

Bin Luo

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

113
papers

8,089
citations

46
h-index

89
g-index

125
ext. papers

9,522
ext. citations

12.5
avg, IF

6.55
L-index

#	Paper	IF	Citations
113	Recent advances in 2D materials for photocatalysis. <i>Nanoscale</i> , 2016 , 8, 6904-20	7.7	492
112	Adaptable silicon-carbon nanocables sandwiched between reduced graphene oxide sheets as lithium ion battery anodes. <i>ACS Nano</i> , 2013 , 7, 1437-45	16.7	359
111	Two dimensional graphene/BnS2 hybrids with superior rate capability for lithium ion storage. <i>Energy and Environmental Science</i> , 2012 , 5, 5226-5230	35.4	357
110	Renewing functionalized graphene as electrodes for high-performance supercapacitors. <i>Advanced Materials</i> , 2012 , 24, 6348-55	24	355
109	Chemical approaches toward graphene-based nanomaterials and their applications in energy-related areas. <i>Small</i> , 2012 , 8, 630-46	11	335
108	Structural evolution of 2D microporous covalent triazine-based framework toward the study of high-performance supercapacitors. <i>Journal of the American Chemical Society</i> , 2015 , 137, 219-25	16.4	311
107	Hollow Nanostructures for Photocatalysis: Advantages and Challenges. <i>Advanced Materials</i> , 2019 , 31, e1801369	24	305
106	Graphene-confined Sn nanosheets with enhanced lithium storage capability. <i>Advanced Materials</i> , 2012 , 24, 3538-43	24	254
105	Design and construction of three dimensional graphene-based composites for lithium ion battery applications. <i>Energy and Environmental Science</i> , 2015 , 8, 456-477	35.4	224
104	Contact-engineered and void-involved silicon/carbon nanohybrids as lithium-ion-battery anodes. <i>Advanced Materials</i> , 2013 , 25, 3560-5	24	212
103	An Innovative Freeze-Dried Reduced Graphene Oxide Supported SnS Cathode Active Material for Aluminum-Ion Batteries. <i>Advanced Materials</i> , 2017 , 29, 1606132	24	207
102	A Binder-Free and Free-Standing Cobalt Sulfide@Carbon Nanotube Cathode Material for Aluminum-Ion Batteries. <i>Advanced Materials</i> , 2018 , 30, 1703824	24	199
101	The dimensionality of Sn anodes in Li-ion batteries. <i>Materials Today</i> , 2012 , 15, 544-552	21.8	194
100	Reduced graphene oxide-mediated growth of uniform tin-core/carbon-sheath coaxial nanocables with enhanced lithium ion storage properties. <i>Advanced Materials</i> , 2012 , 24, 1405-9	24	175
99	High volumetric capacity silicon-based lithium battery anodes by nanoscale system engineering. <i>Nano Letters</i> , 2013 , 13, 5578-84	11.5	159
98	Review on areal capacities and long-term cycling performances of lithium sulfur battery at high sulfur loading. <i>Energy Storage Materials</i> , 2019 , 18, 289-310	19.4	159
97	Terephthalonitrile-derived nitrogen-rich networks for high performance supercapacitors. <i>Energy and Environmental Science</i> , 2012 , 5, 9747	35.4	154

96	Recent Progress on Visible Light Responsive Heterojunctions for Photocatalytic Applications. <i>Journal of Materials Science and Technology</i> , 2017 , 33, 1-22	9.1	146
95	Pyrolyzed bacterial cellulose: a versatile support for lithium ion battery anode materials. <i>Small</i> , 2013 , 9, 2399-404	11	144
94	Tin nanoparticles encapsulated in graphene backboned carbonaceous foams as high-performance anodes for lithium-ion and sodium-ion storage. <i>Nano Energy</i> , 2016 , 22, 232-240	17.1	119
93	Sandwich-Like Ultrathin TiS ₂ Nanosheets Confined within N, S Codoped Porous Carbon as an Effective Polysulfide Promoter in Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2019 , 9, 1901872	21.8	119
92	Two-dimensional g-C ₃ N ₄ /Ca ₂ Nb ₂ TaO ₁₀ nanosheet composites for efficient visible light photocatalytic hydrogen evolution. <i>Applied Catalysis B: Environmental</i> , 2017 , 202, 184-190	21.8	118
91	Recent advances in separators to mitigate technical challenges associated with re-chargeable lithium sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 6596-6615	13	115
90	Recent Progress on Integrated Energy Conversion and Storage Systems. <i>Advanced Science</i> , 2017 , 4, 17001104	13.4	109
89	Application of graphene and graphene-based materials in clean energy-related devices. <i>International Journal of Energy Research</i> , 2009 , 33, 1161-1170	4.5	108
88	Molten-Salt-Mediated Synthesis of an Atomic Nickel Co-catalyst on TiO for Improved Photocatalytic H Evolution. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 7230-7234	16.4	102
87	Solar energy conversion on g-C ₃ N ₄ photocatalyst: Light harvesting, charge separation, and surface kinetics. <i>Journal of Energy Chemistry</i> , 2018 , 27, 1111-1123	12	102
86	Controllable growth of SnS ₂ nanostructures on nanocarbon surfaces for lithium-ion and sodium-ion storage with high rate capability. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 1462-1472	13	97
85	Chemical amination of graphene oxides and their extraordinary properties in the detection of lead ions. <i>Nanoscale</i> , 2011 , 3, 5059-66	7.7	97
84	Approaching the downsizing limit of silicon for surface-controlled lithium storage. <i>Advanced Materials</i> , 2015 , 27, 1526-32	24	95
83	New Binder-Free Metal Phosphide/Carbon Felt Composite Anodes for Sodium-Ion Battery. <i>Advanced Energy Materials</i> , 2018 , 8, 1801197	21.8	90
82	Hydrogen reduced graphene oxide/metal grid hybrid film: towards high performance transparent conductive electrode for flexible electrochromic devices. <i>Carbon</i> , 2015 , 81, 232-238	10.4	78
81	Au@MnO ₂ core-shell nanomesh electrodes for transparent flexible supercapacitors. <i>Small</i> , 2014 , 10, 4136-41	11	76
80	One-dimensional/two-dimensional hybridization for self-supported binder-free silicon-based lithium ion battery anodes. <i>Nanoscale</i> , 2013 , 5, 1470-4	7.7	76
79	Single-Crystalline Nanomesh Tantalum Nitride Photocatalyst with Improved Hydrogen-Evolving Performance. <i>Advanced Energy Materials</i> , 2018 , 8, 1701605	21.8	63

78	Lithiation-Induced Vacancy Engineering of Co ₃ O ₄ with Improved Faradic Reactivity for High-Performance Supercapacitor. <i>Advanced Functional Materials</i> , 2020 , 30, 2004172	15.6	63
77	Faster Activation and Slower Capacity/Voltage Fading: A Bifunctional Urea Treatment on Lithium-Rich Cathode Materials. <i>Advanced Functional Materials</i> , 2020 , 30, 1909192	15.6	62
76	Yolk-shell Si/C composites with multiple Si nanoparticles encapsulated into double carbon shells as lithium-ion battery anodes. <i>Journal of Energy Chemistry</i> , 2019 , 32, 124-130	12	58
75	Recent Progress and Future Trends of Aluminum Batteries. <i>Energy Technology</i> , 2019 , 7, 86-106	3.5	58
74	Engineering the trap effect of residual oxygen atoms and defects in hard carbon anode towards high initial Coulombic efficiency. <i>Nano Energy</i> , 2019 , 64, 103937	17.1	57
73	MXene derived TiS ₂ nanosheets for high-rate and long-life sodium-ion capacitors. <i>Energy Storage Materials</i> , 2020 , 26, 550-559	19.4	57
72	Biomimetic SnP Anchored on Carbon Nanotubes as an Anode for High-Performance Sodium-Ion Batteries. <i>ACS Nano</i> , 2020 , 14, 8826-8837	16.7	56
71	Cyclic Voltammetry in Lithium Sulfur Batteries—Challenges and Opportunities. <i>Energy Technology</i> , 2019 , 7, 1801001	3.5	51
70	Enriching CO ₂ Activation Sites on Graphitic Carbon Nitride with Simultaneous Introduction of Electron-Transfer Promoters for Superior Photocatalytic CO ₂ -to-Fuel Conversion. <i>Advanced Sustainable Systems</i> , 2017 , 1, 1700003	5.9	50
69	The role of functional materials to produce high areal capacity lithium sulfur battery. <i>Journal of Energy Chemistry</i> , 2020 , 42, 195-209	12	50
68	Intertwined network of Si/C nanocables and carbon nanotubes as lithium-ion battery anodes. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 6467-72	9.5	46
67	Surface Ligands Stabilized Lead Halide Perovskite Quantum Dot Photocatalyst for Visible Light-Driven Hydrogen Generation. <i>Advanced Functional Materials</i> , 2019 , 29, 1905683	15.6	45
66	Lattice distortion induced internal electric field in TiO photoelectrode for efficient charge separation and transfer. <i>Nature Communications</i> , 2020 , 11, 2129	17.4	41
65	A Portable and Efficient Solar-Rechargeable Battery with Ultrafast Photo-Charge/Discharge Rate. <i>Advanced Energy Materials</i> , 2019 , 9, 1900872	21.8	35
64	High-efficiency and room-temperature reduction of graphene oxide: a facile green approach towards flexible graphene films. <i>Small</i> , 2012 , 8, 1180-4, 1124	11	35
63	Two-Dimensional Titanium Carbonitride Mxene for High-Performance Sodium Ion Batteries. <i>ACS Applied Nano Materials</i> , 2018 , 1, 6854-6863	5.6	35
62	Preparation of carbon-encapsulated metal magnetic nanoparticles by an instant pyrolysis method. <i>New Carbon Materials</i> , 2010 , 25, 199-204	4.4	34
61	Design of twin junction with solid solution interface for efficient photocatalytic H ₂ production. <i>Nano Energy</i> , 2020 , 69, 104410	17.1	34

60	Construction of point-line-plane (0-1-2 dimensional) Fe ₂ O ₃ -SnO ₂ /graphene hybrids as the anodes with excellent lithium storage capability. <i>Nano Research</i> , 2017 , 10, 121-133	10	33
59	Boosting the performance of hybrid supercapacitors through redox electrolyte-mediated capacity balancing. <i>Nano Energy</i> , 2020 , 68, 104226	17.1	33
58	Tantalum (Oxy)Nitride: Narrow Bandgap Photocatalysts for Solar Hydrogen Generation. <i>Engineering</i> , 2017 , 3, 365-378	9.7	32
57	Enhancing photocatalytic activity of tantalum nitride by rational suppression of bulk, interface and surface charge recombination. <i>Applied Catalysis B: Environmental</i> , 2019 , 246, 195-201	21.8	31
56	Sn ₄ P ₃ @Porous carbon nanofiber as a self-supported anode for sodium-ion batteries. <i>Journal of Power Sources</i> , 2020 , 461, 228116	8.9	31
55	Separator coatings as efficient physical and chemical hosts of polysulfides for high-sulfur-loaded rechargeable lithium-sulfur batteries. <i>Journal of Energy Chemistry</i> , 2020 , 44, 51-60	12	30
54	Molten-Salt-Mediated Synthesis of an Atomic Nickel Co-catalyst on TiO ₂ for Improved Photocatalytic H ₂ Evolution. <i>Angewandte Chemie</i> , 2020 , 132, 7297-7301	3.6	27
53	Long-Term Cycling Performance of Nitrogen-Doped Hollow Carbon Nanospheres as Anode Materials for Sodium-Ion Batteries. <i>European Journal of Inorganic Chemistry</i> , 2016 , 2016, 2051-2055	2.3	27
52	Identifying dual functions of rGO in a BiVO ₄ /rGO/NiFe-layered double hydroxide photoanode for efficient photoelectrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 13231-13240	13	26
51	Reduced graphene oxide nanoribbon networks: a novel approach towards scalable fabrication of transparent conductive films. <i>Small</i> , 2013 , 9, 820-4	11	26
50	Fabricating highly efficient heterostructured CuBi ₂ O ₄ photocathodes for unbiased water splitting. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 2498-2504	13	26
49	A fast room-temperature strategy for direct reduction of graphene oxide films towards flexible transparent conductive films. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 10969-10973	13	25
48	Large-scale fabrication of single crystalline tin nanowire arrays. <i>Nanoscale</i> , 2010 , 2, 1661-4	7.7	25
47	Graphene-templated formation of 3D tin-based foams for lithium ion storage applications with a long lifespan. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 362-367	13	24
46	Unlocking the potential of commercial carbon nanofibers as free-standing positive electrodes for flexible aluminum ion batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 15123-15130	13	23
45	High-Performance Porous Silicon/Nanosilver Anodes from Industrial Low-Grade Silicon for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 49080-49089	9.5	23
44	Polyethylenimine Expanded Graphite Oxide Enables High Sulfur Loading and Long-Term Stability of Lithium-Sulfur Batteries. <i>Small</i> , 2019 , 15, e1804578	11	22
43	Synergistically engineered self-standing silicon/carbon composite arrays as high performance lithium battery anodes. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 494-498	13	22

42	Multifunctional Effects of Sulfonyl-Anchored, Dual-Doped Multilayered Graphene for High Areal Capacity Lithium Sulfur Batteries. <i>ACS Central Science</i> , 2019 , 5, 1946-1958	16.8	22
41	Confining ultrafine tin monophosphide in Ti3C2Tx interlayers for rapid and stable sodium ion storage. <i>EScience</i> , 2021 , 1, 203-211		21
40	Recent Advances of Metal-Oxide Photoanodes: Engineering of Charge Separation and Transportation toward Efficient Solar Water Splitting. <i>Solar Rrl</i> , 2020 , 4, 1900509	7.1	19
39	Effect of heating rate on the electrochemical performance of MnO X @CNF nanocomposites as supercapacitor electrodes. <i>Science Bulletin</i> , 2014 , 59, 1832-1837		18
38	Freestanding carbon-coated CNT/Sn(O2) coaxial sponges with enhanced lithium-ion storage capability. <i>Nanoscale</i> , 2015 , 7, 20380-5	7.7	18
37	Hollow structured cathode materials for rechargeable batteries. <i>Science Bulletin</i> , 2020 , 65, 496-512	10.6	18
36	Noble-metal-free MoS2/Ta3N5 heterostructure photocatalyst for hydrogen generation. <i>Progress in Natural Science: Materials International</i> , 2018 , 28, 189-193	3.6	17
35	Covalently stabilized Pd clusters in microporous polyphenylene: an efficient catalyst for Suzuki reactions under aerobic conditions. <i>Small</i> , 2013 , 9, 2460-5	11	17
34	Trilayer Nanomesh Films with Tunable Wettability as Highly Transparent, Flexible, and Recyclable Electrodes. <i>Advanced Functional Materials</i> , 2020 , 30, 2002556	15.6	15
33	Metallic Nanomesh with Disordered Dual-Size Apertures As Wide-Viewing-Angle Transparent Conductive Electrode. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 22768-73	9.5	15
32	A new sodium iron phosphate as a stable high-rate cathode material for sodium ion batteries. <i>Nano Research</i> , 2018 , 11, 6197-6205	10	15
31	Shape Control of Periodic Metallic Nanostructures for Transparent Conductive Films. <i>Particle and Particle Systems Characterization</i> , 2017 , 34, 1600262	3.1	15
30	Interlayer Space Engineering of MXenes for Electrochemical Energy Storage Applications. <i>Chemistry - A European Journal</i> , 2021 , 27, 1921-1940	4.8	15
29	Impact of Micropores and Dopants to Mitigate Lithium Polysulfides Shuttle over High Surface Area of ZIF-8 Derived Nanoporous Carbons. <i>ACS Applied Energy Materials</i> , 2020 , 3, 5523-5532	6.1	14
28	PSi@SiOx/Nano-Ag composite derived from silicon cutting waste as high-performance anode material for Li-ion batteries. <i>Journal of Hazardous Materials</i> , 2021 , 414, 125480	12.8	14
27	Hierarchical macro/mesoporous NiO as stable and fast-charging anode materials for lithium-ion batteries. <i>Microporous and Mesoporous Materials</i> , 2017 , 238, 78-83	5.3	13
26	Oriented nanoporous MOFs to mitigate polysulfides migration in lithium-sulfur batteries. <i>Nano Energy</i> , 2020 , 75, 105009	17.1	11
25	Sulfur-based redox chemistry for electrochemical energy storage. <i>Coordination Chemistry Reviews</i> , 2020 , 422, 213445	23.2	11

24	An Integrated Strategy towards Enhanced Performance of the Lithium-Sulfur Battery and its Fading Mechanism. <i>Chemistry - A European Journal</i> , 2018 , 24, 18544-18550	4.8	11
23	Exploring the interaction between graphene derivatives and metal ions as a key step towards graphene-inorganic nanohybrids. <i>Chemistry - an Asian Journal</i> , 2013 , 8, 410-3	4.5	10
22	Poly (zinc phthalocyanine) Nanoribbons and Their Application in the High-Sensitive Detection of Lead Ions. <i>Macromolecular Chemistry and Physics</i> , 2012 , 213, 1051-1059	2.6	9
21	Molten Salt Synthesis of Atomic Heterogeneous Catalysts: Old Chemistry for Advanced Materials. <i>European Journal of Inorganic Chemistry</i> , 2020 , 2020, 2942-2949	2.3	9
20	Tuning the carbon content on TiO ₂ nanosheets for optimized sodium storage. <i>Electrochimica Acta</i> , 2016 , 219, 163-169	6.7	9
19	Will new aluminum-ion battery be a game changer?. <i>Science Bulletin</i> , 2015 , 60, 1042-1044	10.6	8
18	A stable high-power Na ₂ Ti ₃ O ₇ /LiNi _{0.5} Mn _{1.5} O ₄ Li-ion hybrid energy storage device. <i>Electrochimica Acta</i> , 2018 , 284, 30-37	6.7	8
17	Recent advances of hollow-structured sulfur cathodes for lithium-sulfur batteries. <i>Materials Chemistry Frontiers</i> , 2020 , 4, 2517-2547	7.8	7
16	Facile fabrication of 3D TiO ₂ - graphene aerogel composite with enhanced adsorption and solar light-driven photocatalytic activity. <i>Ceramics International</i> , 2021 , 47, 14290-14300	5.1	7
15	Nanoconfined Topochemical Conversion from MXene to Ultrathin Non-Layered TiN Nanomesh toward Superior Electrocatalysts for Lithium-Sulfur Batteries. <i>Small</i> , 2021 , 17, e2101360	11	7
14	Designing efficient BiFeO photoanodes via bulk and surface defect engineering. <i>Chemical Communications</i> , 2020 , 56, 9376-9379	5.8	6
13	One-pot synthesis of Bi-Ni nanowire and nanocable arrays by coelectrodeposition approach. <i>Nanoscale Research Letters</i> , 2012 , 7, 130	5	6
12	Two-dimensional heterojunction SnS ₂ /SnO ₂ photoanode with excellent photoresponse up to near infrared region. <i>Solar Energy Materials and Solar Cells</i> , 2020 , 207, 110342	6.4	6
11	Enhanced Safety and Performance of High-Voltage Solid-State Sodium Battery through Trilayer, Multifunctional Electrolyte Design. <i>Energy Storage Materials</i> , 2021 , 41, 8-13	19.4	6
10	Nanosphere lithography: a versatile approach to develop transparent conductive films for optoelectronic applications.. <i>Advanced Materials</i> , 2022 , e2103842	24	5
9	ZIF-8 derived hollow carbon to trap polysulfides for high performance lithium-sulfur batteries. <i>Nanoscale</i> , 2021 , 13, 11086-11092	7.7	5
8	Bridging localized electron states of pyrite-type CoS ₂ cocatalyst for activated solar H ₂ evolution. <i>Nano Research</i> , 1	10	3
7	Photocatalysis: Single-Crystalline Nanomesh Tantalum Nitride Photocatalyst with Improved Hydrogen-Evolving Performance (Adv. Energy Mater. 1/2018). <i>Advanced Energy Materials</i> , 2018 , 8, 1770138	21.8	2

6	Enhanced transparent conductive properties of graphene/carbon nano-composite films. <i>Journal of Nanoscience and Nanotechnology</i> , 2013 , 13, 942-5	1.3	2
5	Understanding the roles of carbon in carbon/g-C ₃ N ₄ based photocatalysts for H ₂ evolution. <i>Nano Research</i> , 1	10	1
4	Influence of iron, aluminum, calcium, titanium and vanadium impurities removal from silicon based on Cu-catalyzed chemical leaching. <i>Journal of Materials Research and Technology</i> , 2021 , 10, 502-511	5.5	1
3	Stable Interfaces in a Sodium Metal-Free, Solid-State Sodium-Ion Battery with Gradient Composite Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 39355-39362	9.5	1
2	Graphene/Inorganic Composites as Electrode Materials for Lithium-Ion Batteries 2016 , 217-249		
1	Design of nanostructured sulfur cathodes for high-performance lithium-sulfur batteries 2022 , 425-452		