Simon Erhard

List of Publications by Year
in descending order

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24 papers	1,450 citations	361045 20 h-index	610482 24 g-index
25 all docs	25 docs citations	25 times ranked	1433 citing authors

#	Article	IF	Citations
1	Lithium plating in lithium-ion batteries at sub-ambient temperatures investigated by in situ neutron diffraction. Journal of Power Sources, 2014, 271, 152-159.	4.0	277
2	Lithium plating in lithium-ion batteries investigated by voltage relaxation and in situ neutron diffraction. Journal of Power Sources, 2017, 342, 17-23.	4.0	205
3	Multi-scale investigation of thickness changes in a commercial pouch type lithium-ion battery. Journal of Energy Storage, 2016, 6, 213-221.	3.9	124
4	Long-term equalization effects in Li-ion batteries due to local state of charge inhomogeneities and their impact on impedance measurements. Electrochimica Acta, 2015, 185, 107-116.	2.6	79
5	A New Method to Model the Thickness Change of a Commercial Pouch Cell during Discharge. Journal of the Electrochemical Society, 2016, 163, A1566-A1575.	1.3	75
6	Multi-directional laser scanning as innovative method to detect local cell damage during fast charging of lithium-ion cells. Journal of Energy Storage, 2016, 8, 1-5.	3.9	65
7	Simulation and Measurement of the Current Density Distribution in Lithium-Ion Batteries by a Multi-Tab Cell Approach. Journal of the Electrochemical Society, 2017, 164, A6324-A6333.	1.3	63
8	State estimation of lithium-ion cells using a physicochemical model based extended Kalman filter. Applied Energy, 2018, 223, 103-123.	5.1	63
9	Current density distribution in cylindrical Li-Ion cells during impedance measurements. Journal of Power Sources, 2016, 314, 93-101.	4.0	56
10	Strain Propagation in Lithium-Ion Batteries from the Crystal Structure to the Electrode Level. Journal of the Electrochemical Society, 2016, 163, A1595-A1606.	1.3	50
11	An extended polarization model to study the influence of current collector geometry of large-format lithium-ion pouch cells. Journal of Power Sources, 2017, 342, 666-676.	4.0	47
12	Multi-Dimensional Modeling of the Influence of Cell Design on Temperature, Displacement and Stress Inhomogeneity in Large-Format Lithium-Ion Cells. Journal of the Electrochemical Society, 2016, 163, A3099-A3110.	1.3	45
13	Simulation and Measurement of Local Potentials of Modified Commercial Cylindrical Cells. Journal of the Electrochemical Society, 2015, 162, A2707-A2719.	1.3	44
14	Simulation and Measurement of Local Potentials of Modified Commercial Cylindrical Cells. Journal of the Electrochemical Society, 2015, 162, A2099-A2105.	1.3	44
15	Impact of Electrode and Cell Design on Fast Charging Capabilities of Cylindrical Lithium-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 130505.	1.3	37
16	Inhomogeneity and relaxation phenomena in the graphite anode of a lithium-ion battery probed by in situ neutron diffraction. Journal of Power Sources, 2017, 361, 54-60.	4.0	34
17	Aging in 18650-type Li-ion cells examined with neutron diffraction, electrochemical analysis and physico-chemical modeling. Journal of Energy Storage, 2018, 17, 383-394.	3.9	28
18	Electro-Thermal Modeling of Large Format Lithium-Ion Pouch Cells: A Cell Temperature Dependent Linear Polarization Expression. Journal of the Electrochemical Society, 2016, 163, A3046-A3062.	1.3	24

#	Article	IF	Citations
19	Temperature dependency of state of charge inhomogeneities and their equalization in cylindrical lithium-ion cells. Journal of Power Sources, 2016, 329, 546-552.	4.0	21
20	In Situ Neutron Diffraction Study of Lithiation Gradients in Graphite Anodes during Discharge and Relaxation. Journal of the Electrochemical Society, 2018, 165, A1846-A1856.	1.3	20
21	Impact of Cell Size and Format on External Short Circuit Behavior of Lithium-Ion Cells at Varying Cooling Conditions: Modeling and Simulation. Journal of the Electrochemical Society, 2020, 167, 013511.	1.3	17
22	State-of-health estimation using a neural network trained on vehicle data. Journal of Power Sources, 2021, 512, 230493.	4.0	12
23	Measurements of lithium-ion concentration equilibration processes inside graphite electrodes. Journal of Power Sources, 2017, 342, 638-643.	4.0	10
24	Anode Potential Estimation in Lithium-Ion Batteries Using Data-Driven Models for Online Applications. Journal of the Electrochemical Society, 2021, 168, 030535.	1.3	10