# Zhixing Wang

List of Publications by Year
in descending order



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|---|---|---|---|
| 105 papers | 5,784 citations | 76326 40 h-index | 79698 73 g-index |
| 105 all docs | 105 docs citations | 105 times ranked | 5642 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Washing effects on electrochemical performance and storage characteristics of LiNi0.8Co0.1Mn0.1O2 as cathode material for lithium-ion batteries. Journal of Power Sources, 2013, 222, 318-325. | 7.8 | 317 |
| 2 | Advances in nanostructures fabricatedviaspray pyrolysis and their applications in energy storage and conversion. Chemical Society Reviews, 2019, 48, 3015-3072. | 38.1 | 260 |
| 3 | Lightweight Reduced Graphene Oxide@MoS<sub>2</sub> Interlayer as Polysulfide Barrier for High-Performance Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2018, 10, 3707-3713. | 8.0 | 239 |
| 4 | Three-dimensional hierarchical Co3O4/CuO nanowire heterostructure arrays on nickel foam for high-performance lithium ion batteries. Nano Energy, 2014, 6, 19-26. | 16.0 | 230 |
| 5 | Enhanced electrochemical properties of lithium-reactive V<sub>2</sub>O<sub>5</sub>coated on the LiNi<sub>0.8</sub>Co<sub>0.1</sub>Mn<sub>0.1</sub>O<sub>2</sub>cathode material for lithium ion batteries at 60 Â°C. Journal of Materials Chemistry A, 2013, 1, 1284-1288. | 10.3 | 209 |
| 6 | Electrochemical analysis graphite/electrolyte interface in lithium-ion batteries: p-Toluenesulfonyl isocyanate as electrolyte additive. Nano Energy, 2017, 34, 131-140. | 16.0 | 208 |
| 7 | A short process for the efficient utilization of transition-metal chlorides in lithium-ion batteries: A case of Ni0.8Co0.1Mn0.1O1.1 and LiNi0.8Co0.1Mn0.1O2. Journal of Power Sources, 2017, 342, 495-503. | 7.8 | 203 |
| 8 | Co 3 O 4 /Co nanoparticles enclosed graphitic carbon as anode material for high performance Li-ion batteries. Chemical Engineering Journal, 2017, 321, 495-501. | 12.7 | 173 |
| 9 | Synthesis and electrochemical study of Zr-doped Li[Li0.2Mn0.54Ni0.13Co0.13]O2 as cathode material for Li-ion battery. Ceramics International, 2016, 42, 263-269. | 4.8 | 140 |
| 10 | A modified LiF coating process to enhance the electrochemical performance characteristics of LiNi0.8Co0.1Mn0.1O2 cathode materials. Materials Letters, 2013, 110, 4-9. | 2.6 | 133 |
| 11 | Investigation and improvement on the electrochemical performance and storage characteristics of LiNiO2-based materials for lithium ion battery. Electrochimica Acta, 2016, 191, 832-840. | 5.2 | 131 |
| 12 | A novel NiCo<sub>2</sub>O<sub>4</sub> anode morphology for lithium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 11970-11975. | 10.3 | 127 |
| 13 | A comprehensive study on electrochemical performance of Mn-surface-modified LiNi0.8Co0.15Al0.05O2 synthesized by an in situ oxidizing-coating method. Journal of Power Sources, 2014, 252, 200-207. | 7.8 | 125 |
| 14 | Li3V(MoO4)3 as a novel electrode material with good lithium storage properties and improved initial coulombic efficiency. Nano Energy, 2018, 44, 272-278. | 16.0 | 125 |
| 15 | Non-aqueous dual-carbon lithium-ion capacitors: a review. Journal of Materials Chemistry A, 2019, 7, 15541-15563. | 10.3 | 118 |
| 16 | Accurate construction of a hierarchical nickelâ€“cobalt oxide multishell yolkâ€“shell structure with large and ultrafast lithium storage capability. Journal of Materials Chemistry A, 2017, 5, 14996-15001. | 10.3 | 106 |
| 17 | Natural sisal fibers derived hierarchical porous activated carbon as capacitive material in lithium ion capacitor. Journal of Power Sources, 2016, 329, 339-346. | 7.8 | 101 |
| 18 | A low temperature fluorine substitution on the electrochemical performance of layered LiNi0.8Co0.1Mn0.1O2â^'zFz cathode materials. Electrochimica Acta, 2013, 92, 1-8. | 5.2 | 100 |

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|---|---|---|---|
| 19 | Multi-layered carbon coated Si-based composite as anode for lithium-ion batteries. Powder Technology, 2018, 323, 294-300. | 4.2 | 97 |
| 20 | Metalorganic Quantum Dots and Their Grapheneâ€Like Derivative Porous Graphitic Carbon for Advanced Lithiumâ€Ion Hybrid Supercapacitor. Advanced Energy Materials, 2019, 9, 1802878. | 19.5 | 94 |
| 21 | A new design concept for preparing nickel-foam-supported metal oxide microspheres with superior electrochemical properties. Journal of Materials Chemistry A, 2017, 5, 13469-13474. | 10.3 | 91 |
| 22 | Graphitic carbon balanced between high plateau capacity and high rate capability for lithium ion capacitors. Journal of Materials Chemistry A, 2017, 5, 15302-15309. | 10.3 | 91 |
| 23 | A MoS2 coating strategy to improve the comprehensive electrochemical performance of LiVPO4F. Journal of Power Sources, 2016, 315, 294-301. | 7.8 | 83 |
| 24 | Co-modification of LiNi0.5Co0.2Mn0.3O2 cathode materials with zirconium substitution and surface polypyrrole coating: towards superior high voltage electrochemical performances for lithium ion batteries. Electrochimica Acta, 2016, 196, 101-109. | 5.2 | 83 |
| 25 | Research Progress of Singleâ€Crystal Nickelâ€Rich Cathode Materials for Lithium Ion Batteries. Small Methods, 2021, 5, e2100234. | 8.6 | 71 |
| 26 | Nanosized LiVPO4F/graphene composite: A promising anode material for lithium ion batteries. Journal of Power Sources, 2014, 251, 325-330. | 7.8 | 70 |
| 27 | Introducing reduced graphene oxide to improve the electrochemical performance of silicon-based materials encapsulated by carbonized polydopamine layer for lithium ion batteries. Materials Letters, 2017, 195, 164-167. | 2.6 | 69 |
| 28 | Fluidized bed reaction towards crystalline embedded amorphous Si anode with much enhanced cycling stability. Chemical Communications, 2018, 54, 3755-3758. | 4.1 | 66 |
| 29 | Lithiophilic Ag/Li composite anodes via a spontaneous reaction for Li nucleation with a reduced barrier. Journal of Materials Chemistry A, 2019, 7, 20911-20918. | 10.3 | 66 |
| 30 | Beneficial effects of 1-propylphosphonic acid cyclic anhydride as an electrolyte additive on the electrochemical properties of LiNi0.5Mn1.5O4 cathode material. Journal of Power Sources, 2014, 263, 231-238. | 7.8 | 64 |
| 31 | Anchoring K<sup>+</sup> in Li<sup>+</sup> Sites of LiNi<sub>0.8</sub>Co<sub>0.15</sub>Al<sub>0.05</sub>O<sub>2</sub> Cathode Material to Suppress its Structural Degradation During Highâ€Voltage Cycling. Energy Technology, 2018, 6, 2358-2366. | 3.8 | 64 |
| 32 | Facile construction of Co(OH)2@Ni(OH)2 core-shell nanosheets on nickel foam as three dimensional free-standing electrode for supercapacitors. Electrochimica Acta, 2019, 293, 40-46. | 5.2 | 61 |
| 33 | Improving rate capability and decelerating voltage decay of Li-rich layered oxide cathodes by chromium doping. International Journal of Hydrogen Energy, 2018, 43, 11109-11119. | 7.1 | 60 |
| 34 | Hydrogen titanate and TiO2 nanowires as anode materials for lithium-ion batteries. Journal of Materials Chemistry, 2011, 21, 12675. | 6.7 | 55 |
| 35 | Suppressing the Voltage Decay and Enhancing the Electrochemical Performance of Li<sub>1.2</sub>Mn<sub>0.54</sub>Co<sub>0.13</sub>Ni<sub>0.13</sub>O<sub>2</sub> by Multifunctional Nb<sub>2</sub>O<sub>5</sub> Coating. Energy Technology, 2018, 6, 2139-2145. | 3.8 | 54 |
| 36 | Carbonization and graphitization of pitch applied for anode materials of high power lithium ion batteries. Journal of Solid State Electrochemistry, 2013, 17, 1401-1408. | 2.5 | 52 |

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|---|---|---|---|
| 37 | Robust synthesis of hierarchical mesoporous hybrid NiOâ€“MnCo2O4 microspheres and their application in Lithium-ion batteries. Electrochimica Acta, 2016, 191, 392-400. | 5.2 | 50 |
| 38 | Spinel-embedded and Li3PO4 modified Li[Li0.2Mn0.54Ni0.13Co0.13]O2 cathode materials for High-Performance Li-Ion battries. Applied Surface Science, 2018, 456, 763-770. | 6.1 | 47 |
| 39 | Cooperation of nitrogen-doping and catalysis to improve the Li-ion storage performance of lignin-based hard carbon. Journal of Energy Chemistry, 2018, 27, 1390-1396. | 12.9 | 46 |
| 40 | The role of a MnO2 functional layer on the surface of Ni-rich cathode materials: Towards enhanced chemical stability on exposure to air. Ceramics International, 2018, 44, 13341-13348. | 4.8 | 44 |
| 41 | One-step synthesis of Li-doped NiO as high-performance anode material for lithium ion batteries. Ceramics International, 2016, 42, 14565-14572. | 4.8 | 42 |
| 42 | Effect of synthesis routes on the electrochemical performance of Li[Ni0.6Co0.2Mn0.2]O2 for lithium ion batteries. Journal of Solid State Electrochemistry, 2012, 16, 3849-3854. | 2.5 | 40 |
| 43 | Effects of Nb doping on the performance of 0.5Li2MnO3Â·0.5LiNi1/3Co1/3Mn1/3O2 cathode material for lithium-ion batteries. Journal of Electroanalytical Chemistry, 2018, 822, 57-65. | 3.8 | 40 |
| 44 | Enhanced electrochemical performance of LiNi0.8Co0.1Mn0.1O2 cathode materials obtained by atomization co-precipitation method. Ceramics International, 2016, 42, 644-649. | 4.8 | 39 |
| 45 | Spiral Graphene Coupling Hierarchically Porous Carbon Advances Dual-Carbon Lithium Ion Capacitor. Energy Storage Materials, 2021, 38, 528-534. | 18.0 | 39 |
| 46 | Enhancement of electrochemical performance of Al-doped LiVPO4F using AlF3 as aluminum source. Journal of Alloys and Compounds, 2013, 581, 836-842. | 5.5 | 38 |
| 47 | Synthesis of nanoparticles-assembled Co 3 O 4 microspheres as anodes for Li-ion batteries by spray pyrolysis of CoCl 2 solution. Electrochimica Acta, 2016, 209, 456-463. | 5.2 | 36 |
| 48 | Oxygen-induced lithiophilicity of tin-based framework toward highly stable lithium metal anode. Chemical Engineering Journal, 2020, 394, 124848. | 12.7 | 36 |
| 49 | Comparative investigations of LiVPO4F/C and Li3V2(PO4)3/C synthesized in similar soft chemical route. Journal of Solid State Electrochemistry, 2013, 17, 1-8. | 2.5 | 34 |
| 50 | A novel dried plum-like yolkâ€“shell architecture of tin oxide nanodots embedded into a carbon matrix: ultra-fast assembly and superior lithium storage properties. Journal of Materials Chemistry A, 2019, 7, 5803-5810. | 10.3 | 34 |
| 51 | Bifunctional Li6CoO4 serving as prelithiation reagent and pseudocapacitive electrode for lithium ion capacitors. Journal of Energy Chemistry, 2020, 47, 38-45. | 12.9 | 33 |
| 52 | In-situ tailored 3D Li2O@Cu nanowires array enabling stable lithium metal anode with ultra-high coulombic efficiency. Journal of Power Sources, 2020, 463, 228178. | 7.8 | 33 |
| 53 | Electrochemical properties of LiNi0.6Co0.2Mn0.2O2 as cathode material for Li-ion batteries prepared by ultrasonic spray pyrolysis. Materials Letters, 2015, 159, 39-42. | 2.6 | 32 |
| 54 | Electrochemical analysis for cycle performance and capacity fading of lithium manganese oxide spinel cathode at elevated temperature using p-toluenesulfonyl isocyanate as electrolyte additive. Electrochimica Acta, 2015, 180, 815-823. | 5.2 | 32 |

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|---|---|---|---|
| 55 | An Ostwald ripening route towards Ni-rich layered cathode material with cobalt-rich surface for lithium ion battery. Science China Materials, 2018, 61, 719-727. | 6.3 | 32 |
| 56 | High-Value Utilization of Lignin To Prepare Functional Carbons toward Advanced Lithium-Ion Capacitors. ACS Sustainable Chemistry and Engineering, 2020, 8, 11522-11531. | 6.7 | 32 |
| 57 | Self-sacrificial-reaction guided formation of hierarchical electronic/ionic conductive shell enabling high-performance nano-silicon anode. Chemical Engineering Journal, 2021, 415, 128998. | 12.7 | 31 |
| 58 | Distinct impact of cobalt salt type on the morphology, microstructure, and electrochemical properties of Co3O4 synthesized by ultrasonic spray pyrolysis. Journal of Alloys and Compounds, 2017, 696, 836-843. | 5.5 | 29 |
| 59 | Potentiostatic deposition of nickel cobalt sulfide nanosheet arrays as binder-free electrode for high-performance pseudocapacitor. Ceramics International, 2018, 44, 15778-15784. | 4.8 | 28 |
| 60 | Systematic parameter acquisition method for electrochemical model of 4.35â€V LiCoO2 batteries. Solid State Ionics, 2019, 343, 115083. | 2.7 | 28 |
| 61 | Spray pyrolysis synthesis of nickel-rich layered cathodes LiNi 1â^'2 x Co x Mn x O 2 ( x â€=â€0.075, 0.05, 0.025) for lithium-ion batteries. Journal of Energy Chemistry, 2018, 27, 447-450. | 12.9 | 27 |
| 62 | Structural and electrochemical characterization of NH4F-pretreated lithium-rich layered Li[Li0.2Ni0.13Co0.13Mn0.54]O2 cathodes for lithium-ion batteries. Ceramics International, 2018, 44, 14370-14376. | 4.8 | 27 |
| 63 | Smartly tailored Co(OH)2-Ni(OH)2 heterostucture on nickel foam as binder-free electrode for high-energy hybrid capacitors. Electrochimica Acta, 2019, 309, 140-147. | 5.2 | 27 |
| 64 | The Electrochemical Performance and Reaction Mechanism of Coated Titanium Anodes for Manganese Electrowinning. Journal of the Electrochemical Society, 2019, 166, E502-E511. | 2.9 | 24 |
| 65 | Hydrometallurgical production of LiNi0.80Co0.15Al0.05O2 cathode material from high-grade nickel matte. Hydrometallurgy, 2019, 186, 30-41. | 4.3 | 23 |
| 66 | Performance of PVDF-HFP-based gel polymer electrolytes with different pore forming agents. Iranian Polymer Journal (English Edition), 2012, 21, 755-761. | 2.4 | 21 |
| 67 | Synthesis and characterization of Li4Ti5O12/graphene composite as anode material with enhanced electrochemical performance. Ionics, 2013, 19, 717-723. | 2.4 | 20 |
| 68 | Capacity fading reason of LiNi0.5Mn1.5O4 with commercial electrolyte. Ionics, 2013, 19, 379-383. | 2.4 | 19 |
| 69 | FeCox alloy nanoparticles encapsulated in three-dimensionally N-doped porous carbon/multiwalled carbon nanotubes composites as bifunctional electrocatalyst for zinc-air battery. Journal of Power Sources, 2019, 438, 227019. | 7.8 | 18 |
| 70 | Improving the electrochemical performance of Li-rich Li1.2Ni0.13Co0.13Mn0.54O2 cathode material by LiF coating. Ionics, 2018, 24, 3717-3724. | 2.4 | 17 |
| 71 | Manipulating the Composition and Structure of Solid Electrolyte Interphase at Graphite Anode by Adjusting the Formation Condition. Energy Technology, 2019, 7, 1900273. | 3.8 | 17 |
| 72 | A novel hierarchical precursor of densely integrated hydroxide nanoflakes on oxide microspheres toward high-performance layered Ni-rich cathode for lithium ion batteries. Materials Chemistry Frontiers, 2018, 2, 1822-1828. | 5.9 | 14 |

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|---|---|---|---|
| 73 | Graphitic nanorings for super-long lifespan lithium-ion capacitors. Nano Research, 2020, 13, 2909-2916. | 10.4 | 14 |
| 74 | Vital effect of sufficient vulcanization on the properties of Ni-Co-S/graphene composites for supercapacitor. Chemical Engineering Science, 2020, 221, 115709. | 3.8 | 14 |
| 75 | A compact process to prepare LiNi 0.8 Co 0.1 Mn 0.1 O 2 cathode material from nickel-copper sulfide ore. Hydrometallurgy, 2017, 174, 1-9. | 4.3 | 13 |
| 76 | Properties on novel PVDFâ€HFPâ€based composite polymer electrolyte with vinyltrimethoxylsilaneâ€modified ZSMâ€5. Polymer Composites, 2012, 33, 629-635. | 4.6 | 12 |
| 77 | Effects of Al doping for Li[Li0.09Mn0.65*0.91Ni0.35*0.91]O2 cathode material. Ionics, 2013, 19, 1495-1501. | 2.4 | 12 |
| 78 | Synthesis and electrochemical performance of LiNi0.6Co0.2Mn0.2O2/reduced graphene oxide cathode materials for lithium-ion batteries. Ionics, 2013, 19, 1329-1334. | 2.4 | 12 |
| 79 | A smart architecture of nickel-cobalt sulfide nanotubes assembled nanoclusters for high-performance pseudocapacitor. Journal of Alloys and Compounds, 2018, 765, 505-511. | 5.5 | 12 |
| 80 | Magnesium-doped Li[Li0.2Mn0.54Ni0.13Co0.13]O2 cathode with high rate capability and improved cyclic stability. Ionics, 2019, 25, 1967-1977. | 2.4 | 12 |
| 81 | The influences of SO42â^' from electrolytic manganese dioxide precursor on the electrochemical properties of Li-rich Mn-based material for Li-ion batteries. Ionics, 2019, 25, 2585-2594. | 2.4 | 12 |
| 82 | Clearing surficial charge-transport obstacles to boost the performance of lithium-rich layered oxides. Chemical Engineering Journal, 2020, 399, 125142. | 12.7 | 12 |
| 83 | Bulk and surface reconstructed Li-rich Mn-based cathode material for lithium ion batteries with eliminating irreversible capacity loss. Journal of Electroanalytical Chemistry, 2018, 829, 7-15. | 3.8 | 11 |
| 84 | Enhancing the electrochemical and storage performance of Ni-based cathode materials by introducing spinel pillaring layer for lithium ion batteries. Solid State Ionics, 2019, 332, 41-46. | 2.7 | 11 |
| 85 | Effect of copper and iron substitution on the structures and electrochemical properties of LiNi 0.8 Co 0.15 Al 0.05 O 2 cathode materials. Energy Science and Engineering, 2020, 8, 1868-1879. | 4.0 | 11 |
| 86 | Performance and capacity fading reason of LiMn2O4/graphite batteries after storing at high temperature. Rare Metals, 2009, 28, 322-327. | 7.1 | 10 |
| 87 | Three-dimensionally mesoporous dual (Co, Fe) metal oxide/CNTs composite as electrocatalysts for air cathodes in Li-O2 batteries. Ceramics International, 2018, 44, 21942-21949. | 4.8 | 10 |
| 88 | BODIPY-Based Conjugated Porous Polymer and Its Derived Porous Carbon for Lithium-Ion Storage. ACS Omega, 2018, 3, 7727-7735. | 3.5 | 10 |
| 89 | Modification by simultaneously Î³-WO3/Li2WO4 composite coating and spinel-structure formation on Li[Li0.2Mn0.54Ni0.13Co0.13]O2 cathode via a simple wet process. Journal of Alloys and Compounds, 2019, 790, 421-432. | 5.5 | 10 |
| 90 | Mitigating the voltage fading and air sensitivity of O3-type NaNi0.4Mn0.4Cu0.1Ti0.1O2 cathode material via La doping. Chemical Engineering Journal, 2022, 431, 133456. | 12.7 | 10 |

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|---|---|---|---|
| 91 | Preparation and physicochemical performances of poly[(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 747 Td (fluoride)â€‹carbon nanotubes. Polymer International, 2014, 63, 307-314. | 3.1 | 9 |
| 92 | Compact structured silicon/carbon composites as high-performance anodes for lithium ion batteries. Ionics, 2018, 24, 3405-3411. | 2.4 | 9 |
| 93 | Modification on improving the structural stabilities and cyclic properties of Li1.2Mn0.54Ni0.13Co0.13O2 cathode materials with CePO4. Ionics, 2020, 26, 2117-2127. | 2.4 | 9 |
| 94 | One-step potentiostatic electrodeposition of cross-linked bimetallic sulfide nanosheet thin film for supercapacitors. Ionics, 2020, 26, 4095-4102. | 2.4 | 9 |
| 95 | Study on performances of ZSM-5 doped P(VDF-HFP) based composite polymer electrolyte prepared by steam bath technique. Iranian Polymer Journal (English Edition), 2012, 21, 481-488. | 2.4 | 8 |
| 96 | Comprehensive reinvestigation on the initial coulombic efficiency and capacity fading mechanism of LiNi0.5Mn1.5O4 at low rate and elevated temperature. Journal of Solid State Electrochemistry, 2013, 17, 1029-1038. | 2.5 | 8 |
| 97 | Superior lithium storage of Si/WSi2 composite prepared via one step co-reduction of multi-phase oxide. Journal of Electroanalytical Chemistry, 2018, 826, 84-89. | 3.8 | 8 |
| 98 | Novel LiV(PO<sub>4</sub>)<sub>0.9</sub>F<sub>1.3</sub> with ultrahigh rate capability and prolonged cycle life. Chemical Communications, 2019, 55, 11175-11178. | 4.1 | 8 |
| 99 | Monoâ€Active Bimetallic Oxide Co<sub>2</sub>AlO<sub>4</sub> with Yolkâ€Shell Structure as a Superior Lithiumâ€Storage Material. ChemElectroChem, 2019, 6, 3298-3302. | 3.4 | 8 |
| 100 | Improving the electrochemical performance of LiMn2O4/graphite batteries using LiF additive during fabrication. Rare Metals, 2011, 30, 120-125. | 7.1 | 7 |
| 101 | Investigation on the storage performance of LiMn2O4 at elevated temperature with the mixture of electrolyte stabilizer. Ionics, 2012, 18, 907-911. | 2.4 | 7 |
| 102 | Accurate regulation of pore distribution and atomic arrangement enabling highly efficient dual-carbon lithium ion capacitors. Journal of Materials Chemistry A, 2020, 8, 22230-22239. | 10.3 | 7 |
| 103 | A Renewable Sedimentary Slurry Battery: Preliminary Study in Zinc Electrodes. IScience, 2020, 23, 101821. | 4.1 | 6 |
| 104 | Storage performance with different charged state of manganese spinel battery. Ionics, 2012, 18, 643-648. | 2.4 | 4 |
| 105 | Improving the Desulfurization Degree of High-Grade Nickel Matte via a Two-Step Oxidation Roasting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 1834-1840. | 2.1 | 4 |