

# Programm

## 2<sup>ND</sup> German Doctoral Colloquium Bioenergy

Monday, September 30<sup>th</sup>, 2019

12:00 Registration

12:30-12:45 Welcome address

Prof. Dr.-Ing. Karl  
 FAU Erlangen-Nürnberg,  
 Prof. Dr.-Ing. Thrän,  
 DBFZ

12:45-13:15 Keynote: "Towards a Sustainable (Bio-)Energy Transition - Ethical Considerations"

Prof. Dr. Potthast  
 Internationales Zentrum für Ethik  
 in den Wissenschaften (IZEW)  
 Eberhard Karls Universität  
 Tübingen

13:15-13:30 Impulse statements by the 5 session leaders (3 minutes each)

13:30-14:00 *Coffee Break* and poster exhibition

**14:00 - 15:40**

**Session: "Bioraffineries/biofuels"**

**20 minutes each + 5 minutes discussion**

Chair: Prof. Dr. Kruse (Universität Hohenheim), Prof. Dr. Dahmen (KIT)

*1: Integration of carbonisation processes into a biorefinery concept*  
 Benjamin Schwan (TU Dresden)

*2: Biogas Filling Dation - Comparative Economic Evaluation of Different Concepts for Decentralised Partial Biogas Upgrading*  
 Abdessamad Saidi (TH Ingolstadt)

*3: Gas conditioning of bio-oil hydrotreatment off-gases for the efficient hydrogen recirculation: a modelling and experimental approach*  
 Michael Bampaou (Centre for Research and Technology Hellas)

*4: CLARA- Chemical looping gasification for sustainable production of biofuels*  
 Paul Dieringer (TU Darmstadt)

**14:00 - 14:50**

**Session: "Energy crops production and -utilization"**

**20 minutes each + 5 minutes discussion**

Chair: Prof. Dr. Weber-Blaschke (TU München), PD Dr. Kurt Möller (LTZ Augustenberg)

*1: Research on Ukrainian Energy Crops for Biogas Production*  
 Ievgeniia Morozova (Universität Hohenheim)

*2: Low Indirect Land Use Change Risk Indicators for Certification- Current Status*  
 Beike Sumfleth (Universität Leipzig/DBFZ)

15:40 GET IN TOUCH!

17:00 Journey to Nuremberg City center (ca. 30min)

17:45- **Guided tour: Historic city centre of Nürnberg**

19:00 17:45 City tour - english language

17:45 City tour- german language

**Guided tour: Rock-cut beer cellars**

17:45 Nuremberg cellar- english language

18:00 Nuremberg cellar- german language

19:00 *Conference dinner (Zum Spiessgesellen)*

## Tuesday, October 1<sup>th</sup>, 2019

**9:00 -10:40**

**Session: “Thermochemical  
Conversion I”**

**20 minutes each + 5 minutes discussion**

Chair: Prof. Dr.-Ing. Karl (FAU Erlangen-Nürnberg),  
Prof. Dr.-Ing. Quicker (RWTH Aachen)

*1: Procedure for the development of catalysts for  
emission reduction in combustion plants - From  
laboratory to practice*  
Rene Bindig (MLU Halle-Wittenberg/DBFZ)

*2: SOFC single cells fed with wood gas: the influence  
of tar contaminants on cell performance*  
Yixing Li (FAU Erlangen-Nürnberg)

*3: Optimisation of process parameter during  
Hydrothermal Carbonisation of sewage sludge*  
Wolfgang Waldmüller (TU München)

*4: Development of a ball grate system for the  
combustion of wheat straw pellets in small-scale  
furnaces*  
Lukas Schenke (RWTH Aachen)

10:40- *Coffee Break* and poster exhibition  
11:10

**9:00 -10:40**

**Session: “System analysis bioenergy”**

**20 minutes each + 5 minutes discussion**

Chair: Prof. Dr.-Ing. Thrän (DBFZ), Dr. Eltrop  
(Universität Stuttgart)

*1: Biogas Plant Operating Strategies for Demand-  
Oriented Electricity Generation at the Distribution Grid  
Level*  
Katharina Bär (TH Ingolstadt)

*2: Impact of increased use of biomass in transport on  
the role of bioenergy for electricity and district  
heating*  
Sylvio Nagel (Universität Stuttgart)

*3: Bioenergy Technologies Pathways in the German  
Electricity and Heat Market - a techno-economic  
Brownfield Optimization*  
Samah Gouya (Universität Stuttgart)

*4: The representation of biomass-based carbon removal  
options in German energy and climate scenarios*  
Alena Hahn (Universität Leipzig/ DBFZ)

**11:10 - 12:50**

### Session: “ Thermochemical Conversion II”

**20 minutes each + 5 minutes discussion**

Chair: Prof. Dr.-Ing. Karl (FAU Erlangen-Nürnberg),  
Prof. Dr.-Ing. Quicker (RWTH Aachen)

*1: Utilization of biogenic residues in a biorefinery concept via entrained flow gasification with coupled gas fermentation for the production of basic chemicals*  
Philipp Leuter (TU München)

*2: “BioWasteStirling” - Long-term operation experience of a fluidized bed-fire Stirling engine for micro-scale CHP*  
Tanja Schneider (FAU Erlangen-Nürnberg)

*3: Hydrothermal Carbonisation of Biogenic Waste*  
Nicklas Stobernack (TH Köln)

*4: Deep desulphurization of biomass-based gasification syngas*  
Christian Frilund (VTT Technical Research Centre of Finland)

12:50- 14:00 *Lunchbreak* and poster exhibition

**11:10-12:50**

### Session: “Biochemical Conversion”

**20 minutes each + 5 minutes discussion**

Chair: Dr. Liebetrau (DBFZ), Dr. Oechsner (Universität Hohenheim)

*1: Optimizing biological CO<sub>2</sub>-methanation in a trickle-bed reactor: the ORBIT-Project*  
Martin Thema (OTH Regensburg)

*2: Trickle-bed reactor for biological methanisation*  
Tobias Weidlich (FAU Erlangen-Nürnberg)

*3: Biological Methanation Using Synthesis Gas of an Allothermal Wood Gasifier*  
Thomas Trabold (FAU Erlangen-Nürnberg)

*4: Quantification and mitigation of methane emissions from biogas plants*  
Thorsten Reinelt (TU Dresden/DBFZ)

**14:00 - 14:40**

### Poster Speed-Presentations

3 minutes each

Biochemical Conversion	<i>1, The potential role of biochemicals for German climate targets: Assessments based on environmental and economic perspectives</i> Frazer Musonda (Universität Leipzig)
Bioraffineries/ biofuels	<i>2, Synthesis of light hydrocarbons from biogas and electrolytic hydrogen</i> Sebastian Dietrich (TU Berlin/DBFZ)
Bioraffineries/ biofuels	<i>3, Fabrication, characterization and modeling of water selective membranes for methanation reactors</i> Matthis Kurth (TU Berlin/DBFZ)
Energy crops production and -utilization	<i>4, Influence of anaerobic digestion processes on the germination of weed seeds</i> Lijun Zhou (Universität Hohenheim)
Energy crops production and -utilization	<i>5, Food Waste Co-Digestion in Germany and the United States: From Lab to Full-Scale Systems</i> Benedikt Hülsemann (Universität Hohenheim)
System analysis bioenergy	<i>6, Status quo of Solid Biogenic Fuels in the European Union: Overview on Qualities, Standards and Applications</i> Niels Kirstein (Universität Leipzig/DBFZ)
Thermochemical Conversion	<i>7, Characterisation of carbon-free and carbon-containing ashes from thermochemical conversion of Si-rich agricultural residues</i> Thomas Schliermann (DBFZ)

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Thermochemical Conversion	<i>8, Development and application of novel SCR catalysts for the low-temperature denitrification of exhaust gases from the thermo-chemical conversion of biogenic solid fuels</i> Mario König (MLU Halle-Wittenberg/DBFZ)
Thermochemical Conversion	<i>9, Catalyst characterization and integration at small-scale biomass combustion systems</i> Mirjam Müller (Universität Leipzig/DBFZ)
Thermochemical Conversion	<i>1: Systematical study of most relevant parameters on the quality of biogenic silica obtained from thermochemical conversion of rice husk</i> Hossein Beidaghy Dizaji (Universität Leipzig/DBFZ)
other topics	<i>11, Bioenergy Policy in Germany</i> <i>The Regulation of Power and Heat from Biomass</i> Katrin Beer (OVGU Magdeburg)

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14:40 Summary and Conclusions

Prof. Dr.-Ing. Karl  
FAU Erlangen-Nürnberg

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