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	Performance degradation modeling in silicon anodes. , 2022, , 299-329.		0
2	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
3	Effect of crystallite geometries on electrochemical performance of porous intercalation electrodes by multiscale operando investigation. Nature Materials, 2022, 21, 217-227.	13.3	35
4	Plating energy as a universal descriptor to classify accelerated cell failure under operational extremes. Cell Reports Physical Science, 2022, 3, 100720.	2.8	8
5	Probing the Influence of Multiscale Heterogeneity on Effective Properties of Graphite Electrodes. ACS Applied Materials & Interfaces, 2022, 14, 943-953.	4.0	11
6	â€œDeadâ€•lithium or back from the â€œdeadâ€?. Joule, 2022, 6, 291-293.	11.7	7
7	Advancements in extreme fast charging to foster sustainable electrification. One Earth, 2022, 5, 216-219.	3.6	11
8	Mesoscale Interrogation Reveals Mechanistic Origins of Lithium Filaments along Grain Boundaries in Inorganic Solid Electrolytes. Advanced Energy Materials, 2022, 12, .	10.2	39
9	Mechanistic Underpinnings of Morphology Transition in Electrodeposition under the Application of Pulsatile Potential. Langmuir, 2022, , .	1.6	5
10	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
11	Chemomechanical Interactions Dictate Lithium Surface Diffusion Kinetics in the Solid Electrolyte Interphase. Langmuir, 2022, 38, 5472-5480.	1.6	8
12	Asphericity Can Cause Nonuniform Lithium Intercalation in Battery Active Particles. ACS Energy Letters, 2022, 7, 1871-1879.	8.8	21
13	Celebrating Women in Electrochemical Sciences and Engineering (WIESE). ACS Energy Letters, 2022, 7, 2105-2112.	8.8	0
14	Kinetics or Transport: Whither Goes the Solid-State Battery Cathode?. ACS Applied Materials & Interfaces, 2022, 14, 29754-29765.	4.0	14
15	Multiscale Electrochemomechanics Interaction and Degradation Analytics of Sn Electrodes for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2022, 14, 29711-29721.	4.0	4
16	Multiscale modeling of physicochemical interactions in lithium-sulfur battery electrodes. , 2022, , 123-158.		1
17	Mechanistic underpinnings of thermal gradient induced inhomogeneity in lithium plating. Energy Storage Materials, 2021, 35, 500-511.	9.5	41
18	Energetics Dictates Deposition at Metal/Solid Electrolyte Interfaces. Journal of Physical Chemistry C, 2021, 125, 2221-2229.	1.5	3

#	Article	IF	Citations
19	Preventing lithium plating under extremes: an untold tale of two electrodes. Journal of Materials Chemistry A, 2021, 9, 17249-17260.	5.2	14
20	Microstructure and Pressure-Driven Electrodeposition Stability in Solid-State Batteries. Cell Reports Physical Science, 2021, 2, 100301.	2.8	32
21	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
22	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
23	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
24	Directionality of thermal gradients in lithium-ion batteries dictates diverging degradation modes. Cell Reports Physical Science, 2021, 2, 100351.	2.8	29
25	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
26	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
27	From material properties to multiscale modeling to improve lithium-ion energy storage safety. MRS Bulletin, 2021, 46, 402-409.	1.7	1
28	Co-Electrodeposition Mechanism in Rechargeable Metal Batteries. ACS Energy Letters, 2021, 6, 2190-2197.	8.8	17
29	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
30	Quantifying the unknown impact of segmentation uncertainty on image-based simulations. Nature Communications, 2021, 12, 5414.	5.8	25
31	Quantifying Sodiation Kinetics in Alloying Tin Electrodes for Sodium-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 090550.	1.3	2
32	Challenges and Opportunities for Fast Charging of Solid-State Lithium Metal Batteries. ACS Energy Letters, 2021, 6, 3734-3749.	8.8	76
33	Synergistic voltage and electrolyte mediation improves sodiation kinetics in Âµ-Sn alloy-anodes. Energy Storage Materials, 2021, 43, 305-316.	9.5	11
34	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
35	Optical Microscopy Reveals the Ambient Sodiumâ€“Sulfur Discharge Mechanism. ACS Sustainable Chemistry and Engineering, 2021, 9, 92-100.	3.2	6
36	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

#	Article	IF	Citations
37	Energy Spotlight. ACS Energy Letters, 2021, 6, 277-279.	8.8	1
38	Mechanistic Insight into Lithium Electrodeposition in Porous Host Architectures. Journal of Physical Chemistry C, 2021, 125, 25369-25375.	1.5	3
39	3Îµâ€“A Versatile Operando Analytics Toolbox in Energy Storage. ACS Omega, 2021, 6, 33284-33292.	1.6	3
40	Mapping mechanisms and growth regimes of magnesium electrodeposition at high current densities. Materials Horizons, 2020, 7, 843-854.	6.4	77
41	Mechanistics of Lithium-Metal Battery Performance by Separator Architecture Design. ACS Applied Materials & Interfaces, 2020, 12, 556-566.	4.0	27
42	Tuning the Splitting Behavior of Droplet in a Bifurcating Channel through Wettabilityâ€“Capillarity Interaction. Langmuir, 2020, 36, 10471-10489.	1.6	21
43	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
44	Mechanistic Analysis of Microstructural Attributes to Lithium Plating in Fast Charging. ACS Applied Materials & Interfaces, 2020, 12, 55795-55808.	4.0	19
45	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition with Solid Electrolytes. Journal of the Electrochemical Society, 2020, 167, 082510.	1.3	44
46	Double-Edged Effect of Temperature on Lithium Dendrites. ACS Applied Materials & Interfaces, 2020, 12, 23931-23938.	4.0	57
47	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
48	Overcharge and Aging Analytics of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 090547.	1.3	41
49	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
50	Anode potential controlled charging prevents lithium plating. Journal of Materials Chemistry A, 2020, 8, 13077-13085.	5.2	43
51	In Operando XANES Imaging of High Capacity Intermetallic Anodes for Lithium Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 040523.	1.3	7
52	Mesoscale Anatomy of Dead Lithium Formation. Journal of Physical Chemistry C, 2020, 124, 6502-6511.	1.5	31
53	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
54	Stochasticity at Scales Leads to Lithium Intercalation Cascade. ACS Applied Materials & Interfaces, 2020, 12, 16359-16366.	4.0	18

#	Article	IF	Citations
55	Overdischarge and Aging Analytics of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 090558.	1.3	30
56	Morphology-Safety Implications of Interfacial Evolution in Lithium Metal Anodes. Journal of Physical Chemistry C, 2020, 124, 16784-16795.	1.5	17
57	Challenges in Lithium Metal Anodes for Solid-State Batteries. ACS Energy Letters, 2020, 5, 922-934.	8.8	322
58	Surface diffusion manifestation in electrodeposition of metal anodes. Physical Chemistry Chemical Physics, 2020, 22, 11286-11295.	1.3	53
59	Mechano-Electrochemical Interaction in Solid-State Lithium Batteries. Journal of the Electrochemical Society, 2020, 167, 080513.	1.3	12
60	Electroanalytical Quantification of Electrolyte Transport Resistance in Porous Electrodes. Journal of the Electrochemical Society, 2020, 167, 080510.	1.3	7
61	Fast Charging of Lithium-ion Batteries via Electrode Engineering. Journal of the Electrochemical Society, 2020, 167, 090508.	1.3	57
62	Fingerprinting Redox Heterogeneity in Electrodes during Extreme Fast Charging. Journal of the Electrochemical Society, 2020, 167, 090542.	1.3	64
63	Probing the Thermal Safety of Li Metal Batteries. Journal of the Electrochemical Society, 2020, 167, 120513.	1.3	31
64	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
65	Cationic shield mediated electrodeposition stability in metal electrodes. Journal of Materials Chemistry A, 2019, 7, 18442-18450.	5.2	7
66	Controllable Electrode Stochasticity Self-Heats Lithium-Ion Batteries at Low Temperatures. ACS Applied Materials & Interfaces, 2019, 11, 26764-26769.	4.0	11
67	Modeling Proton Exchange Membrane Fuel Cell Cathode Catalyst Layers with the Lattice-Boltzmann-Method Framework. ECS Transactions, 2019, 92, 47-59.	0.3	2
68	In operando signature and quantification of lithium plating. Journal of Materials Chemistry A, 2019, 7, 20683-20695.	5.2	49
69	Probing spatial coupling of resistive modes in porous intercalation electrodes through impedance spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 3805-3813.	1.3	25
70	Mechanistic understanding of electrochemical plating and stripping of metal electrodes. Journal of Materials Chemistry A, 2019, 7, 4668-4688.	5.2	32
71	In operando thermal signature probe for lithium-ion batteries. Applied Physics Letters, 2019, 114, .	1.5	14
72	Non-dimensional analysis of the criticality of Li-ion battery thermal runaway behavior. Journal of Hazardous Materials, 2019, 369, 268-278.	6.5	56

#	Article	IF	Citations
73	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
74	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
75	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
76	Electrodeposition stability of metal electrodes. Energy Storage Materials, 2019, 20, 1-6.	9.5	68
77	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
78	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
79	Non-equilibrium thermodynamics in electrochemical complexation of Liâ€“oxygen porous electrodes. Journal of Materials Chemistry A, 2019, 7, 8882-8888.	5.2	18
80	Electrochemical-Reaction-Driven Interfacial Stress in a Solid-Solid LayeredÂArchitecture. Physical Review Applied, 2019, 11, .	1.5	10
81	Mesoscale Elucidation of Self-Discharge-Induced Performance Decay in Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 13326-13333.	4.0	9
82	Chemical and mechanical degradation and mitigation strategies for Si anodes. Journal of Power Sources, 2019, 419, 208-218.	4.0	32
83	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
84	Mechanistic Elucidation of Si Particle Morphology on Electrode Performance. Journal of the Electrochemical Society, 2019, 166, A3852-A3860.	1.3	7
85	Thermo-Electrochemical Stability Analytics of Electrode Materials. Journal of Physical Chemistry C, 2019, 123, 30106-30120.	1.5	11
86	Deconstructing electrode pore network to learn transport distortion. Physics of Fluids, 2019, 31, 122005.	1.6	12
87	Elucidating Lithium Alloying-Induced Degradation Evolution in High-Capacity Electrodes. ACS Applied Materials & Interfaces, 2019, 11, 563-577.	4.0	8
88	Formation of Magnesium Dendrites during Electrodeposition. ACS Energy Letters, 2019, 4, 375-376.	8.8	221
89	Mesoscale modeling in electrochemical devicesâ€"A critical perspective. Progress in Energy and Combustion Science, 2019, 71, 118-142.	15.8	75
90	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

#	Article	IF	Citations
91	Electrolyte Confinement Alters Lithium Electrodeposition. ACS Energy Letters, 2019, 4, 156-162.	8.8	65
92	Mesoscopic Modeling of Capillarity-Induced Two-Phase Transport in a Microfluidic Porous Structure. Transport in Porous Media, 2018, 122, 673-691.	1.2	1
93	Electrochemistry-Mechanics Coupling in Intercalation Electrodes. Journal of the Electrochemical Society, 2018, 165, A1064-A1083.	1.3	32
94	Revealing reaction mechanisms of nanoconfined Li2S: implications for lithiumâ€“sulfur batteries. Physical Chemistry Chemical Physics, 2018, 20, 11713-11721.	1.3	18
95	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
96	Superhierarchical Nickelâ€“Vanadia Nanocomposites for Lithium Storage. ACS Applied Energy Materials, 2018, 1, 2056-2066.	2.5	9
97	Secondary-Phase Stochastics in Lithium-Ion Battery Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 6317-6326.	4.0	120
98	Mesoscale Physicochemical Interactions in Lithiumâ€“Sulfur Batteries: Progress and Perspective. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .	1.1	11
99	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
100	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
101	â€œShuttleâ€•in Polysulfide Shuttle: Friend or Foe?. Journal of Physical Chemistry C, 2018, 122, 23845-23851.	1.5	47
102	Mechanistic insight into dendriteâ€“SEI interactions for lithium metal electrodes. Journal of Materials Chemistry A, 2018, 6, 19664-19671.	5.2	105
103	Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional channel. Physics of Fluids, 2018, 30, .	1.6	20
104	Three-electrode Coin Cell Preparation and Electrodeposition Analytics for Lithium-ion Batteries. Journal of Visualized Experiments, 2018, , .	0.2	9
105	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
106	Electrochemistry Coupled Mesoscale Complexations in Electrodes Lead to Thermo-Electrochemical Extremes. ACS Applied Materials & Interfaces, 2018, 10, 28644-28655.	4.0	49
107	Electrolyte Transport Evolution Dynamics in Lithiumâ€“Sulfur Batteries. Journal of Physical Chemistry C, 2018, 122, 18329-18335.	1.5	27
108	Mesoscale Complexations in Lithium Electrodeposition. ACS Applied Materials & Interfaces, 2018, 10, 26320-26327.	4.0	61

#	Article	IF	Citations
109	Mechano-Electrochemical Interaction and Degradation in Graphite Electrode with Surface Film. Journal of the Electrochemical Society, 2018, 165, A2397-A2408.	1.3	16
110	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
111	Mesoscale Understanding of Lithium Electrodeposition for Intercalation Electrodes. Journal of Physical Chemistry C, 2018, 122, 21097-21107.	1.5	6
112	Elucidating Copper Dissolution Phenomenon in Li-Ion Cells under Overdischarge Extremes. Journal of the Electrochemical Society, 2018, 165, A1639-A1647.	1.3	76
113	Mesoscale Elucidation of Surface Passivation in the Liâ€“Sulfur Battery Cathode. ACS Applied Materials & Interfaces, 2017, 9, 5263-5271.	4.0	49
114	Revealing Charge Transport Mechanisms in Li₂S₂ for Liâ€“Sulfur Batteries. Journal of Physical Chemistry Letters, 2017, 8, 1324-1330.	2.1	56
115	Impedance Evolution Characteristics in Lithium-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A837-A847.	1.3	49
116	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
117	Mesoscale Evaluation of Titanium Silicide Monolayer as a Cathode Host Material in Lithiumâ€“Sulfur Batteries. Jom, 2017, 69, 1532-1536.	0.9	5
118	Mechanistic Understanding of the Role of Evaporation in Electrode Processing. Journal of the Electrochemical Society, 2017, 164, A1616-A1627.	1.3	87
119	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
120	Evaporation induced nanoparticle â€“ binder interaction in electrode film formation. Physical Chemistry Chemical Physics, 2017, 19, 10051-10061.	1.3	13
121	Precipitationâ€“Microstructure Interactions in the Li-Sulfur Battery Electrode. Journal of Physical Chemistry C, 2017, 121, 26256-26264.	1.5	40
122	Probing Impedance and Microstructure Evolution in Lithiumâ€“Sulfur Battery Electrodes. Journal of Physical Chemistry C, 2017, 121, 21206-21216.	1.5	34
123	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
124	Hole Polaron Diffusion in the Final Discharge Product of Lithiumâ€“Sulfur Batteries. Journal of Physical Chemistry C, 2017, 121, 17169-17175.	1.5	15
125	Mesoscale Interplay in Lithium-Ion Batteries and Beyond. Jom, 2017, 69, 1467-1468.	0.9	0
126	Hierarchical Structured Cu/Ni/TiO₂ Nanocomposites as Electrodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 28695-28703.	4.0	21

#	Article	IF	Citations
127	Mechanistic Analysis of Mechano-Electrochemical Interaction in Silicon Electrodes with Surface Film. Journal of the Electrochemical Society, 2017, 164, A3570-A3581.	1.3	22
128	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
129	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
130	Mechano-Electrochemical Stochastics in High-Capacity Electrodes for Energy Storage. Journal of the Electrochemical Society, 2016, 163, A1120-A1137.	1.3	31
131	Stochastics of diffusion induced damage in intercalation materials. Materials Research Express, 2016, 3, 104001.	0.8	8
132	Mechano-Electrochemical Interaction Gives Rise to Strain Relaxation in Sn Electrodes. Journal of the Electrochemical Society, 2016, 163, A3022-A3035.	1.3	36
133	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
134	Analysis of Long-Range Interaction in Lithium-Ion Battery Electrodes. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	44
135	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
136	Special Issue on Multiphysics Coupling in Energy Storage. Journal of Electrochemical Energy Conversion and Storage, 2016, 13, .	1.1	0
137	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
138	An overview of degradation phenomena modeling in lithium-ion battery electrodes. Current Opinion in Chemical Engineering, 2016, 13, 82-90.	3.8	23
139	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
140	Non-aqueous Electrode Processing and Construction of Lithium-ion Coin Cells. Journal of Visualized Experiments, 2016, , e53490.	0.2	8
141	Scaling Relations for Intercalation Induced Damage in Electrodes. Electrochimica Acta, 2016, 204, 31-49.	2.6	19
142	Poromechanical effect in the lithiumâ€“sulfur battery cathode. Extreme Mechanics Letters, 2016, 9, 359-370.	2.0	66
143	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
144	Li₂S Film Formation on Lithium Anode Surface of Liâ€“S batteries. ACS Applied Materials & Interfaces, 2016, 8, 4700-4708.	4.0	70

#	Article	IF	Citations
145	Modeling of Mesoscale Variability in Biofilm Shear Behavior. PLoS ONE, 2016, 11, e0165593.	1.1	15
146	Wettability effects on contact line dynamics of droplet motion in an inclined channel. Physical Review E, 2015, 91, 053006.	0.8	20
147	Adsorption of insoluble polysulfides Li2Sx (x = 1, 2) on Li2S surfaces. Physical Chemistry Chemical Physics, 2015, 17, 9032-9039.	1.3	53
148	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
149	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
150	Influence of Microstructure on Impedance Response in Intercalation Electrodes. Journal of the Electrochemical Society, 2015, 162, A1202-A1214.	1.3	58
151	Mesoscale elucidation of laser-assisted chemical deposition of Sn nanostructured electrodes. Journal of Applied Physics, 2015, 117, 214301.	1.1	2
152	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
153	Experimental Analysis of Thermal Runaway and Propagation in Lithium-Ion Battery Modules. Journal of the Electrochemical Society, 2015, 162, A1905-A1915.	1.3	249
154	Mesoscopic simulation of blob resonance in a model porous pathway. Microfluidics and Nanofluidics, 2015, 18, 215-232.	1.0	0
155	Mechano-Electrochemical Model for Acoustic Emission Characterization in Intercalation Electrodes. Journal of the Electrochemical Society, 2014, 161, F3123-F3136.	1.3	23
156	Mesoscale Elucidation of the Influence of Mixing Sequence in Electrode Processing. Langmuir, 2014, 30, 15102-15113.	1.6	44
157	Protocol for Biofilm Streamer Formation in a Microfluidic Device with Micro-pillars. Journal of Visualized Experiments, 2014, , .	0.2	9
158	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
159	Probing the influence of superhydrophobicity and mixed wettability on droplet displacement behavior. Microfluidics and Nanofluidics, 2014, 17, 657-674.	1.0	18
160	Probing the Thermal Implications in Mechanical Degradation of Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, A1058-A1070.	1.3	51
161	Diffusion Induced Damage and Impedance Response in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, A2138-A2152.	1.3	43
162	Microstructure Evolution in Lithium-Ion Battery Electrode Processing. Journal of the Electrochemical Society, 2014, 161, E3248-E3258.	1.3	56

#	Article	IF	Citations
163	Microscale confinement features can affect biofilm formation. Microfluidics and Nanofluidics, 2013, 14, 895-902.	1.0	42
164	Stochastic Analysis of Diffusion Induced Damage in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2013, 160, A955-A967.	1.3	73
165	Columnar order in jammed LiFePO4 cathodes: ion transport catastrophe and its mitigation. Physical Chemistry Chemical Physics, 2012, 14, 7040.	1.3	37
166	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
167	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
168	Mesoscopic modeling of two-phase behavior and flooding phenomena in polymer electrolyte fuel cells. Electrochimica Acta, 2009, 54, 6861-6875.	2.6	216
169	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
170	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
171	Optimization of polymer electrolyte fuel cell cathode catalyst layers via direct numerical simulation modeling. Electrochimica Acta, 2007, 52, 6367-6377.	2.6	62
172	Direct numerical simulation (DNS) modeling of PEFC electrodes. Electrochimica Acta, 2006, 51, 3139-3150.	2.6	82
173	Stochastic Microstructure Reconstruction and Direct Numerical Simulation of the PEFC Catalyst Layer. Journal of the Electrochemical Society, 2006, 153, A840.	1.3	128