

# Agenda

## 6<sup>th</sup> Nuremberg Workshop on Methanation and 2<sup>nd</sup> Generation Fuels

Thursday, June 1<sup>st</sup>, 2023

### 1. Session: Methane for Europe

Session Chair: Prof. Dr.-Ing. Jürgen Karl, FAU Erlangen-Nürnberg

9 <sup>30</sup>	Registration	
10 <sup>00</sup> -10 <sup>15</sup>	Welcome address	J. Karl, FAU Erlangen-Nürnberg, Germany
10 <sup>15</sup> -11 <sup>00</sup>	<b>Keynote:</b> "Industry without natural gas - (how) is it possible?"	T. Kolb, KIT, Germany
11 <sup>00</sup> -11 <sup>30</sup>	Quo vadis Gas? - Between crisis management and transformation	M. Noack, BDEW, Germany
11 <sup>30</sup> -12 <sup>00</sup>	GreenLNG for mobility – The EU project CarbonNeutralLNG	P. Treiber, FAU Erlangen-Nürnberg, Germany
12 <sup>00</sup> -12 <sup>15</sup>	Discussion	

*Lunch break*

### Open Session - Latest news from the audience

Session Chair: Prof. Dr. Katharina Herkendell, FAU Erlangen-Nürnberg

13 <sup>30</sup>	SynBioS: The Commercial Future of Biological Methanation	M. Andrade, MicroPyros BioEnerTec GmbH, Germany
13 <sup>35</sup>	Cutting the costs of Direct Air Capture	R. Haas, NeoCarbon GmbH, Germany
13 <sup>40</sup>	Production of alternative energy and feedstocks from carbon emissions of non-biological origin: an iron and steel industry study	C. D. Dubé, National Research Council Canada, Canada
13 <sup>45</sup>	Direct catalytic methanation of biogas in an industrial environment	S. Markthaler, FAU, Germany
13 <sup>50</sup>	Operation of 20 kW mobile methanation plant – first results, challenges and outlook for further upscale	K. Salbrechter, Montanuniversität Leoben, Austria

13 <sup>55</sup>	Renewable energy and synthesis gas solutions for Energy Intensive Industries – Results from the EU Project RE4Industry	O. Birgi, R. Janssen, WIP GMBH & CO PLANUNGS KG, Germany
14 <sup>00</sup>	The <b>CoMBPres</b> -Gasification - <b>C</b> ombined <b>M</b> ethanation and <b>B</b> iomass Gasification via high <b>P</b> ressure	G. Waizmann, Universität Stuttgart, Germany
14 <sup>05</sup>	The <b>CoMBPres</b> specific 400 bar <b>HPHT Test Rig</b> for biomass gasification at <b>H</b> igh <b>P</b> ressure and <b>H</b> igh <b>T</b> emperature	L. Rainer, Universität Stuttgart, Germany
14 <sup>10</sup>	Initiatives by Japanese gas industry and Tokyo Gas with regard to methanation	M. Yoshida, TOKYO GAS Co., Ltd., Japan
14 <sup>15</sup>	Fluidised bed methanation – Status of pilot scale research	T. Schildhauer, Paul Scherer Institut, Switzerland

## 2. Session: Green Carbon Sources

Session Chair: Prof. Dr.-Ing. Markus Lehner, Montanuniversität Leoben

14 <sup>30</sup> -15 <sup>00</sup>	With wood into a climate-neutral energy supply?	D. Thrän, DBFZ, Germany
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### *Coffee break*

15 <sup>30</sup> -16 <sup>00</sup>	ANDRITZ Carbon Capture plant at Rohrdorfer's cement mill	M. Koller, Andritz, Austria
16 <sup>00</sup> -16 <sup>30</sup>	"Advanced biomethane production: Insights into ENGIE Lab CRIGEN's Innovative technologies"	L. Brito, G. Bouteau, ENGIE, France
16 <sup>30</sup> -17 <sup>00</sup>	Green Carbon fuels from Residues	M. Kuba, BEST, Austria
17 <sup>00</sup> -17 <sup>15</sup>	Discussion	

18 <sup>20</sup> / 18 <sup>30</sup> / 18 <sup>40</sup>	Guided sightseeing tour "Historische Felsengänge" (tours start at 18:20, 18:30 and 18:40) Meeting point at Bergstraße 19, 90403 Nürnberg
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19 <sup>30</sup>	Conference Dinner Restaurant „Zum Spießgesellen“, Rathausplatz 4, 90403 Nuremberg
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Friday, June 2<sup>nd</sup>, 2023

### 3. Session: Innovation in Biological and Catalytic Synthesis

Session Chair: Prof. Dr. Tanja Franken, FAU Erlangen-Nürnberg

8 <sup>30</sup> -9 <sup>00</sup>	Latest developments of HZI methanation reactors (plate type catalytic reactor and biological methanation)	E. Moioli , Hitachi Zosen Inova AG, Switzerland
9 <sup>00</sup> -9 <sup>30</sup>	Implementing a genetic toolbox for biomethanation and beyond	B. Molitor, Universität Tübingen, Germany
9 <sup>30</sup> -9 <sup>45</sup>	Discussion	
<i>Coffee break</i>		
10 <sup>00</sup> -10 <sup>30</sup>	Methanation Pilot Plant with a Slurry Bubble Column Reactor	S. Sauerschell, KIT, Germany
10 <sup>30</sup> -11 <sup>00</sup>	Hydrogen Carrier Methanol & Derivates	P. Schühle, FAU Erlangen-Nürnberg, Germany
11 <sup>00</sup> -11 <sup>15</sup>	Discussion	

### Open Session- - Latest news from the audience

Session Chair: Dr. Tilman Schildhauer, Paul-Scherrer-Institut

11 <sup>15</sup>	Solution proposal for the "trilemma of methanation" by high-capacity tube-bundle reactors	A. Krammer, Montanuniversität Leoben, Austria
11 <sup>20</sup>	Catalytic methanation of biogas on the way to pilot scale	S. Nieß, DBFZ, Germany
11 <sup>25</sup>	EU-Project HYFUELUP – Flexible Methanation of Producer Gas	A. Gantenbein, AlphaSYNT GmbH, Switzerland
11 <sup>30</sup>	Technology Centre of Energy (UAS Landshut) - Research in the field of energy conversion	R. Brotsack, Technische Hochschule Deggendorf, Germany
11 <sup>40</sup>	Energetic and economic optimization of the start-up process of CO <sub>2</sub> methanation: Introducing an innovative heat concept	S. Schmidt, EAH Jena, Germany
11 <sup>45</sup>	Microbial power-to-gas electrolysis cell (PtG MEC)"	R. Quejigo Jose, Electrochaeta GmbH, Germany
11 <sup>50</sup>	H <sub>2</sub> -Reallabor Burghausen	L. Anthofer, TU München, Germany
11 <sup>55</sup>	Membrane reactors for methanation, next gen. fuels and more...	J. Mohit, Fraunhofer IKTS, Germany

*Lunch break - optional: Lab-Tours*

#### 4. Session: Industrial Applications

Session Chair: Prof. Dr. Reinhard Rauch, Karlsruher Institut für Technologie (KIT)

13 <sup>45</sup> -14 <sup>15</sup>	Klaipėdos Nafta - Insights from an operator on the current role of LNG terminals	D. Sivickis, Klaipėdos Nafta, Lithuania (online)
14 <sup>15</sup> -14 <sup>45</sup>	Overview of the renewable gas potential and markets from France to Europe	E. Goudal, GRDF, France
14 <sup>45</sup> -15 <sup>00</sup>	Discussion	
<i>Coffee break</i>		
15 <sup>15</sup> -15 <sup>45</sup>	Finland's first industrial-scale renewable methane production – the Harjavalta project.	A. Alitalo, QPower, Finland
15 <sup>45</sup> -16 <sup>15</sup>	Methanation – industrial concept at voestalpine	A. Haider, voestalpine Stahl GmbH & A. Sasiain, K1-MET, Austria
16 <sup>15</sup> -16 <sup>45</sup>	Summary and conclusions	J. Karl, FAU Erlangen-Nürnberg, Germany