan et al. Taiyuan | University of Technology (China) |
| 17:45 | **Reliable sampling of impurities in product gas and syngas** | | |
| | | J. Zeisler | Bioenergy2020+ (Austria) |
| | | M. Kleinhappl, H. Hofbauer | Vienna University of Technology (Austria) |
| 18:30 | **Guided tour through the exhibition of the Zeitgeschichtliches Forum** | | |
| 19:30 | **Reception** | | |

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| | **SESSION "FUEL SYNTHESIS TECHNOLOGY"** | | |
| 08:30 | **Methanation - Basics, technologies and integration into thermo-chemical biorefineries** | | |
| | | A. Ortwein et al. | German Biomass Research Centre (Germany) |
| 09:00 | **Hydroprocessing of Fischer Tropsch biowaxes to 2nd generation biofuels** | | |
| | | H. Schablitzky | OMV Refining and Marketing (Austria) |
| | | R. Rauch, H. Hofbauer | Vienna University of Technology (Austria) |
| 09:30 | **Pathways for synthesis of liquid bio fuels - Review on conversion efficiency, selectivity and by-products** | | |
| | | H. Wagner | Hamburg University of Technology (Germany) |
| | | M. Kaltschmitt | German Biomass Research Centre, Hamburg University of Technology (Germany) |
| 10:00 | **Coffee break & Poster presentation** | | |
| | **SESSION "OVERALL CONCEPTS I"** | | |
| 10:45 | **Biorefineries based on thermo-chemical processing** | | |
| | | M. Sanati | Lund University (Sweden) |
| 11:15 | **Biomass gasification for power generation: Essent's own developments** | | |
| | | M. Spanjers, W. Willeboer | Essent Energy Production (Netherlands) |
| 11:45 | **Biomass to green gasoline and power** | | |
| | | F. Joensen | Haldor Topsoe (Denmark) |
| 12:15 | **Lunch break** | | |
| | **SESSION "OVERALL CONCEPTS II"** | | |
| 14:00 | **Efficient biomass utilisation by polygeneration processes - Production of hydrogen, electricity and heat** | | |
| | | T. Mayer et al. | Bioenergy 2020+ (Austria) |
| 14:25 | **Converting biomass-rich residual streams into biofuels , co-product commodities and traditional bioenergy vectors (heat and power)** | | |
| | | E. Chornet, R. P. Overend, M. Chornet | Enerkem / CRB Innovations (Canada) |
| 14:50 | **Research activities in polygeneration in Germany within the BMU-funding programme - Status and prospects** | | |
| | | D. Pfeiffer, D. Thraen | German Biomass Research Centre (Germany) |
| 15:15 | **Future potential of flexible integrated gasification poly-generation facilities** | | |
| | | J.C. Meerman et al. | Utrecht University (Netherlands) |
| 15:40 | **Future ways of biorefineries** | T. Targiel | Wuppertal Institute for Climate, Environment and Energy (Germany) |
| | | D. Maga | Fraunhofer-Institute for Environmental, Safety and Energy Technology |
| | | U. R. Fritsche et al. | Institute for Applied Ecology (Germany) |
| 16:05 | **Final consideration & outlook** | H. Hofbauer | Vienna University of Technology (Austria) |
| | | M. Kaltschmitt | German Biomass Research Centre, Hamburg University of Technology (Germany) |

## EXCURSION (TWO ALTERNATIVE TOURS ARE OFFERED)

### TOUR 1

8:00 - 15:00
**Excursion to the BIOETHANOL PLANT, ZEITZ and the BIOMETHANE PLANT KÖNNERN**

**Timetable**

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|---|---|
| 08:00 - 13:00 | Excursion |
| 13:00 - 14:00 | Lunch |
| 15:00 | Arrival in Leipzig |

### TOUR 2

8:00 - 15:00
**Excursion to the**
**WASTE FERMENTATION PLANT, WEISSENFELS,**
**THE LARGE BIOGAS POWER PLANT TO**
**GENERATE ELECTRICITY, MÖHRSDORF and the**
**GERMAN BIOMASS RESEARCH CENTRE (DBFZ), LEIPZIG**

**Timetable**

| | |
|---|---|
| 9:00 - 12:00 | Excursion |
| 12:00 - 13:30 | Lunch |
| 13:30 - 15:00 | Excursion |

## EXCURSION

Thursday, 9th September 2010

## IMPRESSIONS

Photo: Martin Jähnichen

*Bioethanol plant in Zeitz*

*Biomethane plant in Könnern*

*Waste fermentation plant in Weißenfels*

*German Biomass Research Centre in Leipzig*

## CHARGES

| | |
|---|---|
| Regular: | € 450,-- |
| Students: | € 350,-- |

## INFORMATION

**Deutsches BiomasseForschungsZentrum (DBFZ)**
German Biomass Research Centre
ICPS `10 Organisation Committee
Torgauer Straße 116
D-04347 Leipzig
Tel. +49-341-2434-112
www.icps-conference.eu

Find more Information at **www.icps-conference.eu**