Aashutosh Mistry

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4483037/publications.pdf

Version: 2024-02-01

50	1,602	304743	315739
papers	citations	22 h-index	38 g-index

53	53	53	1518
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of crystallite geometries on electrochemical performance of porous intercalation electrodes by multiscale operando investigation. Nature Materials, 2022, 21, 217-227.	27.5	35
2	MATBOX: An Open-source Microstructure Analysis Toolbox for microstructure generation, segmentation, characterization, visualization, correlation, and meshing. SoftwareX, 2022, 17, 100915.	2.6	12
3	The Transference Number. Energy and Environmental Materials, 2022, 5, 366-369.	12.8	18
4	Effect of Solvent Motion on Ion Transport in Electrolytes. Journal of the Electrochemical Society, 2022, 169, 040524.	2.9	19
5	Asphericity Can Cause Nonuniform Lithium Intercalation in Battery Active Particles. ACS Energy Letters, 2022, 7, 1871-1879.	17.4	21
6	Electric-Field-Induced Spatially Dynamic Heterogeneity of Solvent Motion and Cation Transference in Electrolytes. Physical Review Letters, 2022, 128, .	7.8	17
7	Modeling of electrode, electrolyte, and interfaces of lithium-sulfur batteries. , 2022, , 201-231.		1
8	Toward Bottom-Up Understanding of Transport in Concentrated Battery Electrolytes. ACS Central Science, 2022, 8, 880-890.	11.3	14
9	How Machine Learning Will Revolutionize Electrochemical Sciences. ACS Energy Letters, 2021, 6, 1422-1431.	17.4	88
10	Ion dynamics in battery materials imaged rapidly. Nature, 2021, 594, 503-504.	27.8	2
11	Quantifying Negative Effects of Carbon-Binder Networks from Electrochemical Performance of Porous Li-Ion Electrodes. Journal of the Electrochemical Society, 2021, 168, 070536.	2.9	31
12	Do we need an accurate understanding of transport in electrolytes?. Joule, 2021, 5, 2773-2776.	24.0	11
13	A Minimal Information Set To Enable Verifiable Theoretical Battery Research. ACS Energy Letters, 2021, 6, 3831-3835.	17.4	19
14	Examining Solvent Motion in Polarized Concentrated Electrolytes. ECS Meeting Abstracts, 2021, MA2021-02, 177-177.	0.0	0
15	Free Radicals: Making a Case for Battery Modeling. Electrochemical Society Interface, 2020, 29, 30-34.	0.4	16
16	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition with Solid Electrolytes. Journal of the Electrochemical Society, 2020, 167, 082510.	2.9	44
17	Corrosion-Induced Microstructural Variability Affects Transport-Kinetics Interaction in PEM Fuel Cell Catalyst Layers. Journal of the Electrochemical Society, 2020, 167, 084519.	2.9	18
18	In Operando Detection of the Onset and Mapping of Lithium Plating Regimes during Fast Charging of Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 30438-30448.	8.0	60

#	Article	IF	Citations
19	Stochasticity at Scales Leads to Lithium Intercalation Cascade. ACS Applied Materials & Interfaces, 2020, 12, 16359-16366.	8.0	18
20	Fingerprinting Redox Heterogeneity in Electrodes during Extreme Fast Charging. Journal of the Electrochemical Society, 2020, 167, 090542.	2.9	64
21	Spreading of Sessile and Pendant Drops on Partially Wetting Surfaces. Mechanical Engineering Series, 2020, , 41-80.	0.2	1
22	Controllable Electrode Stochasticity Self-Heats Lithium-Ion Batteries at Low Temperatures. ACS Applied Materials & Interfaces, 2019, 11, 26764-26769.	8.0	11
23	Probing spatial coupling of resistive modes in porous intercalation electrodes through impedance spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 3805-3813.	2.8	25
24	In operando thermal signature probe for lithium-ion batteries. Applied Physics Letters, 2019, 114, .	3.3	14
25	Quantifying Transport, Geometrical, and Morphological Parameters in Li-Ion Cathode Phases Using X-ray Microtomography. ACS Applied Materials & Interfaces, 2019, 11, 19933-19942.	8.0	20
26	Materials by Design: Tailored Morphology and Structures of Carbon Anodes for Enhanced Battery Safety. ACS Applied Materials & Interfaces, 2019, 11, 13334-13342.	8.0	16
27	Perspectiveâ€"Mesoscale Physics in the Catalyst Layer of Proton Exchange Membrane Fuel Cells. Journal of the Electrochemical Society, 2019, 166, F3089-F3092.	2.9	11
28	Non-equilibrium thermodynamics in electrochemical complexation of Liâ€"oxygen porous electrodes. Journal of Materials Chemistry A, 2019, 7, 8882-8888.	10.3	18
29	Deconstructing electrode pore network to learn transport distortion. Physics of Fluids, 2019, 31, 122005.	4.0	12
30	On our Limited Understanding of Electrodeposition. MRS Advances, 2019, 4, 2843-2861.	0.9	10
31	Electrolyte Confinement Alters Lithium Electrodeposition. ACS Energy Letters, 2019, 4, 156-162.	17.4	65
32	Spreading of a pendant liquid drop underneath a textured substrate. Physics of Fluids, 2018, 30, .	4.0	7
33	Electrochemistry-Mechanics Coupling in Intercalation Electrodes. Journal of the Electrochemical Society, 2018, 165, A1064-A1083.	2.9	32
34	Secondary-Phase Stochastics in Lithium-Ion Battery Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 6317-6326.	8.0	120
35	The 2018 Edward G. Weston Summer Research Fellowship â€" Summary Report: Curvature Effects in Precipitation Dynamics. Electrochemical Society Interface, 2018, 27, 80-81.	0.4	1
36	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

#	Article	IF	Citations
37	Editors' Choiceâ€"Mesoscale Analysis of Conductive Binder Domain Morphology in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2018, 165, E725-E736.	2.9	95
38	â€œShuttleâ€•in Polysulfide Shuttle: Friend or Foe?. Journal of Physical Chemistry C, 2018, 122, 23845-23851.	3.1	47
39	Electrochemistry Coupled Mesoscale Complexations in Electrodes Lead to Thermo-Electrochemical Extremes. ACS Applied Materials & Interfaces, 2018, 10, 28644-28655.	8.0	49
40	Electrolyte Transport Evolution Dynamics in Lithiumâ€"Sulfur Batteries. Journal of Physical Chemistry C, 2018, 122, 18329-18335.	3.1	27
41	State of the Art and Future Research Needs for Multiscale Analysis of Li-Ion Cells. Journal of Electrochemical Energy Conversion and Storage, 2017, 14, .	2.1	22
42	Mechanistic Understanding of the Role of Evaporation in Electrode Processing. Journal of the Electrochemical Society, 2017, 164, A1616-A1627.	2.9	87
43	Transport-Geometry Interactions in Li-Ion Cathode Materials Imaged Using X-ray Nanotomography. Journal of the Electrochemical Society, 2017, 164, A1412-A1424.	2.9	28
44	Precipitationâ€"Microstructure Interactions in the Li-Sulfur Battery Electrode. Journal of Physical Chemistry C, 2017, 121, 26256-26264.	3.1	40
45	Probing Impedance and Microstructure Evolution in Lithiumâ€"Sulfur Battery Electrodes. Journal of Physical Chemistry C, 2017, 121, 21206-21216.	3.1	34
46	Analysis of Long-Range Interaction in Lithium-Ion Battery Electrodes. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	2.1	44
47	Poromechanical effect in the lithiumâ€"sulfur battery cathode. Extreme Mechanics Letters, 2016, 9, 359-370.	4.1	66
48	Towards Next Generation Lithium-Sulfur Batteries: Non-Conventional Carbon Compartments/Sulfur Electrodes and Multi-Scale Analysis. Journal of the Electrochemical Society, 2016, 163, A730-A741.	2.9	43
49	Axisymmetric model of drop spreading on a horizontal surface. Physics of Fluids, 2015, 27, 092103.	4.0	11
50	Leveraging reactions and electrodeposition to fabricate photoanodes for oxygen production. MRS Bulletin, 0, , 1.	3.5	0