# Venue and Directions



# Hotels and Accommodation

We kindly recommend these hotels offering a good connection to the conference location "Auf AEG"

### Best Western Hotel Nürnberg City West

Regerstr. 6, 90429 Nürnberg, Tel. +49 911 21750 <u>www.nuernberg-citywest.bestwestern.de</u> (in walking distance)

## Derag Living Hotel Nürnberg

Obere Kanalstr. 11, 90429 Nürnberg, Tel. +49 911 92950 https://www.deraghotels.de/hotel-nuernberg/ (three subway stations to conference location at AEG)

## Hotel Prinzregent

Prinzregentenufer 11, 90489 Nürnberg, Tel. +49 911 588188 http://www.prinzregent.net/ (close to main station, 10 min with subway to AEG)

# Registration

Please register via our website by Friday, May 30, 2025.



#### Registration fees

Early bird registration (deadline March 31 <sup>th</sup> 2025)	280 €
Regular (after April 1 <sup>st</sup> 2025)	380€
Students, B. Sc. and M. Sc. level only	60 €

The registration fee includes coffee/lunch breaks, dinner, and sightseeing tour. Presentations will be made available online after the workshop.

## Contact:

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Friedrich-Alexander-Universität Erlangen-Nürnberg TECHNISCHE FAKULTÄT

## Invitation to the



Chair of Energy Process Engineering Friedrich-Alexander University Erlangen-Nuremberg



# About this Workshop

#### Dear colleagues,

it's that time again – in June, we will meet in Nuremberg for the  $7^{\rm th}$  Nuremberg Workshop on "Methanation and  $2^{\rm nd}$  Generation Fuels."

Europe is currently discussing the conversion of gas grids to hydrogen. Initial projects reveal that the transport routes for green hydrogen from regions with an excess of renewable energy to industrial centers in Europe and the Far East remain largely undefined. Only a small proportion of green hydrogen can be imported via pipelines, making it essential to explore alternative *"Hydrogen Pathways to Europe"* We will evaluate the hydrogen derivatives ammonia, methanol, and, of course, liquid methane – GreenLNG – for storing and transporting renewable energy across continents.

The session "*Methane for Europe*" will highlight ongoing EU projects focused on the synthesis and utilization of methane as a green hydrogen carrier. Another session will once again showcase the latest developments in "*Innovation in Biological and Catalytic Synthesis*" Methanation and the transportation of renewable energy as GreenLNG can leverage existing LNG infrastructures. However, there is still limited knowledge about the CO<sub>2</sub> balance when using fossil versus green LNG. Therefore, this year's focus will include examining fugitive methane emissions within the LNG infrastructure.

We look forward to welcoming you back to Nuremberg for the seventh time and to engaging in dynamic, insightful discussions about the future of green energy carriers.



#### Prof. Dr.-Ing. Jürgen Karl

Chair of Energy Process Engineering Friedrich-Alexander University Erlangen-Nuremberg

# Thursday, June 12<sup>st</sup> 2025

## 1. Session: Methane for Europe

9:30 Registration

10:00	Welcome address	J. Karl, FAU Erlangen- Nürnberg, Germany
10:15	<b>Keynote</b> : Energy import using "green" methane and methanol - A systemic analysis	M. Kaltschmidt, TU Hamburg-Harburg, Germany
11:00	Biomethanation in Industrial Scale: Development, Operation & Experience	Brian Jønson, Biogasclean A/S, Denmark
11:30	Horizon Europe Biomethane Cluster	Galin Gentchev, DG ENER, European commission
	Lunch break	

## **Open Session**

13:30 Latest news from the audience

# 2. Session: Fugitive Methane emissions - another inconvenient truth?

14:30Remote sensing of fugitive<br/>methane emissionsRalf Ludwig, LMU<br/>München, Germany

#### Coffee break - Slideshow

- 15:30 Meassuring and monitoring J. Matlach, DBFZ, of Fugitive Methane Germany emissions from Biogas Plants
- 16:00 Methane emissions of Oil and gas industries
- Adefarati Oloruntoba, University of Calgary, Canada
- 16:30 Methane emissions from the Miriam Hofer, Uni energy sector - the legal Graz, Austria perspective

### Guided Sightseeing Tour and Conference Dinner

# Friday, June 13<sup>nd</sup> 2025

# 3. Session: Innovation in Biological and Catalytic Synthesis

9:00	Advanced reactor design/ Additive Manufacturing	J. Müller, FAU Erlangen-Nürnberg, Germany		
09:30	Using particle-resolved CFD simulations to elucidate methanation	G. Wehinger, KIT, Germany		
Coffee break - Slideshow				
10:30	Flexible methanation in pilot scale	T. Schildhauer, Paul Scherrer Institute Switzerland		
11:00	Arificial Intelligence for online optimization	S. Markthaler, FAU Erlangen-Nürnberg, Germany		

Lunch break - Slideshow

## **Open Session**

13:00 Latest news from the audience

## 4. Session: Hydrogen Pathways to Europe

- 14:00 Sorption-enhanced ammonia R. Güttel, Ulm synthesis: Pushing the University, Germany thermodynamic limits"
- 14:30 Status bioLNG use in Sweden J. Held, BEIC and Europe

#### Coffee break

- 15:30 Scaling up of green methanolto-X processes
- 16:00 Summary and conclusions
- M. Gräbner, TU Bergakademie Freiberg, Germany
- J. Karl, FAU Erlangen-Nürnberg, Germany