Dean R Wheeler

List of Publications by Year
in descending order

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30 papers	1,906 citations	471509 17 h-index	477307 29 g-index
30 all docs	30 docs citations	30 times ranked	1929 citing authors

#	Article	IF	Citations
1	Quantifying tortuosity in porous Li-ion battery materials. Journal of Power Sources, 2009, 188, 592-600.	7.8	442
2	Modeling of lithium-ion batteries. Journal of Power Sources, 2003, 119-121, 838-843.	7.8	259
3	Resolving the Discrepancy in Tortuosity Factor Estimation for Li-Ion Battery Electrodes through Micro-Macro Modeling and Experiment. Journal of the Electrochemical Society, 2018, 165, A3403-A3426.	2.9	133
4	Modeling 3D Microstructure and Ion Transport in Porous Li-Ion Battery Electrodes. Journal of the Electrochemical Society, 2011, 158, A781.	2.9	130
5	Threeâ€Phase Multiscale Modeling of a LiCoO₂ Cathode: Combining the Advantages of FIBâ€“SEM Imaging and Xâ€Ray Tomography. Advanced Energy Materials, 2015, 5, 1401612.	19.5	127
6	Modeling of Particle-Particle Interactions in Porous Cathodes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2007, 154, A1146.	2.9	115
7	A Combination of Xâ€Ray Tomography and Carbon Binder Modeling: Reconstructing the Three Phases of LiCoO₂ Liâ€Ion Battery Cathodes. Advanced Energy Materials, 2014, 4, 1301617.	19.5	95
8	Experiment and simulation of the fabrication process of lithium-ion battery cathodes for determining microstructure and mechanical properties. Journal of Power Sources, 2016, 312, 172-183.	7.8	90
9	Quantifying Tortuosity of Porous Li-Ion Battery Electrodes: Comparing Polarization-Interrupt and Blocking-Electrolyte Methods. Journal of the Electrochemical Society, 2018, 165, A2644-A2653.	2.9	76
10	Direct Measurements of Effective Ionic Transport in Porous Li-Ion Electrodes. Journal of the Electrochemical Society, 2013, 160, A306-A311.	2.9	75
11	Modeling the Effects of Electrode Microstructural Heterogeneities on Li-Ion Battery Performance and Lifetime. Journal of the Electrochemical Society, 2018, 165, A2127-A2144.	2.9	64
12	Non-equilibrium molecular dynamics simulation of the shear viscosity of liquid methanol: adaptation of the Ewald sum to Lees-Edwards boundary conditions. Molecular Physics, 1997, 92, 55-62.	1.7	62
13	Direct Measurements of Effective Electronic Transport in Porous Li-Ion Electrodes. Journal of the Electrochemical Society, 2014, 161, A2175-A2181.	2.9	43
14	Electrode microstructure controls localized electronic impedance in Li-ion batteries. Electrochimica Acta, 2019, 297, 820-825.	5.2	33
15	Micro-Four-Line Probe to Measure Electronic Conductivity and Contact Resistance of Thin-Film Battery Electrodes. Journal of the Electrochemical Society, 2015, 162, A2145-A2151.	2.9	32
16	Correlation of chromatographic performance with morphological features of organic polymer monoliths. Journal of Chromatography A, 2014, 1334, 20-29.	3.7	22
17	The effects of cycling on ionic and electronic conductivities of Li â€“ion battery electrodes. Journal of Power Sources, 2021, 492, 229636.	7.8	19
18	A Model for Investigating Sources of Li-Ion Battery Electrode Heterogeneity: Part I. Electrode Drying and Calendering Processes. Journal of the Electrochemical Society, 2021, 168, 060547.	2.9	17

#	Article	IF	Citations
19	Tortuosity of Composite Porous Electrodes with Various Conductive Additives in an Alkaline System. Journal of the Electrochemical Society, 2017, 164, A3117-A3130.	2.9	13
20	Nonequilibrium Linear Response Theory: Application to Onsagerâ€“Stefanâ€“Maxwell Diffusion. Industrial & Engineering Chemistry Research, 2015, 54, 4460-4467.	3.7	11
21	Fourier Correlation Method for Simulating Mutual Diffusion Coefficients in Condensed Systems at Equilibrium. Industrial & Engineering Chemistry Research, 2015, 54, 12156-12164.	3.7	11
22	Mathematical Model of Four-Line Probe to Determine Conductive Properties of Thin-Film Battery Electrodes. Journal of the Electrochemical Society, 2015, 162, A2136-A2144.	2.9	10
23	Micro-Flexible-Surface Probe for Determining Spatially Heterogeneous Electronic Conductivity of Lithium-Ion Battery Electrode Films. Journal of the Electrochemical Society, 2021, 168, 100504.	2.9	8
24	A Model for Investigating Sources of Li-Ion Battery Electrode Heterogeneity: Part II. Active Material Size, Shape, Orientation, and Stiffness. Journal of the Electrochemical Society, 2021, 168, 120518.	2.9	5
25	Interplay of Electrode Heterogeneity and Lithium Plating. Journal of the Electrochemical Society, 2022, 169, 020551.	2.9	4
26	Characterization of mechanical properties of battery electrode films from acoustic resonance measurements. Journal of Applied Physics, 2018, 123, .	2.5	3
27	Heterogeneity in MacMullin Number of Li-Ion Battery Electrodes Studied by Means of an Aperture Probe. Journal of the Electrochemical Society, 2022, 169, 010517.	2.9	3
28	Electrodes: A Combination of X-Ray Tomography and Carbon Binder Modeling: Reconstructing the Three Phases of LiCoO2 Li-Ion Battery Cathodes (Adv. Energy Mater. 8/2014). Advanced Energy Materials, 2014, 4, .	19.5	2
29	Characterization of mechanical properties of thin-film Li-ion battery electrodes from laser excitation and measurements of zero group velocity resonances. Journal of Applied Physics, 2019, 126, 085112.	2.5	2
30	Determination of mechanical properties of battery films from acoustic resonances. AIP Conference Proceedings, 2018, , .	0.4	0