



# 2. BIO ECONOMY CONGRESS

BADEN-WÜRTTEMBERG

**12 - 13 September 2017**

University of Hohenheim  
Garbenstraße 30  
70599 Stuttgart



**Baden-Württemberg**  
MINISTRY OF SCIENCE, RESEARCH AND THE ARTS

**BIO**  **PRO**  
Baden-Württemberg GmbH

UNIVERSITY OF HOHENHEIM



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# Preface

The 2<sup>nd</sup> International Bioeconomy Congress is an interdisciplinary expert and stakeholder meeting dedicated to the systemic approaches of Bioeconomy. The conference aims at discussing innovative products, processes and regional concepts that use biomass instead of fossil resources and contribute to both climate goals and global food security. These include technological innovations as well as careful evaluations of environmental, climatic and societal impacts. Basic research will be presented in addition to implementation strategies for markets and society in order to develop future Bioeconomy scenarios.

The following topics will be addressed:

1. **Sustainable biomass supply**
2. **Food and feed – New sources, products, technology and applications**
3. **Value chains for new materials, chemicals and fuels**
4. **Substrates, technologies and products in the biogas value chain**
5. **Collaboration networks for Bioeconomy value chains**
6. **Bioeconomy and the environment**
7. **Concepts for measuring and modelling the sustainability of bio-based materials**
8. **Societal issues of Bioeconomy**

The Congress committee has designed a structure with parallel sessions in the above interdisciplinary topics to accommodate the broad spectrum of research activities. Each of the sessions will contain an introductory keynote lecture and report results from original research. Moderated poster sessions are included to provide an excellent platform facilitating two-way discussions between presenters and all interested delegates. These activities will be supplemented by panel discussions to reflect the current state of the Bioeconomy implementation, first with the focus on markets and then with the focus on the socio-economic aspects.

A hearty welcome to the German Southwest!



# Welcome Addresses

## *Theresa Bauer, Minister for Science, Research and Arts*

In order to make our state and society future-proof, we must also make it sustainable – this is something we have long known in Baden-Württemberg. For us, the growth and development of the Bioeconomy is a central building block in this transition. We must find solutions by combining a future of further economic growth with globally responsible food supplies, environmental protection and nature conservation.

Bioeconomic research and science are essential companions for us as a society on the way to an efficient, resourceful and climate-friendly future. However, this means not only developing new knowledge and technologies, but also consideration for the environmental impacts, the conditions for a sustainable biomass production, or what we as a society consider socially and ethically acceptable.



For this reason, the Baden-Württemberg Ministry of Science, Research and Arts has launched a Bioeconomy Research Program to promote interdisciplinary cooperation between different stakeholders in this field. More than 50 projects are funded with the aim of analysing the Bioeconomy potential of Baden-Württemberg and to develop new methods and concepts for the Bioeconomy. With the graduate program “BBW ForWerths”, we are educating the Bioeconomy experts of tomorrow – beginning with our first graduating class this year.

And this research program can already list numerous achievements:

The program has brought together scientists across institutions and scientific disciplines in order to establish successful and sustainable networks. Take for example research in the field of microalgae, where biotechnologists, food technologists and nutrition scientists work closely together.

Ranging from forestry to agriculture or from lignocellulosic biomass to the biogas sector, specialists from different research fields have joined forces and successfully developed new technological processes and concepts for the Bioeconomy of the future.

Scientists from the competence network “Modelling the Bioeconomy” have been able to connect existing simulation models and feed them with experimental, economic and environmental data in order to provide an assessment tool for future Bioeconomy scenarios.

At the 2nd International Bioeconomy Congress, the findings from the Bioeconomy Research Program Baden-Württemberg and other renowned research groups will be presented and discussed, and not just among scientists, but among a broad range of stakeholders from science, industry, government and non-governmental organizations. Even though science is an important driver of Bioeconomic development, the way to the Bioeconomy of the future requires profound structural change for which we all must work together: science, business, politics, and most importantly, citizens and consumers themselves.

I want to express my gratitude to those who organized this exceptional event and to the University of Hohenheim for providing the beautiful setting: a great prerequisite for a successful congress. I wish everybody an inspiring conference and plenty of interesting insights and impulses to help drive the Bioeconomy forward.

## ***Prof. Dr. Stephan Dabbert, President of the University of Hohenheim***



Undoubtedly, the transition from a fossil-based to a bio-based economy is gaining importance worldwide. It does so for a very simple reason: Bioeconomy holds the key to a modern and much more sustainable economy.

A number of key barriers exist in the Bioeconomy. In order to overcome these and enhance the transition to a sustainable Bioeconomy, research is needed. It will not be enough to just create a new raw material base. Rather, it is necessary to focus on the sustainable performance of the entire value chain from the production, conditioning, and conversion of bio-based raw materials to the acceptance of these materials by consumers and society as a whole. In other words, to enable the Bioeconomy to reach its full potential, research efforts must also be interdisciplinary.

Having taken this indispensable condition into account, the Hohenheim Research Center for Bioeconomy was founded to establish and implement Bioeconomy as an interdisciplinary topic in a targeted and sustainable manner at the University of Hohenheim. Furthermore, we introduced a Master's program in Bioeconomy, which accepted the first group of students in the winter semester 2014/15. Only two years later, the demand for Bioeconomists greatly exceeds the speed at which these interdisciplinary experts can be educated.

We are very grateful for the structural and financial support provided by the Baden-Württemberg government's Bioeconomy Research Program, which enables us to even better contribute to national and international research on Bioeconomy. The program aims to pool and further strengthen Bioeconomy research activities in Baden-Württemberg, and we are very excited that the Baden-Württemberg Bioeconomy Coordination Office has found its home at the University of Hohenheim.

Due to the outstanding importance of an interdisciplinary approach of this topic, we are also very grateful for the opportunity of scientific exchange provided by the 2<sup>nd</sup> Bioeconomy Congress in Baden-Württemberg. I wish stimulating discussions and ideas for future collaborative projects to all those who will be participating in this interesting event.

## ***Prof. Dr. Thomas Hirth, Chair of the Steering Committee***

Research and development are fundamental for the structural change towards a Bioeconomy. In Baden-Württemberg, a strategy council of experienced scientists from all relevant disciplines was created in 2012 to develop a Bioeconomy research strategy for the state. It was concluded that an interdisciplinary and systemic approach is necessary to develop sustainable products and processes. We are very glad that the establishment of the Bioeconomy Research Program in Baden-Württemberg has supported the local universities and research institutes to build new networks and infrastructures that have been very successful. Existing expertise in Baden-Württemberg was focused on the common goal of the enhanced use of renewable resources. During the 2<sup>nd</sup> International Bioeconomy Congress in Baden-Württemberg we would like to share our experience with the scientific community and discuss new findings and analyses. Collaboration between academia, small and medium size companies, and industry will be important for the development of Bioeconomy products that are successful in the market. Innovations also occur at the interface between networks and disciplines, therefore collaborations and interactions are extremely important.



One key component of the Bioeconomy Research Program Baden-Württemberg is the qualification of young Bioeconomy experts for interdisciplinary research questions through joint programs of the involved universities. We are looking forward to the contributions of junior researchers as well as senior scientists, which will encompass all aspects of Bioeconomy research.

Sustainable Bioeconomy can only work as a global concept. Strategies have been developed in many countries based on different conditions and backgrounds. We are looking forward to presentations by and discussion with our international guests, who will provide aspects and views from their countries and environments.

# Hosts



## Baden-Württemberg

MINISTRY OF SCIENCE, RESEARCH AND THE ARTS

With nine universities, a wide variety of non-university research institutions and transfer centers, Baden-Württemberg is a prime location for science and research. 4.91 % of the states GDP is invested in research and development (2014), turning Baden-Württemberg into one of the most innovative and research-intensive regions in the European Union. With the Universities of Heidelberg, Konstanz, and Tübingen being awarded as elite universities within the Federal Research Ministry's Excellence Initiative, Baden-Württemberg was the most successful in the current phase of this program. To maintain Baden-Württemberg's position as a premier research location in Europe, the state government supports cutting-edge research at the universities and their cooperation with institutes of the Max Planck, the Fraunhofer and Leibnitz society as well as the Helmholtz Association.

Baden-Württemberg wants to be attractive to bright minds in science who follow their own ideas and strengthen the innovative capability of the region. The state government's objectives are to strengthen the role of science in achieving sustainable development, and to create the right conditions for excellent research and education.

Baden-Württemberg was one of the first federal states in Germany to develop a dedicated Bioeconomy research strategy and to launch its own Bioeconomy Research Program in 2014, which is supported by the Ministry of Science, Research and the Arts with a 12 Million Euro fund.



BIOPRO Baden-Württemberg comes under the auspices of the Baden-Württemberg government and is focused on Bioeconomy, biotechnology, pharmaceutical industry and medical technology.

- ❖ We work in partnership with science, the economic sector and business and science networks.
- ❖ We contribute to cross-sectoral cooperation across the entire value creation chain and hence to innovation.
- ❖ We offer support for technology transfer and start-up projects.
- ❖ We are the lead partner and Bioeconomy expert in the DanuBioValNet project, founded by the EU.
- ❖ We are initiator of a Bioeconomy innovation 'ecosystem'.

All these activities help to contribute to the positive development of Baden-Württemberg. One of our major objectives is to present and explain the healthcare industry and the Bioeconomy to the public and highlight the benefit of innovations.



Founded in 1818 after devastating famines, the University of Hohenheim has traditionally been committed to developing innovative solutions for some of society's pressing problems.

Today the University of Hohenheim is the leading university in Germany for agricultural and food sciences and strong in natural-, social-, business- and communication sciences as well as economics. This combination makes it possible to find solutions for many global challenges. This is why the University puts great emphasis on maintaining an international network with numerous strong partners. The innovative degree programs of the University of Hohenheim are applying award-winning teaching methods, such as the 'Humboldt reloaded' project which promotes research oriented teaching.

Hohenheim was the first German university to establish a Masters' program in Bioeconomy, which is jointly offered by the university's Faculties of Natural Sciences, Agricultural Sciences, Business, Economics and Social Sciences. The University of Hohenheim is highly committed to Bioeconomy and carries out numerous Bioeconomy-related research activities including the establishment of a Research Center for Bioeconomy, the coordination of international strategic networks on bio-based economy (BECY) and food security (FSC), the hosting of the coordination office of the Bioeconomy Research Program Baden-Württemberg and many more Bioeconomy-related research projects.

## Scientific Committee

- ❖ Professor Dr. Thomas Hirth, Karlsruhe Institute of Technology (KIT) (Chairman of the Steering Committee)
- ❖ Dr. Elisabeth Angenendt, University of Hohenheim
- ❖ Professor Dr. Enno Bahrs, University of Hohenheim
- ❖ Professor Dr. Jürgen Bausch, University of Freiburg
- ❖ Professor Dr. Nicolaus Dahmen, Karlsruhe Institute of Technology (KIT)
- ❖ Professor Dr. Harald Grethe, Humboldt University of Berlin
- ❖ Professor Dr. Ralf Kindervater, BIOPRO Baden-Württemberg GmbH
- ❖ Professor Dr. Iris Lewandowski, University of Hohenheim
- ❖ Dr. Caroline Liepert, Ministry for Science, Research and the Arts Baden-Württemberg
- ❖ Juniorprofessor Dr. Stefan Pauliuk, University of Freiburg
- ❖ Professor Dr. Clemens Posten, Karlsruhe Institute of Technology (KIT)
- ❖ Professor Dr. Thomas Rausch, University of Heidelberg
- ❖ Professor Dr. Markus Rodehutscord, University of Hohenheim
- ❖ Dr. Dirk Scheer, DIALOGIK gGmbH
- ❖ Dr. Ursula Schließmann, University of Stuttgart
- ❖ Professor Dr. Jochen Weiss, University of Hohenheim

## Student Representatives

- ❖ Joshua Güsewell, University of Stuttgart
- ❖ Katharina Wild, University of Hohenheim

# Program Overview

12 September 2017				
09:00	Registration - <i>Bio Foyer</i>			
10:00 - 10:20	Welcome Address - <i>Audimax</i>			
10:20 - 11:45	Plenary Session "From Science to Markets" - <i>Audimax</i> Keynote Lecture and Panel discussion			
11:45 - 13:15	Networking Lunch - <i>Schloss Hohenheim</i>			
13:15 - 15:05	<b>Potentials for sustainable biomass supply 1</b>	<b>Measuring and modelling sustainability of bio-based materials 1</b>	<b>Food and feed - new sources, products, technology &amp; applications 1</b>	<b>Efficiency of biogas production 1</b>
	<i>Audimax</i>	<i>Bio 3</i>	<i>Öko 1</i>	<i>Öko 2</i>
15:05 - 15:20	Coffee Break - <i>Bio Foyer</i>			
15:20 - 16:00	<b>Poster Session - <i>Bio Foyer</i></b> P1 Sustainable biomass supply P3 Value chains for new materials, chemicals and fuels - processes 1 P5 Collaboration networks for Bioeconomy value chains P8 Societal issues of Bioeconomy			
	<b>Bioeconomy and environment 1</b>	<b>Societal issues of Bioeconomy 1</b>	<b>Collaboration networks for Bioeconomy value chains</b>	<b>Value chains for new materials, chemicals and fuels - processes 1</b>
16:00 - 17:50	<i>Audimax</i>	<i>Bio 3</i>	<i>Öko 1</i>	<i>Öko 2</i>
18:15 - 18:45	Bus Transfers - <i>Garbenstraße 30</i>			
19:15	Evening Reception - <i>Bix Jazzclub</i>			

13 September 2017				
8:30 - 10:00	Plenary Session "Socio-Economic Transformation to Bioeconomy" - <i>Audimax</i> Keynote lecture and Panel discussion			
10:00 - 10:20	Coffee Break - <i>Bio Foyer</i>			
10:20 - 11:00	<b>Poster Session - <i>Bio Foyer</i></b> P2 Food and feed - New sources, products, technology and applications P3 Value chains for new materials, chemicals and fuels - processes 2 P4 Substrates, technologies and products in the biogas value chain P6 Bioeconomy and the environment P7 Measuring and modelling the sustainability of bio-based materials			
	<b>Bioeconomy and the environment 2</b>	<b>Societal issues of Bioeconomy 2</b>	<b>Value chains for new materials, chemicals and fuels - processes 2</b>	<b>Biogas refineries 2</b>
11:00 - 12:50	<i>Audimax</i>	<i>Bio 3</i>	<i>Öko 1</i>	<i>Öko 2</i>
12:50 - 14:15	Networking Lunch - <i>Schloss Hohenheim</i>			
14:15 - 16:05	<b>New crops for a sustainable biomass supply 2</b>		<b>Food and feed - new sources, products, technology &amp; applications 2</b>	<b>Measuring and modelling sustainability of bio-based materials 2</b>
	<i>Audimax</i>	<i>Bio 3</i>	<i>Öko 1</i>	<i>Öko 2</i>
16:15 - 16:30	Breakout Session- <i>Audimax</i>			



# Program Detail

September 12, 2017

## Plenary Program

<b>10:00-10:20</b> <i>Audimax</i>	<b>Welcome Address</b>
	<p><b>Prof. Dr. Stephan Dabbert</b>, <i>President of the University of Hohenheim</i></p> <p><b>Ministerialdirektor Ulrich Steinbach</b>, <i>Ministry of Science, Research and the Arts Baden-Württemberg</i></p> <p><b>Prof. Dr. Thomas Hirth</b>, <i>Chair of Steering Committee, Bioeconomy Research Program Baden-Württemberg</i></p>
<b>10:20-11:45</b> <i>Audimax</i>	<b>Plenary Session "From Science to Markets"</b>
	Chair: Ralf Kindervater, <i>Stuttgart</i>
10:20 - 10:50	<p>Keynote lecture</p> <p><b>Bioeconomy value chains - new enzymes for conversion of new feed stocks to higher value products</b></p> <p>Lene Lange <i>Technical University of Denmark, Copenhagen, Denmark</i></p>
10:50 - 11:45	<p><b>Panel discussion "From Science to Markets"</b></p> <p>Moderator: Ralf Kindervater, <i>BIOPRO GmbH, Stuttgart</i></p> <p><b>Panel members:</b></p> <p><b>Lene Lange</b>, <i>Professor for Bioprocess Engineering, Technical University of Denmark, Copenhagen, Denmark</i></p> <p><b>Michael Carus</b>, <i>Founder and Managing Director of nova-Institut GmbH, Huerth, Germany</i></p> <p><b>Thomas Hirth</b>, <i>Professor and Vice President for Innovation and International Affairs, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i></p> <p><b>Helmut Nägele</b>, <i>Managing Director of Tecnaro, Ilsfeld, Germany</i></p> <p><b>Sven Wydra</b>, <i>Fraunhofer-Institut für System- und Innovationsforschung ISI, Karlsruhe, Germany</i></p>

## Parallel Sessions

<b>13:15-15:05</b> <i>Audimax</i>	<b>1.1</b>	<b>Potentials for sustainable biomass supply</b>
12. September	Chair: Moderator:	Iris Lewandowski, <i>Stuttgart-Hohenheim</i> Moritz Wagner, <i>Stuttgart-Hohenheim</i>
13:15-13:50	1.1.1	<b>How sustainable agricultural intensification can contribute to sustainable Bioeconomy</b> Nicolas Brüggemann <i>Forschungszentrum Jülich, Jülich, Germany</i>
13:50-14:15	1.1.2	<b>A business-as-usual wood supply projection for Baden-Württemberg, Germany</b> Philipp Kilham, Gerald Kändler, Christoph Hartebrodt, Ulrich Riemer, Ulrich Schraml <i>Forest Research Institute, Freiburg im Breisgau, Germany</i>
14:15-14:40	1.1.3	<b>The Danish + 10 Million tonnes study - increasing the sustainable production of biomass for Bio refineries</b> Morten Gylling <i>University of Copenhagen, Frederiksberg C, Denmark</i>
14:40-15:05	1.1.4	<b>Potential for agricultural expansion and current biomass opportunities in Colombia</b> Eleonora Davalos <i>Universidad EAFIT, Medellín, Colombia</i>

13:15-15:05 <i>Bio 3</i>	7.1	<b>Measuring and modelling the sustainability of bio-based materials</b>
12. September	Chair: Moderator:	Stefan Pauliuk, <i>Freiburg im Breisgau</i> Natalia Matiz, <i>Stuttgart</i>
13:15-13:50	7.1.1	<b>Criteria and indicators for sustainable lignocellulosic biomass for the Bioeconomy - findings from S2BIOM</b> Uwe Fritsche <sup>1</sup> , Leire Iriarte <sup>2</sup> , Marcus Lindner <sup>3</sup> , Joanne Fitzgerald <sup>3</sup> , Calliope Panoutsou <sup>4</sup> , Berien Elbersen <sup>5</sup> <sup>1</sup> IINAS, Darmstadt, Germany, <sup>2</sup> IINAS, Madrid, Spain, <sup>3</sup> EFI, Joensuu, Finland, <sup>4</sup> Imperial College, London, United Kingdom, <sup>5</sup> Alterra / WUR, Wageningen, Netherlands
13:50-14:15	7.1.2	<b>Estimating climate impact of biomass-based materials production and utilization in a life cycle assessment approach</b> Ashrafal Alam, Seppo Kellomäki, Antti Kilpeläinen <i>University of Eastern Finland, Joensuu, Finland</i>
14:15-14:40	7.1.3	<b>Prospective climate benefit of carbon storage in harvested wood products: A case study comparing Indonesia and Germany</b> Rio Aryapratama, Stefan Pauliuk <i>University of Freiburg, Freiburg im Breisgau, Germany</i>
14:40-15:05	7.1.4	<b>A new allocation method overcomes the current limitations of mass and energy allocation method for dealing with multifunctionality problem in biorefineries</b> Sylvestre Njakou Djomo <sup>1</sup> , Marie Trydeman Knudsen <sup>1</sup> , Ranjan Parajuli <sup>1</sup> , Mikael Skou Andersen <sup>1</sup> , Morten Ambye-Jensen <sup>2</sup> , Gerfried Jungmeier <sup>3</sup> , Benoit Gabrielle <sup>4</sup> , John Erik Hermansen <sup>1</sup> <sup>1</sup> Aarhus University, Tjele, Denmark, <sup>2</sup> Aarhus University, Aarhus, Denmark, <sup>3</sup> Joanneum Research, Graz, Austria, <sup>4</sup> AgroParisTech, INRA, Thieveryal-Grignon, France
13:15-15:05 <i>Öko 1</i>	2.1	<b>Food and feed - New sources, products, technology and applications</b>
12. September	Chair: Moderator:	Markus Rodehutsord, <i>Stuttgart-Hohenheim</i> Ulrike Neumann, <i>Stuttgart-Hohenheim</i>
13:15-13:50	2.1.1	<b>Wheat bran bio refinery - challenges and perspectives</b> Wolfgang Kneifel <i>University of Natural Resources and Life Sciences, Vienna, Austria</i>
13:50-14:15	2.1.2	<b>Interfacial and emulsifying properties of natural extracts obtained from food by-product streams</b> Theo Ralla <sup>1</sup> , Hanna Salminen <sup>1</sup> , Matthias Edelmann <sup>2</sup> , Corinna Dawid <sup>2</sup> , Thomas Hofmann <sup>2</sup> , Jochen Weiss <sup>1</sup> <sup>1</sup> University of Hohenheim, Stuttgart, Germany, <sup>2</sup> Technical University of Munich, Germany
14:15-14:40	2.1.3	<b>InducTomE: Induction of secondary metabolites in tomato by-products for extraction and economic evaluation of the model process</b> Alexandra Wormit <sup>1</sup> , Stefanie Bröring <sup>2</sup> , Laura Carraresi <sup>2</sup> , Laura V. Junker <sup>3</sup> , Andreas Jupke <sup>1</sup> , Manuel Lück <sup>1</sup> , Georg Noga <sup>2</sup> , Julia J. Reimer <sup>1</sup> , Simone Schmittgen <sup>2</sup> , Ulrich Schurr <sup>3</sup> , Björn Thiele <sup>3</sup> , Joana Wensing <sup>2</sup> , Anika Wiese-Klinkenberg <sup>3</sup> , Björn Usadel <sup>1</sup> <sup>1</sup> RWTH Aachen University, Aachen, Germany, <sup>2</sup> Bonn University, Bonn, Germany, <sup>3</sup> Research Center Jülich, Jülich, Germany
14:40-15:05	2.1.4	<b>Bioeconomy &amp; circular economy: A new consumer responsibility?</b> Leticia Bourges <i>UCEL, Rosario, Argentina</i>
13:15-15:05 <i>Öko 2</i>	4.1	<b>Efficiency of biogas production</b>
12. September	Chair: Moderator:	Enno Bahrs, <i>Stuttgart-Hohenheim</i> Hans Oechsner, <i>Stuttgart-Hohenheim</i>
13:15-13:50	4.1.1	<b>Sustainable biomass for bioenergy in the context of 100 percent renewable energy supply in EU – will this be possible?</b> Jens Bo Holm-Nielsen <i>Aalborg University, Esbjerg, Denmark</i>
13:50-14:15	4.1.2	<b>Modelling and evaluation of promising reactor concepts for biological methanation</b> Friedemann Mörs <sup>1</sup> , Katharina Bär <sup>1</sup> , Felix Ortloff <sup>1</sup> , Frank Graf <sup>1</sup> , Thomas Kolb <sup>2</sup> <sup>1</sup> DVGW Research Center at the Engler-Bunte-Institut (EBI) of the Karlsruhe Institute of Technology (KIT), Karlsruhe, <sup>2</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
14:15-14:40	4.1.3	<b>Novel <i>Miscanthus</i> genotypes for a more environmentally benign biogas production</b> Anja Mangold, Iris Lewandowski, Andreas Kiesel <i>University of Hohenheim, Stuttgart, Germany</i>
14:40-15:05	4.1.4	<b>Effects of repowering measures on the development of the existing biogas plants in Baden-Wuerttemberg</b> Joshua Güsewell, Ludger Eltrop <i>University of Stuttgart, Stuttgart, Germany</i>

<b>16:00-17:50</b> <i>Audimax</i>	<b>6.1</b>	<b>Bioeconomy and the environment</b>
12. September	Chair: Moderator:	Michael Scherer-Lorenzen, <i>Freiburg im Breisgau</i> Kenton Stutz, <i>Freiburg im Breisgau</i>
16:00-16:35	6.1.1	<b>The impact of a forest based Bioeconomy on biodiversity</b> Jari Kouki <i>University of Eastern Finland, Joensuu, Finland</i>
16:35-17:00	6.1.2	<b>Impacts of land using processes on land quality and biodiversity on product level</b> Jan Paul Lindner <sup>1</sup> , Marie Perennes <sup>1</sup> , Ulrike Bos <sup>2</sup> , Stephanie D. Maier <sup>2</sup> , Carla R. V. Coelho <sup>2</sup> , Eva Knüpffer <sup>1</sup> <sup>1</sup> <i>Fraunhofer IBP, Stuttgart, Germany</i> , <sup>2</sup> <i>University of Stuttgart, Stuttgart, Germany</i>
17:00-17:25	6.1.3	<b>Independence Day? Are camelina and crambe sustainable alternatives to imported tropical plant oils?</b> Nils Rettenmaier, Guido Reinhardt, Tobias Schmidt, Heiko Keller, Frank Wellenreuther <i>ifeu - Institute for Energy and Environmental Research, Heidelberg, Germany</i>
17:25-17:50	6.1.4	<b>Biodiversity, carbon and socio-economic implications of the use of 'abandoned agricultural land' for future biomass production in Central and Eastern Europe (CEE).</b> Saori Miyake <sup>1</sup> , Damian Bargiel <sup>1</sup> , Jan T. Mizgajski <sup>1</sup> , Karoline Wowra <sup>1</sup> , Rafał Pudelko <sup>2</sup> , Liselotte Schebek <sup>1</sup> <sup>1</sup> <i>Technische Universität Darmstadt, Darmstadt, Germany</i> , <sup>2</sup> <i>Institute of Soil Science and Plant Cultivation (IUNG), Puławy, Poland</i>
<b>16:00-17:50</b> <i>Bio 3</i>	<b>8.1</b>	<b>Societal issues of Bioeconomy</b>
12. September	Chair: Moderator:	Witold-Roger Pogonietz, <i>Karlsruhe</i> Johanny Perez Sierra, <i>Stuttgart-Hohenheim</i>
16:00-16:35	8.1.1	<b>Towards a global assessment of Bioeconomy policies</b> Ruth Delzeit <sup>1</sup> , Tobias Heimann <sup>1</sup> , Franziska Schünemann <sup>1</sup> , Mareike Söder <sup>1</sup> , Florian Zabel <sup>2</sup> <sup>1</sup> <i>Kiel Institute for the World Economy, Kiel, Germany</i> , <sup>2</sup> <i>Ludwig-Maximilians Universität München, München, Germany</i>
16:35-17:00	8.1.2	<b>Political processes of Bioeconomy between economy and ecology – BIO-ECOPOLI</b> Katrín Beer <sup>1</sup> , Daniela Perbandt <sup>2</sup> , Michael Böcher <sup>1</sup> , Alexander Bollmann <sup>2</sup> , Annette Elisabeth Töller <sup>2</sup> , Thomas Vogelpohl <sup>2</sup> <sup>1</sup> <i>Otto von Guericke University Magdeburg, Magdeburg, Germany</i> , <sup>2</sup> <i>FernUni Hagen, Hagen, Germany</i>
17:00-17:25	8.1.3	<b>Bioeconomy as a socio-technical challenge: towards "Good Governance"</b> Regina Schröter, Wilfried Konrad, Dirk Scheer <i>DIALOGIK, Stuttgart, Germany</i>
17:25-17:50	8.1.4	<b>How much compensation do farmers in Baden-Wuerttemberg expect for growing short rotation coppice and <i>Miscanthus</i>?</b> Caroline Sophie-Theresia Gillich, Christian Lippert, Tatjana Krimly <i>University of Hohenheim, Stuttgart, Germany</i>
<b>16:00-17:50</b> <i>Öko 1</i>	<b>5.1</b>	<b>Collaboration networks for Bioeconomy value chains</b>
12. September	Chair: Moderator:	Elisabeth Angenendt, <i>Stuttgart-Hohenheim</i> Lea Böhme, <i>Stuttgart</i>
16:00-16:35	5.1.1	<b>Market trends and outlook for bio-based materials in Europe</b> Michael Carus <i>nova-Institut, Huerth, Germany</i>
16:35-17:00	5.1.2	<b>Transitioning to a forest-bioeconomy? Actor networks and beliefs along emerging wood value chains in Germany and Scandinavia</b> Alex Giurca, Daniela Kleinschmit <i>University of Freiburg, Freiburg im Breisgau, Germany</i>
17:00-17:25	5.1.3	<b>The potential of plantain fibers as an industrial resource - Preparations for an example project</b> Tim Loos <sup>1</sup> , Marlene Hoppe <sup>2</sup> , Beloved Dzomeku <sup>3</sup> <sup>1</sup> <i>University of Hohenheim, Stuttgart, Germany</i> , <sup>2</sup> <i>C.S.P., Dresden, Germany</i> , <sup>3</sup> <i>CSIR-Crops Research Institute, Kumasi, Ghana</i>
17:25-17:50	5.1.4	<b>Rubber dandelions for natural rubber and inulin production</b> Maria Hingsamer <sup>1</sup> , Hannes Schwaiger <sup>1</sup> , Gerfried Jungmeier <sup>1</sup> , Ingrid van der Meer <sup>2</sup> , Peter van Dijk <sup>3</sup> , Hilde Muylle <sup>4</sup> , Jan Kirschner <sup>5</sup> , Frans Kappens <sup>2</sup> , Nico Gevers <sup>6</sup> <sup>1</sup> <i>JOANNEUM RESEARCH Forschungsgesellschaft mbH, Graz, Austria</i> , <sup>2</sup> <i>Wageningen University &amp; Research, Wageningen, Netherlands</i> , <sup>3</sup> <i>KeyGene NV, Wageningen, Netherlands</i> , <sup>4</sup> <i>Institute for Agricultural and Fisheries Research, Melle, Belgium</i> , <sup>5</sup> <i>Institute of Botany, Průhonice, Czech Republic</i> , <sup>6</sup> <i>APOLLO TYRES GLOBAL R&amp;D BV, Enschede, Netherlands</i>

<b>16:00-17:50</b> <i>Öko 2</i>	<b>3.1</b>	<b>Value chains for new materials, chemicals and fuels - processes 1</b>
12. September	Chair: Moderator:	Nicolaus Dahmen, <i>Karlsruhe</i> Alexander Beck, <i>Stuttgart</i>
16:00-16:35	3.1.1	<b>Conventional and biotechnological approaches to increasing yield in food and biomass crops</b> K. Peter Pauls <i>University of Guelph, Guelph, Canada</i>
16:35-17:00	3.1.2	<b>Exploiting biorefinery side streams for the microbial production of chemicals</b> Julian Lange, Felix Müller, Kerstin Bernecker, Ralf Takors, Bastian Blombach <i>University of Stuttgart, Stuttgart, Germany</i>
17:00-17:25	3.1.3	<b>Changes in biomass water interactions due to pretreatment can reduce the 'high solids effect': Towards pretreatments better suited for high solids enzymatic hydrolysis reactions.</b> Noah Weiss, Lisbeth Thygesen, Claus Felby <i>University of Copenhagen, Frederiksberg, Denmark</i>
17:25-17:50	3.1.4	<b>Optimization and scale-up of the enzymatic saccharification of beech wood cellulose</b> Thomas Hahn <sup>1</sup> , Matthias Nothacker <sup>1</sup> , Steffen Rupp <sup>1,2</sup> , Susanne Zibek <sup>1,2</sup> <i><sup>1</sup>Fraunhofer IGB, Stuttgart, Germany, <sup>2</sup>University of Stuttgart, Stuttgart, Germany</i>

## September 13, 2017

<b>8:30-10:00</b> <i>Audimax</i>	<b>Plenary Session "Socio-Economic Transformation to Bioeconomy"</b>	
	Chair: Andreas Pyka, <i>Stuttgart-Hohenheim</i>	
8:30 - 09:00	Keynote lecture	<b>The Socio-economic Transformation to the Bioeconomy, the Quest for Real Circularity and the Role of Responsible Innovation</b> Vincent Blok <i>Wageningen University and Research, Wageningen, Netherlands</i>
09:00 - 10:00	<b>Panel discussion "Socio-Economic Transformation to Bioeconomy"</b>	Moderator: Andreas Pyka, <i>University of Hohenheim, Stuttgart</i> <b>Panel members:</b> <b>Vincent Blok</b> , <i>Professor in Sustainable Entrepreneurship, Business Ethics and Responsible Innovation, Wageningen University and Research, Wageningen, Netherlands</i> <b>Hans-Jürgen Froese</b> , <i>Federal Ministry of Food and Agriculture (BMEL), Berlin, Germany</i> <b>Jenny Walther-Thoss</b> , <i>Policy Officer Sustainable Biomass for World Wide Fund For Nature (WWF) and Member of the European Bioeconomy Panel, Berlin, Germany</i> <b>Eleonora Davalos</b> , <i>Professor in Environmental Economics, Universidad EAFIT, Medellín, Colombia</i>

## Parallel Sessions

<b>11:00-12:50</b> <i>Audimax</i>	<b>6.2</b>	<b>Bioeconomy and the environment</b>
13. September	Chair: Moderator:	Jürgen Bausch, <i>Freiburg im Breisgau</i> Philipp Kilham, <i>Freiburg im Breisgau</i>
11:00-11:35	6.2.1	<b>Dependency of future global bioenergy potentials on changes in food systems and agriculture</b> Helmut Haberl <i>Alpen-Adria-University of Klagenfurt, Klagenfurt, Austria</i>
11:35-12:00	6.2.2	<b>Sustainable intensification of Northwestern European cropping systems to increase nitrogen and carbon yields, while reducing losses</b> Uffe Jørgensen, Kiril Manevski, Poul Erik Lærke <i>Aarhus University, Tjele, Denmark</i>
12:00-12:25	6.2.3	<b>Biogas production and soil related carbon fluxes - a regional analysis</b> Felix Witing <sup>1</sup> , Nadia Prays <sup>1</sup> , Sinead O'Keeffe <sup>1</sup> , Ralf Gründling <sup>1</sup> , Jaqueline Daniel-Gromke <sup>2</sup> , Uwe Franko <sup>1</sup> <i><sup>1</sup>Helmholtz Center for Environmental Research - UFZ, Leipzig, Germany, <sup>2</sup>Deutsches Biomasseforschungszentrum DBFZ, Leipzig, Germany</i>
12:25-12:50	6.2.4	<b>Soil ecological risks of increased use of lignocellulose</b> Kenton Stutz, Siegfried Fink, Friederike Lang <i>University of Freiburg, Freiburg im Breisgau, Germany</i>

<b>11:00-12:50</b> <i>Bio 3</i>	<b>8.2</b>	<b>Societal issues of Bioeconomy</b>
13. September	Chair: Moderator	Christine Rösch, <i>Karlsruhe</i> Alex Giurca, <i>Freiburg im Breisgau</i>
11:00-11:35	8.2.1	<b>Innovative bio-economies? On the co-construction of markets and natures</b> Kean Birch <i>York University, Toronto, Canada</i>
11:35-12:00	8.2.2	<b>Guiding images, visions and narrative scenarios of an algae-based nutrition</b> Max Roßmann, Christine Rösch <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
12:00-12:25	8.2.3	<b>NGOs and the labelling of bio-based products</b> Lan Ge <sup>1</sup> , Marieke Meeusen <sup>2</sup> <sup>1</sup> <i>Wageningen Economic Research, Wageningen, Netherlands</i> , <sup>2</sup> <i>Wageningen Economic Research, The Hague, Netherlands</i>
12:25-12:50	8.2.4	<b>Social impacts of bioplastic value chains – is there a benefit for society?</b> Eva Knüppfer <sup>1</sup> , Ulrike Bos <sup>2</sup> , Stefan Albrecht <sup>1</sup> , Jan Paul Lindner <sup>1</sup> , Hannes Krieg <sup>1</sup> <sup>1</sup> <i>Fraunhofer IBP, Stuttgart, Germany</i> , <sup>2</sup> <i>University of Stuttgart, Stuttgart, Germany</i>
<b>11:00-12:50</b> <i>Öko 1</i>	<b>3.2</b>	<b>Value chains for new materials, chemicals and fuels - processes 2</b>
13. September	Chair: Moderator:	Nicolaus Dahmen, <i>Karlsruhe</i> Viola Hoffmann, <i>Stuttgart-Hohenheim</i>
11:00-11:35	3.2.1	<b>Innovation management for product and process development in the chemical industry</b> Claudius Neumann <i>Evonik Industries, Essen, Germany</i>
11:35-12:00	3.2.2	<b>Conversion of lignocellulosic biomass to 5-hydroxymethylfurfural in water media</b> David Steinbach <sup>1</sup> , Andrea Kruse <sup>2</sup> , Jörg Sauer <sup>1</sup> <sup>1</sup> <i>Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany</i> , <sup>2</sup> <i>University of Hohenheim, Stuttgart, Germany</i>
12:00-12:25	3.2.3	<b>Solvolytic lignosulfonate catalyzed by supported NiMo</b> Soheila Ghafarnejad Parto <sup>1</sup> , Jakob Munkholt Christensen <sup>1</sup> , Lars Saaby Pedersen <sup>2</sup> , Esben Taarning <sup>2</sup> , Freddy Tjosås <sup>3</sup> , Anker Degn Jensen <sup>1</sup> <sup>1</sup> <i>Technical University of Denmark, Lyngby, Denmark</i> , <sup>2</sup> <i>Haldor Topsøe A/S, Lyngby, Denmark</i> , <sup>3</sup> <i>Borregaard, Sarpsborg, Norway</i>
12:25-12:50	3.2.4	<b>Improving waste frying oil quality for biodiesel production</b> Larissa Bueno-Borges, Grasiela Santos, Marisa Regitano-d'Arce <i>University of São Paulo, Piracicaba, SP, Brazil</i>
<b>11:00-12:50</b> <i>Öko 2</i>	<b>4.2</b>	<b>Biogas refineries</b>
13. September	Chair: Moderator:	Ursula Schliessmann, <i>Stuttgart</i> Barbara Waelkens, <i>Stuttgart</i>
11:00-11:35	4.2.1	<b>Syngas - a valuable substrate for microbial production</b> Ralf Takors <i>University of Stuttgart, Stuttgart, Germany</i>
11:35-12:00	4.2.2	<b>Harnessing biogas plants for the production of value-added products</b> Elina Tampio <sup>1</sup> , Satu Ervasti <sup>2</sup> , Erika Winqvist <sup>3</sup> , Saija Rasi <sup>4</sup> <sup>1</sup> <i>Natural Resources Institute Finland (Luke), Tampere, Finland</i> , <sup>2</sup> <i>Natural Resources Institute Finland (Luke), Jokioinen, Finland</i> , <sup>3</sup> <i>Natural Resources Institute Finland (Luke), Espoo, Finland</i> , <sup>4</sup> <i>Natural Resources Institute Finland (Luke), Jyväskylä, Finland</i>
12:00-12:25	4.2.3	<b>Future potential of biogas for local energy production in rural areas in Finland</b> Erika Winqvist, Vilja Varho, Pasi Rikkonen, Jarkko Pyysiäinen <i>Natural Resources Institute Finland (Luke), Espoo, Finland</i>
12:25-12:50	4.2.4	<b>Biogas role for smart municipalities - a step-wise dynamic assessment framework</b> Lorie Hamelin, Jerzy Kozyra, Magdalena Borzecka, Rafal Pudelko <i>IUNG - Institute of Soil Science and Plant Cultivation, Pulawy, Poland</i>

<b>14:15-16:05</b> <i>Audimax</i>	<b>1.2</b>	<b>New crops for a sustainable biomass supply</b>
13. September	Chair: Moderator:	Thomas Rausch, <i>Heidelberg</i> Feng He, <i>Heidelberg</i>
14:15-14:50	1.2.1	<b>The role of breeding in developing new bio based resources</b> John Clifton-Brown <i>Aberystwyth University, Aberystwyth, United Kingdom</i>
14:50-15:15	1.2.2	<b>Effects of tree genetic diversity on productivity and stability in Short Rotation Coppice (ECOLINK-Salix)</b> Clara Arranz <sup>1</sup> , Stefanie Hoerber <sup>2</sup> , Charles Nock <sup>1</sup> , Tobias Gebauer <sup>1</sup> , Michael Scherer-Lorenzen <sup>1</sup> , Nils-Erik Nordh <sup>2</sup> , Ortrud Jäck <sup>2</sup> , Ewa Magnuski <sup>2</sup> , Fereshteh Pourazari <sup>2</sup> , Janine Schweier <sup>1</sup> , Dirk Jaeger <sup>1</sup> , Juergen Bauhus <sup>1</sup> , Christel Baum <sup>3</sup> , Martin Weih <sup>2</sup> <sup>1</sup> <i>Albert-Ludwigs University Freiburg, Freiburg im Breisgau, Germany</i> , <sup>2</sup> <i>Swedish University of Agricultural Sciences, Uppsala, Sweden</i> , <sup>3</sup> <i>University of Rostock, Rostock, Germany</i>
15:15-15:40	1.2.3	<b><i>Miscanthus</i> from marginal land – An approach towards a more sustainable biomass supply</b> Moritz Wagner, Iris Lewandowski <i>University of Hohenheim, Stuttgart, Germany</i>
15:40-16:05	1.2.4	<b>Strategies for lignin engineering: SND1, laccases, and beyond</b> Philippe Golfier, Feng He, Wan Zhang, Sebastian Wolf, Thomas Rausch <i>University of Heidelberg, Heidelberg, Germany</i>
<b>14:15-16:05</b> <i>Öko 1</i>	<b>2.2</b>	<b>Food and feed - New sources, products, technology and applications</b>
13. September	Chair: Moderator:	Jochen Weiss, <i>Stuttgart-Hohenheim</i> Lutz Großmann, <i>Stuttgart-Hohenheim</i>
14:15-14:50	2.2.1	<b>Algae and new protein sources in the context of novel food</b> Klaus Riediger <i>AGES- Austrian Agency for Health and Food Safety, Vienna, Austria</i>
14:50-15:15	2.2.2	<b>Algal biomass for food and feed – utilization of tailored process strategies to improve protein production</b> Andreas Trautmann, Clemens Posten <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
15:15-15:40	2.2.3	<b>Investigations on the nutritional value of microalgae for ruminants</b> Katharina Judith Wild, Herbert Steingaß, Markus Rodehutschord <i>University of Hohenheim, Stuttgart, Germany</i>
15:40-16:05	2.2.4	<b>Bioavailability and safety of three microalgae in C57Bl/6 mice</b> Ulrike Neumann <sup>1</sup> , Felix Derwenskus <sup>2,3</sup> , Andrea Gille <sup>4</sup> , Sandrine Louis <sup>1</sup> , Stephan C. Bischoff <sup>1</sup> <sup>1</sup> <i>University of Hohenheim, Stuttgart, Germany</i> , <sup>2</sup> <i>University of Stuttgart, Germany</i> , <sup>3</sup> <i>Fraunhofer IGB, Stuttgart, Germany</i> , <sup>4</sup> <i>Max Rubner-Institute, Karlsruhe, Germany</i>
<b>14:15-16:05</b> <i>Öko 2</i>	<b>7.2</b>	<b>Measuring and modelling the sustainability of bio-based materials</b>
13. September	Chair: Moderator:	Harald Grethe, <i>Berlin</i> Sebastian Weickert, <i>Stuttgart-Hohenheim</i>
14:15-14:50	7.2.1	<b>Bioeconomy and circular economy: synergies and challenges in the assessment</b> Serenella Sala <i>European commission - Joint research center, Directorate D sustainable resources, Ispra, Italy</i>
14:50-15:15	7.2.2	<b>Possible futures for a bioeconomy in Baden-Württemberg</b> Witold-Roger Pogonietz <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
15:15-15:40	7.2.3	<b>Model based location optimization of biorefineries for agricultural biomass in Baden-Württemberg</b> Andreas Rudi <sup>1</sup> , Eckart Petig <sup>2</sup> , Elisabeth Angenendt <sup>2</sup> , Enno Bahrs <sup>2</sup> , Frank Schultmann <sup>1</sup> <sup>1</sup> <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i> , <sup>2</sup> <i>University of Hohenheim, Stuttgart, Germany</i>
15:40-16:05	7.2.4	<b>Role of biogas and lignocellulose related EU and Baden-Württemberg policy targets until 2050</b> Markus Blesl, Michael Wiesmeth <i>University of Stuttgart, Stuttgart, Germany</i>

# Poster Sessions

September 12, 2017

<b>15:20-16:00</b> <i>Bio-Foyer</i>	<b>P 1 Sustainable biomass supply</b>
P 1.01	<b>On the regional availability of lignocellulose from trees in Baden-Württemberg</b> Marcus Lingenfelder, Joachim Maack, Thomas Smaltschinski, Dirk Jaeger, Barbara Koch <i>University of Freiburg, Freiburg im Breisgau, Germany</i>
P 1.02	<b>Spatially explicit GIS analysis of biomass potentials in Baden-Württemberg</b> Vera Polcher <i>University of Stuttgart, Stuttgart, Germany</i>
P 1.03	<b>Cross talk between flavonoid and lignin biosynthesis in <i>Miscanthus</i> via R2R3-MYB transcription factors</b> Wan Zhang, Thomas Rausch <i>University of Heidelberg, Heidelberg, Germany</i>
P 1.04	<b>Establishing a basidiomycete host for sesquiterpene production and Identification of future target compounds in <i>Ustilago maydis</i></b> Junggho Lee, Carl Haag, Michael Feldbrügge <i>Heinrich Heine Universität Düsseldorf, Düsseldorf, Germany</i>
P 1.05	<b><i>Miscanthus</i> SND1, cell wall formation under control</b> Philippe Golfier, Sebastian Wolf, Thomas Rausch <i>University of Heidelberg, Heidelberg, Germany</i>
P 1.06	<b>Bioengineering sugarcane for bioenergy</b> Helaine Carrer, Andre Barboza, Glaucia Souza <i>University of Sao Paulo, Sao Paulo, Brazil</i>
P 1.07	<b>Global land demand for food, feed, energy and forestry</b> Lorie Hamelin <sup>1</sup> , Lauranne Fauvet <sup>2</sup> <sup>1</sup> <i>IUNG - Institute of Soil Science and Plant Cultivation, System Analysis and Bioeconomy, Pulawy, Poland,</i> <sup>2</sup> <i>University of Southern Denmark, Odense, Denmark</i>
P 1.08	<b>Molecular studies to improve teak trees</b> Helaine Carrer <sup>1</sup> , Esteban Galeano <sup>1</sup> , Fernando Torres <sup>2</sup> <sup>1</sup> <i>ESALQ/University of Sao Paulo, Piracicaba-SP, Brazil,</i> <sup>2</sup> <i>Proteca, Cuiaba-MT, Brazil</i>
<b>15:20-16:00</b> <i>Bio-Foyer</i>	<b>P 3 Value chains for new materials, chemicals and fuels - processes 1</b>
P 3.01	<b>Fractionation of three different lignins by thermal separation techniques - A comparative study</b> Viktoria Rohde <sup>1</sup> , Sarah Böringer <sup>1</sup> , Beatrice Tübke <sup>1</sup> , Nicolaus Dahmen <sup>2</sup> , Detlef Schmiedl <sup>1</sup> <sup>1</sup> <i>Fraunhofer Institute for Chemical Technology, Pfinztal, Germany,</i> <sup>2</sup> <i>Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany</i>
P 3.02	<b>Hydrodeoxygenation of beech wood bio-oil over nickel catalyst</b> Caroline Carriel Schmitt, Klaus Raffelt, Michael Rapp, Nicolaus Dahmen <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
P 3.03	<b>Conductive materials from biomass</b> Viola Hoffmann, Andrea Kruse <i>Universität Hohenheim, Stuttgart, Germany</i>
P 3.04	<b>Valorization of glycerol from the biodiesel industries as a renewable substrate for producing DHA using microporous zeolites modified with noble metals</b> Eliana Diguilio, Emilce Daniela Galarza, María Soledad Renzini, Liliana B. Pierella <i>Centro de Investigación y Tecnología Química (CITeQ -UTN-CONICET), Cordoba, Argentina</i>
P 3.05	<b>ZSM-5 fast synthesis employing soluble starch as template</b> Luciana Bonetto, María Soledad Renzini, Liliana Pierella, Clara Saux <i>Centro de Investigación y Tecnología Química (CITeQ)-UTN-CONICET, Córdoba, Argentina</i>
P 3.06	<b>HMF production from fructose in acidic aqueous media</b> Paul Körner, Andrea Kruse <i>University of Hohenheim, Stuttgart, Germany</i>
P 3.07	<b>Hydrothermal liquefaction of raw and components-extracted microalgae with assist of pulsed electric field pretreatment</b> Bingfeng Guo, Aude Silve, Wolfgang Frey, Ursel Hornung, Nicolaus Dahmen <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>

15:20-16:00 <i>Bio-Foyer</i>	<b>P 3 Value chains for new materials, chemicals and fuels - processes 1 (continued)</b>
P 3.08	<b>Evaluating of subcritical water extraction from microalgae</b> Lin Du <i>University of Hohenheim, Stuttgart, Germany</i>
P 3.09	<b>Catalytic biomass revalorization: 2-furaldehyde oxidation reactions</b> Agostina Córdoba <sup>1</sup> , Adrian Parodi <sup>2</sup> , Ivana Magario <sup>2</sup> , Clara Saux <sup>1</sup> , Liliana Pierella <sup>1</sup> <sup>1</sup> <i>Centro de Investigación y Tecnología Química-UTN-CONICET, Córdoba, Argentina</i> , <sup>2</sup> <i>Investigación y Desarrollo en Tecnología Química, UNC- Grupo Vinculado PLAPIQUI-CONICET., Córdoba, Argentina</i>
P 3.10	<b>Influence of the solid catalyst porosity on the products yields and composition from peanut shells pyrolysis</b> Carla Soledad Fermanelli, Eliana Diguilio, Liliana Beatriz Pierella, Clara Saux <sup>1</sup> <i>CITeQ (Center for Research and Chemical Technology) - UTN (National Technological University) - FRC (Cordoba Regional Faculty), Córdoba, Argentina</i>
P 3.11	<b>Hydrothermal liquefaction of biomass: study of model compounds for the influence of Maillard reactions</b> Yujie Fan <sup>1</sup> , Ursel Hornung <sup>1</sup> , Nicolaus Dahmen <sup>1</sup> , Andrea Kruse <sup>2</sup> <sup>1</sup> <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i> , <sup>2</sup> <i>University of Hohenheim, Stuttgart, Germany</i>
P 3.12	<b>Hydrothermal liquefaction of lignin</b> Julia Schuler, Ursel Hornung, Jörg Sauer <i>Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany</i>
15:20-16:00 <i>Bio-Foyer</i>	<b>P 5 Collaboration networks for Bioeconomy value chains</b>
P 5.01	<b>The BioInnovation Growth mega-Cluster - BIG-Cluster</b> Vera Haye, Cornelia Bähr, Carolin Lange, Manfred Kircher, Thomas Schwarz <i>CLIB2021, Düsseldorf, Germany</i>
P 5.02	<b>Using the agrobiodiversity to development new value chains: the case of "jícara" (<i>Crescentia alata</i>) in Central America</b> Olman Quirós Madrigal <i>University of Costa Rica, San Pedro, Costa Rica</i>
P 5.03	<b>Valorization of biomass sidestreams from forestry and agriculture</b> Hartmut Welck <i>Steinbeis 2i GmbH, Stuttgart, Germany</i>
P 5.04	<b>Market actor networks in bio-economic value chains</b> Marzena Wilczynski, Julia Federer, Heiner Schanz <i>University of Freiburg, Freiburg im Breisgau, Germany</i>
P 5.05	<b>Bioeconomy comes in a package</b> Atte Koskivaara, Jaana Korhonen, Anne Toppinen <i>University of Helsinki, Helsinki, Finland</i>
P 5.06	<b>Management of municipal solid waste aiming the production of energy and chemical feedstocks</b> Alcides Lopes Leao <sup>1</sup> , Ivana Cesarino <sup>1</sup> , Mohini Sain <sup>1,2</sup> <sup>1</sup> <i>UNESP/FCA, Botucatu, Brazil</i> , <sup>2</sup> <i>UofT, Center for Biocomposites and Biomaterials, Toronto, Canada</i>
P 5.07	<b>Castor oil as a high value raw material export commodity for smallholder farmers - Linking Ethiopian producers to German companies</b> Tim Loos <sup>1</sup> , Marlene Hoppe <sup>2</sup> <sup>1</sup> <i>University of Hohenheim, Stuttgart, Germany</i> , <sup>2</sup> <i>C.S.P., Dresden, Germany</i>
P 5.08	<b>Integrated research for a sustainable bioeconomy - A core element within the <i>Bioeconomy Science Center</i></b> Heike Slusarczyk <sup>1</sup> , Ulrich Schurr <sup>2</sup> <sup>1</sup> <i>Bioeconomy Science Center Office c/o Forschungszentrum Juelich, Juelich, Germany</i> , <sup>2</sup> <i>Forschungszentrum Juelich, IBG-2: Plant Sciences, Juelich, Germany</i>
P 5.09	<b>Potential application areas for lignin extracted through a novel 2nd generation bio-refinery process</b> Lora Tsvetanova, Laura Carraresi, Stefania Bröring <i>University of Bonn, Bonn, Germany</i>
P 5.10	<b>Measuring the impact of green chemistry and biorefineries on bioeconomy industries: The lignocellulosic biomass from <i>Pinus patula</i> as feedstock example</b> Carlos Ariel Cardona, Carlos Andres Garcia <i>Universidad Nacional de Colombia sede Manizales, Manizales, Colombia</i>
P 5.11	<b>Additional Bio - Innovation services than piloting alone for a sustainable Bioeconomy</b> Tanja Meyer, Lieve Hoflack, Katrien Moulders, Frederik De Bruyn, Brecht Vanlerberghe <i>Bio Base Europe Pilot Plant, Business Development, Ghent, Belgium</i>



15:20-16:00 <i>Bio-Foyer</i>	P 8 Societal issues of bioeconomy
P 8.01	<b>Factors that contributed to the decline of the agroeconomic bases of the municipality of palmital, SP.</b> Vinicius Bianchi, Leonardo Pinto, Paulo Dias, Izabel Takitane <i>School of Agricultural Sciences - FCA/UNESP, Economics, Sociology and Technology, Botucatu, Brazil</i>
P 8.02	<b>Payment for environmental services: case study of the municipality of Botucatu (Sao Paulo State, Brazil)</b> Luiz Ribas, Izabel Takitane <i>School of Agricultural Sciences - FCA/UNESP, Economics, Sociology and Technology, Botucatu, Brazil</i>
P 8.03	<b>The rural workers accidents linked to the sugar cane cultivation and their social and economic impacts in Sao Paulo State</b> Paulo Dias, Leonardo Pinto, Vinicius Bianchi, Izabel Takitane <i>School of Agricultural Sciences - FCA/UNESP, Economics, Sociology and Technology, Botucatu, Brazil</i>
P 8.04	<b>The systemic Bioeconomy approach in context of fragmented realities</b> Rolf Meyer, Carmen Priefer <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
P 8.05	<b>The prospect of smallholder renewable energy production: insights from case studies in rural South Africa, India and Brazil</b> Bastian Winkler <sup>1</sup> , Stefanie Lemke <sup>2, 1</sup> , Iris Lewandowski <sup>1</sup> <i><sup>1</sup>University of Hohenheim, Stuttgart, Germany, <sup>2</sup>Coventry University, Coventry, United Kingdom</i>
P 8.06	<b>“And the award goes to...” Supporting knowledge transfer in the Bioeconomy: An insight into researchers’ experiences of receiving innovation support awards</b> Aine Regan, Maeve Henchion <i>Teagasc, Dublin, Ireland</i>
P 8.07	<b>Risk perception of biomass production with genetically modified microalgae</b> Christine Rösch, Laura Scholz <i>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
P 8.08	<b>Fuzzy Cognitive Maps reveal the crucial factors for the production of bioethanol from waste</b> Aikaterini Konti, Dimitris Damigos <i>National Technical University of Athens, Zografou, Greece</i>

## September 13, 2017

10:20-11:00 <i>Bio-Foyer</i>	P 2 Food and feed - New sources, products, technology and applications
P 2.01	<b>Microalgae as a potential source of carotenoids and retinoids: results of a feeding experiment with mice</b> Andrea Gille <sup>1</sup> , Ulrike Neumann <sup>2</sup> , Sandrine Louis <sup>2</sup> , Stephan C. Bischoff <sup>2</sup> , Karlis Briviba <sup>1</sup> <i><sup>1</sup>Max Rubner-Institut, Karlsruhe, Germany, <sup>2</sup>University of Hohenheim, Stuttgart, Germany</i>
P 2.02	<b>Production of microalgae extracts for food- and feed applications</b> Felix Derwenskus <sup>1</sup> , Felix Metz <sup>1</sup> , Matthias Hardtmann <sup>1</sup> , Andrea Gille <sup>2</sup> , Ulrike Schmid-Staiger <sup>3</sup> , Ursula Schließmann <sup>1, 3</sup> , Thomas Hirth <sup>4</sup> <i><sup>1</sup>University of Stuttgart, Stuttgart, Germany, <sup>2</sup>Max Rubner-Institut, Karlsruhe, Germany, <sup>3</sup>Fraunhofer IGB, Stuttgart, Germany, <sup>4</sup>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</i>
P 2.03	<b>Emulsifying properties of protein extracts from <i>Chlorella protothecoides</i></b> Lutz Grossmann, Sabine Schäfer, Jörg Hinrichs, Jochen Weiss <i>University of Hohenheim, Stuttgart, Germany</i>
P 2.04	<b>Solubility enhancement of novel microalgae protein by acid hydrolysis: 2. Influence of temperature on hydrolysis kinetic</b> Laixin Dai, Jörg Hinrichs, Jochen Weiss <i>University of Hohenheim, Stuttgart, Germany</i>
P 2.05	<b>Pulsed electric field (PEF) - assisted protein recovery from microalgae biomass</b> Daniel Scherer <i>Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany</i>
P 2.06	<b>Role of the wall matrix as an oxygen diffusion barrier on the oxidative stability of encapsulated lipid powders</b> Annika Linke, Heike Teichmann, Jochen Weiss, Reinhard Kohlus <i>University of Hohenheim, Stuttgart, Germany</i>
P 2.07	<b>A Transcriptomic approach for investigation of cacao antioxidants</b> Adriana Gallego <sup>1</sup> , Luisa Fernanda Rojas <sup>1</sup> , Alejandro Rodríguez <sup>1</sup> , Aura Inés Urrea <sup>1</sup> , Lucía Atehortúa <sup>1</sup> , Siela Maximova <sup>2</sup> , Mark Guiltinan <sup>2</sup> , Natalia Pabón-Mora <sup>1</sup> <i><sup>1</sup>Universidad de Antioquia, Medellín, Colombia, <sup>2</sup>Penn State University, Pennsylvania, United States</i>

10:20-11:00 <i>Bio-Foyer</i>	<b>P 2 Food and feed - New sources, products, technology and applications (continued)</b>
P 2.08	<b>Implementation of cyanophycin production strain PII(I86N) in <i>Synechocystis</i> sp. PCC 6803 using an innovative growth system</b> Luca Lippi <sup>1</sup> , Lars Bähr <sup>2</sup> , Annegret Wilde <sup>1</sup> <sup>1</sup> University of Freiburg, Freiburg im Breisgau, Germany, <sup>2</sup> CellDEG GmbH, Berlin, Germany
P 2.09	<b>Interfacial and emulsifying properties of an extract obtained from a food by-product stream: Oat bran extract (<i>Avena sativa</i> L.)</b> Theo Ralla <sup>1</sup> , Hanna Salminen <sup>1</sup> , Matthias Edelmann <sup>2</sup> , Corinna Dawid <sup>2</sup> , Thomas Hofmann <sup>2</sup> , Jochen Weiss <sup>1</sup> <sup>1</sup> University of Hohenheim, Stuttgart, Germany, <sup>2</sup> Technical University of Munich, Freising, Germany
P 2.10	<b>Formation and stability of emulsions using <i>Panax ginseng</i> as natural emulsifier</b> Eva Herz <sup>1</sup> , Theo Ralla <sup>1</sup> , Hanna Salminen <sup>1</sup> , Matthias Edelmann <sup>2</sup> , Corinna Dawid <sup>2</sup> , Thomas Hofmann <sup>2</sup> , Jochen Weiss <sup>1</sup> <sup>1</sup> University of Hohenheim, Stuttgart, Germany, <sup>2</sup> Technical University Munich, Freising, Germany
P 2.11	<b>Operating strategy to reduce the energy input of a flat panel airlift photobioreactor with intrinsic static mixers</b> Valentina Ruppel <sup>1</sup> , Peter Bergmann <sup>1</sup> , Pascal Scherz <sup>1</sup> , Walter Trösch <sup>2</sup> <sup>1</sup> Subitec GmbH, Stuttgart, Germany <sup>2</sup> University of Hohenheim, Stuttgart, Germany,
10:20-11:00 <i>Bio-Foyer</i>	<b>P 3 Value chains for new materials, chemicals and fuels - processes 2</b>
P 3.13	<b>Bio-Masterbatches for bioplastics, biocomposites and blends</b> Albrecht Dinkelaker Polymer- und Produktentwicklung, Zell im Wiesental, Germany
P 3.14	<b>Microbial production of mannosylerythritol lipids from lignocellulosic feedstock</b> Alexander Beck <sup>1</sup> , Paula Carrillo-Riveros <sup>1</sup> , Steffen Rupp <sup>1,2</sup> , Susanne Zibek <sup>1,2</sup> <sup>1</sup> University of Stuttgart, Stuttgart, Germany, <sup>2</sup> Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart, Germany
P 3.15	<b>Enzymatically synthesized glycolipids in organosolv-sugar based deep eutectic solvents and their quantification</b> Sascha Siebenhaller <sup>1</sup> , Susanne Zibek <sup>2</sup> , Gerald Brenner-Weiß <sup>1</sup> , Christoph Syldatk <sup>1</sup> <sup>1</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany, <sup>2</sup> Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart, Germany
P 3.16	<b>Evaluation of the microbial malic acid production by <i>Aspergillus oryzae</i></b> Vanessa Schmitt, Katrin Ochsenreither Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
P 3.17	<b>Evaluation of pyrolysis oil as an alternative microbial feedstock for a bio-based economy</b> Stefanie Arnold, Karin Moß, Marius Henkel, Rudolf Hausmann University of Hohenheim, Stuttgart, Germany
P 3.18	<b>Organosolv based lignocellulose fractions for fermentative malic acid production with <i>Aspergillus oryzae</i></b> Stefan Dörsam <sup>1</sup> , Jana Fessler <sup>1</sup> , Susanne Zibek <sup>2</sup> , Christoph Syldatk <sup>1</sup> , Katrin Ochsenreither <sup>1</sup> <sup>1</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany, <sup>2</sup> Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart, Germany
P 3.19	<b>Development of hemicellulose metabolizing bacteria strains for the production of recombinant proteins</b> Felix Horlamus <sup>1</sup> , Yan Wang <sup>2</sup> , Andreas Wittgens <sup>2</sup> , Frank Rosenau <sup>2</sup> , Paul Grieshaber <sup>1</sup> , Marius Henkel <sup>1</sup> , Rudolf Hausmann <sup>1</sup> <sup>1</sup> University of Hohenheim, Stuttgart, Germany, <sup>2</sup> Ulm University, Ulm, Germany
P 3.20	<b><i>Ustilago maydis</i> as a whole-cell biocatalyst for biomass degradation and the production of secondary metabolites.</b> Peter Stoffels <sup>1,2</sup> , Elena Geiser <sup>2,3</sup> , Markus Müller <sup>2,3</sup> , Marta Rodriguez-Estevéz <sup>4</sup> , Lars M. Blank <sup>2,3</sup> , Nick Wierckx <sup>2,3</sup> , Jochen Büchs <sup>2,3</sup> , Michael Feldbrügge <sup>1,2</sup> , Kerstin Schipper <sup>1,2</sup> <sup>1</sup> Heinrich Heine University Düsseldorf, Düsseldorf, Germany, <sup>2</sup> Bioeconomy Science Center (BioSC), Forschungszentrum Jülich, Jülich, Germany, <sup>3</sup> RWTH Aachen University, Aachen, Germany, <sup>4</sup> Universität des Saarlandes, Saarbrücken, Germany
P 3.21	<b>Investigation of a new method for reinforcing PLA by Cellulose Nanofibrils</b> Gudrun Gräbe, Sebastian Kunze, Kevin Moser, Sebastian Reinhardt, Jens Forberger Fraunhofer Institute of Chemical Engineering ICT, Pfinztal, Germany
P 3.22	<b>Integration of next generation biosurfactant production into biorefinery processes</b> Julia Fritsch <sup>1,2</sup> , Jochen Büchs <sup>1</sup> , Lars Regestein <sup>1,2</sup> <sup>1</sup> RWTH Aachen University, Aachen, Germany, <sup>2</sup> Bioeconomy Science Center (BioSC), Forschungszentrum Jülich, Jülich, Germany
P 3.23	<b>Evaluation of lignocellulose as the substrate for co-production of single cell oil and gluconic acid</b> Xiujuan Qian <sup>1,2</sup> , Katrin Ochsenreither <sup>1</sup> , Christoph Syldatk <sup>1</sup> <sup>1</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany, <sup>2</sup> Nanjing Tech University, Nanjing, China
P 3.24	<b>Bionic Lignocellulosic nanocomposites</b> Jia Mao, Marie-Pierre Laborie University of Freiburg, Freiburg im Breisgau, Germany

<b>10:20-11:00</b> <i>Bio-Foyer</i>	<b>P 4 Substrates, technologies and products in the biogas value chain</b>
P 4.01	<b>Risk perception assessment of biological methanation as part of the German biogas sector</b> Johanny Perez Sierra <sup>1</sup> , Claudia Bieling <sup>1</sup> , Dirk Scheer <sup>2</sup> <sup>1</sup> University of Hohenheim, Stuttgart, Germany, <sup>2</sup> University of Stuttgart, Research Center for Interdisciplinary Risk and Innovation Studies (ZIRIUS), Stuttgart, Germany
P 4.02	<b>H2-Transfer</b> Bernhard Lecker, Hans Oechsner University of Hohenheim, Stuttgart, Germany
P 4.03	<b>Characterization of products from hydrothermal carbonization of biogas digestate</b> Zebin Cao, Andrea Kruse University of Hohenheim, Stuttgart, Germany
P 4.04	<b>Development of a bioreactor for the conversion of methane into value added products</b> Ilka Mühlemeier <sup>1</sup> , Matthias Stier <sup>1</sup> , Dieter Bryniok <sup>2</sup> , Ursula Schließmann <sup>1,2</sup> , Thomas Hirth <sup>3</sup> <sup>1</sup> University of Stuttgart, Stuttgart, Germany, <sup>2</sup> Fraunhofer IGB, Stuttgart, Germany, <sup>3</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
P 4.05	<b>Retrieval of fatty acids during biogas-process</b> Fabian Muhlke, Sebastian Reinhardt, Detlef Rückert, Ute Pohnsner, Sarah Böringer, Thorsten Jänisch Fraunhofer-Institut für Chemische Technologie, Pfingsttal, Germany
P 4.06	<b>Use of biological methanation for Power-to-gas concepts: Fermentative high-pressure methanation of hydrogen</b> Timo Ullrich, Andreas Lemmer University of Hohenheim, Stuttgart, Germany
P 4.07	<b>Organic waste potentials from households in Baden-Wuerttemberg</b> Lea Böhme, Detlef Clauß, Martin Kranert University of Stuttgart, Stuttgart, Germany
P 4.08	<b>Energy valorization of Greek brewery spent grains</b> Nikolaos Kouros <sup>1</sup> , Elli Maria Barampouti <sup>2</sup> , Sofia Mai <sup>2</sup> <sup>1</sup> Hellenic Open University, Patras, Greece, <sup>2</sup> National Technical University of Athens, Zografou, Greece
P 4.09	<b>No Agro-Waste: Innovative approaches to turn agricultural waste into ecologic and economic assets</b> Katrin Kayser, Tristan Gruszkos, Michael Köttner IBBK Fachgruppe Biogas GmbH, Kirchberg / Jagst, Germany
<b>10:20-11:00</b> <i>Bio-Foyer</i>	<b>P 6 Bioeconomy and the environment</b>
P 6.01	<b>The influence of harvesting intensity on structural and species diversity of forests</b> Felix Storch, Jürgen Bauhus University of Freiburg, Freiburg im Breisgau, Germany
P 6.02	<b>Comparing soil functions for a wide range of agriculture soils focusing on production for bioenergy using a combined isotope-based observation and modelling approach</b> Hannes Leistert, Barbara Herbstritt, Markus Weiler University of Freiburg, Freiburg im Breisgau, Germany
P 6.03	<b>High hopes for marginal land? A life cycle assessment of bioenergy from lignocellulosic crops.</b> Nils Rettenmaier, Tobias Schmidt, Sven Gärtner, Guido Reinhardt ifeu - Institute for Energy and Environmental Research, Heidelberg, Germany
P 6.04	<b>Harmonization of LCAs for bio-based products</b> Tabea Beck, Stefan Albrecht, Ulrike Bos University of Stuttgart, Stuttgart, Germany
P 6.05	<b>Comparative environmental life cycle assessment of microalgae as an alternative source of protein for the food sector</b> Sophie Mok, Christine Rösch Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
P 6.06	<b>Soil as a sustainable resource for the Bioeconomy – BonaRes</b> Ute Wollschläger <sup>1</sup> , Wulf Amelung <sup>2</sup> , Nicolas Brüggemann <sup>3</sup> , Joachim Brunotte <sup>4</sup> , Robin Gebbers <sup>5</sup> , Rita Grosch <sup>6</sup> , Uwe Heinrich <sup>7</sup> , Katharina Helming <sup>7</sup> , Ralf Kiese <sup>8</sup> , Peter Leinweber <sup>9</sup> , Marco Lorenz <sup>4</sup> , Barbara Reinhold-Hurek <sup>10</sup> , Edzo Veldkamp <sup>11</sup> , Hans-Jörg Vogel <sup>1</sup> , Traud Winkelmann <sup>12</sup> <sup>1</sup> Helmholtz Center for Environmental Research - UFZ, Halle (Saale), Germany, <sup>2</sup> University of Bonn, Bonn, Germany, <sup>3</sup> Forschungszentrum Jülich GmbH, Jülich, Germany, <sup>4</sup> Thünen Institute of Agricultural Technology, Braunschweig, Germany, <sup>5</sup> Leibniz-Institut für Agrartechnik und Bioökonomie e.V. (ATB), Potsdam, Germany, <sup>6</sup> Leibniz-Institute of Vegetable and Ornamental Crops (IGZ), Großbeeren, Germany, <sup>7</sup> Leibniz Center for Agricultural Landscape Research, Müncheberg, Germany, <sup>8</sup> Karlsruhe Institute of Technology IMK-IFU, Garmisch-Partenkirchen, Germany, <sup>9</sup> University of Rostock, Rostock, Germany, <sup>10</sup> University of Bremen, Bremen, Germany, <sup>11</sup> University of Göttingen, Göttingen, Germany, <sup>12</sup> Leibniz Universität Hannover, Hannover, Germany

<b>10:20-11:00</b> <i>Bio-Foyer</i>	<b>P 6 Bioeconomy and the environment (continued)</b>
P 6.07	<b>Economic analysis of composted sewage sludge production for use in agriculture</b> Sara Fernandes Martins, Maura Seiko Tsutsui Esperancini, Izabel Cristina Takitane <i>FCA/UNESP, Botucatu, Brazil</i>
P 6.08	<b>Direct and indirect impacts of perennial lignocellulosic biomass land use on the EU and the Global agricultural market and climate change mitigation</b> Hyung Sik Choi <sup>1</sup> , Harald Grethe <sup>2</sup> , Steffen Entenmann <sup>2, 3</sup> <i><sup>1</sup>University of Hohenheim, Stuttgart, Germany, <sup>2</sup>Humboldt-University of Berlin, Berlin, Germany, <sup>3</sup>University of Freiburg, Freiburg im Breisgau, Germany</i>
P 6.09	<b>Regional circular economy concept based on integration of municipal wastewater treatment, biogas production and fertilizer production</b> Elina Tampio <sup>1</sup> , Saija Rasi <sup>2</sup> , Marika Kokko <sup>3</sup> , Jukka Rintala <sup>3</sup> <i><sup>1</sup>Natural Resources Institute Finland (Luke), Tampere, Finland, <sup>2</sup>Natural Resources Institute Finland (Luke), Jyväskylä, Finland, <sup>3</sup>Tampere University of Technology, Tampere, Finland</i>
P 6.10	<b>Carbon footprint as an indicator of sustainable development for businesses and public administration: The School Forest Enterprise in Kostelec nad Černými lesy</b> Miroslav Hajek <i>Czech University of Life Sciences Prague, Prague, Czech Republic</i>
<b>10:20-11:00</b> <i>Bio-Foyer</i>	<b>P 7 Measuring and modelling the sustainability of bio-based materials</b>
P 7.01	<b>The inclusion of biomass uses into a general equilibrium model</b> Sebastian Voigt <i>Center for European Economic Research (ZEW), Mannheim, Germany</i>
P 7.02	<b>The potential of microalgae for the production of protein. How sustainable is the production of microalgae protein compared with conventional sources?</b> Sebastian Weickert <sup>1</sup> , Harald Grethe <sup>2</sup> <i><sup>1</sup>University of Hohenheim, Stuttgart, Germany, <sup>2</sup>Humboldt-Universität zu Berlin, Berlin, Germany</i>
P 7.03	<b>Environmental screening of suitable biomass for green biorefinery conversion</b> Andrea Corona, Morten Birkved <i>Technical University of Denmark, Lyngby, Denmark</i>
P 7.04	<b>Integrative life cycle based sustainability assessment of multifunctional product systems in the bioeconomy</b> Natalia Matiz Rubio <sup>1</sup> , Ludger Eltrop <sup>1</sup> , Matthias Böhm <sup>2</sup> , Thomas Potthast <sup>2</sup> <i><sup>1</sup>University of Stuttgart, Stuttgart, Germany, <sup>2</sup>University of Tübingen, Tübingen, Germany</i>
P 7.05	<b>Land use change impact assessments and life cycle thinking: New directions for the evaluation of deforestation-free biomass value chains in Southeast Asia</b> Melvin Lippe, Rubén Ferrer, Sven Günter <i>Thuenen Institute of International Forestry and Forest Economics, Forestry Worldwide, Hamburg, Germany</i>
P 7.06	<b>Techno-economic and environmental assessment of biorefinery technologies</b> Pablo Silva Ortiz <sup>1</sup> , Silvio de Oliveira Junior <sup>2</sup> , Rubens Maciel Filho <sup>1</sup> <i><sup>1</sup>University of Campinas, Campinas, Brazil, <sup>2</sup>University of São Paulo, São Paulo, Brazil</i>

# Bioeconomy Research in Baden-Württemberg

The Bioeconomy Research Program Baden-Württemberg is a network of universities and research institutions that collaborate in more than 50 projects in four focus areas to develop new concepts and technologies using biomass instead of fossil resources to ensure global food security. The research program implements Baden-Württemberg's systemic research strategy for Bioeconomy and is funded by the Ministry of Science, Research and Arts since 2014.

A coordination office located at the University of Hohenheim provides support through project management, external and internal communication and represents the operative unit of the program's steering committee. The integrated graduate program BBW ForWerts provides an interdisciplinary curriculum and networking opportunities to qualify future Bioeconomy experts to work on multifaceted challenges as well as independent research in their specific fields.

## Focus Areas of the program

### Biogas: Sustainable and flexible value-added chains in Baden-Württemberg

- ❖ New, optimized technologies for biomass production, conversion and use
- ❖ Potential biogas production in context of new German legislation (EEG 2014)
- ❖ Modelling of food and non-food markets including other regenerative energy and bioenergy production



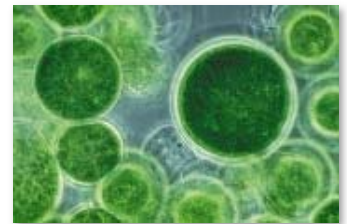
### Lignocellulose: Alternative resource platform for new materials and products

- ❖ Biomass from agriculture and forestry: selection, breeding, cultivation and harvesting
- ❖ Impact of biomass production on ecosystems
- ❖ Efficient conversion and preparation techniques
- ❖ New processes and products derived from cellulose- and lignin fractions
- ❖ Systemic analysis of value chains



### Microalgae – Integrated use for food and feed

- ❖ Resource-efficient production of proteins and essential fatty acids in microalgae
- ❖ Optimization of cultivation, harvesting and processing
- ❖ Functionality in food technology
- ❖ Nutrition physiology
- ❖ Sustainability assessment, consumer acceptance, economic modelling



### Competence network modelling the Bioeconomy

With an increasing demand of biomass worldwide, competition between production of food, feed, energy and other materials will increase. The competence network aims to analyse and evaluate potential biomass value chains for their direct and indirect economic and ecological impacts. Technological and economic simulation models at various aggregation levels will be adapted, combined and applied.

- ❖ Farm-, agricultural sector and economic models
- ❖ Modelling of energy systems and biomass conversion plants
- ❖ Models for ecological impact and life cycle analyses



More details about the program are available at [www.bioeconomy-research-bw.de](http://www.bioeconomy-research-bw.de)

# Organisational Information

## Arrival

### By Train and/or Bus:

#### Public transportation from the Stuttgart main train station:

- ❖ Stadtbahn U7 or U15 (underground train station) towards Ostfildern to Ruhbank (Fernsehturm), then transfer to the city bus 70 towards Plieningen to the stop Universität Hohenheim.
- ❖ Stadtbahn U5, U6 or U12 (underground train station) towards Leinfelden or Fasanenhof until Möhringen Bahnhof, then transfer to the Stadtbahn U3 toward Plieningen to the last station Plieningen Garbe.

### By Flight:

#### Public transport from Stuttgart Airport:

Take bus 122 to the stop "Plieningen-Post," then switch to bus 70 or 74; takes 25-35 minutes.

#### Taxi from Stuttgart Airport:

Cost around € 15, takes about 15 minutes.

### By Car:

**From Stuttgart center:** From the B14 (Konrad-Adenauer-Straße), turn onto the B27 (Charlottenstraße) at Charlottenplatz (near the Schloss), then keep driving straight. When the street turns into 4 lanes, take the exit S-Hohenheim. Follow the signs S-Plieningen/S-Hohenheim for several kilometres until you reach Plieningen. Turn left towards the University of Hohenheim. Follow the street and turn right at the next opportunity. Continue to follow the street until you reach the parking spaces.

**From Karlsruhe/Heilbronn:** Autobahn A8, exit Stuttgart-Flughafen/S-Hohenheim, stay left, and follow the signs S-Hohenheim. After around 4 km, turn left to the University of Hohenheim. Follow the street until you reach the parking spaces after a sharp left turn.

**From Munich:** Autobahn A8, exit S-Plieningen/S-Hohenheim, stay right, and follow the signs S-Hohenheim. After around 4 km, turn left to the University of Hohenheim. Follow the street until you reach the parking spaces after a sharp left turn.

(see also directions at page nr 24)

## Accommodation

### Close to the city center

- ❖ Motel One, Stuttgart-Hauptbahnhof  
Lautenschlagerstraße 14, 70173 Stuttgart

### Close to the airport and near the university

- ❖ Star Inn Hotel, Stuttgart Airport-Messe  
In den Entenäckern 6, 70599 Stuttgart-Plieningen
- ❖ Dormero Hotel, Stuttgart  
Plieninger Str. 100, 70567 Stuttgart

## Registration (Info Point)

The registration starts Tuesday, 12<sup>th</sup> of September at 09:00, and is open Wednesday, 13<sup>th</sup> of September at 08:00.

You can find the registration desk in the Foyer of the Biology Building, Garbenstraße 30. If you have any questions during the day, please do not hesitate to ask our team members. The registration will remain staffed until the congress is finished.



## Wardrobe

There is the possibility to store coats and luggage in room B11 in the Biology Building (close to the registration). Please note that the congress organizers cannot take any responsibility for items kept there.

## Internet connection

The University of Hohenheim supports Eduroam access to participating universities.

### Eduroam

- ❖ Connect using WiFi with the network eduroam
- ❖ You can login using the user account name from your home institution and the domain from your home institution (e.g. "uni-ulm.de"). If no domain is requested, your log-in is: [Useraccount]@[Domain](e.g. mueller@uni-ulm.de)
- ❖ Now you can use the internet

In case of any difficulty with internet access, please feel free to approach the info point/registration desk and we will be happy to assist you.

## Image and sound recording

Any kind of recording (Audio/Video) of the sessions by congress participants is **prohibited**. Cooperation from all participants is expected to avoid any **legal actions**.

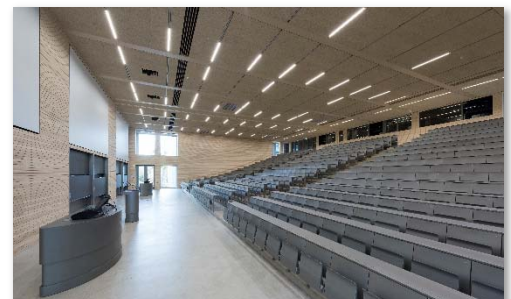
By entering the venue all members of the audience and participants consent to the filming and sound recording of themselves as members of the audience by the organizers as well as to the broadcasting and publishing of these recordings without compensation.

## Oral presentations

The oral presentations are assigned to 15 parallel sessions grouped by topic. Each session will be introduced with a keynote lecture of 30 minutes followed by three talks of original research papers of 20 minutes each.

The language of the congress and therefore of all talks is English.

For more information, see the guidelines available on [www.bioeconomy-congress.de](http://www.bioeconomy-congress.de)



## Poster sessions

The posters will be displayed in the Exhibition Area throughout the 2<sup>nd</sup> International Bioeconomy Congress from 09:30 on Tuesday, the 12<sup>th</sup> of September, till 16:30 on Wednesday, the 13<sup>th</sup> of September. The Exhibition Area is located in the foyer of the Biology Building and is accessible all day to conference visitors.

There will be one moderated poster session per day during the following times: **15:20 - 16:00 Tuesday, 12<sup>th</sup> September**, and **10:20 - 11:00 Wednesday, 13<sup>th</sup> September**. Moderators will lead small groups through parts of the poster exhibition. Posters will be grouped by topic and each poster presentation will be assigned to one of the moderated poster sessions as indicated in the conference program.

For more information, see the guidelines available on [www.bioeconomy-congress.de](http://www.bioeconomy-congress.de)

## Food and coffee break

Lunch on both days will take place on the first floor of Schloss Hohenheim in the Aula and the Foyer. The coffee stations will be located in the Foyer of the Biology Building where drinks will be available throughout the day.



## Evening Reception

### Program

The evening reception on Tuesday, 12<sup>th</sup> of September, will take place at BIX Jazzclub in the city center of Stuttgart. In addition to the networking opportunities, drinks, food and music, a Bioeconomy science slam will be featured. Young researchers will explain their vision on how Bioeconomy research could change the world. You are welcome to join us and vote for the best Bioeconomy science slammer of the 2<sup>nd</sup> International Bioeconomy Congress.

### How to get there

There will be bus transfers from the conference venue to the BIX Jazzclub. Buses will depart between 18:30 and 18:50 in front of Garbenstraße 30. The evening reception will start at 19:30. There will be bus transfers from the Jazzclub to the hotels in Plieningen between 22:00 and 23:00.

Alternatively, the BIX Jazzclub can be reached by public transport. The closest underground train stations are "Rathaus" (U21 or U24) (3 minutes walking distance) or Charlottenplatz (U5, U6, U7, U12, U15, U21, U24) (6 minutes walking distance).

### Address

BIX Jazzclub, Leonhardsplatz 28, 70182 Stuttgart

## Publication of extended papers

Highlights from the congress will be published in a special issue "Bioeconomy" of the open access journal *Global Change Biology Bioenergy* Published by John Wiley & Sons Ltd.

The issue will cover complete bio-based value chains in the Bioeconomic sectors of bioenergy, bio-chemicals, bio-materials, food and feed, and will focus on the subject areas lignocellulose, biogas and microalgae. It will combine technological development with sustainability aspects, including economic, social and ecological assessments.

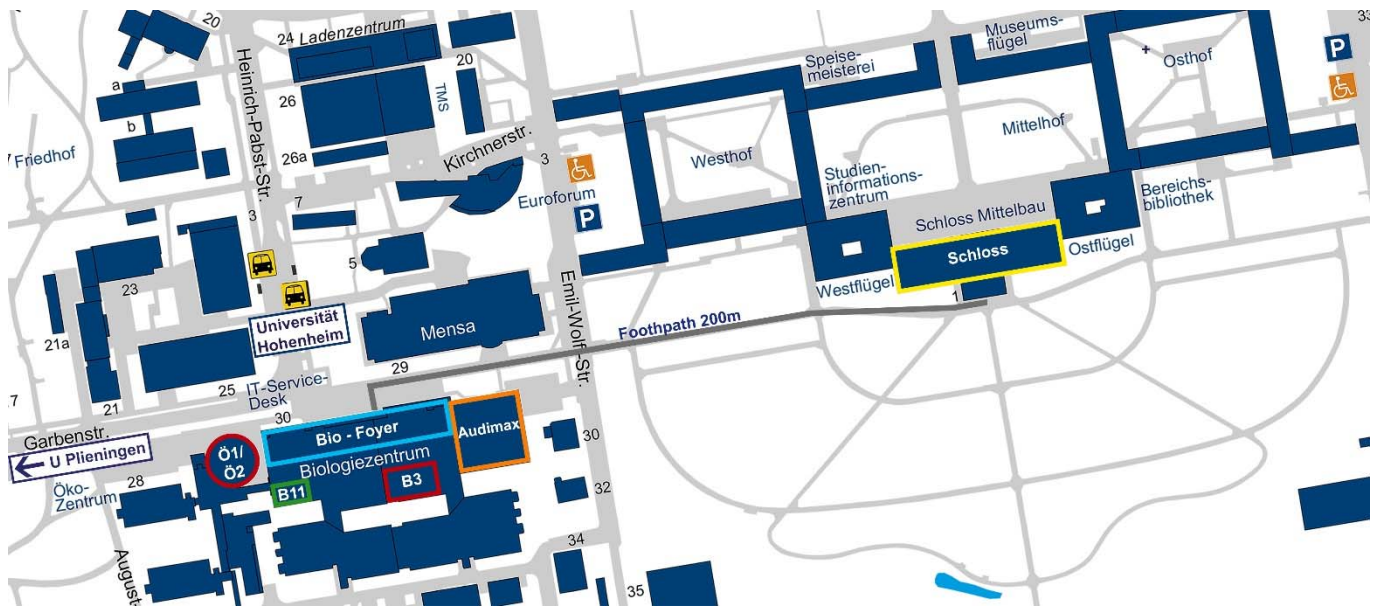
After the conference, selected authors will be invited for manuscript submission. If you are interested in publishing in the special issue, please notify the organizers at 'bioeconomy-bw@uni-hohenheim.de'. The Contributions will be peer-reviewed after submission.

Please note that the journal is an open access journal. Therefore, publications costs will have to be covered by the contributing authors.



# University Map

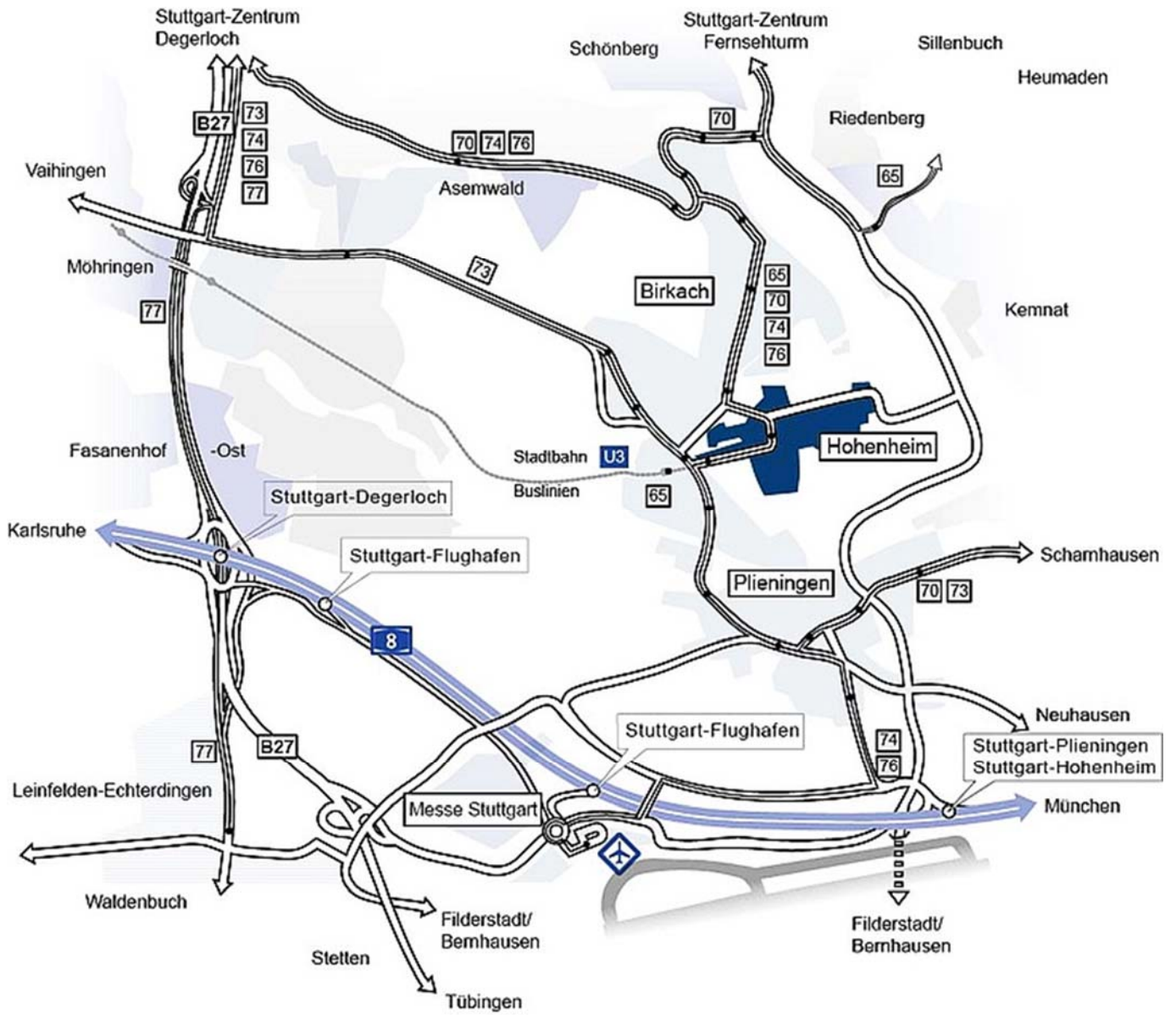
An overview of the most important locations of the Congress can be seen here:



## Legend

<span style="color: orange;">■</span>	Audimax:	Welcome Address, Plenary Session
<span style="color: lightblue;">■</span>	Bio-Foyer:	Registration/ Info Point, Coffee Break, Poster Sessions
<span style="color: red;">■</span>	Ö1, Ö2, B3:	Parallel Sessions
<span style="color: green;">■</span>	B11:	Wardrobe
<span style="color: yellow;">■</span>	Schloss:	Lunch Break

# Directions





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Speakers and poster presenters are required to comply with the applicable provisions of intellectual property rights regulations as well as with the Rules of Good Scientific Practice.



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BADEN-WÜRTTEMBERG



**Baden-Württemberg**  
MINISTRY OF SCIENCE, RESEARCH AND THE ARTS



UNIVERSITY OF HOHENHEIM



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[www.bioeconomy-congress.de](http://www.bioeconomy-congress.de)

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***Conference Venue***

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Garbenstraße 30  
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