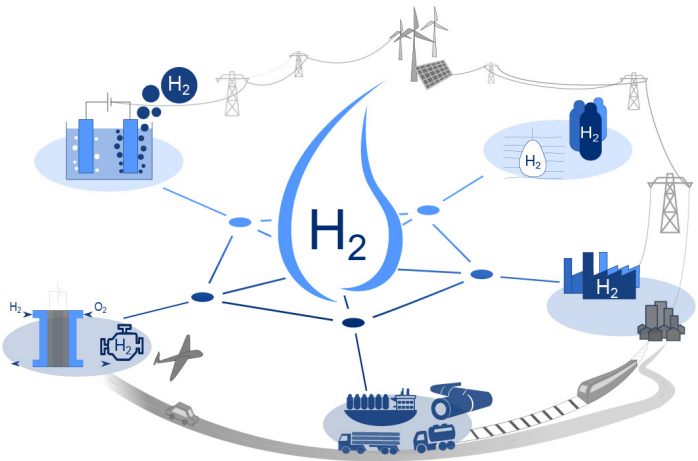


# Program

## Aachen Hydrogen Colloquium

Novotel | Peterstraße 66 | 52062 Aachen  
May 19 - 20, 2026



# TUESDAY, MAY 19, 2026

## Main Hall Plenary Session

-  08:30 Welcome Prof. Dr.-Ing. Matthias Wessling | Vice-Rector for Translation and Transfer | RWTH Aachen
- 08:40 Introduction Prof. Dr.-Ing. Stefan Pischinger | Head of Institute | TME, RWTH Aachen
- 09:00 Keynote Dr. Peter Geskes | VP RnD & Product Management Electrolysis | Siemens Energy
- 09:20 Keynote Dr. Sabrina von Hebel | Senior Director Manufacturing | ThyssenKrupp Nucera
- 09:40 Keynote Dr. Gerui Wang | Head of Schaeffler Global Hydrogen | Schaeffler
- 10:00 Panel Discussion
-  10:30 BREAK
- 11:00 Poster Pitch Session
-  12:00 WALKING LUNCH & POSTER PARTY

## Main Hall Session: Electrolysis 1

From Feasibility to Reality: Chiyoda and FEV's Joint Pathway to Sustainable Hydrogen Carriers  
Kyra-Marie Thier and Hiroki Toba | FEV Consulting & Chiyoda Corporation

Advancement of Low-Iridium PEMWE MEA Technology and Ongoing Validation Toward Industrial Integration  
Zhengyang Sun | Toshiba Europe GmbH

Influence of Carbon-Based Pore Formers on the Electrochemical Behavior of IrO<sub>2</sub> Anodes in PEM Water Electrolysis  
Niklas Vollmert | AVT.CVT, RWTH Aachen


 14:30 BREAK

## Session: Fuel Cells 1

Successful Demonstration of Long-Term Durability Including Extensive Freeze Start Cycling  
Fabian Mönch | EKPO

Test Methodology for High Accuracy Sensitivity Analysis of a PEM Fuel Cell System  
Fabian Weller | Mahle

Fuel Cell Frost Damages: A Multiscale Problem  
Marc Böttner | TME, RWTH Aachen

 16:30 BREAK

## Session: Combustion Engines

Challenges During Development of a Hydrogen Internal Combustion Engine  
Georg Töpfer | Deutz AG

Hydrogen Engine: Emission and Transient Assessment in a System Approach  
Dipl.-Ing. (FH) Holger Kauss | Bosch

Investigation of Performance, Efficiency and Combustion Characteristics of a Direct Injection Hydrogen ICE for Improved Model Development  
Stefania Esposito | University of Bath

 18:30 TRANSFER TO RATSKELLER | MARKT 40 | 52062 AACHEN

## Second Hall Session: Decentral Hydrogen

AquaPrimus: Foundation for Gigawatt-Scale Offshore Hydrogen  
Christoph Tewis | Tewis Projektmanagement GmbH

Compact and Efficient Energy Storage Based on Ironoxide and Hydrogen (H<sub>2</sub>) Including Purification  
Uwe Pahl | AMBARtec AG

Boosting High Temperature EHP Efficiency by Better Sintering  
Desheng Feng | University of Melbourne

## Session: Ecosystems

Green Hydrogen in Africa: Viable, Sustainable, Legitimate  
Katharina Thoms and Jacqueline Lorenz | TIM and Controlling, RWTH Aachen

High Hopes, Few Concerns - Investigating Public Perceptions and Local Acceptance of Decentralized Hydrogen Ecosystems  
Eva Rößler | RISK, RWTH Aachen

Evaluating Socio-Cultural Factors Influencing Hydrogen Energy Acceptance in Oman  
Fatema Mohammed Al Hajri | GUTech and Oman Hydrogen Center

## Session: Electrolysis 2

Designing Lifetime-Optimal Service Strategies for Electrolyzer Operation and Stack Replacement  
Jens Schäfer | P3 Energy

Electricity Procurement Options for Grid Connected Electrolysis and Implications on RFNBO conformity  
Richard Grzempa | Andritz AG

Development of Titanium-Based Alloy Coatings for Corrosion Protection Inside PEM Electrolyzers  
Tim Sievert | IMD-2, Forschungszentrum Jülich

## Main Hall

Session: Electrolysis 3

Challenges of Developing and Scaling up of Electrolysers in an Industrial Setting  
John Ralphs | Sunfire

From Hardware-Centric to Software-Defined: Rethinking Electrolyzer Systems  
Dr. Vivek Srivastava | FEV Europe GmbH

Electrochemical Activation of Ni-Fe Anodes for Alkaline Water Electrolysis: The Effect of Base Concentration and Temperature  
Janis Schmitt | AVT.ERT, RWTH Aachen

BREAK

## Session: Future Fuels Combustion

Ammonia-Fueled Large-Bore Engines Enable Highly Efficient and Low-Carbon Energy Conversion  
Valentin Scharl | Everlence

A Roadmap for Demonstrating H<sub>2</sub> Use in Industrial Gas Burners in Steel Production  
Fabian Krause | SMS group GmbH

Optical Diagnostics-Led Development of Hydrogen SI Engine and Dual-Fuel Diesel Engine  
Shawn Kook | University of New South Wales

LUNCH BREAK

## Main Hall

Plenary Session

Keynote Dr. Isabel Kundler | Senior Advisor Electrochemistry | Dechema

Keynote Dr. Nils Liesebach | Head of Innovation | OGE

Keynote Shena Britzen | Head of Hydrogen Program | Rheinmetall

Panel Discussion

Awards and Closing Remarks

End

## Second Hall

Session: Power Generation

Hydrogen Road of Kawasaki Heavy Industries  
Nurettin Tekin | Kawasaki Gas Turbine Europe GmbH

RWE H<sub>2</sub> Lingen  
Gregor Herklotz | RWE

Gas Turbines Fired with Hydrogen: Impacts on Combustion, Turbomachinery and Plant Operation  
Johannes Mohs | IKDG, RWTH Aachen

## Session: Fuel Cells 2

Towards Efficient Anode Recirculation: A Holistic Simulation Framework  
Dr. Maximilian Wick | Pierburg GmbH

Predictive Maintenance of Fuel Cell-Battery Hybrids Through Real-Time Data Analysis in Forklift Fleets  
Niklas Ruf | Globe Fuel Cell Systems

Flexible Test Bench / Validation Concept for rSOC Stacks  
Klaus Lucka | Tec4Fuels

08:30 

10:00 

10:30

12:00 

13:00

13:20

13:40

14:00

14:30

14:45

## Hydrogen Generation

Mechanistic CFD Framework for Bubble Removal in an Electrochemical CO<sub>2</sub> Desorption Chamber  
Rafael Bellot | Greenlyte

HylInnoAEM - Application-Oriented Development of a Novel AEM Stack With Integrated Electrodes and Innovative Stack Design  
Niklas Thissen | AVT.ERT, RWTH Aachen

Evaluating 3M Material Platforms for H<sub>2</sub>  
Simon Brand | 3M GmbH

Challenges and Opportunities of Elevated-Temperature Anion Exchange Membrane Water Electrolysis  
John Tan Nguyen | University of Melbourne

Rotational and Magnetic Field-Induced Transport Effects in Water Electrolysis  
Mostafa Delpisheh  
Mostafa Delpisheh | School of Engineering, Newcastle University

Dynamics of Electrogenerated H<sub>2</sub> and O<sub>2</sub> Bubbles at Elevated Pressure  
Luca Mayolle | AIA, RWTH

Impact of Surface Chemistry on Bubble Behavior  
Jonathan Franz | RSM, TU Darmstadt

From Precious to Practical: Ni-Fe Based Benchmark Electrodes for Alkaline Water Electrolysis  
Johanna Güttler | IET-4, Forschungszentrum Jülich

Ceramic Diaphragms Enabling High-Temperature Alkaline Electrolysis Under Industrially Relevant Conditions  
Sonja Frerich | IET-4, Forschungszentrum Jülich

Simulation-Based Assessment of System-Induced Operating Point Shifts in SOEC Co-Electrolysis  
Marvin Schmidt | TME, RWTH Aachen

## PEM - From Electrolysis to Fuel Cells

Data Mining for Enhanced PEM Electrolysis  
Stephan Zimmer | AVT.CVT, RWTH Aachen

CCM Production for PEM Water Electrolysis: From Laboratory to Pilot Plant Scale ... and Back!  
Lukas Rein | IET-4, Forschungszentrum Jülich

Noble Metal-Free Corrosion Protection Coatings for PEM Electrolyzer PTLs  
Noah Leuschen | IMD 2, Forschungszentrum Jülich

MAXCarbon - Potential of Hybrid MAX-Phase Carbon Fibers for Electrochemical Components  
Fabian Jung | TERNAfil

Successful Demonstration of Long-Term Durability Including Extensive Freeze Start Cycling  
Nadja Sommer | EKPO

Development of an Ageing-Adaptive Energy Management System for Scalable PEM Fuel Cell Systems  
Alexandre Ennen | TME, RWTH Aachen

Cycle Dependent Evolution of Through-Plane Thermal Resistance in PEM Fuel Cell Gas Diffusion Layer Assemblies under Compression  
Simon Winter | WSA, RWTH Aachen

Impact of Cell Design on Electrode Testing for the Alkaline Oxygen Evolution Reaction  
Christian Marcks | AVT.ERT, RWTH Aachen

## Hydrogen Applications

Understanding Air Condensation During Liquid Hydrogen Leaks  
Joel Mortimer | University of Melbourne

3D Flow Simulation of Hydrogen Through the Original Tesla Valve  
Christoph Hollenbeck | Boll & Kirch Filterbau GmbH

Numerical Investigation of H<sub>2</sub> Addition in an Additively Manufactured Gas Burner in EAF Operation  
Christian Goßrau | IKDG, RWTH Aachen

Numerical Prediction of Thermoacoustic Instability Onset in a Hydrogen-Enriched Dry Low-Emission Combustor  
Jeremias Fleger | University of Melbourne

RANS and Reduced-order Modeling of Thermo-diffusive Instabilities in Hydrogen Combustion  
Dominik Golc | ITV, RWTH Aachen

A Combustion Model Validation Framework With Three Different Turbulent Premixed Hydrogen/Air Flames (16th TNF Workshop)  
Svenja Nerzak | ITV, RWTH Aachen

## Hydrogen Society

Life Cycle Assessment Comparison of Electrochemical and Conventional Regeneration in KOH-Based Direct Air Capture  
Georgianna Prokopou | AVT.SVT, RWTH Aachen

Ontology-Based Agentic Framework for Constructing Knowledge Graphs in Hydrogen Technology Research  
Marjan Kohandani | RWTH Aachen

Optimized Hydrogen Import Portfolios for Germany and Japan: Trade-Offs Between Cost and Carbon Footprint  
Fabian Welker | LTT, RWTH Aachen

Optimal Distinctiveness in Emerging Technology Fields: Pre-Market Discourse and Valuation  
Jan-Marco Nepute | TIM, RWTH Aachen

A Mapping of Sustainable Development Goal Interlinkages Centered Around Green Hydrogen  
Rega Sota and Ali Ebadi Torkayesh | EoS, RWTH Aachen



## PARTICIPANTS

**FULL PARTICIPATION** 380,- €  
 Online Participation 129,- €

**MEMBERS**

**FULL PARTICIPATION** 266,- €  
 Online Participation 90,- €



**UNIVERSITY/RESEARCH**

**FULL PARTICIPATION** 190,- €  
 Online Participation 64,- €

# CONFERENCE APP

- » Agenda and program overview
- » Livestream for both rooms
- » Rating of presentations and posters
- » Exchange with other participants



# ABOUT US

Hydrogen as an energy carrier offers the possibility of establishing a global and local CO<sub>2</sub>-neutral energy economy. **SupplHyInno Rhineland, the Hydrogen Clusters4Future initiative**, bundles already existing expertise in the field of hydrogen technologies in and around Aachen with actors from Industry, Science and Society. All while considering the entire hydrogen life cycle – from production to storage and distribution to use.

## CONTACT



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Program Management



Prof. Dr.-Ing. Stefan Pischinger  
Speaker of SupplHyInno Rhineland - the Hydrogen Clusters4Future

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