Biao Zhang

List of Publications by Year
in descending order

90 papers	9,000 citations	46984 47 h-index	45285 90 g-index
91 all docs	91 docs citations	91 times ranked	10714 citing authors

#	Article	IF	Citations
1	Constructing resilient solid electrolyte interphases on carbon nanofiber film for advanced potassium metal anodes. Carbon, 2022, 186, 141-149.	5.4	17
2	Unraveling the Rateâ€Dependent Stability of Metal Anodes and Its Implication in Designing Cycling Protocol. Advanced Functional Materials, 2022, 32, 2107584.	7.8	63
3	Stabilizing Microsized Sn Anodes for Na-Ion Batteries with Extended Ether Electrolyte Chemistry. ACS Applied Energy Materials, 2022, 5, 2252-2259.	2.5	7
4	Critical Roles of Mechanical Properties of Solid Electrolyte Interphase for Potassium Metal Anodes. Advanced Functional Materials, 2022, 32, .	7.8	31
5	Two-Dimensional Room-Temperature Magnetic Nonstoichiometric Fe₇Se₈ Nanocrystals: Controllable Synthesis and Magnetic Behavior. Nano Letters, 2022, 22, 1242-1250.	4.5	28
6	2D FeOCl: A Highly Inâ€Plane Anisotropic Antiferromagnetic Semiconductor Synthesized via Temperatureâ€Oscillation Chemical Vapor Transport. Advanced Materials, 2022, 34, e2108847.	11.1	34
7	Unlocking the Reversible Selenium Electrode for Nonâ€Aqueous and Aqueous Calciumâ€Ion Batteries. Advanced Functional Materials, 2022, 32, .	7.8	22
8	Elastomerâ€“Alginate Interface for Highâ€Power and Highâ€Energy Zn Metal Anodes. Advanced Energy Materials, 2022, 12, .	10.2	51
9	Revealing the complex lithiation pathways and kinetics of core-shell NiO@CuO electrode. Energy Storage Materials, 2022, 51, 11-18.	9.5	11
10	Solvent Molecular Design to Regulate the Intercalation Behavior in Ether Electrolyte for Stable Graphite Anodes in Potassiumâ€Ion Batteries. Small Structures, 2022, 3, .	6.9	16
11	A freestanding hydroxylated carbon nanotube film boosting the stability of Zn metal anodes. Materials Today Communications, 2022, 32, 103939.	0.9	4
12	Hard carbon derived from coconut shells, walnut shells, and corn silk biomass waste exhibiting high capacity for Na-ion batteries. Journal of Energy Chemistry, 2021, 58, 207-218.	7.1	89
13	Critical roles of microstructure and interphase on the stability of microsized germanium anode. Journal of Power Sources, 2021, 481, 228916.	4.0	9
14	A highly concentrated electrolyte for high-efficiency potassium metal batteries. Chemical Communications, 2021, 57, 1034-1037.	2.2	35
15	Eliminating Dendrites and Side Reactions via a Multifunctional ZnSe Protective Layer toward Advanced Aqueous Zn Metal Batteries. Advanced Functional Materials, 2021, 31, 2100186.	7.8	85
16	Building Elastic Solid Electrolyte Interphases for Stabilizing Microsized Antimony Anodes in Potassium Ion Batteries. Advanced Functional Materials, 2021, 31, 2102562.	7.8	33
17	Rational design of microstructure and interphase enables high-capacity and long-life carbon anodes for potassium ion batteries. Carbon, 2021, 176, 383-389.	5.4	30
18	Realizing high-power and high-capacity zinc/sodium metal anodes through interfacial chemistry regulation. Nature Communications, 2021, 12, 3083.	5.8	167

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19	Synergistic PF6âˆ’ and FSIâˆ’ intercalation enables stable graphite cathode for potassium-based dual ion battery. Carbon, 2021, 178, 363-370.	5.4	25
20	Unraveling the mechanical origin of stable solid electrolyte interphase. Joule, 2021, 5, 1860-1872.	11.7	89
21	Advances in multi-functional flexible interlayers for Liâ€“S batteries and metal-based batteries. Materials Today Communications, 2021, 28, 102566.	0.9	6
22	Understanding potassium ion storage mechanism in pitch-derived soft carbon and the consequence on cyclic stability. Journal of Power Sources, 2021, 506, 230179.	4.0	39
23	Structure Engineering of 2D Materials toward Magnetism Modulation. Small Structures, 2021, 2, 2100077.	6.9	41
24	Realizing wide-temperature Zn metal anodes through concurrent interface stability regulation and solvation structure modulation. Energy Storage Materials, 2021, 42, 517-525.	9.5	47
25	2D Magnetic Heterostructures and Their Interface Modulated Magnetism. ACS Applied Materials & Interfaces, 2021, 13, 50591-50601.	4.0	19
26	Robust Solid Electrolyte Interphases in Localized High Concentration Electrolytes Boosting Black Phosphorus Anode for Potassium-Ion Batteries. ACS Nano, 2021, 15, 16851-16860.	7.3	41
27	Free-standing 2D non-van der Waals antiferromagnetic hexagonal FeSe semiconductor: halide-assisted chemical synthesis and Fe²⁺ related magnetic transitions. Chemical Science, 2021, 13, 203-209.	3.7	14
28	Advanced lignin-derived hard carbon for Na-ion batteries and a comparison with Li and K ion storage. Carbon, 2020, 157, 316-323.	5.4	121
29	Realizing high-performance Zn-ion batteries by a reduced graphene oxide block layer at room and low temperatures. Journal of Energy Chemistry, 2020, 43, 1-7.	7.1	29
30	Exploring the structure evolution of MoS₂ upon Li/Na/K ion insertion and the origin of the unusual stability in potassium ion batteries. Nanoscale Horizons, 2020, 5, 1618-1627.	4.1	13
31	Tailoring desolvation kinetics enables stable zinc metal anodes. Journal of Materials Chemistry A, 2020, 8, 19367-19374.	5.2	136
32	Multifunctional V3S4-nanowire/graphene composites for high performance Li-S batteries. Science China Materials, 2020, 63, 1910-1919.	3.5	31
33	Multifunctional ultrasmall-MoS₂/graphene composites for high sulfur loading Liâ€“S batteries. Materials Chemistry Frontiers, 2020, 4, 1483-1491.	3.2	17
34	Valorizing low cost and renewable lignin as hard carbon for Na-ion batteries: Impact of lignin grade. Carbon, 2019, 153, 634-647.	5.4	67
35	KVPO₄F as a novel insertion-type anode for potassium ion batteries. Chemical Communications, 2019, 55, 11311-11314.	2.2	28
36	Yolk-shelled Sb@C nanoconfined nitrogen/sulfur co-doped 3D porous carbon microspheres for sodium-ion battery anode with ultralong high-rate cycling. Nano Energy, 2019, 66, 104133.	8.2	56

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37	Preserved Layered Structure Enables Stable Cyclic Performance of MoS₂ upon Potassium Insertion. Chemistry of Materials, 2019, 31, 8801-8809.	3.2	39
38	Exploring room- and low-temperature performance of hard carbon material in half and full Na-ion batteries. Electrochimica Acta, 2019, 316, 60-68.	2.6	32
39	The underestimated charge storage capability of carbon cathodes for advanced alkali metal-ion capacitors. Nanoscale, 2019, 11, 11445-11450.	2.8	9
40	Nanostructures of solid electrolyte interphases and their consequences for microsized Sn anodes in sodium ion batteries. Energy and Environmental Science, 2019, 12, 1550-1557.	15.6	167
41	Facile flame catalytic growth of carbon nanomaterials on the surface of carbon nanotubes. Applied Surface Science, 2019, 465, 23-30.	3.1	14
42	Correlation between the microstructure of carbon materials and their potassium ion storage performance. Carbon, 2019, 143, 138-146.	5.4	90
43	K3V2(PO4)2F3 as a robust cathode for potassium-ion batteries. Energy Storage Materials, 2019, 16, 97-101.	9.5	145
44	Hybrid Aqueous/Organic Electrolytes Enable the High-Performance Zn-Ion Batteries. Research, 2019, 2019, 2635310.	2.8	31
45	Bismuth Microparticles as Advanced Anodes for Potassiumâ€Ion Battery. Advanced Energy Materials, 2018, 8, 1703496.	10.2	306
46	Kinetically controlled redox behaviors of K_{0.3}MnO₂ electrodes for high performance sodium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 10803-10812.	5.2	11
47	Laser Synthesis of Hard Carbon for Anodes in Naâ€Ion Battery. Advanced Materials Technologies, 2017, 2, 1600227.	3.0	21
48	Correlation Between Microstructure and Na Storage Behavior in Hard Carbon. Advanced Energy Materials, 2016, 6, 1501588.	10.2	364
49	Anomalous Enhancement of Liâ€O₂ Battery Performance with Li₂O₂ Films Assisted by NiFeO<i>_x</i> Nanofiber Catalysts: Insights into Morphology Control. Advanced Functional Materials, 2016, 26, 8290-8299.	7.8	47
50	Microsized Sn as Advanced Anodes in Glymeâ€Based Electrolyte for Naâ€Ion Batteries. Advanced Materials, 2016, 28, 9824-9830.	11.1	199
51	Insertion compounds and composites made by ball milling for advanced sodium-ion batteries. Nature Communications, 2016, 7, 10308.	5.8	198
52	Electrospun graphitic carbon nanofibers with in-situ encapsulated Coâ€"Ni nanoparticles as freestanding electrodes for Liâ€"O2 batteries. Carbon, 2016, 100, 329-336.	5.4	79
53	Optimization of Na-Ion Battery Systems Based on Polyanionic or Layered Positive Electrodes and Carbon Anodes. Journal of the Electrochemical Society, 2016, 163, A867-A874.	1.3	77
54	Recent advances in electrospun carbon nanofibers and their application in electrochemical energy storage. Progress in Materials Science, 2016, 76, 319-380.	16.0	579

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55	Ultrafine Amorphous SnO<i>_x</i> Embedded in Carbon Nanofiber/Carbon Nanotube Composites for Liâ€ion and Naâ€ion Batteries. Advanced Functional Materials, 2015, 25, 5222-5228.	7.8	104
56	Electrospun Carbon Nanofibers with in Situ Encapsulated Co₃O₄ Nanoparticles as Electrodes for High-Performance Supercapacitors. ACS Applied Materials & Interfaces, 2015, 7, 13503-13511.	4.0	199
57	Novel interlayer made from Fe3C/carbon nanofiber webs for high performance lithiumâ€“sulfur batteries. Journal of Power Sources, 2015, 285, 43-50.	4.0	178
58	Controlled synthesis of cobalt carbonate/graphene composites with excellent supercapacitive performance and pseudocapacitive characteristics. Journal of Materials Chemistry A, 2015, 3, 17827-17836.	5.2	48
59	In-situ TEM examination and exceptional long-term cyclic stability of ultrafine Fe3O4 nanocrystal/carbon nanofiber composite electrodes. Energy Storage Materials, 2015, 1, 25-34.	9.5	46
60	Correlation Between Atomic Structure and Electrochemical Performance of Anodes Made from Electrospun Carbon Nanofiber Films. Advanced Energy Materials, 2014, 4, 1301448.	10.2	133
61	Electrospun carbon nanofiber anodes containing monodispersed Si nanoparticles and graphene oxide with exceptional high rate capacities. Nano Energy, 2014, 6, 27-35.	8.2	125
62	Sandwich-structured grapheneâ€“NiFe2O4â€“carbon nanocomposite anodes with exceptional electrochemical performance for Li ion batteries. Journal of Materials Chemistry A, 2014, 2, 8314.	5.2	79
63	Exceptional rate performance of functionalized carbon nanofiber anodes containing nanopores created by (Fe) sacrificial catalyst. Nano Energy, 2014, 4, 88-96.	8.2	94
64	Nanocavity-engineered Si/multi-functional carbon nanofiber composite anodes with exceptional high-rate capacities. Journal of Materials Chemistry A, 2014, 2, 17944-17951.	5.2	42
65	Insitu grown graphitic carbon/Fe₂O₃/carbon nanofiber composites for high performance freestanding anodes in Li-ion batteries. RSC Advances, 2014, 4, 12298-12301.	1.7	29
66	Cobalt Carbonate/ and Cobalt Oxide/Graphene Aerogel Composite Anodes for High Performance Li-Ion Batteries. ACS Applied Materials & Interfaces, 2014, 6, 18971-18980.	4.0	135
67	Highly Aligned Graphene/Polymer Nanocomposites with Excellent Dielectric Properties for Highâ€Performance Electromagnetic Interference Shielding. Advanced Materials, 2014, 26, 5480-5487.	11.1	1,024
68	Carbon nanofibers containing Si nanoparticles and graphene-covered Ni for high performance anodes in Li ion batteries. RSC Advances, 2014, 4, 22359-22366.	1.7	37
69	Co₃O₄/porous electrospun carbon nanofibers as anodes for high performance Li-ion batteries. Journal of Materials Chemistry A, 2014, 2, 16939-16944.	5.2	115
70	Free-standing Ni mesh with in-situ grown MnO2 nanoparticles as cathode for Liâ€“air batteries. Solid State Ionics, 2014, 262, 197-201.	1.3	12
71	Percolation threshold of graphene nanosheets as conductive additives in Li4Ti5O12 anodes of Li-ion batteries. Nanoscale, 2013, 5, 2100.	2.8	113
72	Mechanisms of capacity degradation in reduced graphene oxide/Î±-MnO₂nanorod composite cathodes of Liâ€“air batteries. Journal of Materials Chemistry A, 2013, 1, 1163-1170.	5.2	85

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73	Evolution of flexible 3D graphene oxide/carbon nanotube/polyaniline composite papers and their supercapacitive performance. Composites Science and Technology, 2013, 88, 126-133.	3.8	45
74	Effect of solid electrolyte interface (SEI) film on cyclic performance of Li4Ti5O12 anodes for Li ion batteries. Journal of Power Sources, 2013, 239, 269-276.	4.0	223
75	Liâ€ion Reaction to Improve the Rate Performance of Nanoporous Anatase TiO₂ Anodes. Energy Technology, 2013, 1, 668-674.	1.8	30
76	Addition of Silane-Functionalized Carbon Nanotubes for Improved Rate Capability of LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂Cathodes for Lithium Ion Batteries. Journal of the Electrochemical Society, 2012, 159, A2024-A2028.	1.3	20
77	Highly transparent and conducting ultralarge graphene oxide/single-walled carbon nanotube hybrid films produced by Langmuirâ€“Blodgett assembly. Journal of Materials Chemistry, 2012, 22, 25072.	6.7	151
78	Self-assembled reduced graphene oxide/carbon nanotube thin films as electrodes for supercapacitors. Journal of Materials Chemistry, 2012, 22, 3591.	6.7	177
79	Exceptional electrochemical performance of freestanding electrospun carbon nanofiber anodes containing ultrafine SnOx particles. Energy and Environmental Science, 2012, 5, 9895.	15.6	165
80	Porous Câ€“LiFePO4â€“C composite microspheres with a hierarchical conductive architecture as a high performance cathode for lithium ion batteries. Journal of Materials Chemistry, 2012, 22, 19643.	6.7	27
81	Urchin-like Li4Ti5O12â€“carbon nanofiber composites for high rate performance anodes in Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 12133.	6.7	133
82	Gassing in Li4Ti5O12-based batteries and its remedy. Scientific Reports, 2012, 2, 913.	1.6	284
83	Low temperature synthesis of graphene-wrapped LiFePO4 nanorod cathodes by the polyol method. Journal of Materials Chemistry, 2012, 22, 17215.	6.7	60
84	Effects of reduction process and carbon nanotube content on the supercapacitive performance of flexible graphene oxide papers. Carbon, 2012, 50, 4239-4251.	5.4	109
85	Carbon nanotube (CNT)-based composites as electrode material for rechargeable Li-ion batteries: A review. Composites Science and Technology, 2012, 72, 121-144.	3.8	432
86	Microscopically porous, interconnected single crystal LiNi1/3Co1/3Mn1/3O2 cathode material for Lithium ion batteries. Journal of Materials Chemistry, 2011, 21, 10777.	6.7	190
87	Improved rate capability of carbon coated Li3.9Sn0.1Ti5O12 porous electrodes for Li-ion batteries. Journal of Power Sources, 2011, 196, 10692-10697.	4.0	95
88	LiNi1/3Co1/3Mn1/3O2 with a novel one-dimensional porous structure: A high-power cathode material for rechargeable Li-ion batteries. Scripta Materialia, 2011, 64, 122-125.	2.6	29
89	SnO2â€“grapheneâ€“carbon nanotube mixture for anode material with improved rate capacities. Carbon, 2011, 49, 4524-4534.	5.4	206
90	Structure and Electrochemical Properties of Zn-Doped Li[sub 4]Ti[sub 5]O[sub 12] as Anode Materials in Li-Ion Battery. Electrochemical and Solid-State Letters, 2010, 13, A36.	2.2	67