Partha P Mukherjee

List of Publications by Year
in descending order

173 papers	6,974 citations	50170 46 h-index	76769 74 g-index
183 all docs	183 docs citations	183 times ranked	5277 citing authors

#	Article	IF	Citations
1	Challenges in Lithium Metal Anodes for Solid-State Batteries. ACS Energy Letters, 2020, 5, 922-934.	8.8	322
2	Modeling of Two-Phase Behavior in the Gas Diffusion Medium of PEFCs via Full Morphology Approach. Journal of the Electrochemical Society, 2007, 154, B419.	1.3	255
3	Experimental Analysis of Thermal Runaway and Propagation in Lithium-Ion Battery Modules. Journal of the Electrochemical Society, 2015, 162, A1905-A1915.	1.3	249
4	Formation of Magnesium Dendrites during Electrodeposition. ACS Energy Letters, 2019, 4, 375-376.	8.8	221
5	Mesoscopic modeling of two-phase behavior and flooding phenomena in polymer electrolyte fuel cells. Electrochimica Acta, 2009, 54, 6861-6875.	2.6	216
6	Linking void and interphase evolution to electrochemistry in solid-state batteries using operando X-ray tomography. Nature Materials, 2021, 20, 503-510.	13.3	194
7	Pore-scale modeling of two-phase transport in polymer electrolyte fuel cellsâ€"progress and perspective. Energy and Environmental Science, 2011, 4, 346-369.	15.6	172
8	Characterization of Lithium-Ion Battery Thermal Abuse Behavior Using Experimental and Computational Analysis. Journal of the Electrochemical Society, 2015, 162, A2163-A2173.	1.3	159
9	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.	1.3	133
10	Stochastic Microstructure Reconstruction and Direct Numerical Simulation of the PEFC Catalyst Layer. Journal of the Electrochemical Society, 2006, 153, A840.	1.3	128
11	Secondary-Phase Stochastics in Lithium-Ion Battery Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 6317-6326.	4.0	120
12	Exploring the efficacy of nanofluids for lithium-ion battery thermal management. International Journal of Heat and Mass Transfer, 2017, 112, 779-794.	2.5	108
13	Mechanistic insight into dendriteâ€“SEI interactions for lithium metal electrodes. Journal of Materials Chemistry A, 2018, 6, 19664-19671.	5.2	105
14	Galvanostatic Intermittent Titration and Performance Based Analysis of LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂Cathode. Journal of the Electrochemical Society, 2017, 164, A3380-A3392.	1.3	102
15	Editors' Choiceâ€"Mesoscale Analysis of Conductive Binder Domain Morphology in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2018, 165, E725-E736.	1.3	95
16	Mechanistic Understanding of the Role of Evaporation in Electrode Processing. Journal of the Electrochemical Society, 2017, 164, A1616-A1627.	1.3	87
17	Direct numerical simulation (DNS) modeling of PEFC electrodes. Electrochimica Acta, 2006, 51, 3139-3150.	2.6	82
18	Mapping mechanisms and growth regimes of magnesium electrodeposition at high current densities. Materials Horizons, 2020, 7, 843-854.	6.4	77

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19	Elucidating Copper Dissolution Phenomenon in Li-Ion Cells under Overdischarge Extremes. Journal of the Electrochemical Society, 2018, 165, A1639-A1647.	1.3	76
20	Challenges and Opportunities for Fast Charging of Solid-State Lithium Metal Batteries. ACS Energy Letters, 2021, 6, 3734-3749.	8.8	76
21	Mesoscale modeling in electrochemical devicesâ€"A critical perspective. Progress in Energy and Combustion Science, 2019, 71, 118-142.	15.8	75
22	Synchrotron Imaging of Pore Formation in Li Metal Solid-State Batteries Aided by Machine Learning. ACS Applied Energy Materials, 2020, 3, 9534-9542.	2.5	75
23	Stochastic Analysis of Diffusion Induced Damage in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2013, 160, A955-A967.	1.3	73
24	Li₂S Film Formation on Lithium Anode Surface of Liâ€"S batteries. ACS Applied Materials & Interfaces, 2016, 8, 4700-4708.	4.0	70
25	Electrodeposition stability of metal electrodes. Energy Storage Materials, 2019, 20, 1-6.	9.5	68
26	Direct Numerical Simulation Modeling of Bilayer Cathode Catalyst Layers in Polymer Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2007, 154, B1121.	1.3	66
27	Poromechanical effect in the lithiumâ€"sulfur battery cathode. Extreme Mechanics Letters, 2016, 9, 359-370.	2.0	66
28	Electrolyte Confinement Alters Lithium Electrodeposition. ACS Energy Letters, 2019, 4, 156-162.	8.8	65
29	Fingerprinting Redox Heterogeneity in Electrodes during Extreme Fast Charging. Journal of the Electrochemical Society, 2020, 167, 090542.	1.3	64
30	Optimization of polymer electrolyte fuel cell cathode catalyst layers via direct numerical simulation modeling. Electrochimica Acta, 2007, 52, 6367-6377.	2.6	62
31	Mesoscale Complexations in Lithium Electrodeposition. ACS Applied Materials & Interfaces, 2018, 10, 26320-26327.	4.0	61
32	Probing the Role of Electrode Microstructure in the Lithium-Ion Battery Thermal Behavior. Journal of the Electrochemical Society, 2017, 164, E3146-E3158.	1.3	60
33	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.	4.0	60
34	Influence of Microstructure on Impedance Response in Intercalation Electrodes. Journal of the Electrochemical Society, 2015, 162, A1202-A1214.	1.3	58
35	Double-Edged Effect of Temperature on Lithium Dendrites. ACS Applied Materials & Interfaces, 2020, 12, 23931-23938.	4.0	57
36	Fast Charging of Lithium-ion Batteries via Electrode Engineering. Journal of the Electrochemical Society, 2020, 167, 090508.	1.3	57

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37	Microstructure Evolution in Lithium-Ion Battery Electrode Processing. Journal of the Electrochemical Society, 2014, 161, E3248-E3258.	1.3	56
38	Revealing Charge Transport Mechanisms in Li₂S₂ for Liâ€“Sulfur Batteries. Journal of Physical Chemistry Letters, 2017, 8, 1324-1330.	2.1	56
39	Non-dimensional analysis of the criticality of Li-ion battery thermal runaway behavior. Journal of Hazardous Materials, 2019, 369, 268-278.	6.5	56
40	Adsorption of insoluble polysulfides Li2Sx (x = 1, 2) on Li2S surfaces. Physical Chemistry Chemical Physics, 2015, 17, 9032-9039.	1.3	53
41	Surface diffusion manifestation in electrodeposition of metal anodes. Physical Chemistry Chemical Physics, 2020, 22, 11286-11295.	1.3	53
42	Probing the Thermal Implications in Mechanical Degradation of Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, A1058-A1070.	1.3	51
43	Mesoscale Elucidation of Surface Passivation in the Liâ€“Sulfur Battery Cathode. ACS Applied Materials & Interfaces, 2017, 9, 5263-5271.	4.0	49
44	Impedance Evolution Characteristics in Lithium-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A837-A847.	1.3	49
45	Electrochemistry Coupled Mesoscale Complexations in Electrodes Lead to Thermo-Electrochemical Extremes. ACS Applied Materials & Interfaces, 2018, 10, 28644-28655.	4.0	49
46	In operando signature and quantification of lithium plating. Journal of Materials Chemistry A, 2019, 7, 20683-20695.	5.2	49
47	â€œShuttleâ€•in Polysulfide Shuttle: Friend or Foe?. Journal of Physical Chemistry C, 2018, 122, 23845-23851.	1.5	47
48	Mechanistic Evaluation of Li_xO_y Formation on Î´-MnO₂ in Nonaqueous Liâ€“Air Batteries. ACS Applied Materials & Interfaces, 2016, 8, 23028-23036.	4.0	46
49	Mesoscale Elucidation of the Influence of Mixing Sequence in Electrode Processing. Langmuir, 2014, 30, 15102-15113.	1.6	44
50	Analysis of Long-Range Interaction in Lithium-Ion Battery Electrodes. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	44
51	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition with Solid Electrolytes. Journal of the Electrochemical Society, 2020, 167, 082510.	1.3	44
52	Diffusion Induced Damage and Impedance Response in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, A2138-A2152.	1.3	43
53	Probing the morphological influence on solid electrolyte interphase and impedance response in intercalation electrodes. Physical Chemistry Chemical Physics, 2015, 17, 9812-9827.	1.3	43
54	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.	1.3	43

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55	Anode potential controlled charging prevents lithium plating. Journal of Materials Chemistry A, 2020, 8, 13077-13085.	5.2	43
56	Microscale confinement features can affect biofilm formation. Microfluidics and Nanofluidics, 2013, 14, 895-902.	1.0	42
57	Overcharge and Aging Analytics of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 090547.	1.3	41
58	Mechanistic underpinnings of thermal gradient induced inhomogeneity in lithium plating. Energy Storage Materials, 2021, 35, 500-511.	9.5	41
59	Reduced Order Modeling of Mechanical Degradation Induced Performance Decay in Lithium-Ion Battery Porous Electrodes. Journal of the Electrochemical Society, 2015, 162, A1751-A1771.	1.3	40
60	Precipitationâ€“Microstructure Interactions in the Li-Sulfur Battery Electrode. Journal of Physical Chemistry C, 2017, 121, 26256-26264.	1.5	40
61	Vortex generators for active thermal management in lithium-ion battery systems. International Journal of Heat and Mass Transfer, 2018, 124, 800-815.	2.5	39
62	Drying Temperature and Capillarity-Driven Crack Formation in Aqueous Processing of Li-Ion Battery Electrodes. ACS Applied Energy Materials, 2019, 2, 4464-4476.	2.5	39
63	Mesoscale Interrogation Reveals Mechanistic Origins of Lithium Filaments along Grain Boundaries in Inorganic Solid Electrolytes. Advanced Energy Materials, 2022, 12, .	10.2	39
64	Mesoscale Elucidation of Solid Electrolyte Interphase Layer Formation in Li-Ion Battery Anode. Journal of Physical Chemistry C, 2017, 121, 26233-26240.	1.5	38
65	Columnar order in jammed LiFePO4 cathodes: ion transport catastrophe and its mitigation. Physical Chemistry Chemical Physics, 2012, 14, 7040.	1.3	37
66	Evaluating silicene as a potential cathode host to immobilize polysulfides in lithiumâ€“sulfur batteries. Journal of Coordination Chemistry, 2016, 69, 2090-2105.	0.8	37
67	Modulating Nanoinhomogeneity at Electrodeâ€“Solid Electrolyte Interfaces for Dendriteâ€Proof Solidâ€State Batteries and Longâ€Life Memristors. Advanced Energy Materials, 2021, 11, 2003811.	10.2	37
68	Mechano-Electrochemical Interaction Gives Rise to Strain Relaxation in Sn Electrodes. Journal of the Electrochemical Society, 2016, 163, A3022-A3035.	1.3	36
69	Mesoscale Analysis of the Electrolyte-Electrode Interface in All-Solid-State Li-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A1857-A1864.	1.3	36
70	Effect of crystallite geometries on electrochemical performance of porous intercalation electrodes by multiscale operando investigation. Nature Materials, 2022, 21, 217-227.	13.3	35
71	Probing Impedance and Microstructure Evolution in Lithiumâ€“Sulfur Battery Electrodes. Journal of Physical Chemistry C, 2017, 121, 21206-21216.	1.5	34
72	Electrochemistry-Mechanics Coupling in Intercalation Electrodes. Journal of the Electrochemical Society, 2018, 165, A1064-A1083.	1.3	32

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73	Mechanistic understanding of electrochemical plating and stripping of metal electrodes. Journal of Materials Chemistry A, 2019, 7, 4668-4688.	5.2	32
74	Chemical and mechanical degradation and mitigation strategies for Si anodes. Journal of Power Sources, 2019, 419, 208-218.	4.0	32
75	Microstructure and Pressure-Driven Electrodeposition Stability in Solid-State Batteries. Cell Reports Physical Science, 2021, 2, 100301.	2.8	32
76	Degradation-Safety Analytics in Lithium-Ion Cells: Part I. Aging under Charge/Discharge Cycling. Journal of the Electrochemical Society, 2020, 167, 160510.	1.3	32
77	Effect of electrode crosstalk on heat release in lithium-ion batteries under thermal abuse scenarios. Energy Storage Materials, 2022, 44, 326-341.	9.5	32
78	Mechano-Electrochemical Stochastics in High-Capacity Electrodes for Energy Storage. Journal of the Electrochemical Society, 2016, 163, A1120-A1137.	1.3	31
79	Mesoscale Anatomy of Dead Lithium Formation. Journal of Physical Chemistry C, 2020, 124, 6502-6511.	1.5	31
80	Quantifying Negative Effects of Carbon-Binder Networks from Electrochemical Performance of Porous Li-Ion Electrodes. Journal of the Electrochemical Society, 2021, 168, 070536.	1.3	31
81	Probing the Thermal Safety of Li Metal Batteries. Journal of the Electrochemical Society, 2020, 167, 120513.	1.3	31
82	Overdischarge and Aging Analytics of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 090558.	1.3	30
83	Directionality of thermal gradients in lithium-ion batteries dictates diverging degradation modes. Cell Reports Physical Science, 2021, 2, 100351.	2.8	29
84	Transport-Geometry Interactions in Li-Ion Cathode Materials Imaged Using X-ray Nanotomography. Journal of the Electrochemical Society, 2017, 164, A1412-A1424.	1.3	28
85	In Operando Impedance Based Diagnostics of Electrode Kinetics in Li-Ion Pouch Cells. Journal of the Electrochemical Society, 2019, 166, A2131-A2141.	1.3	28
86	Electrolyte Transport Evolution Dynamics in Lithiumâ€“Sulfur Batteries. Journal of Physical Chemistry C, 2018, 122, 18329-18335.	1.5	27
87	Mechanistics of Lithium-Metal Battery Performance by Separator Architecture Design. ACS Applied Materials & Interfaces, 2020, 12, 556-566.	4.0	27
88	Evaluation of Combined Active and Passive Thermal Management Strategies for Lithium-Ion Batteries. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	26
89	Probing spatial coupling of resistive modes in porous intercalation electrodes through impedance spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 3805-3813.	1.3	25
90	Quantifying the unknown impact of segmentation uncertainty on image-based simulations. Nature Communications, 2021, 12, 5414.	5.8	25

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91	Mechano-Electrochemical Model for Acoustic Emission Characterization in Intercalation Electrodes. Journal of the Electrochemical Society, 2014, 161, F3123-F3136.	1.3	23
92	An overview of degradation phenomena modeling in lithium-ion battery electrodes. Current Opinion in Chemical Engineering, 2016, 13, 82-90.	3.8	23
93	Mechanistic Analysis of Mechano-Electrochemical Interaction in Silicon Electrodes with Surface Film. Journal of the Electrochemical Society, 2017, 164, A3570-A3581.	1.3	22
94	Hierarchical Structured Cu/Ni/TiO₂ Nanocomposites as Electrodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 28695-28703.	4.0	21
95	Tuning the Splitting Behavior of Droplet in a Bifurcating Channel through Wettabilityâ€“Capillarity Interaction. Langmuir, 2020, 36, 10471-10489.	1.6	21
96	Asphericity Can Cause Nonuniform Lithium Intercalation in Battery Active Particles. ACS Energy Letters, 2022, 7, 1871-1879.	8.8	21
97	Wettability effects on contact line dynamics of droplet motion in an inclined channel. Physical Review E, 2015, 91, 053006.	0.8	20
98	Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional channel. Physics of Fluids, 2018, 30, .	1.6	20
99	Quantifying Transport, Geometrical, and Morphological Parameters in Li-Ion Cathode Phases Using X-ray Microtomography. ACS Applied Materials & Interfaces, 2019, 11, 19933-19942.	4.0	20
100	Scaling Relations for Intercalation Induced Damage in Electrodes. Electrochimica Acta, 2016, 204, 31-49.	2.6	19
101	Roadblocks in Cation Diffusion Pathways: Implications of Phase Boundaries for Li-Ion Diffusivity in an Intercalation Cathode Material. ACS Applied Materials & Interfaces, 2018, 10, 30901-30911.	4.0	19
102	Mechanistic Analysis of Microstructural Attributes to Lithium Plating in Fast Charging. ACS Applied Materials & Interfaces, 2020, 12, 55795-55808.	4.0	19
103	Probing the influence of superhydrophobicity and mixed wettability on droplet displacement behavior. Microfluidics and Nanofluidics, 2014, 17, 657-674.	1.0	18
104	Revealing reaction mechanisms of nanoconfined Li2S: implications for lithiumâ€“sulfur batteries. Physical Chemistry Chemical Physics, 2018, 20, 11713-11721.	1.3	18
105	Non-equilibrium thermodynamics in electrochemical complexation of Liâ€“oxygen porous electrodes. Journal of Materials Chemistry A, 2019, 7, 8882-8888.	5.2	18
106	Corrosion-Induced Microstructural Variability Affects Transport-Kinetics Interaction in PEM Fuel Cell Catalyst Layers. Journal of the Electrochemical Society, 2020, 167, 084519.	1.3	18
107	Stochasticity at Scales Leads to Lithium Intercalation Cascade. ACS Applied Materials & Interfaces, 2020, 12, 16359-16366.	4.0	18
108	Nonequilibrium Phase Transformation and Particle Shape Effect in LiFePO4 Materials for Li-Ion Batteries. Electrochemical and Solid-State Letters, 2011, 14, A143.	2.2	17

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109	Morphology-Safety Implications of Interfacial Evolution in Lithium Metal Anodes. Journal of Physical Chemistry C, 2020, 124, 16784-16795.	1.5	17
110	Co-Electrodeposition Mechanism in Rechargeable Metal Batteries. ACS Energy Letters, 2021, 6, 2190-2197.	8.8	17
111	Probing the Effect of High Energy Ball Milling on the Structure and Properties of LiNi1/3Mn1/3Co1/3O2 Cathodes for Li-Ion Batteries. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	16
112	Mechano-Electrochemical Interaction and Degradation in Graphite Electrode with Surface Film. Journal of the Electrochemical Society, 2018, 165, A2397-A2408.	1.3	16
113	Materials by Design: Tailored Morphology and Structures of Carbon Anodes for Enhanced Battery Safety. ACS Applied Materials & Interfaces, 2019, 11, 13334-13342.	4.0	16
114	Hole Polaron Diffusion in the Final Discharge Product of Lithiumâ€“Sulfur Batteries. Journal of Physical Chemistry C, 2017, 121, 17169-17175.	1.5	15
115	Modeling of Mesoscale Variability in Biofilm Shear Behavior. PLoS ONE, 2016, 11, e0165593.	1.1	15
116	Probing the Role of Multi-scale Heterogeneity in Graphite Electrodes for Extreme Fast Charging. ACS Applied Materials & Interfaces, 2022, 14, 18335-18352.	4.0	15
117	In operando thermal signature probe for lithium-ion batteries. Applied Physics Letters, 2019, 114, .	1.5	14
118	Decreasing the Ion Diffusion Pathways for the Intercalation of Multivalent Cations into One-Dimensional TiS₂ Nanobelt Arrays. ACS Applied Materials & Interfaces, 2020, 12, 21788-21798.	4.0	14
119	Preventing lithium plating under extremes: an untold tale of two electrodes. Journal of Materials Chemistry A, 2021, 9, 17249-17260.	5.2	14
120	Kinetics or Transport: Whither Goes the Solid-State Battery Cathode?. ACS Applied Materials & Interfaces, 2022, 14, 29754-29765.	4.0	14
121	Evaporation induced nanoparticle â€“ binder interaction in electrode film formation. Physical Chemistry Chemical Physics, 2017, 19, 10051-10061.	1.3	13
122	Deconstructing electrode pore network to learn transport distortion. Physics of Fluids, 2019, 31, 122005.	1.6	12
123	Mechano-Electrochemical Interaction in Solid-State Lithium Batteries. Journal of the Electrochemical Society, 2020, 167, 080513.	1.3	12
124	Degradation-Safety Analytics in Lithium-Ion Cells and Modules Part II. Overcharge and External Short Circuit Scenarios. Journal of the Electrochemical Society, 2021, 168, 050535.	1.3	12
125	Mesoscale Physicochemical Interactions in Lithiumâ€“Sulfur Batteries: Progress and Perspective. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .	1.1	11
126	Controllable Electrode Stochasticity Self-Heats Lithium-Ion Batteries at Low Temperatures. ACS Applied Materials & Interfaces, 2019, 11, 26764-26769.	4.0	11

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127	Perspectiveâ€"Mesoscale Physics in the Catalyst Layer of Proton Exchange Membrane Fuel Cells. Journal of the Electrochemical Society, 2019, 166, F3089-F3092.	1.3	11
128	Thermo-Electrochemical Stability Analytics of Electrode Materials. Journal of Physical Chemistry C, 2019, 123, 30106-30120.	1.5	11
129	Synergistic voltage and electrolyte mediation improves sodiation kinetics in Âµ-Sn alloy-anodes. Energy Storage Materials, 2021, 43, 305-316.	9.5	11
130	Probing the Influence of Multiscale Heterogeneity on Effective Properties of Graphite Electrodes. ACS Applied Materials & Interfaces, 2022, 14, 943-953.	4.0	11
131	Advancements in extreme fast charging to foster sustainable electrification. One Earth, 2022, 5, 216-219.	3.6	11
132	Electrochemical-Reaction-Driven Interfacial Stress in a Solid-Solid LayeredÂArchitecture. Physical Review Applied, 2019, 11, .	1.5	10
133	Protocol for Biofilm Streamer Formation in a Microfluidic Device with Micro-pillars. Journal of Visualized Experiments, 2014, , .	0.2	9
134	Superhierarchical Nickelâ€"Vanadia Nanocomposites for Lithium Storage. ACS Applied Energy Materials, 2018, 1, 2056-2066.	2.5	9
135	Three-electrode Coin Cell Preparation and Electrodeposition Analytics for Lithium-ion Batteries. Journal of Visualized Experiments, 2018, , .	0.2	9
136	Mesoscale Elucidation of Self-Discharge-Induced Performance Decay in Lithiumâ€"Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 13326-13333.	4.0	9
137	Simulation of effect of interfacial lithium flux on miscibility gap inÂnon-equilibrium phase transformation of LiFePO4 particles. Journal of Power Sources, 2014, 245, 83-88.	4.0	8
138	Stochastics of diffusion induced damage in intercalation materials. Materials Research Express, 2016, 3, 104001.	0.8	8
139	Non-aqueous Electrode Processing and Construction of Lithium-ion Coin Cells. Journal of Visualized Experiments, 2016, , e53490.	0.2	8
140	Elucidating Lithium Alloying-Induced Degradation Evolution in High-Capacity Electrodes. ACS Applied Materials & Interfaces, 2019, 11, 563-577.	4.0	8
141	Plating energy as a universal descriptor to classify accelerated cell failure under operational extremes. Cell Reports Physical Science, 2022, 3, 100720.	2.8	8
142	Chemomechanical Interactions Dictate Lithium Surface Diffusion Kinetics in the Solid Electrolyte Interphase. Langmuir, 2022, 38, 5472-5480.	1.6	8
143	Cationic shield mediated electrodeposition stability in metal electrodes. Journal of Materials Chemistry A, 2019, 7, 18442-18450.	5.2	7
144	Mesoscale understanding of capillarity driven two-phase flow in a packed bed architecture. International Journal of Heat and Mass Transfer, 2019, 136, 116-127.	2.5	7

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145	Mechanistic Elucidation of Si Particle Morphology on Electrode Performance. Journal of the Electrochemical Society, 2019, 166, A3852-A3860.	1.3	7
146	In Operando XANES Imaging of High Capacity Intermetallic Anodes for Lithium Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 040523.	1.3	7
147	Electroanalytical Quantification of Electrolyte Transport Resistance in Porous Electrodes. Journal of the Electrochemical Society, 2020, 167, 080510.	1.3	7
148	Two-Phase Dynamics and Hysteresis in the PEM Fuel Cell Catalyst Layer with the Lattice-Boltzmann Method. Journal of the Electrochemical Society, 2021, 168, 024521.	1.3	7
149	â€œDeadâ€•lithium or back from the â€œdeadâ€?. Joule, 2022, 6, 291-293.	11.7	7
150	Mesoscale Understanding of Lithium Electrodeposition for Intercalation Electrodes. Journal of Physical Chemistry C, 2018, 122, 21097-21107.	1.5	6
151	Probing the influence of confinement and wettability on droplet displacement behavior: A mesoscale analysis. European Journal of Mechanics, B/Fluids, 2019, 75, 327-338.	1.2	6
152	Optical Microscopy Reveals the Ambient Sodiumâ€“Sulfur Discharge Mechanism. ACS Sustainable Chemistry and Engineering, 2021, 9, 92-100.	3.2	6
153	Mesoscale Evaluation of Titanium Silicide Monolayer as a Cathode Host Material in Lithiumâ€“Sulfur Batteries. Jom, 2017, 69, 1532-1536.	0.9	5
154	Mechanistic Underpinnings of Morphology Transition in Electrodeposition under the Application of Pulsatile Potential. Langmuir, 2022, , .	1.6	5
155	Degradation-Safety Analytics in Lithium-Ion Cells and Modules: Part III. Aging and Safety of Pouch Format Cells. Journal of the Electrochemical Society, 2021, 168, 110501.	1.3	4
156	Multiscale Electrochemomechanics Interaction and Degradation Analytics of Sn Electrodes for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2022, 14, 29711-29721.	4.0	4
157	Energetics Dictates Deposition at Metal/Solid Electrolyte Interfaces. Journal of Physical Chemistry C, 2021, 125, 2221-2229.	1.5	3
158	Mechanistic Insight into Lithium Electrodeposition in Porous Host Architectures. Journal of Physical Chemistry C, 2021, 125, 25369-25375.	1.5	3
159	3Îµâ€“A Versatile Operando Analytics Toolbox in Energy Storage. ACS Omega, 2021, 6, 33284-33292.	1.6	3
160	Mesoscale elucidation of laser-assisted chemical deposition of Sn nanostructured electrodes. Journal of Applied Physics, 2015, 117, 214301.	1.1	2
161	Modeling Proton Exchange Membrane Fuel Cell Cathode Catalyst Layers with the Lattice-Boltzmann-Method Framework. ECS Transactions, 2019, 92, 47-59.	0.3	2
162	Quantifying Sodiation Kinetics in Alloying Tin Electrodes for Sodium-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 090550.	1.3	2

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163	Simplified Pouch Cell Method for 3-Electrode Re-Testing of Harvested Double-Sided Electrodes From Commercial Lithium-Ion Batteries. Journal of Electrochemical Energy Conversion and Storage, 2021, 18, .	1.1	2
164	Mesoscopic Modeling of Capillarity-Induced Two-Phase Transport in a Microfluidic Porous Structure. Transport in Porous Media, 2018, 122, 673-691.	1.2	1
165	From material properties to multiscale modeling to improve lithium-ion energy storage safety. MRS Bulletin, 2021, 46, 402-409.	1.7	1
166	Energy Spotlight. ACS Energy Letters, 2021, 6, 277-279.	8.8	1
167	Multiscale modeling of physicochemical interactions in lithium-sulfur battery electrodes. , 2022, , 123-158.		1
168	Mesoscopic simulation of blob resonance in a model porous pathway. Microfluidics and Nanofluidics, 2015, 18, 215-232.	1.0	0
169	Special Issue on Multiphysics Coupling in Energy Storage. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	0
170	Mesoscale Interplay in Lithium-Ion Batteries and Beyond. Jom, 2017, 69, 1467-1468.	0.9	0
171	Solidâ€State Batteries: Modulating Nanoinhomogeneity at Electrodeâ€“Solid Electrolyte Interfaces for Dendriteâ€Proof Solidâ€State Batteries and Longâ€Life Memristors (Adv. Energy Mater. 16/2021). Advanced Energy Materials, 2021, 11, 2170062.	10.2	0
172	Performance degradation modeling in silicon anodes. , 2022, , 299-329.		0
173	Celebrating Women in Electrochemical Sciences and Engineering (WIESE). ACS Energy Letters, 2022, 7, 2105-2112.	8.8	0