Upper Rhine Cluster
for Sustainability Research

Researchers Profil

Name, Position & Affiliation

Prof. Dr. habil. Wolfgang Bessler
Full Professor and Head of Institute of Energy Systems Technology
Institute of Energy Systems Technology
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Expertise in relation to the topics of the URCforSR (include max. 3 related and recent publications)

Prof. Bessler's research interest is computational battery technology. His group develops and applies multi-scale and multi-physics mathematical models in order to understand and improve batteries and fuel cells. Goal is the knowledge-based development of electrical energy storage with improved performance, durability, energy density, and safety.

A. A. Franco, M. L. Doublet, and W. G. Bessler, Editors, "Physical multiscale modeling and numerical simulation of electrochemical devices for energy conversion and storage," Springer, London (2016).
M. Mayur, S. Strahl, A. Husar, and W. G. Bessler, "A multi-timescale modeling methodology for PEMFC performance and durability in a virtual fuel cell car," Int. J. Hydrogen Energy 40, 16466-16476 (2015).
D. Grübl and W. G. Bessler, "Cell design concepts for aqueous lithium oxygen batteries: A model-based assessment," J. Power Sources 297, 481-491 (2015).

Special Interests in the topics of the URCforSR

Energy storage and conversion

What you are searching for regarding the cooperation within the URCforSR

Scientific collaboration opportunities in the field of energy storage and conversion, smart grids, and/or battery/fuel cell/electrolyzer technologies