

Jake F Christensen

List of Publications by Year in descending order

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52
papers

5,300
citations

201385

27
h-index

233125

45
g-index

55
all docs

55
docs citations

55
times ranked

5812
citing authors

#	ARTICLE	IF	CITATIONS
1	An Efficient Electrical Network Model for Computing Electrochemical State Distributions in a Spirally Wound Lithium-Ion Cell. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050541.	1.3	2
2	Understanding thermal and mechanical effects on lithium plating in lithium-ion batteries. <i>Journal of Power Sources</i> , 2022, 541, 231632.	4.0	5
3	Performance and Lifetime of Battery Desalination Cells Based on Nickel Hexacyanoferrate. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 142-142.	0.0	0
4	Reply to the "Comment on "Techno-economic analysis of capacitive and intercalative water deionization" by S. K. Patel, L. Wang and M. Elimelech, <i>Energy Environ. Sci.</i> , 2021, 10.1039/DOEE03321A. <i>Energy and Environmental Science</i> , 2021, 14, 2499-2503.	15.6	3
5	A Modified Electrochemical Model to Account for Mechanical Effects Due to Lithium Intercalation and External Pressure. <i>Journal of the Electrochemical Society</i> , 2021, 168, 020533.	1.3	8
6	A Study of Model-Based Protective Fast-Charging and Associated Degradation in Commercial Smartphone Cells: Insights on Cathode Degradation as a Result of Lithium Depositions on the Anode. <i>Advanced Energy Materials</i> , 2021, 11, 2003019.	10.2	7
7	The effects of cycling on ionic and electronic conductivities of Li-ion battery electrodes. <i>Journal of Power Sources</i> , 2021, 492, 229636.	4.0	19
8	Location-Dependent Cobalt Deposition in Smartphone Cells upon Long-Term Fast-Charging Visualized by Synchrotron X-ray Fluorescence. <i>Chemistry of Materials</i> , 2021, 33, 6318-6328.	3.2	1
9	Impact of Size and Position of Lithium Metal Reference Electrodes on the Measurement of Lithium-Plating Overpotential. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090534.	1.3	6
10	Evaluation of the entropy of reaction using modified frequency-domain method and a physics-based thermoelectrochemical model of a lithium-ion battery. <i>Journal of Power Sources</i> , 2021, 508, 230283.	4.0	4
11	Performance and lifetime of intercalative water deionization cells for mono- and divalent ion removal. <i>Desalination</i> , 2021, 517, 115218.	4.0	3
12	Operando video microscopy of Li plating and re-intercalation on graphite anodes during fast charging. <i>Journal of Materials Chemistry A</i> , 2021, 9, 23522-23536.	5.2	54
13	Understanding Thermal and Mechanical Effects on Lithium Plating in Lithium Ion Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 465-465.	0.0	0
14	Removal of Na ⁺ and Ca ²⁺ with Prussian blue analogue electrodes for brackish water desalination. <i>Desalination</i> , 2020, 487, 114479.	4.0	23
15	Understanding the Overlithiation Properties of Li _{0.6} Mn _{0.2} Co _{0.2} O ₂ Using Electrochemistry and Depth-Resolved X-ray Absorption Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2020, 167, 080514.	1.3	17
16	Interrelationship Between the Open Circuit Potential Curves in a Class of Ni-Rich Cathode Materials. <i>Journal of the Electrochemical Society</i> , 2020, 167, 040510.	1.3	2
17	Techno-economic analysis of capacitive and intercalative water deionization. <i>Energy and Environmental Science</i> , 2020, 13, 1544-1560.	15.6	76
18	Effect of Liquid Electrolyte Soaking on the Interfacial Resistance of Li ₇ La ₃ Zr ₂ O ₁₂ for All-Solid-State Lithium Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 20605-20612.	4.0	26

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19	An Electro-chemo-thermo-mechanical Coupled Three-dimensional Computational Framework for Lithium-ion Batteries. Journal of the Electrochemical Society, 2020, 167, 160542.	1.3	13
20	Modeling of lithium electrodeposition at the lithium/ceramic electrolyte interface: The role of interfacial resistance and surface defects. Journal of Power Sources, 2019, 441, 227186.	4.0	32
21	Transport anomalies emerging from strong correlation in ionic liquid electrolytes. Journal of Power Sources, 2019, 428, 27-36.	4.0	53
22	Thermally-driven mesopore formation and oxygen release in delithiated NCA cathode particles. Journal of Materials Chemistry A, 2019, 7, 12593-12603.	5.2	41
23	Long-term chemothermal stability of delithiated NCA in polymer solid-state batteries. Journal of Materials Chemistry A, 2019, 7, 27135-27147.	5.2	10
24	Mesoscale Chemomechanical Interplay of the $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ Cathode in Solid-State Polymer Batteries. Chemistry of Materials, 2019, 31, 491-501.	3.2	89
25	Evaluation of convective heat transfer coefficient and specific heat capacity of a lithium-ion battery using infrared camera and lumped capacitance method. Journal of Power Sources, 2019, 412, 552-558.	4.0	61
26	Evaluating the Effects of Temperature and Pressure on Li/PEO-LiTFSI Interfacial Stability and Kinetics. Journal of the Electrochemical Society, 2018, 165, A2801-A2806.	1.3	61
27	Quantifying Tortuosity of Porous Li-Ion Battery Electrodes: Comparing Polarization-Interrupt and Blocking-Electrolyte Methods. Journal of the Electrochemical Society, 2018, 165, A2644-A2653.	1.3	76
28	Engineering stable interfaces for three-dimensional lithium metal anodes. Science Advances, 2018, 4, eaat5168.	4.7	153
29	Stitching h-BN by atomic layer deposition of LiF as a stable interface for lithium metal anode. Science Advances, 2017, 3, eaao3170.	4.7	252
30	Thermoelectrochemical simulations of performance and abuse in 50-Ah automotive cells. Journal of Power Sources, 2014, 268, 625-633.	4.0	63
31	Overview of LiO ₂ Battery Systems, with a Focus on Oxygen Handling Requirements and Technologies. , 2014, , 291-310.		1
32	An Efficient Parallelizable 3D Thermoelectrochemical Model of a Li-Ion Cell. Journal of the Electrochemical Society, 2013, 160, A2258-A2267.	1.3	50
33	Electrochemical Model Based Observer Design for a Lithium-Ion Battery. IEEE Transactions on Control Systems Technology, 2013, 21, 289-301.	3.2	217
34	Approximations for Partial Differential Equations Appearing in Li-Ion Battery Models. , 2013, , .		2
35	Efficient Conservative Numerical Schemes for 1D Nonlinear Spherical Diffusion Equations with Applications in Battery Modeling. Journal of the Electrochemical Society, 2013, 160, A1565-A1571.	1.3	46
36	Lithium Redistribution in Lithium-Metal Batteries. Journal of the Electrochemical Society, 2012, 159, A1615-A1623.	1.3	36

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37	Identifying Capacity Limitations in the Li/Oxygen Battery Using Experiments and Modeling. Journal of the Electrochemical Society, 2011, 158, A343.	1.3	254
38	A Critical Review of Li/Air Batteries. Journal of the Electrochemical Society, 2011, 159, R1-R30.	1.3	950
39	An Efficient Multiscale Model of a Spirally-Wound Li-Ion Cell. ECS Meeting Abstracts, 2011, , .	0.0	4
40	Optimal charging strategies in lithium-ion battery. , 2011, , .		116
41	State estimation of a reduced electrochemical model of a lithium-ion battery. , 2010, , .		45
42	Algorithms for Advanced Battery-Management Systems. IEEE Control Systems, 2010, 30, 49-68.	1.0	471
43	Modeling, estimation, and control challenges for lithium-ion batteries. , 2010, , .		46
44	Modeling Diffusion-Induced Stress in Li-Ion Cells with Porous Electrodes. Journal of the Electrochemical Society, 2010, 157, A366.	1.3	194
45	Experiments on and Modeling of Positive Electrodes with Multiple Active Materials for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2009, 156, A606.	1.3	157
46	Modeling Side Reactions and Nonisothermal Effects in Nickel Metal-Hydride Batteries. Journal of the Electrochemical Society, 2008, 155, A48.	1.3	28
47	Optimization of Lithium Titanate Electrodes for High-Power Cells. Journal of the Electrochemical Society, 2006, 153, A560.	1.3	93
48	A Mathematical Model of Stress Generation and Fracture in Lithium Manganese Oxide. Journal of the Electrochemical Society, 2006, 153, A1019.	1.3	359
49	Stress generation and fracture in lithium insertion materials. Journal of Solid State Electrochemistry, 2006, 10, 293-319.	1.2	554
50	Cyclable Lithium and Capacity Loss in Li-Ion Cells. Journal of the Electrochemical Society, 2005, 152, A818.	1.3	166
51	A Mathematical Model for the Lithium-Ion Negative Electrode Solid Electrolyte Interphase. Journal of the Electrochemical Society, 2004, 151, A1977.	1.3	259
52	Effect of Anode Film Resistance on the Charge/Discharge Capacity of a Lithium-Ion Battery. Journal of the Electrochemical Society, 2003, 150, A1416.	1.3	92