Jang Wook Choi

List of Publications by Year
in descending order

248 papers	38,882 citations	3333 91 h-index	2680 193 g-index
257 all docs	257 docs citations	257 times ranked	32982 citing authors

#	Article	IF	Citations
1	Promise and reality of post-lithium-ion batteries with high energy densities. Nature Reviews Materials, 2016, 1, .	23.3	3,562
2	Stable cycling of double-walled silicon nanotube battery anodes through solidâ€“electrolyte interphase control. Nature Nanotechnology, 2012, 7, 310-315.	15.6	2,144
3	Nitrogen-Doped Graphene for High-Performance Ultracapacitors and the Importance of Nitrogen-Doped Sites at Basal Planes. Nano Letters, 2011, 11, 2472-2477.	4.5	1,547
4	Stretchable, Porous, and Conductive Energy Textiles. Nano Letters, 2010, 10, 708-714.	4.5	1,415
5	3D Macroporous Graphene Frameworks for Supercapacitors with High Energy and Power Densities. ACS Nano, 2012, 6, 4020-4028.	7.3	1,186
6	A 160-kilobit molecular electronic memory patterned at 1011 bits per square centimetre. Nature, 2007, 445, 414-417.	13.7	1,176
7	Highly conductive paper for energy-storage devices. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21490-21494.	3.3	1,138
8	Highly elastic binders integrating polyrotaxanes for silicon microparticle anodes in lithium ion batteries. Science, 2017, 357, 279-283.	6.0	943
9	Musselâ€Inspired Polydopamineâ€Treated Polyethylene Separators for Highâ€Power Liâ€Ion Batteries. Advanced Materials, 2011, 23, 3066-3070.	11.1	635
10	Electrospun Coreâ€“Shell Fibers for Robust Silicon Nanoparticle-Based Lithium Ion Battery Anodes. Nano Letters, 2012, 12, 802-807.	4.5	587
11	Musselâ€Inspired Adhesive Binders for Highâ€Performance Silicon Nanoparticle Anodes in Lithiumâ€Ion Batteries. Advanced Materials, 2013, 25, 1571-1576.	11.1	532
12	Light-Weight Free-Standing Carbon Nanotube-Silicon Films for Anodes of Lithium Ion Batteries. ACS Nano, 2010, 4, 3671-3678.	7.3	507
13	Bendable Inorganic Thin-Film Battery for Fully Flexible Electronic Systems. Nano Letters, 2012, 12, 4810-4816.	4.5	494
14	Nitrogen-Doped Multiwall Carbon Nanotubes for Lithium Storage with Extremely High Capacity. Nano Letters, 2012, 12, 2283-2288.	4.5	468
15	Silicon carbide-free graphene growth on silicon for lithium-ion battery with high volumetric energy density. Nature Communications, 2015, 6, 7393.	5.8	449
16	Effective Liquid-Phase Exfoliation and Sodium Ion Battery Application of MoS₂ Nanosheets. ACS Applied Materials & Interfaces, 2014, 6, 7084-7089.	4.0	443
17	Aqueous zinc ion batteries: focus on zinc metal anodes. Chemical Science, 2020, 11, 2028-2044.	3.7	440
18	Defined spatial structure stabilizes a synthetic multispecies bacterial community. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18188-18193.	3.3	426

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19	Excellent Cycle Life of Lithiumâ€Metal Anodes in Lithiumâ€Ion Batteries with Musselâ€Inspired Polydopamineâ€Coated Separators. Advanced Energy Materials, 2012, 2, 645-650.	10.2	410
20	Wearable Textile Battery Rechargeable by Solar Energy. Nano Letters, 2013, 13, 5753-5761.	4.5	400
21	The High Performance of Crystal Water Containing Manganese Birnessite Cathodes for Magnesium Batteries. Nano Letters, 2015, 15, 4071-4079.	4.5	400
22	One-Dimensional Carbonâ€“Sulfur Composite Fibers for Naâ€“S Rechargeable Batteries Operating at Room Temperature. Nano Letters, 2013, 13, 4532-4538.	4.5	387
23	Controlled Prelithiation of Silicon Monoxide for High Performance Lithium-Ion Rechargeable Full Cells. Nano Letters, 2016, 16, 282-288.	4.5	386
24	Restacking-Inhibited 3D Reduced Graphene Oxide for High Performance Supercapacitor Electrodes. ACS Nano, 2013, 7, 9366-9374.	7.3	384
25	Anomalous Shape Changes of Silicon Nanopillars by Electrochemical Lithiation. Nano Letters, 2011, 11, 3034-3039.	4.5	364
26	Al Doping for Mitigating the Capacity Fading and Voltage Decay of Layered Li and Mnâ€Rich Cathodes for Liâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1502398.	10.2	360
27	Size-dependent fracture of Si nanowire battery anodes. Journal of the Mechanics and Physics of Solids, 2011, 59, 1717-1730.	2.3	355
28	The emerging era of supramolecular polymeric binders in silicon anodes. Chemical Society Reviews, 2018, 47, 2145-2164.	18.7	341
29	Encapsulated Monoclinic Sulfur for Stable Cycling of Liâ€“S Rechargeable Batteries. Advanced Materials, 2013, 25, 6547-6553.	11.1	330
30	Electrochemical and Thermal Properties of NASICON Structured Na₃V₂(PO₄)₃as a Sodium Rechargeable Battery Cathode: A Combined Experimental and Theoretical Study. Journal of the Electrochemical Society, 2012, 159, A1393-A1397.	1.3	316
31	Na₂FeP₂O₇ as a Promising Ironâ€Based Pyrophosphate Cathode for Sodium Rechargeable Batteries: A Combined Experimental and Theoretical Study. Advanced Functional Materials, 2013, 23, 1147-1155.	7.8	316
32	Tungsten Disulfide Catalysts Supported on a Carbon Cloth Interlayer for High Performance Liâ€“S Battery. Advanced Energy Materials, 2017, 7, 1602567.	10.2	309
33	Elementalâ€Sulfurâ€Mediated Facile Synthesis of a Covalent Triazine Framework for Highâ€Performance Lithiumâ€“Sulfur Batteries. Angewandte Chemie - International Edition, 2016, 55, 3106-3111.	7.2	308
34	Novel Size and Surface Oxide Effects in Silicon Nanowires as Lithium Battery Anodes. Nano Letters, 2011, 11, 4018-4025.	4.5	284
35	Rechargeable aluminium organic batteries. Nature Energy, 2019, 4, 51-59.	19.8	283
36	Hyperbranched Î²-Cyclodextrin Polymer as an Effective Multidimensional Binder for Silicon Anodes in Lithium Rechargeable Batteries. Nano Letters, 2014, 14, 864-870.	4.5	277

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37	A Truncated Manganese Spinel Cathode for Excellent Power and Lifetime in Lithium-Ion Batteries. Nano Letters, 2012, 12, 6358-6365.	4.5	272
38	Crystal water for high performance layered manganese oxide cathodes in aqueous rechargeable zinc batteries. Energy and Environmental Science, 2019, 12, 1999-2009.	15.6	269
39	Recycling rice husks for high-capacity lithium battery anodes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12229-12234.	3.3	256
40	Hydrated Intercalation for Highâ€Performance Aqueous Zinc Ion Batteries. Advanced Energy Materials, 2019, 9, 1900083.	10.2	243
41	Spray Drying Method for Large-Scale and High-Performance Silicon Negative Electrodes in Li-Ion Batteries. Nano Letters, 2013, 13, 2092-2097.	4.5	237
42	Hierarchical Porous Carbon by Ultrasonic Spray Pyrolysis Yields Stable Cycling in Lithiumâ€“Sulfur Battery. Nano Letters, 2014, 14, 4418-4425.	4.5	234
43	Stepwise Nanopore Evolution in One-Dimensional Nanostructures. Nano Letters, 2010, 10, 1409-1413.	4.5	229
44	Millipede-inspired structural design principle for high performance polysaccharide binders in silicon anodes. Energy and Environmental Science, 2015, 8, 1224-1230.	15.6	222
45	Ground-State Equilibrium Thermodynamics and Switching Kinetics of Bistable [2]Rotaxanes Switched in Solution, Polymer Gels, and Molecular Electronic Devices. Chemistry - A European Journal, 2006, 12, 261-279.	1.7	216
46	Deep eutectic solvents as attractive media for CO₂ capture. Green Chemistry, 2016, 18, 2834-2842.	4.6	209
47	A Lithiumâ€Sulfur Battery with a High Areal Energy Density. Advanced Functional Materials, 2014, 24, 5359-5367.	7.8	206
48	Structures and Properties of Self-Assembled Monolayers of Bistable [2]Rotaxanes on Au (111) Surfaces from Molecular Dynamics Simulations Validated with Experiment. Journal of the American Chemical Society, 2005, 127, 1563-1575.	6.6	202
49	Sodium zinc hexacyanoferrate with a well-defined open framework as a positive electrode for sodium ion batteries. Chemical Communications, 2012, 48, 8416.	2.2	186
50	Mussel- and Diatom-Inspired Silica Coating on Separators Yields Improved Power and Safety in Li-Ion Batteries. Chemistry of Materials, 2012, 24, 3481-3485.	3.2	185
51	Controlled Lithium Dendrite Growth by a Synergistic Effect of Multilayered Graphene Coating and an Electrolyte Additive. Chemistry of Materials, 2015, 27, 2780-2787.	3.2	177
52	Critical Role of Crystal Water for a Layered Cathode Material in Sodium Ion Batteries. Chemistry of Materials, 2015, 27, 3721-3725.	3.2	174
53	Effective Polysulfide Rejection by Dipoleâ€Aligned BaTiO₃ Coated Separator in Lithiumâ€“Sulfur Batteries. Advanced Functional Materials, 2016, 26, 7817-7823.	7.8	170
54	Dynamic Cross-Linking of Polymeric Binders Based on Hostâ€“Guest Interactions for Silicon Anodes in Lithium Ion Batteries. ACS Nano, 2015, 9, 11317-11324.	7.3	167

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55	Anomalous Manganese Activation of a Pyrophosphate Cathode in Sodium Ion Batteries: A Combined Experimental and Theoretical Study. Journal of the American Chemical Society, 2013, 135, 2787-2792.	6.6	165
56	Flexible Few-Layered Graphene for the Ultrafast Rechargeable Aluminum-Ion Battery. Journal of Physical Chemistry C, 2016, 120, 13384-13389.	1.5	164
57	Extremely stable cycling of ultra-thin V2O5 nanowireâ€“graphene electrodes for lithium rechargeable battery cathodes. Energy and Environmental Science, 2012, 5, 9889.	15.6	159
58	A Radically Configurable Six-State Compound. Science, 2013, 339, 429-433.	6.0	158
59	Perfluoroarylâ€Elemental Sulfur S_NAr Chemistry in Covalent Triazine Frameworks with High Sulfur Contents for Lithiumâ€“Sulfur Batteries. Advanced Functional Materials, 2017, 27, 1703947.	7.8	158
60	Delicate Structural Control of Siâ€“SiO_xâ€“C Composite via High-Speed Spray Pyrolysis for Li-Ion Battery Anodes. Nano Letters, 2017, 17, 1870-1876.	4.5	156
61	Systematic Molecularâ€Level Design of Binders Incorporating Meldrum's Acid for Silicon Anodes in Lithium Rechargeable Batteries. Advanced Materials, 2014, 26, 7979-7985.	11.1	155
62	A stable lithium-rich surface structure for lithium-rich layered cathode materials. Nature Communications, 2016, 7, 13598.	5.8	153
63	Graphene balls for lithium rechargeable batteries with fast charging and high volumetric energy densities. Nature Communications, 2017, 8, 1561.	5.8	151
64	Co-polyimide-coated polyethylene separators for enhanced thermal stability of lithium ion batteries. Electrochimica Acta, 2012, 85, 524-530.	2.6	148
65	Fluorinated ether electrolyte with controlled solvation structure for high voltage lithium metal batteries. Nature Communications, 2022, 13, 2575.	5.8	147
66	N-doped graphitic self-encapsulation for high performance silicon anodes in lithium-ion batteries. Energy and Environmental Science, 2014, 7, 621-626.	15.6	137
67	The Synergistic Effect of Cation and Anion of an Ionic Liquid Additive for Lithium Metal Anodes. Advanced Energy Materials, 2018, 8, 1702744.	10.2	137
68	Role of intermediate phase for stable cycling of Na ₇ V ₄ (P ₂ O) Tj ETQq0 0 0 rgBT /Overlock 10 Academy of Sciences of the United States of America, 2014, 111, 599-604.	3.3	136
69	A new strategy for integrating abundant oxygen functional groups into carbon felt electrode for vanadium redox flow batteries. Scientific Reports, 2014, 4, 6906.	1.6	136
70	Improved reversibility in lithium-oxygen battery: Understanding elementary reactions and surface charge engineering of metal alloy catalyst. Scientific Reports, 2014, 4, 4225.	1.6	133
71	Combined CO₂-philicity and Ordered Mesoporosity for Highly Selective CO₂ Capture at High Temperatures. Journal of the American Chemical Society, 2015, 137, 7210-7216.	6.6	130
72	Fluorinated Aromatic Diluent for Highâ€Performance Lithium Metal Batteries. Angewandte Chemie - International Edition, 2020, 59, 14869-14876.	7.2	130

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73	Ordered Mesoporous Titanium Nitride as a Promising Carbon-Free Cathode for Aprotic Lithium-Oxygen Batteries. ACS Nano, 2017, 11, 1736-1746.	7.3	128
74	Atom-Level Understanding of the Sodiation Process in Silicon Anode Material. Journal of Physical Chemistry Letters, 2014, 5, 1283-1288.	2.1	127
75	The Importance of Confined Sulfur Nanodomains and Adjoining Electron Conductive Pathways in Subreaction Regimes of Liâ€S Batteries. Advanced Energy Materials, 2017, 7, 1700074.	10.2	127
76	Corrosion as the origin of limited lifetime of vanadium oxide-based aqueous zinc ion batteries. Nature Communications, 2022, 13, 2371.	5.8	126
77	Carbon nanofiber supercapacitors with large areal capacitances. Applied Physics Letters, 2009, 95, .	1.5	123
78	A Moistureâ€and Oxygenâ€Impermeable Separator for Aprotic Liâ€O₂ Batteries. Advanced Functional Materials, 2016, 26, 1747-1756.	7.8	122
79	Selection of Binder and Solvent for Solution-Processed All-Solid-State Battery. Journal of the Electrochemical Society, 2017, 164, A2075-A2081.	1.3	122
80	Recent Progress on Spray Pyrolysis for High Performance Electrode Materials in Lithium and Sodium Rechargeable Batteries. Advanced Energy Materials, 2017, 7, 1601578.	10.2	120
81	Battery Electrode Materials with Omnivalent Cation Storage for Fast and Chargeâ€Efficient Ion Removal of Asymmetric Capacitive Deionization. Advanced Functional Materials, 2018, 28, 1802665.	7.8	117
82	Anisotropic Volume Expansion of Crystalline Silicon during Electrochemical Lithium Insertion: An Atomic Level Rationale. Nano Letters, 2012, 12, 5342-5347.	4.5	116
83	Functionalized Graphene for High Performance Lithium Ion Capacitors. ChemSusChem, 2012, 5, 2328-2333.	3.6	115
84	Recent Progress in High Donor Electrolytes for Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2020, 10, 2001456.	10.2	112
85	Rational Sulfur Cathode Design for Lithiumâ€“Sulfur Batteries: Sulfur-Embedded Benzoxazine Polymers. ACS Energy Letters, 2016, 1, 566-572.	8.8	107
86	Enhanced Durability of Polymer Electrolyte Membrane Fuel Cells by Functionalized 2D Boron Nitride Nanoflakes. ACS Applied Materials & Interfaces, 2014, 6, 7751-7758.	4.0	106
87	An Aqueous Sodium Ion Hybrid Battery Incorporating an Organic Compound and a Prussian Blue Derivative. Advanced Energy Materials, 2014, 4, 1400133.	10.2	106
88	Anisotropic Lithiation Onset in Silicon Nanoparticle Anode Revealed by in Situ Graphene Liquid Cell Electron Microscopy. ACS Nano, 2014, 8, 7478-7485.	7.3	103
89	Molecular Dynamics Simulation of Amphiphilic Bistable [2]Rotaxane Langmuir Monolayers at the Air/Water Interface. Journal of the American Chemical Society, 2005, 127, 14804-14816.	6.6	102
90	Mussel-Inspired Self-Healing Metallopolymers for Silicon Nanoparticle Anodes. ACS Nano, 2019, 13, 8364-8373.	7.3	101

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91	Sprayable Ultrafast Polydopamine Surface Modifications. Advanced Materials Interfaces, 2016, 3, 1500857.	1.9	99
92	Issues and Advances in Scaling up Sulfide-Based All-Solid-State Batteries. Accounts of Chemical Research, 2021, 54, 3390-3402.	7.6	97
93	Elementalâ€Sulfurâ€Mediated Facile Synthesis of a Covalent Triazine Framework for Highâ€Performance Lithiumâ€“Sulfur Batteries. Angewandte Chemie, 2016, 128, 3158-3163.	1.6	96
94	A â€œStickyâ€•Mucinâ€Inspired DNAâ€Polysaccharide Binder for Silicon and Siliconâ€“Graphite Blended Anodes in Lithiumâ€Ion Batteries. Advanced Materials, 2018, 30, e1707594.	11.1	96
95	New High Donor Electrolyte for Lithiumâ€“Sulfur Batteries. Advanced Materials, 2020, 32, e2005022.	11.1	95
96	Highly Reversible, Grainâ€Directed Zinc Deposition in Aqueous Zinc Ion Batteries. Advanced Energy Materials, 2021, 11, 2100676.	10.2	95
97	Scalable Fracture-free SiOC Glass Coating for Robust Silicon Nanoparticle Anodes in Lithium Secondary Batteries. Nano Letters, 2014, 14, 7120-7125.	4.5	94
98	Chemical Blowing Approach for Ultramicroporous Carbon Nitride Frameworks and Their Applications in Gas and Energy Storage. Advanced Functional Materials, 2017, 27, 1604658.	7.8	92
99	Opportunities and Reality of Aqueous Rechargeable Batteries. Advanced Energy Materials, 2020, 10, 2001386.	10.2	92
100	Sodium Ion Diffusion in Al₂O₃: A Distinct Perspective Compared with Lithium Ion Diffusion. Nano Letters, 2014, 14, 6559-6563.	4.5	91
101	Exfoliated 2D Lepidocrocite Titanium Oxide Nanosheets for High Sulfur Content Cathodes with Highly Stable Liâ€“S Battery Performance. ACS Energy Letters, 2018, 3, 412-419.	8.8	90
102	Fast and Scalable Printing of Large Area Monolayer Nanoparticles for Nanotexturing Applications. Nano Letters, 2010, 10, 2989-2994.	4.5	87
103	Direct Observation of an Anomalous Spinelâ€toâ€Layered Phase Transition Mediated by Crystal Water Intercalation. Angewandte Chemie - International Edition, 2015, 54, 15094-15099.	7.2	86
104	Mixed Transition Metal Oxide with Vacancy-Induced Lattice Distortion for Enhanced Catalytic Activity of Oxygen Evolution Reaction. ACS Catalysis, 2019, 9, 7099-7108.	5.5	85
105	Nitrogen-doped carbon coating for a high-performance SiO anode in lithium-ion batteries. Electrochemistry Communications, 2013, 34, 98-101.	2.3	84
106	Mussel-Inspired Coating and Adhesion for Rechargeable Batteries: A Review. ACS Applied Materials & Interfaces, 2018, 10, 7562-7573.	4.0	84
107	Tetradiketone macrocycle for divalent aluminium ion batteries. Nature Communications, 2021, 12, 2386.	5.8	84
108	Important Role of Functional Groups for Sodium Ion Intercalation in Expanded Graphite. Chemistry of Materials, 2015, 27, 5402-5406.	3.2	79

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109	A Half Millimeter Thick Coplanar Flexible Battery with Wireless Recharging Capability. Nano Letters, 2015, 15, 2350-2357.	4.5	78
110	A Pyreneâ€“Poly(acrylic acid)â€“Polyrotaxane Supramolecular Binder Network for Highâ€Performance Silicon Negative Electrodes. Advanced Materials, 2019, 31, e1905048.	11.1	77
111	Effect of N-substitution in naphthalenediimides on the electrochemical performance of organic rechargeable batteries. RSC Advances, 2012, 2, 7968.	1.7	76
112	Effect of polydopamine surface coating on polyethylene separators as a function of their porosity for high-power Li-ion batteries. Electrochimica Acta, 2013, 113, 433-438.	2.6	76
113	Defectâ€Controlled Formation of Triclinic Na₂CoP₂O₇ for 4â€…V Sodiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2016, 55, 6662-6666.	7.2	76
114	An Electrochemical Cell for Selective Lithium Capture from Seawater. Environmental Science & Technology, 2015, 49, 9415-9422.	4.6	74
115	Silicon@porous nitrogen-doped carbon spheres through a bottom-up approach are highly robust lithium-ion battery anodes. RSC Advances, 2012, 2, 4311.	1.7	73
116	Lithiumâ€Salt Mediated Synthesis of a Covalent Triazine Framework for Highly Stable Lithium Metal Batteries. Angewandte Chemie - International Edition, 2019, 58, 16795-16799.	7.2	72
117	A gel polymer electrolyte based on initiator-free photopolymerization for lithium secondary batteries. Electrochimica Acta, 2012, 60, 23-30.	2.6	71
118	Electrochemical Synthesis of Ammonia from Water and Nitrogen: A Lithiumâ€Mediated Approach Using Lithiumâ€Ion Conducting Glass Ceramics. ChemSusChem, 2018, 11, 120-124.	3.6	71
119	Highly Elastic Binder for Improved Cyclability of Nickelâ€Rich Layered Cathode Materials in Lithiumâ€Ion Batteries. Advanced Energy Materials, 2020, 10, 2001069.	10.2	71
120	Inorganic Glue Enabling High Performance of Silicon Particles as Lithium Ion Battery Anode. Journal of the Electrochemical Society, 2011, 158, A592.	1.3	68
121	Effects of lithium salts on thermal stabilities of lithium alkyl carbonates in SEI layer. Electrochimica Acta, 2012, 83, 259-263.	2.6	68
122	Highly Elastic Polyrotaxane Binders for Mechanically Stable Lithium Hosts in Lithiumâ€Metal Batteries. Advanced Materials, 2019, 31, e1901645.	11.1	68
123	Improved cycle lives of LiMn2O4 cathodes in lithium ion batteries by an alginate biopolymer from seaweed. Journal of Materials Chemistry A, 2013, 1, 15224.	5.2	67
124	5L-Scale Magnesio-Milling Reduction of Nanostructured SiO₂ for High Capacity Silicon Anodes in Lithium-Ion Batteries. Nano Letters, 2016, 16, 7261-7269.	4.5	67
125	N-(triphenylphosphoranylidene) aniline as a novel electrolyte additive for high voltage LiCoO2 operations in lithium ion batteries. Electrochimica Acta, 2011, 56, 5195-5200.	2.6	66
126	Fluorinated Covalent Organic Polymers for High Performance Sulfur Cathodes in Lithiumâ€“Sulfur Batteries. Chemistry of Materials, 2019, 31, 7910-7921.	3.2	66

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127	Prospect for Supramolecular Chemistry in High-Energy-Density Rechargeable Batteries. Joule, 2019, 3, 662-682.	11.7	66
128	Wisdom from the Human Eye: A Synthetic Melanin Radical Scavenger for Improved Cycle Life of Liâ€“O₂ Battery. Chemistry of Materials, 2014, 26, 4757-4764.	3.2	65
129	Intercalated Water and Organic Molecules for Electrode Materials of Rechargeable Batteries. Advanced Materials, 2018, 30, e1705851.	11.1	64
130	Spiers Memorial Lecture : Molecular mechanics and molecular electronics. Faraday Discussions, 2006, 131, 9-22.	1.6	63
131	Thiolâ€“Ene Click Reaction for Fine Polarity Tuning of Polymeric Binders in Solution-Processed All-Solid-State Batteries. ACS Energy Letters, 2019, 4, 94-101.	8.8	62
132	Self-Terminated Artificial SEI Layer for Nickel-Rich Layered Cathode Material via Mixed Gas Chemical Vapor Deposition. Chemistry of Materials, 2015, 27, 7370-7379.	3.2	61
133	Metal current collector-free freestanding siliconâ€“carbon 1D nanocomposites for ultralight anodes in lithium ion batteries. Journal of Power Sources, 2010, 195, 8311-8316.	4.0	60
134	Stabilized Octahedral Frameworks in Layered Double Hydroxides by Solidâ€Solution Mixing of Transition Metals. Advanced Functional Materials, 2017, 27, 1605225.	7.8	58
135	Ionic Liquid Functionalized Gel Polymer Electrolytes for Stable Lithium Metal Batteries. Angewandte Chemie - International Edition, 2021, 60, 22791-22796.	7.2	58
136	On the Mechanism of Crystal Water Insertion during Anomalous Spinel-to-Birnessite Phase Transition. Chemistry of Materials, 2016, 28, 5488-5494.	3.2	55
137	Covalent Triazine Frameworks Incorporating Charged Polypyrrole Channels for High-Performance Lithiumâ€“Sulfur Batteries. Chemistry of Materials, 2020, 32, 4185-4193.	3.2	55
138	Switching between Local and Global Aromaticity in a Conjugated Macrocycle for Highâ€Performance Organic Sodiumâ€Ion Battery Anodes. Angewandte Chemie - International Edition, 2020, 59, 12958-12964.	7.2	52
139	Integrated Ringâ€Chain Design of a New Fluorinated Ether Solvent for Highâ€Voltage Lithiumâ€Metal Batteries. Angewandte Chemie - International Edition, 2022, 61, e202115884.	7.2	50
140	Fast Nonlinear Ion Transport via Field-Induced Hydrodynamic Slip in Sub-20-nm Hydrophilic Nanofluidic Transistors. Nano Letters, 2009, 9, 1315-1319.	4.5	48
141	Mechanism of Co3O4/graphene catalytic activity in Liâ€“O2 batteries using carbonate based electrolytes. Electrochimica Acta, 2013, 90, 63-70.	2.6	48
142	Large area multi-stacked lithium-ion batteries for flexible and rollable applications. Journal of Materials Chemistry A, 2014, 2, 10862-10868.	5.2	48
143	Tuning the Electron Density of Aromatic Solvent for Stable Solidâ€Electrolyteâ€Interphase Layer in Carbonateâ€Based Lithium Metal Batteries. Advanced Energy Materials, 2018, 8, 1802365.	10.2	48
144	Marginal Magnesium Doping for Highâ€Performance Lithium Metal Batteries. Advanced Energy Materials, 2019, 9, 1902278.	10.2	47

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145	Designing Adaptive Binders for Microenvironment Settings of Silicon Anode Particles. Advanced Materials, 2021, 33, e2007460.	11.1	46
146	Tris(pentafluorophenyl) borane as an electrolyte additive for high performance silicon thin film electrodes in lithium ion batteries. Electrochimica Acta, 2011, 56, 8997-9003.	2.6	45
147	Poreless Separator and Electrolyte Additive for Lithiumâ€“Sulfur Batteries with High Areal Energy Densities. ChemNanoMat, 2015, 1, 240-245.	1.5	45
148	Lattice Water for the Enhanced Performance of Amorphous Iron Phosphate in Sodium-Ion Batteries. ACS Energy Letters, 2017, 2, 998-1004.	8.8	45
149	Monodispersed PtCo nanoparticles on hexadecyltrimethylammonium bromide treated graphene as an effective oxygen reduction reaction catalyst for proton exchange membrane fuel cells. Carbon, 2012, 50, 3739-3747.	5.4	43
150	Robust Cycling of Liâ€“O₂ Batteries through the Synergistic Effect of Blended Electrolytes. ChemSusChem, 2013, 6, 443-448.	3.6	43
151	Mussel-Inspired Polydopamine Coating for Enhanced Thermal Stability and Rate Performance of Graphite Anodes in Li-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 13973-13981.	4.0	43
152	In Situ Deprotection of Polymeric Binders for Solutionâ€Processible Sulfideâ€Based Allâ€Solidâ€State Batteries. Advanced Materials, 2020, 32, e2001702.	11.1	43
153	Initiated Chemical Vapor Deposition (iCVD) of Highly Cross-Linked Polymer Films for Advanced Lithium-Ion Battery Separators. ACS Applied Materials & Interfaces, 2015, 7, 18849-18855.	4.0	40
154	Nanoscale Zirconium-Abundant Surface Layers on Lithium- and Manganese-Rich Layered Oxides for High-Rate Lithium-Ion Batteries. Nano Letters, 2017, 17, 7869-7877.	4.5	40
155	Stable Solid Electrolyte Interphase Formation Induced by Monoquat-Based Anchoring in Lithium Metal Batteries. ACS Energy Letters, 2021, 6, 1711-1718.	8.8	40
156	Site-Specific Transition Metal Occupation in Multicomponent Pyrophosphate for Improved Electrochemical and Thermal Properties in Lithium Battery Cathodes: A Combined Experimental and Theoretical Study. Journal of the American Chemical Society, 2012, 134, 11740-11748.	6.6	37
157	Modified graphite and graphene electrodes for high-performance lithium ion hybrid capacitors. Materials for Renewable and Sustainable Energy, 2014, 3, 1.	1.5	37
158	Energy-efficient hybrid FCDI-NF desalination process with tunable salt rejection and high water recovery. Journal of Membrane Science, 2017, 541, 580-586.	4.1	37
159	Role of Ordered Ni Atoms in Li Layers for Liâ€Rich Layered Cathode Materials. Advanced Functional Materials, 2017, 27, 1700982.	7.8	36
160	Anomalous Stretchable Conductivity Using an Engineered Tricot Weave. ACS Nano, 2015, 9, 12214-12223.	7.3	35
161	Pyrazine-Linked 2D Covalent Organic Frameworks as Coating Material for High-Nickel Layered Oxide Cathodes in Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 10597-10606.	4.0	35
162	Electrospun Li-confinable hollow carbon fibers for highly stable Li-metal batteries. Chemical Engineering Journal, 2021, 422, 130017.	6.6	33

#	Article	IF	Citations
163	A bifunctional approach for the preparation of graphene and ionic liquid-based hybrid gels. Journal of Materials Chemistry A, 2013, 1, 43-48.	5.2	32
164	Directional Change of Interfacial Electric Field by Carbon Insertion in Heterojunction System TiO₂/WO₃. ACS Applied Materials & Interfaces, 2020, 12, 15239-15245.	4.0	32
165	Photochemically driven solid electrolyte interphase for extremely fast-charging lithium-ion batteries. Nature Communications, 2021, 12, 6807.	5.8	32
166	Hostâ€“Guest Interlocked Complex Binder for Siliconâ€“Graphite Composite Electrodes in Lithium Ion Batteries. Advanced Energy Materials, 2022, 12, .	10.2	32
167	Origin of unusual spinel-to-layered phase transformation by crystal water. Chemical Science, 2018, 9, 433-438.	3.7	31
168	Atomicâ€Scale Observation of LiFePO₄ and LiCoO₂ Dissolution Behavior in Aqueous Solutions. Advanced Functional Materials, 2018, 28, 1804564.	7.8	31
169	High-performance bifunctional electrocatalyst for iron-chromium redox flow batteries. Chemical Engineering Journal, 2021, 421, 127855.	6.6	31
170	Icephobic Coating through a Self-Formed Superhydrophobic Surface Using a Polymer and Microsized Particles. ACS Applied Materials & Interfaces, 2022, 14, 3334-3343.	4.0	31
171	Mechanochemical synthesis and electrochemical behavior of Na3FeF6 in sodium and lithium batteries. Solid State Ionics, 2012, 218, 35-40.	1.3	30
172	Zn²⁺â€“Imidazole Coordination Crosslinks for Elastic Polymeric Binders in Highâ€Capacity Silicon Electrodes. Advanced Science, 2021, 8, 2004290.	5.6	30
173	Cobalt(II)â€Centered Fluorinated Phthalocyanineâ€Sulfur S_NAr Chemistry for Robust Lithiumâ€“Sulfur Batteries with Superior Conversion Kinetics. Advanced Functional Materials, 2021, 31, 2106679.	7.8	28
174	Mussel-inspired polydopamine-treated composite electrolytes for long-term operations of polymer electrolyte membrane fuel cells. Journal of Materials Chemistry A, 2013, 1, 14484.	5.2	27
175	Graphene Coating of Silicon Nanoparticles with CO₂â€Enhanced Chemical Vapor Deposition. Small, 2016, 12, 658-667.	5.2	27
176	Low Molecular Weight Spandex as a Promising Polymeric Binder for LiFePO₄ Electrodes. Advanced Energy Materials, 2017, 7, 1602147.	10.2	27
177	Elastic Binder for High-Performance Sulfide-Based All-Solid-State Batteries. ACS Energy Letters, 2022, 7, 1374-1382.	8.8	27
178	Lithiumâ€Salt Mediated Synthesis of a Covalent Triazine Framework for Highly Stable Lithium Metal Batteries. Angewandte Chemie, 2019, 131, 16951-16955.	1.6	26
179	Cobalt oxide-porous carbon composite derived from CO2 for the enhanced performance of lithium-ion battery. Journal of CO2 Utilization, 2019, 30, 28-37.	3.3	26
180	Li₂Oâ€“B₂O₃â€“GeO₂ glass as a high performance anode material for rechargeable lithium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 6860-6866.	5.2	25

#	Article	IF	Citations
181	Elucidating the Extraordinary Rate and Cycling Performance of Phenanthrenequinone in Aluminum-Complex-Ion Batteries. Journal of Physical Chemistry Letters, 2020, 11, 2384-2392.	2.1	25
182	Ultrastable Grapheneâ€Encapsulated 3 nm Nanoparticles by In Situ Chemical Vapor Deposition. Advanced Materials, 2018, 30, e1805023.	11.1	24
183	A hydrophobic blend binder for anti-water flooding of cathode catalyst layers in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2011, 36, 13695-13702.	3.8	23
184	Cotton-templated hierarchical porous structures for high power lithium rechargeable batteries. Journal of Materials Chemistry A, 2013, 1, 5320.	5.2	23
185	Superior Lithiumâ€Ion Storage Properties of Siâ€Based Composite Powders with Unique Si@Carbon@Void@Graphene Configuration. Chemistry - A European Journal, 2015, 21, 2076-2082.	1.7	23
186	High transference number enabled by sulfated zirconia superacid for lithium metal batteries with carbonate electrolytes. Energy and Environmental Science, 2021, 14, 1420-1428.	15.6	23
187	Atomic-scale unveiling of multiphase evolution during hydrated Zn-ion insertion in vanadium oxide. Nature Communications, 2021, 12, 4599.	5.8	23
188	Dual Functional High Donor Electrolytes for Lithiumâ€“Sulfur Batteries under Lithium Nitrate Free and Lean Electrolyte Conditions. ACS Energy Letters, 2022, 7, 2459-2468.	8.8	23
189	Nanomaterials for Energy Conversion and Storage. ChemNanoMat, 2016, 2, 560-561.	1.5	22
190	Critical role of elemental copper for enhancing conversion kinetics of sulphur cathodes in rechargeable magnesium batteries. Applied Surface Science, 2019, 484, 933-940.	3.1	22
191	Enhanced Pseudocapacitance in Multicomponent Transitionâ€Metal Oxides by Local Distortion of Oxygen Octahedra. Angewandte Chemie - International Edition, 2016, 55, 3958-3962.	7.2	21
192	Unveiling anomalous CO₂-to-N₂ selectivity of graphene oxide. Physical Chemistry Chemical Physics, 2017, 19, 22743-22748.	1.3	21
193	2-(triphenylphosphoranylidene) succinic anhydride as a new electrolyte additive to improve high temperature cycle performance of LiMn2O4/graphite Li-ion batteries. Electrochimica Acta, 2013, 102, 97-103.	2.6	20
194	Stable Performance of Aluminumâ€Metal Battery by Incorporating Lithiumâ€Ion Chemistry. ChemElectroChem, 2017, 4, 2345-2351.	1.7	20
195	A Bendable Liâ€Ion Battery with a Nanoâ€Hairy Electrode: Direct Integration Scheme on the Polymer Substrate. Advanced Energy Materials, 2015, 5, 1400611.	10.2	19
196	Entropymetry for non-destructive structural analysis of LiCoO₂cathodes. Energy and Environmental Science, 2020, 13, 286-296.	15.6	19
197	Ionic Liquid Functionalized Gel Polymer Electrolytes for Stable Lithium Metal Batteries. Angewandte Chemie, 2021, 133, 22973-22978.	1.6	19
198	Nanoporous networks as caging supports for uniform, surfactant-free Co₃O₄ nanocrystals and their applications in energy storage and conversion. Journal of Materials Chemistry A, 2015, 3, 15489-15497.	5.2	18

#	Article	IF	Citations
199	Synthesis of mesoporous Î³-aluminas of controlled pore properties using alkyl carboxylate assisted method. Studies in Surface Science and Catalysis, 2003, 146, 209-212.	1.5	17
200	Perfluorosulfonic acid-functionalized Pt/graphene as a high-performance oxygen reduction reaction catalyst for proton exchange membrane fuel cells. Journal of Solid State Electrochemistry, 2013, 17, 767-774.	1.2	17
201	Superlattice Formation of Crystal Water in Layered Double Hydroxides for Longâ€Term and Fast Operation of Aqueous Rechargeable Batteries. Advanced Energy Materials, 2018, 8, 1703572.	10.2	17
202	A Colloidalâ€Quantumâ€Dotâ€Based Selfâ€Charging System via the Nearâ€Infrared Band. Advanced Materials, 2018, 30, e1707224.	11.1	17
203	Thiopheneâ€“nitroxide radical as a novel combination of sensitizerâ€“redox mediator for dye-sensitized solar cells. Journal of Solid State Electrochemistry, 2012, 16, 657-663.	1.2	16
204	Factors that Affect the Phase Behavior of Multi-Component Olivine (LiFe_xMn_yCo_{1-x-y}PO₄; 0) Tj ETQq0 0 0 rgBT /Overlock 1 Reaction. Journal of the Electrochemical Society, 2013, 160, A444-A448.	1.3	16
205	Multiphase LiNi_{0.33}Mn_{0.54}Co_{0.13}O₂ Cathode Material with High Capacity Retention for Liâ€Ion Batteries. ChemElectroChem, 2015, 2, 1957-1965.	1.7	16
206	Rice husk-originating siliconâ€“graphite composites for advanced lithium ion battery anodes. Nano Convergence, 2017, 4, 24.	6.3	16
207	Lithium-Mediated Ammonia Electro-Synthesis: Effect of CsClO₄ on Lithium Plating Efficiency and Ammonia Synthesis. Journal of the Electrochemical Society, 2018, 165, F1027-F1031.	1.3	16
208	Fluorinated Aromatic Diluent for Highâ€Performance Lithium Metal Batteries. Angewandte Chemie, 2020, 132, 14979-14986.	1.6	16
209	Computational Analysis of Pressure-Dependent Optimal Pore Size for CO₂ Capture with Graphitic Surfaces. Journal of Physical Chemistry C, 2016, 120, 3978-3985.	1.5	15
210	Tuning the Phase Stability of Sodium Metal Pyrophosphates for Synthesis of High Voltage Cathode Materials. Chemistry of Materials, 2016, 28, 6724-6730.	3.2	14
211	Solutionâ€Processed Metal Coating to Nonwoven Fabrics forÂWearable Rechargeable Batteries. Small, 2018, 14, e1703028.	5.2	14
212	Atomic thin titania nanosheet-coupled reduced graphene oxide 2D heterostructures for enhanced photocatalytic activity and fast lithium storage. Electronic Materials Letters, 2016, 12, 211-218.	1.0	13
213	Atomicâ€Scale Direct Identification of Surface Variations in Cathode Oxides for Aqueous and Nonaqueous Lithiumâ€Ion Batteries. ChemSusChem, 2019, 12, 787-794.	3.6	13
214	Synergistic Composite Coating for Separators in Lithium Metal Batteries. ACS Applied Energy Materials, 2021, 4, 5237-5245.	2.5	13
215	Switching between Local and Global Aromaticity in a Conjugated Macrocycle for Highâ€Performance Organic Sodiumâ€Ion Battery Anodes. Angewandte Chemie, 2020, 132, 13058-13064.	1.6	12
216	Highly Oriented Carbon Nanotube Sheets for Rechargeable Lithium Oxygen Battery Electrodes. Journal of Nanoscience and Nanotechnology, 2015, 15, 7611-7614.	0.9	11

#	Article	IF	Citations
217	Optimal Activation of Porous Carbon for High Performance CO₂ Capture. ChemNanoMat, 2016, 2, 528-533.	1.5	11
218	Nanomechanical properties of lithiated Si nanowires probed with atomic force microscopy. Journal Physics D: Applied Physics, 2012, 45, 275301.	1.3	10
219	Lewis acidity controlled heme catalyst for lithium-oxygen battery. Energy Storage Materials, 2019, 19, 16-23.	9.5	10
220	Scalable LiCoO2 Nanoparticle Fibers for High Power Lithium Battery Cathodes. Journal of the Electrochemical Society, 2011, 158, A1150.	1.3	9
221	Electrochemically Controlled Nanopore and Crystal Structure Evolution in Zinc Oxide Nanorods. Journal of the Electrochemical Society, 2012, 159, A2143-A2147.	1.3	9
222	Lithium-Ion Batteries: Mussel-Inspired Adhesive Binders for High-Performance Silicon Nanoparticle Anodes in Lithium-Ion Batteries (Adv. Mater. 11/2013). Advanced Materials, 2013, 25, 1570-1570.	11.1	8
223	DNA metallization for high performance Li-ion battery anodes. Nano Energy, 2014, 8, 17-24.	8.2	8
224	Integrated Ringâ€Chain Design of a New Fluorinated Ether Solvent for Highâ€Voltage Lithiumâ€Metal Batteries. Angewandte Chemie, 2022, 134, .	1.6	8
225	Enhanced Pseudocapacitance in Multicomponent Transitionâ€Metal Oxides by Local Distortion of Oxygen Octahedra. Angewandte Chemie, 2016, 128, 4026-4030.	1.6	7
226	Effect of Binding Affinity of Crystal Water on the Electrochemical Performance of Layered Double Hydroxides. ChemSusChem, 2020, 13, 6546-6551.	3.6	7
227	Lithium-Conducting Self-Assembled Organic Nanotubes. Journal of the American Chemical Society, 2021, 143, 17655-17665.	6.6	7
228	Block copolymer binders with hard and soft segments for scalable fabrication of sulfideâ€based allâ€solidâ€state batteries. EcoMat, 2022, 4, .	6.8	7
229	Cesium Ionâ€Mediated Microporous Carbon for CO₂ Capture and Lithiumâ€Ion Storage. ChemNanoMat, 2021, 7, 150-157.	1.5	6
230	Defectâ€Controlled Formation of Triclinic Na₂CoP₂O₇ for 4â€…V Sodiumâ€Ion Batteries. Angewandte Chemie, 2016, 128, 6774-6778.	1.6	5
231	Preparation of a hydrophobic cerium oxide nanoparticle coating with polymer binder via a facile solution route. Ceramics International, 2020, 46, 12209-12215.	2.3	5
232	Oxide Nanostructures for Energy Storage. Springer Series in Materials Science, 2012, , 269-302.	0.4	4
233	Lithium-Ion Batteries: Excellent Cycle Life of Lithium-Metal Anodes in Lithium-Ion Batteries with Mussel-Inspired Polydopamine-Coated Separators (Adv. Energy Mater. 6/2012). Advanced Energy Materials, 2012, 2, 610-610.	10.2	4
234	Glycerol as a Binder Additive for Low-Resistance Graphite Anodes in Lithium-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 040558.	1.3	4

#	Article	IF	Citations
235	Optically tunable and reconfigurable azobenzene photonic crystal. Macromolecular Research, 2014, 22, 606-612.	1.0	3
236	Effect of Pelletizing and Temperature in Silicon Production Using Magnesiothermic Reduction. Journal of Chemical Engineering of Japan, 2018, 51, 794-799.	0.3	3
237	A Carbon Nanotubes-Silicon Nanoparticles Network for High Performance Lithium Rechargeable Battery Anodes. Journal of Electrochemical Science and Technology, 2012, 3, 116-122.	0.9	3
238	A Carbon Nanotubes-Silicon Nanoparticles Network for High Performance Lithium Rechargeable Battery Anodes. Journal of Electrochemical Science and Technology, 2012, 3, 116-122.	0.9	3
239	Lithiumâ€Sulfur Batteries: Tungsten Disulfide Catalysts Supported on a Carbon Cloth Interlayer for High Performance Liâ€“S Battery (Adv. Energy Mater. 11/2017). Advanced Energy Materials, 2017, 7, .	10.2	2
240	Li-Intercalation Oxides: Atomic-Scale Observation of LiFePO4 and LiCoO2 Dissolution Behavior in Aqueous Solutions (Adv. Funct. Mater. 45/2018). Advanced Functional Materials, 2018, 28, 1870320.	7.8	2
241	Off-Stoichiometry Induced Few-Nanometer Surface Layer for High-Performance Layered Cathode in Nonaqueous and Aqueous Electrolytes. ACS Applied Energy Materials, 0, , .	2.5	2
242	Areal Energy Density: A Lithium-Sulfur Battery with a High Areal Energy Density (Adv. Funct. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	7.8	0
243	EEWS 2016: Progress and Perspectives of Energy Science and Technology. ACS Energy Letters, 2017, 2, 592-594.	8.8	0
244	Lithiumâ€Sulfur Batteries: The Importance of Confined Sulfur Nanodomains and Adjoining Electron Conductive Pathways in Subreaction Regimes of Liâ€S Batteries (Adv. Energy Mater. 19/2017). Advanced Energy Materials, 2017, 7, .	10.2	0
245	Supramolecular Chemistries for Polymeric Binders of High Capacity Lithium-Ion Batteries. , 2018, , .		0
246	Rechargeable Aluminum Organic Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
247	Multifunctional Gel Polymer/Microspheres Composite Electrolyte Coated Separator for Lithium Metal Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
248	Covalent Triazine Frameworks Incorporating Charged Polypyrrole Channels for High-Performance Lithium-Sulfur Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 3440-3440.	0.0	0