# Biao Zhang

List of Publications by Year
in descending order

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| 90 | 9,000 | 46984 47 | 45285 90 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 91 | 91 | 91 | 10714 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | 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 |
| 2 | Recent advances in electrospun carbon nanofibers and their application in electrochemical energy storage. Progress in Materials Science, 2016, 76, 319-380. | 16.0 | 579 |
| 3 | 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 |
| 4 | Correlation Between Microstructure and Na Storage Behavior in Hard Carbon. Advanced Energy Materials, 2016, 6, 1501588. | 10.2 | 364 |
| 5 | Bismuth Microparticles as Advanced Anodes for Potassiumâ€Ion Battery. Advanced Energy Materials, 2018, 8, 1703496. | 10.2 | 306 |
| 6 | Gassing in Li4Ti5O12-based batteries and its remedy. Scientific Reports, 2012, 2, 913. | 1.6 | 284 |
| 7 | 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 |
| 8 | SnO2â€“grapheneâ€“carbon nanotube mixture for anode material with improved rate capacities. Carbon, 2011, 49, 4524-4534. | 5.4 | 206 |
| 9 | Electrospun Carbon Nanofibers with in Situ Encapsulated Co<sub>3</sub>O<sub>4</sub> Nanoparticles as Electrodes for High-Performance Supercapacitors. ACS Applied Materials & Interfaces, 2015, 7, 13503-13511. | 4.0 | 199 |
| 10 | Microsized Sn as Advanced Anodes in Glymeâ€Based Electrolyte for Naâ€Ion Batteries. Advanced Materials, 2016, 28, 9824-9830. | 11.1 | 199 |
| 11 | Insertion compounds and composites made by ball milling for advanced sodium-ion batteries. Nature Communications, 2016, 7, 10308. | 5.8 | 198 |
| 12 | 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 |
| 13 | 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 |
| 14 | Self-assembled reduced graphene oxide/carbon nanotube thin films as electrodes for supercapacitors. Journal of Materials Chemistry, 2012, 22, 3591. | 6.7 | 177 |
| 15 | 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 |
| 16 | Realizing high-power and high-capacity zinc/sodium metal anodes through interfacial chemistry regulation. Nature Communications, 2021, 12, 3083. | 5.8 | 167 |
| 17 | Exceptional electrochemical performance of freestanding electrospun carbon nanofiber anodes containing ultrafine SnOx particles. Energy and Environmental Science, 2012, 5, 9895. | 15.6 | 165 |
| 18 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | K3V2(PO4)2F3 as a robust cathode for potassium-ion batteries. Energy Storage Materials, 2019, 16, 97-101. | 9.5 | 145 |
| 20 | Tailoring desolvation kinetics enables stable zinc metal anodes. Journal of Materials Chemistry A, 2020, 8, 19367-19374. | 5.2 | 136 |
| 21 | 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 |
| 22 | 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 |
| 23 | Correlation Between Atomic Structure and Electrochemical Performance of Anodes Made from Electrospun Carbon Nanofiber Films. Advanced Energy Materials, 2014, 4, 1301448. | 10.2 | 133 |
| 24 | 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 |
| 25 | 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 |
| 26 | Co<sub>3</sub>O<sub>4</sub>/porous electrospun carbon nanofibers as anodes for high performance Li-ion batteries. Journal of Materials Chemistry A, 2014, 2, 16939-16944. | 5.2 | 115 |
| 27 | Percolation threshold of graphene nanosheets as conductive additives in Li4Ti5O12 anodes of Li-ion batteries. Nanoscale, 2013, 5, 2100. | 2.8 | 113 |
| 28 | 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 |
| 29 | Ultrafine Amorphous SnO<sub>x</sub> Embedded in Carbon Nanofiber/Carbon Nanotube Composites for Liâ€ion and Naâ€ion Batteries. Advanced Functional Materials, 2015, 25, 5222-5228. | 7.8 | 104 |
| 30 | 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 |
| 31 | Exceptional rate performance of functionalized carbon nanofiber anodes containing nanopores created by (Fe) sacrificial catalyst. Nano Energy, 2014, 4, 88-96. | 8.2 | 94 |
| 32 | Correlation between the microstructure of carbon materials and their potassium ion storage performance. Carbon, 2019, 143, 138-146. | 5.4 | 90 |
| 33 | 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 |
| 34 | Unraveling the mechanical origin of stable solid electrolyte interphase. Joule, 2021, 5, 1860-1872. | 11.7 | 89 |
| 35 | Mechanisms of capacity degradation in reduced graphene oxide/Î±-MnO<sub>2</sub>nanorod composite cathodes of Liâ€“air batteries. Journal of Materials Chemistry A, 2013, 1, 1163-1170. | 5.2 | 85 |
| 36 | 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 |

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|---|---|---|---|
| 37 | 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 |
| 38 | 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 |
| 39 | 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 |
| 40 | 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 |
| 41 | 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 |
| 42 | Unraveling the Rateâ€Dependent Stability of Metal Anodes and Its Implication in Designing Cycling Protocol. Advanced Functional Materials, 2022, 32, 2107584. | 7.8 | 63 |
| 43 | Low temperature synthesis of graphene-wrapped LiFePO4 nanorod cathodes by the polyol method. Journal of Materials Chemistry, 2012, 22, 17215. | 6.7 | 60 |
| 44 | 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 |
| 45 | Elastomerâ€“Alginate Interface for Highâ€Power and Highâ€Energy Zn Metal Anodes. Advanced Energy Materials, 2022, 12, . | 10.2 | 51 |
| 46 | 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 |
| 47 | Anomalous Enhancement of Liâ€O<sub>2</sub> Battery Performance with Li<sub>2</sub>O<sub>2</sub> Films Assisted by NiFeO<sub>x</sub> Nanofiber Catalysts: Insights into Morphology Control. Advanced Functional Materials, 2016, 26, 8290-8299. | 7.8 | 47 |
| 48 | 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 |
| 49 | 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 |
| 50 | 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 |
| 51 | 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 |
| 52 | Structure Engineering of 2D Materials toward Magnetism Modulation. Small Structures, 2021, 2, 2100077. | 6.9 | 41 |
| 53 | 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 |
| 54 | Preserved Layered Structure Enables Stable Cyclic Performance of MoS<sub>2</sub> upon Potassium Insertion. Chemistry of Materials, 2019, 31, 8801-8809. | 3.2 | 39 |

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|---|---|---|---|
| 55 | 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 |
| 56 | 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 |
| 57 | A highly concentrated electrolyte for high-efficiency potassium metal batteries. Chemical Communications, 2021, 57, 1034-1037. | 2.2 | 35 |
| 58 | 2D FeOCl: A Highly Inâ€Plane Anisotropic Antiferromagnetic Semiconductor Synthesized via Temperatureâ€Oscillation Chemical Vapor Transport. Advanced Materials, 2022, 34, e2108847. | 11.1 | 34 |
| 59 | Building Elastic Solid Electrolyte Interphases for Stabilizing Microsized Antimony Anodes in Potassium Ion Batteries. Advanced Functional Materials, 2021, 31, 2102562. | 7.8 | 33 |
| 60 | 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 |
| 61 | Multifunctional V3S4-nanowire/graphene composites for high performance Li-S batteries. Science China Materials, 2020, 63, 1910-1919. | 3.5 | 31 |
| 62 | Hybrid Aqueous/Organic Electrolytes Enable the High-Performance Zn-Ion Batteries. Research, 2019, 2019, 2635310. | 2.8 | 31 |
| 63 | Critical Roles of Mechanical Properties of Solid Electrolyte Interphase for Potassium Metal Anodes. Advanced Functional Materials, 2022, 32, . | 7.8 | 31 |
| 64 | Liâ€ion Reaction to Improve the Rate Performance of Nanoporous Anatase TiO<sub>2</sub> Anodes. Energy Technology, 2013, 1, 668-674. | 1.8 | 30 |
| 65 | 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 |
| 66 | 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 |
| 67 | Insitu grown graphitic carbon/Fe<sub>2</sub>O<sub>3</sub>/carbon nanofiber composites for high performance freestanding anodes in Li-ion batteries. RSC Advances, 2014, 4, 12298-12301. | 1.7 | 29 |
| 68 | 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 |
| 69 | KVPO<sub>4</sub>F as a novel insertion-type anode for potassium ion batteries. Chemical Communications, 2019, 55, 11311-11314. | 2.2 | 28 |
| 70 | Two-Dimensional Room-Temperature Magnetic Nonstoichiometric Fe<sub>7</sub>Se<sub>8</sub> Nanocrystals: Controllable Synthesis and Magnetic Behavior. Nano Letters, 2022, 22, 1242-1250. | 4.5 | 28 |
| 71 | 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 |
| 72 | Synergistic PF6â^' and FSIâ^' intercalation enables stable graphite cathode for potassium-based dual ion battery. Carbon, 2021, 178, 363-370. | 5.4 | 25 |

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|---|---|---|---|
| 73 | Unlocking the Reversible Selenium Electrode for Nonâ€Aqueous and Aqueous Calciumâ€Ion Batteries. Advanced Functional Materials, 2022, 32, . | 7.8 | 22 |
| 74 | Laser Synthesis of Hard Carbon for Anodes in Naâ€Ion Battery. Advanced Materials Technologies, 2017, 2, 1600227. | 3.0 | 21 |
| 75 | Addition of Silane-Functionalized Carbon Nanotubes for Improved Rate Capability of LiNi<sub>1/3</sub>Co<sub>1/3</sub>Mn<sub>1/3</sub>O<sub>2</sub>Cathodes for Lithium Ion Batteries. Journal of the Electrochemical Society, 2012, 159, A2024-A2028. | 1.3 | 20 |
| 76 | 2D Magnetic Heterostructures and Their Interface Modulated Magnetism. ACS Applied Materials & Interfaces, 2021, 13, 50591-50601. | 4.0 | 19 |
| 77 | Multifunctional ultrasmall-MoS<sub>2</sub>/graphene composites for high sulfur loading Liâ€“S batteries. Materials Chemistry Frontiers, 2020, 4, 1483-1491. | 3.2 | 17 |
| 78 | Constructing resilient solid electrolyte interphases on carbon nanofiber film for advanced potassium metal anodes. Carbon, 2022, 186, 141-149. | 5.4 | 17 |
| 79 | 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 |
| 80 | Facile flame catalytic growth of carbon nanomaterials on the surface of carbon nanotubes. Applied Surface Science, 2019, 465, 23-30. | 3.1 | 14 |
| 81 | Free-standing 2D non-van der Waals antiferromagnetic hexagonal FeSe semiconductor: halide-assisted chemical synthesis and Fe<sup>2+</sup> related magnetic transitions. Chemical Science, 2021, 13, 203-209. | 3.7 | 14 |
| 82 | Exploring the structure evolution of MoS<sub>2</sub> 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 |
| 83 | 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 |
| 84 | Kinetically controlled redox behaviors of K<sub>0.3</sub>MnO<sub>2</sub> electrodes for high performance sodium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 10803-10812. | 5.2 | 11 |
| 85 | Revealing the complex lithiation pathways and kinetics of core-shell NiO@CuO electrode. Energy Storage Materials, 2022, 51, 11-18. | 9.5 | 11 |
| 86 | The underestimated charge storage capability of carbon cathodes for advanced alkali metal-ion capacitors. Nanoscale, 2019, 11, 11445-11450. | 2.8 | 9 |
| 87 | Critical roles of microstructure and interphase on the stability of microsized germanium anode. Journal of Power Sources, 2021, 481, 228916. | 4.0 | 9 |
| 88 | Stabilizing Microsized Sn Anodes for Na-Ion Batteries with Extended Ether Electrolyte Chemistry. ACS Applied Energy Materials, 2022, 5, 2252-2259. | 2.5 | 7 |
| 89 | Advances in multi-functional flexible interlayers for Liâ€“S batteries and metal-based batteries. Materials Today Communications, 2021, 28, 102566. | 0.9 | 6 |
| 90 | A freestanding hydroxylated carbon nanotube film boosting the stability of Zn metal anodes. Materials Today Communications, 2022, 32, 103939. | 0.9 | 4 |