

December

05.

2023

9 am CET

1 pm CET

Organisation:  
.DERlab e.V.

Online:  
Microsoft  
Teams

## H<sub>2</sub>GIGA – HyLeiT: WORKSHOP

# Modeling of electrolysis plants on component and system level

### Aims:

- Discuss various modelling approaches in electrolysis technology
- Illustrate different use cases for models
- Compile specific model requirements

### Target group:

Manufacturer and researcher in the field of water electrolysis and electrical system technology.



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Please register for this workshop via this link before December 1<sup>st</sup>, 2023:

[REGISTRATION](#)

The invitation with the updated agenda and dial-in link will follow by email some days before the event.

## Scope

The joint project **HyLeiT** is part of the BMBF flagship project **H2Giga**, which deals with the series production and scale-up of water electrolyzers. Within H2Giga, HyLeiT covers the interdisciplinary topic "electrical hydrogen system technology". Central research topics are cost-optimized system and power converter technology as well as the grid integration of electrolysis plants for the production of green hydrogen. Various model approaches are important tools within these research topics. We invite you to the workshop and look forward to exciting discussions.

Dr. Philipp Strauß, Dr. Norbert Henze (HyLeiT Project Coordinators)

***The aim of this workshop is discuss various modelling approaches and to compile the model requirements for different use cases.***

- Electrochemical models on cell and stack level for real-time applications
- Balance of plants (BoP) models on subsystem level
- Equivalent circuit models of electrolyzers
- Dynamic electrical models grid integration studies

## Agenda

**9:00am – 9:15am Welcome**

- Introduction into the topic, motivation and aims of this workshop
- The project HyLeiT: Cost-optimized system technology and grid integration of systems for the production of green hydrogen.

**9:15am – 11:00am Impulse presentations**

- **Electrochemical and BoP models (Fraunhofer IEE)**
- **PEM electrolyser model (Fraunhofer IEG)**
- **Dynamic electrical models (Fraunhofer IEE)**
- **Equivalent circuit models (Technical University Dresden)**
- **Modelling of electrochemical reactors + systems in different time and spatial scales (DLR)**
- **Modelling use cases and requirements (t.b.d.)**

**11:00am – 11:15am Q & A**

**11:15am – 11:30am Coffee break**

**11:30am – 12:30pm Discussions**

**12:30pm – 13:00pm Conclusions and end of meeting**

# Contact / Organisation

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# Supporters

Project:



Coordinated by:



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