Development strategies for electrochemical systems

Dr. Tobias Greese, physicist and PhD electrochemist, advises development teams for redox-flow batteries, batteries, fuel cells and electrolysers. The central question: which development steps have the largest effect on performance, efficiency and cost, and how can they be proven with reliable data.



Dr. Tobias Greese

Technology Audit

Status assessment and prioritised development route.

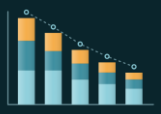


- Analysis of cell, stack, materials and hydraulics
- Quantified levers: resistance, power, cost
- Review of test stands, sensors, uncertainty
- Experimental design to prove the levers
- Report with prioritised actions

Two days on site or remote

Development Partnership

Continuous support for your development.



- Sparring on development decisions
- Independent assessment of stack, hydraulics and material concepts
- Review of test plans and measurement data
- Sensor selection and reference cells (OCV, OCP)
- Technical due diligence

Monthly hour budget

Funded Projects

From project idea to approved project.

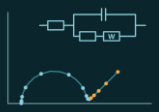


- Choice of funding instrument: R&D tax allowance (Forschungszulage), federal and state programmes, EU
- Project outline, work plan and budget
- Building and coordinating the consortium
- Proposal and project management

Support across all project phases

Training

Electrochemical storage and conversion for industry teams.



- Fundamentals and technology comparison
- Characterisation and impedance spectroscopy
- Degradation and safety
- Test stands and design of experiments
- Hands-on with your own measurement data

One or two days or weekly sessions

Who it is for

- Manufacturers of redox-flow batteries and their suppliers
- Manufacturers and suppliers of electrolysers, fuel cells and battery components
- Integrators of stationary storage systems
- Research institutes and universities in collaborative projects

Background

- PhD in technical electrochemistry, MSc Applied and Engineering Physics (TU Munich)
- Since 2024 external technical consultant to a manufacturer of organic flow batteries
- Several years of experience:
  - Team lead in product management and development of redox-flow battery storage systems
  - R&D consultant through workshops, team and individual coaching in cleantech and battery development
  - Acquisition and coordination of collaborative research projects
  - Lecturer for the master's course “Batteries and Fuel Cells” at Munich University of Applied Sciences (HM)

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