

9th Energy Colloquium of the Munich School of Engineering

Shaping a Sustainable Energy Future

August 01, 2019 – 8:30 a.m. to 8:00 p.m.
TUM – Quantum, Garching-Hochbrück

8:30 – 9:00 a.m.

Registration

9:00 – 9:15 a.m.

Opening: Prof. Thomas Hamacher

Director, Munich School of Engineering, TUM

9:15 – 9:45 a.m.

Keynote: Challenges and Approaches for a Sustainable and Integrated Energy Transition in Bavaria

Dr. Josef Hochhuber, Bayerisches Wirtschaftsministerium

9:45 – 11:00 a.m.

Energy Material Science: From Heat to Power to Building Applications

Session Chair: **Prof. Peter Müller-Buschbaum**

Development of Salt Hydrate Mixtures for Low-Temperature Latent Heat Storage

Christoph Rathgeber, ZAE Bayern, Energy Storage

A Newly Developed Reference Electrode for In-Situ Impedance Measurements in Sodium-Ion Batteries

Fabian Linsenmann, Chair of Technical Electrochemistry, TUM

Potential Use of Thermo-Responsive Polymers as Smart Window Surface Coatings

Lucas Kreuzer, Chair of Functional Materials, TUM

11:00 – 11:30 a.m.

Poster Presentation and Coffee Break

11:30 – 12:45 p.m.

Future Fuels: Power-to-X

Session Chair: **Prof. Hartmut Spliethoff**

Piping Renewable Energy: Utilizing Methanogen and Organic Waste

Robert Bauer, Deggendorf Institute of Technology

A Comparison of the Energetic Efficiency of the Production of Polyoxymethylene Dimethyl Ethers and other E-Fuels

Yannic Tönges, Chair of Chemical Process Engineering, TUM

Economics of Reversible Power-to-Gas

Gunther Glenk, Chair of Controlling, TUM

12:45 – 2:00 p.m.

Poster Presentation and Lunch Break

Please register: <http://www.mse.tum.de>

2:00 – 2:30 a.m.

Keynote: Food and Energy – Approaches to a Holistic Vertical Farming Concept

Dr. Petra Liedl, Munich School of Engineering, TUM

2:30 – 3:20 p.m.

Urban Energy Modeling

Session Chair: **Dr. Petra Liedl**

Integrated Urban Energy Modeling: Coupling Urban Growth with Energy Demand

Anahi Molar-Cruz, Chair of Energy Efficient and Sustainable Energy Systems, TUM

Solar Activated Envelopes in District Context – Energy Modeling Tasks

Lea Bogischef, Junior Research Group Cleanvelope, TUM

3:20 – 3:45 p.m.

Poster Presentation and Coffee Break

3:45 – 5:30 p.m.

Trends in Regional Energy Systems: A Bavarian Perspective

Session Chair: **Prof. Thomas Hamacher**

Retrofit Hybridization of Geothermal Binary Cycles in Southern Germany

Davide Toselli, Munich School of Engineering, TUM

Assessing Middle and Low Voltage Grid Requirements in Bavaria for the Decades to Come

Luis Ramirez Camargo, Team Geoinformatics, Deggendorf Institute of Technology

Comparison of a Decentralized and Centralized Future Energy System at the Campus Garching

Benedikt Schweiger, Chair of Energy Systems, TUM

How can Prosumer Provide Flexibility to the Local Energy System?

Nalini Babu Kumaran, Chair of Energy Economy and Application Technology, TUM

5:30 – 6:00 p.m.

Keynote: The Antinomies of Climate Policy

PD Dr. Jens Söntgen, WZU Augsburg

6:00 – 6:15 p.m.

Summary and Closing

6:15 – 8:00 p.m.

Poster and Presentation Award with Colloquium Dinner