TORBEN
SAATKAMP

EDUCATION

2016 – 2021 **Dr. rer. nat in Chemistry** *(Stuttgart University, Germany)*

Development and characterization of fluorine-free polymer electrolyte membranes for application in fuel cells and electrolyzers
Max Planck Institute for Solid State Research / Supervisor: Dr. habil. Klaus-Dieter Kreuer

2013 – 2016 **M. Sc. in Chemistry** *(Stuttgart University, Germany)*

2009 – 2013 **B. Sc. in Chemistry** *(Tübingen University, Germany)*

POSITIONS

Tenure Track Scientist *Paul Scherrer Institute (Villigen, Switzerland)* **06/2025 – current**
Group: Membranes and Electrochemical Cells, Lead: PD Dr. Lorenz Gubler

- *Research*: chemistry of radicals in aqueous environments, electrochemical testing of functional polymers, transport and stability of polymer composites
- *(Co-)supervision & teaching*: mentoring of research activities of PhD students, supervision of student internships and technical apprenticeship

Project Scientist *Paul Scherrer Institute (Villigen, Switzerland)* **03/2024 – 06/2025**
PI: PD Dr. Lorenz Gubler

- *Research*: chemistry of radicals in aqueous environments, chemical degradation in polymer electrolytes (PEM/AEM), accelerated stress testing in electrochemical devices (PEMFC), novel graft polymer architectures
- *(Co-)supervision & strategy*: guidance and mentoring of research activities of PhD students, supervision of student internships and technical apprenticeship

Post-Doctoral Fellow *Simon Fraser University (Burnaby, Canada)* **02/2022 – 01/2024**
PI: Prof. Steven Holdcroft, PhD

- *Research*: zero-gap CO_2 electrolyzers (CO2E), catalyst layers in HC-based PEMFCs, study of grafted and crosslinked ionomer powders

Research Assistant *MPI-FKF (Stuttgart, Germany)* **08/2021 – 11/2021**
PI: Dr. habil. Klaus-Dieter Kreuer

PhD Researcher *MPI-FKF (Stuttgart, Germany)* **06/2016 – 07/2021**
PI: Dr. habil. Klaus-Dieter Kreuer, group of Prof. Dr. Joachim Maier

PROJECTS

Project Member within Materials for Clean Fuels Challenge Program — *Simon Fraser University (Burnaby, Canada)* — **02/2022 – 03/2024**
PI: Prof. Steven Holdcroft, PhD, Topic: Design, testing, and electrochemical characterization of polymer-electrolyte-based zero-gap CO_2 electrolyzers, to identify and aid in the scale-up of promising polymer electrolytes, collaborators: IONOMR INNOVATIONS INC.

Project Member "PSUMEA-3" — *MPI-FKF (Stuttgart, Germany)* — **01/2018 – 08/2021**
BMBF (Federal Ministry of Education and Research) funded (ID: 03EK3045A) project to develop, test, and scale-up fluorine-free membrane electrode assemblies for fuel cells and electrolyzers, collaborators: ROBERT BOSCH GmbH, SIEMENS AG, FUMATECH BWT GmbH, Hahn-Schickard Freiburg, ZSW Ulm

Project Member "PSUMEA-2" — *MPI-FKF (Stuttgart, Germany)* — **02/2015 – 12/2017**
BMBF (Federal Ministry of Education and Research) funded (ID: 03SF0473) project to develop high performance proton conducting polymer membranes for high temperature fuel cell application

CONFERENCES & AWARDS

- **Oral presentations**
  1. Ion Exchange Membranes for Energy Applications (EMEA), **2025**, "*Radical-induced Ageing of Hydrocarbon Ion Exchange Membranes: learnings from HC-PEMs, caveats, next steps*"
  2. Canadian Chemistry Conference and Exhibition (CSC), **2023**, "*Towards a balanced reaction environment at the catalyst interface of AEM-based low temperature CO_2 electrolyzers*"
  3. Solid State Protonic Conductors (SSPC), **2018**, *"Viscoelastic reinforcement of a polyelectrolyte via blending for fuel cell applications"*
  4. Solid State Ionics (SSI), **2017**, *"From polyelectrolytes to robust, highly proton conducting hydrocarbon membranes for PEM fuel cell applications"*

- **Poster presentations**
  - **2022** Canadian Chemistry Conference and Exhibition (CSC)
  - **2017+2019** CARISMA (International Conference on Medium and High Temperature Proton Exchange Membrane Fuel Cells)
  - **2018** Fuel Cells GRC (Gordon Research Conference)
  - **2018** SSPC (Solid State Protonic Conductors)
  - **2017** FDFC (Fundamentals & Development of Fuel Cells)
  - **2016+2017** EMEA (Ion Exchange Membranes for Energy Applications)
  - **2016** ISPE (Polymer Electrolytes)

- **Organizing committee member**
  Social Media & Host, **NANOLYTICA 2022**, SFU (online)
  Organizing Committee & Host, **PSI Electrochemistry Day 6**, PSI

- **Awards**
  Best Poster Award, **CARISMA 2017**