Reversible aqueous zinc/manganese oxide energy storage from conversion reactions

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#	Paper	IF	Citations
1827	Batteries: Converting to long stability. *Nature Energy*, **2016**, 1,	62.3	9
1826	Cadmium Removal from Aqueous Solution by a Deionization Supercapacitor with a Birnessite Electrode. **2016**, 8, 34405-34413		53
1825	Nano on reflection. **2016**, 11, 828-834		25
1824	Effect of crystalline structure on the electrochemical properties of K0.25V2O5 nanobelt for fast Li insertion. **2016**, 218, 199-207		13
1823	A Flexible Quasi-Solid-State Nickel-Zinc Battery with High Energy and Power Densities Based on 3D Electrode Design. **2016**, 28, 8732-8739		367
1822	Flexible Ultrafast Aqueous Rechargeable Ni//Bi Battery Based on Highly Durable Single-Crystalline Bismuth Nanostructured Anode. **2016**, 28, 9188-9195		178
1821	Cation-Deficient Spinel ZnMnO Cathode in Zn(CFSO) Electrolyte for Rechargeable Aqueous Zn-Ion Battery. **2016**, 138, 12894-12901		1011
1820	Critical Role of pH Evolution of Electrolyte in the Reaction Mechanism for Rechargeable Zinc Batteries. **2016**, 9, 2948-2956		218
1819	High-Performance Flexible Solid-State Ni/Fe Battery Consisting of Metal Oxides Coated Carbon Cloth/Carbon Nanofiber Electrodes. **2016**, 6, 1601034		213
1818	A high-capacity and long-life aqueous rechargeable zinc battery using a metal oxide intercalation cathode. *Nature Energy*, **2016**, 1,	62.3	1416
1817	Layered VS2 Nanosheet-Based Aqueous Zn Ion Battery Cathode. **2017**, 7, 1601920		680
1816	Manganese Sesquioxide as Cathode Material for Multivalent Zinc Ion Battery with High Capacity and Long Cycle Life. **2017**, 229, 422-428		250
1815	Zinc removal from aqueous solution using a deionization pseudocapacitor with a high-performance nanostructured birnessite electrode. **2017**, 4, 811-823		16
1814	Self-branched □MnO2/□MnO2 heterojunction nanowires with enhanced pseudocapacitance. **2017**, 4, 415-422		89
1813	Regenerable Cu-intercalated MnO layered cathode for highly cyclable energy dense batteries. **2017**, 8, 14424		156
1812	Odyssey of Multivalent Cathode Materials: Open Questions and Future Challenges. **2017**, 117, 4287-4341		687
1811	Ambient redox synthesis of vanadium-doped manganese dioxide nanoparticles and their enhanced zinc storage properties. **2017**, 404, 435-442		91

1810	Hollandite-type Al-doped VO1.52(OH)0.77 as a zinc ion insertion host material. **2017**, 5, 8367-8375	95
1809	A promising energy storage system: rechargeable Ni–Zn battery. **2017**, 36, 381-396	42
1808	Carbon-coated manganese dioxide nanoparticles and their enhanced electrochemical properties for zinc-ion battery applications. **2017**, 26, 815-819	75
1807	Bio-degradable zinc-ion battery based on a prussian blue analogue cathode and a bio-ionic liquid-based electrolyte. **2017**, 21, 2021-2027	80
1806	Rechargeable Zinc Alkaline Anodes for Long-Cycle Energy Storage. **2017**, 29, 4819-4832	96
1805	Achieving Ultrahigh Energy Density and Long Durability in a Flexible Rechargeable Quasi-Solid-State Zn-MnO Battery. **2017**, 29, 1700274	450
1804	Surfactant widens the electrochemical window of an aqueous electrolyte for better rechargeable aqueous sodium/zinc battery. **2017**, 5, 730-738	187
1803	Universal quinone electrodes for long cycle life aqueous rechargeable batteries. **2017**, 16, 841-848	432
1802	High-performance flexible quasi-solid-state Zn–MnO2 battery based on MnO2 nanorod arrays coated 3D porous nitrogen-doped carbon cloth. **2017**, 5, 14838-14846	196
1801	Investigation of zinc ion storage of transition metal oxides, sulfides, and borides in zinc ion battery systems. **2017**, 53, 6872-6874	94
1800	pH-Controlled Electrolysis of Electrolytic Manganese Dioxide (EMD) for Improved Cycle Life of Rechargeable MnO2/Zn Batteries. **2017**, 164, A810-A819	7
1799	Sheet-on-Sheet Hierarchical Nanostructured C@MnO2 for Zn-Air and Zn-MnO2 Batteries. **2017**, 3, 401-405	21
1798	Rechargeable zinc–air batteries: a promising way to green energy. **2017**, 5, 7651-7666	323
1797	Sustainability and in situ monitoring in battery development. **2016**, 16, 45-56	695
1796	Earth Abundant Fe/Mn-Based Layered Oxide Interconnected Nanowires for Advanced K-Ion Full Batteries. **2017**, 17, 544-550	297
1795	Encapsulation of zinc hexacyanoferrate nanocubes with manganese oxide nanosheets for high-performance rechargeable zinc ion batteries. **2017**, 5, 23628-23633	128
1794	Controlling Solid–Liquid Conversion Reactions for a Highly Reversible Aqueous Zinc–Iodine Battery. **2017**, 2, 2674-2680	96
1793	Facile synthesis and the exploration of the zinc storage mechanism of β-MnO2 nanorods with exposed (101) planes as a novel cathode material for high performance eco-friendly zinc-ion batteries. **2017**, 5, 23299-23309	194

1792	On-site evolution of ultrafine ZnO nanoparticles from hollow metal□rganic frameworks for advanced lithium ion battery anodes. **2017**, 5, 22512-22518	67
1791	ZnAlxCo2□O4 Spinels as Cathode Materials for Non-Aqueous Zn Batteries with an Open Circuit Voltage of □ V. **2017**, 29, 9351-9359	67
1790	Nanostructured Electrode Materials for High-Energy Rechargeable Li, Na and Zn Batteries. **2017**, 29, 9589-9604	60
1789	Rational Development of Neutral Aqueous Electrolytes for Zinc-Air Batteries. **2017**, 10, 4735-4747	55
1788	Rechargeable aqueous zinc-manganese dioxide batteries with high energy and power densities. **2017**, 8, 405	850
1787	Enhancement of Zn2+ and Ni2+ removal performance using a deionization pseudocapacitor with nanostructured birnessite and its carbon nanotube composite electrodes. **2017**, 328, 464-473	34
1786	Synthesis of cryptomelane type □MnO2 (KxMn8O16) cathode materials with tunable K+ content: the role of tunnel cation concentration on electrochemistry. **2017**, 5, 16914-16928	73
1785	Green-low-cost rechargeable aqueous zinc-ion batteries using hollow porous spinel ZnMn2O4 as the cathode material. **2017**, 5, 17990-17997	192
1784	Weavable, Conductive Yarn-Based NiCo//Zn Textile Battery with High Energy Density and Rate Capability. **2017**, 11, 8953-8961	237
1783	High-Performance Aqueous Zinc-Ion Battery Based on Layered H V O Nanowire Cathode. **2017**, 13, 1702551	335
1782	Zn/VO Aqueous Hybrid-Ion Battery with High Voltage Platform and Long Cycle Life. **2017**, 9, 42717-42722	293
1781	Polycrystalline soft carbon semi-hollow microrods as anode for advanced K-ion full batteries. **2017**, 9, 18216-18222	113
1780	Electrochemical Energy Storage with Mediator-Ion Solid Electrolytes. **2017**, 1, 453-462	19
1779	Dual-ions electrochemical deionization: a desalination generator. **2017**, 10, 2081-2089	176
1778	Zn/MnO Battery Chemistry With H and Zn Coinsertion. **2017**, 139, 9775-9778	866
1777	Tunnel Structured □MnO2with Different Tunnel Cations (H+, K+, Ag+) as Cathode Materials in Rechargeable Lithium Batteries: The Role of Tunnel Cation on Electrochemistry. **2017**, 164, A1983-A1990	26
1776	Nanostructured MnO□as Electrode Materials for Energy Storage. **2017**, 7,	128
1775	Unravelling the reaction chemistry and degradation mechanism in aqueous Zn/MnO2 rechargeable batteries. **2018**, 6, 5733-5739	132

1774	Electrochemical performance of nanosized MnO2 synthesized by redox route using biological reducing agents. **2018**, 746, 227-237	16
1773	Ni-based Nanostructures as High-performance Cathodes for Rechargeable Ni□n Battery. **2018**, 4, 525-536	47
1772	High-capacity aqueous zinc batteries using sustainable quinone electrodes. **2018**, 4, eaao1761	465
1771	Transition-Metal-Doped □MnO2 Nanorods as Bifunctional Catalysts for Efficient Oxygen Reduction and Evolution Reactions. **2018**, 3, 2613-2622	31
1770	Structural transformation and electrochemical study of layered MnO2 in rechargeable aqueous zinc-ion battery. **2018**, 276, 1-11	138
1769	Co O Nanosheets as Active Material for Hybrid Zn Batteries. **2018**, 14, e1800225	103
1768	Aqueous rechargeable zinc/sodium vanadate batteries with enhanced performance from simultaneous insertion of dual carriers. **2018**, 9, 1656	712
1767	Binder-free stainless steel@Mn3O4 nanoflower composite: a high-activity aqueous zinc-ion battery cathode with high-capacity and long-cycle-life. **2018**, 6, 9677-9683	196
1766	Highly reversible zinc metal anode for aqueous batteries. **2018**, 17, 543-549	1128
1765	On the Balance of Intercalation and Conversion Reactions in Battery Cathodes. **2018**, 8, 1800379	30
1764	Investigation of VO as a low-cost rechargeable aqueous zinc ion battery cathode. **2018**, 54, 4457-4460	225
1763	In Situ Activation of 3D Porous Bi/Carbon Architectures: Toward High-Energy and Stable Nickel-Bismuth Batteries. **2018**, 30, e1707290	106
1762	Low-cost birnessite as a promising cathode for high-performance aqueous rechargeable batteries. **2018**, 272, 154-160	80
1761	An electrochemically induced bilayered structure facilitates long-life zinc storage of vanadium dioxide. **2018**, 6, 8006-8012	137
1760	A flexible rechargeable zinc-ion wire-shaped battery with shape memory function. **2018**, 6, 8549-8557	103
1759	Tough hydrogel diodes with tunable interfacial adhesion for safe and durable wearable batteries. **2018**, 48, 569-574	40
1758	Using core□shell interlinked polymer@C□bdine hollow spheres to synergistically depress polyiodide shuttle and boost kinetics for iodine-based batteries. **2018**, 6, 9019-9031	27
1757	Highly Stable Aqueous Zinc-Ion Storage Using a Layered Calcium Vanadium Oxide Bronze Cathode. **2018**, 130, 4007-4012	68

1756	Aqueous vs. nonaqueous Zn-ion batteries: consequences of the desolvation penalty at the interface. **2018**, 11, 881-892		389
1755	Highly Durable NaVO1.63HO Nanowire Cathode for Aqueous Zinc-Ion Battery. **2018**, 18, 1758-1763		403
1754	Aqueous rechargeable Zn-ion batteries: an imperishable and high-energy Zn2V2O7 nanowire cathode through intercalation regulation. **2018**, 6, 3850-3856		212
1753	Graphene Scroll-Coated MnO Nanowires as High-Performance Cathode Materials for Aqueous Zn-Ion Battery. **2018**, 14, e1703850		386
1752	Rate-Limiting Step in Batteries with Metal Oxides as the Energy Materials. **2018**, 10, 7162-7170		8
1751	An extremely safe and wearable solid-state zinc ion battery based on a hierarchical structured polymer electrolyte. **2018**, 11, 941-951		520
1750	Highly Stable Aqueous Zinc-Ion Storage Using a Layered Calcium Vanadium Oxide Bronze Cathode. **2018**, 57, 3943-3948		509
1749	High performance, environmentally benign and integratable Zn//MnO2 microbatteries. **2018**, 6, 3933-3940		30
1748	Fabrication of Core-Shell Fe3O4@C@MnO2Microspheres and Their Application in Supercapacitors. **2018**, 165, E58-E63		13
1747	Combining battery-like and pseudocapacitive charge storage in 3D MnOx@carbon electrode architectures for zinc-ion cells. **2018**, 2, 626-636		57
1746	Sodium Ion Stabilized Vanadium Oxide Nanowire Cathode for High-Performance Zinc-Ion Batteries. **2018**, 8, 1702463		454
1745	Extremely safe, high-rate and ultralong-life zinc-ion hybrid supercapacitors. **2018**, 13, 96-102		326
1744	Intercalation and Conversion Reactions of Nanosized MnO2 Cathode in the Secondary Zn/MnO2 Alkaline Battery. **2018**, 122, 11177-11185		44
1743	Light-permeable, photoluminescent microbatteries embedded in the color filter of a screen. **2018**, 11, 2414-2422		70
1742	Elucidating Solvation Structures for Rational Design of Multivalent Electrolytes-A Review. **2018**, 376, 19		46
1741	Synthesis of manganese-based complex as cathode material for aqueous rechargeable batteries.. **2018**, 8, 15703-15708		10
1740	Investigation of electrochemical calcium-ion energy storage mechanism in potassium birnessite. **2018**, 390, 127-133		33
1739	A manganeseHydrogen battery with potential for grid-scale energy storage. *Nature Energy*, **2018**, 3, 428-435	62.3	174

1738	Density Functional Theory Modeling of MnO2 Polymorphs as Cathodes for Multivalent Ion Batteries. **2018**, 122, 8788-8795	48
1737	H2V3O8 Nanowire/Graphene Electrodes for Aqueous Rechargeable Zinc Ion Batteries with High Rate Capability and Large Capacity. **2018**, 8, 1800144	302
1736	Waterproof and Tailorable Elastic Rechargeable Yarn Zinc Ion Batteries by a Cross-Linked Polyacrylamide Electrolyte. **2018**, 12, 3140-3148	305
1735	NaVO□BHO Barnesite Nanorod: An Open Door to Display a Stable and High Energy for Aqueous Rechargeable Zn-Ion Batteries as Cathodes. **2018**, 18, 2402-2410	341
1734	DFT study of nano zinc/copper voltaic cells. **2018**, 24, 103	1
1733	A long-life aqueous Zn-ion battery based on Na3V2(PO4)2F3 cathode. **2018**, 15, 14-21	295
1732	Lithium Extracting from Zinnwaldite: Economical Comparison of an Adapted Spodumene and a Direct-Carbonation Process. **2018**, 41, 975-982	8
1731	Electrochemically induced spinel-layered phase transition of Mn3O4 in high performance neutral aqueous rechargeable zinc battery. **2018**, 259, 170-178	190
1730	Dip-coating processed sponge-based electrodes for stretchable Zn-MnO2 batteries. **2018**, 11, 1554-1562	35
1729	Rechargeable Aqueous Zinc-Ion Battery Based on Porous Framework Zinc Pyrovanadate Intercalation Cathode. **2018**, 30, 1705580	523
1728	Three-dimensional nanotube-array anode enables a flexible Ni/Zn fibrous battery to ultrafast charge and discharge in seconds. **2018**, 12, 232-240	49
1727	Supercapacitive properties of activated carbon electrode using ammonium based proton conducting electrolytes. **2018**, 43, 1667-1674	12
1726	Water-Lubricated Intercalation in V O □nH O for High-Capacity and High-Rate Aqueous Rechargeable Zinc Batteries. **2018**, 30, 1703725	725
1725	A high-capacity and long-life aqueous rechargeable zinc battery using a porous metal□rganic coordination polymer nanosheet cathode. **2018**, 5, 3067-3073	17
1724	A ZnCl water-in-salt electrolyte for a reversible Zn metal anode. **2018**, 54, 14097-14099	275
1723	Highly reversible and long-life cycling aqueous zinc-ion battery based on ultrathin (NH4)2V10O25□8H2O nanobelts. **2018**, 6, 20402-20410	126
1722	A deeply rechargeable zinc anode with pomegranate-inspired nanostructure for high-energy aqueous batteries. **2018**, 6, 21933-21940	43
1721	A rechargeable aqueous Zn2+-battery with high power density and a long cycle-life. **2018**, 11, 3168-3175	182

1720	An Intermediate-Temperature High-Performance Na-ZnCl Battery. **2018**, 3, 15702-15708	9
1719	A Nanofibrillated Cellulose/Polyacrylamide Electrolyte-Based Flexible and Sewable High-Performance Zn-MnO Battery with Superior Shear Resistance. **2018**, 14, e1803978	119
1718	Binary and Ternary Manganese Dioxide Composites Cathode for Aqueous Zinc-ion Battery. **2018**, 3, 12661-12665	15
1717	Solid electrolyte interphases for high-energy aqueous aluminum electrochemical cells. **2018**, 4, eaau8131	121
1716	Highly Compressible Cross-Linked Polyacrylamide Hydrogel-Enabled Compressible Zn-MnO Battery and a Flexible Battery-Sensor System. **2018**, 10, 44527-44534	75
1715	Effective Zinc Adsorption Driven by Electrochemical Redox Reactions of Birnessite Nanosheets Generated by Solar Photochemistry. **2018**, 6, 13907-13914	7
1714	An Operando Study of the Initial Discharge of Bi and Bi/Cu Modified MnO2. **2018**, 165, A2935-A2947	15
1713	Layered MgxV2O5·nH2O as Cathode Material for High-Performance Aqueous Zinc Ion Batteries. **2018**, 3, 2602-2609	381
1712	Solid-State Rechargeable Zn//NiCo and Zn–Air Batteries with Ultralong Lifetime and High Capacity: The Role of a Sodium Polyacrylate Hydrogel Electrolyte. **2018**, 8, 1802288	146
1711	Inhibition of Zinc Dendrite Growth in Zinc-Based Batteries. **2018**, 11, 3996-4006	149
1710	Unveiling Conversion Reaction on Intercalation-Based Transition Metal Oxides for High Power, High Energy Aqueous Lithium Battery. **2018**, 8, 1802254	13
1709	Integration of Zn-Ag and Zn-Air Batteries: A Hybrid Battery with the Advantages of Both. **2018**, 10, 36873-36881	12
1708	Self-Healing Lamellar Structure Boosts Highly Stable Zinc-Storage Property of Bilayered Vanadium Oxides. **2018**, 10, 35079-35089	101
1707	Present and Future Perspective on Electrode Materials for Rechargeable Zinc-Ion Batteries. **2018**, 3, 2620-2640	439
1706	Nitrogen-doped MnO2 nanorods as cathodes for high-energy Zn-MnO2 batteries. **2018**, 11, 1840006	22
1705	Investigating the Impact of Particle Size on the Performance and Internal Resistance of Aqueous Zinc Ion Batteries with a Manganese Sesquioxide Cathode. **2018**, 4, 44	4
1704	Hydrogel Electrolytes for Flexible Aqueous Energy Storage Devices. **2018**, 28, 1804560	253
1703	A Long-Cycle-Life Self-Doped Polyaniline Cathode for Rechargeable Aqueous Zinc Batteries. **2018**, 57, 16359-16363	211

1702	High-Power Aqueous Zinc-Ion Batteries for Customized Electronic Devices. **2018**, 12, 11838-11846	110
1701	Dendrite Suppression Membranes for Rechargeable Zinc Batteries. **2018**, 10, 38928-38935	111
1700	A Lasagna-Inspired Nanoscale ZnO Anode Design for High-Energy Rechargeable Aqueous Batteries. **2018**, 1, 6345-6351	27
1699	A Long-Cycle-Life Self-Doped Polyaniline Cathode for Rechargeable Aqueous Zinc Batteries. **2018**, 130, 16597-16601	59
1698	Ion-Sieving Carbon Nanoshells for Deeply Rechargeable Zn-Based Aqueous Batteries. **2018**, 8, 1802470	86
1697	Transformed Akhtenskite MnO2 from Mn3O4 as Cathode for a Rechargeable Aqueous Zinc Ion Battery. **2018**, 6, 16055-16063	66
1696	Sealing ZnO nanorods for deeply rechargeable high-energy aqueous battery anodes. **2018**, 53, 666-674	82
1695	Insights on the Proton Insertion Mechanism in the Electrode of Hexagonal Tungsten Oxide Hydrate. **2018**, 140, 11556-11559	62
1694	Recent Advances in Aqueous Zinc-Ion Batteries. **2018**, 3, 2480-2501	959
1693	Novel Alkaline Zn/NaMnO Dual-Ion Battery with a High Capacity and Long Cycle Lifespan. **2018**, 10, 34108-34115	56
1692	Cryptomelane-Type KMnO as Potential Cathode Material - for Aqueous Zinc Ion Battery. **2018**, 6, 352	30
1691	Li+ intercalated V2O5·nH2O with enlarged layer spacing and fast ion diffusion as an aqueous zinc-ion battery cathode. **2018**, 11, 3157-3162	535
1690	3D zinc@carbon fiber composite framework anode for aqueous Zn-MnO batteries.. **2018**, 8, 19157-19163	84
1689	ZnNixMnxCo2−2xO4 Spinel as a High-Voltage and High-Capacity Cathode Material for Nonaqueous Zn-Ion Batteries. **2018**, 8, 1800589	72
1688	Rechargeable Aqueous Zn–V2O5 Battery with High Energy Density and Long Cycle Life. **2018**, 3, 1366-1372	486
1687	Aqueous intercalation-type electrode materials for grid-level energy storage: Beyond the limits of lithium and sodium. **2018**, 50, 229-244	78
1686	Nickel@Nickel Oxide Core–Shell Electrode with Significantly Boosted Reactivity for Ultrahigh-Energy and Stable Aqueous Ni–Zn Battery. **2018**, 28, 1802157	92
1685	An aqueous Zn–MnO2 rechargeable microbattery. **2018**, 6, 10926-10931	45

1684	Ultrafast Zn Intercalation and Deintercalation in Vanadium Dioxide. **2018**, 30, e1800762	331
1683	A High-Rate and Stable Quasi-Solid-State Zinc-Ion Battery with Novel 2D Layered Zinc Orthovanadate Array. **2018**, 30, e1803181	389
1682	ReviewÂdvent of TiO2Nanotubes as Supercapacitor Electrode. **2018**, 165, E345-E358	30
1681	High-Performance Cable-Type Flexible Rechargeable Zn Battery Based on MnO@CNT Fiber Microelectrode. **2018**, 10, 24573-24582	122
1680	Rechargeability of aqueous sulfate Zn/MnO2 batteries enhanced by accessible Mn2+ ions. **2018**, 15, 351-360	131
1679	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. **2018**, 57, 11978-11981	84
1678	Flexible high energy density zinc-ion batteries enabled by binder-free MnO2/reduced graphene oxide electrode. **2018**, 2,	50
1677	Advances in Flexible and Wearable Energy-Storage Textiles. **2018**, 2, 1800124	87
1676	Polyaniline-intercalated manganese dioxide nanolayers as a high-performance cathode material for an aqueous zinc-ion battery. **2018**, 9, 2906	618
1675	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. **2018**, 130, 12154-12157	10
1674	High-Performance Reversible Aqueous Zn-Ion Battery Based on Porous MnOx Nanorods Coated by MOF-Derived N-Doped Carbon. **2018**, 8, 1801445	284
1673	Potassium vanadates with stable structure and fast ion diffusion channel as cathode for rechargeable aqueous zinc-ion batteries. **2018**, 51, 579-587	291
1672	A smart safe rechargeable zinc ion battery based on sol-gel transition electrolytes. **2018**, 63, 1077-1086	94
1671	High-performance flexible all-solid-state aqueous rechargeable ZnMnO2 microbatteries integrated with wearable pressure sensors. **2018**, 6, 14594-14601	67
1670	Nanoporous CaCO3 Coatings Enabled Uniform Zn Stripping/Plating for Long-Life Zinc Rechargeable Aqueous Batteries. **2018**, 8, 1801090	450
1669	An Environmentally Friendly and Flexible Aqueous Zinc Battery Using an Organic Cathode. **2018**, 130, 11911-11915	106
1668	An Environmentally Friendly and Flexible Aqueous Zinc Battery Using an Organic Cathode. **2018**, 57, 11737-11741	261
1667	K2V6O16·2.7H2O nanorod cathode: an advanced intercalation system for high energy aqueous rechargeable Zn-ion batteries. **2018**, 6, 15530-15539	132

1666	Integrating a Triboelectric Nanogenerator and a Zinc-Ion Battery on a Designed Flexible 3D Spacer Fabric. **2018**, 2, 1800150	54
1665	Manganese-Oxide-Based Electrode Materials for Energy Storage Applications: How Close Are We to the Theoretical Capacitance?. **2018**, 30, e1802569	68
1664	Recent Advances in Zn-Ion Batteries. **2018**, 28, 1802564	981
1663	Ultrathin Surface Coating Enables Stabilized Zinc Metal Anode. **2018**, 5, 1800848	276
1662	Mechanistic Insights of Zn2+ Storage in Sodium Vanadates. **2018**, 8, 1801819	167
1661	An adaptive and stable bio-electrolyte for rechargeable Zn-ion batteries. **2018**, 6, 12237-12243	102
1660	Vanadium-Based Cathode Materials for Rechargeable Multivalent Batteries: Challenges and Opportunities. **2018**, 1, 169-199	90
1659	Advanced Low-Cost, High-Voltage, Long-Life Aqueous Hybrid Sodium/Zinc Batteries Enabled by a Dendrite-Free Zinc Anode and Concentrated Electrolyte. **2018**, 10, 22059-22066	152
1658	Electrochemical Impedance and its Applications in Energy-Storage Systems. **2018**, 2, 1700342	42
1657	Capacitive Performance and Tortuosity of Activated Carbon Electrodes with Macroscopic Pores. **2018**, 165, A1685-A1693	16
1656	Initiating a mild aqueous electrolyte Co3O4/Zn battery with 2.2 V-high voltage and 5000-cycle lifespan by a Co(III) rich-electrode. **2018**, 11, 2521-2530	282
1655	Rational design of nano-architecture composite hydrogel electrode towards high performance Zn-ion hybrid cell. **2018**, 10, 13083-13091	66
1654	A potential large-scale energy conversion/storage system: an aqueous rechargeable battery with intercalated potassium compound. **2019**, 25, 2267-2274	3
1653	Freestanding graphene/VO2 composite films for highly stable aqueous Zn-ion batteries with superior rate performance. **2019**, 17, 143-150	250
1652	Observation of combination displacement/intercalation reaction in aqueous zinc-ion battery. **2019**, 18, 10-14	108
1651	Quasi-Isolated Au Particles as Heterogeneous Seeds To Guide Uniform Zn Deposition for Aqueous Zinc-Ion Batteries. **2019**, 2, 6490-6496	117
1650	Ultrafast Zinc-Ion Diffusion Ability Observed in 6.0-Nanometer Spinel Nanodots. **2019**, 13, 10376-10385	77
1649	Electrochemical activation of commercial MnO microsized particles for high-performance aqueous zinc-ion batteries. **2019**, 438, 226951	80

1648	Breaking the 2 V Barrier in Aqueous Zinc Chemistry: Creating 2.45 and 2.8 V MnO2/Zn Aqueous Batteries. **2019**, 4, 2144-2146	79
1647	K+ intercalated V2O5 nanorods with exposed facets as advanced cathodes for high energy and high rate zinc-ion batteries. **2019**, 7, 20335-20347	67
1646	On the unsuspected role of multivalent metal ions on the charge storage of a metal oxide electrode in mild aqueous electrolytes. **2019**, 10, 8752-8763	21
1645	Recent Progress in the Electrolytes of Aqueous Zinc-Ion Batteries. **2019**, 25, 14480-14494	162
1644	Artificial Solid-Electrolyte Interface Facilitating Dendrite-Free Zinc Metal Anodes via Nanowetting Effect. **2019**, 11, 32046-32051	110
1643	Rechargeable aqueous electrolyte batteries: from univalent to multivalent cation chemistry. **2019**, 7, 20519-20539	101
1642	A Superior δ-MnO Cathode and a Self-Healing Zn-δ-MnO Battery. **2019**, 13, 10643-10652	278
1641	Ultrafast Rechargeable Zinc Battery Based on High-Voltage Graphite Cathode and Stable Nonaqueous Electrolyte. **2019**, 11, 32978-32986	49
1640	Electrochemical Activation of Mn3O4 (Hausmannite) for a Rechargeable Aqueous Zn/Mn-Oxide Battery for Energy Storage Applications. **2019**,	1
1639	Zinc ion interactions in a two-dimensional covalent organic framework based aqueous zinc ion battery. **2019**, 10, 8889-8894	103
1638	Structure Rearrangement and V(IV) Doping for V2O5 as Ultralong-Life and Ultrahigh-Rate Cathode in Aqueous Zinc-Ion Batteries. **2019**, 166, A2805-A2813	7
1637	K+ pre-intercalated manganese dioxide with enhanced Zn2+ diffusion for high rate and durable aqueous zinc-ion batteries. **2019**, 7, 20806-20812	76
1636	Ni3S2/Ni nanosheet arrays for high-performance flexible zinc hybrid batteries with evident two-stage charge and discharge processes. **2019**, 7, 18915-18924	39
1635	A Universal Principle to Design Reversible Aqueous Batteries Based on Deposition–Dissolution Mechanism. **2019**, 9, 1901838	83
1634	Designing a manganese oxide bifunctional air electrode for aqueous chloride-based electrolytes in secondary zinc-air batteries. **2019**, 320, 134557	17
1633	Rechargeable aqueous hybrid ion batteries: developments and prospects. **2019**, 7, 18708-18734	68
1632	Layered vanadium oxides with proton and zinc ion insertion for zinc ion batteries. **2019**, 320, 134565	78
1631	A Flexible Quasi-Solid-State Bifunctional Device with Zinc-Ion Microbattery and Photodetector. **2019**, 6, 3933-3939	21

1630	An efficient electrocatalyst for the oxygen evolution reaction: in situ enrichment of cobalt by sulfate-reducing bacteria. **2019**, 25, 5919-5928	
1629	An innovation: Dendrite free quinone paired with ZnMn2O4 for zinc ion storage. **2019**, 13, 323-330	42
1628	Layered Sodium Manganese Oxide Na2Mn3O7 as an Insertion Host for Aqueous Zinc-ion Batteries. **2019**, 4, 2651-2657	6
1627	V-MOF derived porous V2O5 nanoplates for high performance aqueous zinc ion battery. **2019**, 493, 368-374	46
1626	A Low-Cost Zn-Based Aqueous Supercapacitor with High Energy Density. **2019**, 2, 5835-5842	38
1625	All solid state rechargeable aluminum-air battery with deep eutectic solvent based electrolyte and suppression of byproducts formation.. **2019**, 9, 22220-22226	17
1624	Layered (NH4)2V6O16·1.5H2O nanobelts as a high-performance cathode for aqueous zinc-ion batteries. **2019**, 7, 19130-19139	72
1623	Pseudo-Zn–Air and Zn-Ion Intercalation Dual Mechanisms to Realize High-Areal Capacitance and Long-Life Energy Storage in Aqueous Zn Battery. **2019**, 9, 1901480	85
1622	Cryptomelane K1.33Mn8O16 as a cathode for rechargeable aqueous zinc-ion batteries. **2019**, 7, 23981-23988	31
1621	Tuning phase evolution of β-MnO2 during microwave hydrothermal synthesis for high-performance aqueous Zn ion battery. **2019**, 64, 103942	91
1620	Aqueous binder effects of poly(acrylic acid) and carboxy methylated cellulose on anode performance in lithium-ion batteries. **2019**, 43, 12555-12562	2
1619	Recent Advances and Prospects of Cathode Materials for Rechargeable Aqueous Zinc-Ion Batteries. **2019**, 6, 1900387	98
1618	A Fully Integrated and Self-Powered Smartwatch for Continuous Sweat Glucose Monitoring. **2019**, 4, 1925-1933	91
1617	A review on recent developments and challenges of cathode materials for rechargeable aqueous Zn-ion batteries. **2019**, 7, 18209-18236	209
1616	TiSe2 cathode for beyond Li-ion batteries. **2019**, 436, 226813	22
1615	A Zn(ClO) Electrolyte Enabling Long-Life Zinc Metal Electrodes for Rechargeable Aqueous Zinc Batteries. **2019**, 11, 42000-42005	69
1614	Phase Transition Triggers Explosion-like Puffing Process to Make Popcorn-Inspired All-Conductive Anodes for Superb Aqueous Rechargeable Batteries. **2019**, 11, 42365-42374	2
1613	β-MnO2@In2O3 Nanotubes as Cathode Material for Aqueous Rechargeable Zn-Ion Battery with High Electrochemical Performance. **2019**, 166, A3362-A3368	18

1612	Achieving Both High Voltage and High Capacity in Aqueous Zinc-Ion Battery for Record High Energy Density. **2019**, 29, 1906142	184
1611	Do Zinc Dendrites Exist in Neutral Zinc Batteries: A Developed Electrohealing Strategy to In Situ Rescue In-Service Batteries. **2019**, 31, e1903778	285
1610	Unlocking the Potential of Disordered Rocksalts for Aqueous Zinc-Ion Batteries. **2019**, 31, e1904369	93
1609	Dendrite-Free Flexible Fiber-Shaped Zn Battery with Long Cycle Life in Water and Air. **2019**, 9, 1901434	54
1608	Molecular Engineering of a 3D Self-Supported Electrode for Oxygen Electrocatalysis in Neutral Media. **2019**, 58, 18883-18887	91
1607	Lignin@Nafion Membranes Forming Zn Solid-Electrolyte Interfaces Enhance the Cycle Life for Rechargeable Zinc-Ion Batteries. **2019**, 12, 4889-4900	64
1606	Unravelling H /Zn Synergistic Intercalation in a Novel Phase of Manganese Oxide for High-Performance Aqueous Rechargeable Battery. **2019**, 15, e1904545	68
1605	Defect Promoted Capacity and Durability of N-MnO Branch Arrays via Low-Temperature NH Treatment for Advanced Aqueous Zinc Ion Batteries. **2019**, 15, e1905452	103
1604	3D CNTs Networks Enable MnO2 Cathodes with High Capacity and Superior Rate Capability for Flexible Rechargeable Zn□MnO2 Batteries. **2019**, 3, 1900525	64
1603	Flexible and stable quasi-solid-state zinc ion battery with conductive guar gum electrolyte. **2019**, 14, 100349	44
1602	Rational design of nitrogen doped hierarchical porous carbon for optimized zinc-ion hybrid supercapacitors. **2019**, 12, 2835-2841	83
1601	Recent Progress on Zinc-Ion Rechargeable Batteries. **2019**, 11, 90	114
1600	□MnO2 nanofibers/carbon nanotubes hierarchically assembled microspheres: Approaching practical applications of high-performance aqueous Zn-ion batteries. **2019**, 443, 227244	54
1599	A High-Energy Aqueous Aluminum-Manganese Battery. **2019**, 29, 1905228	62
1598	Achieving High-Voltage and High-Capacity Aqueous Rechargeable Zinc Ion Battery by Incorporating Two-Species Redox Reaction. **2019**, 9, 1902446	183
1597	Inhibiting VOPO4?x H2O Decomposition and Dissolution in Rechargeable Aqueous Zinc Batteries to Promote Voltage and Capacity Stabilities. **2019**, 131, 16203-16207	2
1596	Molecular Engineering of a 3D Self-Supported Electrode for Oxygen Electrocatalysis in Neutral Media. **2019**, 131, 19059-19063	18
1595	Flexible free-standing paper electrodes based on reduced graphene oxide/□NaxV2O5□nH2O nanocomposite for high-performance aqueous zinc-ion batteries. **2019**, 328, 135137	30

1594	A Flexible Solid-State Aqueous Zinc Hybrid Battery with Flat and High-Voltage Discharge Plateau. **2019**, 9, 1902473	79
1593	Rechargeable Soft-Matter EGaIn-MnO2 Battery for Stretchable Electronics. **2019**, 9, 1902798	36
1592	High-Power and Ultralong-Life Aqueous Zinc-Ion Hybrid Capacitors Based on Pseudocapacitive Charge Storage. **2019**, 11, 94	67
1591	Going beyond Intercalation Capacity of Aqueous Batteries by Exploiting Conversion Reactions of Mn and Zn electrodes for Energy-Dense Applications. **2019**, 9, 1902270	45
1590	Cathode Interfacial Layer Formation Electrochemically Charging in Aqueous Zinc-Ion Battery. **2019**, 13, 13456-13464	110
1589	Silver-Containing □MnO2□Nanorods: Electrochemistry in Rechargeable Aqueous Zn-MnO2 Batteries. **2019**, 166, A3575-A3584	14
1588	Structural water and disordered structure promote aqueous sodium-ion energy storage in sodium-birnessite. **2019**, 10, 4975	46
1587	Building better zinc-ion batteries: A materials perspective. **2019**, 1, 100022	97
1586	Hierarchical Porous Metallic VO@C for Advanced Aqueous Zinc-Ion Batteries. **2019**, 11, 44109-44117	78
1585	Understanding and mitigating performance decline in electrochemical deionization. **2019**, 25, 67-74	11
1584	An Aqueous Zn-Ion Hybrid Supercapacitor with High Energy Density and Ultrastability up to 80 000 Cycles. **2019**, 9, 1902915	137
1583	Realizing a Rechargeable High-Performance Cu□Zn Battery by Adjusting the Solubility of Cu2+. **2019**, 29, 1905979	29
1582	NaCa0.6V6O16□3H2O as an Ultra-Stable Cathode for Zn-Ion Batteries: The Roles of Pre-Inserted Dual-Cations and Structural Water in V3O8 Layer. **2019**, 9, 1901968	116
1581	Inhibiting VOPO ?x H O Decomposition and Dissolution in Rechargeable Aqueous Zinc Batteries to Promote Voltage and Capacity Stabilities. **2019**, 58, 16057-16061	64
1580	Delaminating Vanadium Carbides for Zinc-Ion Storage: Hydrate Precipitation and H+/Zn2+ Co-Action Mechanism. **2019**, 3, 1900495	61
1579	Conductive 2D metal-organic framework for high-performance cathodes in aqueous rechargeable zinc batteries. **2019**, 10, 4948	198
1578	Simultaneous Cationic and Anionic Redox Reactions Mechanism Enabling High-Rate Long-Life Aqueous Zinc-Ion Battery. **2019**, 29, 1905267	93
1577	Superior-Performance Aqueous Zinc Ion Battery Based on Structural Transformation of MnO2 by Rare Earth Doping. **2019**, 123, 22735-22741	37

1576	Design Strategies for Vanadium-based Aqueous Zinc-Ion Batteries. **2019**, 131, 16508-16517	46
1575	Ultra-High Mass-Loading Cathode for Aqueous Zinc-Ion Battery Based on Graphene-Wrapped Aluminum Vanadate Nanobelts. **2019**, 11, 69	74
1574	A New Free-Standing Aqueous Zinc-Ion Capacitor Based on MnO-CNTs Cathode and MXene Anode. **2019**, 11, 70	71
1573	In Situ Encapsulating Metal Oxides into Core-Shell Hierarchical Hybrid Fibers for Flexible Zinc-Ion Batteries toward High Durability and Ultrafast Capability for Wearable Applications. **2019**, 11, 35796-35808	28
1572	Proving insertion of Mg in Mn2O3 electrodes through a spectroelectrochemical study. **2019**, 106, 106512	3
1571	A paradigm of storage batteries. **2019**, 12, 3203-3224	100
1570	An inorganic salt reinforced Zn2+-conducting solid-state electrolyte for ultra-stable Zn metal batteries. **2019**, 7, 22287-22295	38
1569	Hybridizing □type NaxV2O5□nH2O with graphene towards high-performance aqueous zinc-ion batteries. **2019**, 321, 134689	29
1568	Structural perspective on revealing energy storage behaviors of silver vanadate cathodes in aqueous zinc-ion batteries. **2019**, 180, 51-59	61
1567	A case study of □and □MnO2 with different crystallographic forms on ion-storage in rechargeable aqueous zinc ion battery. **2019**, 324, 134867	31
1566	Electrolyte Effect on the Electrochemical Performance of Mild Aqueous Zinc-Electrolytic Manganese Dioxide Batteries. **2019**, 11, 37524-37530	28
1565	Graphene Oxide Wrapped CuVO Nanobelts as High-Capacity and Long-Life Cathode Materials of Aqueous Zinc-Ion Batteries. **2019**, 13, 12081-12089	153
1564	Cathodic electrodeposition of porous MnO2 film as binder-free cathode for high performance rechargeable Zinc-ion battery. **2019**, 12, 1950073	7
1563	Homogeneous Deposition of Zinc on Three-Dimensional Porous Copper Foam as a Superior Zinc Metal Anode. **2019**, 7, 17737-17746	74
1562	Ultralong cycle stability of aqueous zinc-ion batteries with zinc vanadium oxide cathodes. **2019**, 5, eaax4279	206
1561	Dual-phase nanostructuring of layered metal oxides for high-performance aqueous rechargeable potassium ion microbatteries. **2019**, 10, 4292	48
1560	Progress and perspective of aqueous zinc-ion battery. **2019**, 12, 1930003	16
1559	Low-cost and high safe manganese-based aqueous battery for grid energy storage and conversion. **2019**, 64, 1780-1787	31

1558	Engineering the interplanar spacing of ammonium vanadates as a high-performance aqueous zinc-ion battery cathode. **2019**, 7, 940-945	164
1557	An ultra-high endurance and high-performance quasi-solid-state fiber-shaped Zn–Ag2O battery to harvest wind energy. **2019**, 7, 2034-2040	44
1556	Rechargeable Na/Ni batteries based on the Ni(OH)2/NiOOH redox couple with high energy density and good cycling performance. **2019**, 7, 1564-1573	27
1555	Hydrated Layered Vanadium Oxide as a Highly Reversible Cathode for Rechargeable Aqueous Zinc Batteries. **2019**, 29, 1807331	217
1554	Highly crystalline ramsdellite as a cathode material for near-neutral aqueous MnO/Zn batteries. **2019**, 55, 2082-2085	27
1553	Aqueous Zn//Zn(CF3SO3)2//Na3V2(PO4)3 batteries with simultaneous Zn2+/Na+ intercalation/de-intercalation. **2019**, 58, 492-498	103
1552	An Organic Cathode Based Dual-Ion Aqueous Zinc Battery Enabled by a Cellulose Membrane. **2019**, 2, 1288-1294	71
1551	Flexible Zn-Ion Batteries: Recent Progresses and Challenges. **2019**, 15, e1804760	277
1550	Polymer grafted on carbon nanotubes as a flexible cathode for aqueous zinc ion batteries. **2019**, 55, 1647-1650	70
1549	Highly Reversible Phase Transition Endows V6O13 with Enhanced Performance as Aqueous Zinc-Ion Battery Cathode. **2019**, 7, 1900022	47
1548	Deciphering charge-storage mechanisms in 3D MnOx@carbon electrode nanoarchitectures for rechargeable zinc-ion cells. **2019**, 9, 99-106	5
1547	Prototype System of Rocking-Chair Zn-Ion Battery Adopting Zinc Chevrel Phase Anode and Rhombohedral Zinc Hexacyanoferrate Cathode. **2019**, 5, 3	28
1546	Recent progress in flexible non-lithium based rechargeable batteries. **2019**, 7, 4353-4382	64
1545	An overview of the concept and technology of ubiquitous energy. **2019**, 238, 284-302	45
1544	Interlayer-Expanded V6O13·nH2O Architecture Constructed for an Advanced Rechargeable Aqueous Zinc-Ion Battery. **2019**, 2, 1988-1996	92
1543	A flexible rechargeable aqueous zinc manganese-dioxide battery working at −20 °C. **2019**, 12, 706-715	333
1542	ZnCl2 “Water-in-Salt” Electrolyte Transforms the Performance of Vanadium Oxide as a Zn Battery Cathode. **2019**, 29, 1902653	124
1541	Advanced rechargeable zinc-based batteries: Recent progress and future perspectives. **2019**, 62, 550-587	471

1540	Expanded hydrated vanadate for high-performance aqueous zinc-ion batteries. **2019**, 12, 2273-2285	277
1539	An easy synthesis of Ni-Co doped hollow C-N tubular nanocomposites as excellent cathodic catalysts of alkaline and neutral zinc-air batteries. **2019**, 62, 1251-1264	23
1538	Toward High-Performance Hybrid Zn-Based Batteries via Deeply Understanding Their Mechanism and Using Electrolyte Additive. **2019**, 29, 1903605	136
1537	Construction of V2O5/NaV6O15 biphase composites as aqueous zinc-ion battery cathode. **2019**, 847, 113246	15
1536	Porous VO microspheres: a high-capacity cathode material for aqueous zinc-ion batteries. **2019**, 55, 8486-8489	72
1535	A Novel Dendrite-Free Mn2+/Zn2+ Hybrid Battery with 2.3 V Voltage Window and 11000-Cycle Lifespan. **2019**, 9, 1901469	102
1534	Langmuir-Blodgett Nanowire Devices for In Situ Probing of Zinc-Ion Batteries. **2019**, 15, e1902141	18
1533	Novel Insights into Energy Storage Mechanism of Aqueous Rechargeable Zn/MnO Batteries with Participation of Mn. **2019**, 11, 49	102
1532	Graphene-wrapped hollow ZnMn2O4 microspheres for high-performance cathode materials of aqueous zinc ion batteries. **2019**, 317, 155-163	53
1531	Flexible quasi-solid-state zinc ion batteries enabled by highly conductive carrageenan bio-polymer electrolyte.. **2019**, 9, 16313-16319	42
1530	Joint Charge Storage for High-Rate Aqueous Zinc-Manganese Dioxide Batteries. **2019**, 31, e1900567	163
1529	An ultra-dense NiS2/reduced graphene oxide composite cathode for high-volumetric/gravimetric energy density nickel–zinc batteries. **2019**, 7, 15654-15661	76
1528	An Ultrastable Presodiated Titanium Disulfide Anode for Aqueous "Rocking-Chair" Zinc Ion Battery. **2019**, 9, 1900993	108
1527	Achieving high energy density and efficiency through integration: progress in hybrid zinc batteries. **2019**, 7, 15564-15574	31
1526	Inhibiting Grain Pulverization and Sulfur Dissolution of Bismuth Sulfide by Ionic Liquid Enhanced Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) for High-Performance Zinc-Ion Batteries. **2019**, 13, 7270-7280	51
1525	Activating C-Coordinated Iron of Iron Hexacyanoferrate for Zn Hybrid-Ion Batteries with 10 000-Cycle Lifespan and Superior Rate Capability. **2019**, 31, e1901521	173
1524	Binder-free hierarchical VS2 electrodes for high-performance aqueous Zn ion batteries towards commercial level mass loading. **2019**, 7, 16330-16338	83
1523	Synthesis of polycrystalline K0.25V2O5 nanoparticles as cathode for aqueous zinc-ion battery. **2019**, 801, 82-89	40

1522	Electrode Materials for Rechargeable Zinc-Ion and Zinc-Air Batteries: Current Status and Future Perspectives. **2019**, 2, 395-427	69
1521	Nanoscale Parallel Circuitry Based on Interpenetrating Conductive Assembly for Flexible and High-Power Zinc Ion Battery. **2019**, 29, 1901336	92
1520	A Flexible Aqueous Asymmetric Lithium-Ion Supercapacitor with High Voltage and Superior Safety. **2019**, 7, 1900293	4
1519	Tailoring Three-Dimensional Composite Architecture for Advanced Zinc-Ion Batteries. **2019**, 11, 19191-19199	53
1518	Anchoring V2O5 nanosheets on hierarchical titanium nitride nanowire arrays to form core–shell heterostructures as a superior cathode for high-performance wearable aqueous rechargeable zinc-ion batteries. **2019**, 7, 12997-13006	64
1517	Stabilized Molybdenum Trioxide Nanowires as Novel Ultrahigh-Capacity Cathode for Rechargeable Zinc Ion Battery. **2019**, 6, 1900151	109
1516	Diethyl ether as self-healing electrolyte additive enabled long-life rechargeable aqueous zinc ion batteries. **2019**, 62, 275-281	234
1515	Grown Carbon Nanotubes on Electrospun Carbon Nanofibers as a 3D Carbon Nanomaterial for High Energy Storage Performance. **2019**, 4, 5437-5458	11
1514	High-performance flexible quasi-solid-state zinc-ion batteries with layer-expanded vanadium oxide cathode and zinc/stainless steel mesh composite anode. **2019**, 62, 94-102	127
1513	Zinc ion stabilized MnO2 nanospheres for high capacity and long lifespan aqueous zinc-ion batteries. **2019**, 7, 13727-13735	209
1512	Flexible and High-Voltage Coaxial-Fiber Aqueous Rechargeable Zinc-Ion Battery. **2019**, 19, 4035-4042	128
1511	Engineering a High-Energy-Density and Long Lifespan Aqueous Zinc Battery via Ammonium Vanadium Bronze. **2019**, 11, 20796-20803	51
1510	Mechanistic Insight into the Electrochemical Performance of Zn/VO2 Batteries with an Aqueous ZnSO4 Electrolyte. **2019**, 9, 1900237	125
1509	Recent progress and perspectives on aqueous Zn-based rechargeable batteries with mild aqueous electrolytes. **2019**, 20, 410-437	295
1508	Built-in oriented electric field facilitating durable Zn MnO2 battery. **2019**, 62, 79-84	96
1507	Long-life and deeply rechargeable aqueous Zn anodes enabled by a multifunctional brightener-inspired interphase. **2019**, 12, 1938-1949	599
1506	Low-Cost Rapid Template-Free Synthesis of Nanoscale Zinc Spinels for Energy Storage and Electrocatalytic Applications. **2019**, 2, 3211-3219	10
1505	Design Strategies for Vanadium-based Aqueous Zinc-Ion Batteries. **2019**, 58, 16358-16367	317

1504	In-situ synthesized Ni2P nanosheet arrays as the cathode for novel alkaline Ni//Zn rechargeable battery. **2019**, 485, 462-467	35
1503	Crystal water for high performance layered manganese oxide cathodes in aqueous rechargeable zinc batteries. **2019**, 12, 1999-2009	162
1502	Mn3O4@NC Composite Nanorods as a Cathode for Rechargeable Aqueous Zn-Ion Batteries. **2019**, 6, 2510-2516	52
1501	Multivalent metal ion hybrid capacitors: a review with a focus on zinc-ion hybrid capacitors. **2019**, 7, 13810-13832	256
1500	A Room-Temperature Molten Hydrate Electrolyte for Rechargeable Zinc–Air Batteries. **2019**, 9, 1900196	78
1499	VO Nanospheres with Mixed Vanadium Valences as High Electrochemically Active Aqueous Zinc-Ion Battery Cathode. **2019**, 11, 25	197
1498	Ultra-endurance coaxial-fiber stretchable sensing systems fully powered by sunlight. **2019**, 60, 267-274	33
1497	Growth of Hierarchical MnO2 Nanospike on Three-Dimensional Carbon Network for Enhancing Rechargeability as High-rate Alkaline Battery Cathode. **2019**, 4, 3204-3209	1
1496	Improving the cycle life of cryptomelane type manganese dioxides in aqueous rechargeable zinc ion batteries: The effect of electrolyte concentration. **2019**, 305, 423-432	39
1495	Ultrathin δ-MnO2 nanosheets as cathode for aqueous rechargeable zinc ion battery. **2019**, 304, 370-377	107
1494	Reversible Zn-driven reduction displacement reaction in aqueous zinc-ion battery. **2019**, 7, 7355-7359	52
1493	Holey nickel nanotube reticular network scaffold for high-performance flexible rechargeable Zn/MnO2 batteries. **2019**, 370, 330-336	32
1492	An aqueous manganese-copper battery for large-scale energy storage applications. **2019**, 423, 203-210	27
1491	Reverse Dual-Ion Battery via a ZnCl Water-in-Salt Electrolyte. **2019**, 141, 6338-6344	210
1490	A Rechargeable Battery with an Iron Metal Anode. **2019**, 29, 1900911	41
1489	Recent advance in new-generation integrated devices for energy harvesting and storage. **2019**, 60, 600-619	126
1488	Forming bubble-encapsulated double-shelled hollow spheres towards fast kinetics and superior high rate performance for aqueous rechargeable Zn-ion batteries. **2019**, 7, 10589-10600	36
1487	Inverse opal manganese dioxide constructed by few-layered ultrathin nanosheets as high-performance cathodes for aqueous zinc-ion batteries. **2019**, 12, 1347-1353	62

1486	Current Review on Synthesis, Composites and Multifunctional Properties of Graphene. **2019**, 377, 10	49
1485	A mechanically durable and device-level tough Zn-MnO2 battery with high flexibility. **2019**, 23, 636-645	97
1484	An Electrolytic Zn–MnO2 Battery for High-Voltage and Scalable Energy Storage. **2019**, 131, 7905-7910	49
1483	Advanced electrochemical performance of ZnMn2O4/N-doped graphene hybrid as cathode material for zinc ion battery. **2019**, 425, 162-169	97
1482	Thickening and Homogenizing Aqueous Electrolyte towards Highly Efficient and Stable Zn Metal Batteries. **2019**, 166, A1211-A1216	45
1481	An Electrolytic Zn-MnO Battery for High-Voltage and Scalable Energy Storage. **2019**, 58, 7823-7828	464
1480	α-MnO2 nanorod/onion-like carbon composite cathode material for aqueous zinc-ion battery. **2019**, 230, 258-266	40
1479	Nanoscale design of zinc anodes for high-energy aqueous rechargeable batteries. **2019**, 6, 100032	90
1478	Investigation of sodium vanadate as a high-performance aqueous zinc-ion battery cathode. **2019**, 37, 172-175	20
1477	A Metal-Organic Framework Host for Highly Reversible Dendrite-free Zinc Metal Anodes. **2019**, 3, 1289-1300	351
1476	V2O5 nanopaper as a cathode material with high capacity and long cycle life for rechargeable aqueous zinc-ion battery. **2019**, 60, 752-759	144
1475	Reaction Mechanisms for Long-Life Rechargeable Zn/MnO2 Batteries. **2019**, 31, 2036-2047	119
1474	One-Step Construction of Ni/Co-Doped CNT Nanotube Composites as Excellent Cathode Catalysts for Neutral Zinc–Air Battery. **2019**, 14, 1950028	8
1473	Suppressing Manganese Dissolution in Potassium Manganate with Rich Oxygen Defects Engaged High-Energy-Density and Durable Aqueous Zinc-Ion Battery. **2019**, 29, 1808375	345
1472	Rechargeable Aqueous Electrochromic Batteries Utilizing Ti-Substituted Tungsten Molybdenum Oxide Based Zn Ion Intercalation Cathodes. **2019**, 31, e1807065	113
1471	Aqueous alkaline–acid hybrid electrolyte for zinc-bromine battery with 3V voltage window. **2019**, 19, 56-61	52
1470	Aqueous V2O5/activated carbon zinc-ion hybrid capacitors with high energy density and excellent cycling stability. **2019**, 30, 5478-5486	16
1469	Self-supported ultrathin bismuth nanosheets acquired by in situ topotactic transformation of BiOCl as a high performance aqueous anode material. **2019**, 7, 6784-6792	17

1468	Freestanding reduced graphene oxide/sodium vanadate composite films for flexible aqueous zinc-ion batteries. **2019**, 62, 609-615	38
1467	A new rechargeable battery based on a zinc anode and a NaVO nanorod cathode. **2019**, 55, 3793-3796	32
1466	Hydrated Intercalation for High-Performance Aqueous Zinc Ion Batteries. **2019**, 9, 1900083	158
1465	Defect Engineering of Oxygen-Deficient Manganese Oxide to Achieve High-Performing Aqueous Zinc Ion Battery. **2019**, 9, 1803815	285
1464	Hydrated hybrid vanadium oxide nanowires as the superior cathode for aqueous Zn battery. **2019**, 14, 100361	48
1463	Suppression of Polysulfide Dissolution and Shuttling with Glutamate Electrolyte for Lithium Sulfur Batteries. **2019**, 13, 14172-14181	28
1462	Issues and opportunities facing aqueous zinc-ion batteries. **2019**, 12, 3288-3304	645
1461	Long-battery-life flexible zinc□air battery with near-neutral polymer electrolyte and nanoporous integrated air electrode. **2019**, 7, 25449-25457	29
1460	A high performance tungsten bronze electrode in a mixed electrolyte and applications in supercapacitors. **2019**, 55, 14323-14326	4
1459	A High Capacity Bilayer Cathode for Aqueous Zn-Ion Batteries. **2019**, 13, 14447-14458	81
1458	Biomimetic organohydrogel electrolytes for high-environmental adaptive energy storage devices. **2019**, 1, e12008	55
1457	In Situ Intercalation of Bismuth into 3D Reduced Graphene Oxide Scaffolds for High Capacity and Long Cycle-Life Energy Storage. **2019**, 15, e1905903	6
1456	Lithium Dendrite Growth Suppression and Ionic Conductivity of Li2S-P2S5-P2O5□Glass Solid Electrolytes Prepared by Mechanical Milling. **2019**, 166, A3997-A4004	9
1455	A long-lifespan, flexible zinc-ion secondary battery using a paper-like cathode from single-atomic layer MnO2 nanosheets. **2019**, 1, 4365-4372	22
1454	Preparation and electrochemical performance of VO(A) hollow spheres as a cathode for aqueous zinc ion batteries.. **2019**, 9, 35117-35123	12
1453	A hydrated NH4V3O8 nanobelt electrode for superior aqueous and quasi-solid-state zinc ion batteries. **2019**, 7, 23140-23148	46
1452	In-situ growth of Co3O4 nanowire-assembled clusters on nickel foam for aqueous rechargeable Zn-Co3O4 and Zn-air batteries. **2019**, 241, 104-112	122
1451	Extracting oxygen anions from ZnMn2O4: Robust cathode for flexible all-solid-state Zn-ion batteries. **2019**, 21, 154-161	159

1450	Improving a Mg/S Battery with YCl Additive and Magnesium Polysulfide. **2019**, 6, 1800981	33
1449	Resist-Dyed Textile Alkaline Zn Microbatteries with Significantly Suppressed Zn Dendrite Growth. **2019**, 11, 5095-5106	29
1448	Recent Advances in Flexible Zinc-Based Rechargeable Batteries. **2019**, 9, 1802605	204
1447	Water in Rechargeable Multivalent-Ion Batteries: An Electrochemical Pandora's Box. **2019**, 12, 379-396	48
1446	A MOF-based single-ion Zn2+ solid electrolyte leading to dendrite-free rechargeable Zn batteries. **2019**, 56, 92-99	149
1445	Conformal Conducting Polymer Shells on V2O5 Nanosheet Arrays as a High-Rate and Stable Zinc-Ion Battery Cathode. **2019**, 6, 1801506	118
1444	Sulfur and nitrogen enriched graphene foam scaffolds for aqueous rechargeable zinc-iodine battery. **2019**, 296, 755-761	53
1443	Ordering Heterogeneity of [MnO6] Octahedra in Tunnel-Structured MnO2 and Its Influence on Ion Storage. **2019**, 3, 471-484	84
1442	Biomimetic Solid-State Zn Electrolyte for Corrugated Structural Batteries. **2019**, 13, 1107-1115	48
1441	3D Porous Copper Skeleton Supported Zinc Anode toward High Capacity and Long Cycle Life Zinc Ion Batteries. **2019**, 7, 3364-3371	211
1440	Fully Solar-Powered Uninterrupted Overall Water-Splitting Systems. **2019**, 29, 1808889	14
1439	Porous V2O5 nanofibers as cathode materials for rechargeable aqueous zinc-ion batteries. **2019**, 38, 20-25	122
1438	Ultrastable and High-Performance Zn/VO2 Battery Based on a Reversible Single-Phase Reaction. **2019**, 31, 699-706	139
1437	Progress in Rechargeable Aqueous Zinc- and Aluminum-Ion Battery Electrodes: Challenges and Outlook. **2019**, 3, 1800111	104
1436	The excellent electrochemical performances of ZnMn2O4/Mn2O3: The composite cathode material for potential aqueous zinc ion batteries. **2019**, 832, 69-74	96
1435	Zinc-ion batteries: Materials, mechanisms, and applications. **2019**, 135, 58-84	355
1434	A high entropy oxide (Mg0.2Co0.2Ni0.2Cu0.2Zn0.2O) with superior lithium storage performance. **2019**, 777, 767-774	112
1433	Multivalent ion storage towards high-performance aqueous zinc-ion hybrid supercapacitors. **2019**, 20, 335-342	128

1432	The Recent Advance in Fiber-Shaped Energy Storage Devices. **2019**, 5, 1800456	68
1431	Recent Progress in Electrically Rechargeable Zinc-Air Batteries. **2019**, 31, e1805230	204
1430	Printable Fabrication of a Fully Integrated and Self-Powered Sensor System on Plastic Substrates. **2019**, 31, e1804285	102
1429	Oxide versus Nonoxide Cathode Materials for Aqueous Zn Batteries: An Insight into the Charge Storage Mechanism and Consequences Thereof. **2019**, 11, 674-682	114
1428	Stretchable Aqueous Batteries: Progress and Prospects. **2019**, 4, 177-186	62
1427	MoS2 nanosheets with expanded interlayer spacing for rechargeable aqueous Zn-ion batteries. **2019**, 19, 94-101	227
1426	Recent Progress of Rechargeable Batteries Using Mild Aqueous Electrolytes. **2019**, 3, 1800272	259
1425	Effect of ionic liquid 1-ethyl-3-methylimidazolium hydrogen sulfate on zinc-ion dynamics in PEO/PVdF blend gel polymer electrolytes. **2019**, 25, 1137-1146	4
1424	Scalable fabrication of printed Zn//MnO planar micro-batteries with high volumetric energy density and exceptional safety. **2020**, 7, 64-72	80
1423	Mesoporous hollow carbon spheres boosted, integrated high performance aqueous Zn-Ion energy storage. **2020**, 25, 858-865	145
1422	Metal Organic framework derived carbon for ultrahigh power and long cyclic life aqueous Zn ion capacitor. **2020**, 2, 159-163	19
1421	3D Oxygen-Defective Potassium Vanadate/Carbon Nanoribbon Networks as High-Performance Cathodes for Aqueous Zinc-Ion Batteries. **2020**, 4, 1900670	65
1420	Electroactivation-induced spinel ZnV2O4 as a high-performance cathode material for aqueous zinc-ion battery. **2020**, 67, 104211	46
1419	A review on mechanistic understanding of MnO2 in aqueous electrolyte for electrical energy storage systems. **2020**, 65, 356-387	63
1418	Smart Textile-Integrated Microelectronic Systems for Wearable Applications. **2020**, 32, e1901958	218
1417	Electrochemically induced cationic defect in MnO intercalation cathode for aqueous zinc-ion battery. **2020**, 24, 394-401	141
1416	Realizing high-performance Zn-ion batteries by a reduced graphene oxide block layer at room and low temperatures. **2020**, 43, 1-7	14
1415	An Overview of Fiber-Shaped Batteries with a Focus on Multifunctionality, Scalability, and Technical Difficulties. **2020**, 32, e1902151	117

1414	-MnO2 nanorods/graphene composite as efficient cathode for advanced rechargeable aqueous zinc-ion battery. **2020**, 43, 182-187	94
1413	Preparation of Polyaniline-coated Composite Aerogel of MnO2 and Reduced Graphene Oxide for High-performance Zinc-ion Battery. **2020**, 38, 514-521	23
1412	Flexible and conductive scaffold-stabilized zinc metal anodes for ultralong-life zinc-ion batteries and zinc-ion hybrid capacitors. **2020**, 384, 123355	99
1411	Free-Standing Hydrated Sodium Vanadate Papers for High-Stability Zinc-Ion Batteries. **2020**, 3, 254-260	15
1410	Commencing mild Ag-Zn batteries with long-term stability and ultra-flat voltage platform. **2020**, 25, 86-92	37
1409	Antifreezing Hydrogel with High Zinc Reversibility for Flexible and Durable Aqueous Batteries by Cooperative Hydrated Cations. **2020**, 30, 1907218	114
1408	Vanadium pentoxide nanosheets as cathodes for aqueous zinc-ion batteries with high rate capability and long durability. **2020**, 502, 144207	41
1407	Vanadium-Based Nanomaterials: A Promising Family for Emerging Metal-Ion Batteries. **2020**, 30, 1904398	123
1406	A high energy efficiency and long life aqueous Zn-2 battery. **2020**, 8, 3785-3794	31
1405	Electrodeposited Manganese Oxide on Carbon Paper for Zinc-Ion Battery Cathodes. **2020**, 3, 293-305	21
1404	Boosting High-Rate Zinc-Storage Performance by the Rational Design of MnO Nanoporous Architecture Cathode. **2019**, 12, 14	27
1403	Progress in electrolytes for beyond-lithium-ion batteries. **2020**, 44, 237-257	39
1402	MnO/AlO cathode material derived from a metal-organic framework with enhanced cycling performance for aqueous zinc-ion batteries. **2020**, 49, 711-718	23
1401	A high voltage aqueous zinc-manganese battery using a hybrid alkaline-mild electrolyte. **2020**, 56, 2039-2042	27
1400	Phase Transition Induced Unusual Electrochemical Performance of VCT MXene for Aqueous Zinc Hybrid-Ion Battery. **2020**, 14, 541-551	99
1399	One-step synthesis of MnO/PPy nanocomposite as a high-performance cathode for a rechargeable zinc-ion battery and insight into its energy storage mechanism. **2020**, 12, 4150-4158	29
1398	H -Insertion Boosted -MnO for an Aqueous Zn-Ion Battery. **2020**, 16, e1905842	126
1397	Voltage issue of aqueous rechargeable metal-ion batteries. **2020**, 49, 180-232	301

1396	Manipulating the ion-transfer kinetics and interface stability for high-performance zinc metal anodes. **2020**, 13, 503-510	378
1395	A highly reversible neutral zinc/manganese battery for stationary energy storage. **2020**, 13, 135-143	83
1394	Flexible and high-energy-density Zn/MnO2 batteries enabled by electrochemically exfoliated graphene nanosheets. **2020**, 44, 653-657	14
1393	A durable VO2(M)/Zn battery with ultrahigh rate capability enabled by pseudocapacitive proton insertion. **2020**, 8, 1731-1740	51
1392	Rechargeable Zn-ion batteries with high power and energy densities: a two-electron reaction pathway in birnessite MnO2 cathode materials. **2020**, 8, 1975-1985	50
1391	A Long-Life Battery-Type Electrochromic Window with Remarkable Energy Storage Ability. **2020**, 4, 1900425	20
1390	Stitching of Zn(OH)VO□2HO 2D Nanosheets by 1D Carbon Nanotubes Boosts Ultrahigh Rate for Wearable Quasi-Solid-State Zinc-Ion Batteries. **2020**, 14, 842-853	104
1389	Unveiling Critical Insight into the Zn Metal Anode Cyclability in Mildly Acidic Aqueous Electrolytes: Implications for Aqueous Zinc Batteries. **2020**, 12, 3522-3530	65
1388	Embroidering a Filmsy Photorechargeable Energy Fabric with Wide Weather Adaptability. **2020**, 12, 3654-3660	13
1387	BiS for Aqueous Zn Ion Battery with Enhanced Cycle Stability. **2019**, 12, 8	24
1386	A Deep-Cycle Aqueous Zinc-Ion Battery Containing an Oxygen-Deficient Vanadium Oxide Cathode. **2020**, 59, 2273-2278	124
1385	Do zinc dendrites exist in neutral zinc batteries?. **2020**, 5, 6-7	2
1384	Emerging rechargeable aqueous aluminum ion battery: Status, challenges, and outlooks. **2020**, 2, 248-263	61
1383	VO2□0.2H2O nanocuboids anchored onto graphene sheets as the cathode material for ultrahigh capacity aqueous zinc ion batteries. **2020**, 13, 215-224	47
1382	Redox-Active Phenanthrenequinone Triangles in Aqueous Rechargeable Zinc Batteries. **2020**, 142, 2541-2548	116
1381	Oxygen Defects in □MnO Enabling High-Performance Rechargeable Aqueous Zinc/Manganese Dioxide Battery. **2020**, 23, 100797	99
1380	The dominant role of Mn2+ additive on the electrochemical reaction in ZnMn2O4 cathode for aqueous zinc-ion batteries. **2020**, 28, 407-417	84
1379	Batteries with high theoretical energy densities. **2020**, 26, 46-55	67

1378	Dendrite-Free Zinc Deposition Induced by Tin-Modified Multifunctional 3D Host for Stable Zinc-Based Flow Battery. **2020**, 32, e1906803	135
1377	Constructing MnO2@PPy core-shell nanorods towards enhancing electrochemical behaviors in aqueous zinc ion battery. **2020**, 262, 127180	30
1376	Challenges and perspectives for manganese-based oxides for advanced aqueous zinc-ion batteries. **2020**, 2, 237-260	136
1375	The composite electrode of Bi@carbon-texture derived from metal-organic frameworks for aqueous chloride ion battery. **2020**, 26, 2395-2403	9
1374	Cathode materials for rechargeable zinc-ion batteries: From synthesis to mechanism and applications. **2020**, 449, 227596	71
1373	Freestanding, Hierarchical, and Porous Bilayered NaVOHO/rGO/CNT Composites as High-Performance Cathode Materials for Nonaqueous K-Ion Batteries and Aqueous Zinc-Ion Batteries. **2020**, 12, 706-716	53
1372	Prolonging the cycle life of zinc-ion battery by introduction of [Fe(CN)6]4to PANI via a simple and scalable synthetic method. **2020**, 392, 123653	27
1371	A novel rechargeable iodide ion battery with zinc and copper anodes. **2020**, 449, 227511	15
1370	A Deep-Cycle Aqueous Zinc-Ion Battery Containing an Oxygen-Deficient Vanadium Oxide Cathode. **2020**, 132, 2293-2298	38
1369	Conjugated polyimide-based organic cathodes with extremely-long cycling life for rechargeable magnesium batteries. **2020**, 26, 494-502	49
1368	A High-Voltage, Dendrite-Free, and Durable Zn-Graphite Battery. **2020**, 32, e1905681	56
1367	MnO Nanosheet-Assembled Hollow Polyhedron Grown on Carbon Cloth for Flexible Aqueous Zinc-Ion Batteries. **2020**, 13, 1537-1545	66
1366	Rechargeable Zn-MnO batteries: advances, challenges and perspectives. **2020**, 31, 122001	41
1365	Mechanistic Investigation of a Hybrid Zn/V O Rechargeable Battery with a Binary Li /Zn Aqueous Electrolyte. **2020**, 13, 724-731	10
1364	Low-cost MgFexMn2-xO4 cathode materials for high-performance aqueous rechargeable magnesium-ion batteries. **2020**, 392, 123652	54
1363	Proton Inserted Manganese Dioxides as a Reversible Cathode for Aqueous Zn-Ion Batteries. **2020**, 3, 319-327	23
1362	High-Voltage Aqueous Na-Ion Battery Enabled by Inert-Cation-Assisted Water-in-Salt Electrolyte. **2020**, 32, e1904427	128
1361	Contribution of Cation Addition to MnO Nanosheets on Stable Co O Nanowires for Aqueous Zinc-Ion Battery. **2020**, 8, 793	10

1360	MnO Stabilized in Carbon-Veiled Multivariate Manganese Oxides as High-Performance Cathode Material for Aqueous Zn-Ion Batteries. **2020**,	11
1359	Mechanochemical reactions of MnO2 and graphite nanosheets as a durable zinc ion battery cathode. **2020**, 534, 147630	45
1358	The electrochemical properties and reaction mechanism of orthorhombic Mn2SiO4 cathode for aqueous rechargeable zinc ion batteries. **2020**, 477, 229013	4
1357	A Low Cost Aqueous Zn-S Battery Realizing Ultrahigh Energy Density. **2020**, 7, 2000761	27
1356	Reversible (De)Intercalation of Hydrated Zn2+ in Mg2+-Stabilized V2O5 Nanobelts with High Areal Capacity. **2020**, 10, 2002293	36
1355	Synergistic deficiency and heterojunction engineering boosted VO2 redox kinetics for aqueous zinc-ion batteries with superior comprehensive performance. **2020**, 33, 390-398	79
1354	An irreversible electrolyte anion-doping strategy toward a superior aqueous Zn-organic battery. **2020**, 33, 283-289	47
1353	VS2 nanosheets vertically grown on graphene as high-performance cathodes for aqueous zinc-ion batteries. **2020**, 477, 228652	30
1352	Mn2+ Ions Confined by Electrode Microskin for Aqueous Battery beyond Intercalation Capacity. **2020**, 10, 2002578	11
1351	Scalable Synthesis of Manganese-Doped Hydrated Vanadium Oxide as a Cathode Material for Aqueous Zinc-Metal Battery. **2020**, 12, 48542-48552	7
1350	Enabling stable MnO2 matrix for aqueous zinc-ion battery cathodes. **2020**, 8, 22075-22082	47
1349	Effect of Binding Affinity of Crystal Water on the Electrochemical Performance of Layered Double Hydroxides. **2020**, 13, 6546-6551	4
1348	Bridging the energy efficiency gap between quasi-neutral and alkaline rechargeable zinc-air batteries by an efficient hybrid battery design. **2020**, 33, 181-187	7
1347	Energy Storage Chemistry in Aqueous Zinc Metal Batteries. **2020**, 5, 3569-3590	62
1346	Cellulose Nanofiber/Carbon Nanotube-Based Bicontinuous Ion/Electron Conduction Networks for High-Performance Aqueous Zn-Ion Batteries. **2020**, 16, e2002837	13
1345	Reaction mechanism and electrochemical performance of manganese (II) oxide in zinc ion batteries. **2020**, 356, 115439	3
1344	A Zinc-Dual-Halogen Battery with a Molten Hydrate Electrolyte. **2020**, 32, e2004553	14
1343	Heteroatom-doped carbon catalysts for zinc–air batteries: progress, mechanism, and opportunities. **2020**, 13, 4536-4563	83

1342	Understanding the Design Principles of Advanced Aqueous Zinc-Ion Battery Cathodes: From Transport Kinetics to Structural Engineering, and Future Perspectives. **2020**, 10, 2002354	68
1341	Quantitative temporally and spatially resolved X-ray fluorescence microprobe characterization of the manganese dissolution-deposition mechanism in aqueous Zn/□MnO2 batteries. **2020**, 13, 4322-4333	28
1340	Mass-Producible, Quasi-Zero-Strain, Lattice-Water-Rich Inorganic Open-Frameworks for Ultrafast-Charging and Long-Cycling Zinc-Ion Batteries. **2020**, 32, e2003592	35
1339	Rechargeable Mild Aqueous Zinc Batteries for Grid Storage. **2020**, 1, 2000026	5
1338	Water cointercalation for high-energy-density aqueous zinc-ion battery based potassium manganite cathode. **2020**, 478, 228758	12
1337	Long lifespan and high-rate Zn anode boosted by 3D porous structure and conducting network. **2020**, 479, 228808	15
1336	Flexible quasi-solid-state aqueous Zn-based batteries: rational electrode designs for high-performance and mechanical flexibility. **2020**, 18, 100523	30
1335	Introducing Na2SO4 in aqueous ZnSO4 electrolyte realizes superior electrochemical performance in zinc-ion hybrid capacitor. **2020**, 18, 100529	17
1334	Free-standing three-dimensional carbon nanotubes/amorphous MnO2 cathodes for aqueous zinc-ion batteries with superior rate performance. **2020**, 18, 100548	27
1333	Fundamentals and perspectives in developing zinc-ion battery electrolytes: a comprehensive review. **2020**, 13, 4625-4665	176
1332	A single-ion conducting covalent organic framework for aqueous rechargeable Zn-ion batteries. **2020**, 11, 11692-11698	19
1331	Real-time visualization of Zn metal plating/stripping in aqueous batteries with high areal capacities. **2020**, 472, 228334	9
1330	Advances in Zn-ion batteries via regulating liquid electrolyte. **2020**, 32, 290-305	50
1329	MnO Heterostructure on Carbon Nanotubes as Cathode Material for Aqueous Zinc-Ion Batteries. **2020**, 21,	18
1328	A High-Performance Aqueous Zinc-Bromine Static Battery. **2020**, 23, 101348	24
1327	Effects of Zn2+ and H+ Association with Naphthalene Diimide Electrodes for Aqueous Zn-Ion Batteries. **2020**, 32, 6990-6997	27
1326	Nanostructured Electrode Enabling Fast and Fully Reversible MnO2-to-Mn2+ Conversion in Mild Buffered Aqueous Electrolytes. **2020**, 3, 7610-7618	8
1325	Current status and future directions of multivalent metal-ion batteries. *Nature Energy*, **2020**, 5, 646-656 62.3	307

1324	A pH-Neutral, Aqueous Redox Flow Battery with a 3600-Cycle Lifetime: Micellization-Enabled High Stability and Crossover Suppression. **2020**, 13, 4069-4077	8
1323	High-Performance Aqueous Zinc-Ion Batteries Realized by MOF Materials. **2020**, 12, 152	62
1322	Superfine MnO Nanowires with Rich Defects Toward Boosted Zinc Ion Storage Performance. **2020**, 12, 34949-34958	62
1321	Binder-free CaV3O7 nanobelts with rich oxygen defects as high energy cathode for aqueous Zn-ion battery. **2020**, 472, 228507	28
1320	Double-shell zinc manganate hollow microspheres embedded in carbon networks as cathode materials for high-performance aqueous zinc-ion batteries. **2020**, 580, 528-539	7
1319	Phenazine anodes for ultralongcycle-life aqueous rechargeable batteries. **2020**, 8, 26013-26022	11
1318	Cu-MOF-derived and porous Cu0.26V2O5@C composite cathode for aqueous zinc-ion batteries. **2020**, 26, e00236	3
1317	Exploring the Interfacial Chemistry between Zinc Anodes and Aqueous Electrolytes via an In Situ Visualized Characterization System. **2020**, 12, 55476-55482	19
1316	A Review of the Use of GPEs in Zinc-Based Batteries. A Step Closer to Wearable Electronic Gadgets and Smart Textiles. **2020**, 12,	11
1315	Stabilized Rechargeable Aqueous Zinc Batteries Using Ethylene Glycol as Water Blocker. **2020**, 13, 5556-5564	25
1314	Ultrathin VSe Nanosheets with Fast Ion Diffusion and Robust Structural Stability for Rechargeable Zinc-Ion Battery Cathode. **2020**, 16, e2000698	72
1313	A stretchable solid-state zinc ion battery based on a cellulose nanofiber□polyacrylamide hydrogel electrolyte and a Mg0.23V2O5□1.0H2O cathode. **2020**, 8, 18327-18337	22
1312	Issues and solutions toward zinc anode in aqueous zinc-ion batteries: A mini review. **2020**, 2, 540-560	64
1311	Proton Insertion Promoted a Polyfurfural/MnO Nanocomposite Cathode for a Rechargeable Aqueous Zn-MnO Battery. **2020**, 12, 36072-36081	42
1310	Synthesis and study of V2O5/rGO nanocomposite as a cathode material for aqueous zinc ion battery. **2020**, 26, 5607-5615	14
1309	Zinc based micro-electrochemical energy storage devices: Present status and future perspective. **2020**, 2, e12042	7
1308	Defect Engineering in Manganese-Based Oxides for Aqueous Rechargeable Zinc-Ion Batteries: A Review. **2020**, 10, 2001769	99
1307	High-Performance Anti-freezing Flexible Zn-MnO Battery Based on Polyacrylamide/Graphene Oxide/Ethylene Glycol Gel Electrolyte. **2020**, 8, 603	20

1306	Uniformizing the electric field distribution and ion migration during zinc plating/stripping via a binary polymer blend artificial interphase. **2020**, 8, 17725-17731		25
1305	Shallow-layer pillaring of a conductive polymer in monolithic grains to drive superior zinc storage via a cascading effect. **2020**, 13, 3149-3163		27
1304	High-value utilization of biomass waste: from garbage floating on the ocean to high-performance rechargeable Zn MnO2 batteries with superior safety. **2020**, 8, 18198-18206		13
1303	Active Materials for Aqueous Zinc Ion Batteries: Synthesis, Crystal Structure, Morphology, and Electrochemistry. **2020**, 120, 7795-7866		347
1302	A Metal-Organic Framework as a Multifunctional Ionic Sieve Membrane for Long-Life Aqueous Zinc-Iodide Batteries. **2020**, 32, e2004240		82
1301	Realizing high zinc reversibility in rechargeable batteries. *Nature Energy*, **2020**, 5, 743-749	62.3	259
1300	A High-Energy Aqueous Manganese-Metal Hydride Hybrid Battery. **2020**, 32, e2001106		7
1299	A Novel Aqueous Zinc-Ion Hybrid Supercapacitor Based on TiS2 (De)Intercalation Battery-Type Anode. **2020**, 6, 2000388		19
1298	A Non-aqueous H PO Electrolyte Enables Stable Cycling of Proton Electrodes. **2020**, 59, 22007-22011		13
1297	Two-dimensional organic inorganic superlattice-like heterostructures for energy storage applications. **2020**, 13, 4834-4853		17
1296	Investigation on the Effect of Different Mild Acidic Electrolyte on ZIBs Electrode/Electrolyte Interface and the Performance Improvements With the Optimized Cathode. **2020**, 8, 827		1
1295	Dendrites in Zn-Based Batteries. **2020**, 32, e2001854		211
1294	Weaker Interactions in Zn2+ and Organic Ion-pre-intercalated Vanadium Oxide toward Highly Reversible Zinc-ion Batteries. **2020**,		20
1293	Recent progress in organic electrodes for zinc-ion batteries. **2020**, 41, 091704		12
1292	Recent Advances in High-Performance Microbatteries: Construction, Application, and Perspective. **2020**, 16, e2003251		21
1291	Cationic Surfactant-Type Electrolyte Additive Enables Three-Dimensional Dendrite-Free Zinc Anode for Stable Zinc-Ion Batteries. **2020**, 5, 3012-3020		164
1290	Layered TiS2 as a Promising Host Material for Aqueous Rechargeable Zn Ion Battery. **2020**, 34, 11590-11596		10
1289	An anti-aging polymer electrolyte for flexible rechargeable zinc-ion batteries. **2020**, 8, 22637-22644		18

1288	Insight into the Li- and Zn-Ion Synergistic Effect for Benzoquinone-Based Anodes in Aqueous Batteries. **2020**, 3, 8309-8316	1
1287	Three-Dimensional Nitrogen-Doped Graphitic Carbon-Encapsulated MnO-Co Heterostructure: A Bifunctional Energy Storage Material for Zn-Ion and Zn□Air Batteries. **2020**, 3, 10108-10118	8
1286	Vanadium-Based Materials as Positive Electrode for Aqueous Zinc-Ion Batteries. **2020**, 4, 2000178	14
1285	A dendrite-free zinc anode for rechargeable aqueous batteries. **2020**, 8, 20175-20184	33
1284	Hybrid Hydrogel Electrolyte Based on Metal-Organic Supermolecular Self-Assembly and Polymer Chemical Cross-Linking for Rechargeable Aqueous Zn-MnO Batteries. **2020**, 12, 42285-42293	9
1283	Electrodeposited Zinc-Based Films as Anodes for Aqueous Zinc Batteries. **2020**, 12, 42763-42772	17
1282	A Non-aqueous H3PO4 Electrolyte Enables Stable Cycling of Proton Electrodes. **2020**, 132, 22191-22195	7
1281	Anisotropic Growth of Al-Intercalated Vanadate by Tuning Surface Hydrophilicity for High-Rate Zn-Ion Storage. **2020**, 1, 2000040	23
1280	Stable Hydrogel Electrolytes for Flexible and Submarine-Use Zn-Ion Batteries. **2020**, 12, 46005-46014	29
1279	Application of Manganese-Based Materials in Aqueous Rechargeable Zinc-Ion Batteries. **2020**, 8,	6
1278	Regulation of Lamellar Structure of Vanadium Oxide via Polyaniline Intercalation for High-Performance Aqueous Zinc-Ion Battery. **2020**, 30, 2003890	78
1277	Stabilizing Zinc Anode Reactions by Polyethylene Oxide Polymer in Mild Aqueous Electrolytes. **2020**, 30, 2003932	78
1276	Zinc□Carbon Paper Composites as Anodes for Zn-Ion Batteries: Key Impacts on Their Electrochemical Behaviors. **2020**, 34, 13118-13125	5
1275	New Insights of Zn2+/Li+ Hybrid Aqueous Batteries. **2020**, 8, 2000476	4
1274	Advances in the application of manganese dioxide and its composites as electrocatalysts for the oxygen evolution reaction. **2020**, 8, 18492-18514	16
1273	Hybridizing □Type MnO2 With Lignin-Derived Porous Carbon as a Stable Cathode Material for Aqueous Zn□MnO2 Batteries. **2020**, 8,	6
1272	Graphdiyne Oxide-Based High-Performance Rechargeable Aqueous Zn□MnO2 Battery. **2020**, 30, 2004115	29
1271	Design of a Janus-Faced Electrode for Highly Stretchable Zinc□Silver Rechargeable Batteries. **2020**, 30, 2004137	8

1270	Engineering Solvation Complex-Membrane Interaction to Suppress Cation Crossover in 3 V Cu-Al Battery. **2020**, 16, e2003438	3
1269	Quasi-Solid-State Zinc Ion Rechargeable Batteries for Subzero Temperature Applications. **2020**, 3, 9058-9065	11
1268	Tailoring desolvation kinetics enables stable zinc metal anodes. **2020**, 8, 19367-19374	55
1267	Two-Phase Electrochemical Proton Transport and Storage in □MoO3 for Proton Batteries. **2020**, 1, 100225	14
1266	Anode Materials for Aqueous Zinc Ion Batteries: Mechanisms, Properties, and Perspectives. **2020**,	133
1265	Unraveling the Dissolution-Mediated Reaction Mechanism of □MnO Cathodes for Aqueous Zn-Ion Batteries. **2020**, 16, e2005406	22
1264	A High-Rate Two-Dimensional Polyarylimide Covalent Organic Framework Anode for Aqueous Zn-Ion Energy Storage Devices. **2020**, 142, 19570-19578	79
1263	Potentiodynamics of the Zinc and Proton Storage in Disordered Sodium Vanadate for Aqueous Zn-Ion Batteries. **2020**, 12, 54627-54636	25
1262	Platinum-Induced Pseudo-Zn-Air Reaction Massively Increases the Electrochemical Capacity of Aqueous Zn/V5O12□6H2O Batteries. **2020**,	2
1261	Side by Side Battery Technologies with Lithium-Ion Based Batteries. **2020**, 10, 2000089	64
1260	Binder-Free □MnO Nanowires on Carbon Cloth as Cathode Material for Zinc-ion Batteries. **2020**, 21,	10
1259	Accessing the Two-Electron Charge Storage Capacity of MnO2 in Mild Aqueous Electrolytes. **2020**, 10, 2000332	30
1258	Stabilizing zinc metal anodes by artificial solid electrolyte interphase through a surface ion-exchanging strategy. **2020**, 396, 125363	43
1257	3D confined zinc plating/stripping with high discharge depth and excellent high-rate reversibility. **2020**, 8, 11719-11727	36
1256	Stabilized Co3+/Co4+ Redox Pair in In Situ Produced CoSe2□-Derived Cobalt Oxides for Alkaline Zn Batteries with 10 000-Cycle Lifespan and 1.9-V Voltage Plateau. **2020**, 10, 2000892	66
1255	Tuning the Kinetics of Zinc-Ion Insertion/Extraction in V O by In Situ Polyaniline Intercalation Enables Improved Aqueous Zinc-Ion Storage Performance. **2020**, 32, e2001113	158
1254	Freestanding Potassium Vanadate/Carbon Nanotube Films for Ultralong-Life Aqueous Zinc-Ion Batteries. **2020**, 14, 6752-6760	69
1253	Impacts of Oxygen Vacancies on Zinc Ion Intercalation in VO. **2020**, 14, 5581-5589	110

1252	VS4 with a chain crystal structure used as an intercalation cathode for aqueous Zn-ion batteries. **2020**, 8, 10761-10766	35
1251	Ultrathin □MnO nanoflakes with Na intercalation as a high-capacity cathode for aqueous zinc-ion batteries.. **2020**, 10, 17702-17712	24
1250	An Overview and Future Perspectives of Rechargeable Zinc Batteries. **2020**, 16, e2000730	78
1249	Rechargeable Aqueous Zinc-Ion Batteries with Mild Electrolytes: A Comprehensive Review. **2020**, 3, 966-1005	24
1248	Materials chemistry for rechargeable zinc-ion batteries. **2020**, 49, 4203-4219	314
1247	Electrochemical Activation of Manganese-Based Cathode in Aqueous Zinc-Ion Electrolyte. **2020**, 30, 2002711	68
1246	High-Performance Aqueous Zinc-Manganese Battery with Reversible Mn/Mn Double Redox Achieved by Carbon Coated MnO Nanoparticles. **2020**, 12, 110	25
1245	Layer-by-Layer Stacked (NH4)2V4O9□0.5H2O Nanosheet Assemblies with Intercalation Pseudocapacitance for High Rate Aqueous Zinc Ion Storage. **2020**, 3, 5343-5352	15
1244	Recent Advances in Vanadium-Based Aqueous Rechargeable Zinc-Ion Batteries. **2020**, 10, 2000477	103
1243	Scalable In Situ Reactive Assembly of Polypyrrole-Coated MnO2 Nanowire and Carbon Nanotube Composite as Freestanding Cathodes for High Performance Aqueous Zn-Ion Batteries. **2020**, 7, 2762-2770	23
1242	Dendrite-free Zn anode with dual channel 3D porous frameworks for rechargeable Zn batteries. **2020**, 30, 104-112	93
1241	Principals and strategies for constructing a highly reversible zinc metal anode in aqueous batteries. **2020**, 74, 104880	94
1240	Nanostructure Design Strategies for Aqueous Zinc-Ion Batteries. **2020**, 7, 2957-2978	19
1239	Electrochemical characterization of hollow urchin-like MnO2 as high-performance cathode for aqueous zinc ion batteries. **2020**, 871, 114242	11
1238	Green and environmental-friendly method to synthesize template free nano grass-flower hierarchical manganese dioxide for high performance supercapacitor. **2020**, 106, 106138	2
1237	Stable and High-Energy-Density Zn-Ion Rechargeable Batteries Based on a MoS-Coated Zn Anode. **2020**, 12, 27249-27257	50
1236	Tunable Layered (Na,Mn)VO□HO Cathode Material for High-Performance Aqueous Zinc Ion Batteries. **2020**, 7, 2000083	57
1235	Mixed phase sodium manganese oxide as cathode for enhanced aqueous zinc-ion storage. **2020**, 28, 2214-2220	6

1234	Modifying the Zn anode with carbon black coating and nanofibrillated cellulose binder: A strategy to realize dendrite-free Zn-MnO batteries. **2020**, 577, 256-264	44
1233	Phenazine-based organic cathode for aqueous zinc secondary batteries. **2020**, 468, 228401	40
1232	Anodic Oxidation Strategy toward Structure-Optimized VO Cathode Electrolyte Regulation for Zn-Ion Storage. **2020**, 14, 7328-7337	101
1231	Manganese-Based Materials for Zn Batteries. **2020**, 37-50	
1230	Anode Materials for Zinc-Ion Batteries. **2020**, 73-83	
1229	Oxygen-Deficient Birnessite-MnO2 for High-Performing Rechargeable Aqueous Zinc-Ion Batteries. **2020**, 6, 1357-1364	11
1228	A Simple Aqueous Battery with Potential for Scalable Energy Storage Based on MnO2 Deposition at the Cathode and a Quinoid-Modified Activated Carbon Anode. **2020**, 7, 2869-2876	
1227	Conducting Redox Polymer as Organic Anode Material for Polymer-Manganese Secondary Batteries. **2020**, 7, 3336-3340	6
1226	Transition Bimetal Based MOF Nanosheets for Robust Aqueous Zn Battery. **2020**, 7,	5
1225	Layer-by-layer stacked amorphous V2O5/Graphene 2D heterostructures with strong-coupling effect for high-capacity aqueous zinc-ion batteries with ultra-long cycle life. **2020**, 31, 156-163	41
1224	Recent advances in cathode materials of rechargeable aqueous zinc-ion batteries. **2020**, 7, 100078	23
1223	High-energy and high-power Zn□Ni flow batteries with semi-solid electrodes. **2020**, 4, 4076-4085	9
1222	Zinc-Organic Battery with a Wide Operation-Temperature Window from -70 to 150 □C. **2020**, 59, 14577-14583	65
1221	Unravelling the Mechanism of Rechargeable Aqueous Zn-MnO Batteries: Implementation of Charging Process by Electrodeposition of MnO. **2020**, 13, 4103-4110	30
1220	Achieving mesoporous MnO2@polyaniline nanohybrids via a gas/liquid interfacial reaction between aniline and KMnO4 aqueous solution towards Zn-MnO2 battery. **2020**, 266, 116438	11
1219	Opportunities and Reality of Aqueous Rechargeable Batteries. **2020**, 10, 2001386	46
1218	Zinc□Organic Battery with a Wide Operation-Temperature Window from □70 to 150 □C. **2020**, 132, 14685-14691	28
1217	Bronze-type vanadium dioxide holey nanobelts as high performing cathode material for aqueous aluminium-ion batteries. **2020**, 8, 12716-12722	21

1216	The rise of aqueous rechargeable batteries with organic electrode materials. **2020**, 8, 15479-15512		48
1215	A High-Energy and Long-Life Aqueous Zn/Birnessite Battery via Reversible Water and Zn Coinsertion. **2020**, 16, e2001228		38
1214	Phenanthroline Covalent Organic Framework Electrodes for High-Performance Zinc-Ion Supercapattery. **2020**, 5, 2256-2264		74
1213	Manganese and Vanadium Oxide Cathodes for Aqueous Rechargeable Zinc-Ion Batteries: A Focused View on Performance, Mechanism, and Developments. **2020**, 5, 2376-2400		128
1212	Design of Highly Reversible Zinc Anodes for Aqueous Batteries Using Preferentially Oriented Electrolytic Zinc. **2020**, 3, 1220-1232		4
1211	Graphene-Wrapped MnO/C Composites by MOFs-Derived as Cathode Material for Aqueous Zinc ion Batteries. **2020**, 353, 136570		78
1210	Safety and Environmental Impacts of Zn Batteries. **2020**, 131-150		2
1209	A Corrosion-Resistant and Dendrite-Free Zinc Metal Anode in Aqueous Systems. **2020**, 16, e2001736		144
1208	Multicomponent hierarchical NiCo2O4@CoMoO4@Co3O4 arrayed structures for high areal energy density aqueous NiCo//Zn batteries. **2020**, 31, 27-35		25
1207	Pillaring Effect of K Ion Anchoring for Stable V2O5-Based Zinc-Ion Battery Cathodes. **2020**, 6, 797-805		26
1206	Salt-concentrated acetate electrolytes for a high voltage aqueous Zn/MnO2 battery. **2020**, 28, 205-215		70
1205	Boosting Zinc-Ion Storage Capability by Effectively Suppressing Vanadium Dissolution Based on Robust Layered Barium Vanadate. **2020**, 20, 2899-2906		97
1204	Decoupling electrolytes towards stable and high-energy rechargeable aqueous zinc–manganese dioxide batteries. *Nature Energy*, **2020**, 5, 440-449	62.3	203
1203	Interlayer Engineering of Layered Cathode Materials for Advanced Zn Storage. **2020**, 6, 817-819		5
1202	Redox polymers for rechargeable metal-ion batteries. **2020**, 2, 100030		69
1201	Metal-Organic Framework Integrated Anodes for Aqueous Zinc-Ion Batteries. **2020**, 10, 1904215		148
1200	Bio-Inspired Isoalloxazine Redox Moieties for Rechargeable Aqueous Zinc-Ion Batteries. **2020**, 15, 1290-1295		19
1199	A High-Capacity Ammonium Vanadate Cathode for Zinc-Ion Battery. **2020**, 12, 67		48

1198	Synergetic ternary metal oxide nanodots-graphene cathode for high performance zinc energy storage. **2020**, 31, 2358-2364	13
1197	Anti-freezing flexible aqueous Zn MnO2 batteries working at 35 C enabled by a borax-crosslinked polyvinyl alcohol/glycerol gel electrolyte. **2020**, 8, 6828-6841	104
1196	Recent advances and future challenges in printed batteries. **2020**, 28, 216-234	41
1195	NASICON Na3V2(PO4)3 Enables Quasi-Two-Stage Na+ and Zn2+ Intercalation for Multivalent Zinc Batteries. **2020**, 32, 3028-3035	40
1194	High-Voltage Operation of a VO Cathode in a Concentrated Gel Polymer Electrolyte for High-Energy Aqueous Zinc Batteries. **2020**, 12, 15305-15312	24
1193	Flexible Electrochromic Zn Mirrors Based on Zn/Viologen Hybrid Batteries. **2020**, 8, 5050-5055	14
1192	Photo-Rechargeable Fabrics as Sustainable and Robust Power Sources for Wearable Bioelectronics. **2020**, 2, 1260-1269	150
1191	Multiscalar Investigation of FeVO4 Conversion Cathode for a Low Concentration Zn(CF3SO3)2 Rechargeable Zn-Ion Aqueous Battery. **2020**, 3, 619-630	8
1190	Catalyzing zinc-ion intercalation in hydrated vanadates for aqueous zinc-ion batteries. **2020**, 8, 7713-7723	41
1189	Constructing a Super-Saturated Electrolyte Front Surface for Stable Rechargeable Aqueous Zinc Batteries. **2020**, 59, 9377-9381	234
1188	Critical Factors Dictating Reversibility of the Zinc Metal Anode. **2020**, 3, 516-521	46
1187	Fast anion intercalation into graphite cathode enabling high-rate rechargeable zinc batteries. **2020**, 457, 227994	17
1186	Electrodeposition of Zinc in Aqueous Electrolytes Containing High Molecular Weight Polymers. **2020**, 53, 2694-2701	14
1185	Preaddition of Cations to Electrolytes for Aqueous 2.2 V High Voltage Hybrid Supercapacitor with Superlong Cycling Life and Its Energy Storage Mechanism. **2020**, 12, 17659-17668	17
1184	Highly stable Zn metal anodes enabled by atomic layer deposited Al2O3 coating for aqueous zinc-ion batteries. **2020**, 8, 7836-7846	136
1183	Constructing a Super-Saturated Electrolyte Front Surface for Stable Rechargeable Aqueous Zinc Batteries. **2020**, 132, 9463-9467	31
1182	Covalent Organic Frameworks: Advanced Organic Electrode Materials for Rechargeable Batteries. **2020**, 10, 1904199	240
1181	The degradation mechanism of vanadium oxide-based aqueous zinc-ion batteries. **2020**, 8, 8084-8095	49

1180	Lamella-nanostructured eutectic zinc-aluminum alloys as reversible and dendrite-free anodes for aqueous rechargeable batteries. **2020**, 11, 1634	195
1179	Activation of MnO hexagonal nanoplates via in situ electrochemical charging toward high-capacity and durable Zn-ion batteries. **2020**, 514, 145949	23
1178	Zwitterionic Sulfobetaine Hydrogel Electrolyte Building Separated Positive/Negative Ion Migration Channels for Aqueous Zn-MnO2 Batteries with Superior Rate Capabilities. **2020**, 10, 2000035	123
1177	A Stimulus-Responsive Zinc-Iodine Battery with Smart Overcharge Self-Protection Function. **2020**, 32, e2000287	53
1176	Binding Zinc Ions by Carboxyl Groups from Adjacent Molecules toward Long-Life Aqueous Zinc-Organic Batteries. **2020**, 32, e2000338	89
1175	Initiating a Reversible Aqueous Zn/Sulfur Battery through a "Liquid Film". **2020**, 32, e2003070	47
1174	Boosting the Cycling Stability of Aqueous Flexible Zn Batteries via F Doping in Nickel-Cobalt Carbonate Hydroxide Cathode. **2020**, 16, e2001935	30
1173	Electrochemical transformation reaction of CuMnO in aqueous rechargeable zinc-ion batteries for high performance and long cycle life. **2020**, 8, 17595-17607	36
1172	Dendrites issues and advances in Zn anode for aqueous rechargeable Zn-based batteries. **2020**, 2, e12035	48
1171	Recent advances in architecture design of nanoarrays for flexible solid-state aqueous batteries. **2020**, 4, 032002	10
1170	Aromatic organic molecular crystal with enhanced stacking interaction for ultrafast Zn-ion storage. **2020**, 13, 2515-2523	81
1169	MnO2 nanospheres electrode composed of low crystalline ultra-thin nanosheets for high performance and high rate supercapacitors. **2020**, 259, 114610	8
1168	Flexible Zn-ion batteries based on manganese oxides: Progress and prospect. **2020**, 2, 387-407	27
1167	Designing an intrinsically safe organic electrolyte for rechargeable batteries. **2020**, 31, 382-400	29
1166	Building High Rate Capability and Ultrastable Dendrite-Free Organic Anode for Rechargeable Aqueous Zinc Batteries. **2020**, 7, 2000146	46
1165	Progress on zinc ion hybrid supercapacitors: Insights and challenges. **2020**, 31, 252-266	62
1164	Multivalent-Ion versus Proton Insertion into Battery Electrodes. **2020**, 5, 2367-2375	51
1163	A Na3V2(PO4)2O1.6F1.4 Cathode of Zn-Ion Battery Enabled by a Water-in-Bisalt Electrolyte. **2020**, 30, 2003511	54

1162	A novel and improved hydrophilic vanadium oxide-based cathode for aqueous Zn-ion batteries. **2020**, 354, 136721	14
1161	The MnO@N-doped carbon composite derived from electrospinning as cathode material for aqueous zinc ion battery. **2020**, 873, 114368	34
1160	Toward a Reversible Mn4+/Mn2+ Redox Reaction and Dendrite-Free Zn Anode in Near-Neutral Aqueous Zn/MnO2 Batteries via Salt Anion Chemistry. **2020**, 10, 1904163	98
1159	Interfacial chemical binding and improved kinetics assisting stable aqueous Zn□MnO2 batteries. **2020**, 17, 100475	30
1158	Electrochemical Energy Storage Behavior of Na0.44MnO2 in Aqueous Zinc-Ion Battery. **2020**,	5
1157	A high-power and long-life aqueous rechargeable Zn-ion battery based on hierarchically porous sodium vanadate. **2020**, 56, 9174-9177	9
1156	Recent Advances in the Rational Design and Synthesis of Two-Dimensional Materials for Multivalent Ion Batteries. **2020**, 13, 1071-1092	19
1155	Carbon fiber micron film guided uniform plating/stripping of metals: A universal approach for highly stable metal batteries. **2020**, 339, 135867	10
1154	Novel Charging-Optimized Cathode for a Fast and High-Capacity Zinc-Ion Battery. **2020**, 12, 10420-10427	27
1153	Hydrothermally Carbonized Waste Biomass as Electrocatalyst Support for □MnO2 in Oxygen Reduction Reaction. **2020**, 10, 177	4
1152	Rechargeable Aqueous Zinc-Ion Batteries in MgSO/ZnSO Hybrid Electrolytes. **2020**, 12, 60	26
1151	Fast-response/stable Ni□i cells achieved using hollowed-out Bi@carbon nanospheres: a preferred electricity storage choice to couple with clean energy harvesting. **2020**, 4, 1249-1255	7
1150	Porous hydrated ammonium vanadate as a novel cathode for aqueous rechargeable Zn-ion batteries. **2020**, 56, 3785-3788	15
1149	Layered Birnessite Cathode with a Displacement/Intercalation Mechanism for High-Performance Aqueous Zinc-Ion Batteries. **2020**, 12, 56	50
1148	The investigation on the electrochemical performance of CuI as cathode material for zinc storage. **2020**, 338, 135915	6
1147	Functioning Mechanism of the Secondary Aqueous Zn-□MnO Battery. **2020**, 12, 12834-12846	40
1146	Self-Recovery Chemistry and Cobalt-Catalyzed Electrochemical Deposition of Cathode for Boosting Performance of Aqueous Zinc-Ion Batteries. **2020**, 23, 100943	47
1145	Facile plasma treated □MnO2@C hybrids for durable cycling cathodes in aqueous Zn-ion batteries. **2020**, 827, 154273	27

1144	An organic/inorganic electrode-based hydronium-ion battery. **2020**, 11, 959	65
1143	Uncovering the Potential of M1-Site-Activated NASICON Cathodes for Zn-Ion Batteries. **2020**, 32, e1907526	59
1142	Hydrogen-Free and Dendrite-Free All-Solid-State Zn-Ion Batteries. **2020**, 32, e1908121	186
1141	Nafion Ionomer-Based Single Component Electrolytes for Aqueous Zn/MnO2 Batteries with Long Cycle Life. **2020**, 8, 5040-5049	19
1140	Zn/MnO2 battery chemistry with dissolution-deposition mechanism. **2020**, 16, 100396	135
1139	Bi-Cation Electrolyte for a 1.7 V Aqueous Zn Ion Battery. **2020**, 12, 13790-13796	32
1138	Formation of Solid□Electrolyte Interfaces in Aqueous Electrolytes by Altering Cation-Solvation Shell Structure. **2020**, 10, 1903665	26
1137	Organic-Inorganic-Induced Polymer Intercalation into Layered Composites for Aqueous Zinc-Ion Battery. **2020**, 6, 968-984	124
1136	Excellent Rate Capability and Cycling Stability of Novel H2V3O8 Doped with Graphene Materials Used in New Aqueous Zinc-Ion Batteries. **2020**, 34, 3877-3886	18
1135	A zinc battery with ultra-flat discharge plateau through phase transition mechanism. **2020**, 71, 104583	43
1134	Boosting aqueous zinc-ion storage in MoS2 via controllable phase. **2020**, 389, 124405	53
1133	VO2(B) nanobelts and reduced graphene oxides composites as cathode materials for low-cost rechargeable aqueous zinc ion batteries. **2020**, 390, 124118	77
1132	Rechargeable Aqueous Zinc□Manganese Dioxide/Graphene Batteries with High Rate Capability and Large Capacity. **2020**, 3, 1742-1748	30
1131	Proton Insertion Chemistry of a Zinc□Organic Battery. **2020**, 132, 4950-4954	29
1130	A robust 2D porous carbon nanoflake cathode for high energy-power density Zn-ion hybrid supercapacitor applications. **2020**, 510, 145384	66
1129	MnO2 particles grown on the surface of N-doped hollow porous carbon nanospheres for aqueous rechargeable zinc ion batteries. **2020**, 510, 145458	14
1128	Ion-confinement effect enabled by gel electrolyte for highly reversible dendrite-free zinc metal anode. **2020**, 27, 109-116	153
1127	Initiating a wide-temperature-window yarn zinc ion battery by a highly conductive iongel. **2020**, 16, 100372	10

1126	Recent advances in zinc anodes for high-performance aqueous Zn-ion batteries. **2020**, 70, 104523	219
1125	Suppression of zinc dendrite formation on anode of Zn/LiFePO4 aqueous rechargeable batteries using electrodeposition. **2020**, 25, 93-96	1
1124	Amorphous Manganese Oxides: An Approach for Reversible Aqueous Zinc-Ion Batteries. **2020**, 3, 1627-1633	20
1123	Strongly coupled zinc manganate nanodots and graphene composite as an advanced cathode material for aqueous zinc ion batteries. **2020**, 46, 11237-11245	18
1122	Electrochemical intercalation of anions in graphite for high-voltage aqueous zinc battery. **2020**, 449, 227594	29
1121	Designing Aqueous Organic Electrolytes for Zinc–Air Batteries: Method, Simulation, and Validation. **2020**, 10, 1903470	25
1120	An Aqueous Hybrid Zinc-Bromine Battery with High Voltage and Energy Density. **2020**, 7, 1531-1536	20
1119	Fast Zn2+ kinetics of vanadium oxide nanotubes in high-performance rechargeable zinc-ion batteries. **2020**, 451, 227767	13
1118	Membrane-Free Zn/MnO2 Flow Battery for Large-Scale Energy Storage. **2020**, 10, 1902085	53
1117	Rational-design of polyaniline cathode using proton doping strategy by graphene oxide for enhanced aqueous zinc-ion batteries. **2020**, 450, 227716	31
1116	Noninterference Revealing of "Layered to Layered" Zinc Storage Mechanism of -MnO toward Neutral Zn-Mn Batteries with Superior Performance. **2020**, 7, 1902795	84
1115	Nonaqueous electrolyte with dual-cations for high-voltage and long-life zinc batteries. **2020**, 8, 3252-3261	56
1114	Unlocking the Door of Boosting Biodirected Structures for High-Performance VN O /C by Controlling the Reproduction Mode. **2020**, 7, 1903276	16
1113	Proton Insertion Chemistry of a Zinc-Organic Battery. **2020**, 59, 4920-4924	134
1112	A Simple Halogen-Free Magnesium Electrolyte for Reversible Magnesium Deposition through Cosolvent Assistance. **2020**, 12, 10252-10260	12
1111	Enhanced Ion Conduction via Epitaxially Polymerized Two-Dimensional Conducting Polymer for High-Performance Cathode in Zinc-Ion Batteries. **2020**, 12, 9347-9354	17
1110	Applications of metal–organic framework-derived materials in fuel cells and metal-air batteries. **2020**, 409, 213214	97
1109	Aqueous zinc ion batteries: focus on zinc metal anodes. **2020**, 11, 2028-2044	218

1108	Introducing Oxygen Defects into Phosphate Ions Intercalated Manganese Dioxide/Vertical Multilayer Graphene Arrays to Boost Flexible Zinc Ion Storage. **2020**, 4, 1900828	69
1107	Chemically resistant Cu□Zn/Zn composite anode for long cycling aqueous batteries. **2020**, 27, 205-211	142
1106	Ultrathin hybrid nanobelts of single-crystalline VO2 and Poly(3,4-ethylenedioxythiophene) as cathode materials for aqueous zinc ion batteries with large capacity and high-rate capability. **2020**, 463, 228223	26
1105	Amorphous manganese dioxide with the enhanced pseudocapacitive performance for aqueous rechargeable zinc-ion battery. **2020**, 396, 125221	44
1104	Scalable gas-phase synthesis of 3D microflowers confining MnO2 nanowires for highly-durable aqueous zinc-ion batteries. **2020**, 463, 228209	25
1103	TiC-modified □MnO2 nanowires as highly efficient oxygen electrocatalyst for rechargeable Zn-air batteries. **2020**, 834, 155090	11
1102	Layered Ca MnO □0.5H O as a High Performance Cathode for Aqueous Zinc-Ion Battery. **2020**, 16, e2000597	81
1101	Quasi-solid-state zinc-ion battery based on □MnO2 cathode with husk-like morphology. **2020**, 345, 136189	9
1100	Structural engineering of hydrated vanadium oxide cathode by K+ incorporation for high-capacity and long-cycling aqueous zinc ion batteries. **2020**, 29, 9-16	63
1099	Synergistic H+/Zn2+ dual ion insertion mechanism in high-capacity and ultra-stable hydrated VO2 cathode for aqueous Zn-ion batteries. **2020**, 29, 60-70	73
1098	Anchoring MnO2 on nitrogen-doped porous carbon nanosheets as flexible arrays cathodes for advanced rechargeable Zn□MnO2 batteries. **2020**, 29, 52-59	59
1097	Scientific Challenges for the Implementation of Zn-Ion Batteries. **2020**, 4, 771-799	482
1096	High-Rate and Long-Cycle Stability with a Dendrite-Free Zinc Anode in an Aqueous Zn-Ion Battery Using Concentrated Electrolytes. **2020**, 3, 4499-4508	43
1095	An environmentally adaptive quasi-solid-state zinc-ion battery based on magnesium vanadate hydrate with commercial-level mass loading and anti-freezing gel electrolyte. **2020**, 8, 8397-8409	46
1094	Electrode Materials for Practical Rechargeable Aqueous Zn-Ion Batteries: Challenges and Opportunities. **2020**, 7, 2714-2734	26
1093	Charge Storage Mechanism of a Quinone Polymer Electrode for Zinc-ion Batteries. **2020**, 167, 070558	12
1092	Progress of Organic Electrodes in Aqueous Electrolyte for Energy Storage and Conversion. **2020**, 59, 18322-18333	40
1091	Cobalt-Doped Layered MnO2 Thin Film Electrochemically Grown on Nitrogen-Doped Carbon Cloth for Aqueous Zinc-Ion Batteries. **2020**, 3, 4720-4726	24

1090	A Chemically Polished Zinc Metal Electrode with a Ridge-like Structure for Cycle-Stable Aqueous Batteries. **2020**, 12, 23028-23034	28
1089	Progress of Organic Electrodes in Aqueous Electrolyte for Energy Storage and Conversion. **2020**, 132, 18478-18489	14
1088	V O @C Nanoscrolls with Expanded Distances between Adjacent Shells as a High-Performance Cathode for a Knittable Zinc-Ion Battery. **2020**, 13, 3696-3706	19
1087	Revealing the Impact of Oxygen Dissolved in Electrolytes on Aqueous Zinc-Ion Batteries. **2020**, 23, 100995	32
1086	Unveiling the Charge Storage Mechanism in Nonaqueous and Aqueous Zn/Na3V2(PO4)2F3 Batteries. **2020**, 3, 5015-5023	20
1085	The Current State of Aqueous Zn-Based Rechargeable Batteries. **2020**, 5, 1665-1675	127
1084	Understanding the mechanism of byproduct formation with in operando synchrotron techniques and its effects on the electrochemical performance of VO2(B) nanoflakes in aqueous rechargeable zinc batteries. **2020**, 8, 9567-9578	25
1083	Layered VSe2: a promising host for fast zinc storage and its working mechanism. **2020**, 8, 9313-9321	29
1082	Hexagonal MoO3 as a zinc intercalation anode towards zinc metal-free zinc-ion batteries. **2020**, 8, 9006-9012	39
1081	Oxygen vacancies-rich cobalt-doped NiMoO4 nanosheets for high energy density and stable aqueous Ni-Zn battery. **2020**, 63, 1205-1215	36
1080	Reversible V3+/V5+ double redox in lithium vanadium oxide cathode for zinc storage. **2020**, 29, 113-120	44
1079	A Layered Zn0.4VOPO4□0.8H2O Cathode for Robust and Stable Zn Ion Storage. **2020**, 3, 3919-3927	34
1078	The critical effect of water content in the electrolyte on the reversible electrochemical performance of Zn□VPO4F cells. **2020**, 8, 8262-8267	9
1077	A universal and facile approach to suppress dendrite formation for a Zn and Li metal anode. **2020**, 8, 9331-9344	62
1076	Challenges and Strategies for High-Energy Aqueous Electrolyte Rechargeable Batteries. **2021**, 60, 598-616	94
1075	W□srige Hochleistungsbatterien: Herausforderungen und Strategien. **2021**, 133, 608-626	5
1074	Redirected Zn Electrodeposition by an Anti-Corrosion Elastic Constraint for Highly Reversible Zn Anodes. **2021**, 31, 2001867	86
1073	Charge storage mechanism of MOF-derived Mn2O3 as high performance cathode of aqueous zinc-ion batteries. **2021**, 52, 277-283	38

1072	From aqueous Zn-ion battery to Zn-MnO2 flow battery: A brief story. **2021**, 54, 194-201	81
1071	Promise and challenge of vanadium-based cathodes for aqueous zinc-ion batteries. **2021**, 54, 655-667	45
1070	Recent advances in energy storage mechanism of aqueous zinc-ion batteries. **2021**, 54, 712-726	93
1069	Molten salt synthesis of □MnO2/Mn2O3 nanocomposite as a high-performance cathode material for aqueous zinc-ion batteries. **2021**, 54, 475-481	24
1068	Boosting the Energy Density of Aqueous Batteries via Facile Grotthuss Proton Transport. **2021**, 133, 4215-4220	13
1067	Na-containing manganese-based cathode materials synthesized by sol-gel method for zinc-based rechargeable aqueous battery. **2021**, 858, 157744	8
1066	Rechargeable alkaline zinc□manganese oxide batteries for grid storage: Mechanisms, challenges and developments. **2021**, 143, 100593	17
1065	Hyper oxidized V6O13+x□nH2O layered cathode for aqueous rechargeable Zn battery: Effect on dual carriers transportation and parasitic reactions. **2021**, 35, 47-61	12
1064	A Highly Flexible and Lightweight MnO2/Graphene Membrane for Superior Zinc-Ion Batteries. **2021**, 31, 2007397	58
1063	Dual defects boosting zinc ion storage of hierarchical vanadium oxide fibers. **2021**, 404, 126536	20
1062	Understanding the Gap between Academic Research and Industrial Requirements in Rechargeable Zinc-Ion Batteries. **2021**, 4, 60-71	9
1061	Ultra-highly stable zinc metal anode via 3D-printed g-C3N4 modulating interface for long life energy storage systems. **2021**, 403, 126425	48
1060	□MnO2 with proton conversion mechanism in rechargeable zinc ion battery. **2021**, 56, 365-373	37
1059	Suppressing by-product via stratified adsorption effect to assist highly reversible zinc anode in aqueous electrolyte. **2021**, 55, 549-556	49
1058	Highly efficient dendrite suppressor and corrosion inhibitor based on gelatin/Mn2+ Co-additives for aqueous rechargeable zinc-manganese dioxide battery. **2021**, 407, 127189	13
1057	Oxide-based cathode materials for rechargeable zinc ion batteries: Progresses and challenges. **2021**, 57, 516-542	14
1056	Electrolyte formulation to enable ultra-stable aqueous Zn-organic batteries. **2021**, 482, 228904	8
1055	Recent advances in vanadium-based cathode materials for rechargeable zinc ion batteries. **2021**, 5, 744-762	14

1054	Boosting zinc storage performance via conductive materials. **2021**, 133, 111077	8
1053	Engineering stable Zn-MnO2 batteries by synergistic stabilization between the carbon nanofiber core and birnessite-MnO2 nanosheets shell. **2021**, 405, 126969	31
1052	Highly stable H2V3O8/Mxene cathode for Zn-ion batteries with superior rate performance and long lifespan. **2021**, 405, 126737	26
1051	Interlayer Engineering of □MoO Modulates Selective Hydronium Intercalation in Neutral Aqueous Electrolyte. **2021**, 60, 896-903	45
1050	Direct Self-Assembly of MXene on Zn Anodes for Dendrite-Free Aqueous Zinc-Ion Batteries. **2021**, 60, 2861-2865	202
1049	Effects of water-based binders on electrochemical performance of manganese dioxide cathode in mild aqueous zinc batteries. **2021**, 3, 473-481	13
1048	Non-metallic charge carriers for aqueous batteries. **2021**, 6, 109-123	85
1047	Pencil Drawing Stable Interface for Reversible and Durable Aqueous Zinc-Ion Batteries. **2021**, 31, 2006495	55
1046	Strategies for the Stabilization of Zn Metal Anodes for Zn-Ion Batteries. **2021**, 11, 2003065	129
1045	Rechargeable Sodium-Based Hybrid Metal-Ion Batteries toward Advanced Energy Storage. **2021**, 31, 2006457	15
1044	High-performance Zn-graphite battery based on LiPF6 single-salt electrolyte with high working voltage and long cycling life. **2021**, 58, 602-609	21
1043	The strategies to improve the layered-structure cathodes for aqueous multivalent metal-ion□batteries. **2021**, 19, 100595	7
1042	Recent advances and perspectives on vanadium- and manganese-based cathode materials for aqueous zinc ion batteries. **2021**, 59, 134-159	44
1041	Vanadium hexacyanoferrate with two redox active sites as cathode material for aqueous Zn-ion batteries. **2021**, 484, 229263	15
1040	In-Situ Electrochemically Activated Surface Vanadium Valence in V2C MXene to Achieve High Capacity and Superior Rate Performance for Zn-Ion Batteries. **2021**, 31, 2008033	49
1039	Uncover the mystery of high-performance aqueous zinc-ion batteries constructed by oxygen-doped vanadium nitride cathode: Cationic conversion reaction works. **2021**, 35, 679-686	30
1038	Free-standing composite of NaxV2O5□H2O nanobelts and carbon nanotubes with interwoven architecture for large areal capacity and high-rate capability aqueous zinc ion batteries. **2021**, 368, 137600	12
1037	Achieving a Zn-ion battery-capacitor hybrid energy storage device with a cycle life of more than 12,000 cycles. **2021**, 207, 108555	7

1036	Emergence of nonaqueous electrolytes for rechargeable zinc batteries. **2021**, 28, 100426	2
1035	Sn stabilized pyrovanadate structure rearrangement for zinc ion battery. **2021**, 81, 105584	21
1034	Phase formation of manganese oxide thin films using pulsed laser deposition. **2021**, 2, 303-309	1
1033	Interfacial polarization triggered by glutamate accelerates dehydration of hydrated zinc ions for zinc-ion batteries. **2021**, 416, 127704	10
1032	Mn-doped ZnO microspheres as cathode materials for aqueous zinc ion batteries with ultrastability up to 10 000 cycles at a large current density. **2021**, 421, 127770	4
1031	Microstructural Engineering of Cathode Materials for Advanced Zinc-Ion Aqueous Batteries. **2020**, 8, 2002722	21
1030	Recent Developments of Preintercalated Cathodes for Rechargeable Aqueous Zn-Ion Batteries. **2021**, 9, 2000829	4
1029	Zinc Metal Energy Storage Devices under Extreme Conditions of Low Temperatures. **2021**, 4, 389-406	7
1028	Green and low-cost acetate-based electrolytes for the highly reversible zinc anode. **2021**, 485, 229329	11
1027	Tailoring the linking patterns of polypyrene cathodes for high-performance aqueous Zn dual-ion batteries. **2021**, 14, 462-472	25
1026	Innovative zinc-based batteries. **2021**, 484, 229309	28
1025	Two-dimensional hierarchical Mn2O3@graphene as a high rate and ultrastable cathode for aqueous zinc-ion batteries. **2021**, 9, 1326-1332	13
1024	Electrocatalytic Iodine Reduction Reaction Enabled by Aqueous Zinc-Iodine Battery with Improved Power and Energy Densities. **2021**, 133, 3835-3842	14
1023	Electrocatalytic Iodine Reduction Reaction Enabled by Aqueous Zinc-Iodine Battery with Improved Power and Energy Densities. **2021**, 60, 3791-3798	26
1022	Recent Advances and Perspectives of Zn-Metal Free Rocking-Chair Type Zn-Ion Batteries. **2021**, 11, 2002529	52
1021	Opportunities of Aqueous Manganese-Based Batteries with Deposition and Stripping Chemistry. **2021**, 11, 2002904	37
1020	Zn electrode/electrolyte interfaces of Zn batteries: A mini review. **2021**, 122, 106898	21
1019	Carbon materials for ion-intercalation involved rechargeable battery technologies. **2021**, 50, 2388-2443	79

1018	Parasitic electrodeposition in Zn-MnO2 batteries and its suppression for prolonged cyclability. **2021**, 36, 478-484	14
1017	Towards a high MnO2 loading and gravimetric capacity from proton-coupled Mn4+/Mn2+ reactions using a 3D free-standing conducting scaffold. **2021**, 9, 1500-1506	3
1016	A vertical graphene enhanced Zn MnO2 flexible battery towards wearable electronic devices. **2021**, 9, 575-584	15
1015	Direct Self-Assembly of MXene on Zn Anodes for Dendrite-Free Aqueous Zinc-Ion Batteries. **2021**, 133, 2897-2901	23
1014	Fundamentals and perspectives of electrolyte additives for aqueous zinc-ion batteries. **2021**, 34, 545-562	102
1013	Boosting the Energy Density of Aqueous Batteries via Facile Grotthuss Proton Transport. **2021**, 60, 4169-4174	37
1012	Rechargeable aqueous zinc-ion batteries: Mechanism, design strategies and future perspectives. **2021**, 42, 73-98	46
1011	Aqueous nickel-ion battery with Na2V6O16 2H2O nanowire as high-capacity and zero-strain host material. **2021**, 413, 127441	7
1010	Interlayer Engineering of MoO3 Modulates Selective Hydronium Intercalation in Neutral Aqueous Electrolyte. **2021**, 133, 909-916	2
1009	Strategies towards the challenges of zinc metal anode in rechargeable aqueous zinc ion batteries. **2021**, 35, 19-46	68
1008	An unconventional full dual-cation battery. **2021**, 81, 105539	7
1007	Polyaniline-mediated coupling of Mn3O4 nanoparticles on activated carbon for high-performance asymmetric supercapacitors. **2021**, 851, 156871	15
1006	On-site building of a Zn2+-conductive interfacial layer via short-circuit energization for stable Zn anode. **2021**, 66, 545-552	14
1005	Cathodes for Aqueous Zn-Ion Batteries: Materials, Mechanisms, and Kinetics. **2021**, 27, 830-860	31
1004	Azobenzene-Based Low-Potential Anolyte for Nonaqueous Organic Redox Flow Batteries. **2021**, 8, 83-89	6
1003	S-doped 3D porous carbons derived from potassium thioacetate activation strategy for zinc-ion hybrid supercapacitor applications. **2021**, 45, 2498-2510	18
1002	High-performance aqueous Zn MnO2 batteries enabled by the coupling engineering of K+ pre-intercalation and oxygen defects. **2021**, 9, 15637-15647	7
1001	A comparison study of MnO and MnO as zinc-ion battery cathodes: an experimental and computational investigation.. **2021**, 11, 14408-14414	3

1000	Gradient valence-distributed vanadium oxygen hydrate hybrid induces high performance aqueous zinc-ion batteries.	1
999	Aqueous Mn-Zn and Ni-Zn Batteries for Sustainable Energy Storage. **2021**, 1-26	1
998	Operando constructing vanadium tetrasulfide-based heterostructures enabled by extrinsic adsorbed oxygen for enhanced zinc ion storage. **2021**, 9, 11433-11441	7
997	Comprehensive understanding of the roles of water molecules in aqueous Zn-ion batteries: from electrolytes to electrode materials. **2021**, 14, 3796-3839	53
996	Preparation and electrochemical performance of sodium manganese oxides as cathode materials for aqueous Mg-ion batteries. **2021**, 0-0	
995	Electrochemical performance and reaction mechanism investigation of V2O5 positive electrode material for aqueous rechargeable zinc batteries. **2021**, 9, 16776-16786	4
994	Preparation of □MnO2 Nanorods/Porous Carbon Cathode for Aqueous Zinc-ion Batteries. **2021**, 79, 200	6
993	Enhanced electrochemical performance of MnO nanoparticles: graphene aerogels as conductive substrates and capacitance contributors. **2021**, 50, 8776-8784	4
992	Suppressing cathode dissolution via guest engineering for durable aqueous zinc-ion batteries. **2021**, 9, 7631-7639	9
991	Recent advances in wearable self-powered energy systems based on flexible energy storage devices integrated with flexible solar cells. **2021**, 9, 18887-18905	6
990	High-voltage and long-lasting aqueous chlorine-ion battery by virtue of "water-in-salt" electrolyte. **2021**, 24, 101976	3
989	Mn-based oxides for aqueous rechargeable metal ion batteries. **2021**, 9, 11472-11500	15
988	Superior-Performance Aqueous Zinc-Ion Batteries Based on the Growth of MnO Nanosheets on VCT MXene. **2021**, 15, 2971-2983	73
987	An Anode-Free Zn-MnO Battery. **2021**, 21, 1446-1453	35
986	Realizing an All-Round Hydrogel Electrolyte toward Environmentally Adaptive Dendrite-Free Aqueous Zn-MnO Batteries. **2021**, 33, e2007559	87
985	Recent Developments of Zinc-Ion Batteries. **2021**, 27-57	0
984	Unveiling the Origin of Alloy-Seeded and Nondendritic Growth of Zn for Rechargeable Aqueous Zn Batteries. **2021**, 6, 404-412	49
983	Alleviation of Dendrite Formation on Zinc Anodes via Electrolyte Additives. **2021**, 6, 395-403	110

982	Extended Conjugated System in Organic Cathode with Active C?N Bonds for Driving Aqueous Zinc-Ion Batteries. **2021**, 4, 655-661	8
981	High Performance Printed AgO-Zn Rechargeable Battery for Flexible Electronics. **2021**, 5, 228-248	33
980	Long cyclic stability of acidic aqueous zinc-ion batteries achieved by atomic layer deposition: the effect of the induced orientation growth of the Zn anode. **2021**, 13, 12223-12232	7
979	A carbon-coated spinel zinc cobaltate doped with manganese and nickel as a cathode material for aqueous zinc-ion batteries. **2021**, 50, 5795-5806	3
978	Uniform and dendrite-free zinc deposition enabled by in situ formed AgZn3 for the zinc metal anode. **2021**, 9, 8452-8461	41
977	Zn2+-Intercalated V2O5·nH2O derived from V2CTx MXene for hyper-stable zinc-ion storage. **2021**, 9, 17994-18005	10
976	Regulation methods for the Zn/electrolyte interphase and the effectiveness evaluation in aqueous Zn-ion batteries.	75
975	Identifying Heteroatomic and Defective Sites in Carbon with Dual-Ion Adsorption Capability for High Energy and Power Zinc Ion Capacitor. **2021**, 13, 59	20
974	Concentrated dual-cation electrolyte strategy for aqueous zinc-ion batteries.	42
973	An Energy and Power Dense Aqueous Zinc-Ion Hybrid Supercapacitor with Low Leakage Current and Long Cycle Life. **2021**, 168, 010538	6
972	Unraveling the critical role of Zn-phyllomanganates in zinc ion batteries. **2021**, 9, 13950-13957	2
971	Generating H+ in Catholyte and OH− in Anolyte: An Approach to Improve the Stability of Aqueous Zinc-Ion Batteries. **2021**, 6, 684-686	10
970	Electrolyte Concentration Regulation Boosting Zinc Storage Stability of High-Capacity KVO Cathode for Bendable Quasi-Solid-State Zinc Ion Batteries. **2021**, 13, 34	14
969	Elucidating zinc-ion battery mechanisms in freestanding carbon electrode architectures decorated with nanocrystalline ZnMn2O4. **2021**, 2, 2730-2738	2
968	A rechargeable zinc-air battery based on zinc peroxide chemistry. **2021**, 371, 46-51	185
967	Liquid Alloy Interlayer for Aqueous Zinc-Ion Battery. **2021**, 6, 675-683	47
966	In situ built interphase with high interface energy and fast kinetics for high performance Zn metal anodes. **2021**, 14, 3609-3620	79
965	Water Invoking Interface Corrosion: An Energy Density Booster for Ni//Zn Battery. **2021**, 11, 2003268	15

964	Sample dependent performance of aqueous copper hexacyanoferrate/zinc batteries. **2021**, 2, 2036-2044	2
963	Non-Metal Ion Co-Insertion Chemistry in Aqueous Zn/MnO2 Batteries. **2021**, 133, 7132-7136	5
962	Probing of Mass Exchange at the Solid Electrolyte Interphase in Aqueous and Nonaqueous Zn Electrolytes with EQCM-D. **2021**, 13, 10131-10140	1
961	Toward Practical High-Areal-Capacity Aqueous Zinc-Metal Batteries: Quantifying Hydrogen Evolution and a Solid-Ion Conductor for Stable Zinc Anodes. **2021**, 33, e2007406	133
960	Electrolyte Strategies toward Better Zinc-Ion Batteries. **2021**, 6, 1015-1033	119
959	Boosting Zinc Electrode Reversibility in Aqueous Electrolytes by Using Low-Cost Antisolvents. **2021**, 133, 7442-7451	43
958	3D Porous Sponge-Inspired Electrode for High-Energy and High-Power Zinc-Ion Batteries. **2021**, 4, 1833-1839	8
957	Simultaneously Regulating Uniform Zn Flux and Electron Conduction by MOF/rGO Interlayers for High-Performance Zn Anodes. **2021**, 13, 73	28
956	Boosting Zinc Electrode Reversibility in Aqueous Electrolytes by Using Low-Cost Antisolvents. **2021**, 60, 7366-7375	161
955	The Renaissance of Proton Batteries. **2021**, 2, 2000113	22
954	Observation of Structural Decomposition of Na3V2(PO4)3 and Na3V2(PO4)2F3 as Cathodes for Aqueous Zn-Ion Batteries. **2021**, 4, 2797-2807	8
953	Inorganic Colloidal Electrolyte for Highly Robust Zinc-Ion Batteries. **2021**, 13, 69	95
952	Electrolyte Design for In Situ Construction of Highly Zn -Conductive Solid Electrolyte Interphase to Enable High-Performance Aqueous Zn-Ion Batteries under Practical Conditions. **2021**, 33, e2007416	158
951	Enabling Stable Zn Anode via a Facile Alloying Strategy and 3D Foam Structure. **2021**, 8, 2002184	23
950	Recent Developments and Future Prospects for Zinc-Ion Hybrid Capacitors: a Review. **2021**, 11, 2003994	76
949	Direct Proof of the Reversible Dissolution/Deposition of Mn/Mn for Mild-Acid Zn-MnO Batteries with Porous Carbon Interlayers. **2021**, 8, 2003714	22
948	The 2021 battery technology roadmap. **2021**, 54, 183001	63
947	Regulating Zn Deposition via an Artificial Solid-Electrolyte Interface with Aligned Dipoles for Long Life Zn Anode. **2021**, 13, 79	30

946	A Replacement Reaction Enabled Interdigitated Metal/Solid Electrolyte Architecture for Battery Cycling at 20 mA cm and 20 mAh cm. **2021**, 143, 3143-3152	60
945	Recent Development of Mn-based Oxides as Zinc-Ion Battery Cathode. **2021**, 14, 1634-1658	25
944	Non-Metal Ion Co-Insertion Chemistry in Aqueous Zn/MnO Batteries. **2021**, 60, 7056-7060	36
943	Achieving Stable Molybdenum Oxide Cathodes for Aqueous Zinc-Ion Batteries in Water-in-Salt Electrolyte. **2021**, 8, 2002080	14
942	Sandwich-Like Heterostructures of MoS /Graphene with Enlarged Interlayer Spacing and Enhanced Hydrophilicity as High-Performance Cathodes for Aqueous Zinc-Ion Batteries. **2021**, 33, e2007480	89
941	High-Potential Pseudocapacitive Energy Storage System: Iron-Based Polyferric Sulfate Electrolyte and Partially Sacrificial Graphite Electrode. **2021**, 13, 490-496	
940	Interconnected Vertical MnO2 Nanoflakes Coated by a Dopamine-Derived Carbon Thin Shell as a High-Performance Self-Supporting Cathode for Aqueous Zinc Ion Batteries. **2021**, 168, 030540	8
939	Recent Progress and Challenges in Multivalent Metal-Ion Hybrid Capacitors. **2021**, 4, 1201-1220	5
938	Zinc manganate/manganic oxide bi-component nanorod as excellent cathode for zinc-ion battery. **2021**, 194, 113707	6
937	Towards High-Performance Zinc-Based Hybrid Supercapacitors via Macropores-Based Charge Storage in Organic Electrolytes. **2021**, 60, 9610-9617	29
936	Application of Carbon Materials in Aqueous Zinc Ion Energy Storage Devices. **2021**, 17, e2100219	16
935	Stratified Zinc-Binding Strategy toward Prolonged Cycling and Flexibility of Aqueous Fibrous Zinc Metal Batteries. **2021**, 11, 2100214	21
934	Towards High-Performance Zinc-Based Hybrid Supercapacitors via Macropores-Based Charge Storage in Organic Electrolytes. **2021**, 133, 9696-9703	5
933	Reversible Electrochemical Energy Storage Based on Zinc-Halide Chemistry. **2021**, 13, 14112-14121	4
932	Toward a High-Performance Aqueous Zinc Ion Battery: Potassium Vanadate Nanobelts and Carbon Enhanced Zinc Foil. **2021**, 21, 2738-2744	15
931	The rising zinc anodes for high-energy aqueous batteries. **2021**, 3, 100052	27
930	Anti-corrosive Hybrid Electrolytes for Rechargeable Aqueous Zinc Batteries. **2021**, 37, 328-334	2
929	Recent progress and challenges of co-based compound for aqueous Zn battery. **2021**, 2, 1642-1660	1

928	Oxygen-deficient ammonium vanadate for flexible aqueous zinc batteries with high energy density and rate capability at −30 °C. **2021**, 43, 53-61	13
927	In-situ electrochemical conversion of vanadium dioxide for enhanced zinc-ion storage with large voltage range. **2021**, 487, 229369	20
926	Constructing a High-Performance Aqueous Rechargeable Zinc-Ion Battery Cathode with Self-Assembled Mat-like Packing of Intertwined Ag(I) Pre-Inserted V3O7·H2O Microbelts with Reduced Graphene Oxide Core. **2021**, 9, 3985-3995	11
925	Fabrications of High-Performance Planar Zinc-Ion Microbatteries by Engraved Soft Templates. **2021**, 17, e2007389	12
924	Mechanistic Understanding of Oxygen Electrodes in Rechargeable Multivalent Metal-Oxygen Batteries. **2021**, 4, 1588	1
923	Synergistic Effect between S and Se Enhancing the Electrochemical Behavior of SexSy in Aqueous Zn Metal Batteries. **2021**, 31, 2101237	18
922	Controlling Vanadate Nanofiber Interlayer via Intercalation with Conducting Polymers: Cathode Material Design for Rechargeable Aqueous Zinc Ion Batteries. **2021**, 31, 2100005	16
921	Advanced Aqueous Zinc-Ion Batteries Enabled by 3D Ternary MnO/Reduced Graphene Oxide/Multiwall Carbon Nanotube Hybrids. **2021**, 9, 2100022	6
920	Frontiers in Hybrid Ion Capacitors: A Review on Advanced Materials and Emerging Devices. **2021**, 8, 1393-1429	6
919	Dendritic Zn Deposition in Zinc-Metal Batteries and Mitigation Strategies. **2021**, 2, 2000082	1
918	Rechargeable quasi-solid-state aqueous hybrid Al3+/H+ battery with 10,000 ultralong cycle stability and smart switching capability. **2021**, 14, 4154	2
917	A Systematic Electrochemical Investigation of a Dimethylamine Cosolvent-Assisted Nonaqueous Zinc(II) Bis(trifluoromethylsulfonyl)imide Electrolyte. **2021**, 168, 030516	4
916	High-Voltage Zinc-Ion Batteries: Design Strategies and Challenges. **2021**, 31, 2010213	35
915	Micronanostructured Design of Dendrite-Free Zinc Anodes and Their Applications in Aqueous Zinc-Based Rechargeable Batteries. **2021**, 2, 2000128	33
914	Macroporous, Freestanding Birnessite H0.08MnO2·0.7H2O Nanobelts/Carbon Nanotube Membranes for Wearable Zinc-Ion Batteries with Superior Rate Capability and Cyclability. **2021**, 4, 4138-4149	5
913	Reaction kinetics in rechargeable zinc-ion batteries. **2021**, 492, 229655	11
912	Optimizing engineering of rechargeable aqueous zinc ion batteries to enhance the zinc ions storage properties of cathode material. **2021**, 490, 229528	8
911	Eliminating Dendrites and Side Reactions via a Multifunctional ZnSe Protective Layer toward Advanced Aqueous Zn Metal Batteries. **2021**, 31, 2100186	29

910	Recent advances of vanadium-based cathode materials for zinc-ion batteries. **2021**, 32, 3753-3753	2
909	Recent Progress in Layered Manganese and Vanadium Oxide Cathodes for Zn-Ion Batteries. **2021**, 9, 2100011	6
908	Manipulating Zn anode reactions through salt anion involving hydrogen bonding network in aqueous electrolytes with PEO additive. **2021**, 82, 105739	40
907	Recent progress on the recycling technology of Li-ion batteries. **2021**, 55, 391-419	82
906	Ultrafast Zinc□ion□conductor Interface toward High-Rate and Stable Zinc Metal Batteries. **2021**, 11, 2100186	61
905	Sulfonic-Group-Grafted TiCT MXene: A Silver Bullet to Settle the Instability of Polyaniline toward High-Performance Zn-Ion Batteries. **2021**, 15, 9065-9075	22
904	Highly Reversible Aqueous Zn-MnO2 Battery by Supplementing Mn2+-Mediated MnO2 Deposition and Dissolution. **2021**, 31, 2101579	27
903	Insights on Flexible Zinc-Ion Batteries from Lab Research to Commercialization. **2021**, 33, e2007548	50
902	Heterometallic Seed-Mediated Zinc Deposition on Inkjet Printed Silver Nanoparticles Toward Foldable and Heat-Resistant Zinc Batteries. **2021**, 31, 2101607	35
901	Opportunities and challenges for aqueous metal-proton batteries. **2021**, 4, 1252-1273	10
900	Self-initiated coating of polypyrrole on MnO2/Mn2O3 nanocomposite for high-performance aqueous zinc-ion batteries. **2021**, 545, 149041	11
899	Electrokinetic-Driven Fast Ion Delivery for Reversible Aqueous Zinc Metal Batteries with High Capacity. **2021**, 17, e2008059	7
898	Facile and Scalable Synthesis of 3D Structures of VO□12HO Nanosheets Coated with Carbon toward Ultrafast and Ultrastable Zinc Storage. **2021**, 13, 18704-18712	6
897	Achieving better aqueous rechargeable zinc ion batteries with heterostructure electrodes. **2021**, 14, 3174-3187	13
896	Wearable Antifreezing Fiber-Shaped Zn/PANI Batteries with Suppressed Zn Dendrites and Operation in Sweat Electrolytes. **2021**, 13, 17608-17617	12
895	Sandwich Structure of 3D Porous Carbon and Water-Pillared V2O5 Nanosheets for Superior Zinc-Ion Storage Properties. **2021**, 8, 1784-1791	4
894	Electrochemical Zinc Ion Capacitors: Fundamentals, Materials, and Systems. **2021**, 11, 2100201	37
893	Aqueous Rechargeable Zn-ion Batteries: Strategies for Improving the Energy Storage Performance. **2021**, 14, 1987-2022	15

892	Proton-assisted calcium-ion storage in aromatic organic molecular crystal with coplanar stacked structure. **2021**, 12, 2400	32
891	Constructing Three-Dimensional Structured V2O5/Conductive Polymer Composite with Fast Ion/Electron Transfer Kinetics for Aqueous Zinc-Ion Battery. **2021**, 4, 4208-4216	13
890	Impacts of fluorine in NASICON-type materials as cathodes for aqueous zinc ion batteries. **2021**, 9, 938	2
889	Progressive "Layer to Hybrid Spinel/Layer" Phase Evolution with Proton and Zn Co-intercalation to Enable High Performance of MnO-Based Aqueous Batteries. **2021**, 13, 22466-22474	3
888	A Low-Strain Potassium-Rich Prussian Blue Analogue Cathode for High Power Potassium-Ion Batteries. **2021**, 60, 13050-13056	35
887	Quicker and More Zn Storage Predominantly from the Interface. **2021**, 33, e2100359	35
886	A Safe Flexible Self-Powered Wristband System by Integrating Defective MnO Nanosheet-Based Zinc-Ion Batteries with Perovskite Solar Cells. **2021**, 15, 10597-10608	33
885	Stable Aqueous Anode-Free Zinc Batteries Enabled by Interfacial Engineering. **2021**, 31, 2101886	46
884	Using redox electrolytes to extend the charge storage capacity in an aqueous hybrid ion battery. **2021**, 411, 128416	3
883	Design and Fabrication of Transparent and Stretchable Zinc Ion Batteries. **2021**, 4, 6166-6179	7
882	High-Voltage and Super-Stable Aqueous Sodium-Zinc Hybrid Ion Batteries Enabled by Double Solvation Structures in Concentrated Electrolyte.. **2021**, 5, e2100418	3
881	High-rate aqueous zinc-organic battery achieved by lowering HOMO/LUMO of organic cathode. **2021**, 37, 378-386	32
880	Crossroads in the renaissance of rechargeable aqueous zinc batteries. **2021**, 45, 191-212	48
879	High performance flexible quasi-solid-state zinc-ion hybrid supercapacitors enable by electrode potential adjustment. **2021**, 495, 229789	4
878	A Low-Strain Potassium-Rich Prussian Blue Analogue Cathode for High Power Potassium-Ion Batteries. **2021**, 133, 13160-13166	3
877	Crystalline and amorphous MnO2 cathodes with open framework enable high-performance aqueous zinc-ion batteries. **2021**, 15, 202-215	1
876	Aqueous Rechargeable Multivalent Metal-Ion Batteries: Advances and Challenges. **2021**, 11, 2100608	33
875	Reduced Intercalation Energy Barrier by Rich Structural Water in Spinel ZnMnO for High-Rate Zinc-Ion Batteries. **2021**, 13, 23822-23832	12

874	The Role of Al -Based Aqueous Electrolytes in the Charge Storage Mechanism of MnO Cathodes. **2021**, 17, e2101515	4
873	Jahn-Teller Distortion Induced Mn-Rich Cathode Enables Optimal Flexible Aqueous High-Voltage Zn-Mn Batteries. **2021**, 8, 2004995	20
872	Boosted charge transfer in oxygen vacancy-rich K+ birnessite MnO2 for water oxidation and zinc-ion batteries. **2021**, 378, 138147	14
871	Recent advances in rechargeable Zn-based batteries. **2021**, 493, 229677	12
870	Rich Alkali Ions Preintercalated Vanadium Oxides for Durable and Fast Zinc-Ion Storage. **2021**, 6, 2111-2120	24
869	Manganese-Based Materials for Rechargeable Batteries beyond Lithium-Ion. **2021**, 11, 2100867	27
868	Modulating MnO Interface with Flexible and Self-Adhering Alkylphosphonic Layers for High-Performance Zn-MnO Batteries. **2021**, 13, 23724-23731	1
867	Realizing high-power and high-capacity zinc/sodium metal anodes through interfacial chemistry regulation. **2021**, 12, 3083	40
866	The energy storage mechanisms of MnO2 in batteries. **2021**, 30, 100769	2
865	High-Capacity Aqueous Storage in Vanadate Cathodes Promoted by the Zn-Ion and Proton Intercalation and Conversion-Intercalation of Vanadyl Ions. **2021**, 13, 25993-26000	7
864	Mechanistic Insights of Mg2+-Electrolyte Additive for High-Energy and Long-Life Zinc-Ion Hybrid Capacitors. **2021**, 11, 2101158	30
863	Successive electrochemical conversion reaction to understand the performance of aqueous Zn/MnO2 batteries with Mn2+ additive. **2021**, 20, 100646	19
862	Tailoring Ultrahigh Energy Density and Stable Dendrite-Free Flexible Anode with Ti3C2Tx MXene Nanosheets and Hydrated Ammonium Vanadate Nanobelts for Aqueous Rocking-Chair Zinc Ion Batteries. **2021**, 31, 2103210	21
861	Comparison of Aqueous- and Non-Aqueous-Based Binder Polymers and the Mixing Ratios for Zn//MnO2 Batteries with Mildly Acidic Aqueous Electrolytes. **2021**, 7, 40	3
860	Suppressing the oxygen-related parasitic reactions in NaTi(PO)-based hybrid capacitive deionization with cation exchange membrane. **2021**, 591, 139-147	8
859	High electrochemical performance of in-situ carbon-coated vanadyl ethylene glycolate as cathode for aqueous zinc-ion batteries. **2021**, 364, 115632	1
858	In Situ Lattice Tunnel Distortion of Vanadium Trioxide for Enhancing Zinc Ion Storage. **2021**, 11, 2100973	21
857	Zinc dendrite growth and inhibition strategies. **2021**, 20, 100692	38

856	Layered Barium Vanadate Cathodes for Aqueous Zinc Batteries: Enhancing Cycling Stability through Inhibition of Vanadium Dissolution. **2021**, 4, 6197-6204	6
855	Interfacial adsorption□insertion mechanism induced by phase boundary toward better aqueous Zn-ion battery. **2021**, 3, 1028-1036	101
854	Interlayer Structure Engineering of MXene-Based Capacitor-Type Electrode for Hybrid Micro-Supercapacitor toward Battery-Level Energy Density. **2021**, 8, e2100775	28
853	Oxygen Defects Engineering of VO2□xH2O Nanosheets via In Situ Polypyrrole Polymerization for Efficient Aqueous Zinc Ion Storage. **2021**, 31, 2103070	37
852	A rechargeable aqueous zinc/sodium manganese oxides battery with robust performance enabled by Na2SO4 electrolyte additive. **2021**, 38, 299-308	20
851	Advances and Perspectives of Cathode Storage Chemistry in Aqueous Zinc-Ion Batteries. **2021**, 15, 9244-9272	58
850	Manipulating Crystallographic Orientation of Zinc Deposition for Dendrite-free Zinc Ion Batteries. **2021**, 11, 2101299	77
849	MnO2@V2O5 microspheres as cathode materials for high performance aqueous rechargeable Zn-ion battery. **2021**, 890, 115253	6
848	Intercalated polyaniline in V2O5 as a unique vanadium oxide bronze cathode for highly stable aqueous zinc ion battery. **2021**, 38, 590-598	33
847	Tuning Surface Energy of Zn Anodes via Sn Heteroatom Doping Enabled by a Codeposition for Ultralong Life Span Dendrite-Free Aqueous Zn-Ion Batteries. **2021**, 13, 27085-27095	11
846	Impact of Binder Functional Groups on Controlling Chemical Reactions to Improve Stability of Rechargeable Zinc-Ion Batteries. **2021**, 4, 7138-7147	5
845	Design of honeycomb-like hierarchically porous carbons with engineered mesoporosity for aqueous zinc-ion hybrid supercapacitors applications. **2021**, 38, 102534	2
844	Water-Repellent Ionic Liquid Skinny Gels Customized for Aqueous Zn-Ion Battery Anodes. **2021**, 31, 2103850	22
843	Recent Advances in Transition Metal Dichalcogenide Cathode Materials for Aqueous Rechargeable Multivalent Metal-Ion Batteries. **2021**, 11,	5
842	Ultrafast and reversible anion storage of spinel nanoarchitecture for high-performance alkaline zinc full cells. **2021**, 8, 021408	1
841	The Emerging of Aqueous Zinc-Based Dual Electrolytic Batteries. **2021**, 17, e2008043	6
840	Reaction mechanisms and optimization strategies of manganese-based materials for aqueous zinc batteries. **2021**, 20, 100626	16
839	Employing the Dynamics of the Electrochemical Interface in Aqueous Zinc-Ion Battery Cathodes. **2021**, 31, 2102135	9

838	Recent Advances in Conversion-Type Electrode Materials for Post Lithium-Ion Batteries. **2021**, 3, 956-977	17
837	Construction of a Multifunctional Quasi-Gel Layer for Long-Life Aqueous Zinc Metal Anodes. **2021**, 13, 29746-29754	12
836	Alkali Ions Pre-Intercalated Layered MnO2 Nanosheet for Zinc-Ions Storage. **2021**, 11, 2101287	25
835	Scalable and Controllable Synthesis of Interface-Engineered Nanoporous Host for Dendrite-Free and High Rate Zinc Metal Batteries. **2021**,	39
834	Cathode strategies to improve the performance of zinc-ion batteries. e2100090	2
833	A Universal Compensation Strategy to Anchor Polar Organic Molecules in Bilayered Hydrated Vanadates for Promoting Aqueous Zinc-Ion Storage. **2021**, 33, e2102701	17
832	A novel 3-phenylpropylamine intercalated molecular bronze with ultrahigh layer spacing as a high-rate and stable cathode for aqueous zinc-ion batteries. **2021**, 1, 425-431	0
831	Bi2O3 Induced Ultralong Cycle Lifespan and High Capacity of MnO2 Nanotube Cathodes in Aqueous Zinc-Ion Batteries. **2021**, 4, 7355-7364	5
830	Ultrafast charge in Zn-based batteries through high-potential deposition. **2021**, 19, 100425	4
829	Microwave-Assisted Rapid Synthesis of NHVO Layered Oxide: A High Energy Cathode for Aqueous Rechargeable Zinc Ion Batteries. **2021**, 11,	1
828	Direct Detection and Visualization of the H Reaction Process in a VO Cathode for Aqueous Zinc-Ion Batteries. **2021**, 12, 7076-7084	1
827	Guest-species-incorporation in manganese/vanadium-based oxides: Towards high performance aqueous zinc-ion batteries. **2021**, 85, 105969	22
826	Atomic-scale unveiling of multiphase evolution during hydrated Zn-ion insertion in vanadium oxide. **2021**, 12, 4599	8
825	Hydrothermal synthesis of □MnO2 nanorods for highly efficient zinc-ion storage. **2021**, 27, 3943-3950	1
824	A high capacity small molecule quinone cathode for rechargeable aqueous zinc-organic batteries. **2021**, 12, 4424	32
823	Harnessing oxygen vacancy in V2O5 as high performing aqueous zinc-ion battery cathode. **2021**, 870, 159403	18
822	Wearable and Fully Biocompatible All-in-One Structured ?Paper-Like? Zinc Ion Battery. **2021**, 13, 34349-34356	3
821	Self-Assembling Films of Covalent Organic Frameworks Enable Long-Term, Efficient Cycling of Zinc-Ion Batteries. **2021**, 33, e2101726	31

820	Achieving long-cycle-life Zn-ion batteries through interfacial engineering of MnO2-polyaniline hybrid networks. **2021**, 28, e00254	7
819	Manganese oxides hierarchical microspheres as cathode material for high-performance aqueous zinc-ion batteries. **2021**, 385, 138447	7
818	Investigating Degradation Modes in Zn-AgO Aqueous Batteries with In Situ X-Ray Micro Computed Tomography. **2021**, 11, 2101327	5
817	Enabling high-performance aqueous rechargeable Li-ion batteries through systematic optimization of TiS2/LiFePO4 full cell. **2021**, 553, 149496	1
816	Recent advances on redox active composites of metal-organic framework and conducting polymers as pseudocapacitor electrode material. **2021**, 145, 110854	13
815	Unveiling the Intricate Intercalation Mechanism in Manganese Sesquioxide as Positive Electrode in Aqueous Zn-Metal Battery. **2021**, 11, 2100962	9
814	Preparation and electrochemical properties of □MnO2/rGO-PPy composite as cathode material for zinc-ion battery. **2021**, 56, 16582-16590	3
813	A high specific capacity aqueous zinc-manganese battery with a □MnO2 cathode. **2021**, 27, 3933-3941	3
812	Efforts at Enhancing Bifunctional Electrocatalysis and Related Events for Rechargeable Zinc-Air Batteries. **2021**, 8, 3998	6
811	A High-Voltage Zn□Organic Battery Using a Nonflammable Organic Electrolyte. **2021**, 133, 21193-21200	0
810	Bifunctional Hydrated Gel Electrolyte for Long-Cycling Zn-Ion Battery with NASICON-Type Cathode. **2021**, 31, 2105717	11
809	A flexible, heat-resistant and self-healable □ocking-chair□zinc ion microbattery based on MXene-TiS2 (de)intercalation anode. **2021**, 504, 230076	9
808	Strategies for constructing manganese-based oxide electrode materials for aqueous rechargeable zinc-ion batteries. **2021**, 100039	8
807	A High-Voltage Zn-Organic Battery Using a Nonflammable Organic Electrolyte. **2021**, 60, 21025-21032	15
806	Amino Acid-Induced Interface Charge Engineering Enables Highly Reversible Zn Anode. **2021**, 31, 2103514	33
805	Oxygen-Deficient □MnO@Graphene Oxide Cathode for High-Rate and Long-Life Aqueous Zinc Ion Batteries. **2021**, 13, 173	13
804	Doping-Induced Static Activation of MnO2 Cathodes for Aqueous Zn-Ion Batteries. **2021**, 9, 12223-12232	6
803	Molecular Engineering of Covalent Organic Framework Cathodes for Enhanced Zinc-Ion Batteries. **2021**, 33, e2103617	31

802	Stabilizing Zinc Anodes by Regulating the Electrical Double Layer with Saccharin Anions. **2021**, 33, e2100445	64
801	Molecular Engineering on MoS Enables Large Interlayers and Unlocked Basal Planes for High-Performance Aqueous Zn-Ion Storage. **2021**, 60, 20286-20293	26
800	A bimetallic oxide NiMnO3 with perovskite structured as a high-performance cathode for zinc ion batteries. **2021**, 27, 4811	4
799	La0.14V2O5/Reduced Graphene Oxide Composite for Aqueous Zinc-Ion Batteries with Long Cycle Life. **2021**, 168, 080527	5
798	Realizing Stretchable Aqueous Zn-Based Batteries by Material and Structural Designs. **2021**, 9,	0
797	Designing Advanced Aqueous Zinc-Ion Batteries: Principles, Strategies and Perspectives.	7
796	Construction of Co-Mn Prussian Blue Analog Hollow Spheres for Efficient Aqueous Zn-ion Batteries. **2021**, 133, 22363-22368	2
795	Polyvinyl Pyrrolidone as Electrolyte Additive for Aqueous Zinc Batteries with MnO2 Cathode. **2021**, 168, 080514	0
794	A Thin and Uniform Fluoride-Based Artificial Interphase for the Zinc Metal Anode Enabling Reversible Zn/MnO2 Batteries. **2021**, 6, 3063-3071	39
793	Recent Advances on Spinel Zinc Manganate Cathode Materials for Zinc-Ion Batteries. **2021**,	2
792	Construction of Co-Mn Prussian Blue Analog Hollow Spheres for Efficient Aqueous Zn-ion Batteries. **2021**, 60, 22189-22194	48
791	Multifold Electrochemical Protons and Zinc Ion Storage Behavior in Copper Vanadate Cathodes. **2021**, 4, 10197-10202	1
790	Molecular Engineering on MoS2 Enables Large Interlayers and Unlocked Basal Planes for High-Performance Aqueous Zn-Ion Storage. **2021**, 133, 20448-20455	14
789	Oxygen-Defect Enhanced Anion Adsorption Energy Toward Super-Rate and Durable Cathode for Ni-Zn Batteries. **2021**, 13, 167	13
788	Aqueous Aluminum Cells: Mechanisms of Aluminum Anode Reactions and Role of the Artificial Solid Electrolyte Interphase. **2021**, 13, 37091-37101	9
787	Self-standing manganese dioxide/graphene carbon nanotubes film electrode for symmetric supercapacitor with high energy density and superior long cycling stability. **2021**, 47, 33020-33020	5
786	Insight into the Critical Role of Surface Hydrophilicity for Dendrite-Free Zinc Metal Anodes. **2021**, 6, 3078-3085	37
785	Defect-Rich MoO3 Nanobelt Cathode for a High-Performance Hybrid Alkali/Acid Zn-MoO3 Rechargeable Battery. **2021**, 9, 11524-11533	4

784	Dual-Function Electrolyte Additive for Highly Reversible Zn Anode. **2021**, 11, 2102010	47
783	Reducing Water Activity by Zeolite Molecular Sieve Membrane for Long-Life Rechargeable Zinc Battery. **2021**, 33, e2102415	37
782	Hybrid electrolyte-mediated nano-scaled Fe2O3 cathode for emerging aqueous zinc battery. **2021**, 390, 138883	4
781	Structure control in VNxOy by hydrogen bond association extraction for enhanced zinc ion storage. **2021**, 389, 138722	2
780	Hydrothermal reaction induced phase transition of vanadium oxide towards high-performance zinc ion batteries cathode. **2021**, 27, 4793	1
779	First-row transition metal compounds for aqueous metal ion batteries. **2021**, 63, 195-195	3
778	Studying conversion mechanism to broaden cathode options in aqueous Zn-ion batteries.	12
777	Chemically Self-Charging Aqueous Zinc-Organic Battery. **2021**, 143, 15369-15377	16
776	Flexible high-energy and stable rechargeable vanadium-zinc battery based on oxygen defect modulated V2O5 cathode. **2021**, 87, 106164	13
775	Accessing the 2V VV/VIV redox process of vanadyl phosphate cathode for aqueous batteries. **2021**, 507, 230270	1
774	Integrated 'all-in-one' strategy to stabilize zinc anodes for high-performance zinc-ion batteries.. **2022**, 9, nwab177	54
773	EQCM study of intercalation processes into electrodeposited MnO2 electrode in aqueous zinc-ion battery electrolyte. **2021**, 892, 162142	4
772	Studying the Conversion Mechanism to Broaden Cathode Options in Aqueous Zinc-Ion Batteries. **2021**, 60, 25114-25121	17
771	A review of zinc-based battery from alkaline to acid. **2021**, 11, 100149	12
770	Phosphorus-doped carbon sheets decorated with SeS2 as a cathode for aqueous Zn-SeS2 battery. **2021**, 420, 129920	5
769	A Template-engaged, Self-doped Strategy to N-doped Hollow Carbon Nanoboxes for Zinc-ion Hybrid Supercapacitors.	0
768	Formation of MnxZny(OH)zSO4?5H2O hot intercalation of Zn is the basis of the neutral MnO2/Zn battery first discharge reaction. **2021**, 390, 138852	4
767	ZnNi reaction in the alkaline zinc-air battery using a nickel-supported air electrode. **2021**, 21, 100823	3

766	,-Dimethylacetamide-Diluted Nitrate Electrolyte for Aqueous Zn//LiMnO Hybrid Ion Batteries. **2021**, 13, 46634-46643	3
765	Sulfur-Based Aqueous Batteries: Electrochemistry and Strategies. **2021**, 143, 15475-15489	23
764	Electrolyte Study with in Operando pH Tracking Providing Insight into the Reaction Mechanism of Aqueous Acidic Zn//MnO2 Batteries. **2021**, 8, 3553-3566	5
763	In-situ electrochemical induced artificial solid electrolyte interphase for MnO@C nanocomposite enabling long-lived aqueous zinc-ion batteries. **2021**, 430, 132673	5
762	Understanding the Limited Electrochemical Zn-Ion Insertion into 2H-MoS2 and 2H-WS2: A Case Study of 2H-NbS2. **2021**, 4, 8849-8856	2
761	Recent advances in electrochemically-efficient materials for zinc-ion hybrid supercapacitors. **2021**, 148, 111288	6
760	A Cascade Battery: Coupling Two Sequential Electrochemical Reactions in a Single Battery. **2021**, 33, e2105480	7
759	A high-performance aqueous rechargeable zinc battery based on organic cathode integrating quinone and pyrazine. **2021**, 40, 31-40	31
758	Suppressing Charge Disproportionation of MnO2 Cathodes in Rechargeable Zinc Ion Batteries via Cooperative Jahn-Teller Distortion.	1
757	The controlled quinone introduction and conformation modification of polyaniline cathode materials for rechargeable aqueous zinc-polymer batteries. **2021**, 419, 129659	12
756	A facile coating strategy for high stability aqueous zinc ion batteries: Porous rutile nano-TiO2 coating on zinc anode. **2021**, 421, 127367	10
755	Low-cost manganese dioxide semi-solid electrode for flow batteries. **2021**,	6
754	Understanding of the electrochemical behaviors of aqueous zinc□manganese batteries: Reaction processes and failure mechanisms. **2021**,	4
753	Potassium-Containing □MnO2 Nanotubes: The Impact of Hollow Regions on Electrochemistry. **2021**, 168, 090559	0
752	High-Energy Density Aqueous Zinc□Iodine Batteries with Ultra-long Cycle Life Enabled by the ZnI2 Additive.	0
751	Precise Proton Redistribution for Two-Electron Redox in Aqueous Zinc/Manganese Dioxide Batteries. 2102055	13
750	High-performance reversible aqueous zinc-ion battery based on iron-doped alpha-manganese dioxide coated by polypyrrole. **2021**, 598, 419-429	13
749	Issues and rational design of aqueous electrolyte for Zn-ion batteries. **2021**, 1, 432-447	11

748	Achievement of a polymer-free KAc gel electrolyte for advanced aqueous K-Ion battery. **2021**, 41, 133-140	6
747	Al-Intercalated MnO2 cathode with reversible phase transition for aqueous Zn-Ion batteries. **2021**, 422, 130375	30
746	Recent progress of carbon nanomaterials for high-performance cathodes and anodes in aqueous zinc ion batteries. **2021**, 41, 715-737	18
745	A novel rechargeable zinc□opper battery without a separator. **2021**, 42, 103109	0
744	Mild synthesis of superadhesive hydrogel electrolyte with low interfacial resistance and enhanced ionic conductivity for flexible zinc ion battery. **2021**, 600, 586-593	7
743	Flexible and anti-freezing zinc-ion batteries using a guar-gum/sodium-alginate/ethylene-glycol hydrogel electrolyte. **2021**, 41, 599-605	28
742	Tuning crystal structure of MnO2 during different hydrothermal synthesis temperature and its electrochemical performance as cathode material for zinc ion battery. **2021**, 192, 110398	0
741	Modifying hydrogel electrolyte to induce zinc deposition for dendrite-free zinc metal anode. **2021**, 393, 139094	8
740	A self-healing neutral aqueous rechargeable Zn/MnO battery based on modified carbon nanotubes substrate cathode. **2021**, 600, 83-89	7
739	A porous puckered V2O5 polymorph as new high performance cathode material for aqueous rechargeable zinc batteries. **2021**, 61, 459-468	4
738	Recent advances in vanadium-based materials for aqueous metal ion batteries: Design of morphology and crystal structure, evolution of mechanisms and electrochemical performance. **2021**, 41, 152-182	4
737	A hafnium oxide-coated dendrite-free zinc anode for rechargeable aqueous zinc-ion batteries. **2021**, 599, 467-475	52
736	Dendrite-free zinc anode enabled by zinc-chelating chemistry. **2021**, 41, 515-521	26
735	Construction of hierarchically porous biomass carbon using iodine as pore-making agent for energy storage. **2021**, 599, 351-359	3
734	Spontaneous knitting behavior of 6.7-nm thin (NH4)0.38V2O5 nano- ribbons for binder-free zinc-ion batteries. **2021**, 42, 286-294	10
733	Insights into host materials for aqueous proton batteries: structure, mechanism and prospect. **2021**, 89, 106400	9
732	Earth-abundant magnetite with carbon coatings as reversible cathodes for stretchable zinc-ion batteries. **2021**, 62, 552-562	3
731	Metallic V5S8 microparticles with tunnel-like structure for high-rate and stable zinc-ion energy storage. **2021**, 42, 786-793	6

730	Stabilizing zinc deposition with sodium lignosulfonate as an electrolyte additive to improve the life span of aqueous zinc-ion batteries. **2021**, 601, 486-494	6
729	Acetate-based oversaturated gel electrolyte enabling highly stable aqueous Zn-MnO2 battery. **2021**, 42, 240-251	10
728	Surface modification of manganese monoxide through chemical vapor deposition to attain high energy storage performance for aqueous zinc-ion batteries. **2021**, 601, 617-625	2
727	Surface-charge regulated TiO2 nanotube arrays as scaffold for constructing binder-free high-performance supercapacitor. **2021**, 567, 150832	5
726	Enhancing the Cycling Stability of Transition-Metal-Oxide-Based Electrochemical Electrode via Pourbaix Diagram Engineering. **2021**, 42, 252-258	7
725	Challenges and design strategies for high performance aqueous zinc ion batteries. **2021**, 42, 533-569	16
724	Structural design and interfacial characteristics endow NaTi2(PO4)3 coated zinc anode with high capacity and better cycling stability. **2021**, 425, 127699	0
723	Diffusion-driven fabrication of yolk-shell structured K-birnessite@mesoporous carbon nanospheres with rich oxygen vacancies for high-energy and high-power zinc-ion batteries. **2021**, 42, 753-763	7
722	Reversible proton co-intercalation boosting zinc-ion adsorption and migration abilities in bismuth selenide nanoplates for advanced aqueous batteries. **2021**, 42, 34-41	4
721	Aqueous rechargeable zinc batteries: Challenges and opportunities. **2021**, 30, 100801	3
720	Improving stability and reversibility via fluorine doping in aqueous zinc manganese batteries. **2021**, 22, 100851	5
719	Suppressing Cu-based cathode dissolution in rechargeable aqueous zinc batteries with equilibrium principles. **2021**, 568, 150948	0
718	Realizing the leucoemeraldine-emeraldine-pernigraniline redox reactions in polyaniline cathode materials for aqueous zinc-polymer batteries. **2022**, 427, 131988	11
717	2,3-diaminophenazine as a high-rate rechargeable aqueous zinc-ion batteries cathode. **2022**, 607, 1262-1268	1
716	Interfacial parasitic reactions of zinc anodes in zinc ion batteries: Underestimated corrosion and hydrogen evolution reactions and their suppression strategies. **2022**, 64, 246-262	18
715	Cathode materials for aqueous zinc-ion batteries: A mini review. **2022**, 605, 828-850	16
714	Layered VO2@N-doped carbon composites for high-performance rechargeable aqueous zinc-ion batteries. **2022**, 428, 131211	15
713	2D metal patterns transformed from 3D printed stamps for flexible Zn//MnO2 in-plane micro-batteries. **2022**, 429, 132196	5

712	An anode-free aqueous dual-ion battery.	1
711	Sodium manganese hexacyanoferrate as Zn ion host toward aqueous energy storage. **2021**, 881, 114968	7
710	Balanced kinetics between electrodes by carbon cloth@ZIF-8 for high rate performance zinc-ion hybrid capacitors. **2021**, 57, 8778-8781	5
709	Towards high-areal-capacity aqueous zinc□manganese batteries: promoting MnO2 dissolution by redox mediators.	21
708	Strategies of structural and defect engineering for high-performance rechargeable aqueous zinc-ion batteries. **2021**, 9, 19245-19281	9
707	Research Progress and Challenge of Aqueous Zinc Ion Battery. **2021**, 79, 158	4
706	In situ grown MnO2/graphdiyne oxide hybrid 3D nanoflowers for high-performance aqueous zinc-ion batteries. **2021**, 5, 5400-5409	7
705	Cathode Design for Aqueous Rechargeable Multivalent Ion Batteries: Challenges and Opportunities. **2021**, 31, 2010445	40
704	MnO2-based nanostructured materials for various energy applications. **2021**, 5, 3549-3575	7
703	Non-concentrated aqueous electrolytes with organic solvent additives for stable zinc batteries. **2021**, 12, 5843-5852	76
702	A high-performance free-standing Zn anode for flexible zinc-ion batteries. **2021**, 13, 10100-10107	7
701	Layered electrode materials for non-aqueous multivalent metal batteries. **2021**, 9, 19317-19345	3
700	A cation selective separator induced cathode protective layer and regulated zinc deposition for zinc ion batteries. **2021**, 9, 4734-4743	19
699	Mechanistic investigation of redox processes in Zn□MnO2 battery in mild aqueous electrolytes. **2021**, 9, 20766-20775	5
698	Recent progress in aqueous zinc-ion batteries: a deep insight into zinc metal anodes. **2021**, 9, 6013-6028	30
697	In Situ Electrochemical Transformation Reaction of Ammonium-Anchored Heptavanadate Cathode for Long-Life Aqueous Zinc-Ion Batteries. **2021**, 13, 5034-5043	17
696	In Situ Oriented Mn Deficient ZnMnO@C Nanoarchitecture for Durable Rechargeable Aqueous Zinc-Ion Batteries. **2021**, 8, 2002636	32
695	Recent progress of dimensionally designed electrode nanomaterials in aqueous electrochemical energy storage. **2021**, 9, 9535-9572	19

694	Bio-inspired design of an in situ multifunctional polymeric solid‐electrolyte interphase for Zn metal anode cycling at 30 mA cm−2 and 30 mA h cm−2.	66
693	Stable, high-performance, dendrite-free, seawater-based aqueous batteries. **2021**, 12, 237	67
692	Aqueous Zinc Batteries. 1-54	1
691	Intrinsic Structure Modification of Electrode Materials for Aqueous Metal-Ion and Metal-Air Batteries. **2021**, 31, 2006855	17
690	Nano Polymorphism-Enabled Redox Electrodes for Rechargeable Batteries. **2021**, 33, e2004920	13
689	Recent Advances in Polymer Electrolytes for Zinc Ion Batteries: Mechanisms, Properties, and Perspectives. **2020**, 10, 1903977	144
688	Co2+/3+/4+-Regulated Electron State of Mn-O for Superb Aqueous Zinc-Manganese Oxide Batteries. **2021**, 11, 2003203	54
687	High-Voltage Electrolytes for Aqueous Energy Storage Devices. **2020**, 3, 323-330	55
686	Recent Progress on High-Performance Cathode Materials for Zinc-Ion Batteries. **2021**, 2, 2000064	36
685	Carbon nanohorns/nanotubes: An effective binary conductive additive in the cathode of high energy-density zinc-ion rechargeable batteries. **2020**, 167, 431-438	27
684	Electrochemically activated MnO cathodes for high performance aqueous zinc-ion battery. **2020**, 402, 125509	45
683	The function of Mn2+ additive in aqueous electrolyte for Zn/‐MnO2 battery. **2020**, 351, 136445	48
682	Appropriately hydrophilic/hydrophobic cathode enables high-performance aqueous zinc-ion batteries. **2020**, 30, 337-345	40
681	Mathematical modeling and numerical analysis of the discharge process of an alkaline zinc-cobalt battery. **2020**, 30, 101432	3
680	Charging activation and desulfurization of MnS unlock the active sites and electrochemical reactivity for Zn-ion batteries. **2020**, 75, 104869	31
679	Investigation of a Biomass Hydrogel Electrolyte Naturally Stabilizing Cathodes for Zinc-Ion Batteries. **2021**, 13, 745-754	22
678	NaVO microflowers as a stable cathode material for high-performance aqueous zinc-ion batteries.. **2020**, 10, 6807-6813	12
677	A zinc ion yarn battery with high capacity and fire retardancy based on a SiO nanoparticle doped ionogel electrolyte. **2020**, 16, 7432-7437	1

676	Roadmap for advanced aqueous batteries: From design of materials to applications. **2020**, 6, eaba4098	455
675	Revealing the Local pH Value Changes of Acidic Aqueous Zinc Ion Batteries with a Manganese Dioxide Electrode during Cycling. **2020**, 167, 020545	40
674	Effects of the Low Coulombic Efficiency of Zinc Anode on the Cycle Performance of Zn Ni Battery. **2020**, 167, 130509	4
673	Highly Reversible Plating/Stripping of Porous Zinc Anodes for Multivalent Zinc Batteries. **2020**, 167, 140520	5
672	Hybrid Aqueous/Organic Electrolytes Enable the High-Performance Zn-Ion Batteries. **2019**, 2019, 2635310	21
671	Recent progress in the synthesis and applications of vertically aligned carbon nanotube materials. **2021**, 10, 1592-1623	2
670	A self-preserving pitted texture enables reversible topographic evolution and cycling on Zn metal anodes.	0
669	Recent progress in tackling Zn anode challenges for Zn ion batteries. **2021**, 9, 25750-25772	2
668	Electrolyte additives inhibit the surface reaction of aqueous sodium/zinc battery. **2021**, 608, 1481-1488	0
667	Hierarchical K-Birnessite-MnO Carbon Framework for High-Energy-Density and Durable Aqueous Zinc-Ion Battery. **2021**, 17, e2104557	8
666	Ceria-Spiderweb Nanosheets Unlock the Energy-Storage Properties in the Sleeping Triplite (Mn2(PO4)F).	0
665	Interfacial thermodynamics-inspired electrolyte strategy to regulate output voltage and energy density of battery chemistry. **2021**,	6
664	Electrolyte Regulation of Bismuth Ions toward High-Performance Aqueous Manganese-based Batteries. **2021**, 3, 1558-1565	3
663	Electrochemically Activated Cu2 Te as an Ultraflat Discharge Plateau, Low Reaction Potential, and Stable Anode Material for Aqueous Zn-Ion Half and Full Batteries. **2021**, 11, 2102607	9
662	MnO2 Nanowires Anchored with Graphene Quantum Dots for Stable Aqueous Zinc-Ion Batteries. **2021**, 4, 10940-10947	2
661	Unraveling H/Zn Sequential Conversion Reactions in Tellurium Cathodes for Rechargeable Aqueous Zinc Batteries. **2021**, 12, 10163-10168	1
660	Rationally Designed Mn O -ZnMn O Hollow Heterostructures from Metal-Organic Frameworks for Stable Zn-Ion Storage. **2021**, 60, 25793-25798	6
659	Rationally Designed Mn2O3-ZnMn2O4 Hollow Heterostructures from Metal-Organic Frameworks for Stable Zn-ion Storage.	1

658	Reaction mechanisms for electrolytic manganese dioxide in rechargeable aqueous zinc-ion batteries. **2021**, 11, 20777	2
657	Zn Metal Anodes for Zn-Ion Batteries in Mild Aqueous Electrolytes: Challenges and Strategies. **2021**, 11,	4
656	Investigation of zinc storage capacity of WS2 nanosheets for rechargeable aqueous Zn-ion batteries. **2022**, 894, 162391	4
655	Green Electrochemical Energy Storage Devices Based on Sustainable Manganese Dioxides.	3
654	Fe-Ion Bolted VOPO 2H O as an Aqueous Fe-Ion Battery Electrode. **2021**, e2105234	6
653	High-concentration dual-complex electrolyte enabled a neutral aqueous zinc-manganese electrolytic battery with superior stability. **2021**, 430, 133058	4
652	Quantifying and Suppressing Proton Intercalation to Enable High-Voltage Zn-Ion Batteries. **2021**, 11, 2102016	8
651	Boosting Electrolytic MnO-Zn Batteries by a Bromine Mediator. **2021**, 21, 8863-8871	6
650	Rechargeable Lithium Metal Batteries. **2019**, 147-203	
649	Preparation and Electrochemical Performance of Water-Based Solid-State Zinc Ion Batteries. **2019**, 09, 79-85	
648	DissolutionRedeposition Mechanism of the MnO2 Cathode in Aqueous Zinc-Ion Batteries.	2
647	A Superlattice-Stabilized Layered CuS Anode for High-Performance Aqueous Zinc-Ion Batteries. **2021**,	10
646	Graphdiyne Hybrid Nanowall Arrays for High-capacity Aqueous Rechargeable Zinc Ion Battery. **2021**, 37, 1301	2
645	Ruthenium-Modified Bimetallic Zeolitic-Imidazolate Framework Derivative as a High-Efficient Catalyst for Rechargeable Zinc-Air Batteries.	1
644	Stable bismuth-antimony alloy cathode with a conversion-dissolution/deposition mechanism for high-performance zinc batteries. **2021**, 51, 87-87	2
643	Amorphous Ni-Co-S nanocages assembled with nanosheet arrays as cathode for high-performance zinc ion battery. **2021**,	0
642	A Highly Reversible Zinc Anode for Rechargeable Aqueous Batteries. **2021**,	3
641	The high-performance MoO3/MXene cathodes for zinc-ion batteries based on oxygen vacancies and electrolyte engineering. **2022**, 91, 106651	10

640	Disproportionation enabling reversible MnO2/Mn2+ transformation in a mild aqueous Zn-MnO2 hybrid battery. **2022**, 430, 133064	6
639	Insight into the electrolyte strategies for aqueous zinc ion batteries. **2022**, 452, 214297	10
638	Self-assembled Cobalt-doped NiMn-layered double hydroxide (LDH)/V2CT MXene hybrids for advanced aqueous electrochemical energy storage properties. **2022**, 430, 132992	10
637	Application of expanded graphite-based materials for rechargeable batteries beyond lithium-ions. **2021**, 13, 19291-19305	5
636	Fiber Electrochemical Batteries. **2020**, 195-251	
635	High-pressure synthesis of □FeOOH from □FeOOH and its application to the water oxidation catalyst.. **2020**, 10, 44756-44767	3
634	Flexible Electron-Rich Ion Channels Enable Ultrafast and Stable Aqueous Zinc-Ion Storage. **2021**, 13, 54096-54105	0
633	Unveiling performance evolution mechanisms of MnO2 polymorphs for durable aqueous zinc-ion batteries. **2021**,	12
632	High-performance Zn battery with transition metal ions co-regulated electrolytic MnO2. **2021**,	15
631	Rechargeable aqueous Zn-based energy storage devices. **2021**,	37
630	A Self-healing Zinc Ion Battery under -20 □C. **2021**,	6
629	Perspectives in electrochemically in-situ structural reconstruction of cathode materials for multivalent-ion storage.	5
628	Research progress on the cathode and anode of aqueous zinc ion battry. **2021**, 2076, 012115	
627	Redistributing Zn ion flux by bifunctional graphitic carbon nitride nanosheets for dendrite-free zinc metal anodes.	2
626	Flexible one-dimensional Zn-based electrochemical energy storage devices: recent progress and future perspectives.	0
625	Silicon acid batteries enabled by a copper catalysed electrochemo-mechanical process. **2021**,	1
624	A new zinc-ion battery cathode with high-performance: Loofah-like lanthanum manganese perovskite. **2021**, 610, 796-796	1
623	In-situ Co-precipitated □MnO2@2-methylimidazole cathode material for high performance zinc ion batteries. **2021**, 896, 162785	1

622	In situ separator modification via CVD-derived N-doped carbon for highly reversible Zn metal anodes. 1	6
621	Washable and Stretchable Zn MnO2 Rechargeable Cell. **2022**, 12, 2103148	3
620	Pre-intercalation MnO2 Zinc-ion hybrid supercapacitor with high energy storage and Ultra-long cycle life. **2021**, 577, 151904	5
619	Defect engineering on VO cathode for long-cycling aqueous zinc metal batteries. **2021**, 12, 6878	13
618	A Long-Life Manganese Oxide Cathode Material for Aqueous Zinc Batteries with a Negatively Charged Porous Host to Promote the Back-Deposition of Dissolved Mn2+. 2106994	4
617	Progress and prospect of low-temperature zinc metal batteries. **2021**,	38
616	Revealing the Two-Dimensional Surface Diffusion Mechanism for Zinc Dendrite Formation on Zinc Anode. **2021**, e2104148	10
615	Phase engineering of Mo-V oxides molecular sieves for zinc-ion batteries. 1	2
614	Manipulating intercalation-extraction mechanisms in structurally modulated MnO2 nanowires for high-performance aqueous zinc-ion batteries. **2021**, 433, 133687	8
613	A self-optimized dual zinc/copper-electrolyte anodic interfaces by mechanical rolling toward zinc ion batteries with high capacity and long cycle life. **2021**, 23, 100897	0
612	Single-Atom Platinum Implanted on Manganese Dioxide Boosted the High-Rate Performance of Cathodes for Zinc-Ion Batteries.	0
611	High-performance reversible aqueous Zinc-Ion battery based on Zn pre-intercalation alpha-manganese dioxide nanowires/carbon nanotubes. **2021**,	2
610	Bi Doping-Enhanced Reversible-Phase Transition of MnO Raising the Cycle Capability of Aqueous Zn-Mn Batteries. **2021**, 13, 55208-55217	2
609	Recent Advances in Electrolytes for "Beyond Aqueous" Zinc-Ion Batteries. **2021**, e2106409	23
608	Synthesis and Performance Optimization of Manganese-based Cathode Materials for Zinc-Ion Batteries.	0
607	Potassium-doped hydrated manganese dioxide nanowires-carbon nanotube on graphene for high performance rechargeable zinc-ion battery. **2021**,	
606	Optimized cyclic durability of MnO2 nanosheets for zinc ion storage through synergistic effect of lithium ions pre-embedding and electrolyte additives. **2021**, 403, 139699	0
605	A non-flammable hydrous organic electrolyte for sustainable zinc batteries.	38

604	Interfacial Engineering Strategy for High-Performance Zn Metal Anodes. **2021**, 14, 6	38
603	Highly Reversible Cycling of Zn-MnO Batteries Integrated with Acid-Treated Carbon Supportive Layer.. **2022**, 6, e2101060	1
602	Dynamic interphase-mediated assembly for deep cycling metal batteries. **2021**, 7, eabl3752	14
601	Contribution of nano-design approaches to future electrochemical energy storage systems. **2021**, 19, 273-325	
600	Organic Acid Etching Strategy for Dendrite Suppression in Aqueous Zinc-Ion Batteries. 2102797	11
599	Tuning the Solvation Structure in Aqueous Zinc Batteries to Maximize Zn-Ion Intercalation and Optimize Dendrite-Free Zinc Plating. 533-540	8
598	Stable static zinc-iodine redox battery constructed with graphene quantum dots coated graphite felt. **2022**, 520, 230861	0
597	In-situ synthesis of graphdiyne on Mn3O4 nanoparticles for efficient Zn ions diffusion and storage. **2022**, 432, 134402	0
596	Chromium vanadate with unsaturated coordination sites for high-performance zinc-ion battery. **2022**, 431, 134034	4
595	Electrolyte/electrode interfacial electrochemical behaviors and optimization strategies in aqueous zinc-ion batteries. **2022**, 45, 618-646	22
594	Ion-intercalation regulation of MXene-derived hydrated vanadates for high-rate and long-life Zn-Ion batteries. **2022**, 45, 568-577	9
593	Unraveling the mechanism of non-uniform zinc deposition in rechargeable zinc-based batteries with vertical orientation. **2022**, 431, 134032	3
592	Aqueous zinc batteries using N-containing organic cathodes with Zn2+ and H+ Co-uptake. **2022**, 431, 134253	5
591	Enable commercial Zinc powders for dendrite-free Zinc anode with improved utilization rate by pristine graphene hybridization. **2022**, 45, 465-473	7
590	Highly improved thermal stability of the ceramic coating layer on the polyethylene separator via chemical crosslinking between ceramic particles and polymeric binders. **2022**, 433, 134501	1
589	Is proton a charge carrier for □MnO2 cathode in aqueous rechargeable magnesium-ion batteries?. **2022**, 68, 572-579	1
588	A new Li2Mn3O7 cathode for aqueous Zn-Ion battery with high specific capacity and long cycle life based on the realization of the reversible Li+ and H+ co-extraction/insertion. **2022**, 433, 134507	1
587	Defect-engineered Mn3O4/CNTs composites enhancing reaction kinetics for zinc-ions storage performance. **2022**, 68, 538-547	0

586	A Self-Regulated Interface toward Highly Reversible Aqueous Zinc Batteries. 2102982	20
585	A dendrite-free anode for stable aqueous rechargeable zinc-ion batteries. **2022**,	0
584	Self-Healing SeO 2 Additives Enable Zinc Metal Reversibility in Aqueous ZnSO 4 Electrolytes. 2112091	9
583	The spinel MnFe2O4 grown in biomass-derived porous carbons materials for high-performance cathode materials of aqueous zinc-ion batteries. **2022**, 904, 164002	0
582	Zn-Ion Battery. **2022**, 201-227	
581	Oxygen Vacancies of Commercial V 2 O 5 Induced by Mechanical Force to Enhance the Diffusion of Zinc Ions in Aqueous Zinc Battery.	4
580	The origin of capacity fluctuation and rescue of dead Mn-based Zn-ion batteries: a Mn-based competitive capacity evolution protocol.	15
579	Reversible Zn stripping/plating achieved by surface thin Sn layer for high-performance aqueous zinc metals batteries. **2022**,	0
578	Insight into the Cycling Behaviour of Metal Anodes, Enabled by X-ray Tomography and Mathematical Modelling.	0
577	Fabricating a Gel Electrolyte Based on Lignin-Coated Nanosilica to Enhance the Reversibility of Zinc Anodes for Rechargeable Aqueous Zn/MnO2 Batteries.	0
576	Boosting Aqueous Zn/MnO Batteries via a Synergy of Edge/Defect-Rich Cathode and Dendrite-Free Anode.. **2022**,	1
575	Issues and opportunities of manganese-based materials for enhanced Zn-ion storage performances. **2022**, 45, 103729	3
574	Coupling aqueous zinc batteries and perovskite solar cells for simultaneous energy harvest, conversion and storage.. **2022**, 13, 64	3
573	A MOF-Derivative Decorated Hierarchical Porous Host Enabling Ultrahigh Rates and Superior Long-Term Cycling of Dendrite-Free Zn Metal Anodes.. **2022**, e2110047	19
572	Hydrogen Bond Shielding Effect for High-Performance Aqueous Zinc Ion Batteries.. **2022**, e2107115	2
571	Scalable Spray Drying Production of Amorphous V O -EGO 2D Heterostructured Xerogels for High-Rate and High-Capacity Aqueous Zinc Ion Batteries.. **2022**, 18, e2105761	4
570	Aqueous Organic Zinc-Ion Hybrid Supercapacitors Prepared by 3D Vertically Aligned Graphene-Polydopamine Composite Electrode.. **2022**, 12,	1
569	Reversible Transformation of a Zinc Salt-Boosted High Areal Capacity Manganese Dioxide Cathode for Energy-Dense and Stable Aqueous Zinc Batteries.	1

568	Eutectic electrolyte based on N-methylacetamide for highly reversible zinc□odine battery.	9
567	Aluminum-copper alloy anode materials for high-energy aqueous aluminum batteries.. **2022**, 13, 576	8
566	Graphitic carbon nitride for batteries. **2022**, 367-392	
565	Hydroxyl Conducting Hydrogels Enable Low-Maintenance Commercially Sized Rechargeable Zn-MnO Batteries for Use in Solar Microgrids.. **2022**, 14,	2
564	Cathode Materials for Rechargeable Aqueous Zn Batteries. **2022**,	0
563	An aqueous zinc-ion battery working at □0□C enabled by low-concentration perchlorate-based chaotropic salt electrolyte.	6
562	Toward Hydrogen-Free and Dendrite-Free Aqueous Zinc Batteries: Formation of Zincophilic Protective Layer on Zn Anodes.. **2022**, e2104866	22
561	Mechanistic Insight into Polypyrrole Coating on V 2 O 5 Cathode for Aqueous Zinc-Ion Battery. **2022**, 9,	0
560	Insight on Organic Molecules in Aqueous Zn-Ion Batteries with an Emphasis on the Zn Anode Regulation. 2102707	29
559	Gamma(?)-MnO2/rGO Fibered Cathode Fabrication from Wet Spinning and Dip Coating Techniques for Cable-Shaped Zn-Ion Batteries. 1	2
558	Understanding and Performance of the Zinc Anode Cycling in Aqueous Zinc-Ion Batteries and a Roadmap for the Future.	2
557	Stable interphase chemistry of textured Zn anode for rechargeable aqueous batteries. **2022**,	12
556	Ca-ion Modified Vanadium Oxide Nanoribbons with Enhanced Zn-ion Storage Capability.	1
555	Modulating residual ammonium in MnO for high-rate aqueous zinc-ion batteries.. **2022**,	0
554	Highly enhanced reversibility of a Zn anode by in-situ texturing. **2022**, 47, 98-104	9
553	Design Strategies for High-Energy-Density Aqueous Zinc Batteries.	4
552	Design Strategies for High-Energy-Density Aqueous Zinc Batteries.. **2022**,	37
551	Block Copolymer-Derived Porous Carbon Fibers Enable High MnO 2 Loading and Fast Charging in Aqueous Zinc-Ion Battery.	0

550	Tuning electrolyte solvation structures to enable stable aqueous Al/MnO2 battery. **2022**, 47, 113-121	3
549	CNT@MnO 2 composite ink toward a flexible 3D printed micro-zinc-ion battery.	10
548	Boosting Zn Diffusion via Tunnel-Type Hydrogen Vanadium Bronze for High-Performance Zinc Ion Batteries.. **2022**,	0
547	Alkali ions pre-intercalation of δ-MnO2 nanosheets for high-capacity and stable Zn-ion battery. **2022**, 24, 100934	13
546	Rechargeable zinc-ion batteries with manganese dioxide cathode: How critical is choice of manganese dioxide polymorphs in aqueous solutions?. **2022**, 523, 231023	1
545	A highly stable 1.3 V organic cathode for aqueous zinc batteries designed in-situ by solid-state electrooxidation. **2022**, 46, 129-137	0
544	Improving performance of zinc-manganese battery via efficient deposition/dissolution chemistry. **2022**, 46, 165-174	1
543	A low-cost and non-corrosive electropolishing strategy for long-life zinc metal anode in rechargeable aqueous battery. **2022**, 46, 223-232	2
542	Zn anode sustaining high rate and high loading in organic electrolyte for rechargeable batteries. **2022**, 46, 523-534	3
541	Manganese hexacyanoferrate anchoring MnO2 with enhanced stability for aqueous zinc-ion batteries. **2022**, 903, 163833	2
540	Ultrafast, long-life, high-loading, and wide-temperature zinc ion supercapacitors. **2022**, 46, 233-242	4
539	A multifunctional protective layer with biomimetic ionic channel suppressing dendrite and side reactions on zinc metal anodes.. **2022**, 613, 136-145	1
538	Engineering the interplanar spacing of K-birnessite for ultra-long cycle Zn-ion battery through hydrothermal potassium insertion strategy. **2022**, 435, 134754	2
537	Dendrite-Free Zinc Deposition Induced by Zinc Phytate Coating for Long-life Aqueous Zinc Batteries.	0
536	New Insights into Phase-Mechanism Relationship of Mg MnO Nanowires in Aqueous Zinc-Ion Batteries.. **2022**, e2107743	2
535	All-Climate Stretchable Dendrite-Free Zn-Ion Hybrid Supercapacitors Enabled by Hydrogel Electrolyte Engineering.	0
534	Synthesis of Nitrogen-Doped KMn O with Oxygen Vacancy for Stable Zinc-Ion Batteries.. **2022**, e2106067	9
533	Aqueous Zn-ion batteries: Cathode Materials and Analysis. **2022**, 100954	1

532	Strategies for Stabilization of Zn Anodes for Aqueous Zn-Based Batteries: A Mini Review.. **2021**, 9, 822624	1
531	Re-Understanding the Reaction Mechanism of Aqueous Zn-Mn Battery in Sulfate Electrolytes: Role of the Zinc Sulfate Hydroxide.. **2022**, e2109092	11
530	Size-Dependent Reaction Mechanism of MnO2 Particles as Cathodes in Aqueous Zinc-Ion Batteries. **2022**, 2022, 1-12	4
529	Aqueous Multivalent Charge Storage Mechanism in Aromatic Diamine-Based Organic Electrodes.. **2022**,	1
528	Highly Reversible and Anticorrosive Zn Anode Enabled by a Ag Nanowires Layer.. **2022**,	3
527	Charge-Enriched Strategy Based on MXene-Based PolypyrroleLayers Toward Dendrite-Free Zinc Metal Anodes. 2103979	14
526	Few-layer bismuth selenide cathode for low-temperature quasi-solid-state aqueous zinc metal batteries.. **2022**, 13, 752	2
525	Hydrogen Bond-Functionalized Massive Solvation Modules Stabilizing Bilateral Interfaces. 2112609	7
524	X-ray imaging and micro-spectroscopy unravel the role of zincate and zinc oxide in the cycling of zinc anodes in mildly acidic aqueous electrolytes. **2022**, 524, 231063	0
523	Electrolyte Salts and Additives Regulation Enables High Performance Aqueous Zinc Ion Batteries: A Mini Review. **2021**, e2104640	9
522	High-Performance Aqueous Zinc-Ion Battery Based on an Al Mn O Cathode: A Design Strategy from Defect Engineering and Atomic Composition Tuning. **2021**, e2105970	1
521	Modulated bonding interaction in propanediol electrolytes toward stable aqueous zinc-ion batteries. **2022**, 65, 1156	6
520	Mg ion pre-intercalated MnO nanospheres as high-performance cathode materials for aqueous Zn-ion batteries.. **2022**,	2
519	Enhanced Cathode Integrity for Zinc-Manganese Oxide Fiber Batteries by a Durable Protective Layer.	1
518	A two-electron transfer mechanism of the Zn-doped MnO2 cathode toward aqueous Zn-ion batteries with ultrahigh capacity. **2022**, 10, 6762-6771	4
517	An anticorrosive zinc metal anode with ultra-long cycle life over one year.	15
516	Ultrathin Carbon Coated Preferentially Orientated V10o24 12h2o Nanosheets with Large Interplanar Spacing Toward Superior Zinc Storage.	
515	Historical development and novel concepts upon electrolytes for aqueous rechargeable batteries.	9

514	Navigating fast and uniform zinc deposition via a versatile metal-organic complex interphase.	15
513	Organics Intercalation into Layered Structures Enables Superior Interface Compatibility and Fast Charge Diffusion for Dendrite-Free Zn Anodes.	13
512	Initiating a high-temperature zinc ion battery through a triazolium-based ionic liquid.. **2022**, 12, 8394-8403	1
511	Simultaneous reversible tuning of H and Zn coinsertion in MnO cathode for high-capacity aqueous Zn-ion battery.. **2022**,	1
510	Pseudocapacitive Storage in Cathode Materials of Aqueous Zinc Ion Batteries toward High Power and Energy Density.	4
509	A Lewis acidity adjustable organic ammonium cation derived robust protecting shield for stable aqueous zinc-ion batteries by inhibiting the tip effect. **2022**, 6, 901-907	0
508	A Biomimetic Polymer-Based Composite Coating Inhibits Zinc Dendrite Growth for High-Performance Zinc-Ion Batteries.. **2022**,	1
507	Electrolyte Engineering Enables High Performance Zinc-Ion Batteries.. **2022**, e2107033	17
506	Engineering Particle Size for Multivalent Ion Intercalation: Implications for Ion Battery Systems.	1
505	Electrospun V2O3@Carbon Nanofibers as a Flexible and Binder-Free Cathode for Highly Stable Aqueous Zn-Ion Full Batteries. **2022**, 5, 3525-3535	2
504	Research Progresses and Challenges of Flexible Zinc Battery.. **2022**, 10, 827563	0
503	In Situ Self-Anchored Growth of MnO2 Nanosheet Arrays in Polyaniline-Derived Carbon Nanotubes with Enhanced Stability for Zn‖MnO2 Batteries. **2022**, 5, 3854-3862	1
502	Driving Zn-MnO2 grid-scale batteries: A roadmap to cost-effective energy storage. **2022**, 9, 13-18	1
501	The Emergence of Aqueous Ammonium-Ion Batteries. **2022**, 134,	
500	The emerging aqueous ammonium-ion batteries.. **2021**,	11
499	Enabling Reversible MnO/Mn Transformation by Al Addition for Aqueous Zn-MnO Hybrid Batteries.. **2022**,	2
498	An efficient and versatile biopolishing strategy to construct high performance zinc anode. 1	
497	Ca/Ni Codoping Enables the Integration of High-Rate and High-Capacity Zn-Ion Storage Performances for Layered Hydrated Vanadate. **2022**, 61, 4212-4221	0

496	Prussian-blue materials: Revealing new opportunities for rechargeable batteries.	3
495	High Energy and Stable Subfreezing Aqueous Zn-MnO Batteries with Selective and Pseudocapacitive Zn-ion insertion in MnO.. **2022**, e2201510	7
494	A Comprehensive Understanding of Interlayer Engineering in Layered Manganese and Vanadium Cathodes for Aqueous Zn-ion Batteries.. **2022**,	3
493	Highly Crystalline Flower-Like Covalent-Organic Frameworks Enable Highly Stable Zinc Metal Anodes. **2022**, 5, 3715-3723	2
492	Advances of Metal Oxide Composite Cathodes for Aqueous Zinc-Ion Batteries. 2100220	1
491	High-surface-area titanium nitride nanosheets as zinc anode coating for dendrite-free rechargeable aqueous batteries. 1	1
490	Comprehensive review on zinc-ion battery anode: Challenges and strategies.	11
489	Manganese-based materials as cathode for rechargeable aqueous zinc-ion batteries. 20210014	1
488	A free-sealed high-voltage aqueous polymeric sodium battery enabling operation at 25 °C. **2022**, 3, 100805	3
487	Roadmap for flexible solid-state aqueous batteries: From materials engineering and architectures design to mechanical characterizations. **2022**, 148, 100671	9
486	Simultaneous regulation of cations and anions in an electrolyte for high-capacity, high-stability aqueous zinc–vanadium batteries. **2022**,	21
485	Paraffin Based Cathode–Electrolyte Interface for Highly Reversible Aqueous Zinc-Ion Battery.	4
484	Recent progress, mechanisms, and perspectives for crystal and interface chemistry applying to the Zn metal anodes in aqueous zinc-ion batteries.	5
483	Unveiling the Synergistic Effect of Ferroelectric Polarization and Domain Configuration for Reversible Zinc Metal Anodes.. **2022**, e2105980	3
482	Additive-Free Ultrastable Hydrated Vanadium Oxide Sol/Carbon Nanotube Ink for Durable and High-Power Aqueous Zinc-Ion Battery. 2200174	0
481	Facile electrode additive stabilizes structure of electrolytic MnO2 for mild aqueous rechargeable zinc-ion battery. **2022**, 528, 231194	0
480	Challenges and Perspectives of Organic Multivalent Metal-ion Batteries.. **2022**, e2200662	2
479	High-Energy Batteries: Beyond Lithium-Ion and Their Long Road to Commercialisation.. **2022**, 14, 94	6

478	Ethylene Glycol as an Antifreeze Additive and Corrosion Inhibitor for Aqueous Zinc-Ion Batteries.	1
477	Achieving high-rate and durable aqueous rechargeable Zn-Ion batteries by enhancing the successive electrochemical conversion reactions.. **2022**, 620, 127-134	0
476	Boosting the Cycling Stability of Aqueous Zinc-Ion Batteries through Nanofibrous Coating of a Bead-like MnO Cathode.. **2022**,	0
475	MnO2/CNTs with cross-linked reticular structure: Towards ultralong life zinc-ion batteries. **2022**, 109024	0
474	Promoting Proton Migration Kinetics by Ni 2+ Regulating Enables Improved Aqueous Zn-MnO 2 Batteries.	3
473	Zincophilic 3D ZnOHF Nanowire Arrays with Ordered and Continuous Zn2+ Ion Modulation Layer Enable Long-term Stable Zn Metal Anodes. **2022**,	0
472	An aqueous rechargeable zinc-ion battery on basis of an organic pigment. 1	1
471	Unexpected Role of the Interlayer Dead Zn 2+ In Strengthening the Nanostructures of VS 2 Cathodes for High-Performance Aqueous Zn-Ion Storage. 2104001	9
470	Electrochemical performance and behavior mechanism for Zn/LiFePO4 battery in a slightly acid aqueous electrolyte.. **2022**,	2
469	Float-charging protocol in rechargeable Zn MnO2 batteries: unraveling the key role of Mn2+ additives in preventing spontaneous pH changes. **2022**, 107271	2
468	Aqueous zinc batteries: Design principles toward organic cathodes for grid applications.. **2022**, 25, 104204	3
467	A high-performance silver-doped manganese oxide nanowire cathode based on combination displacement/intercalation reaction and deposition-dissolution mechanism. **2022**, 164944	
466	Novel Polymer/Barium Intercalated Vanadium Pentoxide with Expanded Interlayer Spacing as High-Rate and Durable Cathode for Aqueous Zinc-Ion Batteries.. **2022**,	0
465	Amorphous H0.82MoO3.26 Cathodes Based Long Cyclelife Fiber-Shaped Zn-ion Battery for Wearable Sensors. **2022**,	2
464	Ultra-stable and deeply rechargeable zinc metal anode enabled by a multifunctional protective layer. **2022**, 47, 602-610	1
463	Unveiling unique steric effect of threonine additive for highly reversible Zn anode. **2022**, 97, 107145	4
462	Fast crystal transformation of nano MnO2 induced by mild interfacial oxidation on hierarchical carbon networks for assembling efficient fibrous MnO2 electrode. **2022**, 907, 164520	1
461	Tuning structural and electronic properties of recycled vanadium oxides via doping trace impurity for sustainable energy storage. **2022**, 438, 135495	

460	Graphdiyne oxide for aqueous zinc ion full battery with ultra-long cycling stability. **2022**, 44, 101463	2
459	Layered MnO2 nanodots as high-rate and stable cathode materials for aqueous zinc-ion storage. **2022**, 48, 335-343	4
458	Commercial carbon cloth: An emerging substrate for practical lithium metal batteries. **2022**, 48, 172-190	7
457	Flame normalizing-induced robust and oriented metallic layer for stable Zn anode. **2022**, 437, 135246	1
456	A novel Mn2+-additive free Zn/MnO2 battery with 2.4 V voltage window and enhanced stability. **2022**, 909, 164835	
455	Aerogel-structured MnO2 cathode assembled by defect-rich ultrathin nanosheets for zinc-ion batteries. **2022**, 441, 136008	3
454	Unsaturated Ni/V centers and short Ni V/Ni distances in nickel vanadate for high-performance zinc-ion battery. **2022**, 441, 136007	1
453	Interface engineering via in-situ electrochemical induced ZnSe for a stabilized zinc metal anode. **2022**, 442, 136247	5
452	Microgroove-patterned Zn metal anode enables ultra-stable and low-overpotential Zn deposition for long-cycling aqueous batteries. **2022**, 442, 136231	2
451	Discharging Behavior of Hollandite MnO in a Hydrated Zinc-Ion Battery.. **2021**, 13, 59937-59949	2
450	In Situ Electrochemical Transformation toward Structure Optimized VEG@MXene Cathode for Enhanced Zinc-Ion Storage.. **2021**, e2105325	0
449	Electrochemically Activated Vanadium Oxide Cathode for Advanced Aqueous Zn-Ion Batteries.. **2021**,	14
448	Cathode Materials Challenge Varied with Different Electrolytes in Zinc Batteries. **2022**, 4, 190-204	4
447	Ion Sieve: Tailoring Zn Desolvation Kinetics and Flux toward Dendrite-Free Metallic Zinc Anodes.. **2021**,	15
446	Redox Catalysis Promoted Activation of Sulfur Redox Chemistry for Energy-Dense Flexible Solid-State Zn-S Battery. **2021**,	5
445	Recent Developments and Challenges of Vanadium Oxides (V O) Cathodes for Aqueous Zinc-Ion Batteries.. **2021**, e202100275	4
444	Frontiers and Structural Engineering for Building Flexible Zinc-Air Batteries.. **2021**, e2103954	6
443	Reversible aqueous zinc-ion battery based on ferric vanadate cathode. **2021**,	1

442	Aqueous Zn-based rechargeable batteries: Recent progress and future perspectives.	3
441	Nanocomposite Polymer Electrolytes for Zinc and Magnesium Batteries: From Synthetic to Biopolymers.. **2021**, 13,	0
440	Polypyrrole-Coated KMn[Fe(CN)] Stabilizing Its Interfaces and Inhibiting Irreversible Phase Transition during the Zinc Storage Process in Aqueous Batteries.. **2021**,	1
439	Aging and Charge Compensation Effects of the Rechargeable Aqueous Zinc/Copper Hexacyanoferrate Battery Elucidated Using In Situ X-ray Techniques. **2021**,	1
438	-V2O5 Polymorph: A Genuine Zn Intercalation Material for Nonaqueous Rechargeable Batteries. **2022**, 34, 1203-1212	2
437	The back-deposition of dissolved Mn to MnO cathodes for stable cycling in aqueous zinc batteries.. **2022**,	0
436	Metal-organic-framework-derived vanadium(iii) phosphate nanoaggregates for zinc-ion battery cathodes with long-term cycle stability.	3
435	Realizing high-rate aqueous zinc-ion battery using organic cathode material containing electron withdrawing group.	0
434	Polyiodide Confinement by Starch Enables Shuttle-Free Zn-Iodine Batteries.. **2022**, e2201716	7
433	Toward dendrite-free and anti-corrosion Zn anodes by regulating a bismuth-based energizer. **2022**,	9
432	Elastomer-Alginate Interface for High-Power and High-Energy Zn Metal Anodes. 2200318	8
431	A High-Voltage Aqueous Rechargeable Zinc-Polyaniline Hybrid Battery Achieved by Decoupling Alkali-Acid electrolyte. **2022**, 136478	2
430	Zwitterionic Bifunctional Layer for Reversible Zn Anode. 1719-1727	7
429	Highly Reversible Zinc Anode Enabled by a Cation-Exchange Coating with Zn-Ion Selective Channels.. **2022**,	4
428	An analysis of the electrochemical mechanism of manganese oxides in aqueous zinc batteries. **2022**, 8, 924-946	7
427	Electrochemical Activation of Oxygen Vacancy-Rich Nitrogen-Doped Manganese Carbonate Microspheres for High-Performance Aqueous Zinc-Ion Batteries.. **2022**,	0
426	Facile hydrothermal synthesis of Au-Mn3O4 decorated graphene oxide nanocomposites for solid-state supercapacitor. **2022**, 50, 104615	1
425	Polyvinyl alcohol coating induced preferred crystallographic orientation in aqueous zinc battery anodes. **2022**, 98, 107269	8

424	Inexpensive and eco-friendly nanostructured birnessite-type MnO2: A design strategy from oxygen defect engineering and K+ pre-intercalation. **2022**, 98, 107274	1
423	Video_1.MP4. **2020**,	
422	Table_1.DOC. **2020**,	
421	Table_1.docx. **2020**,	
420	Data_Sheet_1.DOCX. **2020**,	
419	Primary Seawater Batteries. **2022**, 37-90	
418	MOF-based nanomaterials for zinc-based battery cathodes. **2022**, 315-340	
417	Stabilization of VOPO2HO voltage and capacity retention in aqueous zinc batteries with a hydrogen bond regulator.. **2022**,	0
416	The Advent of Membrane-less Zinc-Anode Aqueous Batteries with Lithium-like Voltage.	
415	A Hydrophobic and Fluorophilic Coating Layer for Stable and Reversible Aqueous Zinc Metal Anodes. **2022**, 136607	1
414	Stabilizing zinc anode for high-performance aqueous zinc ion batteries via employing a novel inositol additive. **2022**, 165231	1
413	Pulsed Electro-Synthesized Tunable Crystallite Sizes ZnMn2O4/Mn2O3 Nanocomposite as High-Performance Cathode Material for Aqueous Zinc-Ion Batteries. **2022**, 165249	0
412	Integration of all-printed zinc ion microbattery and glucose sensor toward onsite quick detections.	2
411	Production of fast-charge Zn-based aqueous batteries via interfacial adsorption of ion-oligomer complexes.. **2022**, 13, 2283	6
410	Ionic Liquid Electrolytes for Next-generation Electrochemical Energy Devices. **2022**, 100075	5
409	Construction of Bio-inspired Film with Engineered Hydrophobicity to Boost Interfacial Reaction Kinetics of Aqueous Zinc-Ion Batteries.. **2022**, e2201732	3
408	Laser-Induced Ni Foil-Supported NiO@Ni(OH)2 Hierarchical Structures as Advanced Cathodes for Ultrahigh Performance Nickel–Zinc Batteries.	0
407	Plasma-induced MnO2 based aqueous zinc-ion batteries and their dissolution-deposition mechanism. **2022**,	1

406	Improving the Performance of Aqueous Zinc-ion Batteries by Inhibiting Zinc Dendrite Growth: Recent Progress.. **2022**,	3
405	Achieving high-performance aqueous Zn-ion hybrid supercapacitors by utilizing zinc-based MOF-derived N-doped carbon. 1	0
404	Enriching Oxygen Vacancy Defects via Ag-O-Mn Bonds for Enhanced Diffusion Kinetics of MnO in Zinc-Ion Batteries.. **2022**,	0
403	Rational-design heteroatom-doped cathode and ion modulation layer modified Zn anode for ultrafast zinc-ion hybrid capacitors with simultaneous high power and energy densities. **2022**, 536, 231484	1
402	Potassium-doped hydrated manganese dioxide nanowires-carbon nanotubes on graphene for high-performance rechargeable zinc-ion batteries. **2022**, 913, 165278	1
401	Borax-crosslinked hydrogel electrolyte membranes for quasi-solid state aqueous energy storage devices. **2022**, 655, 120606	0
400	Conductive polymer intercalated vanadium oxide on carbon cloth for fast ammonium-ion storage in supercapacitor applications. **2022**, 445, 136747	3
399	Rationally designed In@Zn@In trilayer structure on 3D porous Cu towards high-performance Zn-Ion batteries. **2022**, 445, 136799	0
398	Biomass-based diatomite coating to prepare a high-stability zinc anode for rechargeable aqueous zinc-ion batteries. **2022**, 648, 129171	1
397	Achieving Ultra-High Rate Planar and Dendrite-Free Zinc Electroplating for Aqueous Zinc Battery Anodes.. **2022**, e2202552	8
396	An in-depth mechanistic insight into the redox reaction and degradation of aqueous Zn-MnO2 batteries. **2022**,	
395	Recycling of zinc-carbon batteries into MnO/ZnO/C: a smart strategy to fabricate sustainable cathode for rechargeable zinc ion batteries.. **2022**,	0
394	AVO with Binary Phases as High-Performance Cathode Materials for Zinc-Ion Batteries: Effect of the Pre-Intercalated Cations A and Reversible Transformation of Coordination Polyhedra.. **2022**,	0
393	Enamel-like Layer of Nanohydroxyapatite Stabilizes Zn Metal Anodes by Ion Exchange Adsorption and Electrolyte pH Regulation.. **2022**,	4
392	Manganese-based layered oxides for electrochemical energy storage: a review of degradation mechanisms and engineering strategies at the atomic level.	0
391	Highly reversible Zn anode with a practical areal capacity enabled by a sustainable electrolyte and superacid interfacial chemistry. **2022**, 6, 1103-1120	16
390	Designing of Birnessite/Polyaniline Composite for Improving Cyclability as Cathode Material for Zinc Ion Batteries Based on Insights into the Reaction Mechanism. **2022**, 7,	
389	One-pot Preparation of La(OH)3 Nanoparticles and NiMn LDH Nanosheets With Mutual Support Structure as Cathode for High-performance Aqueous Zinc-ion Batteries. **2022**, 165547	1

388	Boosted H+ Intercalation Enables Ultrahigh Rate Performance of the □MnO2 Cathode for Aqueous Zinc Batteries.	3
387	Hydrated ammonium manganese phosphates by electrochemically induced manganese-defect as cathode material for aqueous zinc ion batteries. **2022**,	1
386	Realizing highly reversible and deeply rechargeable Zn anode by porous zeolite layer. **2022**, 540, 231659	0
385	CTAB controlled electrochemical deposition of manganese dioxide with enhanced performance in aqueous Zn-ion battery. **2022**, 282, 115777	0
384	Recent Advances of Carbon Materials in Anodes for Aqueous Zinc Ion Batteries.	1
383	Zn-modified zeolites host for dendrite-free zinc metal anodes.	1
382	Design Concepts of Transition Metal Dichalcogenides for High-Performance Aqueous Zn-Ion Storage.	1
381	Synergistic Optimization Strategy Involving Sandwich-like MnO2@rGO and Laponite-Modified PAM for High-Performance Zinc-Ion Batteries and Zinc Dendrite Suppression.	1
380	Interface Regulated MnO2/Mn2+ Redox Chemistry in Aqueous Zn ion Batteries. **2022**, 137205	0
379	Recycling spent lead acid batteries into aqueous zinc-ion battery material with ultra-flat voltage platforms. **2022**,	0
378	Optimization of Electrolytes for High-Performance Aqueous Aluminum-Ion Batteries.	3
377	Stimulus-responsive polymers for safe batteries and smart electronics.	1
376	Energetic Aqueous Batteries. 2201074	6
375	An Air-Rechargeable Zn/Organic Battery with Proton Storage.	6
374	Unraveling a cathode/anode compatible electrolyte for high-performance aqueous rechargeable zinc batteries. **2022**, 50, 464-472	0
373	Metal□rganic framework for dendrite-free anodes in aqueous rechargeable zinc batteries. **2022**, 425, 140648	2
372	High-performance and dendrite-free Zn/KZnHCF batteries boosted by aqueous electrolyte mixed with ethanol. **2022**, 918, 165619	1
371	In situ growth of S-doped ZnO thin film enabling dendrite-free zinc anode for high-performance aqueous zinc-ion batteries. **2022**, 918, 165486	1

370	A Binder-Free Amorphous Manganese Dioxide for Aqueous Zinc-Ion Battery. **2022**, 10, 13-18	0
369	Towards the practical application of Zn metal anodes for mild aqueous rechargeable Zn batteries.	6
368	A piece of common cellulose paper but with outstanding functions for advanced aqueous zinc-ion batteries. **2022**, 101076	3
367	Concentrated electrolytes enabling stable aqueous ammonium-ion batteries. 2201877	1
366	Insight on Cathodes Chemistry for Aqueous Zinc-Ion Batteries: From Reaction Mechanisms, Structural Engineering, and Modification Strategies. 2201011	3
365	Regulation of Zinc Interface by Maltitol for Long-Life Dendrite-free Aqueous Zinc Ion Batteries.	0
364	A high-voltage and stable zinc-air battery enabled by dual-hydrophobic-induced proton shuttle shielding. **2022**,	1
363	Beyond Li-ion Batteries for Grid-Scale Energy Storage. **2022**,	0
362	Highly stable aqueous zinc-ion batteries enabled by suppressing the dendrite and by-product formation in multifunctional Al3+ electrolyte additive.	1
361	Stabilizing Zinc Anodes by a Cotton Towel Separator for Aqueous Zinc-Ion Batteries.	4
360	Biomolecular Regulation of Zinc Deposition to Achieve Ultra-Long Life and High-Rate Zn Metal Anodes. 2202509	1
359	Conducting Polymer Nanomaterials for Electrochemical Energy Storage and Electrocatalysis. **2022**, 337-398	
358	Achieving Highly Reversible Zinc Anodes via N, N-Dimethylacetamide Enabled Zn-Ion Solvation Regulation. 2202363	4
357	Methods for Rational Design of Advanced Zn-Based Batteries. 2200560	5
356	Surface-Alloyed Nanoporous Zinc as Reversible and Stable Anodes for High-Performance Aqueous Zinc-Ion Battery. **2022**, 14,	7
355	Ionic Liquid-Softened Polymer Electrolyte for Anti-Drying Flexible Zinc Ion Batteries. **2022**, 14, 27287-27293	0
354	What happens to MnO 2 when it comes in contact with Zn 2+ ? An electrochemical study in aid of Zn/MnO 2 -based rechargeable batteries.	0
353	Decoupling the Dynamics of Zinc Hydroxide Sulfate Precipitation/Dissolution in Aqueous Zn/MnO 2 Batteries by Operando Optical Microscopy: A Missing Piece of the Mechanistic Puzzle. 2200722	3

352	Recent progress of artificial interfacial layers in aqueous Zn metal batteries. **2022**, 4, 100076	3
351	Recent advances in MOFs/MOF derived nanomaterials toward high-efficiency aqueous zinc ion batteries. **2022**, 468, 214642	5
350	A dendrite suppression coating formulated via electrophoretic deposition using Bi-functional surfactants for Zn-ion batteries. **2022**, 918, 165790	1
349	Laser-radiated tellurium vacancies enable high-performance telluride molybdenum anode for aqueous zinc-ion batteries. **2022**, 51, 29-37	2
348	MoS2 with high 1T phase content enables fast reversible zinc-ion storage via pseudocapacitance. **2022**, 448, 137688	2
347	Electrochemical Stability of ZnMn2O4: Understanding Zn-Ion Rechargeable Battery Capacity and Degradation. **2022**, 126, 10957-10967	0
346	A Sub-Square-Millimeter Microbattery with Milliampere-Hour-Level Footprint Capacity. 2200714	6
345	Theory-Driven Design of Cationic Accelerator for High-Performance Electrolytic MnO 2 -Zn Batteries. 2203249	5
344	Rechargeable Manganese dioxide-Zinc Batteries: A Review Focusing on Challenges and Optimization Strategies under Alkaline and Mild Acidic Electrolyte Mediums.	0
343	Amorphous nickel borate nanosheets as cathode material with high capacity and better cycling performance for zinc ion battery. **2022**,	
342	Efficient high-rate aqueous alkaline battery with dual-ion intercalation chemistry enabled by asymmetric electrode polarization. **2022**, 100981	
341	Two-dimensional materials for aqueous zinc-ion batteries. **2022**, 9, 042001	1
340	Constructing accommodational space in MnO2 cathode for Mn2+ transport and electrodeposition for aqueous zinc-ion batteries.	
339	Grid-Grade Rechargeable Batterie and Predication in Future. 3, 63-72	
338	Pathways towards High-Performance Aqueous Zinc-Organic Batteries.	2
337	Manipulating Alloying Reaction to Achieve the Stable and Dendrite-free Zinc Metal Anodes. **2022**, 138048	2
336	Surface Transformation Enables Dendrite-free Zinc Metal Anode in Nonaqueous Electrolyte. 2203710	3
335	A freestanding hydroxylated carbon nanotube film boosting the stability of Zn metal anodes. **2022**, 103939	0

334	Synergic Effect of Dendrite-Free and Zinc Gating in Lignin-Containing Cellulose Nanofibers-MXene Layer Enabling Long-Cycle-Life Zinc Metal Batteries. 2202380	3
333	A Non-Alkaline Electrolyte for Electrically Rechargeable Zinc-Air Batteries with Long-term Operation Stability in Ambient Air.	0
332	A Novel High-Performance Cathode for Rechargeable Aqueous Zinc-ion Battery: Transformed ZnMnO3 Nanosheets from Rhodochrosite MnCO3 Cubes.	0
331	Facile in situ synthesis of PEDOT conductor interface at the surface of MnO2 cathodes for enhanced aqueous zinc-ion batteries. **2022**, 102222	2
330	Oxygen-Deficient HNaV6O16·4H2O@Reduced Graphene Oxide as a Cathode for Aqueous Rechargeable Zinc-Ion Batteries.	0
329	Super Flexible Cathode Material with 3D Cross-Linking System Based on Polyvinyl Alcohol Hydrogel for Boosting Aqueous Zinc Ion Batteries.	
328	Zinc-Ion Hybrid Supercapacitors Employing Acetate-Based Water-in-Salt Electrolytes. 2201563	4
327	Selective Ion Transport in Assembled Graphene Oxide-Modified Separator and the Novel Intra-Series Architecture for Improved Aqueous Batteries. **2022**, 138061	0
326	A Non-Alkaline Electrolyte for Electrically Rechargeable Zinc-Air Batteries with Long-term Operation Stability in Ambient Air.	0
325	Na+ pre-intercalated Na0.11MnO2 on three-dimensional graphene as cathode for aqueous zinc ion hybrid supercapacitor with high energy density. **2022**, 198, 46-56	2
324	Regulating proton distribution by ion exchange resin to achieve long lifespan aqueous Zn-MnO2 battery. **2022**, 51, 599-609	2
323	Electrolyte additive engineering for aqueous Zn ion batteries. **2022**, 51, 733-755	15
322	Highly active crystal planes-oriented texture for reversible high-performance Zn metal batteries. **2022**, 51, 550-558	1
321	A static three-chamber zinc-polyiodide redox battery for decoupling of active anions and cations. **2022**, 54, 105258	
320	Scalable fabrication of NiCoMnO4 yolk-shell microspheres with gradient oxygen vacancies for high-performance aqueous zinc ion batteries. **2022**, 626, 314-323	1
319	Chitosan modified filter paper separators with specific ion adsorption to inhibit side reactions and induce uniform Zn deposition for aqueous Zn batteries. **2022**, 450, 137902	2
318	Integrated pyrazine-based porous aromatic frameworks/carbon nanotube composite as cathode materials for aqueous zinc ion batteries. **2022**, 450, 138051	0
317	Copper activated near-full two-electron Mn4+/Mn2+ redox for mild aqueous Zn/MnO2 battery. **2022**, 450, 137923	0

316	Designing a Bimodal BaTiO3 Artificial Layer to Boost the Dielectric Effect toward Highly Reversible Dendrite-Free Zn Metal Anodes.	0
315	Critical factors to inhibit water-splitting side reaction in carbon-based electrode materials for zinc metal anodes.	1
314	A hydrophobic layer of amino acid enabling dendrite-free Zn anodes for aqueous zinc-ion batteries.	4
313	Monodispersed flower-like MXene@VO2 clusters for aqueous zinc ion batteries with superior rate performance. **2022**, 14, 11655-11663	1
312	Defect Engineering via Copper Doping on Oxygen-Deficient Manganese Oxide for Durable Aqueous Zinc-Ion Battery. 2200502	1
311	Bidirectional Interface Protection of a Concentrated Electrolyte, Enabling High-Voltage and Long-Life Aqueous Zn Hybrid-Ion Batteries. **2022**, 14, 35864-35872	1
310	The Synthesis of Manganese Hydroxide Nanowire Arrays for a High-Performance Zinc-Ion Battery. **2022**, 12, 2514	0
309	Tartaric acid as a novel additive for approaching high-performance capacity retention in zinc-ion battery. **2022**, 12,	0
308	Toward practical aqueous zinc-ion batteries for electrochemical energy storage. **2022**, 6, 1733-1738	12
307	Dendrite-free and stable Zn metal anodes with ZnO protective layer.	
306	An Ultrahigh Rate and Stable Zinc Anode by Facet-Matching-Induced Dendrite Regulation. 2203835	6
305	A Volume Self-Regulation MoS2 Superstructure Cathode for Stable and High Mass-Loaded Zn-Ion Storage. **2022**, 16, 12095-12106	1
304	Balanced interfacial ion concentration and migration steric hindrance promoting high-efficiency deposition/dissolution battery chemistry. 2204681	3
303	Understanding intercalation chemistry for sustainable aqueous zinc□hanganese dioxide batteries.	6
302	Charge carrier unveiled.	
301	Cathodic Zn underpotential deposition: an evitable degradation mechanism in aqueous zinc-ion batteries. **2022**,	7
300	Electrochemical Property of Solid-State MnO2-Zn Battery with the Combination of Improved Cathode and Solid Electrolyte. **2022**, 169, 080527	0
299	Vat Orange 7 as an Organic Electrode with Ultrafast Hydronium-ion Storage and Super-long Life for Rechargeable Aqueous Zinc Batteries. **2022**, 138776	1

298	Solvation Structures in Aqueous Metal-Ion Batteries. 2202068	3
297	An Anti-Aromatic Covalent Organic Framework Cathode with Dual-Redox Centers for Rechargeable Aqueous Zinc Batteries.	1
296	Stability Design Principles of Manganese-Based Oxides in Acid.	1
295	Synergetic Modulation of Ion Flux and Water Activity in a Single Zn2+ Conductor Hydrogel Electrolyte for Ultrastable Aqueous Zinc-Ion Batteries.	1
294	Aqueous OH □/H + Dual-Ion Zn-Based Batteries.	
293	Copper Hexacyanoferrate Solid-State Electrolyte Protection Layer on Zn Metal Anode for High-Performance Aqueous Zinc-Ion Batteries. 2203061	2
292	Activated Proton Storage in Molybdenum Selenide through Electronegativity Regulation. 2205874	0
291	Calcium-organic frameworks cathode for high-stable aqueous Zn/organic batteries. **2022**, 107760	
290	Oxygen-Deficient □MnO2 Nanotube/Graphene/N, P Codoped Porous Carbon Composite Cathode To Achieve High-Performing Zinc-Ion Batteries. **2022**, 14, 36668-36678	1
289	Construction of hollow mesoporous ZnMn2O4/C microspheres with carbon nanotubes embedded in shells for high-performance aqueous zinc ions batteries.	1
288	Salt Bridge-intermediated Three Phase Decoupling Electrolytes for High Voltage Electrolytic Aqueous Zinc-Manganese Dioxides Battery. **2022**, 138775	
287	Reducing Zn-ion concentration gradient by SO42--immobilized interface coating for dendrite-free Zn anode. **2022**, 138772	0
286	Conversion electrochemistry of copper selenides for robust and energetic aqueous batteries.	0
285	A Multifunctional Anti-Proton Electrolyte for High-Rate and Super-Stable Aqueous Zn-Vanadium Oxide Battery. **2022**, 14,	3
284	Unlocking Layered Double Hydroxide as a High-Performance Cathode Material for Aqueous Zinc-Ion Batteries. 2204320	3
283	Tug-of-War in the Selection of Materials for Battery Technologies. **2022**, 8, 105	0
282	Interfacial engineering of hydrated vanadate to promote the fast and highly reversible H+/Zn2+ co-insertion processes for high-performance aqueous rechargeable batteries. **2022**, 52, 473-484	0
281	The intercalation cathode materials of heterostructure MnS/MnO with dual ions defect embedded in N-doped carbon fibers for aqueous zinc ion batteries. **2022**, 52, 180-188	2

280	Intrinsic structural optimization of zinc anode with uniform second phase for stable zinc metal batteries. **2022**, 52, 161-168	3
279	Synergistic co-reaction of Zn2+ and H+ with carbonyl groups towards stable aqueous zinc–organic batteries. **2022**, 52, 386-394	1
278	The secondary aqueous zinc-manganese battery. **2022**, 55, 105397	1
277	In situ synthesis of a self-supported MnO2-based cathode for high-performance zinc-ion batteries by K+ pre-intercalation. **2022**, 604, 154578	2
276	Freestanding and Flexible Interfacial Layer Enables Bottom-Up Zn Deposition Toward Dendrite-Free Aqueous Zn-Ion Batteries. **2022**, 14,	1
275	Advanced Fiber-Shaped Aqueous Zn Ion Battery Integrated with Strain Sensor. **2022**, 14, 41045-41052	2
274	Advanced aqueous proton batteries: working mechanism, key materials, challenges and prospects. **2022**, 4, 100092	2
273	Regulating the plating process of zinc with highly efficient additive for long-life zinc anode. **2022**, 549, 232078	0
272	Structural engineering of δ-MnO2 cathode by Ag+ incorporation for high capacity aqueous zinc-ion batteries. **2022**, 548, 232010	1
271	Dual-engineering of ammonium vanadate for enhanced aqueous and quasi-solid-state zinc ion batteries. **2022**, 52, 664-674	0
270	Dendrite-free Zn anodes enabled by a hierarchical zincophilic TiO2 layer for rechargeable aqueous zinc-ion batteries. **2022**, 606, 154932	1
269	Modulating the V10O24·12H2O nanosheets decorated with carbon for enhanced and durable zinc storage. **2022**, 654, 130093	0
268	In-situ regulated competitive proton intercalation and deposition/dissolution reaction of MnO2 for high-performance flexible zinc-manganese batteries. **2022**, 53, 72-78	1
267	Highly reversible Zn metal anodes enabled by multifunctional poly zinc acrylate protective coating. **2023**, 451, 139058	0
266	Self-healing of surface defects on Zn electrode for stable aqueous zinc-ion batteries via manipulating the electrode/electrolyte interphases. **2023**, 629, 916-925	1
265	Achieving high-energy and long-cycling aqueous zinc-metal batteries by highly reversible insertion mechanisms in Ti-substituted Na0.44MnO2 cathode. **2023**, 451, 139059	1
264	Toward highly reversible aqueous zinc-ion batteries: nanoscale-regulated zinc nucleation via graphene quantum dots functionalized with multiple functional groups. **2023**, 452, 139090	2
263	Enhanced Electrochemical Performance of Mno2 by V5+ Doping.	0

262	Multifunctional polyzwitterion ionic liquid coating for long-lifespan and dendrite-free Zn metal anodes. **2022**, 10, 16952-16961	0
261	Emerging two-dimensional nanostructured manganese-based materials for electrochemical energy storage: recent advances, mechanisms, challenges, and prospects.	3
260	Reduced water activity in co-solvent electrolyte enables 2 V zinc-ion hybrid capacitors with prolonged stability and high energy density. **2022**, 10, 20431-20445	0
259	Advances in the regulation of kinetics of cathodic H+/Zn2+ interfacial transport in aqueous Zn/MnO2 electrochemistry.	1
258	Practical conversion-type titanium telluride anodes for high-capacity long-lifespan rechargeable aqueous zinc batteries. **2022**, 10, 16976-16985	1
257	Recent Advancement in Zn-Ion Batteries. **2022**, 1-27	0
256	Local structure and ion storage properties of vanadate cathode materials regulated by the pre-alkalization. **2022**, 10, 20552-20558	0
255	An aqueous copper battery enabled by Cu2+/Cu+ and Cu3+/Cu2+ redox conversion chemistry. **2022**, 58, 10076-10079	0
254	P-doped porous carbon derived from walnut shell for zinc ion hybrid capacitors. **2022**, 12, 24724-24733	0
253	Stepwise recycling of Fe, Cu, Zn and Ni from real electroplating sludge via coupled acidic leaching and hydrothermal and extraction routes. **2023**, 216, 114462	1
252	In-situ oriented oxygen-defect-rich Mn N O via nitridation and electrochemical oxidation based on industrial-scale Mn2O3 to achieve high-performance aqueous zinc ion battery. **2023**, 76, 11-18	2
251	Study of Quaternary Ammonium Additives towards High-Rate Zinc Deposition and Dissolution Cycling for Application in Zinc-Based Rechargeable Batteries. **2022**, 8, 106	1
250	Ultrathin Polyaniline-Coated Single-Crystalline Mn2O3 Nanoporous Ellipsoids with High Energy Density and Cyclability for Low-Cost Zinc-Ion Batteries. **2022**, 5, 12729-12736	1
249	Recent advances in cathode materials for aqueous zinc-ion batteries: Mechanisms, materials, challenges, and opportunities.	2
248	Ultralow-water-activity Electrolyte Endows Vanadium-based Zinc-ion Batteries with Durable Lifespan Exceeding 30 000 Cycles. **2022**,	0
247	Bulk-phase and interface stability strategies of manganese oxide cathodes for aqueous Zn-MnOx batteries. 10,	0
246	Oxygen Vacancies Enhance H+ Diffusion Kinetics for a Flexible and Lightweight Aqueous Zinc/Manganese Monoxide Battery. **2022**, 10, 12188-12196	0
245	Toward Dendrite-Free Deposition in Zinc-Based Flow Batteries: Status and Prospects. **2022**, 8, 117	0

244	Self-repairing interphase reconstructed in each cycle for highly reversible aqueous zinc batteries. **2022**, 13,	2
243	Synergistic Chaotropic Effect and Cathode Interface Thermal Release Effect Enabling Ultralow Temperature Aqueous Zinc Battery. 2203347	0
242	3D printed semi-solid zinc-manganese battery. **2022**,	0
241	MXene ink hosting zinc anode for high performance of aqueous zinc metal batteries. **2022**,	2
240	Formation of CuMn Prussian Blue Analog Double-shelled Nanoboxes Toward Long-life Zn-ion Batteries.	1
239	How to increase the potential of aqueous Zn-MnO2 batteries: the effect of pH gradient electrolyte. **2022**, 141275	0
238	Triple-Functional Polyoxovanadate Cluster in Regulating Cathode, Anode, and Electrolyte for Tough Aqueous Zinc-Ion Battery. 2202671	9
237	Charge carriers for aqueous dual-ion batteries.	0
236	Rechargeable Batteries for Grid Scale Energy Storage.	14
235	Material Design and Energy Storage Mechanism of Mn-Based Cathodes for Aqueous Zinc-Ion Batteries.	0
234	Suppressing the Exacerbated Hydrogen Evolution of Porous Zn Anode with an Artificial Solid-Electrolyte Interphase Layer. **2022**, 14, 41988-41996	1
233	Understanding H 2 evolution electrochemistry to minimize solvated water impact on zinc anode performance. 2206754	4
232	Super-Fast and Super-Long-Life Rechargeable Zinc Battery. 2202784	0
231	Formation of CuMn Prussian Blue Analog Double-shelled Nanoboxes Toward Long-life Zn-ion Batteries.	0
230	Fiber-Based Materials for Aqueous Zinc Ion Batteries.	1
229	Hewettite ZnV6O16·8H2O with Remarkably Stable Layers and Ultralarge Interlayer Spacing for High-Performance Aqueous Zn-Ion Batteries.	0
228	Hewettite ZnV6O16·8H2O with Remarkably Stable Layers and Ultralarge Interlayer Spacing for High-Performance Aqueous Zn-Ion Batteries.	0
227	Ligand-Substitution Chemistry Enabling Wide-Voltage Aqueous Hybrid Electrolyte for Ultrafast-Charging Batteries. 2202478	0

226	g-C3N4-coated MnO2 hollow nanorod cathode for stable aqueous Zn-ion batteries.	0
225	Developing a high-performance aqueous zinc battery with Zn2+ pre-intercalated V3O7·H2O cathode coupled with surface engineered metallic zinc anode. **2022**, 924, 116851	1
224	Alloying effects on inhibiting hydrogen evolution of Zn metal anode in rechargeable aqueous batteries. **2022**, 33, 104576	0
223	Highly reversible aqueous zinc-ion battery using the chelating agent triethanolamine as an electrolyte additive.	0
222	Applications of all-inorganic perovskites for energy storage.	0
221	Demixing the miscible liquids: toward biphasic battery electrolytes based on the kosmotropic effect.	2
220	An appropriate Zn2+/Mn2+ concentration of the electrolyte enables superior performance of AZIBs.	0
219	Manipulating Oxygen Vacancies by K+ Doping and Controlling Mn2+ Deposition to Boost Energy Storage in δ-MnO2. **2022**, 14, 47725-47736	0
218	Optimized Strategies to Enhance Electrochemical Properties of Ammonium Vanadates for Aqueous Zn ion Batteries. **2022**, 155408	1
217	Exploration of Calcium-Doped Manganese Monoxide Cathode for High-Performance Aqueous Zinc-Ion Batteries. **2022**, 36, 13296-13306	1
216	Design of Electrolyte for Zinc–Air Batteries. **2022**, 185-216	0
215	Tunable Vanadium Oxide Microflowers as High-Capacity Cathode Materials for Aqueous Rechargeable Zinc-Ion Batteries.	0
214	Enhanced Elastic Migration of Magnesium Cations in alpha-Manganese Dioxide Tunnels Locally Tuned by Aluminium Substitution. 2210519	0
213	Uniformly MXene-Grafted Eutectic Aluminum-Cerium Alloys as Flexible and Reversible Anode Materials for Rechargeable Aluminum-Ion Battery. 2211271	0
212	Inhibiting Dendrites on Zn Anode by ZIF-8 as Solid Electrolyte Additive for Aqueous Zinc ion Battery. **2022**, 130255	0
211	Unveiling the "Proton Lubricant" Chemistry in Aqueous Zinc-MoS2 Batteries.	1
210	Heterostructures Stimulate Electric-Field to Facilitate Optimal Zn 2+ Intercalation in MoS 2 Cathode. 2204534	0
209	Organic interlayer engineering of TiS2 for enhanced aqueous Zn ions storage. **2022**,	0

208	Synergistic Design of Multifunctional Interfacial Zn Host toward Practical Zn Metal Batteries. 2202937	1
207	Intrinsically Stretchable Microbattery with Ultrahigh Deformability for Self-Powering Wearable Electronics. 2401-2408	0
206	Unveiling the "Proton Lubricant" Chemistry in Aqueous Zinc-MoS2 Batteries.	0
205	Interfacial Designing of MnO2 Half-Wrapped by Aromatic Polymers for High-Performance Aqueous Zinc-Ion Batteries.	0
204	Interfacial Designing of MnO2 Half-Wrapped by Aromatic Polymers for High-Performance Aqueous Zinc-Ion Batteries.	2
203	Interface Engineering of Aqueous Zinc/Manganese Dioxide Batteries with High Areal Capacity and Energy Density. 2204683	0
202	V 2 O 5 as a versatile electrode material for post-lithium energy storage systems.	0
201	Highly Reversible Zn Metal Anodes Realized by Synergistically Enhancing Ion Migration Kinetics and Regulating Surface Energy. 2209028	1
200	A solid-to-solid metallic conversion electrochemistry toward 91% zinc utilization for sustainable aqueous batteries. **2022**, 8,	5
199	Rational Design of Sulfonamide-Based Additive Enables Stable Solid Electrolyte Interphase for Reversible Zn Metal Anode. 2210197	1
198	Hierarchically Porous Ferroelectric Layer with the Aligned Dipole Moment for a High-Performance Aqueous Zn Metal Battery. **2022**, 14, 48570-48581	0
197	MnO2 cathode materials with high reversible stability through Li intercalating for aqueous zinc ion battery. **2022**, 386, 116049	1
196	Metal-organic frameworks for advanced aqueous ion batteries and supercapacitors. **2022**, 4, 100090	0
195	High Specific Capacity and Mechanism of a Metal-organic Framework Based Cathode for Aqueous Zinc-ion Batteries.	0
194	Reaction Mechanism for β-MnO2 Cathode in Aqueous Zn Ion Batteries Revisited: Elucidating Irreversible Transformation of β-MnO2 to Zn-vernadite.	0
193	From anode to cell: synergistic protection strategies and perspectives for stabilized Zn metal in mild aqueous electrolytes. **2023**, 54, 623-640	3
192	Stainless steel foil: A more appropriate current collector than titanium foil for the cathodes of aqueous zinc ion batteries. **2023**, 437, 141519	0
191	Graphene oxide suspension-based electrolyte promotes the cycling performance of aqueous sodium-ion batteries through the interaction between metal ions, free water molecules and functional groups. **2023**, 555, 232380	0

190	Electrochemical one-step synthesis of Mn3O4 with tunable oxygen defects for high-performance aqueous zinc-ion batteries. **2023**, 934, 167933	0
189	Highly Reversible Zinc Metal Anode in a Dilute Aqueous Electrolyte Enabled by a pH Buffer Additive.	0
188	MOF-Derived Mn3O4@C Hierarchical Nanospheres as Cathodes for Aqueous Zinc-Ion Batteries.	0
187	Assisting Zn Storage in Layered Vanadyl Phosphate Cathode by Interactions with Oligoaniline Pillars for Rechargeable Aqueous Zinc Batteries. **2022**, 140323	0
186	Constructing Three-Dimensional Topological Zn Deposition for Long-Life Aqueous Zn-Ion Batteries. **2022**, 14, 51010-51017	0
185	Interface Reversible Electric Field Regulated by Amphoteric Charged Protein-Based Coating Toward High-Rate and Robust Zn Anode. **2022**, 14,	0
184	Recent advances and perspectives for Zn-based batteries: Zn anode and electrolyte. **2022**,	2
183	High-performance Aqueous Zinc-organic Battery Achieved by Reasonable Molecular Design.	0
182	Insights into Chemical and Electrochemical Interactions between Zn Anode and Electrolytes in Aqueous Zn-Ion Batteries.	0
181	The Optimization of a Carbon Paper/MnO2 Composite Current Collector for Manufacturing a High-Performance Li Battery Cathode. **2022**, 12, 1596	0
180	Phase-Transformation-Activated MnCO3 as Cathode Material of Aqueous Zinc-Ion Batteries. **2022**, 8, 239	0
179	Highly Reversible Zinc Metal Anode in a Dilute Aqueous Electrolyte Enabled by a pH Buffer Additive.	5
178	Suppressed Layered-to-Spinel Phase Transition in MnO 2 via van der Waals Interaction for Highly Stable Zn/MnO 2 Batteries. 2201142	3
177	Unraveling the high Energy efficiency for Zn||metal hexacyanoferrate batteries in a zinc-potassium hybrid configuration. **2022**, 104, 107990	0
176	Advances in solid-state fiber batteries for wearable bioelectronics. **2022**, 26, 101042	3
175	Binary solvents assisting the long-term stability of aqueous K/Zn hybrid batteries. **2022**, 101204	0
174	Cobalt-Doped MoS2....nH2O Nanosheets Induced Heterogeneous Phases as High-Rate Capability and Long-Term Cyclability Cathodes for Wearable Zinc-Ion BatteriesENSM. **2022**,	1
173	One-step co-precipitation of MnSe2/CNTs as a high-performance cathode material for zinc-ion batteries. **2022**,	0

172	Incorporating polyimide cathode materials into porous polyaniline xerogel to optimize the zinc-storage behavior. **2022**, 33, 103878	0
171	A review on solutions to overcome the structural transformation of manganese dioxide-based cathodes for aqueous rechargeable zinc ion batteries. **2023**, 555, 232385	5
170	Simultaneous manipulation of electron/Zn2+ ion flux and desolvation effect enabled by in-situ built ultra-thin oxide-based artificial interphase for controlled deposition of zinc metal anodes. **2023**, 456, 141015	1
169	Two-dimensional nanosheets of bimetallic chalcogenide-tagged nitrogen-doped carbon as a cathode for high-performance and durable zinc-ion capacitors.	0
168	Manganese-based cathode materials for aqueous rechargeable zinc-ion batteries: recent advance and future prospects. **2023**, 27, 101294	0
167	Few-layer δ-MnO2 nanosheets grown on three-dimensional N-doped hierarchically porous carbon networks for long-life aqueous zinc ion batteries. **2023**, 203, 326-336	0
166	Aqueous Zn-ion batteries using amorphous Zn-buserite with high activity and stability.	0
165	Discharge intermittency considerably changes ZnO spatial distribution in porous Zn anodes. **2023**, 556, 232460	0
164	Na+/K+-codoped amorphous manganese oxide with enhanced performance for aqueous sodium-ion battery. **2023**, 937, 168344	0
163	Solvothermally prepared hydrated VO2(B) for aqueous zinc ion batteries with high capacity and excellent rate capability. **2023**, 936, 168218	0
162	Zinc Batteries: Basics, Materials Functions, and Applications. **2022**, 1-37	0
161	Dynamic reconstruction of Ni2Zn alloy solid-electrolyte interface for highly stable Zn anode.	0
160	Building a seamless water-sieving MOF-based interphase for highly reversible Zn metal anodes. **2022**, 140510	0
159	Chitosan-Carboxymethylcellulose Hydrogels as Electrolytes for Zinc-Air Batteries: An Approach to the Transition towards Renewable Energy Storage Devices. **2022**, 8, 265	1
158	Ultrastable and ultrafast 3D charge–discharge network of robust chemically coupled 1T-MoS2/Ti3C2 MXene heterostructure for aqueous Zn-ion batteries. **2022**, 140539	1
157	Interface challenges and optimization strategies for aqueous zinc-ion batteries. **2022**,	1
156	Mechanically Improved Zn-Ion Battery Cathodes Based on Branched Aramid Nanofibers. **2022**, 126, 20293-20301	0
155	Revealing the Real Charge Carrier in Aqueous Zinc Batteries Based on Polythiophene/Manganese Dioxide Cathode. 2200221	0

154	Regulating Zinc Nucleation Sites and Electric Field Distribution to Achieve High-Performance Zinc Metal Anode via Surface Texturing. 2206634	0
153	Biocompatible zinc battery with programmable electro-crosslinked electrolyte.	2
152	A Highly Reversible Low-Cost Aqueous Sulfur–Manganese Redox Flow Battery. 429-435	0
151	Monolayer Thiol Engineered Covalent Interface toward Stable Zinc Metal Anode.	1
150	Ag-Doping Effect on MnO2 Cathodes for Flexible Quasi-Solid-State Zinc-Ion Batteries. **2022**, 8, 267	1
149	Facile Construction of the Graphene-Supported Porous V2O3 Nanocomposite Derived from the V-MOF@Graphene Precursor with Enhanced Performance for Aqueous Zinc-Ion Batteries. **2022**, 5, 14990-14999	0
148	Template-free hydrothermal synthesis of α-MnO2 hierarchical nanoflowers with potassium ions intercalation as cathodes for high-performing aqueous zinc ion batteries. **2022**, 117084	0
147	Hybrid Anionic Electrolytes for the High Performance of Aqueous Zinc-Ion Hybrid Supercapacitors. **2023**, 16, 248	0
146	Progress of Phosphate-based Polyanion Cathodes for Aqueous Rechargeable Zinc Batteries. 2211765	1
145	Three-In-One Organic-inorganic Heterostructures: From Scalable Ball-milling Synthesis to Freestanding Cathodes with High Areal Capacity for Aqueous Zinc-ion Batteries. **2022**, 141140	1
144	A Semi-solid Zinc Powder-based Slurry Anode for Advanced Aqueous Zinc-ion Batteries.	0
143	High-Energy and Long-Lived Zn–MnO2 Battery Enabled by a Hydrophobic-Ion-Conducting Membrane.	0
142	A Semi-solid Zinc Powder-based Slurry Anode for Advanced Aqueous Zinc-ion Batteries.	0
141	Electrochemically Induced Defects Promotional High-Performance Binder-Free MnO@CC Cathodes for Flexible Quasi-Solid-State Zinc-Ion Battery. **2022**, 5, 15510-15519	2
140	Direct Ink Writing of 3D Zn Structures as High-Capacity Anodes for Rechargeable Alkaline Batteries. 2200323	0
139	Engineering p-Band Center of Oxygen Boosting H+ Intercalation in α-MnO2 for Aqueous Zinc Ion Batteries.	0
138	Engineering p-Band Center of Oxygen Boosting H+ Intercalation in α-MnO2 for Aqueous Zinc Ion Batteries.	1
137	Simultaneous Elucidation of Solid and Solution Manganese Environments via Multiphase Operando Extended X-ray Absorption Fine Structure Spectroscopy in Aqueous Zn/MnO2 Batteries.	1

136	Selectivity of Electrochemical Ion Insertion into Manganese Dioxide Polymorphs.	0
135	Three-dimensional Zn-based alloys for dendrite-free aqueous Zn battery in dual-cation electrolytes. **2022**, 13,	1
134	Stabling Zinc Metal Anode with Polydopamine Regulation through Dual Effects of Fast Desolvation and Ion Confinement. 2203523	1
133	An aqueous magnesium-ion battery working at −30 °C enabled by modulating electrolyte structure. **2022**, 140806	0
132	Proton storage chemistry in aqueous zinc-organic batteries: A review.	0
131	Aqueous Zinc–Chalcogen Batteries: Emerging Conversion-Type Energy Storage Systems. **2023**, 9, 62	0
130	Stable Zn Electrodes Enabled by Ultra-Thin Zn Phosphate Protective Layer.	1
129	Improved electrochemical performance of aqueous zinc-ion batteries with modified glass fiber separator by Ketjen Black. **2023**, 130991	0
128	Hydrogel Electrolyte with High Tolerance to a Wide Spectrum of pHs and Compressive Energy Storage Devices Based on It. 2201448	0
127	Supramolecular Engineering of Cathode Materials for Aqueous Zinc-ion Hybrid Supercapacitors: Novel Thiophene-bridged Donor-Acceptor sp2 Carbon-linked Polymers.	0
126	In situ construction of a stable composite solid electrolyte interphase for dendrite-free Zn batteries. **2023**,	0
125	Dendrite-Free Zn Anode Enabled by Anionic Surfactant-Induced Horizontal Growth for Highly-Stable Aqueous Zn-Ion Pouch Cells.	0
124	Recent advances in manipulating strategy of aqueous electrolytes for Zn anode stabilization. **2023**,	0
123	Achieving Ultralong-Cycle Zinc-Ion Battery via Synergistically Electronic and Structural Regulation of a MnO 2 Nanocrystal–Carbon Hybrid Framework. 2207517	0
122	Aqueous transition-metal ion batteries: Materials and electrochemistry. **2023**, 100097	0
121	Wearable and Washable MnO2–Zn Battery Packaged by Vacuum Sealing. **2023**, 13, 265	0
120	Unraveling the Interphasial Chemistry for Highly Reversible Aqueous Zn Ion Batteries.	0
119	Issues and strategies of cathode materials for mild aqueous static zinc-ion batteries. **2023**,	0

118	Unraveling high-performance oxygen-deficient amorphous manganese oxide as the cathode for advanced zinc ion batteries.	0
117	Activating zinc-ion storage in MXene through Mn4+ loading on surface terminations.	0
116	Tuning Discharge Behavior of Hollandite □MnO2 in Hydrated Zinc Ion Battery by Transition Metal Substitution.	0
115	A novel 3D bacterial cellulose network as cathodic scaffold and hydrogel electrolyte for zinc-ion batteries. **2023**, 557, 232553	0
114	Insights on rational design and energy storage mechanism of Mn-based cathode materials towards high performance aqueous zinc-ion batteries. **2023**, 479, 215009	0
113	Mo-Pre-Intercalated MnO2 Cathode with Highly Stable Layered Structure and Expanded Interlayer Spacing for Aqueous Zn-Ion Batteries. **2023**, 15, 859-869	1
112	A Covalent Organic Framework as a Long-life and High-Rate Anode Suitable for Both Aqueous Acidic and Alkaline Batteries.	0
111	Rational Design of Flexible Zn-Based Batteries for Wearable Electronic Devices.	0
110	How About Vanadium-Based Compounds as Cathode Materials for Aqueous Zinc Ion Batteries?. 2206907	0
109	Valid design and evaluation of cathode and anode materials of aqueous zinc ion batteries with high-rate capability and cycle stability.	0
108	Integrated Uniformly Microporous C 4 N/Multi-Walled Carbon Nanotubes Composite Toward Ultra-Stable and Ultralow-Temperature Proton Batteries. 2207487	0
107	Ultrahigh-Rate Zn Stripping and Plating by Capacitive Charge Carriers Enrichment Boosting Zn-Based Energy Storage. 2203165	0
106	Mini-Review on the Regulation of Electrolyte Solvation Structure for Aqueous Zinc Ion Batteries. **2023**, 9, 73	0
105	Towards storable and durable Zn-MnO2 batteries with hydrous tetraglyme electrolyte. **2023**,	0
104	Bi-MOF Modulating MnO 2 Deposition Enables Ultra-Stable Cathode-Free Aqueous Zinc-Ion Batteries. 2208233	0
103	Improving stability and reversibility of manganese dioxide cathode materials via nitrogen and sulfur doping for aqueous zinc ion batteries. **2023**, 943, 169068	0
102	Artificial phosphate solid electrolyte interphase enables stable MnO2 cathode for zinc ion batteries. **2023**, 101524	0
101	Advances and Strategies of Electrolyte Regulation in Zn-ion Batteries.	0

100	Design Strategies toward High-Performance Zn Metal Anode. 2201572	0
99	MnO2 electrodeposition at the positive electrode of zinc-ion aqueous battery containing Zn2+ and Mn2+ cations.	0
98	Protocol in Evaluating Capacity of Zn Mn Aqueous Batteries: A Clue of pH.	0
97	A small inorganic-organic material based on anthraquinone-decorated cyclophosphazene as cathode for aqueous electrolyte zinc-ion batteries. **2023**, 33, 101280	0
96	Construction of an Artificial Interfacial Layer with Porous Structure toward Stable Zinc-Metal Anodes.	0
95	A hydrogel electrolyte with ultrahigh ionic conductivity and transference number benefit from Zn2+ highways for dendrite-free Zn-MnO2 battery. **2023**, 463, 142535	0
94	Tailoring porous three-dimensional (Co,Mn)(Co,Mn)2O4/PPy architecture towards high-performance cathode for aqueous zinc-ion batteries. **2023**, 465, 142897	0
93	Single crystalline Na2/3Ni1/3Mn2/3O2 microrods as a high-performance cathode for aqueous zinc-ion batteries. **2023**, 341, 134262	0
92	Enhanced electrochemical performance of MnO2 by high oxidation state vanadium(V) doping. **2023**, 946, 169386	0
91	A facile finger paint physical modification for bilateral electrode/electrolyte interface towards a stable aqueous Zn battery. **2023**, 81, 101-109	0
90	A three-dimensional zincophilic nano-copper host enables dendrite-free and anode-free Zn batteries. **2023**, 34, 101284	0
89	Microfluidic-oriented assembly of Mn3O4@C/GFF cathode with multiscale synergistic structure for high-performance aqueous zinc-ion batteries. **2023**, 208, 247-254	0
88	Highly flexible and compressible zinc-ion batteries with superb electrochemical performance enabled by a dual structural regulation strategy. **2023**, 56, 478-488	0
87	Voltage induced lattice contraction enabling superior cycling stability of MnO2 cathode in aqueous zinc batteries. **2023**, 56, 524-531	0
86	Electrolytes for Batteries. **2022**, 1-24	0
85	Interfacial synthesis of strongly-coupled MnO2/MXene heteronanosheets for stable zinc ion batteries with Zn2+-exclusive storage mechanism. **2023**, 459, 141662	0
84	A path forward for the translational development of aqueous zinc-ion batteries. **2023**, 7, 244-250	0
83	Electrolytes in Organic Batteries. **2023**, 123, 1712-1773	0

82	Interlayer Ag+ and In Situ Ag Metal Particles Synergistically Strengthening MnO2 Cathode Performance for Aqueous Zinc-Ion Batteries. **2023**, 6, 1467-1474	0
81	Dynamically Interfacial pH-Buffering Effect Enabled by N -Methylimidazole Molecules as Spontaneous Proton Pumps toward Highly Reversible Zinc-Metal Anodes. 2208630	0
80	Zn glutarate protective layers in situ form on Zn anodes for Zn redox flow batteries. **2023**, 57, 195-204	0
79	High-Performance Aqueous Zinc-Ion Batteries Enabled by Superlattice Intercalation Zn3V2O7-C Cathodes. **2023**, 6, 2462-2470	0
78	N-doped □MnO2 coated N-doped carbon cloth as stable cathode for aqueous zinc-ion batteries. **2023**, 18, 1-8	0
77	Addition of Dioxane in Electrolyte Promotes (002)-Textured Zinc Growth and Suppressed Side Reactions in Zinc-Ion Batteries. **2023**, 17, 3765-3775	1
76	Establishing copper-zinc alloying strategy via active screen plasma toward stabilized zinc metal anode.	0
75	Intercalation Pseudocapacitance of Cation-Exchanged Molybdenum-Based Polyoxometalate for the Fast and Stable Zinc-Ion Storage.	0
74	New insights on (V10O28)6□based electrode materials for energy storage: a brief review. **2023**, 42, 1431-1445	0
73	Electrodeposition of polypyrrole for high-performance zinc ion battery.	0
72	Enabling On-Demand Conformal Zn-Ion Batteries on Non-Developable Surfaces. 2211597	0
71	Organic Hydronium-Ion Battery with Ultralong Life. **2023**, 8, 1390-1396	0
70	Sustained-Compensated Interfacial Zincophilic Sites to Assist High-Capacity Aqueous Zn Metal Batteries. **2023**, 23, 1135-1143	0
69	Designing interstitial boron-doped tunnel-type vanadium dioxide cathode for enhancing zinc ion storage capability.	0
68	Decoupling, quantifying, and restoring aging-induced Zn-anode losses in rechargeable aqueous zinc batteries. **2023**, 7, 366-379	0
67	Aqueous air cathodes and catalysts for metal□air batteries. **2023**, 38, 101246	0
66	2D Mesoporous Zincophilic Sieve for High-Rate Sulfur-Based Aqueous Zinc Batteries. **2023**, 145, 5384-5392	0
65	Insights into the oxygen vacancies in transition metal oxides for aqueous Zinc-Ion batteries. **2023**, 461, 142033	0

64	A Heteroanionic Zinc Ion Conductor for Dendrite-Free Zn Metal Anodes. 2300195	0
63	Amorphous K-Buserite Microspheres for High-Performance Aqueous Zn-Ion Batteries and Hybrid Supercapacitors. 2207329	0
62	Ion Selective and Water Resistant Cellulose Nanofiber/MXene Membrane Enabled Cycling Zn Anode at High Currents. **2023**, 13,	1
61	A Static Tin Manganese Battery with 30000-Cycle Lifespan Based on Stabilized Mn3+/Mn2+ Redox Chemistry. **2023**, 17, 5083-5094	0
60	Quasi-Solid Electrolyte Interphase Boosting Charge and Mass Transfer for Dendrite-Free Zinc Battery. **2023**, 15,	0
59	Rational Design of Layered MnO 2 @Graphene with Hierarchical Structure for Flexible Quasisolid-State Aqueous Zinc-Ion Battery via Laser Activation. 2201430	0
58	Solid-Adsorbed Polymer-Electrolyte Interphases for Stabilizing Metal Anodes in Aqueous Zn and Non-Aqueous Li Batteries. **2023**, 135,	0
57	Solid-Adsorbed Polymer-Electrolyte Interphases for Stabilizing Metal Anodes in Aqueous Zn and Non-Aqueous Li Batteries. **2023**, 62,	0
56	Reversible Zn Metal Anodes Enabled by Trace Amounts of Underpotential Deposition Initiators. **2023**, 135,	0
55	Reversible Zn Metal Anodes Enabled by Trace Amounts of Underpotential Deposition Initiators. **2023**, 62,	0
54	Supercapacitors Based on Resveratrol/Reduced Graphene Oxide Composites. **2023**, 6, 4162-4169	0
53	Integrating molybdenum into zinc vanadate enables Zn3V2MoO8 as a high-capacity Zn-supplied cathode for Zn-metal free aqueous batteries. **2023**, 15, 6722-6731	0
52	A diluent protective organic additive electrolyte of hydrophilic hyperbranched polyester for long-life reversible aqueous zinc manganese oxide batteries. **2023**, 17,	0
51	Progress and perspective on multi-dimensional structured carbon nanomaterials for cathodes in aqueous zinc-based energy storage. **2023**, 11, 481-516	0
50	Solid Interhalogen Compounds with Effective Br 0 Fixing for Stable High-energy Zinc Batteries.	0
49	Application of Biomass Materials in Zinc-Ion Batteries. **2023**, 28, 2436	0
48	Potassium pre-intercalated manganese dioxide nanoflakes for high-performance aqueous zinc ion batteries. **2023**, 58, 4853-4864	0
47	Solid Interhalogen Compounds with Effective Br 0 Fixing for Stable High-energy Zinc Batteries.	0

46	High Interspace-Layer Manganese Selenide Nanorods as a High-Performance Cathode for Aqueous Zinc-Ion Batteries. **2023**, 6, 3225-3235	0
45	Materials and structural design for preferable Zn deposition behavior toward stable Zn anodes.	0
44	Electrode/electrolyte interfacial engineering for aqueous Zn-ion batteries. **2023**, 2, 186-212	0
43	Synergistic effect of small-size MnO2 nanodots and conductive reduced graphene oxide boosting cathode materials for high-performance aqueous zinc-based energy storage. **2023**, 566, 232915	0
42	Kinetics-Driven MnO2 Nanoflowers Supported by Interconnected Porous Hollow Carbon Spheres for Zinc-Ion Batteries.	0
41	Recent advances and challenges of cobalt-based materials as air cathodes in rechargeable Zn–air batteries. **2023**, 5, 100896	0
40	Dopamine-intercalated vanadate hollow microtube arrays with S-doping for high-performance zinc-ion batteries: disorder/defect-induced clusters and a reversible phase transition. **2023**, 15, 6273-6284	0
39	Efficient Scalable Hydrothermal Synthesis of MnO2 with Controlled Polymorphs and Morphologies for Enhanced Battery Cathodes. **2023**, 8, 1744-1751	0
38	Vanadium Oxide-Based Cathode Materials for Aqueous Zinc-Ion Batteries: Energy Storage Mechanism and Design Strategy. **2023**, 11, 118	0
37	Solute-solvent dual engineering toward versatile electrolyte for high-voltage aqueous zinc-based energy storage devices. **2023**,	0
36	Enhanced H+ Storage of a MnO2 Cathode via a MnO2 Nanolayer Interphase Transformed from Manganese Phosphate. **2023**, 17, 5600-5608	1
35	Sustainable high-energy aqueous zinc–manganese dioxide batteries enabled by stress-governed metal electrodeposition and fast zinc diffusivity.	0
34	Efficient electrochemical performance of MnO2 nanowires interknitted vanadium oxide intercalated nanoporous carbon network as cathode for aqueous zinc ion battery. **2023**,	0
33	Revealing the Competitive Intercalation between Na + and H + into Na 0.44 MnO 2 in Aqueous Sodium Ion Batteries. 2204413	0
32	Zn Microbatteries Explore Ways for Integrations in Intelligent Systems. 2300230	0
31	First-principles analysis of electrochemical hydrogen storage behavior for hydrogenated amorphous silicon thin film in high-capacity proton battery. **2023**,	0
30	Metal-Organic Framework-Based Materials in Aqueous Zinc-Ion Batteries. **2023**, 24, 6041	0
29	Facing the capacity fading of vanadium-based zinc-ion batteries. **2023**,	0

28	Silica-based electrolyte regulation for stable aqueous zinc-manganese batteries. **2023**, 30, 434-442	0
27	Bimetallic MnMoO4 nanostructures on carbon fibers as flexible cathode for high performance zinc-ion batteries. **2023**, 641, 981-989	0
26	Metal-Free On-Chip Battery–Supercapacitor Hybrid System Based on Rationally Designed Highly Conducting Laser-Irradiated Graphene-Based Electrodes. **2023**, 11, 5451-5461	0
25	MnO2@Co3O4 heterostructure composite as high-performance cathode material for rechargeable aqueous zinc-ion battery. **2023**, 29, 1913-1921	0
24	Mitigating the interfacial concentration gradient by negatively charged quantum dots toward dendrite-free Zn anodes. **2023**, 58, 215-221	0
23	Enlarged Interlayer Spacing of Marigold-Shaped 1T-MoS2 with Sulfur Vacancies via Oxygen-Assisted Phosphorus Embedding for Rechargeable Zinc-Ion Batteries. **2023**, 13, 1185	0
22	Reconciling Mass Loading and Gravimetric Performance of MnO 2 Cathodes by 3D-Printed Carbon Structures for Zinc-Ion Batteries.	0
21	Diminishing Space-Charge Layer Effect of Zinc Anodes by an Anion-Immobilized Electrolyte Membrane. **2023**, 8, 1959-1968	0
20	Functional group differentiation of isomeric solvents enables distinct zinc anode chemistry. **2023**, 1-11	0
19	The Origin of Capacity Degradation and Regulation Strategy in Aqueous Zn-MnO2 Battery with Manganese Acetate. **2023**, 170, 030545	0
18	The TWh challenge: Next generation batteries for energy storage and electric vehicles. **2023**, 1, 100015	0
17	In-situ cation-inserted MnO2 with selective accelerated intercalation of individual H+ or Zn2+ ions in aqueous zinc ion batteries. **2023**, 82, 88-102	0
16	Structural Transformation by Crystal Engineering Endows Aqueous Zinc-Ion Batteries with Ultra-long Cyclability.	0
15	Challenges and Strategies in the Development of Zinc-Ion Batteries.	0
14	Modulating the Proton-Conducting Lanes in Spinel ZnMn 2 O 4 through Off-Stoichiometry.	0
13	Aromatic additives with designed functions ameliorating chemo-mechanical reliability for zinc-ion batteries. **2023**, 59, 102769	0
12	Developing Cathode Materials for Aqueous Zinc Ion Batteries: Challenges and Practical Prospects.	0
11	In situ synthesis of Bi3+-doped δ-MnO2 cathode to enhance the cycle stability for aqueous zinc-ion batteries.	0

10	An Artificial MnWO4 Cathode Electrolyte Interphase Enabling Enhanced Electrochemical Performance of MnO2 Cathode for Aqueous Zinc Ion Battery. **2023**, 16, 3228	0
9	Recent advances in interfacial modification of zinc anode for aqueous rechargeable zinc ion batteries. **2023**,	0
8	Understanding of the charge storage mechanism of MnO2-based aqueous zinc-ion batteries: Reaction processes and regulation strategies. **2023**,	0
7	Freestanding Co1.29Ni1.71O4 Nanowire Array Cathodes with Ultralong Cycle Life for Rechargeable Hybrid Zinc Batteries.	0
6	V2O3@C Microspheres as the High-Performance Cathode Materials for Advanced Aqueous Zinc-Ion Storage.	0
5	Amino-Functionalized Carbon Nanotubes Stimulating MnO2 To Achieve High-Performance Zinc-Ion Batteries. **2023**, 142461	0
4	Self-Adapting and Self-Healing Hydrogel Interface with Fast Zn 2+ Transport Kinetics for Highly Reversible Zn Anodes.	0
3	Towards high-performance aqueous ZnMnO2 batteries: Formation mechanism and alleviation strategies of irreversible inert phases. **2023**, 260, 110770	0
2	Elucidating a dissolutiondeposition reaction mechanism by multimodal synchrotron X-ray characterization in aqueous Zn/MnO2 batteries.	0
1	A Multifunctional Organic Electrolyte Additive for Aqueous Zinc Ion Batteries Based on Polyaniline Cathode.	0