

Partha P Mukherjee

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

167
papers

4,545
citations

38
h-index

59
g-index

183
ext. papers

5,774
ext. citations

7.4
avg, IF

6.54
L-index

#	Paper	IF	Citations
167	Plating energy as a universal descriptor to classify accelerated cell failure under operational extremes. <i>Cell Reports Physical Science</i> , 2022 , 3, 100720	6.1	4
166	Probing the Influence of Multiscale Heterogeneity on Effective Properties of Graphite Electrodes.. <i>ACS Applied Materials & Interfaces</i> , 2022 ,	9.5	0
165	Performance degradation modeling in silicon anodes 2022 , 299-329		
164	Dead Lithium or back from the Dead? <i>Joule</i> , 2022 , 6, 291-293	27.8	0
163	Advancements in extreme fast charging to foster sustainable electrification. <i>One Earth</i> , 2022 , 5, 216-219	8.1	1
162	Mesoscale Interrogation Reveals Mechanistic Origins of Lithium Filaments along Grain Boundaries in Inorganic Solid Electrolytes. <i>Advanced Energy Materials</i> , 2022 , 12, 2102825	21.8	8
161	Asphericity Can Cause Nonuniform Lithium Intercalation in Battery Active Particles. <i>ACS Energy Letters</i> , 2022 , 7, 1871-1879	20.1	2
160	Multiscale modeling of physicochemical interactions in lithium-sulfur battery electrodes 2022 , 123-158		1
159	Effect of crystallite geometries on electrochemical performance of porous intercalation electrodes by multiscale operando investigation. <i>Nature Materials</i> , 2021 ,	27	6
158	Mechanistic Insight into Lithium Electrodeposition in Porous Host Architectures. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 25369-25375	3.8	1
157	Effect of electrode crosstalk on heat release in lithium-ion batteries under thermal abuse scenarios. <i>Energy Storage Materials</i> , 2021 , 44, 326-326	19.4	5
156	Optical Microscopy Reveals the Ambient Sodium Sulfur Discharge Mechanism. <i>ACS Sustainable Chemistry and Engineering</i> , 2021 , 9, 92-100	8.3	2
155	Modulating Nanoinhomogeneity at Electrode Solid Electrolyte Interfaces for Dendrite-Proof Solid-State Batteries and Long-Life Memristors. <i>Advanced Energy Materials</i> , 2021 , 11, 2003811	21.8	18
154	Directionality of thermal gradients in lithium-ion batteries dictates diverging degradation modes. <i>Cell Reports Physical Science</i> , 2021 , 2, 100351	6.1	9
153	Solid-State Batteries: Modulating Nanoinhomogeneity at Electrode Solid Electrolyte Interfaces for Dendrite-Proof Solid-State Batteries and Long-Life Memristors (Adv. Energy Mater. 16/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170062	21.8	
152	Degradation-Safety Analytics in Lithium-Ion Cells and Modules Part II. Overcharge and External Short Circuit Scenarios. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 050535	3.9	2
151	From material properties to multiscale modeling to improve lithium-ion energy storage safety. <i>MRS Bulletin</i> , 2021 , 46, 402-409	3.2	1

150	Co-Electrodeposition Mechanism in Rechargeable Metal Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 2190-2197. 70.1	7
149	Quantifying Negative Effects of Carbon-Binder Networks from Electrochemical Performance of Porous Li-Ion Electrodes. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 070536	3.9 6
148	Mechanistic underpinnings of thermal gradient induced inhomogeneity in lithium plating. <i>Energy Storage Materials</i> , 2021 , 35, 500-511	19.4 15
147	Energetics Dictates Deposition at Metal/Solid Electrolyte Interfaces. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 2221-2229	3.8 2
146	Preventing lithium plating under extremes: an untold tale of two electrodes. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 17249-17260	13 5
145	Microstructure and Pressure-Driven Electrodeposition Stability in Solid-State Batteries. <i>Cell Reports Physical Science</i> , 2021 , 2, 100301	6.1 13
144	Linking void and interphase evolution to electrochemistry in solid-state batteries using operando X-ray tomography. <i>Nature Materials</i> , 2021 , 20, 503-510	27 75
143	Two-Phase Dynamics and Hysteresis in the PEM Fuel Cell Catalyst Layer with the Lattice-Boltzmann Method. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 024521	3.9 2
142	Quantifying the unknown impact of segmentation uncertainty on image-based simulations. <i>Nature Communications</i> , 2021 , 12, 5414	17.4 3
141	Quantifying Sodiation Kinetics in Alloying Tin Electrodes for Sodium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 090550	3.9
140	Synergistic voltage and electrolyte mediation improves sodiation kinetics in β -Sn alloy-anodes. <i>Energy Storage Materials</i> , 2021 , 43, 305-316	19.4 3
139	Simplified Pouch Cell Method for 3-Electrode Re-Testing of Harvested Double-Sided Electrodes From Commercial Lithium-Ion Batteries. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2021 , 18,	2 1
138	3μ -A Versatile Operando Analytics Toolbox in Energy Storage.. <i>ACS Omega</i> , 2021 , 6, 33284-33292	3.9 2
137	Mechanistic Analysis of Microstructural Attributes to Lithium Plating in Fast Charging. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 55795-55808	9.5 4
136	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition with Solid Electrolytes. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 082510	3.9 28
135	Double-Edged Effect of Temperature on Lithium Dendrites. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 23931-23938	9.5 30
134	Corrosion-Induced Microstructural Variability Affects Transport-Kinetics Interaction in PEM Fuel Cell Catalyst Layers. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 084519	3.9 6
133	Overcharge and Aging Analytics of Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 090547. 3.9	20

132	In Operando Detection of the Onset and Mapping of Lithium Plating Regimes during Fast Charging of Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 30438-30448	9.5	29
131	Anode potential controlled charging prevents lithium plating. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 13077-13085	13	25
130	In Operando XANES Imaging of High Capacity Intermetallic Anodes for Lithium Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 040523	3.9	3
129	Mesoscale Anatomy of Dead Lithium Formation. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 6502-6511	3.8	17
128	Decreasing the Ion Diffusion Pathways for the Intercalation of Multivalent Cations into One-Dimensional TiS Nanobelt Arrays. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 21788-21798	9.5	9
127	Stochasticity at Scales Leads to Lithium Intercalation Cascade. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 16359-16366	9.5	12
126	Overdischarge and Aging Analytics of Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 090558	3.8	16
125	Morphology-Safety Implications of Interfacial Evolution in Lithium Metal Anodes. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 16784-16795	3.8	7
124	Challenges in Lithium Metal Anodes for Solid-State Batteries. <i>ACS Energy Letters</i> , 2020 , 5, 922-934	20.1	171
123	Surface diffusion manifestation in electrodeposition of metal anodes. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 11286-11295	3.6	28
122	Mechano-Electrochemical Interaction in Solid-State Lithium Batteries. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 080513	3.9	5
121	Fingerprinting Redox Heterogeneity in Electrodes during Extreme Fast Charging. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 090542	3.9	37
120	Probing the Thermal Safety of Li Metal Batteries. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 120513	3.9	11
119	Degradation-Safety Analytics in Lithium-Ion Cells: Part I. Aging under Charge/Discharge Cycling. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 160510	3.9	10
118	Mapping mechanisms and growth regimes of magnesium electrodeposition at high current densities. <i>Materials Horizons</i> , 2020 , 7, 843-854	14.4	33
117	Mechanistics of Lithium-Metal Battery Performance by Separator Architecture Design. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 556-566	9.5	16
116	Tuning the Splitting Behavior of Droplet in a Bifurcating Channel through Wettability-Capillarity Interaction. <i>Langmuir</i> , 2020 , 36, 10471-10489	4	10
115	Synchrotron Imaging of Pore Formation in Li Metal Solid-State Batteries Aided by Machine Learning. <i>ACS Applied Energy Materials</i> , 2020 , 3, 9534-9542	6.1	38

114	Electroanalytical Quantification of Electrolyte Transport Resistance in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 080510	3.9	2
113	Fast Charging of Lithium-ion Batteries via Electrode Engineering. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 090508	3.9	25
112	In operando signature and quantification of lithium plating. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 20683-20695	13	32
111	Probing spatial coupling of resistive modes in porous intercalation electrodes through impedance spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 3805-3813	3.6	20
110	Mechanistic understanding of electrochemical plating and stripping of metal electrodes. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 4668-4688	13	18
109	In operando thermal signature probe for lithium-ion batteries. <i>Applied Physics Letters</i> , 2019 , 114, 023901	3.4	13
108	Non-dimensional analysis of the criticality of Li-ion battery thermal runaway behavior. <i>Journal of Hazardous Materials</i> , 2019 , 369, 268-278	12.8	40
107	In Operando Impedance Based Diagnostics of Electrode Kinetics in Li-Ion Pouch Cells. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A2131-A2141	3.9	22
106	Drying Temperature and Capillarity-Driven Crack Formation in Aqueous Processing of Li-Ion Battery Electrodes. <i>ACS Applied Energy Materials</i> , 2019 , 2, 4464-4476	6.1	15
105	Quantifying Transport, Geometrical, and Morphological Parameters in Li-Ion Cathode Phases Using X-ray Microtomography. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 19933-19942	9.5	10
104	Electrodeposition stability of metal electrodes. <i>Energy Storage Materials</i> , 2019 , 20, 1-6	19.4	38
103	Materials by Design: Tailored Morphology and Structures of Carbon Anodes for Enhanced Battery Safety. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 13334-13342	9.5	13
102	Perspective Mesoscale Physics in the Catalyst Layer of Proton Exchange Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2019 , 166, F3089-F3092	3.9	8
101	Non-equilibrium thermodynamics in electrochemical complexation of Li ₂ O ₂ on porous electrodes. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 8882-8888	13	10
100	Electrochemical-Reaction-Driven Interfacial Stress in a Solid-Solid Layered Architecture. <i>Physical Review Applied</i> , 2019 , 11,	4.3	7
99	Mesoscale Elucidation of Self-Discharge-Induced Performance Decay in Lithium-Sulfur Batteries. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 13326-13333	9.5	5
98	Chemical and mechanical degradation and mitigation strategies for Si anodes. <i>Journal of Power Sources</i> , 2019 , 419, 208-218	8.9	21
97	Mesoscale understanding of capillarity driven two-phase flow in a packed bed architecture. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 136, 116-127	4.9	4

96	Cationic shield mediated electrodeposition stability in metal electrodes. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 18442-18450	13	7
95	Controllable Electrode Stochasticity Self-Heats Lithium-Ion Batteries at Low Temperatures. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 26764-26769	9.5	10
94	Modeling Proton Exchange Membrane Fuel Cell Cathode Catalyst Layers with the Lattice-Boltzmann-Method Framework. <i>ECS Transactions</i> , 2019 , 92, 47-59	1	
93	Mechanistic Elucidation of Si Particle Morphology on Electrode Performance. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A3852-A3860	3.9	2
92	Thermo-Electrochemical Stability Analytics of Electrode Materials. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 30106-30120	3.8	9
91	Deconstructing electrode pore network to learn transport distortion. <i>Physics of Fluids</i> , 2019 , 31, 122005	4.4	9
90	Elucidating Lithium Alloying-Induced Degradation Evolution in High-Capacity Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 563-577	9.5	1
89	Formation of Magnesium Dendrites during Electrodeposition. <i>ACS Energy Letters</i> , 2019 , 4, 375-376	20.1	125
88	Mesoscale modeling in electrochemical devices: A critical perspective. <i>Progress in Energy and Combustion Science</i> , 2019 , 71, 118-142	33.6	47
87	Probing the influence of confinement and wettability on droplet displacement behavior: A mesoscale analysis. <i>European Journal of Mechanics, B/Fluids</i> , 2019 , 75, 327-338	2.4	3
86	Electrolyte Confinement Alters Lithium Electrodeposition. <i>ACS Energy Letters</i> , 2019 , 4, 156-162	20.1	46
85	Mesoscopic Modeling of Capillarity-Induced Two-Phase Transport in a Microfluidic Porous Structure. <i>Transport in Porous Media</i> , 2018 , 122, 673-691	3.1	1
84	Electrochemistry-Mechanics Coupling in Intercalation Electrodes. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A1064-A1083	3.9	19
83	Revealing reaction mechanisms of nanoconfined LiS: implications for lithium-sulfur batteries. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 11713-11721	3.6	18
82	Vortex generators for active thermal management in lithium-ion battery systems. <i>International Journal of Heat and Mass Transfer</i> , 2018 , 124, 800-815	4.9	24
81	Superhierarchical Nickel/Vanadia Nanocomposites for Lithium Storage. <i>ACS Applied Energy Materials</i> , 2018 , 1, 2056-2066	6.1	9
80	Secondary-Phase Stochastics in Lithium-Ion Battery Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 6317-6326	9.5	77
79	Mesoscale Physicochemical Interactions in Lithium/Sulfur Batteries: Progress and Perspective. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2018 , 15,	2	8

78	Electrochemistry Coupled Mesoscale Complexations in Electrodes Lead to Thermo-Electrochemical Extremes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 28644-28655	9.5	41
77	Electrolyte Transport Evolution Dynamics in Lithium Sulfur Batteries. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 18329-18335	3.8	17
76	Mesoscale Complexations in Lithium Electrodeposition. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 26320-26327	9.5	42
75	Mechano-Electrochemical Interaction and Degradation in Graphite Electrode with Surface Film. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A2397-A2408	3.9	11
74	Roadblocks in Cation Diffusion Pathways: Implications of Phase Boundaries for Li-Ion Diffusivity in an Intercalation Cathode Material. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 30901-30911	9.5	12
73	Mesoscale Understanding of Lithium Electrodeposition for Intercalation Electrodes. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 21097-21107	3.8	6
72	Elucidating Copper Dissolution Phenomenon in Li-Ion Cells under Overdischarge Extremes. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A1639-A1647	3.9	44
71	Resolving the Discrepancy in Tortuosity Factor Estimation for Li-Ion Battery Electrodes through Micro-Macro Modeling and Experiment. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A3403-A3426	3.9	85
70	Editors' Choice Mesoscale Analysis of Conductive Binder Domain Morphology in Lithium-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2018 , 165, E725-E736	3.9	58
69	Shuttle In Polysulfide Shuttle: Friend or Foe?. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 23845-23851	3.8	32
68	Mechanistic insight into dendrite SEI interactions for lithium metal electrodes. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 19664-19671	13	71
67	Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional channel. <i>Physics of Fluids</i> , 2018 , 30, 102102	4.4	14
66	Three-electrode Coin Cell Preparation and Electrodeposition Analytics for Lithium-ion Batteries. <i>Journal of Visualized Experiments</i> , 2018 ,	1.6	4
65	Mesoscale Analysis of the Electrolyte-Electrode Interface in All-Solid-State Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A1857-A1864	3.9	23
64	Mesoscale Elucidation of Surface Passivation in the Li-Sulfur Battery Cathode. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 5263-5271	9.5	39
63	Revealing Charge Transport Mechanisms in LiS for Li-Sulfur Batteries. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 1324-1330	6.4	51
62	Impedance Evolution Characteristics in Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A837-A847	3.9	34
61	Exploring the efficacy of nanofluids for lithium-ion battery thermal management. <i>International Journal of Heat and Mass Transfer</i> , 2017 , 112, 779-794	4.9	58

60	Mesoscale Evaluation of Titanium Silicide Monolayer as a Cathode Host Material in Lithium Sulfur Batteries. <i>Jom</i> , 2017 , 69, 1532-1536	2.1	5
59	Mechanistic Understanding of the Role of Evaporation in Electrode Processing. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A1616-A1627	3.9	58
58	Transport-Geometry Interactions in Li-Ion Cathode Materials Imaged Using X-ray Nanotomography. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A1412-A1424	3.9	20
57	Evaporation induced nanoparticle - binder interaction in electrode film formation. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 10051-10061	3.6	7
56	Precipitation Microstructure Interactions in the Li-Sulfur Battery Electrode. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 26256-26264	3.8	32
55	Probing Impedance and Microstructure Evolution in Lithium Sulfur Battery Electrodes. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 21206-21216	3.8	28
54	Probing the Role of Electrode Microstructure in the Lithium-Ion Battery Thermal Behavior. <i>Journal of the Electrochemical Society</i> , 2017 , 164, E3146-E3158	3.9	44
53	Hole Polaron Diffusion in the Final Discharge Product of Lithium Sulfur Batteries. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 17169-17175	3.8	14
52	Mesoscale Interplay in Lithium-Ion Batteries and Beyond. <i>Jom</i> , 2017 , 69, 1467-1468	2.1	
51	Hierarchical Structured Cu/Ni/TiO Nanocomposites as Electrodes for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 28695-28703	9.5	19
50	Mechanistic Analysis of Mechano-Electrochemical Interaction in Silicon Electrodes with Surface Film. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A3570-A3581	3.9	19
49	Mesoscale Elucidation of Solid Electrolyte Interphase Layer Formation in Li-Ion Battery Anode. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 26233-26240	3.8	28
48	Galvanostatic Intermittent Titration and Performance Based Analysis of LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ Cathode. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A3380-A3392	3.9	60
47	An overview of degradation phenomena modeling in lithium-ion battery electrodes. <i>Current Opinion in Chemical Engineering</i> , 2016 , 13, 82-90	5.4	16
46	Mechanistic Evaluation of Li _x O _y Formation on EMnO ₂ in Nonaqueous Li-Air Batteries. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 23028-36	9.5	37
45	Non-aqueous Electrode Processing and Construction of Lithium-ion Coin Cells. <i>Journal of Visualized Experiments</i> , 2016 , e53490	1.6	7
44	Scaling Relations for Intercalation Induced Damage in Electrodes. <i>Electrochimica Acta</i> , 2016 , 204, 31-49	6.7	15
43	Poromechanical effect in the lithium sulfur battery cathode. <i>Extreme Mechanics Letters</i> , 2016 , 9, 359-370	3.9	51

42	Towards Next Generation Lithium-Sulfur Batteries: Non-Conventional Carbon Compartments/Sulfur Electrodes and Multi-Scale Analysis. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A730-A741	3.9	33
41	Li ₂ S Film Formation on Lithium Anode Surface of Li-S batteries. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 4700-8	9.5	59
40	Modeling of Mesoscale Variability in Biofilm Shear Behavior. <i>PLoS ONE</i> , 2016 , 11, e0165593	3.7	10
39	Mechano-Electrochemical Stochastics in High-Capacity Electrodes for Energy Storage. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A1120-A1137	3.9	27
38	Stochastics of diffusion induced damage in intercalation materials. <i>Materials Research Express</i> , 2016 , 3, 104001	1.7	8
37	Mechano-Electrochemical Interaction Gives Rise to Strain Relaxation in Sn Electrodes. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A3022-A3035	3.9	32
36	Probing the Effect of High Energy Ball Milling on the Structure and Properties of LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ Cathodes for Li-Ion Batteries. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2016 , 13,	2	8
35	Analysis of Long-Range Interaction in Lithium-Ion Battery Electrodes. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2016 , 13,	2	37
34	Evaluation of Combined Active and Passive Thermal Management Strategies for Lithium-Ion Batteries. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2016 , 13,	2	18
33	Evaluating silicene as a potential cathode host to immobilize polysulfides in lithium sulfur batteries. <i>Journal of Coordination Chemistry</i> , 2016 , 69, 2090-2105	1.6	32
32	Adsorption of insoluble polysulfides Li ₂ S(x) (x = 1, 2) on Li ₂ S surfaces. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 9032-9	3.6	46
31	Reduced Order Modeling of Mechanical Degradation Induced Performance Decay in Lithium-Ion Battery Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A1751-A1771	3.9	32
30	Probing the morphological influence on solid electrolyte interphase and impedance response in intercalation electrodes. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 9812-27	3.6	38
29	Influence of Microstructure on Impedance Response in Intercalation Electrodes. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A1202-A1214	3.9	48
28	Mesoscale elucidation of laser-assisted chemical deposition of Sn nanostructured electrodes. <i>Journal of Applied Physics</i> , 2015 , 117, 214301	2.5	2
27	Characterization of Lithium-Ion Battery Thermal Abuse Behavior Using Experimental and Computational Analysis. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A2163-A2173	3.9	108
26	Experimental Analysis of Thermal Runaway and Propagation in Lithium-Ion Battery Modules. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A1905-A1915	3.9	170
25	Mesosopic simulation of blob resonance in a model porous pathway. <i>Microfluidics and Nanofluidics</i> , 2015 , 18, 215-232	2.8	

24	Wettability effects on contact line dynamics of droplet motion in an inclined channel. <i>Physical Review E</i> , 2015 , 91, 053006	2.4	14
23	Probing the influence of superhydrophobicity and mixed wettability on droplet displacement behavior. <i>Microfluidics and Nanofluidics</i> , 2014 , 17, 657-674	2.8	17
22	Probing the Thermal Implications in Mechanical Degradation of Lithium-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A1058-A1070	3.9	36
21	Diffusion Induced Damage and Impedance Response in Lithium-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A2138-A2152	3.9	39
20	Microstructure Evolution in Lithium-Ion Battery Electrode Processing. <i>Journal of the Electrochemical Society</i> , 2014 , 161, E3248-E3258	3.9	47
19	Mechano-Electrochemical Model for Acoustic Emission Characterization in Intercalation Electrodes. <i>Journal of the Electrochemical Society</i> , 2014 , 161, F3123-F3136	3.9	21
18	Mesoscale elucidation of the influence of mixing sequence in electrode processing. <i>Langmuir</i> , 2014 , 30, 15102-13	4	39
17	Protocol for biofilm streamer formation in a microfluidic device with micro-pillars. <i>Journal of Visualized Experiments</i> , 2014 ,	1.6	8
16	Simulation of effect of interfacial lithium flux on miscibility gap in non-equilibrium phase transformation of LiFePO ₄ particles. <i>Journal of Power Sources</i> , 2014 , 245, 83-88	8.9	8
15	Microscale confinement features can affect biofilm formation. <i>Microfluidics and Nanofluidics</i> , 2013 , 14, 895-902	2.8	36
14	Stochastic Analysis of Diffusion Induced Damage in Lithium-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A955-A967	3.9	60
13	Columnar order in jammed LiFePO ₄ cathodes: ion transport catastrophe and its mitigation. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 7040-50	3.6	36
12	Pore-scale modeling of two-phase transport in polymer electrolyte fuel cells—Progress and perspective. <i>Energy and Environmental Science</i> , 2011 , 4, 346-369	35.4	149
11	Nonequilibrium Phase Transformation and Particle Shape Effect in LiFePO ₄ Materials for Li-Ion Batteries. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, A143		16
10	Mesosopic modeling of two-phase behavior and flooding phenomena in polymer electrolyte fuel cells. <i>Electrochimica Acta</i> , 2009 , 54, 6861-6875	6.7	186
9	Optimization of polymer electrolyte fuel cell cathode catalyst layers via direct numerical simulation modeling. <i>Electrochimica Acta</i> , 2007 , 52, 6367-6377	6.7	54
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4	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition in Solid Electrolytes		2
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