Jang Wook Choi

List of Publications by Citations

239 papers	30,970 citations	83 h-index	174 g-index
257 ext. papers	34,842 ext. citations	13.7 avg, IF	7.74 L-index

#	Paper	IF	Citations
239	Promise and reality of post-lithium-ion batteries with high energy densities. *Nature Reviews Materials*, **2016**, 1,	73.3	2575
238	Stable cycling of double-walled silicon nanotube battery anodes through solid-electrolyte interphase control. *Nature Nanotechnology*, **2012**, 7, 310-5	28.7	1831
237	Nitrogen-doped graphene for high-performance ultracapacitors and the importance of nitrogen-doped sites at basal planes. *Nano Letters*, **2011**, 11, 2472-7	11.5	1373
236	Stretchable, porous, and conductive energy textiles. *Nano Letters*, **2010**, 10, 708-14	11.5	1280
235	3D macroporous graphene frameworks for supercapacitors with high energy and power densities. *ACS Nano*, **2012**, 6, 4020-8	16.7	1082
234	A 160-kilobit molecular electronic memory patterned at 10(11) bits per square centimetre. *Nature*, **2007**, 445, 414-7	50.4	1078
233	Highly conductive paper for energy-storage devices. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 21490-4	11.5	1048
232	Highly elastic binders integrating polyrotaxanes for silicon microparticle anodes in lithium ion batteries. *Science*, **2017**, 357, 279-283	33.3	670
231	Mussel-inspired polydopamine-treated polyethylene separators for high-power li-ion batteries. *Advanced Materials*, **2011**, 23, 3066-70	24	560
230	Electrospun core-shell fibers for robust silicon nanoparticle-based lithium ion battery anodes. *Nano Letters*, **2012**, 12, 802-7	11.5	526
229	Mussel-inspired adhesive binders for high-performance silicon nanoparticle anodes in lithium-ion batteries. *Advanced Materials*, **2013**, 25, 1571-6	24	463
228	Light-weight free-standing carbon nanotube-silicon films for anodes of lithium ion batteries. *ACS Nano*, **2010**, 4, 3671-8	16.7	460
227	Nitrogen-doped multiwall carbon nanotubes for lithium storage with extremely high capacity. *Nano Letters*, **2012**, 12, 2283-8	11.5	433
226	Bendable inorganic thin-film battery for fully flexible electronic systems. *Nano Letters*, **2012**, 12, 4810-6	11.5	431
225	Effective liquid-phase exfoliation and sodium ion battery application of MoS2 nanosheets. *ACS Applied Materials & Interfaces*, **2014**, 6, 7084-9	9.5	379
224	Silicon carbide-free graphene growth on silicon for lithium-ion battery with high volumetric energy density. *Nature Communications*, **2015**, 6, 7393	17.4	376
223	Excellent Cycle Life of Lithium-Metal Anodes in Lithium-Ion Batteries with Mussel-Inspired Polydopamine-Coated Separators. *Advanced Energy Materials*, **2012**, 2, 645-650	21.8	359

222	Wearable textile battery rechargeable by solar energy. *Nano Letters*, **2013**, 13, 5753-61	11.5	349
221	Restacking-inhibited 3D reduced graphene oxide for high performance supercapacitor electrodes. *ACS Nano*, **2013**, 7, 9366-74	16.7	343
220	The High Performance of Crystal Water Containing Manganese Birnessite Cathodes for Magnesium Batteries. *Nano Letters*, **2015**, 15, 4071-9	11.5	339
219	Defined spatial structure stabilizes a synthetic multispecies bacterial community. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 18188-93	11.5	338
218	One-dimensional carbon-sulfur composite fibers for Na-S rechargeable batteries operating at room temperature. *Nano Letters*, **2013**, 13, 4532-8	11.5	334
217	Anomalous shape changes of silicon nanopillars by electrochemical lithiation. *Nano Letters*, **2011**, 11, 3034-9	11.5	316
216	Size-dependent fracture of Si nanowire battery anodes. *Journal of the Mechanics and Physics of Solids*, **2011**, 59, 1717-1730	5	303
215	Encapsulated monoclinic sulfur for stable cycling of li-s rechargeable batteries. *Advanced Materials*, **2013**, 25, 6547-53	24	295
214	Controlled Prelithiation of Silicon Monoxide for High Performance Lithium-Ion Rechargeable Full Cells. *Nano Letters*, **2016**, 16, 282-8	11.5	283
213	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	3.9	275
212	Al Doping for Mitigating the Capacity Fading and Voltage Decay of Layered Li and Mn-Rich Cathodes for Li-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1502398	21.8	271
211	Novel size and surface oxide effects in silicon nanowires as lithium battery anodes. *Nano Letters*, **2011**, 11, 4018-25	11.5	251
210	Na2FeP2O7 as a Promising Iron-Based Pyrophosphate Cathode for Sodium Rechargeable Batteries: A Combined Experimental and Theoretical Study. *Advanced Functional Materials*, **2013**, 23, 1147-1155	15.6	250
209	Elemental-Sulfur-Mediated Facile Synthesis of a Covalent Triazine Framework for High-Performance Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2016**, 55, 3106-11	16.4	249
208	Tungsten Disulfide Catalysts Supported on a Carbon Cloth Interlayer for High Performance Li-S Battery. *Advanced Energy Materials*, **2017**, 7, 1602567	21.8	233
207	Recycling rice husks for high-capacity lithium battery anodes. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 12229-34	11.5	233
206	Hyperbranched β-cyclodextrin polymer as an effective multidimensional binder for silicon anodes in lithium rechargeable batteries. *Nano Letters*, **2014**, 14, 864-70	11.5	230
205	Spray drying method for large-scale and high-performance silicon negative electrodes in Li-ion batteries. *Nano Letters*, **2013**, 13, 2092-7	11.5	219

204	Aqueous zinc ion batteries: focus on zinc metal anodes. *Chemical Science*, **2020**, 11, 2028-2044	9.4	218
203	Stepwise nanopore evolution in one-dimensional nanostructures. *Nano Letters*, **2010**, 10, 1409-13	11.5	218
202	The emerging era of supramolecular polymeric binders in silicon anodes. *Chemical Society Reviews*, **2018**, 47, 2145-2164	58.5	217
201	Hierarchical porous carbon by ultrasonic spray pyrolysis yields stable cycling in lithium-sulfur battery. *Nano Letters*, **2014**, 14, 4418-25	11.5	214
200	A truncated manganese spinel cathode for excellent power and lifetime in lithium-ion batteries. *Nano Letters*, **2012**, 12, 6358-65	11.5	214
199	Ground-state equilibrium thermodynamics and switching kinetics of bistable [2]rotaxanes switched in solution, polymer gels, and molecular electronic devices. *Chemistry - A European Journal*, **2005**, 12, 261-79	4.8	203
198	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, 1563-75	16.4	185
197	A Lithium-Sulfur Battery with a High Areal Energy Density. *Advanced Functional Materials*, **2014**, 24, 5359-5367	15.6	180
196	Millipede-inspired structural design principle for high performance polysaccharide binders in silicon anodes. *Energy and Environmental Science*, **2015**, 8, 1224-1230	35.4	179
195	Mussel- and Diatom-Inspired Silica Coating on Separators Yields Improved Power and Safety in Li-Ion Batteries. *Chemistry of Materials*, **2012**, 24, 3481-3485	9.6	167
194	Crystal water for high performance layered manganese oxide cathodes in aqueous rechargeable zinc batteries. *Energy and Environmental Science*, **2019**, 12, 1999-2009	35.4	162
193	Rechargeable aluminium organic batteries. *Nature Energy*, **2019**, 4, 51-59	62.3	159
192	Controlled Lithium Dendrite Growth by a Synergistic Effect of Multilayered Graphene Coating and an Electrolyte Additive. *Chemistry of Materials*, **2015**, 27, 2780-2787	9.6	158
191	Hydrated Intercalation for High-Performance Aqueous Zinc Ion Batteries. *Advanced Energy Materials*, **2019**, 9, 1900083	21.8	158
190	Deep eutectic solvents as attractive media for CO2 capture. *Green Chemistry*, **2016**, 18, 2834-2842	10	150
189	Sodium zinc hexacyanoferrate with a well-defined open framework as a positive electrode for sodium ion batteries. *Chemical Communications*, **2012**, 48, 8416-8	5.8	146
188	Critical Role of Crystal Water for a Layered Cathode Material in Sodium Ion Batteries. *Chemistry of Materials*, **2015**, 27, 3721-3725	9.6	142
187	A radically configurable six-state compound. *Science*, **2013**, 339, 429-33	33.3	140

186	Extremely stable cycling of ultra-thin V2O5 nanowire–graphene electrodes for lithium rechargeable battery cathodes. *Energy and Environmental Science*, **2012**, 5, 9889	35.4	140
185	Flexible Few-Layered Graphene for the Ultrafast Rechargeable Aluminum-Ion Battery. *Journal of Physical Chemistry C*, **2016**, 120, 13384-13389	3.8	134
184	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, 2787-92	16.4	131
183	Delicate Structural Control of Si-SiO-C Composite via High-Speed Spray Pyrolysis for Li-Ion Battery Anodes. *Nano Letters*, **2017**, 17, 1870-1876	11.5	129
182	Effective Polysulfide Rejection by Dipole-Aligned BaTiO3 Coated Separator in Lithium–Sulfur Batteries. *Advanced Functional Materials*, **2016**, 26, 7817-7823	15.6	129
181	N-doped graphitic self-encapsulation for high performance silicon anodes in lithium-ion batteries. *Energy and Environmental Science*, **2014**, 7, 621-626	35.4	127
180	Improved reversibility in lithium-oxygen battery: understanding elementary reactions and surface charge engineering of metal alloy catalyst. *Scientific Reports*, **2014**, 4, 4225	4.9	126
179	Co-polyimide-coated polyethylene separators for enhanced thermal stability of lithium ion batteries. *Electrochimica Acta*, **2012**, 85, 524-530	6.7	126
178	Systematic molecular-level design of binders incorporating Meldrum's acid for silicon anodes in lithium rechargeable batteries. *Advanced Materials*, **2014**, 26, 7979-85	24	124
177	Dynamic Cross-Linking of Polymeric Binders Based on Host-Guest Interactions for Silicon Anodes in Lithium Ion Batteries. *ACS Nano*, **2015**, 9, 11317-24	16.7	123
176	A stable lithium-rich surface structure for lithium-rich layered cathode materials. *Nature Communications*, **2016**, 7, 13598	17.4	121
175	Role of intermediate phase for stable cycling of Na7V4(P2O7)4PO4 in sodium ion battery. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 599-604	11.5	120
174	Perfluoroaryl-Elemental Sulfur SNAr Chemistry in Covalent Triazine Frameworks with High Sulfur Contents for Lithium–Sulfur Batteries. *Advanced Functional Materials*, **2017**, 27, 1703947	15.6	118
173	Carbon nanofiber supercapacitors with large areal capacitances. *Applied Physics Letters*, **2009**, 95, 243109	3.4	114
172	Graphene balls for lithium rechargeable batteries with fast charging and high volumetric energy densities. *Nature Communications*, **2017**, 8, 1561	17.4	112
171	Functionalized graphene for high performance lithium ion capacitors. *ChemSusChem*, **2012**, 5, 2328-33	8.3	107
170	A new strategy for integrating abundant oxygen functional groups into carbon felt electrode for vanadium redox flow batteries. *Scientific Reports*, **2014**, 4, 6906	4.9	106
169	Ordered Mesoporous Titanium Nitride as a Promising Carbon-Free Cathode for Aprotic Lithium-Oxygen Batteries. *ACS Nano*, **2017**, 11, 1736-1746	16.7	104

168	Atom-Level Understanding of the Sodiation Process in Silicon Anode Material. *Journal of Physical Chemistry Letters*, **2014**, 5, 1283-8	6.4	102
167	Combined CO2-philicity and Ordered Mesoporosity for Highly Selective CO2 Capture at High Temperatures. *Journal of the American Chemical Society*, **2015**, 137, 7210-6	16.4	102
166	A Moisture- and Oxygen-Impermeable Separator for Aprotic Li-O2 Batteries. *Advanced Functional Materials*, **2016**, 26, 1747-1756	15.6	101
165	Anisotropic volume expansion of crystalline silicon during electrochemical lithium insertion: an atomic level rationale. *Nano Letters*, **2012**, 12, 5342-7	11.5	99
164	The Synergistic Effect of Cation and Anion of an Ionic Liquid Additive for Lithium Metal Anodes. *Advanced Energy Materials*, **2018**, 8, 1702744	21.8	94
163	An Aqueous Sodium Ion Hybrid Battery Incorporating an Organic Compound and a Prussian Blue Derivative. *Advanced Energy Materials*, **2014**, 4, 1400133	21.8	93
162	Recent Progress on Spray Pyrolysis for High Performance Electrode Materials in Lithium and Sodium Rechargeable Batteries. *Advanced Energy Materials*, **2017**, 7, 1601578	21.8	92
161	Molecular dynamics simulation of amphiphilic bistable [2]rotaxane langmuir monolayers at the air/water interface. *Journal of the American Chemical Society*, **2005**, 127, 14804-16	16.4	90
160	Elemental-Sulfur-Mediated Facile Synthesis of a Covalent Triazine Framework for High-Performance Lithium–Sulfur Batteries. *Angewandte Chemie*, **2016**, 128, 3158-3163	3.6	89
159	Rational Sulfur Cathode Design for Lithium–Sulfur Batteries: Sulfur-Embedded Benzoxazine Polymers. *ACS Energy Letters*, **2016**, 1, 566-572	20.1	88
158	Anisotropic lithiation onset in silicon nanoparticle anode revealed by in situ graphene liquid cell electron microscopy. *ACS Nano*, **2014**, 8, 7478-85	16.7	88
157	Enhanced durability of polymer electrolyte membrane fuel cells by functionalized 2D boron nitride nanoflakes. *ACS Applied Materials & Interfaces*, **2014**, 6, 7751-8	9.5	87
156	Scalable fracture-free SiOC glass coating for robust silicon nanoparticle anodes in lithium secondary batteries. *Nano Letters*, **2014**, 14, 7120-5	11.5	82
155	Exfoliated 2D Lepidocrocite Titanium Oxide Nanosheets for High Sulfur Content Cathodes with Highly Stable Li–S Battery Performance. *ACS Energy Letters*, **2018**, 3, 412-419	20.1	78
154	Sodium ion diffusion in Al2O3: a distinct perspective compared with lithium ion diffusion. *Nano Letters*, **2014**, 14, 6559-63	11.5	77
153	Chemical Blowing Approach for Ultramicroporous Carbon Nitride Frameworks and Their Applications in Gas and Energy Storage. *Advanced Functional Materials*, **2017**, 27, 1604658	15.6	77
152	Fast and scalable printing of large area monolayer nanoparticles for nanotexturing applications. *Nano Letters*, **2010**, 10, 2989-94	11.5	76
151	The Importance of Confined Sulfur Nanodomains and Adjoining Electron Conductive Pathways in Subreaction Regimes of Li-S Batteries. *Advanced Energy Materials*, **2017**, 7, 1700074	21.8	75

150	Battery Electrode Materials with Omnivalent Cation Storage for Fast and Charge-Efficient Ion Removal of Asymmetric Capacitive Deionization. *Advanced Functional Materials*, **2018**, 28, 1802665	15.6	75
149	Selection of Binder and Solvent for Solution-Processed All-Solid-State Battery. *Journal of the Electrochemical Society*, **2017**, 164, A2075-A2081	3.9	71
148	A half millimeter thick coplanar flexible battery with wireless recharging capability. *Nano Letters*, **2015**, 15, 2350-7	11.5	70
147	Sprayable Ultrafast Polydopamine Surface Modifications. *Advanced Materials Interfaces*, **2016**, 3, 1500857	4.6	70
146	Effect of N-substitution in naphthalenediimides on the electrochemical performance of organic rechargeable batteries. *RSC Advances*, **2012**, 2, 7968	3.7	69
145	A "Sticky" Mucin-Inspired DNA-Polysaccharide Binder for Silicon and Silicon-Graphite Blended Anodes in Lithium-Ion Batteries. *Advanced Materials*, **2018**, 30, e1707594	24	68
144	Nitrogen-doped carbon coating for a high-performance SiO anode in lithium-ion batteries. *Electrochemistry Communications*, **2013**, 34, 98-101	5.1	67
143	Direct Observation of an Anomalous Spinel-to-Layered Phase Transition Mediated by Crystal Water Intercalation. *Angewandte Chemie - International Edition*, **2015**, 54, 15094-9	16.4	67
142	Silicon@porous nitrogen-doped carbon spheres through a bottom-up approach are highly robust lithium-ion battery anodes. *RSC Advances*, **2012**, 2, 4311	3.7	67
141	Mussel-Inspired Self-Healing Metallopolymers for Silicon Nanoparticle Anodes. *ACS Nano*, **2019**, 13, 8364-8373	16.7	65
140	A gel polymer electrolyte based on initiator-free photopolymerization for lithium secondary batteries. *Electrochimica Acta*, **2012**, 60, 23-30	6.7	63
139	Important Role of Functional Groups for Sodium Ion Intercalation in Expanded Graphite. *Chemistry of Materials*, **2015**, 27, 5402-5406	9.6	62
138	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	6.7	62
137	Inorganic Glue Enabling High Performance of Silicon Particles as Lithium Ion Battery Anode. *Journal of the Electrochemical Society*, **2011**, 158, A592	3.9	62
136	Fluorinated Aromatic Diluent for High-Performance Lithium Metal Batteries. *Angewandte Chemie - International Edition*, **2020**, 59, 14869-14876	16.4	61
135	N-(triphenylphosphoranylidene) aniline as a novel electrolyte additive for high voltage LiCoO2 operations in lithium ion batteries. *Electrochimica Acta*, **2011**, 56, 5195-5200	6.7	60
134	Spiers Memorial Lecture. Molecular mechanics and molecular electronics. *Faraday Discussions*, **2006**, 131, 9-22; discussion 91-109	3.6	59
133	Mussel-Inspired Coating and Adhesion for Rechargeable Batteries: A Review. *ACS Applied Materials & Interfaces*, **2018**, 10, 7562-7573	9.5	58

132	Wisdom from the Human Eye: A Synthetic Melanin Radical Scavenger for Improved Cycle Life of Li–O2 Battery. *Chemistry of Materials*, **2014**, 26, 4757-4764	9.6	58
131	Metal current collector-free freestanding silicon–carbon 1D nanocomposites for ultralight anodes in lithium ion batteries. *Journal of Power Sources*, **2010**, 195, 8311-8316	8.9	56
130	5L-Scale Magnesio-Milling Reduction of Nanostructured SiO for High Capacity Silicon Anodes in Lithium-Ion Batteries. *Nano Letters*, **2016**, 16, 7261-7269	11.5	55
129	Defect-Controlled Formation of Triclinic Na2 CoP2 O7 for 4 V Sodium-Ion Batteries. *Angewandte Chemie - International Edition*, **2016**, 55, 6662-6	16.4	55
128	Improved cycle lives of LiMn2O4 cathodes in lithium ion batteries by an alginate biopolymer from seaweed. *Journal of Materials Chemistry A*, **2013**, 1, 15224	13	55
127	Self-Terminated Artificial SEI Layer for Nickel-Rich Layered Cathode Material via Mixed Gas Chemical Vapor Deposition. *Chemistry of Materials*, **2015**, 27, 7370-7379	9.6	53
126	Mixed Transition Metal Oxide with Vacancy-Induced Lattice Distortion for Enhanced Catalytic Activity of Oxygen Evolution Reaction. *ACS Catalysis*, **2019**, 9, 7099-7108	13.1	52
125	Recent Progress in High Donor Electrolytes for Lithium–Sulfur Batteries. *Advanced Energy Materials* , **2020**, 10, 2001456	21.8	51
124	Intercalated Water and Organic Molecules for Electrode Materials of Rechargeable Batteries. *Advanced Materials*, **2018**, 30, e1705851	24	50
123	A Pyrene-Poly(acrylic acid)-Polyrotaxane Supramolecular Binder Network for High-Performance Silicon Negative Electrodes. *Advanced Materials*, **2019**, 31, e1905048	24	50
122	Effects of lithium salts on thermal stabilities of lithium alkyl carbonates in SEI layer. *Electrochimica Acta*, **2012**, 83, 259-263	6.7	50
121	An Electrochemical Cell for Selective Lithium Capture from Seawater. *Environmental Science & Technology*, **2015**, 49, 9415-22	10.3	47
120	Opportunities and Reality of Aqueous Rechargeable Batteries. *Advanced Energy Materials*, **2020**, 10, 2001386	21.8	46
119	On the Mechanism of Crystal Water Insertion during Anomalous Spinel-to-Birnessite Phase Transition. *Chemistry of Materials*, **2016**, 28, 5488-5494	9.6	44
118	Mechanism of Co3O4/graphene catalytic activity in Li–O2 batteries using carbonate based electrolytes. *Electrochimica Acta*, **2013**, 90, 63-70	6.7	44
117	Fast nonlinear ion transport via field-induced hydrodynamic slip in sub-20-nm hydrophilic nanofluidic transistors. *Nano Letters*, **2009**, 9, 1315-9	11.5	44
116	Electrochemical Synthesis of Ammonia from Water and Nitrogen: A Lithium-Mediated Approach Using Lithium-Ion Conducting Glass Ceramics. *ChemSusChem*, **2018**, 11, 120-124	8.3	43
115	Lithium-Salt Mediated Synthesis of a Covalent Triazine Framework for Highly Stable Lithium Metal Batteries. *Angewandte Chemie - International Edition*, **2019**, 58, 16795-16799	16.4	43

114	Stabilized Octahedral Frameworks in Layered Double Hydroxides by Solid-Solution Mixing of Transition Metals. *Advanced Functional Materials*, **2017**, 27, 1605225	15.6	42
113	Large area multi-stacked lithium-ion batteries for flexible and rollable applications. *Journal of Materials Chemistry A*, **2014**, 2, 10862-10868	13	42
112	Prospect for Supramolecular Chemistry in High-Energy-Density Rechargeable Batteries. *Joule*, **2019**, 3, 662-682	27.8	42
111	Lattice Water for the Enhanced Performance of Amorphous Iron Phosphate in Sodium-Ion Batteries. *ACS Energy Letters*, **2017**, 2, 998-1004	20.1	40
110	Robust cycling of Li-O2 batteries through the synergistic effect of blended electrolytes. *ChemSusChem*, **2013**, 6, 443-8	8.3	40
109	Fluorinated Covalent Organic Polymers for High Performance Sulfur Cathodes in Lithium–Sulfur Batteries. *Chemistry of Materials*, **2019**, 31, 7910-7921	9.6	39
108	Highly Elastic Polyrotaxane Binders for Mechanically Stable Lithium Hosts in Lithium-Metal Batteries. *Advanced Materials*, **2019**, 31, e1901645	24	39
107	Poreless Separator and Electrolyte Additive for Lithium–Sulfur Batteries with High Areal Energy Densities. *ChemNanoMat*, **2015**, 1, 240-245	3.5	39
106	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	10.4	39
105	Highly Elastic Binder for Improved Cyclability of Nickel-Rich Layered Cathode Materials in Lithium-Ion Batteries. *Advanced Energy Materials*, **2020**, 10, 2001069	21.8	36
104	Tuning the Electron Density of Aromatic Solvent for Stable Solid-Electrolyte-Interphase Layer in Carbonate-Based Lithium Metal Batteries. *Advanced Energy Materials*, **2018**, 8, 1802365	21.8	36
103	Nanoscale Zirconium-Abundant Surface Layers on Lithium- and Manganese-Rich Layered Oxides for High-Rate Lithium-Ion Batteries. *Nano Letters*, **2017**, 17, 7869-7877	11.5	35
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101	New High Donor Electrolyte for Lithium-Sulfur Batteries. *Advanced Materials*, **2020**, 32, e2005022	24	35
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99	A bifunctional approach for the preparation of graphene and ionic liquid-based hybrid gels. *Journal of Materials Chemistry A*, **2013**, 1, 43-48	13	31
98	Anomalous Stretchable Conductivity Using an Engineered Tricot Weave. *ACS Nano*, **2015**, 9, 12214-23	16.7	30
97	Covalent Triazine Frameworks Incorporating Charged Polypyrrole Channels for High-Performance Lithium–Sulfur Batteries. *Chemistry of Materials*, **2020**, 32, 4185-4193	9.6	29

96	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, 11740-8	16.4	29
95	Thiol-Ene Click Reaction for Fine Polarity Tuning of Polymeric Binders in Solution-Processed All-Solid-State Batteries. *ACS Energy Letters*, **2019**, 4, 94-101	20.1	29
94	Energy-efficient hybrid FCDI-NF desalination process with tunable salt rejection and high water recovery. *Journal of Membrane Science*, **2017**, 541, 580-586	9.6	28
93	Tetradiketone macrocycle for divalent aluminium ion batteries. *Nature Communications*, **2021**, 12, 2386	17.4	28
92	Mechanochemical synthesis and electrochemical behavior of Na3FeF6 in sodium and lithium batteries. *Solid State Ionics*, **2012**, 218, 35-40	3.3	27
91	Marginal Magnesium Doping for High-Performance Lithium Metal Batteries. *Advanced Energy Materials*, **2019**, 9, 1902278	21.8	26
90	Initiated Chemical Vapor Deposition (iCVD) of Highly Cross-Linked Polymer Films for Advanced Lithium-Ion Battery Separators. *ACS Applied Materials & Interfaces*, **2015**, 7, 18849-55	9.5	26
89	Modified graphite and graphene electrodes for high-performance lithium ion hybrid capacitors. *Materials for Renewable and Sustainable Energy*, **2014**, 3, 1	4.7	26
88	Role of Ordered Ni Atoms in Li Layers for Li-Rich Layered Cathode Materials. *Advanced Functional Materials*, **2017**, 27, 1700982	15.6	26
87	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	9.5	24
86	Superior lithium-ion storage properties of si-based composite powders with unique Si@carbon@void@graphene configuration. *Chemistry - A European Journal*, **2015**, 21, 2076-82	4.8	23
85	Origin of unusual spinel-to-layered phase transformation by crystal water. *Chemical Science*, **2018**, 9, 433-438	9.4	23
84	Switching between Local and Global Aromaticity in a Conjugated Macrocycle for High-Performance Organic Sodium-Ion Battery Anodes. *Angewandte Chemie - International Edition*, **2020**, 59, 12958-12964	16.4	22
83	Mussel-inspired polydopamine-treated composite electrolytes for long-term operations of polymer electrolyte membrane fuel cells. *Journal of Materials Chemistry A*, **2013**, 1, 14484	13	22
82	Graphene Coating of Silicon Nanoparticles with CO2 -Enhanced Chemical Vapor Deposition. *Small*, **2016**, 12, 658-67	11	22
81	Atomic-Scale Observation of LiFePO4 and LiCoO2 Dissolution Behavior in Aqueous Solutions. *Advanced Functional Materials*, **2018**, 28, 1804564	15.6	22
80	Cotton-templated hierarchical porous structures for high power lithium rechargeable batteries. *Journal of Materials Chemistry A*, **2013**, 1, 5320	13	21
79	Highly Reversible, Grain-Directed Zinc Deposition in Aqueous Zinc Ion Batteries. *Advanced Energy Materials*,2100676	21.8	21

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