

**Current positions**

Scientific Director “Fundamental Electrochemistry” at Institute of Energy and Climate Research (IEK-9), FZJ (since 2012)
Full Professor, RWTH Aachen University, Germany (since 2012)

Previous positions

Senior Lecturer and Group Leader, Karlsruhe Institute of Technology, Institute of Applied Materials, Germany (2011-2012)
Lecturer and Junior Group Leader, University Freiburg, Institute of Physical Chemistry, Germany (2008-2011)

Scientific degrees

Habilitation and Venia Legendi in Physical Chemistry, Technical University Darmstadt, Germany (2007)
Dr. rer. nat. (PhD) in Physical Chemistry, ETH Zürich, Switzerland (2001)
Diploma in Solid-State Physics, University of Cologne, Germany (1998)

Recent research topics

Advanced Batteries: All Solid-State and Post-Lithium; *Power-to-X*: Co-Electrolysis and reversible Electrolyzer / Fuel Cells; *Advanced Characterization*: In-Situ and Operando Spectroscopy / Microscopy

Awards, honors, memberships

Coordinator Kopernikus Flagship-Project P2X: “*Research, Validation and Implementation of ‘Power-to-X’ Concepts*” (since 2016)
Board Member Cluster of Excellence: “*The Fuel Science Center – Adaptive Conversion Systems for Renewable Energy and Carbon Sources*” (since 2019),
Founding Director: “*Competence Center Industrial Electrochemistry*” (since 2018)

Publications (5 most important)

- J. Wandt, P. Jakes, J. Granwehr, R.-A. Eichel et al.: “*Quantitative and Time Resolved Detection of Lithium Plating and Reintercalation on Graphite Anodes in Lithium Ion Batteries*”, Mat. Today **21** (2018) 231-240. [doi:10.1016/j.mattod.2017.11.001](https://doi.org/10.1016/j.mattod.2017.11.001)
- S. Yu, A. Mertens, H. Tempel, R. Schierholz, H. Kungl, R.-A. Eichel: “*Monolithic All-Phosphate Solid-State Lithium-Ion Battery with Improved Interfacial Compatibility*”, ACS Appl. Mater. Interfaces **10** (2018) 22264-22277. [doi:10.1021/acsami.8b05902](https://doi.org/10.1021/acsami.8b05902)
- C. Chen, J.F.M. Oudenhoven, D.L. Danilov, E. Vezhlev, L. Gao, N. Li, F.M. Mulder, R.-A. Eichel et al.: “*Degradation of Si-based all-solid-state Li-ion micro-batteries: A mechanistic Neutron Depth Profiling study*”, Adv. Energy Mat. **8** (2018) 1801430. [doi:10.1002/aenm.201801430](https://doi.org/10.1002/aenm.201801430)
- J. Wandt, P. Jakes, J. Granwehr, H.A. Gasteiger, R.-A. Eichel: “*Singlet Oxygen Formation during the Charging Process of an Aprotic Lithium–Oxygen Battery*”, Angew. Chem. Int. Ed. **55** (2016) 6892-6895. [doi:10.1002/ange.201602142](https://doi.org/10.1002/ange.201602142)
- S. Foit, I.C. Vinke, L.G.J. de Haart, R.-A. Eichel: “*Power-to-Syngas - an enabling technology for the transition of the energy system? Production of tailored synfuels and chemicals using renewably generated electricity*”, Angew. Chem. Int. Ed. **56** (2017) 5402-5411. [doi:10.1002/anie.201607552](https://doi.org/10.1002/anie.201607552)