



Prof. Dirk Uwe Sauer

Chair for Electrochemical Energy Conversion and Storage Systems - RWTH Aachen

1994 - Diploma in Physics from University of Darmstadt

2003 - PhD in Electrochemistry / Natural Science from University of Ulm

2003 – Junior professor for “Electrochemical Energy Conversion and Storage Systems” at RWTH Aachen University

2005 – 2018 - Scientific Chairman “International Renewable Energy Storage Conference”

Since 2009 - Scientific Chairman “International Advanced Battery Power Conference”

2009 / 2012 - Appointment as W2 / W3 Full Professor at RWTH Aachen University

2014 – 2020 - Director of JARA Energy (Jülich Aachen Research Alliance)

Since 2015 - Member of the National Academy of Engineering Sciences “acatech”

Since 2016 - Review Board of the German Science Foundation (DFG) for 2016 – 2019

Since 2016 - Spokesman “Center for Ageing, Reliability & Lifetime Prediction for Electrochemical & Power Electronics Systems (CARL)”

Since 2018 - Presidium member of National academy of Science and Engineering acatech

Since 2019 - Appointed Coordinator of the Cluster of Excellence “Battery use concepts” of the National Ministry for Education and research (BMBWF)

Since 2020 - Elected Member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW) - three-hundred-year-old tradition of uniting outstanding scholars and scientists across national and disciplinary boundaries

2010 – to day – co-founder of 5 spin-off companies

Most important publications

Thomson Reuters „Web of Science“: > 250 Papers, > 9000 Citations, h-index 48

Google Scholar: > 600 items, > 17000 Citations, h-index 62

1.

W Waag, S Käbitz, DU Sauer, Experimental investigation of the lithium-ion battery impedance characteristic at various conditions and aging states and its influence on the application, *Applied Energy* 102 (2013) 885-897

2.

MA Roscher, DU Sauer, Dynamic electric behavior and open-circuit-voltage modeling of LiFePO₄-based lithium ion secondary batteries, *J. Power Sources*, 196 (2011) 331-336

3.

H Blanke, O Bohlen, S Buller, RW De Doncker, B Fricke, A Hammouche, Dirk Uwe Sauer, Impedance measurements on lead–acid batteries for state-of-charge, state-of-health and cranking capability prognosis in electric and hybrid electric vehicles, *J. Power Sources*, 144 (2005) 418-425

4.

D Andre, M Meiler, K Steiner, C Wimmer, T Soczka-Guth, DU Sauer, Characterization of high-power lithium-ion batteries by electrochemical impedance spectroscopy. I. Experimental investigation, *J. Power Sources*, 196 (2011) 5334-5341

5.

W Waag, C Fleischer, DU Sauer, Critical review of the methods for monitoring of lithium-ion batteries in electric and hybrid vehicles, *J. Power Sources*, 258 (2014) 321-339

6.

O Bohlen, J Kowal, DU Sauer, Ageing behaviour of electrochemical double layer capacitors: Part I. Experimental study and ageing model, *J. Power Sources* 172 (2007) 468-475

7.

M Ecker, JB Gerschler, J Vogel, S Käbitz, F Hust, P Dechent, DU Sauer, Development of a lifetime prediction model for lithium-ion batteries based on extended accelerated aging test data, *J. Power Sources* 215 (2012) 248-257

8.

DU Sauer, H Wenzl, Comparison of different approaches for lifetime prediction of electro-chemical systems - Using lead-acid batteries as example, *J. Power Sources*, 176 (2008) 534-546

9.

J Schiffer, DU Sauer, H Bindner, T Cronin, P Lundsager, R Kaiser, Model prediction for ranking lead-acid batteries according to expected lifetime in renewable energy systems and autonomous power-supply systems, *J. Power Sources*, 168 (2007) 66-78

10.

D Andre, M Meiler, K Steiner, H Walz, T Soczka-Guth, DU Sauer, Characterization of high-power lithium-ion batteries by electrochemical impedance spectroscopy. II: Modelling, *J. Power Sources*, 196 (2011) 5349-5356