Andrew Lushington

List of Publications by Year
in descending order

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250 papers	30,960 citations	2795 94 h-index	5101 166 g-index
252 all docs	252 docs citations	252 times ranked	24108 citing authors

#	Article	IF	Citations
1	Platinum single-atom and cluster catalysis of the hydrogen evolution reaction. Nature Communications, 2016, 7, 13638.	5.8	1,521
2	High oxygen-reduction activity and durability of nitrogen-doped graphene. Energy and Environmental Science, 2011, 4, 760.	15.6	1,153
3	Understanding and recent development of carbon coating on LiFePO₄cathode materials for lithium-ion batteries. Energy and Environmental Science, 2012, 5, 5163-5185.	15.6	839
4	Recent Developments and Understanding of Novel Mixed Transitionâ€Metal Oxides as Anodes in Lithium Ion Batteries. Advanced Energy Materials, 2016, 6, 1502175.	10.2	756
5	Single-atom Catalysis Using Pt/Graphene Achieved through Atomic Layer Deposition. Scientific Reports, 2013, 3, .	1.6	719
6	Tailoring grain boundary structures and chemistry of Ni-rich layered cathodes for enhanced cycle stability of lithium-ion batteries. Nature Energy, 2018, 3, 600-605.	19.8	613
7	Significantly improving cycling performance of cathodes in lithium ion batteries: The effect of Al2O3 and LiAlO2 coatings on LiNi0.6Co0.2Mn0.2O2. Nano Energy, 2018, 44, 111-120.	8.2	536
8	Emerging Applications of Atomic Layer Deposition for Lithiumâ€Ion Battery Studies. Advanced Materials, 2012, 24, 3589-3615.	11.1	493
9	Metal organic frameworks for energy storage and conversion. Energy Storage Materials, 2016, 2, 35-62.	9.5	483
10	Nitrogen doping effects on the structure of graphene. Applied Surface Science, 2011, 257, 9193-9198.	3.1	476
11	Ultrathin MoS₂/Nitrogenâ€Doped Graphene Nanosheets with Highly Reversible Lithium Storage. Advanced Energy Materials, 2013, 3, 839-844.	10.2	440
12	Olivine LiFePO₄: the remaining challenges for future energy storage. Energy and Environmental Science, 2015, 8, 1110-1138.	15.6	412
13	Recent developments and insights into the understanding of Na metal anodes for Na-metal batteries. Energy and Environmental Science, 2018, 11, 2673-2695.	15.6	388
14	Tin Oxide with Controlled Morphology and Crystallinity by Atomic Layer Deposition onto Graphene Nanosheets for Enhanced Lithium Storage. Advanced Functional Materials, 2012, 22, 1647-1654.	7.8	384
15	Atomic layer deposition of solid-state electrolyte coated cathode materials with superior high-voltage cycling behavior for lithium ion battery application. Energy and Environmental Science, 2014, 7, 768-778.	15.6	363
16	Superior performance of ordered macroporous TiNb 2 O 7 anodes for lithium ion batteries: Understanding from the structural and pseudocapacitive insights on achieving high rate capability. Nano Energy, 2017, 34, 15-25.	8.2	351
17	Air-stable Li₃InCl₆ electrolyte with high voltage compatibility for all-solid-state batteries. Energy and Environmental Science, 2019, 12, 2665-2671.	15.6	345
18	Significant impact of 2D graphene nanosheets on large volume change tin-based anodes in lithium-ion batteries: A review. Journal of Power Sources, 2015, 274, 869-884.	4.0	343

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19	Towards high-performance solid-state Liâ€“S batteries: from fundamental understanding to engineering design. Chemical Society Reviews, 2020, 49, 2140-2195.	18.7	337
20	Superior cycle stability of nitrogen-doped graphene nanosheets as anodes for lithium ion batteries. Electrochemistry Communications, 2011, 13, 822-825.	2.3	315
21	Challenges and opportunities of nanostructured materials for aprotic rechargeable lithiumâ€“air batteries. Nano Energy, 2013, 2, 443-467.	8.2	315
22	Structural Design of Lithiumâ€“Sulfur Batteries: From Fundamental Research to Practical Application. Electrochemical Energy Reviews, 2018, 1, 239-293.	13.1	298
23	From Lithiumâ€Oxygen to Lithiumâ€Air Batteries: Challenges and Opportunities. Advanced Energy Materials, 2016, 6, 1502164.	10.2	296
24	In-situ formed Li2CO3-free garnet/Li interface by rapid acid treatment for dendrite-free solid-state batteries. Nano Energy, 2019, 61, 119-125.	8.2	281
25	A comprehensive review on recent progress in aluminumâ€“air batteries. Green Energy and Environment, 2017, 2, 246-277.	4.7	280
26	Superior Stable and Long Life Sodium Metal Anodes Achieved by Atomic Layer Deposition. Advanced Materials, 2017, 29, 1606663.	11.1	273
27	Design of a mixed conductive garnet/Li interface for dendrite-free solid lithium metal batteries. Energy and Environmental Science, 2020, 13, 127-134.	15.6	269
28	Nitrogen-doped carbon nanotubes as cathode for lithiumâ€“air batteries. Electrochemistry Communications, 2011, 13, 668-672.	2.3	261
29	Site-Occupation-Tuned Superionic Li_xScCl_{3+x}Halide Solid Electrolytes for All-Solid-State Batteries. Journal of the American Chemical Society, 2020, 142, 7012-7022.	6.6	260
30	Inorganicâ€“Organic Coating via Molecular Layer Deposition Enables Long Life Sodium Metal Anode. Nano Letters, 2017, 17, 5653-5659.	4.5	243
31	Extremely Stable Platinum Nanoparticles Encapsulated in a Zirconia Nanocage by Areaâ€Selective Atomic Layer Deposition for the Oxygen Reduction Reaction. Advanced Materials, 2015, 27, 277-281.	11.1	238
32	Recent progress on solid-state hybrid electrolytes for solid-state lithium batteries. Energy Storage Materials, 2019, 21, 308-334.	9.5	221
33	Significant impact on cathode performance of lithium-ion batteries by precisely controlled metal oxide nanocoatings via atomic layer deposition. Journal of Power Sources, 2014, 247, 57-69.	4.0	212
34	Surface and Subsurface Reactions of Lithium Transition Metal Oxide Cathode Materials: An Overview of the Fundamental Origins and Remedying Approaches. Advanced Energy Materials, 2018, 8, 1802057.	10.2	207
35	Stabilizing the Interface of NASICON Solid Electrolyte against Li Metal with Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2018, 10, 31240-31248.	4.0	207
36	A Novel Organic â€œPolyureaâ€•Thin Film for Ultralongâ€Life Lithiumâ€Metal Anodes via Molecularâ€Layer Deposition. Advanced Materials, 2019, 31, e1806541.	11.1	204

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37	All-solid-state lithium batteries enabled by sulfide electrolytes: from fundamental research to practical engineering design. Energy and Environmental Science, 2021, 14, 2577-2619.	15.6	201
38	Recent advances and perspectives on thin electrolytes for high-energy-density solid-state lithium batteries. Energy and Environmental Science, 2021, 14, 643-671.	15.6	200
39	Sodiumâ€Oxygen Batteries: A Comparative Review from Chemical and Electrochemical Fundamentals to Future Perspective. Advanced Materials, 2016, 28, 7065-7093.	11.1	198
40	Addressing Interfacial Issues in Liquid-Based and Solid-State Batteries by Atomic and Molecular Layer Deposition. Joule, 2018, 2, 2583-2604.	11.7	198
41	Designing a highly efficient polysulfide conversion catalyst with paramontroseite for high-performance and long-life lithium-sulfur batteries. Nano Energy, 2019, 57, 230-240.	8.2	190
42	Highly stable Li 1.2 Mn 0.54 Co 0.13 Ni 0.13 O 2 enabled by novel atomic layer deposited AlPO 4 coating. Nano Energy, 2017, 34, 120-130.	8.2	188
43	Cobaltâ€Doped SnS₂ with Dual Active Centers of Synergistic Absorptionâ€Catalysis Effect for Highâ€S Loading Liâ€S Batteries. Advanced Functional Materials, 2019, 29, 1806724.	7.8	186
44	Promising Dual-Doped Graphene Aerogel/SnS₂ Nanocrystal Building High Performance Sodium Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 2637-2648.	4.0	185
45	Efficient Trapping and Catalytic Conversion of Polysulfides by VS₄ Nanosites for Liâ€“S Batteries. ACS Energy Letters, 2019, 4, 755-762.	8.8	185
46	A Versatile Snâ€Substituted Argyrodite Sulfide Electrolyte for Allâ€Solidâ€State Li Metal Batteries. Advanced Energy Materials, 2020, 10, 1903422.	10.2	183
47	Controlled SnO2Crystallinity Effectively Dominating Sodium Storage Performance. Advanced Energy Materials, 2016, 6, 1502057.	10.2	180
48	A high-energy sulfur cathode in carbonate electrolyte by eliminating polysulfides via solid-phase lithium-sulfur transformation. Nature Communications, 2018, 9, 4509.	5.8	175
49	Rational Design of Atomicâ€Layerâ€Deposited LiFePO₄ as a Highâ€Performance Cathode for Lithiumâ€Ion Batteries. Advanced Materials, 2014, 26, 6472-6477.	11.1	161
50	Insight into MoS₂â€“MoN Heterostructure to Accelerate Polysulfide Conversion toward Highâ€Energyâ€Density Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2021, 11, 2003314.	10.2	159
51	High concentration nitrogen doped carbon nanotube anodes with superior Li+ storage performance for lithium rechargeable battery application. Journal of Power Sources, 2012, 197, 238-245.	4.0	158
52	Safe and Durable High-Temperature Lithiumâ€“Sulfur Batteries via Molecular Layer Deposited Coating. Nano Letters, 2016, 16, 3545-3549.	4.5	157
53	Tuning the Anodeâ€“Electrolyte Interface Chemistry for Garnetâ€Based Solidâ€State Li Metal Batteries. Advanced Materials, 2020, 32, e2000030.	11.1	156
54	Unravelling the Chemistry and Microstructure Evolution of a Cathodic Interface in Sulfide-Based All-Solid-State Li-Ion Batteries. ACS Energy Letters, 2019, 4, 2480-2488.	8.8	154

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55	On rechargeability and reaction kinetics of sodiumâ€“air batteries. Energy and Environmental Science, 2014, 7, 3747-3757.	15.6	150
56	Defect-Rich Crystalline SnO₂ Immobilized on Graphene Nanosheets with Enhanced Cycle Performance for Li Ion Batteries. Journal of Physical Chemistry C, 2012, 116, 22149-22156.	1.5	138
57	Going Beyond Lithium Hybrid Capacitors: Proposing a New Highâ€Performing Sodium Hybrid Capacitor System for Nextâ€Generation Hybrid Vehicles Made with Bioâ€Inspired Activated Carbon. Advanced Energy Materials, 2016, 6, 1502199.	10.2	137
58	A flexible electron-blocking interfacial shield for dendrite-free solid lithium metal batteries. Nature Communications, 2021, 12, 176.	5.8	136
59	Hierarchically porous LiFePO4/nitrogen-doped carbon nanotubes composite as a cathode for lithium ion batteries. Journal of Materials Chemistry, 2012, 22, 7537.	6.7	135
60	Sulfur/Nitrogen Dual-doped Porous Graphene Aerogels Enhancing Anode Performance of Lithium Ion Batteries. Electrochimica Acta, 2016, 205, 188-197.	2.6	133
61	Crumpled reduced graphene oxide conformally encapsulated hollow V2O5 nano/microsphere achieving brilliant lithium storage performance. Nano Energy, 2016, 24, 32-44.	8.2	132
62	Stabilizing interface between Li10SnP2S12 and Li metal by molecular layer deposition. Nano Energy, 2018, 53, 168-174.	8.2	132
63	Nitrogen-doped carbon nanotubes with high activity for oxygen reduction in alkaline media. International Journal of Hydrogen Energy, 2011, 36, 2258-2265.	3.8	128
64	Enhanced Performance of P2â€Na_{0.66}(Mn_{0.54}Co_{0.13}Ni_{0.13})O₂ Cathode for Sodiumâ€Ion Batteries by Ultrathin Metal Oxide Coatings via Atomic Layer Deposition. Advanced Functional Materials, 2017, 27, 1701870.	7.8	128
65	Toward High Areal Energy and Power Density Electrode for Li-Ion Batteries via Optimized 3D Printing Approach. ACS Applied Materials & Interfaces, 2018, 10, 39794-39801.	4.0	126
66	Graphene Oxideâ€Template Controlled Cuboidâ€Shaped Highâ€Capacity VS₄ Nanoparticles as Anode for Sodiumâ€Ion Batteries. Advanced Functional Materials, 2018, 28, 1801806.	7.8	125
67	Li₁₀Ge(P_{1â€“x}Sb_x)₂S₁₂ Lithium-Ion Conductors with Enhanced Atmospheric Stability. Chemistry of Materials, 2020, 32, 2664-2672.	3.2	125
68	Atomic Layer Deposition of Lithium Tantalate Solid-State Electrolytes. Journal of Physical Chemistry C, 2013, 117, 20260-20267.	1.5	123
69	Elegant design of electrode and electrode/electrolyte interface in lithium-ion batteries by atomic layer deposition. Nanotechnology, 2015, 26, 024001.	1.3	123
70	Molecular Layer Deposition for Energy Conversion and Storage. ACS Energy Letters, 2018, 3, 899-914.	8.8	123
71	Chemical Structure of Nitrogen-Doped Graphene with Single Platinum Atoms and Atomic Clusters as a Platform for the PEMFC Electrode. Journal of Physical Chemistry C, 2014, 118, 3890-3900.	1.5	121
72	Tiâ€Based Oxide Anode Materials for Advanced Electrochemical Energy Storage: Lithium/Sodium Ion Batteries and Hybrid Pseudocapacitors. Small, 2019, 15, e1904740.	5.2	121

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73	Atomic scale enhancement of metalâ€“support interactions between Pt and ZrC for highly stable electrocatalysts. Energy and Environmental Science, 2015, 8, 1450-1455.	15.6	120
74	Natural SEI-Inspired Dual-Protective Layers via Atomic/Molecular Layer Deposition for Long-Life Metallic Lithium Anode. Matter, 2019, 1, 1215-1231.	5.0	120
75	Superior catalytic activity of nitrogen-doped graphene cathodes for high energy capacity sodiumâ€“air batteries. Chemical Communications, 2013, 49, 11731.	2.2	119
76	Nanoscale Manipulation of Spinel Lithium Nickel Manganese Oxide Surface by Multisite Ti Occupation as Highâ€Performance Cathode. Advanced Materials, 2017, 29, 1703764.	11.1	119
77	Carbon paper interlayers: A universal and effective approach for highly stable Li metal anodes. Nano Energy, 2018, 43, 368-375.	8.2	117
78	Soft X-ray XANES studies of various phases related to LiFePO4 based cathode materials. Energy and Environmental Science, 2012, 5, 7007.	15.6	116
79	Engineering the Low Coordinated Pt Single Atom to Achieve the Superior Electrocatalytic Performance toward Oxygen Reduction. Small, 2020, 16, e2003096.	5.2	110
80	Cu-doped P2-Na_{0.5}Ni_{0.33}Mn_{0.67}O₂ encapsulated with MgO as a novel high voltage cathode with enhanced Na-storage properties. Journal of Materials Chemistry A, 2017, 5, 8408-8415.	5.2	109
81	Dual-functional interfaces for highly stable Ni-rich layered cathodes in sulfide all-solid-state batteries. Energy Storage Materials, 2020, 27, 117-123.	9.5	109
82	Atomic/molecular layer deposition for energy storage and conversion. Chemical Society Reviews, 2021, 50, 3889-3956.	18.7	109
83	Unravelling the Role of Electrochemically Active FePO₄ Coating by Atomic Layer Deposition for Increased Highâ€Voltage Stability of LiNi_{0.5}Mn_{1.5}O₄ Cathode Material. Advanced Science, 2015, 2, 1500022.	5.6	108
84	Structurally tailored graphene nanosheets as lithium ion battery anodes: an insight to yield exceptionally high lithium storage performance. Nanoscale, 2013, 5, 12607.	2.8	107
85	Inkjet-printed silicon as high performance anodes for Li-ion batteries. Nano Energy, 2017, 36, 313-321.	8.2	107
86	Pt/Pd Single-Atom Alloys as Highly Active Electrochemical Catalysts and the Origin of Enhanced Activity. ACS Catalysis, 2019, 9, 9350-9358.	5.5	106
87	Recent Progress on MOF-Derived Nanomaterials as Advanced Electrocatalysts in Fuel Cells. Catalysts, 2016, 6, 116.	1.6	105
88	High Capacity, Dendriteâ€Free Growth, and Minimum Volume Change Na Metal Anode. Small, 2018, 14, e1703717.	5.2	104
89	Tunable porous structure of metal organic framework derived carbon and the application in lithiumâ€“sulfur batteries. Journal of Power Sources, 2016, 302, 174-179.	4.0	100
90	Metalâ€“Organic Frameworks-Derived Co₂P@N-C@rGO with Dual Protection Layers for Improved Sodium Storage. ACS Applied Materials & Interfaces, 2018, 10, 14641-14648.	4.0	100

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91	Ultrathin atomic layer deposited ZrO2 coating to enhance the electrochemical performance of Li4Ti5O12 as an anode material. Electrochimica Acta, 2013, 93, 195-201.	2.6	99
92	High-performance all-solid-state Liâ€“Se batteries induced by sulfide electrolytes. Energy and Environmental Science, 2018, 11, 2828-2832.	15.6	99
93	Highly Stable Na_{2/3}(Mn_{0.54}Ni_{0.13}Co_{0.13})O₂ Cathode Modified by Atomic Layer Deposition for Sodiumâ€ion Batteries. ChemSusChem, 2015, 8, 2537-2543.	3.6	97
94	Engineering the Pores of Biomassâ€Derived Carbon: Insights for Achieving Ultrahigh Stability at High Power in Highâ€Energy Supercapacitors. ChemSusChem, 2017, 10, 2805-2815.	3.6	96
95	Antiperovskite Electrolytes for Solid-State Batteries. Chemical Reviews, 2022, 122, 3763-3819.	23.0	96
96	Origin of the high oxygen reduction reaction of nitrogen and sulfur co-doped MOF-derived nanocarbon electrocatalysts. Materials Horizons, 2017, 4, 900-907.	6.4	95
97	Surface aging at olivine LiFePO₄: a direct visual observation of iron dissolution and the protection role of nano-carbon coating. Journal of Materials Chemistry A, 2013, 1, 1579-1586.	5.2	93
98	Development of the cold sintering process and its application in solid-state lithium batteries. Journal of Power Sources, 2018, 393, 193-203.	4.0	92
99	A metal-organic framework-derived bifunctional catalyst for hybrid sodium-air batteries. Applied Catalysis B: Environmental, 2019, 241, 407-414.	10.8	92
100	Novel approach toward a binder-free and current collector-free anode configuration: highly flexible nanoporous carbon nanotube electrodes with strong mechanical strength harvesting improved lithium storage. Journal of Materials Chemistry, 2012, 22, 18847.	6.7	91
101	Interface Design and Development of Coating Materials in Lithiumâ€Sulfur Batteries. Advanced Functional Materials, 2018, 28, 1801323.	7.8	91
102	Controllable synthesis of graphene-based titanium dioxide nanocomposites by atomic layer deposition. Nanotechnology, 2011, 22, 165602.	1.3	90
103	Manipulating Interfacial Nanostructure to Achieve Highâ€Performance Allâ€Solidâ€State Lithiumâ€ion Batteries. Small Methods, 2019, 3, 1900261.	4.6	90
104	Printing nanostructured carbon for energy storage and conversion applications. Carbon, 2015, 92, 150-176.	5.4	89
105	Ultrasmall MoS₂ embedded in carbon nanosheets-coated Sn/SnO_x as anode material for high-rate and long life Li-ion batteries. Journal of Materials Chemistry A, 2017, 5, 4576-4582.	5.2	89
106	Stabilizing and understanding the interface between nickel-rich cathode and PEO-based electrolyte by lithium niobium oxide coating for high-performance all-solid-state batteries. Nano Energy, 2020, 78, 105107.	8.2	88
107	Recent progress and prospects of Li-CO2 batteries: Mechanisms, catalysts and electrolytes. Energy Storage Materials, 2021, 34, 148-170.	9.5	88
108	Atomic layer deposition of lithium phosphates as solid-state electrolytes for all-solid-state microbatteries. Nanotechnology, 2014, 25, 504007.	1.3	87

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109	Oxygen-containing Functional Groups Enhancing Electrochemical Performance of Porous Reduced Graphene Oxide Cathode in Lithium Ion Batteries. Electrochimica Acta, 2015, 174, 762-769.	2.6	86
110	Three-Dimensional Nanostructured Air Electrode for Sodiumâ€“Oxygen Batteries: A Mechanism Study toward the Cyclability of the Cell. Chemistry of Materials, 2015, 27, 3040-3047.	3.2	86
111	Advanced characterization techniques for solid state lithium battery research. Materials Today, 2020, 36, 139-157.	8.3	86
112	Atomic Layer Deposition of Lithium Niobium Oxides as Potential Solid-State Electrolytes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 1654-1661.	4.0	85
113	Interfaces in Garnetâ€Based Allâ€Solidâ€State Lithium Batteries. Advanced Energy Materials, 2020, 10, 2001318.	10.2	85
114	Robust Metallic Lithium Anode Protection by the Molecularâ€Layerâ€Deposition Technique. Small Methods, 2018, 2, 1700417.	4.6	84
115	Mitigating the Interfacial Degradation in Cathodes for High-Performance Oxide-Based Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2019, 11, 4954-4961.	4.0	83
116	Detection of Electrochemical Reaction Products from the Sodiumâ€“Oxygen Cell with Solid-State ²³Na NMR Spectroscopy. Journal of the American Chemical Society, 2017, 139, 595-598.	6.6	81
117	Nitrogen-doped carbon nanotubes coated by atomic layer deposited SnO2 with controlled morphology and phase. Carbon, 2011, 49, 1133-1144.	5.4	80
118	Eliminating the Detrimental Effects of Conductive Agents in Sulfide-Based Solid-State Batteries. ACS Energy Letters, 2020, 5, 1243-1251.	8.8	80
119	Electrocatalysts by atomic layer deposition for fuel cell applications. Nano Energy, 2016, 29, 220-242.	8.2	79
120	Superior sodium storage of novel VO₂nano-microspheres encapsulated into crumpled reduced graphene oxide. Journal of Materials Chemistry A, 2017, 5, 4850-4860.	5.2	79
121	Atomic layer deposited coatings to significantly stabilize anodes for Li ion batteries: effects of coating thickness and the size of anode particles. Journal of Materials Chemistry A, 2014, 2, 2306.	5.2	78
122	Advanced Support Materials and Interactions for Atomically Dispersed Nobleâ€Metal Catalysts: From Support Effects to Design Strategies. Advanced Energy Materials, 2022, 12, 2102556.	10.2	78
123	Stabilization of all-solid-state Liâ€“S batteries with a polymerâ€“ceramic sandwich electrolyte by atomic layer deposition. Journal of Materials Chemistry A, 2018, 6, 23712-23719.	5.2	77
124	Superionic conductivity in lithium argyrodite solid-state electrolyte by controlled Cl-doping. Nano Energy, 2020, 69, 104396.	8.2	76
125	Dendrite-free lithium metal solid battery with a novel polyester based triblock copolymer solid-state electrolyte. Nano Energy, 2020, 72, 104690.	8.2	76
126	Tailoring interactions of carbon and sulfur in Liâ€“S battery cathodes: significant effects of carbonâ€“heteroatom bonds. Journal of Materials Chemistry A, 2014, 2, 12866.	5.2	75

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127	Self-stacked nitrogen-doped carbon nanotubes as long-life air electrode for sodium-air batteries: Elucidating the evolution of discharge product morphology. Nano Energy, 2015, 12, 698-708.	8.2	75
128	Composite Nanostructure Construction on the Grain Surface of Liâ€Rich Layered Oxides. Advanced Materials, 2020, 32, e1906070.	11.1	74
129	Î³-Fe₂O₃@CNTs Anode Materials for Lithium Ion Batteries Investigated by Electron Energy Loss Spectroscopy. Chemistry of Materials, 2017, 29, 3499-3506.	3.2	73
130	Insight into the Microstructure and Ionic Conductivity of Cold Sintered NASICON Solid Electrolyte for Solid-State Batteries. ACS Applied Materials & Interfaces, 2019, 11, 27890-27896.	4.0	72
131	Engineering the conductive carbon/PEO interface to stabilize solid polymer electrolytes for all-solid-state high voltage LiCoO₂ batteries. Journal of Materials Chemistry A, 2020, 8, 2769-2776.	5.2	72
132	Reversible hybrid sodium-CO2 batteries with low charging voltage and long-life. Nano Energy, 2020, 68, 104318.	8.2	70
133	Size-dependent surface phase change of lithium iron phosphate during carbon coating. Nature Communications, 2014, 5, 3415.	5.8	66
134	Toward a Sodiumâ€“â€œAirâ€•Battery: Revealing the Critical Role of Humidity. Journal of Physical Chemistry C, 2015, 119, 13433-13441.	1.5	66
135	Highly Exposed Active Sites of Defect-Enriched Derived MOFs for Enhanced Oxygen Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 17855-17862.	3.2	66
136	Tuning the dual-active sites of ZIF-67 derived porous nanomaterials for boosting oxygen catalysis and rechargeable Zn-air batteries. Nano Research, 2021, 14, 2353.	5.8	66
137	Advanced Highâ€Voltage Allâ€Solidâ€State Liâ€Ion Batteries Enabled by a Dualâ€Halogen Solid Electrolyte. Advanced Energy Materials, 2021, 11, 2100836.	10.2	64
138	Imaging Nitrogen in Individual Carbon Nanotubes. Journal of Physical Chemistry Letters, 2010, 1, 1709-1713.	2.1	63
139	Deciphering Interfacial Chemical and Electrochemical Reactions of Sulfideâ€Based Allâ€Solidâ€State Batteries. Advanced Energy Materials, 2021, 11, 2100210.	10.2	63
140	Synchrotronâ€Based Xâ€ray Absorption Fine Structures, Xâ€ray Diffraction, and Xâ€ray Microscopy Techniques Applied in the Study of Lithium Secondary Batteries. Small Methods, 2018, 2, 1700341.	4.6	62
141	Rational design of porous structures via molecular layer deposition as an effective stabilizer for enhancing Pt ORR performance. Nano Energy, 2019, 60, 111-118.	8.2	62
142	3D Vertically Aligned Li Metal Anodes with Ultrahigh Cycling Currents and Capacities of 10 mA cm^{â^'2}/20 mAh cm^{â^'2} Realized by Selective Nucleation within Microchannel Walls. Advanced Energy Materials, 2020, 10, 1903753.	10.2	62
143	Atomic layer deposition derived amorphous TiO2 thin film decorating graphene nanosheets with superior rate capability. Electrochemistry Communications, 2015, 57, 43-47.	2.3	61
144	Amorphous SnO2/graphene aerogel nanocomposites harvesting superior anode performance for lithium energy storage. Applied Energy, 2016, 175, 529-535.	5.1	60

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145	Microwave-assisted hydrothermal synthesis of nanostructured spinel Li4Ti5O12 as anode materials for lithium ion batteries. Electrochimica Acta, 2012, 63, 100-104.	2.6	59
146	Converting a thick electrode into vertically aligned â€œThin electrodesâ€•by 3D-Printing for designing thickness independent Li-S cathode. Energy Storage Materials, 2020, 24, 682-688.	9.5	59
147	Insight into cathode surface to boost the performance of solid-state batteries. Energy Storage Materials, 2021, 35, 661-668.	9.5	59
148	Carbon black cathodes for lithium oxygen batteries: Influence of porosity and heteroatom-doping. Carbon, 2013, 64, 170-177.	5.4	58
149	Atomic Layer Deposited Lithium Silicates as Solid-State Electrolytes for All-Solid-State Batteries. ACS Applied Materials & Interfaces, 2017, 9, 31786-31793.	4.0	58
150	A liquid anode for rechargeable sodium-air batteries with low voltage gap and high safety. Nano Energy, 2018, 49, 574-579.	8.2	57
151	Influence of paper thickness on the electrochemical performances of graphene papers as an anode for lithium ion batteries. Electrochimica Acta, 2013, 91, 227-233.	2.6	56
152	Superior stable sulfur cathodes of Liâ€“S batteries enabled by molecular layer deposition. Chemical Communications, 2014, 50, 9757.	2.2	56
153	A bifunctional solid state catalyst with enhanced cycling stability for Na and Liâ€“O₂cells: revealing the role of solid state catalysts. Energy and Environmental Science, 2017, 10, 286-295.	15.6	55
154	Atomic layer deposited Li4Ti5O12 on nitrogen-doped carbon nanotubes. RSC Advances, 2013, 3, 7285.	1.7	54
155	Constructing high-rate and long-life phosphorus/carbon anodes for potassium-ion batteries through rational nanoconfinement. Nano Energy, 2021, 83, 105772.	8.2	54
156	Origin of achieving the enhanced activity and stability of Pt electrocatalysts with strong metal-support interactions via atomic layer deposition. Nano Energy, 2018, 53, 716-725.	8.2	53
157	Gradiently Sodiated Alucone as an Interfacial Stabilizing Strategy for Solidâ€State Na Metal Batteries. Advanced Functional Materials, 2020, 30, 2001118.	7.8	53
158	Recent Development of Electrocatalytic CO₂ Reduction Application to Energy Conversion. Small, 2021, 17, e2100323.	5.2	53
159	Recent progress and perspectives on designing high-performance thick electrodes for all-solid-state lithium batteries. ETransportation, 2022, 11, 100152.	6.8	53
160	Tailored lithium storage performance of graphene aerogel anodes with controlled surface defects for lithium-ion batteries. Applied Surface Science, 2016, 364, 651-659.	3.1	52
161	Dualâ€“phase Spinel MnCo 2 O 4 Nanocrystals with Nitrogen-doped Reduced Graphene Oxide as Potential Catalyst for Hybrid Naâ€“Air Batteries. Electrochimica Acta, 2017, 244, 222-229.	2.6	52
162	All-Organic Sodium Hybrid Capacitor: A New, High-Energy, High-Power Energy Storage System Bridging Batteries and Capacitors. Chemistry of Materials, 2017, 29, 7122-7130.	3.2	52

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163	High stability and activity of Pt electrocatalyst on atomic layer deposited metal oxide/nitrogen-doped graphene hybrid support. International Journal of Hydrogen Energy, 2014, 39, 15967-15974.	3.8	51
164	Recent Advances on Sodiumâ€“Oxygen Batteries: A Chemical Perspective. Accounts of Chemical Research, 2018, 51, 1532-1540.	7.6	51
165	In situ formation of highly controllable and stable Na₃PS₄ as a protective layer for Na metal anode. Journal of Materials Chemistry A, 2019, 7, 4119-4125.	5.2	51
166	Highly stable Ni-rich layered oxide cathode enabled by a thick protective layer with bio-tissue structure. Energy Storage Materials, 2020, 24, 291-296.	9.5	51
167	New insight into atomic-scale engineering of electrode surface for long-life and safe high voltage lithium ion cathodes. Nano Energy, 2017, 38, 19-27.	8.2	50
168	High Tap Density Co and Ni Containing P2â€Na_{0.66}MnO₂ Buckyballs: A Promising High Voltage Cathode for Stable Sodiumâ€Ion Batteries. Advanced Functional Materials, 2018, 28, 1801898.	7.8	50
169	The application of carbon materials in nonaqueous Naâ€O₂ batteries. , 2019, 1, 141-164.		49
170	Observation of lithiation-induced structural variations in TiO₂ nanotube arrays by X-ray absorption fine structure. Journal of Materials Chemistry A, 2015, 3, 412-419.	5.2	48
171	Atomic layer deposited tantalum oxide to anchor Pt/C for a highly stable catalyst in PEMFCs. Journal of Materials Chemistry A, 2017, 5, 9760-9767.	5.2	48
172	Regulated lithium plating and stripping by a nano-scale gradient inorganicâ€“organic coating for stable lithium metal anodes. Energy and Environmental Science, 2021, 14, 4085-4094.	15.6	48
173	Interaction of Carbon Coating on LiFePO₄: A Local Visualization Study of the Influence of Impurity Phases. Advanced Functional Materials, 2013, 23, 806-814.	7.8	47
174	High-Performance and Recyclable Al-Air Coin Cells Based on Eco-friendly Chitosan Hydrogel Membranes. ACS Applied Materials & Interfaces, 2018, 10, 19730-19738.	4.0	47
175	Ultralow Loading and High-Performing Pt Catalyst for a Polymer Electrolyte Membrane Fuel Cell Anode Achieved by Atomic Layer Deposition. ACS Catalysis, 2019, 9, 5365-5374.	5.5	47
176	Nitrogen-doped carbon nanotubes with tunable structure and high yield produced by ultrasonic spray pyrolysis. Applied Surface Science, 2011, 257, 7837-7844.	3.1	46
177	Fabrication of MoS₂-Graphene Nanocomposites by Layer-by-Layer Manipulation for High-Performance Lithium Ion Battery Anodes. ECS Journal of Solid State Science and Technology, 2013, 2, M3034-M3039.	0.9	46
178	Enabling ultrafast ionic conductivity in Br-based lithium argyrodite electrolytes for solid-state batteries with different anodes. Energy Storage Materials, 2020, 30, 238-249.	9.5	46
179	Stable Silicon Anodes by Molecular Layer Deposited Artificial Zincone Coatings. Advanced Functional Materials, 2021, 31, 2010526.	7.8	46
180	Realizing Solidâ€Phase Reaction in Liâ€“S Batteries via Localized Highâ€Concentration Carbonate Electrolyte. Advanced Energy Materials, 2021, 11, 2101004.	10.2	46

#	Article	IF	Citations
181	Utilizing the full capacity of carbon black as anode for Na-ion batteries via solvent co-intercalation. Nano Research, 2017, 10, 4378-4387.	5.8	45
182	Formation of size-dependent and conductive phase on lithium iron phosphate during carbon coating. Nature Communications, 2018, 9, 929.	5.8	45
183	A green and template-free synthesis process of superior carbon material with ellipsoidal structure as enhanced material for supercapacitors. Journal of Power Sources, 2018, 405, 80-88.	4.0	45
184	Manipulation of an ionic and electronic conductive interface for highly-stable high-voltage cathodes. Nano Energy, 2019, 65, 103988.	8.2	45
185	Atomic layer deposition of amorphous iron phosphates on carbon nanotubes as cathode materials for lithium-ion batteries. Electrochimica Acta, 2015, 162, 275-281.	2.6	44
186	Tuning bifunctional interface for advanced sulfide-based all-solid-state batteries. Energy Storage Materials, 2020, 33, 139-146.	9.5	44
187	Three-dimensional Composite Catalysts for Alâ€“O₂ Batteries Composed of CoMn₂O₄ Nanoneedles Supported on Nitrogen-Doped Carbon Nanotubes/Graphene. ACS Applied Materials & Interfaces, 2019, 11, 21526-21535.	4.0	42
188	Carbon coated bimetallic sulfide nanodots/carbon nanorod heterostructure enabling long-life lithium-ion batteries. Journal of Materials Chemistry A, 2017, 5, 25625-25631.	5.2	41
189	A 3D-printed ultra-high Se loading cathode for high energy density quasi-solid-state Liâ€“Se batteries. Journal of Materials Chemistry A, 2020, 8, 278-286.	5.2	41
190	Dendrite-free and minimum volume change Li metal anode achieved by three-dimensional artificial interlayers. Energy Storage Materials, 2018, 15, 415-421.	9.5	40
191	Suppressing Corrosion of Aluminum Foils via Highly Conductive Graphene-like Carbon Coating in High-Performance Lithium-Based Batteries. ACS Applied Materials & Interfaces, 2019, 11, 32826-32832.	4.0	39
192	Interrogation of the Reaction Mechanism in a Naâ€“O₂ Battery Using In Situ Transmission Electron Microscopy. ACS Nano, 2020, 14, 3669-3677.	7.3	39
193	Nanoscale stabilization of Liâ€“sulfur batteries by atomic layer deposited Al2O3. RSC Advances, 2014, 4, 27126.	1.7	38
194	A novel coating onto LiMn2O4 cathode with increased lithium ion battery performance. Applied Surface Science, 2014, 317, 884-891.	3.1	38
195	New Insight of Pyroleâ€Like Nitrogen for Boosting Hydrogen Evolution Activity and Stability of Pt Single Atoms. Small, 2021, 17, e2004453.	5.2	38
196	Observation of Surface/Defect States of SnO₂ Nanowires on Different Substrates from X-ray Excited Optical Luminescence. Crystal Growth and Design, 2012, 12, 397-402.	1.4	37
197	Revealing the charge/discharge mechanism of Naâ€“O₂ cells by in situ soft X-ray absorption spectroscopy. Energy and Environmental Science, 2018, 11, 2073-2077.	15.6	37
198	Paper with Power: Engraving 2D Materials on 3D Structures for Printed, Highâ€Performance, Binderâ€Free, and Allâ€Solidâ€State Supercapacitors. Advanced Functional Materials, 2018, 28, 1803600.	7.8	37

#	Article	IF	Citations
199	On the Cycling Performance of Naâ€O₂ Cells: Revealing the Impact of the Superoxide Crossover toward the Metallic Na Electrode. Advanced Functional Materials, 2018, 28, 1801904.	7.8	37
200	3D Printing of Free-Standing â€œO₂ Breathableâ€•Air Electrodes for High-Capacity and Long-Life Naâ€“O₂ Batteries. Chemistry of Materials, 2020, 32, 3018-3027.	3.2	37
201	How to Control the Discharge Products in Naâ€“O₂ Cells: Direct Evidence toward the Role of Functional Groups at the Air Electrode Surface. Journal of Physical Chemistry Letters, 2017, 8, 4794-4800.	2.1	36
202	Tailoring the Mechanical and Electrochemical Properties of an Artificial Interphase for Highâ€Performance Metallic Lithium Anode. Advanced Energy Materials, 2020, 10, 2001139.	10.2	36
203	Electron and Ion Coâ€Conductive Catalyst Achieving Instant Transformation of Lithium Polysulfide towards Li₂S. Advanced Materials, 2021, 33, e2105362.	11.1	36
204	COFs-based electrolyte accelerates the Na+ diffusion and restrains dendrite growth in quasi-solid-state organic batteries. Nano Energy, 2022, 92, 106756.	8.2	36
205	Immobilization and kinetic promotion of polysulfides by molybdenum carbide in lithium-sulfur batteries. Chemical Engineering Journal, 2021, 411, 128563.	6.6	35
206	Crystallinity-Controlled Synthesis of Zirconium Oxide Thin Films on Nitrogen-Doped Carbon Nanotubes by Atomic Layer Deposition. Journal of Physical Chemistry C, 2012, 116, 14656-14664.	1.5	34
207	Atomic Layer Deposited Nonâ€Noble Metal Oxide Catalyst for Sodiumâ€“Air Batteries: Tuning the Morphologies and Compositions of Discharge Product. Advanced Functional Materials, 2017, 27, 1606662.	7.8	34
208	Atomically precise growth of sodium titanates as anode materials for high-rate and ultralong cycle-life sodium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 24281-24288.	5.2	32
209	Stabilizing Sulfur Cathode in Carbonate and Ether Electrolytes: Excluding Long-Chain Lithium Polysulfide Formation and Switching Lithiation/Delithiation Route. Chemistry of Materials, 2019, 31, 2002-2009.	3.2	32
210	Highly interconnected hollow graphene nanospheres as an advanced high energy and high power cathode for sodium metal batteries. Journal of Materials Chemistry A, 2018, 6, 9846-9853.	5.2	30
211	Visualizing the Oxidation Mechanism and Morphological Evolution of the Cubicâ€Shaped Superoxide Discharge Product in Naâ€“Air Batteries. Advanced Functional Materials, 2019, 29, 1808332.	7.8	30
212	All-Solid-State Lithium Metal Batteries with Sulfide Electrolytes: Understanding Interfacial Ion and Electron Transport. Accounts of Materials Research, 2022, 3, 21-32.	5.9	30
213	Understanding the Critical Role of Binders in Phosphorus/Carbon Anode for Sodiumâ€Ion Batteries through Unexpected Mechanism. Advanced Functional Materials, 2020, 30, 2000060.	7.8	29
214	Tracking the Effect of Sodium Insertion/Extraction in Amorphous and Anatase TiO₂ Nanotubes. Journal of Physical Chemistry C, 2017, 121, 11773-11782.	1.5	28
215	Pd on carbon nanotubes-supported Ag for formate oxidation: The effect of Ag on anti-poisoning performance. Electrochimica Acta, 2016, 210, 285-292.	2.6	27
216	Atomic layer deposited aluminium phosphate thin films on N-doped CNTs. RSC Advances, 2013, 3, 4492.	1.7	26

#	Article	IF	Citations
217	Titanium Dioxide/Lithium Phosphate Nanocomposite Derived from Atomic Layer Deposition as a Highâ€Performance Anode for Lithium Ion Batteries. Advanced Materials Interfaces, 2016, 3, 1600369.	1.9	26
218	Origin of phase inhomogeneity in lithium iron phosphate during carbon coating. Nano Energy, 2018, 45, 52-60.	8.2	26
219	Unveiling the Interfacial Instability of the Phosphorus/Carbon Anode for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2019, 11, 30763-30773.	4.0	26
220	Sodiumâ€“Oxygen Batteries: Recent Developments and Remaining Challenges. Trends in Chemistry, 2020, 2, 241-253.	4.4	26
221	O₂/O₂^{â€“} Crossover- and Dendrite-Free Hybrid Solid-State Naâ€“O₂ Batteries. Chemistry of Materials, 2019, 31, 9024-9031.	3.2	24
222	Recent Advances of Bimetallic Sulfide Anodes for Sodium Ion Batteries. Frontiers in Chemistry, 2020, 8, 353.	1.8	24
223	Revealing the Chemical Mechanism of NaO₂ Decomposition by In Situ Raman Imaging. Chemistry of Materials, 2018, 30, 5156-5160.	3.2	23
224	Design of a 3D-Porous Structure with Residual Carbon for High-Performance Ni-Rich Cathode Materials. ACS Applied Materials & Interfaces, 2019, 11, 2500-2506.	4.0	23
225	Novel High-Energy-Density Rechargeable Hybrid Sodiumâ€“Air Cell with Acidic Electrolyte. ACS Applied Materials & Interfaces, 2018, 10, 23748-23756.	4.0	22
226	Novel amorphous CoSnO3@rGO nanocomposites highly enhancing sodium storage. Electrochimica Acta, 2019, 316, 236-247.	2.6	22
227	Reviving Anode Protection Layer in Naâ€O₂ Batteries: Failure Mechanism and Resolving Strategy. Advanced Energy Materials, 2021, 11, 2003789.	10.2	22
228	Atomic Layer Deposition of Hierarchical CNTs@FePO₄ Architecture as a 3D Electrode for Lithiumâ€Ion and Sodiumâ€Ion Batteries. Advanced Materials Interfaces, 2016, 3, 1600468.	1.9	21
229	Aligning the binder effect on sodiumâ€“air batteries. Journal of Materials Chemistry A, 2018, 6, 1473-1484.	5.2	21
230	Emerging Characterization Techniques for Electrode Interfaces in Sulfideâ€Based Allâ€Solidâ€State Lithium Batteries. Small Structures, 2022, 3, 2100146.	6.9	21
231	Controllable Synthesis of Co@CoO_x/Helical Nitrogen-Doped Carbon Nanotubes toward Oxygen Reduction Reaction as Binder-free Cathodes for Alâ€“Air Batteries. ACS Applied Materials & Interfaces, 2020, 12, 16512-16520.	4.0	20
232	Fastâ€Charging Halideâ€Based Allâ€Solidâ€State Batteries by Manipulation of Current Collector Interface. Advanced Functional Materials, 2022, 32, .	7.8	20
233	Nitrogen ion implanted graphene as thrombo-protective safer and cytoprotective alternative for biomedical applications. Carbon, 2013, 61, 321-328.	5.4	19
234	Nitrogen-doped graphene nanosheets/sulfur composite as lithiumâ€“sulfur batteries cathode. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2016, 213, 83-89.	1.7	18

#	Article	IF	Citations
235	Minimizing Polysulfide Shuttle Effect in Lithium-Ion Sulfur Batteries by Anode Surface Passivation. ACS Applied Materials & Interfaces, 2018, 10, 21965-21972.	4.0	18
236	Nanomechanical elasticity and fracture studies of lithium phosphate (LPO) and lithium tantalate (LTO) solid-state electrolytes. Nanoscale, 2019, 11, 18730-18738.	2.8	17
237	ALD derived Fe3+- doping toward high performance P2â€“Na0.75Ni0.2Co0.2Mn0.6O2 cathode material for sodium ion batteries. Materials Today Energy, 2019, 14, 100353.	2.5	16
238	Engineering a â€œnanonetâ€•reinforced polymer electrolyte for long-life Liâ€“O2 batteries. Journal of Materials Chemistry A, 2019, 7, 24947-24952.	5.2	16
239	A novel approach in controlling the conductivity of thin films using molecular layer deposition. Applied Surface Science, 2015, 357, 1319-1324.	3.1	15
240	Designing High-Performance Nanostructured P2-type Cathode Based on a Template-free Modified Pechini Method for Sodium-Ion Batteries. ACS Omega, 2018, 3, 8309-8316.	1.6	15
241	Orientation and Ordering of Organic and Hybrid Inorganicâ€“Organic Polyurea Films Using Molecular Layer Deposition. Journal of Physical Chemistry C, 2017, 121, 11757-11764.	1.5	13
242	Thermal Stability of Alumina-Overcoated Au₂₅ Clusters for Catalysis. ACS Applied Nano Materials, 2018, 1, 6904-6911.	2.4	13
243	Non Noble Metal Catalyst for Oxygen Reduction Reaction and Its Characterization by Simulated Fuel Cell Test. Journal of the Electrochemical Society, 2018, 165, J3008-J3015.	1.3	13
244	Optimized ALD-derived MgO coating layers enhancing silicon anode performance for lithium ion batteries. Journal of Materials Research, 2019, 34, 2425-2434.	1.2	13
245	Realizing Highâ€Performance Liâ€S Batteries through Additive Manufactured and Chemically Enhanced Cathodes. Small Methods, 2021, 5, e2100176.	4.6	12
246	Surface modification of nitrogen-doped carbon nanotubes by ozone via atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	9
247	Spreading monoclinic boundary network between hexagonal primary grains for high performance Ni-rich cathode materials. Nano Energy, 2022, 100, 107502.	8.2	7
248	Lithium-Ion Batteries: Rational Design of Atomic-Layer-Deposited LiFePO4as a High-Performance Cathode for Lithium-Ion Batteries (Adv. Mater. 37/2014). Advanced Materials, 2014, 26, 6358-6358.	11.1	5
249	Chemical speciation and mapping of the Si in Si doped LFP ingot with synchrotron radiation technique. Canadian Journal of Chemical Engineering, 2019, 97, 2211-2217.	0.9	4
250	Investigation of amorphous to crystalline phase transition of sodium titanate by X-ray absorption spectroscopy and scanning transmission X-ray microscopy. Canadian Journal of Chemistry, 2017, 95, 1163-1169.	0.6	2