

# Review of electrical energy storage technologies, materials and prospects for large-scale grid storage

Energy and Environmental Science

11, 2696-2767

DOI: [10.1039/c8ee01419a](https://doi.org/10.1039/c8ee01419a)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Hydrogen is essential for sustainability. <i>Current Opinion in Electrochemistry</i> , 2018, 12, 166-181.	2.5	99
2	XPS and Raman study of the active-sites on molybdenum disulfide nanopetals for photocatalytic removal of rhodamine B and doxycycline hydrochloride. <i>RSC Advances</i> , 2018, 8, 36280-36285.	1.7	15
3	Design of S-Substituted Fluorinated Aryl Sulfonamide-Tagged (S-FAST) Anions To Enable New Solvate Ionic Liquids for Battery Applications. <i>Chemistry of Materials</i> , 2019, 31, 7558-7564.	3.2	11
4	Plasma-Activated Electrolysis for Cogeneration of Nitric Oxide and Hydrogen from Water and Nitrogen. <i>ACS Energy Letters</i> , 2019, 4, 2091-2095.	8.8	35
5	Amorphous Core-Shell Nanoparticles as a Highly Effective and Stable Battery-Type Electrode for Hybrid Supercapacitors. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900858.	1.9	10
6	Electrocatalysts for Lithium-Air Batteries: Current Status and Challenges. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 14288-14320.	3.2	42
7	Nanocomposites of digestively ripened copper oxide quantum dots and graphene oxide as a binder free battery-like supercapacitor electrode material. <i>Electrochimica Acta</i> , 2019, 321, 134709.	2.6	23
8	Pathways to Industrial-Scale Fuel Out of Thin Air from CO <sub>2</sub> Electrolysis. <i>Joule</i> , 2019, 3, 1822-1834.	11.7	137
9	Efficient Base-Metal NiMn/TiO <sub>2</sub> Catalyst for CO <sub>2</sub> Methanation. <i>ACS Catalysis</i> , 2019, 9, 7823-7839.	5.5	124
10	Recent Progress of Metal-Air Batteries: A Mini Review. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 2787.	1.3	120
11	Renewable energy powered membrane technology: A review of the reliability of photovoltaic-powered membrane system components for brackish water desalination. <i>Applied Energy</i> , 2019, 253, 113524.	5.1	56
12	Highly efficient CuO/ZnO/ZrO <sub>2</sub> @SBA-15 nanocatalysts for methanol synthesis from the catalytic hydrogenation of CO <sub>2</sub> . <i>Applied Catalysis B: Environmental</i> , 2019, 258, 117941.	10.8	105
13	Pathways to Widespread Applications: Development of Redox Flow Batteries Based on New Chemistries. <i>CheM</i> , 2019, 5, 1964-1987.	5.8	105
14	Formation of needle-like porous CoNi <sub>2</sub> S <sub>4</sub> -MnOOH for high performance hybrid supercapacitors with high energy density. <i>Journal of Colloid and Interface Science</i> , 2019, 554, 125-132.	5.0	36
15	Metal-organic framework derived N-doped CNT@ porous carbon for high-performance sodium- and potassium-ion storage. <i>Electrochimica Acta</i> , 2019, 319, 541-551.	2.6	63
16	Synthesis of Iron-Nickel Sulfide Porous Nanosheets via a Chemical Etching/Anion Exchange Method for Efficient Oxygen Evolution Reaction in Alkaline Media. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900788.	1.9	27
17	In-situ synthesis of Ni-MOF@CNT on graphene/Ni foam substrate as a novel self-supporting hybrid structure for all-solid-state supercapacitors with a high energy density. <i>Journal of Electroanalytical Chemistry</i> , 2019, 848, 113301.	1.9	66
18	Tuning phase evolution of $\beta$ -MnO <sub>2</sub> during microwave hydrothermal synthesis for high-performance aqueous Zn ion battery. <i>Nano Energy</i> , 2019, 64, 103942.	8.2	154

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19	Comparative study of density functionals for the description of lithium-graphite intercalation compounds. <i>Journal of Computational Chemistry</i> , 2019, 40, 2400-2412.	1.5	21
20	Carbon Loaded Nano-Designed Spherically High Symmetric Lithium Iron Orthosilicate Cathode Materials for Lithium Secondary Batteries. <i>Polymers</i> , 2019, 11, 1703.	2.0	5
21	Energy balance of an airlift bioreactor used for electrical power generation in energy storage. <i>Chemical Engineering Science</i> , 2019, 210, 115208.	1.9	0
22	Pyrenetetrone Derivatives Tailored by Nitrogen Dopants for High-Potential Cathodes in Lithium-Ion Batteries. <i>IScience</i> , 2019, 21, 206-216.	1.9	14
23	Mesoporous carbon derived from pomelo peel as a high-performance electrode material for zinc-bromine flow batteries. <i>Journal of Power Sources</i> , 2019, 442, 227255.	4.0	40
24	A two-dimensional model of the vanadium-cerium redox flow battery. <i>Electrochimica Acta</i> , 2019, 328, 135019.	2.6	16
25	Enhancing Energy Storage Devices with Biomacromolecules in Hybrid Electrodes. <i>Biotechnology Journal</i> , 2019, 14, e1900062.	1.8	21
26	Characterization of a Regenerative Hydrogen-Vanadium Fuel Cell Using an Experimentally Validated Unit Cell Model. <i>Journal of the Electrochemical Society</i> , 2019, 166, A3511-A3524.	1.3	8
27	Next generation of power electronic-converter application for energy-conversion and storage units and systems. <i>Clean Energy</i> , 2019, 3, 307-315.	1.5	6
28	Gallium Nitride Nanoparticles Embedded in a Carbon Nanofiber Anode for Ultralong-Cycle-Life Lithium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 44263-44269.	4.0	19
29	Activated Carbon-Anchored 3D Carbon Network for Bromine Activity and its Enhanced Electrochemical Performance in Zn-Br Hybrid Redox Flow Battery. <i>ChemElectroChem</i> , 2019, 6, 5688-5697.	1.7	22
30	$P2\text{-Na}_{0.67}\text{Al}_x\text{Mn}_{1-x}\text{O}_2$ : Cost-Effective, Stable and High-Rate Sodium Electrodes by Suppressing Phase Transitions and Enhancing Sodium Cation Mobility. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 18086-18095.	7.2	127
31	$P2\text{-Na}_{0.67}\text{Al}_x\text{Mn}_{1-x}\text{O}_2$ : Cost-Effective, Stable and High-Rate Sodium Electrodes by Suppressing Phase Transitions and Enhancing Sodium Cation Mobility. <i>Angewandte Chemie</i> , 2019, 131, 18254-18263.	1.6	9
32	Analyze the Break-even Cost of Lithium-ion Battery under Time-of-use Pricing Tariffs. , 2019, , .		0
33	Shedding X-ray Light on the Interfacial Electrochemistry of Silicon Anodes for Li-Ion Batteries. <i>Accounts of Chemical Research</i> , 2019, 52, 2673-2683.	7.6	25
34	Micro-Macroscopic Coupled Electrode Architecture for High-Energy-Density Lithium-Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2019, 2, 7393-7402.	2.5	6
35	Redox-active polymers (redoxmers) for electrochemical energy storage. <i>MRS Communications</i> , 2019, 9, 1151-1167.	0.8	9
36	Bio-oil derived hierarchical porous hard carbon from rubber wood sawdust via a template fabrication process as highly stable anode for sodium-ion batteries. <i>Materials Today Energy</i> , 2019, 14, 100346.	2.5	32

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37	Recent advances in nanostructured electrode-electrolyte design for safe and next-generation electrochemical energy storage. <i>Materials Today Nano</i> , 2019, 8, 100057.	2.3	31
38	Anaerobic membrane bioreactor towards biowaste biorefinery and chemical energy harvest: Recent progress, membrane fouling and future perspectives. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 115, 109392.	8.2	103
39	Improved performance of CoS <sub>2</sub> nanoparticles encapsulated in carbon micro-polyhedron for propelling redox reaction of polysulfide. <i>Electrochimica Acta</i> , 2019, 324, 134899.	2.6	3
40	Electrochemical exploration of the effects of calcination temperature of a mesoporous zinc vanadate anode material on the performance of Na-ion batteries. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 2653-2659.	3.0	22
41	High capacity vanadium oxide electrodes: effective recycling through thermal treatment. <i>Sustainable Energy and Fuels</i> , 2019, 3, 2615-2626.	2.5	4
42	A new perspective on global renewable energy systems: why trade in energy carriers matters. <i>Energy and Environmental Science</i> , 2019, 12, 2022-2029.	15.6	81
43	Hierarchical porous CoO /carbon nanocomposite for enhanced lithium storage. <i>Journal of Electroanalytical Chemistry</i> , 2019, 847, 113202.	1.9	6
44	Perfunctionalized Dodecaborate Clusters as Stable Metal-Free Active Materials for Charge Storage. <i>ACS Applied Energy Materials</i> , 2019, 2, 4907-4913.	2.5	19
45	Novel hexagonal Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> porous nanoplate/nitrogen-doped graphene nanomaterials with enhanced electrochemical properties for oxygen reduction reaction in acidic media for fuel cells. <i>Carbon</i> , 2019, 152, 459-473.	5.4	29
46	Projected economic outlook and scenario analysis for H <sub>2</sub> production by alkaline water electrolysis on the basis of the unit electricity price, the learning rate, and the automation level. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1799-1807.	2.5	20
47	Graphite Anode for a Potassium-ion Battery with Unprecedented Performance. <i>Angewandte Chemie</i> , 2019, 131, 10610-10615.	1.6	100
48	Graphite Anode for a Potassium-ion Battery with Unprecedented Performance. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 10500-10505.	7.2	504
49	Nitrogen and oxygen co-doped porous carbon nanosheets as high-rate and long-lifetime anode materials for high-performance Li-ion capacitors. <i>Carbon</i> , 2019, 151, 28-35.	5.4	74
50	Membrane resistance of different separator materials in a vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2019, 586, 106-114.	4.1	18
51	Highly Stable and Efficient Performance of Binder-Free Symmetric Supercapacitor Fabricated with Electroactive Polymer Synthesized via Interfacial Polymerization. <i>Materials</i> , 2019, 12, 1626.	1.3	23
52	The role of micro-nanoscale AlSb precipitates in improving the discharge performance of Al-Sb alloy anodes for Al-air batteries. <i>Journal of Power Sources</i> , 2019, 425, 186-194.	4.0	53
53	A COOH-terminated nitrogen-doped carbon aerogel as a bulk electrode for completely selective two-electron oxygen reduction to H <sub>2</sub> O <sub>2</sub> . <i>Chemical Communications</i> , 2019, 55, 6173-6176.	2.2	66
54	Benign Recycling of Spent Batteries towards All-Solid-State Lithium Batteries. <i>Chemistry - A European Journal</i> , 2019, 25, 8975-8981.	1.7	26

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55	Synthesis and electrochemical characterization of nanostructured Ni-Co-MOF/graphene oxide composites as capacitor electrodes. <i>Electrochimica Acta</i> , 2019, 311, 62-71.	2.6	126
56	Long-Life Polysulfide-Polyhalide Batteries with a Mediator-Ion Solid Electrolyte. <i>ACS Applied Energy Materials</i> , 2019, 2, 3445-3451.	2.5	26
57	A high-temperature phosphorization for synthesis of core-shell Ni-NixPy@C nanocomposite-immobilized sponge-like P-doped porous carbon with excellent supercapacitance performance. <i>Electrochimica Acta</i> , 2019, 309, 197-208.	2.6	35
58	Flexible sector coupling with hydrogen: A climate-friendly fuel supply for road transport. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 12918-12930.	3.8	60
59	Ultra-high energy storage performance with mitigated polarization saturation in lead-free relaxors. <i>Journal of Materials Chemistry A</i> , 2019, 7, 8573-8580.	5.2	191
60	Solvent-Free, Single Lithium-Ion Conducting Covalent Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2019, 141, 5880-5885.	6.6	284
61	Facile preparation of Ni-Mn layered double hydroxide nanosheets/carbon for supercapacitor. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 7524-7533.	1.1	19
62	Revisiting the feasibility of biomass-fueled CHP in future energy systems - Case study of the Åland Islands. <i>Energy Conversion and Management</i> , 2019, 188, 66-75.	4.4	27
63	Synthesis of MnCo <sub>2</sub> O <sub>4</sub> @MnCo <sub>2</sub> S <sub>4</sub> core/shell micro-nanostructures on Ni foam for high performance asymmetric supercapacitors. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2019, 570, 73-80.	2.3	47
64	Exploring competitive features of stationary sodium ion batteries for electrochemical energy storage. <i>Energy and Environmental Science</i> , 2019, 12, 1512-1533.	15.6	402
65	Facile synthesis of nanowire and rectangular flakes of Co <sub>3</sub> O <sub>4</sub> onto Ni foam for high-performance asymmetric supercapacitors. <i>Ionics</i> , 2019, 25, 3875-3883.	1.2	4
66	The role of carbon bond types on the formation of solid electrolyte interphase on graphite surfaces. <i>Carbon</i> , 2019, 148, 105-114.	5.4	17
67	Phase- and interlayer spacing-controlled cobalt hydroxides for high performance asymmetric supercapacitor applications. <i>Journal of Power Sources</i> , 2019, 422, 9-17.	4.0	56
68	Pt-embedded in monolayer g-C <sub>3</sub> N <sub>4</sub> as a promising single-atom electrocatalyst for ammonia synthesis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11908-11914.	5.2	78
69	Self-Assembled Nickel Pyrophosphate-Decorated Amorphous Bimetal Hydroxides 2D/2D Nanostructure for High-Energy Solid-State Asymmetric Supercapacitor. <i>Small</i> , 2019, 15, e1901145.	5.2	80
70	High-efficiency supercapacitors based on V <sub>2</sub> O <sub>5</sub> /rGONR network from hierarchical nanoribbon assemblies. <i>Journal of Alloys and Compounds</i> , 2019, 792, 468-473.	2.8	6
71	Ternary metal sulfides for electrocatalytic energy conversion. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9386-9405.	5.2	225
72	Comparative Study of Ethylene Carbonate-Based Electrolyte Decomposition at Li, Ca, and Al Anode Interfaces. <i>ACS Applied Energy Materials</i> , 2019, 2, 1676-1684.	2.5	36

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73	Stability and electrochemical performance of nanostructured La <sub>2</sub> CuO <sub>4</sub> + $\hat{1}$ cathodes. Journal of Alloys and Compounds, 2019, 788, 565-572.	2.8	15
74	Overcoming the High-Voltage Limitations of Li-Ion Batteries Using a Titanium Nitride Current Collector. ACS Applied Energy Materials, 2019, 2, 974-978.	2.5	17
75	Electricity system and emission impact of direct and indirect electrification of heavy-duty transportation. Energy, 2019, 172, 740-751.	4.5	33
76	Physicochemical implications of alkoxide $\hat{\text{c}}$ mixing $\hat{\text{c}}$ in polyoxovanadium clusters for nonaqueous energy storage. Journal of Materials Chemistry A, 2019, 7, 4893-4902.	5.2	31
77	A Comparative Study on the Influence of DC/DC-Converter Induced High Frequency Current Ripple on Lithium-Ion Batteries. Sustainability, 2019, 11, 6050.	1.6	16
78	Capacitor-Less Bidirectional Synchronous Buck-Boost Converter for Vanadium Redox Flow Battery. , 2019, , .		0
79	Mechanisms of PrOx performance enhancement of oxygen electrodes for low and intermediate temperature solid oxide fuel cells. Materials Today Energy, 2019, 14, 100362.	2.5	25
80	3D architectures with Co <sub>2</sub> (OH) <sub>2</sub> CO <sub>3</sub> nanowires wrapped by reduced graphene oxide as superior rate anode materials for Li-ion batteries. Nanoscale, 2019, 11, 21180-21187.	2.8	25
81	Emergence of rechargeable seawater batteries. Journal of Materials Chemistry A, 2019, 7, 22803-22825.	5.2	71
82	From nanomelting to nanobeads: nanostructured Sb <sub>x</sub> Bi <sub>1-x</sub> alloys anchored in three-dimensional carbon frameworks as a high-performance anode for potassium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 27041-27047.	5.2	43
83	Technical and economical evaluation of fast charging infrastructures for electric buses. AIP Conference Proceedings, 2019, , .	0.3	2
84	Engineering <i>Rhynchostylis retusa</i> -like heterostructured $\hat{1}$ -nickel molybdate with enhanced redox properties for high-performance rechargeable asymmetric supercapacitors. Journal of Materials Chemistry A, 2019, 7, 26893-26904.	5.2	19
85	Recycling lithium-ion batteries from electric vehicles. Nature, 2019, 575, 75-86.	13.7	1,699
86	Contributions in renewable energy systems: A perspective from the latest publications of FCSE. Frontiers of Chemical Science and Engineering, 2019, 13, 632-635.	2.3	2
87	Rechargeable High-Capacity Aluminum-Nickel Batteries. ChemistrySelect, 2019, 4, 13191-13197.	0.7	8
88	Advances in sodium secondary batteries utilizing ionic liquid electrolytes. Energy and Environmental Science, 2019, 12, 3247-3287.	15.6	129
89	A dinuclear cobalt cluster as electrocatalyst for oxygen reduction reaction. RSC Advances, 2019, 9, 42554-42560.	1.7	7
90	Comparative Review of Energy Storage Systems, Their Roles, and Impacts on Future Power Systems. IEEE Access, 2019, 7, 4555-4585.	2.6	280

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91	Hydrothermal synthesis of novel Mn <sub>1/3</sub> Ni <sub>1/3</sub> Co <sub>1/3</sub> MoO <sub>4</sub> on reduced graphene oxide with a high electrochemical performance for supercapacitors. <i>Journal of Alloys and Compounds</i> , 2019, 778, 900-912.	2.8	15
92	An updated review of energy storage systems: Classification and applications in distributed generation power systems incorporating renewable energy resources. <i>International Journal of Energy Research</i> , 2019, 43, 6171-6210.	2.2	169
93	Solid Electrolyte Interphase on Native Oxide-Terminated Silicon Anodes for Li-Ion Batteries. <i>Joule</i> , 2019, 3, 762-781.	11.7	185
94	LiF Splitting Catalyzed by Dual Metal Nanodomains for an Efficient Fluoride Conversion Cathode. <i>ACS Nano</i> , 2019, 13, 2490-2500.	7.3	27
95	CO <sub>2</sub> methanation under dynamic operational mode using nickel nanoparticles decorated carbon felt (Ni/OCF) combined with inductive heating. <i>Catalysis Today</i> , 2020, 357, 214-220.	2.2	29
96	High performance and stability of nanocomposite oxygen electrode for solid oxide cells. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 5554-5564.	3.8	18
97	Elucidating the role of anionic chemistry towards high-rate intermediate-temperature Na-metal halide batteries. <i>Energy Storage Materials</i> , 2020, 24, 177-187.	9.5	17
98	Hierarchical NiO@NiS@graphene nanocomposite as a sustainable counter electrode for Pt free dye-sensitized solar cell. <i>Applied Surface Science</i> , 2020, 501, 144010.	3.1	44
99	Achieving high energy density and high power density with pseudocapacitive materials. <i>Nature Reviews Materials</i> , 2020, 5, 5-19.	23.3	1,138
100	Electrodeposition of Sb/CNT composite films as anodes for Li- and Na-ion batteries. <i>Energy Storage Materials</i> , 2020, 25, 572-584.	9.5	71
101	Recrystallization synthesis of disodium rhodizonate-conductive polyaniline composite with high cyclic performance as cathode material of sodium-ion battery. <i>Applied Surface Science</i> , 2020, 499, 143849.	3.1	11
102	Non-destructive parameter extraction for a reduced order lumped electrochemical-thermal model for simulating Li-ion full-cells. <i>Journal of Power Sources</i> , 2020, 445, 227296.	4.0	25
103	Additive Manufacturing of Batteries. <i>Advanced Functional Materials</i> , 2020, 30, 1906244.	7.8	176
104	Metal-organic frameworks for electrochemical energy conversion: status and challenges. <i>Science China Chemistry</i> , 2020, 63, 7-10.	4.2	21
105	An Electrochemical Haber-Bosch Process. <i>Joule</i> , 2020, 4, 142-158.	11.7	325
106	Bi <sup>3+</sup> -modified SrTiO <sub>3</sub> -based ceramics for high-temperature energy storage applications. <i>Journal of the American Ceramic Society</i> , 2020, 103, 1722-1731.	1.9	105
107	Binary graphene-based cathode structure for high-performance lithium-sulfur batteries. <i>JPhys Energy</i> , 2020, 2, 015003.	2.3	11
108	Progress in electrolytes for beyond-lithium-ion batteries. <i>Journal of Materials Science and Technology</i> , 2020, 44, 237-257.	5.6	74

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109	Covalent fixing of sulfur in metal–sulfur batteries. <i>Energy and Environmental Science</i> , 2020, 13, 432-471.	15.6	118
110	Hollow nanostructures of metal oxides as emerging electrode materials for high performance supercapacitors. <i>CrystEngComm</i> , 2020, 22, 1633-1644.	1.3	30
111	Current and future role of Haber–Bosch ammonia in a carbon-free energy landscape. <i>Energy and Environmental Science</i> , 2020, 13, 331-344.	15.6	764
112	A comprehensive review of Cr, Ti-based anode materials for Li-ion batteries. <i>Ionics</i> , 2020, 26, 1081-1099.	1.2	9
113	Integration of Cu extraction and Zn electrowinning processes for energy storage. <i>Journal of Cleaner Production</i> , 2020, 253, 119779.	4.6	4
114	Local measurement of current collector potential in a polymer electrolyte membrane water electrolyser. <i>Journal of Power Sources</i> , 2020, 448, 227563.	4.0	21
115	Chalcopyrite-Derived Na <sub>x</sub> MO <sub>2</sub> (M = Cu, Fe, Mn) Cathode: Tuning Impurities for Self-Doping. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 2432-2444.	4.0	41
116	Renewable energy powered membrane technology: Energy buffering control system for improved resilience to periodic fluctuations of solar irradiance. <i>Renewable Energy</i> , 2020, 149, 877-889.	4.3	12
117	Nature of FeSe <sub>2</sub> /NaCl Anode for High Performance Potassium Ion Hybrid Capacitor. <i>Advanced Energy Materials</i> , 2020, 10, 1903277.	10.2	225
118	Aqueous lithium-ion batteries with niobium tungsten oxide anodes for superior volumetric and rate capability. <i>Energy Storage Materials</i> , 2020, 27, 506-513.	9.5	40
119	Electrospinning of Metal–Organic Frameworks for Energy and Environmental Applications. <i>Advanced Science</i> , 2020, 7, 1902590.	5.6	199
120	Synthesis of cobalt phosphate-graphene foam material via co-precipitation approach for a positive electrode of an asymmetric supercapacitors device. <i>Journal of Alloys and Compounds</i> , 2020, 818, 153332.	2.8	45
121	Electrocatalysis of Oxygen on Bifunctional Nickel–Cobaltite Spinel. <i>ChemElectroChem</i> , 2020, 7, 124-130.	1.7	27
122	Synthesis of carbon self-repairing porous hybrid composites for supercapacitors. , 2020, , 225-238.		0
123	Application of organic-inorganic hybrids in lithium batteries. <i>Materials Today Physics</i> , 2020, 15, 100289.	2.9	15
124	Enabling Renewable Base Load Generation via Chemical Energy Storage. <i>Computer Aided Chemical Engineering</i> , 2020, 48, 1357-1362.	0.3	1
125	Hydrogen storage alloys for stationary applications. <i>Journal of Energy Storage</i> , 2020, 32, 101864.	3.9	33
126	Chemical binding and conformal coating of sub-10 nm Sn–Ni alloy layer on nanostructured carbon matrices enabling enhanced lithium storage. <i>Surface and Coatings Technology</i> , 2020, 400, 126068.	2.2	2

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127	Chemical looping electricity storage. <i>Applied Energy</i> , 2020, 279, 115553.	5.1	12
128	Molten Lithium-Brass/Zinc Chloride System as High-Performance and Low-Cost Battery. <i>Matter</i> , 2020, 3, 1714-1724.	5.0	17
129	Interfacial design of Al electrode for efficient aluminum-air batteries: issues and advances. <i>Materials Today Energy</i> , 2020, 18, 100499.	2.5	23
130	Zn@NiSe@NiCo <sub>2</sub> S <sub>4</sub> Core-Shell Architectures: A Highly Efficient Positive Electrode for Hybrid Supercapacitors. <i>Energy &amp; Fuels</i> , 2020, 34, 14934-14947.	2.5	39
131	Prediction of Highly Selective Electrocatalytic Nitrogen Reduction at Low Overpotential on a Mo-Doped g-GaN Monolayer. <i>ACS Catalysis</i> , 2020, 10, 12841-12857.	5.5	92
132	Electrocatalytic hydrogenation and depolymerization pathways for lignin valorization: toward mild synthesis of chemicals and fuels from biomass. <i>Green Chemistry</i> , 2020, 22, 7233-7264.	4.6	59
133	Quantitative temporally and spatially resolved X-ray fluorescence microprobe characterization of the manganese dissolution-deposition mechanism in aqueous Zn/Fe-MnO <sub>2</sub> batteries. <i>Energy and Environmental Science</i> , 2020, 13, 4322-4333.	15.6	72
134	Honeycombed-like nanosheet array composite NiCo <sub>2</sub> O <sub>4</sub> /rGO for efficient methanol electrooxidation and supercapacitors. <i>Electrochimica Acta</i> , 2020, 362, 137145.	2.6	48
135	Metal-organic framework based bifunctional oxygen electrocatalysts for rechargeable zinc-air batteries: current progress and prospects. <i>Chemical Science</i> , 2020, 11, 11646-11671.	3.7	60
136	The Energy Storage Density of Redox Flow Battery Chemistries: A Thermodynamic Analysis. <i>Journal of the Electrochemical Society</i> , 2020, 167, 110536.	1.3	11
137	Three dimensional flower-like CuO/Co <sub>3</sub> O <sub>4</sub> /r-GO heterostructure for high-performance asymmetric supercapacitors. <i>Journal of Alloys and Compounds</i> , 2020, 846, 156439.	2.8	52
138	Advances in Materials Design for All-Solid-state Batteries: From Bulk to Thin Films. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 4727.	1.3	27
139	Recent progress in metal-organic framework-based supercapacitor electrode materials. <i>Coordination Chemistry Reviews</i> , 2020, 420, 213438.	9.5	280
140	A High-Performance Aqueous Zinc-Bromine Static Battery. <i>IScience</i> , 2020, 23, 101348.	1.9	71
141	Advances in Organic Anode Materials for Na-ion Rechargeable Batteries. <i>ChemSusChem</i> , 2020, 13, 4866-4884.	3.6	55
142	Modelling of redox flow battery electrode processes at a range of length scales: a review. <i>Sustainable Energy and Fuels</i> , 2020, 4, 5433-5468.	2.5	29
143	Inline Spectroscopy-Based Optimization of Chemical Reactions Considering Dynamic Process Conditions. <i>Chemie-Ingenieur-Technik</i> , 2020, 92, 659-664.	0.4	1
144	Electrochemical studies on NH <sub>4</sub> MnPO <sub>4</sub> .H <sub>2</sub> O@rGO Hybrid Composite Synthesized via Microwave Route for High Energy Supercapacitors. <i>Journal of Materials Science</i> , 2020, 55, 14447-14463.	1.7	16

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145	Key role of chemistry versus bias in electrocatalytic oxygen evolution. <i>Nature</i> , 2020, 587, 408-413.	13.7	405
146	Leverage Surface Chemistry for High-Performance Triboelectric Nanogenerators. <i>Frontiers in Chemistry</i> , 2020, 8, 577327.	1.8	45
147	High-performance solid-state hybrid supercapacitor enabled by metal-organic framework-derived multi-component hybrid electrodes of Co <sup>2+</sup> /Na <sup>+</sup> -C nanofibers and Co <sub>2</sub> Fe <sub>x</sub> P <sub>x</sub> -Na <sup>+</sup> -C micropillars. <i>Journal of Materials Chemistry A</i> , 2020, 8, 26158-26174.	5.2	53
148	Fabrication of a High-Energy Flexible All-Solid-State Supercapacitor Using Pseudocapacitive 2D-Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> -MXene and Battery-Type Reduced Graphene Oxide/Nickel-Cobalt Bimetal Oxide Electrode Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 52749-52762.	4.0	66
149	Tuning the Performance of Aqueous Organic Redox Flow Batteries via First-Principles Calculations. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 10433-10438.	2.1	11
150	Preparing composites of Ni-Al layered double hydroxide/graphene electrode for supercapacitors and their electrochemical properties. <i>Materials Express</i> , 2020, 10, 1364-1368.	0.2	3
151	Opportunities and Challenges for Renewable Power-to-X. <i>ACS Energy Letters</i> , 2020, 5, 3843-3847.	8.8	126
152	Multi-dimensional materials with layered structures for supercapacitors: Advanced synthesis, supercapacitor performance and functional mechanism. <i>Nano Energy</i> , 2020, 78, 105193.	8.2	58
153	Fluorescence-Enabled Self-Reporting for Redox Flow Batteries. <i>ACS Energy Letters</i> , 2020, 5, 3062-3068.	8.8	9
154	In-Situ™ Preparation of Carbonaceous Conductive Composite Materials Based on PEDOT and Biowaste for Flexible Pseudocapacitor Application. <i>Journal of Composites Science</i> , 2020, 4, 87.	1.4	3
155	An Energy-Dense Solvent-Free Dual-Ion Battery. <i>Advanced Functional Materials</i> , 2020, 30, 2003557.	7.8	18
156	De Novo Design of Covalent Organic Framework Membranes toward Ultrafast Anion Transport. <i>Advanced Materials</i> , 2020, 32, e2001284.	11.1	130
157	Waterborne Nanocomposites with Enhanced Breakdown Strength for High Energy Storage. <i>ACS Applied Energy Materials</i> , 2020, 3, 9107-9116.	2.5	11
158	Energy storage performance in Dy doped Na <sub>0.425</sub> Bi <sub>0.425</sub> Ca <sub>0.15</sub> TiO <sub>3</sub> Pb-free ceramics. <i>Ceramics International</i> , 2020, 46, 28432-28442.	2.3	13
159	Hierarchical electrode design of highly efficient and stable unitized regenerative fuel cells (URFCs) for long-term energy storage. <i>Energy and Environmental Science</i> , 2020, 13, 4872-4881.	15.6	43
160	Electrochemical studies on wafer-scale synthesized silicon nanowalls for supercapacitor application. <i>Bulletin of Materials Science</i> , 2020, 43, 1.	0.8	2
161	A High-Performance Na-Al Battery Based on Reversible NaAlCl <sub>4</sub> Catholyte. <i>Advanced Energy Materials</i> , 2020, 10, 2001378.	10.2	18
162	Piper longum Extract-Mediated Green Synthesis of Porous Cu <sub>2</sub> O:Mo Microspheres and Their Superior Performance as Active Anode Material in Lithium-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 14557-14567.	3.2	15

#	ARTICLE	IF	CITATIONS
163	Stabilizing Tin Anodes in Sodium-Ion Batteries by Alloying with Silicon. ACS Applied Energy Materials, 2020, 3, 9950-9962.	2.5	23
164	Tuning the A-Site Cation Deficiency of La <sub>0.8</sub> Sr <sub>0.2</sub> FeO <sub>3</sub> Perovskite Oxides for High-Efficiency Triiodide Reduction Reaction in Dye-Sensitized Solar Cells. Energy & Fuels, 2020, 34, 11322-11329.	2.5	14
165	Synthesis of Cu-Doped Mn <sub>3</sub> O <sub>4</sub> @Mn-Doped CuO Nanostructured Electrode Materials by a Solution Process for High-Performance Electrochemical Pseudocapacitors. ACS Omega, 2020, 5, 22356-22366.	1.6	39
166	Ni-Co Double Hydroxide Grown on Graphene Oxide for Enhancing Lithium Ion Storage. Energy & Fuels, 2020, 34, 13032-13037.	2.5	32
167	Visualization and Chemical Characterization of the Cathode Electrolyte Interphase Using He-Ion Microscopy and <i>In Situ</i> Time-of-Flight Secondary Ion Mass Spectrometry. ACS Applied Energy Materials, 2020, 3, 8822-8832.	2.5	16
168	Tungsten disulfide: synthesis and applications in electrochemical energy storage and conversion. Tungsten, 2020, 2, 217-239.	2.0	44
169	Spectroscopic Insights into the Electrochemical Mechanism of Rechargeable Calcium/Sulfur Batteries. Chemistry of Materials, 2020, 32, 8266-8275.	3.2	29
170	Controllable Synthesis of Anatase TiO <sub>2</sub> Nanosheets Grown on Amorphous TiO <sub>2</sub> /C Frameworks for Ultrafast Pseudocapacitive Sodium Storage. ACS Applied Materials & Interfaces, 2020, 12, 43813-43823.	4.0	28
171	Fe-MOF-Derived Efficient ORR/OER Bifunctional Electrocatalyst for Rechargeable Zinc-Air Batteries. ACS Applied Materials & Interfaces, 2020, 12, 44710-44719.	4.0	152
172	3D Hollow rGO Microsphere Decorated with ZnO Nanoparticles as Efficient Sulfur Host for High-Performance Li-S Battery. Nanomaterials, 2020, 10, 1633.	1.9	11
173	Bimetallic tungstate nanoparticle-decorated-lignin electrodes for flexible supercapacitors. Materials Advances, 2020, 1, 2124-2135.	2.6	25
174	Perspective and advanced development of lead-carbon battery for inhibition of hydrogen evolution. Emergent Materials, 2020, 3, 791-805.	3.2	8
175	Annealing Boosts the Supercapacitive Properties of Molybdenum Disulfide Powder. Electroanalysis, 2020, 32, 2642-2649.	1.5	3
176	2D Heterojunction Between Double Perovskite Oxide Nanosheet and Layered Double Hydroxide to Promote Rechargeable Zinc-Air Battery Performance. ChemElectroChem, 2020, 7, 5005-5012.	1.7	19
177	Te-S covalent bond induces 1T&2H MoS <sub>2</sub> with improved potassium-ion storage performance. Nanoscale, 2020, 12, 24463-24470.	2.8	20
178	Round-Trip Efficiency Enhancement of Hybrid Li-Air Battery Enables Efficient Power Generation from Low-Grade Waste Heat. ACS Sustainable Chemistry and Engineering, 2020, 8, 18500-18505.	3.2	6
179	Porous Li-MOF as a solid-state electrolyte: exploration of lithium ion conductivity through bio-inspired ionic channels. Chemical Communications, 2020, 56, 14873-14876.	2.2	18
180	A Feasibility Study of Frequency Regulation Energy Storage System Installation in a Power Plant. Energies, 2020, 13, 5365.	1.6	3

#	ARTICLE	IF	CITATIONS
181	Encapsulation of Co <sub>3</sub> O <sub>4</sub> Nanocone Arrays via Ultrathin NiO for Superior Performance Asymmetric Supercapacitors. <i>Small</i> , 2020, 16, e2005414.	5.2	75
182	A dual-electrolyte aluminum/air microfluidic cell with enhanced voltage, power density and electrolyte utilization via a novel composite membrane. <i>Journal of Power Sources</i> , 2020, 478, 228960.	4.0	10
183	Side by Side Battery Technologies with Lithium-Ion Based Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000089.	10.2	127
184	Understanding mesopore volume-enhanced extra-capacity: Optimizing mesoporous carbon for high-rate and long-life potassium-storage. <i>Energy Storage Materials</i> , 2020, 29, 341-349.	9.5	74
185	Synergistic optimization of thermoelectric performance in earth-abundant Cu <sub>2</sub> ZnSnS <sub>4</sub> by inclusion of graphene nanosheets. <i>Nanotechnology</i> , 2020, 31, 365402.	1.3	13
186	Controlling Fuel Crossover in Open Electrochemical Cells by Tuning the Water Nanochannel for Power Generation. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 8613-8623.	3.2	6
187	Microporous Layers with Different Decorative Patterns for Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 24048-24058.	4.0	33
188	Emerging soluble organic redox materials for next-generation grid energy-storage applications. <i>MRS Communications</i> , 2020, 10, 215-229.	0.8	4
189	Analyses and optimization of electrolyte concentration on the electrochemical performance of iron-chromium flow battery. <i>Applied Energy</i> , 2020, 271, 115252.	5.1	33
190	Improved electrochemical performance of supercapacitors by utilizing ternary Pd-AC-doped NiO nanostructure as an electrode material. <i>Journal of Solid State Electrochemistry</i> , 2020, 24, 1271-1282.	1.2	13
192	Exploring the theoretical and experimental optimization of high-performance triboelectric nanogenerators using microarchitected silk cocoon films. <i>Nano Energy</i> , 2020, 74, 104882.	8.2	58
193	NiMn-Cl Layered Double Hydroxide/Carbon Nanotube Networks for High-Performance Chloride Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 4559-4568.	2.5	47
194	Anchoring Mo single atoms/clusters and N on edge-rich nanoporous holey graphene as bifunctional air electrode in Zn-air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 276, 119172.	10.8	79
195	Integration of operation and design of solar fuel plants: A carbon dioxide to methanol case study. <i>Computers and Chemical Engineering</i> , 2020, 140, 106836.	2.0	6
196	Scalable Synthesis and Kinetic Studies of Carbon Coated Sodium Titanate: A Promising Ultra-low Voltage Anode for Sodium Ion Battery. , 2020, 5, 475-483.		2
197	Protonic ceramic electrolysis cells for fuel production: a brief review. <i>Journal of the Korean Ceramic Society</i> , 2020, 57, 480-494.	1.1	34
198	A study of the techno-economic feasibility of H <sub>2</sub> -based energy storage systems in remote areas. <i>Energy Conversion and Management</i> , 2020, 211, 112768.	4.4	57
199	The design of zinc-substituted cobalt (pyro)phosphates as efficient bifunctional electrocatalysts for zinc-air batteries. <i>Chemical Communications</i> , 2020, 56, 8400-8403.	2.2	6

#	ARTICLE	IF	CITATIONS
200	Synthesis and characterisation of Ag incorporated TiO <sub>2</sub> nanomaterials for supercapacitor applications. <i>Journal of Molecular Structure</i> , 2020, 1219, 128661.	1.8	32
201	Simulation and modeling of a combined biomass gasification-solar photovoltaic hydrogen production system for methanol synthesis via carbon dioxide hydrogenation. <i>Energy Conversion and Management</i> , 2020, 219, 113045.	4.4	43
202	Novel flexible solid-state pseudo-parallel pseudocapacitor with manganese oxide active material synthesized using electrodeposition. <i>Journal of Alloys and Compounds</i> , 2020, 843, 156017.	2.8	23
203	Cucumber-Shaped Construction Combining Bismuth Nanoparticles with Carbon Nanofiber Networks as a Binder-Free and Freestanding Anode for Li-Ion Batteries. <i>Energy &amp; Fuels</i> , 2020, 34, 8987-8992.	2.5	17
204	Hierarchically Structured Nitrogen-Doped Carbon Microspheres for Advanced Potassium Ion Batteries. , 2020, 2, 853-860.		70
205	Perovskite-Based Multifunctional Cathode with Simultaneous Supplementation of Substrates and Electrons for Enhanced Microbial Electrosynthesis of Organics. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 30449-30456.	4.0	24
206	Evolution of 3D Printing Methods and Materials for Electrochemical Energy Storage. <i>Advanced Materials</i> , 2020, 32, e2000556.	11.1	134
207	Existing and new arrangements of pumped-hydro storage plants. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 129, 109914.	8.2	80
208	Charge transfer from perovskite oxide nanosheets to N-doped carbon nanotubes to promote enhanced performance of a zinc-air battery. <i>Chemical Communications</i> , 2020, 56, 8277-8280.	2.2	15
209	Al and Fe-containing Mn-based layered cathode with controlled vacancies for high-rate sodium ion batteries. <i>Nano Energy</i> , 2020, 76, 104997.	8.2	54
210	Fabrication of molybdenum oxycarbide nanoparticles dispersed on nitrogen-doped carbon hollow nanotubes through anion exchange mechanism for enhanced performance in supercapacitor. <i>Journal of Energy Storage</i> , 2020, 27, 101122.	3.9	6
211	Rational Design of Highly Efficient Perovskite Hydroxide for Electrocatalytic Water Oxidation. <i>Inorganic Chemistry</i> , 2020, 59, 4816-4824.	1.9	4
212	Core-Shell Cathode Design with Molybdenum Trioxide as the Electrocatalytic Trapping Layer for High-Energy Density Room-Temperature Sodium Sulfur Batteries. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7615-7623.	1.5	20
213	Modification of spinel-based CoV <sub>2</sub> O <sub>4</sub> materials through Mn substitution as a potential anode material for Li-ion storage. <i>Surface and Coatings Technology</i> , 2020, 389, 125602.	2.2	18
214	NASICON Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> Enables Quasi-Two-Stage Na <sup>+</sup> and Zn <sup>2+</sup> Intercalation for Multivalent Zinc Batteries. <i>Chemistry of Materials</i> , 2020, 32, 3028-3035.	3.2	75
215	Switchable Supercapacitors with Transistor-Like Gating Characteristics (G-Cap). <i>Advanced Functional Materials</i> , 2020, 30, 1910439.	7.8	23
216	Self-assembled RuO <sub>2</sub> @IrO <sub>x</sub> core-shell nanocomposite as high efficient anode catalyst for PEM water electrolyzer. <i>Applied Surface Science</i> , 2020, 514, 145943.	3.1	37
217	Power management control strategy for hybrid energy storage system in a grid-independent hybrid renewable energy system: a hardware-in-loop real-time verification. <i>IET Renewable Power Generation</i> , 2020, 14, 454-465.	1.7	16

#	ARTICLE	IF	CITATIONS
218	Rapid Upcycling of Waste Polyethylene Terephthalate to Energy Storing Disodium Terephthalate Flowers with DFT Calculations. ACS Sustainable Chemistry and Engineering, 2020, 8, 6252-6262.	3.2	43
219	Polypyrrole/Carbon Nanotube Freestanding Electrode with Excellent Electrochemical Properties for High-Performance All-Solid-State Supercapacitors. ACS Omega, 2020, 5, 6441-6451.	1.6	49
220	Artificial Electron Mediator with Nanocubic Architecture Highly Promotes Microbial Electrosynthesis from Carbon Dioxide. ACS Sustainable Chemistry and Engineering, 2020, 8, 6777-6785.	3.2	20
221	Ionic Liquid-Assisted Synthesis of Hierarchical One-Dimensional MoP/NPC for High-Performance Supercapacitor and Electrocatalysis. ACS Sustainable Chemistry and Engineering, 2020, 8, 6343-6351.	3.2	53
222	Renewable energies driven electrochemical wastewater/soil decontamination technologies: A critical review of fundamental concepts and applications. Applied Catalysis B: Environmental, 2020, 270, 118857.	10.8	196
223	Recent progress and emerging challenges of transition metal sulfides based composite electrodes for electrochemical supercapacitive energy storage. Ceramics International, 2020, 46, 14317-14345.	2.3	183
224	Dehydration of Cations Inducing Fast Ion Transfer and High Electrical Capacitance Performance on Graphene Electrode in Aqueous Electrolytes. Industrial & Engineering Chemistry Research, 2020, 59, 5768-5774.	1.8	4
225	Sb&Sb<sub>2</sub>O<sub>3</sub>-enhanced flexible carbon cloth as an advanced self-supporting anode for sodium-ion batteries. New Journal of Chemistry, 2020, 44, 4719-4725.	1.4	10
226	Pseudocapacitance: From Fundamental Understanding to High Power Energy Storage Materials. Chemical Reviews, 2020, 120, 6738-6782.	23.0	1,020
227	Coral-Shaped Bifunctional NiCo<sub>2</sub>O<sub>4</sub> Nanostructure: A Material for Highly Efficient Electrochemical Charge Storage and Electrocatalytic Oxygen Evolution Reaction. ACS Applied Energy Materials, 2020, 3, 6793-6804.	2.5	31
228	Wind can reduce storage-induced emissions at grid scales. Applied Energy, 2020, 276, 115420.	5.1	4
229	Electroactive Covalent Organic Frameworks: Design, Synthesis, and Applications. Advanced Materials, 2020, 32, e2002038.	11.1	148
230	Insights on boosting oxygen evolution reaction performance via boron incorporation into nitrogen-doped carbon electrocatalysts. Applied Surface Science, 2020, 528, 146979.	3.1	18
231	Polymer Template Synthesis of Flexible SiO<sub>2</sub> Nanofibers to Upgrade Composite Electrolytes. ACS Applied Materials & Interfaces, 2020, 12, 31439-31447.	4.0	58
232	Electroanalytical methods and their hyphenated techniques for novel ion battery anode research. Energy and Environmental Science, 2020, 13, 2618-2656.	15.6	29
233	Recent advances in electrolytes for room-temperature sodium-sulfur batteries: A review. Energy Storage Materials, 2020, 31, 352-372.	9.5	80
234	Perspectives on oxygen-based coal conversion towards zero-carbon power generation. Energy, 2020, 196, 117074.	4.5	5
235	An Up-scalable, Infiltration-Based Approach for Improving the Durability of Ni/YSZ Electrodes for Solid Oxide Cells. Journal of the Electrochemical Society, 2020, 167, 024519.	1.3	23

#	ARTICLE	IF	CITATIONS
236	The Development of Vanadyl Phosphate Cathode Materials for Energy Storage Systems: A Review. Chemistry - A European Journal, 2020, 26, 8190-8204.	1.7	21
237	Few-layer WS <sub>2</sub> nanosheets with oxygen-incorporated defect-sulphur entrapped by a hierarchical N, S co-doped graphene network towards advanced long-term lithium storage performances. RSC Advances, 2020, 10, 7134-7145.	1.7	13
238	Microdroplet photofuel cells to harvest high-density energy and dye degradation. Nanoscale Advances, 2020, 2, 1613-1624.	2.2	4
239	The impact of intelligent cyber-physical systems on the decarbonization of energy. Energy and Environmental Science, 2020, 13, 744-771.	15.6	104
240	Rapid prototyping of electrochemical energy storage devices based on two dimensional materials. Current Opinion in Electrochemistry, 2020, 20, 36-45.	2.5	5
241	Construction of flower-like ZnCo <sub>2</sub> S <sub>4</sub> /ZnCo <sub>2</sub> O <sub>4</sub> arrays on Ni foam for high-performance asymmetric supercapacitors. Journal of Materials Science: Materials in Electronics, 2020, 31, 4895-4904.	1.1	12
242	Emerging topics in energy storage based on a large-scale analysis of academic articles and patents. Applied Energy, 2020, 263, 114625.	5.1	42
243	A low temperature unitized regenerative fuel cell realizing 60% round trip efficiency and 10 <sup>4</sup> cycles of durability for energy storage applications. Energy and Environmental Science, 2020, 13, 2096-2105.	15.6	57
244	Improving the Efficiency of PEM Electrolyzers through Membrane-Specific Pressure Optimization. Energies, 2020, 13, 612.	1.6	61
245	Alteration in capacitive performance of Sn-decorated MnO <sub>2</sub> with different crystal structure: An investigation towards the development of high-performance supercapacitor electrode materials. Journal of Energy Storage, 2020, 28, 101281.	3.9	27
246	Lamellar composite membrane with acid-base pair anchored layer-by-layer structure towards highly enhanced conductivity and stability. Journal of Membrane Science, 2020, 602, 117978.	4.1	32
247	Rational Design of a Laminated Dual-Polymer/Polymer-Ceramic Composite Electrolyte for High-Voltage All-Solid-State Lithium Batteries. , 2020, 2, 317-324.		59
248	Scalable Route to Electroactive and Light Active Perylene Diimide Dye Polymer Binder for Lithium-Ion Batteries. ACS Applied Energy Materials, 2020, 3, 2271-2277.	2.5	21
249	An aqueous manganese-lead battery for large-scale energy storage. Journal of Materials Chemistry A, 2020, 8, 5959-5967.	5.2	29
250	A Boron Nitride Nanosheets Composite Membrane for a Long-Life Zinc-Based Flow Battery. Angewandte Chemie, 2020, 132, 6781-6785.	1.6	4
251	Interfacial Design of Dendrite-Free Zinc Anodes for Aqueous Zinc-Ion Batteries. Angewandte Chemie, 2020, 132, 13280-13291.	1.6	40
252	Interfacial Design of Dendrite-Free Zinc Anodes for Aqueous Zinc-Ion Batteries. Angewandte Chemie - International Edition, 2020, 59, 13180-13191.	7.2	727
253	A solid-solid phase change material based on dynamic ion cross-linking with reprocessability at room temperature. Chemical Engineering Journal, 2020, 390, 124586.	6.6	107

#	ARTICLE	IF	CITATIONS
254	S- and N-doped graphene-based catalysts for the oxygen evolution reaction. <i>Electrochimica Acta</i> , 2020, 340, 135975.	2.6	16
255	Composites of Sb <sub>2</sub> O <sub>4</sub> and Biomass-Derived Mesoporous Disordered Carbon as Versatile Anodes for Sodium-Ion Batteries. <i>ChemistrySelect</i> , 2020, 5, 1846-1857.	0.7	7
256	Membraneless energy conversion and storage using immiscible electrolyte solutions. <i>Current Opinion in Electrochemistry</i> , 2020, 21, 100-108.	2.5	22
257	Novel bi-functional electrocatalysts based on the electrochemical synthesized bimetallic metal organic frameworks: Towards high energy advanced reversible zinc-air batteries. <i>Journal of Power Sources</i> , 2020, 451, 227768.	4.0	68
258	Realization of an Asymmetric Non-Aqueous Redox Flow Battery through Molecular Design to Minimize Active Species Crossover and Decomposition. <i>Chemistry - A European Journal</i> , 2020, 26, 5369-5373.	1.7	46
259	Spatially confined synthesis of a flexible and hierarchically porous three-dimensional graphene/FeP hollow nanosphere composite anode for highly efficient and ultrastable potassium ion storage. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3369-3378.	5.2	58
260	Recent advances in the interface design of solid-state electrolytes for solid-state energy storage devices. <i>Materials Horizons</i> , 2020, 7, 1246-1278.	6.4	46
261	Redox-ambitious route to boost energy and capacity retention of pouch type asymmetric solid-state supercapacitor fabricated with graphene oxide-based battery-type electrodes. <i>Applied Materials Today</i> , 2020, 19, 100563.	2.3	12
262	A Low-Cost Durable Na <sub>2</sub> FeCl <sub>2</sub> Battery with Ultrahigh Rate Capability. <i>Advanced Energy Materials</i> , 2020, 10, 1903472.	10.2	30
263	Tetrapyrrophenazine/graphene composites for aqueous hybrid flow battery anodes with long cycle life. <i>Carbon</i> , 2020, 161, 309-315.	5.4	11
264	A Boron Nitride Nanosheets Composite Membrane for a Long-Life Zinc-Based Flow Battery. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 6715-6719.	7.2	67
265	Design and synthesis of novel binuclear ferrocenyl-intercalated graphene oxide and polyaniline nanocomposite for supercapacitor applications. <i>Electrochimica Acta</i> , 2020, 342, 136078.	2.6	23
266	Low-loading IrO <sub>2</sub> supported on Pt for catalysis of PEM water electrolysis and regenerative fuel cells. <i>Applied Catalysis B: Environmental</i> , 2020, 272, 118955.	10.8	43
267	Co nanoparticles coupling induced high catalytic activity of nitrogen doped carbon towards hydrogen evolution reaction in acidic/alkaline solutions. <i>Electrochimica Acta</i> , 2020, 342, 136076.	2.6	14
268	A novel fast capacity estimation method based on current curves of parallel-connected cells for retired lithium-ion batteries in second-use applications. <i>Journal of Power Sources</i> , 2020, 459, 227901.	4.0	32
269	Electrochemical synthesis of titanium nitride nanoparticles onto titanium foil for electrochemical supercapacitors with ultrafast charge/discharge. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2480-2490.	2.5	34
270	Soft X-ray Absorption Spectroscopic Investigation of Li(Ni <sub>0.8</sub> Co <sub>0.1</sub> Mn <sub>0.1</sub> )O <sub>2</sub> Cathode Materials. <i>Nanomaterials</i> , 2020, 10, 759.	1.9	9
271	Promotion of oxygen reduction and evolution by applying a nanoengineered hybrid catalyst on cobalt free electrodes for solid oxide cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 9039-9048.	5.2	22

#	ARTICLE	IF	CITATIONS
272	Effect of molten salts on the structure, morphology and electrical conductivity of PET-derived carbon nanostructures. <i>Polymer Degradation and Stability</i> , 2020, 177, 109184.	2.7	38
273	The dodecahedral Nitrogen-doped carbon coated ZnO composite derived from zeolitic inidazolate framework-8 with excellent cycling performance for zinc based rechargeable batteries. <i>Journal of Power Sources</i> , 2020, 463, 228193.	4.0	21
274	Conversion of a microwave synthesized alkali-metal MOF to a carbonaceous anode for Li-ion batteries. <i>RSC Advances</i> , 2020, 10, 13732-13736.	1.7	10
275	An iron-based polyanionic cathode for potassium storage with high capacity and excellent cycling stability. <i>Journal of Materials Chemistry A</i> , 2020, 8, 9128-9136.	5.2	33
276	Ni-Doped magnesium manganese oxide as a cathode and its application in aqueous magnesium-ion batteries with high rate performance. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 2168-2177.	3.0	23
277	Phase Transition Mechanism for Crystalline Aromatic Dicarboxylate in Li <sup>+</sup> Intercalation. <i>Chemistry of Materials</i> , 2020, 32, 3396-3404.	3.2	16
278	Highly active Fe <sub>7</sub> S <sub>8</sub> encapsulated in N-doped hollow carbon nanofibers for high-rate sodium-ion batteries. <i>Journal of Energy Chemistry</i> , 2021, 53, 26-35.	7.1	59
279	Design of Large-Scale Rectangular Cells for Rechargeable Seawater Batteries. <i>Advanced Sustainable Systems</i> , 2021, 5, .	2.7	17
280	Achieving a nearly zero energy structure by a novel framework including energy recovery and conversion, carbon capture and demand response. <i>Energy and Buildings</i> , 2021, 230, 110563.	3.1	28
281	Novel design of TiO <sub>2</sub> goober structure/microcone array photoanode for fiber-type dye-sensitized solar cell: Effect of peanut growth duration and TiO <sub>2</sub> precursor concentration. <i>Journal of Power Sources</i> , 2021, 482, 228954.	4.0	4
282	Renewable hydrogen production by dark-fermentation: Current status, challenges and perspectives. <i>Bioresource Technology</i> , 2021, 321, 124354.	4.8	135
283	Electrosynthesis of Ni/Al layered double hydroxide and reduced graphene oxide composites for the development of hybrid capacitors. <i>Electrochimica Acta</i> , 2021, 365, 137294.	2.6	19
284	Synergistic effects in oxygen evolution activity of mixed iridium-ruthenium pyrochlores. <i>Electrochimica Acta</i> , 2021, 366, 137327.	2.6	17
285	High energy storage density realized in Bi <sub>0.5</sub> Na <sub>0.5</sub> TiO <sub>3</sub> -based relaxor ferroelectric ceramics at ultralow sintering temperature. <i>Journal of the European Ceramic Society</i> , 2021, 41, 368-375.	2.8	39
286	Interlayer Space Engineering of MXenes for Electrochemical Energy Storage Applications. <i>Chemistry - A European Journal</i> , 2021, 27, 1921-1940.	1.7	45
287	Porous Co-MoS <sub>2</sub> @Cu <sub>2</sub> MoS <sub>4</sub> three-dimensional nanoflowers via in situ sulfurization of Cu <sub>2</sub> O nanospheres for electrochemical hybrid capacitors. <i>Chemical Engineering Journal</i> , 2021, 403, 126319.	6.6	21
288	Metal Ti quantum chain-inlaid 2D NaSn <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /H-doped hard carbon hybrid electrodes with ultrahigh energy storage density. <i>Chemical Engineering Journal</i> , 2021, 403, 126311.	6.6	14
289	Nanostructured MnCo <sub>2</sub> O <sub>4</sub> as a high-performance electrode for supercapacitor application. <i>Ionics</i> , 2021, 27, 325-337.	1.2	40

#	ARTICLE	IF	CITATIONS
290	Chemically stable anion exchange membranes based on C2-Protected imidazolium cations for vanadium flow battery. <i>Journal of Membrane Science</i> , 2021, 618, 118696.	4.1	48
291	Engineering stable Zn-MnO <sub>2</sub> batteries by synergistic stabilization between the carbon nanofiber core and birnessite-MnO <sub>2</sub> nanosheets shell. <i>Chemical Engineering Journal</i> , 2021, 405, 126969.	6.6	74
292	Anion-mediated transition metal electrocatalysts for efficient water electrolysis: Recent advances and future perspectives. <i>Coordination Chemistry Reviews</i> , 2021, 427, 213552.	9.5	66
293	Enhanced lithiation dynamics in nanostructured Nb <sub>18</sub> W <sub>16</sub> O <sub>93</sub> anodes. <i>Journal of Power Sources</i> , 2021, 482, 228898.	4.0	15
294	An overview and prospective on Al and Al-ion battery technologies. <i>Journal of Power Sources</i> , 2021, 481, 228870.	4.0	130
295	Critical review of energy storage systems. <i>Energy</i> , 2021, 214, 118987.	4.5	359
296	Low loading of Pt@Graphite felt for enhancing multifunctional activity towards achieving high energy efficiency of Zn <sup>2+</sup> /Br <sub>2</sub> redox flow battery. <i>Journal of Power Sources</i> , 2021, 482, 228912.	4.0	21
297	Highly conductive and vanadium sieving Microporous Tröger's Base Membranes for vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2021, 620, 118832.	4.1	48
298	New strategy for increasing sodium-ion uptake in silicon oxycarbides. <i>Chemical Engineering Journal</i> , 2021, 404, 126520.	6.6	14
299	Identification of highly active surface iron sites on Ni(OOH) for the oxygen evolution reaction by atomic layer deposition. <i>Journal of Catalysis</i> , 2021, 394, 476-485.	3.1	8
300	1T-Phase MoS <sub>2</sub> with large layer spacing supported on carbon cloth for high-performance Na <sup>+</sup> storage. <i>Journal of Colloid and Interface Science</i> , 2021, 583, 579-585.	5.0	65
301	Temperature optimization for improving polymer electrolyte membrane-water electrolysis system efficiency. <i>Applied Energy</i> , 2021, 283, 116270.	5.1	55
302	Polymer chemistry underpinning materials for triboelectric nanogenerators (TENGs): Recent trends. <i>European Polymer Journal</i> , 2021, 142, 110163.	2.6	37
303	Excellent stability and electrochemical performance of the electrolyte with indium ion for iron <sup>2+</sup> /chromium flow battery. <i>Electrochimica Acta</i> , 2021, 368, 137524.	2.6	20
304	Advanced poly(vinyl pyrrolidone) decorated chlorinated polyvinyl chloride membrane with low area resistance for vanadium flow battery. <i>Journal of Membrane Science</i> , 2021, 620, 118947.	4.1	16
305	A vision of European biogas sector development towards 2030: Trends and challenges. <i>Journal of Cleaner Production</i> , 2021, 287, 125065.	4.6	81
306	Preparation of Hierarchical Porous Activated Carbon from Banana Leaves for High-performance Supercapacitor: Effect of Type of Electrolytes on Performance. <i>Chemistry - an Asian Journal</i> , 2021, 16, 296-308.	1.7	88
307	Probing local electrochemistry via mechanical cyclic voltammetry curves. <i>Nano Energy</i> , 2021, 81, 105592.	8.2	23

#	ARTICLE	IF	CITATIONS
308	Nickel cobalt bimetallic metal-organic frameworks with a layer-and-channel structure for high-performance supercapacitors. <i>Journal of Energy Storage</i> , 2021, 33, 102149.	3.9	35
309	A high-performance aqueous iron-hydrogen gas battery. <i>Materials Today Energy</i> , 2021, 19, 100603.	2.5	13
310	Techno-economic analysis of a sustainable process for converting CO <sub>2</sub> and H <sub>2</sub> O to feedstock for fuels and chemicals. <i>Sustainable Energy and Fuels</i> , 2021, 5, 486-500.	2.5	13
311	Low carbon hydrogen production from a waste-based biorefinery system and environmental sustainability assessment. <i>Green Chemistry</i> , 2021, 23, 561-574.	4.6	90
312	Bio-Derived Materials Achieving High Performance in Alkali Metal-Chalcogen Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2008354.	7.8	13
313	Two-Dimensional Siloxene-Graphene Heterostructure-Based High-Performance Supercapacitor for Capturing Regenerative Braking Energy in Electric Vehicles. <i>Advanced Functional Materials</i> , 2021, 31, 2008422.	7.8	121
314	Biomimetic [MoO <sub>3</sub> @ZnO] semiconducting nanocomposites: Chemo-proportional fabrication, characterization and energy storage potential exploration. <i>Renewable Energy</i> , 2021, 167, 568-579.	4.3	39
315	Modified H <sub>2</sub> V <sub>3</sub> O <sub>8</sub> to Enhance the Electrochemical Performance for Li-ion Insertion: The Influence of Prelithiation and Mo-Substitution. <i>ChemSusChem</i> , 2021, 14, 1112-1121.	3.6	11
316	High energy efficiency of Al-based anodes for Al-air battery by simultaneous addition of Mn and Sb. <i>Chemical Engineering Journal</i> , 2021, 417, 128006.	6.6	51
317	Hybrid water electrolysis: Replacing oxygen evolution reaction for energy-efficient hydrogen production and beyond. <i>Materials Reports Energy</i> , 2021, 1, 100004.	1.7	27
318	Fabrication of Pressure-Responsive Energy Device from Nanofluidic Vanadium Pentoxide and Polymeric Hydrogel. <i>ACS Applied Electronic Materials</i> , 2021, 3, 277-284.	2.0	8
319	Recent development of Na metal anodes: Interphase engineering chemistries determine the electrochemical performance. <i>Chemical Engineering Journal</i> , 2021, 409, 127943.	6.6	38
320	Stable Lithium Storage at Subzero Temperatures for High-capacity Co <sub>3</sub> O <sub>4</sub> @graphene Composite Anodes. <i>ChemNanoMat</i> , 2021, 7, 61-70.	1.5	19
321	Energy storage properties of bismuth ferrite based ternary relaxor ferroelectric ceramics through a viscous polymer process. <i>Chemical Engineering Journal</i> , 2021, 412, 127555.	6.6	111
322	Projected material requirements for the global electricity infrastructure – generation, transmission and storage. <i>Resources, Conservation and Recycling</i> , 2021, 164, 105200.	5.3	35
323	Lithium polyacrylate polymer coating enhances the performance of graphite/silicon/carbon composite anodes. <i>Electrochimica Acta</i> , 2021, 365, 137387.	2.6	13
324	Amalgamation of MnWO <sub>4</sub> nanorods with amorphous carbon nanotubes for highly stabilized energy efficient supercapacitor electrodes. <i>Dalton Transactions</i> , 2021, 50, 5327-5341.	1.6	23
325	Renewable Energy Powered Membrane Technology: Electrical Energy Storage Options for a Photovoltaic-Powered Brackish Water Desalination System. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 856.	1.3	3

#	ARTICLE	IF	CITATIONS
326	Porous N self-doped carbon materials for high-performance supercapacitors via nanosized silica template combined with pyrolysis method. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 2774-2783.	1.1	2
328	Highly efficient ammonia synthesis at low temperature over a Ru-Co catalyst with dual atomically dispersed active centers. <i>Chemical Science</i> , 2021, 12, 7125-7137.	3.7	35
329	N-Induced Electron Transfer Effect on Low-Temperature Activation of Nitrogen for Ammonia Synthesis over Co-Based Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 1529-1539.	3.2	11
330	Kinetics of competing exchange of oxygen and water at the surface of functional oxides. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 2805-2811.	1.3	8
331	Dielectric polymers for high-temperature capacitive energy storage. <i>Chemical Society Reviews</i> , 2021, 50, 6369-6400.	18.7	262
332	Bidirectional energy & fuel production using RTO-supported-Pt-IrO <sub>2</sub> loaded fixed polarity unitized regenerative fuel cells. <i>Sustainable Energy and Fuels</i> , 2021, 5, 2734-2746.	2.5	5
333	Hybrid dual-function thermal energy harvesting and storage technologies: towards self-chargeable flexible/wearable devices. <i>Dalton Transactions</i> , 2021, 50, 9983-10013.	1.6	13
334	The importance of green mobility. , 2021, , 345-391.		1
335	Multiresponsive Supercapacitor for Future Energy Storage Applications. , 2021, , .		1
336	Nanotechnology for Electrical Energy Systems. , 2021, , 1679-1701.		0
337	High-power graphene supercapacitors for the effective storage of regenerative energy during the braking and deceleration process in electric vehicles. <i>Materials Chemistry Frontiers</i> , 2021, 5, 6200-6211.	3.2	41
338	Molecular redox species for next-generation batteries. <i>Chemical Society Reviews</i> , 2021, 50, 5863-5883.	18.7	53
339	Addressing energy storage needs at lower cost <i>via</i> on-site thermal energy storage in buildings. <i>Energy and Environmental Science</i> , 2021, 14, 5315-5329.	15.6	46
340	A highly reversible zinc deposition for flow batteries regulated by critical concentration induced nucleation. <i>Energy and Environmental Science</i> , 2021, 14, 4077-4084.	15.6	58
341	A renewable future: a comprehensive perspective from materials to systems for next-generation batteries. <i>Materials Chemistry Frontiers</i> , 2021, 5, 3344-3377.	3.2	11
342	Metal-organic-framework derived hollow manganese nickel selenide spheres confined with nanosheets on nickel foam for hybrid supercapacitors. <i>Dalton Transactions</i> , 2021, 50, 8372-8384.	1.6	42
343	Unravelling kinetic and mass transport effects on two-electron storage in radical polymer batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 13071-13079.	5.2	21
344	Biomass Derived High Areal and Specific Capacity Hard Carbon Anodes for Sodium-Ion Batteries. <i>Energy &amp; Fuels</i> , 2021, 35, 1820-1830.	2.5	18

#	ARTICLE	IF	CITATIONS
345	Oxide-based Cathode Materials for Li- and Na-ion Batteries. <i>New Developments in NMR</i> , 2021, , 159-210.	0.1	0
346	A closed-loop regeneration of $\text{LiNi}_{0.6}\text{Co}_{0.2}\text{Mn}_{0.2}\text{O}_2$ and graphite from spent batteries <i>via</i> efficient lithium supplementation and structural remodelling. <i>Sustainable Energy and Fuels</i> , 2021, 5, 4981-4991.	2.5	21
347	Insights into the electric double-layer capacitance of two-dimensional electrically conductive metal-organic frameworks. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16006-16015.	5.2	31
348	Recent developments in chemical energy storage. , 2021, , 447-494.		2
349	Characteristics of Electrochemical Energy Storage Materials in Light of Advanced Characterization Techniques. , 2021, , .		0
350	Redox Flow Batteries. , 2022, , 176-185.		2
351	Ion-selective PEDOT:PSS-decorated separator as a potential polysulfide immobilizer for lithium-sulfur batteries. <i>Ionics</i> , 2021, 27, 1087-1099.	1.2	17
352	Li-S ion batteries: a substitute for Li-ion storage batteries. , 2021, , 335-371.		2
353	Niobium pentoxide based materials for high rate rechargeable electrochemical energy storage. <i>Materials Horizons</i> , 2021, 8, 1130-1152.	6.4	51
354	Nitrogen-Doped Microporous Carbons Synthesized from Indole-Based Copolymer Spheres for Supercapacitors and Metal-Free Electrocatalysis. <i>Energy &amp; Fuels</i> , 2021, 35, 2785-2794.	2.5	10
355	Optimal energy storage portfolio for high and ultrahigh carbon-free and renewable power systems. <i>Energy and Environmental Science</i> , 2021, 14, 5132-5146.	15.6	46
356	A hybrid plasma electrocatalytic process for sustainable ammonia production. <i>Energy and Environmental Science</i> , 2021, 14, 865-872.	15.6	164
357	Trust is good, control is better: a review on monitoring and characterization techniques for flow battery electrolytes. <i>Materials Horizons</i> , 2021, 8, 1866-1925.	6.4	45
358	CHAPTER 4. 3D Graphene-based Materials for Enhancing the Energy Density of Sodium Ion Batteries. <i>Chemistry in the Environment</i> , 2021, , 86-114.	0.2	0
359	Microcapsules composed of stearic acid core and polyethylene glycol-based shell as a microcapsule phase change material. <i>International Journal of Energy Research</i> , 2021, 45, 9677-9684.	2.2	22
360	Synthesis of Novel $\text{NiFe}_2\text{O}_4/\text{Fe}_3\text{O}_4$ Nanotube arrays as flexible negative electrodes for Supercapacitor Applications. <i>IOP Conference Series: Earth and Environmental Science</i> , 0, 639, 012029.	0.2	0
361	An insight into the effect of g-C <sub>3</sub> N <sub>4</sub> support on the enhanced performance of ZnS nanoparticles as anode material for lithium-ion and sodium-ion batteries. <i>Electrochimica Acta</i> , 2021, 370, 137715.	2.6	33
362	Next-Generation Materials for Energy Storage and Conversion. <i>Materials</i> , 2021, 14, 696.	1.3	1

#	ARTICLE	IF	CITATIONS
363	Thermodynamic analysis and perspective of aqueous metal-sulfur batteries. <i>Materials Today</i> , 2021, 49, 184-200.	8.3	31
364	Recent Advances in Membrane-Based Electrochemical Hydrogen Separation: A Review. <i>Membranes</i> , 2021, 11, 127.	1.4	39
365	Development of titanium 3D mesh interlayer for enhancing the electrochemical performance of zinc-bromine flow battery. <i>Scientific Reports</i> , 2021, 11, 4508.	1.6	15
366	Harnessing Interfacial Electron Transfer in Redox Flow Batteries. <i>Joule</i> , 2021, 5, 360-378.	11.7	32
367	Toward predictive permeabilities: Experimental measurements and multiscale simulation of methanol transport in Nafion. <i>Journal of Polymer Science</i> , 2021, 59, 594-613.	2.0	6
368	Capacitive Load-Based Smart OTF for High Power Rated SPV Module. <i>Energies</i> , 2021, 14, 788.	1.6	6
369	Faradaic Quantized Capacitance as an Ideal Pseudocapacitive Mechanism. <i>Journal of Physical Chemistry C</i> , 2021, 125, 4343-4354.	1.5	7
370	Pseudocapacitive MoOx anode material with super-high rate and ultra-long cycle properties for aqueous zinc ion batteries. <i>Journal of Electroanalytical Chemistry</i> , 2021, 882, 115033.	1.9	11
371	Comparison of electrochemical response and electric field emission characteristics of pristine La <sub>2</sub> NiO <sub>4</sub> and La <sub>2</sub> NiO <sub>4</sub> /CNT composites: Origin of multi-functionality with theoretical penetration by density functional theory. <i>Electrochimica Acta</i> , 2021, 369, 137676.	2.6	15
372	An Overview on Functional Integration of Hybrid Renewable Energy Systems in Multi-Energy Buildings. <i>Energies</i> , 2021, 14, 1078.	1.6	29
373	Tunable Lithium-Ion Transport in Mixed-Halide Argyrodites Li <sub>6</sub> PS <sub>5</sub> ClBr: An Unusual Compositional Space. <i>Chemistry of Materials</i> , 2021, 33, 1435-1443.	3.2	78
374	Lithium-Ion Capacitors: A Review of Design and Active Materials. <i>Energies</i> , 2021, 14, 979.	1.6	41
375	Significant life extension of lithium-ion batteries using compact metallic lithium reservoir with passive control. <i>Electrochimica Acta</i> , 2021, 370, 137777.	2.6	10
376	Grid-Aware Layout of Photovoltaic Panels in Sustainable Building Energy Systems. <i>Frontiers in Energy Research</i> , 2021, 8, .	1.2	12
377	Low-Resistance Mechanism of Nanoflake Crystalline Aromatic Dicarboxylates with Selective Defects for Safe and Fast Charging Negative Electrodes. <i>ACS Nano</i> , 2021, 15, 2719-2729.	7.3	1
378	Organic Materials as Electrodes in Potassium-Ion Batteries. <i>Chemistry - A European Journal</i> , 2021, 27, 6131-6144.	1.7	83
379	Battery storage systems integrated renewable energy sources: A bibliometric analysis towards future directions. <i>Journal of Energy Storage</i> , 2021, 35, 102296.	3.9	66
380	Disodium Rhodizonate/Reduced Graphene Oxide-Sodium Alginate Composite as a Cathode Material for Sodium-ion Batteries with High Cyclic Performance. <i>International Journal of Electrochemical Science</i> , 0, , 210361.	0.5	0

#	ARTICLE	IF	CITATIONS
381	High Performance Iron Electrodes with Metal Sulfide Additives. <i>Journal of the Electrochemical Society</i> , 2021, 168, 030518.	1.3	8
382	Ni <sub>0.85</sub> Se/MoSe <sub>2</sub> Interfacial Structure: An Efficient Electrocatalyst for Alkaline Hydrogen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 2828-2837.	2.5	60
383	Methanation of CO <sub>2</sub> and CO by (Ni,Mg,Al)-Hydrotalcite-Derived and Related Catalysts with Varied Magnesium and Aluminum Oxide Contents. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 5114-5123.	1.8	17
384	Single-Step Fabrication of a Multiscale Porous Catalyst Layer by the Emulsion Template Method for Low Pt-Loaded Proton Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 4012-4020.	2.5	11
385	Sustainable Battery Materials for Next-Generation Electrical Energy Storage. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000102.	2.8	52
386	Amphiphilic Ti porous transport layer for highly effective PEM unitized regenerative fuel cells. <i>Science Advances</i> , 2021, 7, .	4.7	16
387	Enhanced energy storage properties of ZrO <sub>2</sub> -doped (Na <sub>0.5</sub> Bi <sub>0.5</sub> ) <sub>0.4</sub> Sr <sub>0.6</sub> TiO <sub>3</sub> Pb-free relaxor ferroelectric ceramics. <i>Ceramics International</i> , 2021, 47, 8545-8554.	2.3	12
388	Performance analysis of a novel hybrid power generation system integrated diesel generator with compressed heat energy storage. <i>International Journal of Green Energy</i> , 2021, 18, 879-895.	2.1	1
389	LiFePO <sub>4</sub> -ferri/ferrocyanide redox targeting aqueous posolyte: Set-up, efficiency and kinetics. <i>Journal of Power Sources</i> , 2021, 488, 229387.	4.0	10
390	Polymer Membranes for All-Vanadium Redox Flow Batteries: A Review. <i>Membranes</i> , 2021, 11, 214.	1.4	32
391	Investigation of the Negative Process as the Limiting Factor of Vanadium Flow Battery. <i>Energy Technology</i> , 2021, 9, 2100086.	1.8	0
392	Multifactor Effects on the Thermal Performances of Molten-Salt Solid-State Lithium-Ion Batteries: A Numerical Study. <i>Energy &amp; Fuels</i> , 2021, 35, 5360-5371.	2.5	6
393	Structural tuning of heterogeneous molecular catalysts for electrochemical energy conversion. <i>Science Advances</i> , 2021, 7, .	4.7	48
394	Hydroxyl-Boosted Nitrogen Reduction Reaction: The Essential Role of Surface Hydrogen in Functionalized MXenes. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 14283-14290.	4.0	34
395	Physical design, techno-economic analysis and optimization of distributed compressed air energy storage for renewable energy integration. <i>Journal of Energy Storage</i> , 2021, 35, 102268.	3.9	25
396	Evaluating ZEBRA Battery Module under the Peak-Shaving Duty Cycles. <i>Materials</i> , 2021, 14, 2280.	1.3	12
397	Pure carbon-based electrodes for metal-ion batteries. <i>Carbon Trends</i> , 2021, 3, 100035.	1.4	10
398	Boost of Charge Storage Performance of Graphene Nanowall Electrodes by Laser-Induced Crystallization of Metal Oxide Nanostructures. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 17957-17970.	4.0	10

#	ARTICLE	IF	CITATIONS
399	Comparison of the heteroatoms-doped biomass-derived carbon prepared by one-step nitrogen-containing activator for high performance supercapacitor. <i>Diamond and Related Materials</i> , 2021, 114, 108316.	1.8	41
400	Optimization and service lifetime prediction of hydro-wind power complementary system. <i>Journal of Cleaner Production</i> , 2021, 291, 125983.	4.6	15
401	Enhanced pseudocapacitive performances of eco-friendly co-precipitated Fe-doped cerium oxide nanoparticles. <i>Ceramics International</i> , 2021, 47, 21988-21995.	2.3	9
402	Research and analysis of performance improvement of vanadium redox flow battery in microgrid: A technology review. <i>International Journal of Energy Research</i> , 2021, 45, 14170-14193.	2.2	47
403	Strategies to Boost Ionic Conductivity and Interface Compatibility of Inorganic - Organic Solid Composite Electrolytes. <i>Energy Storage Materials</i> , 2021, 36, 291-308.	9.5	82
404	Aqueous Rechargeable Zn <sup>2+</sup> /ion Batteries: Strategies for Improving the Energy Storage Performance. <i>ChemSusChem</i> , 2021, 14, 1987-2022.	3.6	59
405	W18O49 nanowires-graphene nanocomposite for asymmetric supercapacitors employing AlCl <sub>3</sub> aqueous electrolyte. <i>Chemical Engineering Journal</i> , 2021, 409, 128216.	6.6	72
406	Bi <sub>0.5</sub> Na <sub>0.5</sub> TiO <sub>3</sub> –Sr <sub>0.85</sub> Bi <sub>0.1</sub> TiO <sub>3</sub> ceramics with high energy storage properties and extremely fast discharge speed via regulating relaxation temperature. <i>Ceramics International</i> , 2021, 47, 11294-11303.	2.3	27
407	Experimental Study of Parametric Dependency of ZnO Nanorods-based Vibration Sensor. <i>IETE Journal of Research</i> , 2023, 69, 3616-3624.	1.8	1
408	Study of Massive Floating Solar Panels over Lake Nasser. <i>Journal of Energy</i> , 2021, 2021, 1-17.	1.4	16
409	The Position of Ammonia in Decarbonising Maritime Industry: An Overview and Perspectives: Part I. <i>Johnson Matthey Technology Review</i> , 2021, 65, 275-290.	0.5	19
410	Overview of current compressed air energy storage projects and analysis of the potential underground storage capacity in India and the UK. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 139, 110705.	8.2	81
411	Microporous Layer Containing CeO <sub>2</sub> -Doped 3D Graphene Foam for Proton Exchange Membrane Fuel Cells at Varying Operating Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 20201-20212.	4.0	11
412	Binary MnO <sub>2</sub> /Co <sub>3</sub> O <sub>4</sub> Metal Oxides Wrapped on Superaligned Electrospun Carbon Nanofibers as Binder Free Supercapacitor Electrodes. <i>Energy &amp; Fuels</i> , 2021, 35, 8396-8405.	2.5	39
413	Challenges and future perspectives on sodium and potassium ion batteries for grid-scale energy storage. <i>Materials Today</i> , 2021, 50, 400-417.	8.3	161
414	Integration of small-scale compressed air energy storage with wind generation for flexible household power supply. <i>Journal of Energy Storage</i> , 2021, 37, 102430.	3.9	24
415	Structural engineering of sulfur-doped carbon encapsulated bismuth sulfide core-shell structure for enhanced potassium storage performance. <i>Nano Research</i> , 2021, 14, 3545-3551.	5.8	16
416	Preparation and characterization of quantum dot doped polyaniline photoactive film for organic solar cell application. <i>Chemical Physics Letters</i> , 2021, 771, 138517.	1.2	6

#	ARTICLE	IF	CITATIONS
417	Beyond short-duration energy storage. <i>Nature Energy</i> , 2021, 6, 460-461.	19.8	34
418	Iron-iminopyridine complexes as charge carriers for non-aqueous redox flow battery applications. <i>Energy Storage Materials</i> , 2021, 37, 576-586.	9.5	18
419	A Review of Electrospun Carbon Nanofiber-Based Negative Electrode Materials for Supercapacitors. <i>Electrochem</i> , 2021, 2, 236-250.	1.7	21
420	Advanced and Emerging Negative Electrodes for Li-Ion Capacitors: Pragmatism vs. Performance. <i>Energies</i> , 2021, 14, 3010.	1.6	4
421	Improving CHP flexibility by integrating thermal energy storage and power-to-heat technologies into the energy system. <i>Smart Energy</i> , 2021, 2, 100022.	2.6	40
422	Thermal and electrochemical impact of kaolin on a direct carbon fuel cell. <i>Fuel</i> , 2021, 291, 120215.	3.4	3
424	Implication of Non-Uniform Anode Particle Morphology on Lithium-Ion Cell Performance. <i>Journal of the Electrochemical Society</i> , 2021, 168, 050552.	1.3	5
425	Metal-organic frameworks as highly efficient electrodes for long cycling stability supercapacitors. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18179-18206.	3.8	55
426	Structure of Coal-Derived Metal-Supported Few-Layer Graphene Composite Materials Synthesized Using a Microwave-Assisted Catalytic Graphitization Process. <i>Nanomaterials</i> , 2021, 11, 1672.	1.9	8
427	Three-dimensional hybrid carbon nanocomposite-based intelligent composite phase change material with leakage resistance, low electrical resistivity, and high latent heat. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 98, 435-443.	2.9	13
428	Comparative study on optimized round-trip efficiency of pumped thermal and pumped cryogenic electricity storages. <i>Energy Conversion and Management</i> , 2021, 238, 114182.	4.4	4
429	Discrete Coating of CNT on Carbon Fiber Surfaces and the Effect on Improving the Electrochemical Performance of VRFB Systems. <i>Coatings</i> , 2021, 11, 736.	1.2	5
430	An Ultrastable Aqueous Iodine-Hydrogen Gas Battery. <i>Advanced Functional Materials</i> , 2021, 31, 2101024.	7.8	20
431	Doping Strategies in Sb <sub>2</sub> S <sub>3</sub> Thin Films for Solar Cells. <i>Small</i> , 2021, 17, e2100241.	5.2	62
432	Sulfone-containing Conjugated Polyimide 2D Nanosheets for Efficient Water Oxidation. <i>Chemistry - an Asian Journal</i> , 2021, 16, 1979-1987.	1.7	7
433	Recent Progress in Cathode Materials for Sodium-Metal Halide Batteries. <i>Materials</i> , 2021, 14, 3260.	1.3	16
434	Layered double hydroxide membrane with high hydroxide conductivity and ion selectivity for energy storage device. <i>Nature Communications</i> , 2021, 12, 3409.	5.8	94
435	High energy storage density and large strain with ultra-low hysteresis in Mn-doped 0.65Bi0.5Na0.5TiO3-0.35SrTiO3 ceramics. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 17645-17654.	1.1	8

#	ARTICLE	IF	CITATIONS
436	A COMPARISON OF THREE-WAY SYNTHESIS AND CHARACTERIZATION OF REDUCED GRAPHENE OXIDE-SULFUR COMPOSITE. <i>Surface Review and Letters</i> , 2021, 0, 2150088.	0.5	0
437	Modeling electrochemical properties of $\text{LiMn}_{1-x}\text{Co}_x\text{BO}_3$ for cathode materials in lithium-ion rechargeable batteries. <i>Scientific Reports</i> , 2021, 11, 11858.	1.6	2
438	Binder-free thin graphite fiber mat sandwich electrode architectures for energy-efficient vanadium redox flow batteries. <i>Catalysis Today</i> , 2021, 370, 181-188.	2.2	9
439	In situ detection of electrochemical reaction by weak measurement. <i>Optics Express</i> , 2021, 29, 19292.	1.7	3
440	Pd-SnO <sub>2</sub> heterojunction catalysts anchored on graphene sheets for enhanced oxygen reduction. <i>Composites Communications</i> , 2021, 25, 100703.	3.3	19
441	Elevator Regenerative Energy Applications with Ultracapacitor and Battery Energy Storage Systems in Complex Buildings. <i>Energies</i> , 2021, 14, 3259.	1.6	7
442	IR Spectroscopy as a Method for Online Electrolyte State Assessment in RFBs. <i>Advanced Energy Materials</i> , 2021, 11, 2100931.	10.2	9
443	Employing the Dynamics of the Electrochemical Interface in Aqueous Zinc-Ion Battery Cathodes. <i>Advanced Functional Materials</i> , 2021, 31, 2102135.	7.8	34
444	Nitrogen and Oxygen Functionalization of Multi-Walled Carbon Nanotubes for Tuning the Bifunctional Oxygen Reduction/Oxygen Evolution Performance of Supported FeCo Oxide Nanoparticles. <i>ChemElectroChem</i> , 2021, 8, 2803-2816.	1.7	13
445	Which water electrolysis technology is appropriate?: Critical insights of potential water electrolysis for green ammonia production. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 143, 110963.	8.2	26
446	Facile synthesis of copper oxide nanoparticles-decorated polyaniline nanofibers with enhanced electrochemical performance as supercapacitor electrode. <i>Polymers for Advanced Technologies</i> , 2021, 32, 4070-4081.	1.6	20
447	Two-dimensional vermiculite nanosheets-modified porous membrane for non-aqueous redox flow batteries. <i>Journal of Power Sources</i> , 2021, 500, 229987.	4.0	15
448	Enhanced and stabilized charge transport boosting by Fe-doping effect of V <sub>2</sub> O <sub>5</sub> nanorod for rechargeable Zn-ion battery. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 99, 344-351.	2.9	29
449	Engineering Platinum-Cobalt Nano-Alloys in Porous Nitrogen-Doped Carbon Nanotubes for Highly Efficient Electrocatalytic Hydrogen Evolution. <i>Angewandte Chemie</i> , 2021, 133, 19216-19221.	1.6	9
450	Composition manipulation of bis(fluorosulfonyl)imide-based ionic liquid electrolyte for high-voltage graphite//LiNi <sub>0.5</sub> Mn <sub>1.5</sub> O <sub>4</sub> lithium-ion batteries. <i>Chemical Engineering Journal</i> , 2021, 415, 128904.	6.6	21
451	On the deactivation mechanisms of MnO <sub>2</sub> electrocatalyst during operation in rechargeable zinc-air batteries studied via density functional theory. <i>Journal of Alloys and Compounds</i> , 2021, 869, 159280.	2.8	17
452	Recent Progress in Al-, K-, and Zn-Ion Batteries: Experimental and Theoretical Viewpoints. <i>Energy Technology</i> , 2021, 9, 2100382.	1.8	5
453	TES-PD: A Fast and Reliable Numerical Model to Predict the Performance of Thermal Reservoir for Electricity Energy Storage Units. <i>Fluids</i> , 2021, 6, 256.	0.8	3

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454	Rationally Designed Zn-Anode and Co <sub>3</sub> O <sub>4</sub> -Cathode Nanoelectrocatalysts for an Efficient Zn-Air Battery. <i>Energy &amp; Fuels</i> , 2021, 35, 12588-12598.	2.5	9
455	Short-Term Power Forecasting Framework for Microgrids Using Combined Baseline and Regression Models. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 6420.	1.3	1
456	Progresses in Analytical Design of Distribution Grids and Energy Storage. <i>Energies</i> , 2021, 14, 4270.	1.6	3
457	Future directions of material chemistry and energy chemistry. <i>Pure and Applied Chemistry</i> , 2021, 93, 1435-1451.	0.9	0
458	Dynamic Cost-Optimal Assessment of Complementary Diurnal Electricity Storage Capacity in High PV Penetration Grid. <i>Energies</i> , 2021, 14, 4496.	1.6	2
459	Evaluating ammonia as green fuel for power generation: A thermo-chemical perspective. <i>Applied Energy</i> , 2021, 293, 116956.	5.1	43
460	High Capacity, Rate-Capability, and Power Delivery at High-Temperature by an Oxygen-Deficient Perovskite Oxide as Proton Insertion Anodes for Energy Storage Devices. <i>Journal of the Electrochemical Society</i> , 2021, 168, 070540.	1.3	4
461	Synthesis, structure, and selected photocatalytic applications of graphitic carbon nitride: a review. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 18512-18543.	1.1	13
462	In-situ growth of sub-micron tentacle-like polypyrrole on wolfram carbide coated fiberglass cloth for flexible quasi-solid-state supercapacitors. <i>Journal of Electroanalytical Chemistry</i> , 2021, 893, 115332.	1.9	7
463	Synthesis and Characterization of Sr <sub>2</sub> Co <sub>2-x</sub> FexO <sub>5+d</sub> Perovskite Oxides. <i>Microscopy and Microanalysis</i> , 2021, 27, 714-715.	0.2	0
464	High performance of activated carbons prepared from mangosteen ( <i>Garcinia mangostana</i> ) peels using the hydrothermal process. <i>Journal of Energy Storage</i> , 2021, 39, 102577.	3.9	19
465	Is R&D helpful for China's energy technology and engineering industry to respond to external uncertainties?. <i>Energy</i> , 2021, 226, 120332.	4.5	4
466	Engineering Platinum-Cobalt Nanoalloys in Porous Nitrogen-Doped Carbon Nanotubes for Highly Efficient Electrocatalytic Hydrogen Evolution. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 19068-19073.	7.2	149
467	Role of Lithiophilic Metal Sites in Lithium Metal Anodes. <i>Energy &amp; Fuels</i> , 2021, 35, 12746-12752.	2.5	16
468	Challenges in regulating interfacial chemistry of the sodium-metal anode for room-temperature sodium-sulfur batteries. <i>Energy Storage</i> , 2022, 4, e264.	2.3	18
469	Research progress on biomass-derived carbon electrode materials for electrochemical energy storage and conversion technologies. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 26053-26073.	3.8	44
470	Synthesis and Modification of Boron Nitride Nanomaterials for Electrochemical Energy Storage: From Theory to Application. <i>Advanced Functional Materials</i> , 2021, 31, 2106315.	7.8	51
471	Polypyrrole-based emerging and futuristic hybrid nanocomposites. <i>Polymer Bulletin</i> , 2022, 79, 6929-7007.	1.7	9

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472	Generated Value of Electricity Versus Incurred Cost for Solar Arrays under Conditions of High Solar Penetration. <i>Solar</i> , 2021, 1, 4-29.	0.9	0
473	Heterostructural conductive polymer with multi-dimensional carbon materials for capacitive energy storage. <i>Applied Surface Science</i> , 2021, 558, 149910.	3.1	16
474	High-Performance Self-Healing Polyurethane Binder Based on Aromatic Disulfide Bonds and Hydrogen Bonds for the Sulfur Cathode of Lithium-Sulfur Batteries. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 12011-12020.	1.8	10
475	Development of sodium hybrid quasi-solid electrolytes based on porous NASICON and ionic liquids. <i>Journal of the European Ceramic Society</i> , 2021, 41, 7723-7733.	2.8	21
476	Engineering Single Atom Catalysts to Tune Properties for Electrochemical Reduction and Evolution Reactions. <i>Advanced Energy Materials</i> , 2021, 11, 2101670.	10.2	42
477	Insights of the Electrochemical Reversibility of P2-Type Sodium Manganese Oxide Cathodes via Modulation of Transition Metal Vacancies. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 38305-38314.	4.0	13
478	Interfacial water management of gradient microporous layer for self-humidifying proton exchange membrane fuel cells. <i>International Journal of Heat and Mass Transfer</i> , 2021, 175, 121340.	2.5	25
479	Study on Positive Electrode material in Li-ion Battery. , 2021, , .		1
480	Patterned separator membranes with pillar surface microstructures for improved battery performance. <i>Journal of Colloid and Interface Science</i> , 2021, 596, 158-172.	5.0	4
481	Low-crystalline transition metal oxide/hydroxide on MWCNT by Fenton-reaction-inspired green synthesis for lithium ion battery and OER electrocatalysis. <i>Electrochimica Acta</i> , 2021, 387, 138559.	2.6	19
482	Versatile zero- to three-dimensional carbon for electrochemical energy storage. , 2021, 3, 895-915.		41
483	Recent progress of Ni3S2-based nanomaterials in different dimensions for pseudocapacitor application: synthesis, optimization, and challenge. <i>Ionics</i> , 2021, 27, 4573-4618.	1.2	6
484	Inertially enhanced mass transport using 3D-printed porous flow-through electrodes with periodic lattice structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	35
485	Organic-Inorganic Hybrid Polyoxotungstates As Configurable Charge Carriers for High Energy Redox Flow Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 8765-8773.	2.5	17
486	Review of the I <sup>2</sup> /I <sup>3</sup> redox chemistry in Zn-iodine redox flow batteries. <i>Materials Research Bulletin</i> , 2021, 141, 111347.	2.7	24
487	Designing lead-free Barium Strontium Titanate-based weakly coupled relaxor ferroelectric ceramics with simultaneous high energy density and efficiency via Bi <sup>3+</sup> lone pair covalent effect. <i>Ceramics International</i> , 2021, 47, 25785-25793.	2.3	26
488	Synthesis of porous CuCo <sub>2</sub> O <sub>4</sub> nanorods/reduced graphene oxide composites via a facile microwave hydrothermal method for high-performance hybrid supercapacitor applications. <i>Electrochimica Acta</i> , 2021, 390, 138865.	2.6	23
489	Defect engineering assisted support effect: IrO <sub>2</sub> /N defective g-C <sub>3</sub> N <sub>4</sub> composite as highly efficient anode catalyst in PEM water electrolysis. <i>Chemical Engineering Journal</i> , 2021, 419, 129455.	6.6	28

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490	Controllable synthesis of LiNi <sub>1/3</sub> Co <sub>1/3</sub> Mn <sub>1/3</sub> O <sub>2</sub> electrode material via a high shear mixer-assisted precipitation process. <i>Chemical Engineering Journal</i> , 2021, 419, 129281.	6.6	18
491	Power and Energy Rating Considerations in Integration of Flow Battery with Solar PV and Residential Load. <i>Batteries</i> , 2021, 7, 62.	2.1	15
492	Capacitive Charge Storage at the Glassy Carbon Electrode: Comparison Between Aqueous and Non-Aqueous Electrolytes. <i>Journal of the Electrochemical Society</i> , 2021, 168, 100508.	1.3	4
493	Toward the Understanding of the Reaction Mechanism of Zn/MnO <sub>2</sub> Batteries Using Non-alkaline Aqueous Electrolytes. <i>Chemistry of Materials</i> , 2021, 33, 7283-7289.	3.2	27
494	The effect of lithium-excess on Ni-rich LiNi <sub>0.6</sub> Co <sub>0.2</sub> Mn <sub>0.2</sub> O <sub>2</sub> cathode materials prepared by a Taylor flow reactor. <i>Electrochimica Acta</i> , 2021, 391, 138982.	2.6	7
495	High Performance of Anion Exchange Blend Membranes Based on Novel Phosphonium Cation Polymers for All-Vanadium Redox Flow Battery Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 45935-45943.	4.0	4
496	Gradient oxygen vacancies in BiVO <sub>4</sub> olive-seeds nanostructure for electrochemical supercapacitor applications. <i>Materials Chemistry and Physics</i> , 2021, 269, 124737.	2.0	7
497	Simultaneous enhancement of specific capacitance and potential window of graphene-based electric double-layer capacitors using ferroelectric polymers. <i>Journal of Power Sources</i> , 2021, 507, 230268.	4.0	5
498	Energy Management System for Hybrid PV/Wind/Battery/Fuel Cell in Microgrid-Based Hydrogen and Economical Hybrid Battery/Super Capacitor Energy Storage. <i>Energies</i> , 2021, 14, 5722.	1.6	43
499	Enhancement of Bromine Kinetics Using Pt@Graphite Felt and Its Applications in Zn-Br <sub>2</sub> Redox Flow Battery. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090566.	1.3	9
500	Recent progress in nanostructured electrodes for solid oxide fuel cells deposited by spray pyrolysis. <i>Journal of Power Sources</i> , 2021, 507, 230277.	4.0	37
501	Polymer-garnet composite electrolyte based on comb-like structured polymer for lithium-metal batteries. <i>Materials Today Energy</i> , 2021, 21, 100836.	2.5	14
502	An In-Depth Life Cycle Assessment (LCA) of Lithium-Ion Battery for Climate Impact Mitigation Strategies. <i>Energies</i> , 2021, 14, 5555.	1.6	20
503	Progress and innovation of nanostructured sulfur cathodes and metal-free anodes for room-temperature Na-S batteries. <i>Beilstein Journal of Nanotechnology</i> , 2021, 12, 995-1020.	1.5	1
504	A metal-organic framework derived cobalt oxide/nitrogen-doped carbon nanotube nanotentacles on electrospun carbon nanofiber for electrochemical energy storage. <i>Chemical Engineering Journal</i> , 2021, 420, 129679.	6.6	44
506	Passive day and night heating for zero energy buildings with solar-based adsorption thermal battery. <i>Cell Reports Physical Science</i> , 2021, 2, 100578.	2.8	19
507	The differential capacitance as a probe for the electric double layer structure and the electrolyte bulk composition. <i>Journal of Chemical Physics</i> , 2021, 155, 104702.	1.2	16
508	Dispatch Strategies for the Utilisation of Battery Storage Systems in Smart Grid Optimised Buildings. <i>Buildings</i> , 2021, 11, 433.	1.4	1

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509	Effects of in-situ bismuth catalyst electrodeposition on performance of vanadium redox flow batteries. <i>Journal of Power Sources</i> , 2021, 506, 230238.	4.0	29
510	Constructing cycle-stable Si/TiSi <sub>2</sub> composites as anode materials for lithium ion batteries through direct utilization of low-purity Si and Ti-bearing blast furnace slag. <i>Journal of Alloys and Compounds</i> , 2021, 876, 160125.	2.8	20
511	Acacia auriculiformis-derived Bimodal Porous Nanocarbons via Self-Activation for High-Performance Supercapacitors. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	6
512	A neutral polysulfide/ferricyanide redox flow battery. <i>IScience</i> , 2021, 24, 103157.	1.9	26
513	Engineering dual metal single-atom sites with the nitrogen-coordinated nonprecious catalyst for oxygen reduction reaction (ORR) in acidic electrolyte. <i>Applied Surface Science</i> , 2022, 572, 151367.	3.1	35
514	Analysis of the integration of photovoltaic excess into a 5th generation district heating and cooling system for network energy storage. <i>Energy</i> , 2022, 239, 122202.	4.5	24
515	Efficient symmetrical electrodes based on LaCrO <sub>3</sub> via microstructural engineering. <i>Journal of the European Ceramic Society</i> , 2022, 42, 181-192.	2.8	10
516	Tailored $\text{HoFeO}_3 \text{ @ Ho}_2\text{O}_3$ hybrid perovskite nanocomposites as stable anode material for advanced lithium-ion storage. <i>International Journal of Energy Research</i> , 2022, 46, 2051-2063.	2.2	10
517	Assessing capacity loss remediation methods for asymmetric redox flow battery chemistries using leveled cost of storage. <i>Journal of Power Sources</i> , 2021, 506, 230085.	4.0	26
518	Novel rhombus-shaped cerium oxide sheets as a highly durable methanol oxidation electrocatalyst and high-performance supercapacitor electrode material. <i>Ceramics International</i> , 2022, 48, 164-172.	2.3	15
519	Two-Dimensional MXene Modified Electrodes for Improved Anodic Performance in Vanadium Redox Flow Batteries. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090518.	1.3	16
520	Ion shielding functional separator using halloysite containing a negative functional moiety for stability improvement of Li-S batteries. <i>Journal of Energy Chemistry</i> , 2021, 60, 334-340.	7.1	26
521	PAN/lignin and LaMnO <sub>3</sub> -derived hybrid nanofibers for self-standing high-performance energy storage electrode materials. <i>Journal of Materials Science</i> , 2021, 56, 19636-19650.	1.7	10
522	Magnetic-field induced sustainable electrochemical energy harvesting and storage devices: Recent progress, opportunities, and future perspectives. <i>Nano Energy</i> , 2021, 87, 106119.	8.2	29
523	Electrolyte flow optimization and performance metrics analysis of vanadium redox flow battery for large-scale stationary energy storage. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 31952-31962.	3.8	30
524	Imaging Sensor for the Detection of the Flow Battery Via Weak Value Amplification. <i>Analytical Chemistry</i> , 2021, 93, 12914-12920.	3.2	7
525	Sodium Superionic Conductors (NASICONs) as Cathode Materials for Sodium-Ion Batteries. <i>Electrochemical Energy Reviews</i> , 2021, 4, 793-823.	13.1	59
526	Issues and rational design of aqueous electrolyte for Zn-ion batteries. <i>SusMat</i> , 2021, 1, 432-447.	7.8	62

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527	A Novel Solid Solution Mn <sub>1-x</sub> V <sub>x</sub> P Anode with Tunable Alloying/Insertion Hybrid Electrochemical Reaction for High Performance Lithium Ion Batteries. <i>Energy Storage Materials</i> , 2021, 41, 310-320.	9.5	6
528	Synergistic effect of magnetron sputtered silver nano-islands and Co <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> for high performance supercapattery devices. <i>Journal of Electroanalytical Chemistry</i> , 2021, 898, 115612.	1.9	11
529	Combustion characteristics of a single droplet of hydroprocessed vegetable oil blended with aluminum nanoparticles in a drop tube furnace. <i>Fuel</i> , 2021, 302, 121160.	3.4	19
530	Nano-engineering of Ru-based hierarchical porous nanoreactors for highly efficient pH-universal overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2021, 294, 120230.	10.8	49
531	Batteries, compressed air, flywheels, or pumped hydro? Exploring public attitudes towards grid-scale energy storage technologies in Canada and the United Kingdom. <i>Energy Research and Social Science</i> , 2021, 80, 102228.	3.0	4
532	Thermodynamic assessment of cryogenic energy storage (CES) systems in cogeneration regime. <i>Energy Conversion and Management</i> , 2021, 245, 114552.	4.4	5
533	Tailoring the vanadium/proton ratio of electrolytes to boost efficiency and stability of vanadium flow batteries over a wide temperature range. <i>Applied Energy</i> , 2021, 301, 117454.	5.1	54
534	Optimal design of sustainable power-to-fuels supply chains for seasonal energy storage. <i>Energy</i> , 2021, 234, 121300.	4.5	19
535	Recent progress and challenges on the bismuth-based anode for sodium-ion batteries and potassium-ion batteries. <i>Materials Today Physics</i> , 2021, 21, 100486.	2.9	29
536	Solar-assisted lithium metal recovery from spent lithium iron phosphate batteries. <i>Chemical Engineering Journal Advances</i> , 2021, 8, 100163.	2.4	6
537	Interfacial defect engineering via combusted graphene in V <sub>2</sub> O <sub>5</sub> nanochips to develop high-rate and stable zinc-ion batteries. <i>Ceramics International</i> , 2021, 47, 31817-31825.	2.3	13
538	The use of high decomposition temperature materials for chemical looping electricity storage. <i>Chemical Engineering Journal</i> , 2021, 423, 128789.	6.6	7
539	Electric vehicles: To what extent are environmentally friendly and cost effective? “Comparative study by european countries. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 151, 111548.	8.2	33
540	Unfolding the Vanadium Redox Flow Batteries: An indeep perspective on its components and current operation challenges. <i>Journal of Energy Storage</i> , 2021, 43, 103180.	3.9	23
541	A new hierarchically porous Cu-MOF composited with rGO as an efficient hybrid supercapacitor electrode material. <i>Journal of Energy Storage</i> , 2021, 43, 103301.	3.9	29
542	Technologies and economics of electric energy storages in power systems: Review and perspective. <i>Advances in Applied Energy</i> , 2021, 4, 100060.	6.6	77
543	Energy storage selection for sustainable energy development: The multi-criteria utility analysis based on the ideal solutions and integer geometric programming for coordination degree. <i>Environmental Impact Assessment Review</i> , 2021, 91, 106675.	4.4	10
544	Computational design of microarchitected porous electrodes for redox flow batteries. <i>Journal of Power Sources</i> , 2021, 512, 230453.	4.0	23

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545	An optimization framework for planning wayside and on-board hybrid storage systems for tramway applications. <i>Journal of Energy Storage</i> , 2021, 43, 103207.	3.9	16
546	Hydrogen Production, Distribution, Storage and Power Conversion in a Hydrogen Economy - A Technology Review. <i>Chemical Engineering Journal Advances</i> , 2021, 8, 100172.	2.4	170
547	2D titanoniobate-titaniumcarbide nanohybrid anodes for ultrafast lithium-ion batteries. <i>Journal of Power Sources</i> , 2021, 512, 230523.	4.0	5
548	Polymer electrolyte membrane unitized regenerative fuel cells: Operational considerations for achieving high round trip efficiency at low catalyst loading. <i>Applied Catalysis B: Environmental</i> , 2021, 297, 120458.	10.8	14
549	Combined step potential electrochemical spectroscopy and electrochemical impedance spectroscopy analysis of the glassy carbon electrode in an aqueous electrolyte. <i>Electrochimica Acta</i> , 2021, 396, 139220.	2.6	8
550	High performance aqueous Prussian blue analogue-hydrogen gas hybrid batteries. <i>Energy Storage Materials</i> , 2021, 42, 464-469.	9.5	18
551	Fabrication of ZnO/NiO:rGO coated Ni foam binder-free electrode via hydrothermal method for supercapacitor application. <i>Journal of Alloys and Compounds</i> , 2021, 883, 160791.	2.8	34
552	Boosted energy storage via carbon surface passivation. <i>Carbon</i> , 2021, 185, 105-112.	5.4	5
553	Highly controlled synthesis of nanoprickly nickel@nickel oxide formed on carbon black/reduced graphene oxide nanosheets: Charge-storage performance and electrocatalytic activity for methanol oxidation. <i>Journal of Alloys and Compounds</i> , 2021, 886, 161236.	2.8	7
554	Core-double shells heterostructure $\text{Fe}_3\text{O}_4/\text{FeS}_2/\text{C}$ nanocubics with energy level matching double interfaces to boost the oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 885, 160986.	2.8	13
555	Heteroatoms-doped hierarchical porous carbons: Multifunctional materials for effective methylene blue removal and cryogenic hydrogen storage. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 630, 127554.	2.3	33
556	Synergy of solar photovoltaics-wind-battery systems in Australia. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 152, 111693.	8.2	14
557	Engineering solid-electrolyte interface from aqueous deep-eutectic solvent to enhance the capacity and lifetime of self-assembled heterostructures of 1T-MoS <sub>2</sub> /graphene. <i>Chemical Engineering Journal</i> , 2022, 427, 130966.	6.6	16
558	Co-metal-organic framework derived CoSe <sub>2</sub> @MoSe <sub>2</sub> core-shell structure on carbon cloth as an efficient bifunctional catalyst for overall water splitting. <i>Chemical Engineering Journal</i> , 2022, 429, 132379.	6.6	129
559	Solvent-free mechanochemical synthesis of Na-rich Prussian white cathodes for high-performance Na-ion batteries. <i>Chemical Engineering Journal</i> , 2022, 428, 131083.	6.6	33
560	Multidimensional synergistic architecture of Ti <sub>3</sub> C <sub>2</sub> MXene/CoS <sub>2</sub> @N-doped carbon for sodium-ion batteries with ultralong cycle lifespan. <i>Chemical Engineering Journal</i> , 2022, 429, 132396.	6.6	60
561	Electrode and electrolyte regulation to promote coulombic efficiency and cycling stability of aqueous zinc-iodine batteries. <i>Chemical Engineering Journal</i> , 2022, 428, 131283.	6.6	43
562	Evaluation of electrochemical properties of nanostructured metal oxide electrodes immersed in redox-inactive organic media. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 17904-17916.	1.3	2

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563	Energy storage electrochromic devices in the era of intelligent automation. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 14126-14145.	1.3	26
564	Stable cycling of Prussian blue/Zn battery in a nonflammable aqueous/organic hybrid electrolyte. <i>RSC Advances</i> , 2021, 11, 30383-30391.	1.7	8
565	Breakthroughs in Information Technology and Their Implications for Education and Health. <i>Advances in Human and Social Aspects of Technology Book Series</i> , 2021, , 83-95.	0.3	0
566	Battery cost forecasting: a review of methods and results with an outlook to 2050. <i>Energy and Environmental Science</i> , 2021, 14, 4712-4739.	15.6	189
567	Lithium-Ion Batteries. , 2021, , .		2
568	Applications of quantum dots in batteries. , 2021, , 287-318.		1
569	Influence of Battery Energy Storage Systems on Transmission Grid Operation With a Significant Share of Variable Renewable Energy Sources. <i>IEEE Systems Journal</i> , 2022, 16, 1508-1519.	2.9	15
570	Supercapattery: technical challenges and future prospects. , 2021, , 349-377.		2
571	Characterization of the interfacial Li-ion exchange process in a ceramic-polymer composite by solid state NMR. <i>Journal of Materials Chemistry A</i> , 2021, 9, 17812-17820.	5.2	21
572	Electrospun Nanofibers for Energy and Environment Protection. <i>Springer Series on Polymer and Composite Materials</i> , 2021, , 25-52.	0.5	1
573	Structure engineering of van der Waals layered transition metal-containing compounds for aqueous energy storage. <i>Materials Chemistry Frontiers</i> , 2021, 5, 2996-3020.	3.2	4
574	Self-assembled cationic organic nanosheets: role of positional isomers in a guanidinium-core for efficient lithium-ion conduction. <i>Chemical Science</i> , 2021, 12, 13878-13887.	3.7	5
575	Balancing the anode and cathode using a reduced graphene binder for boosting both energy and power density of hybrid supercapacitors. <i>Sustainable Energy and Fuels</i> , 2021, 5, 1988-1994.	2.5	4
576	Tab Design Based on the Internal Distributed Properties in a Zinc-Nickel Single-Flow Battery. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 1434-1451.	1.8	6
577	TEMPO allegro: liquid catholyte redoxmers for nonaqueous redox flow batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16769-16775.	5.2	15
578	Power-to-methanol process: a review of electrolysis, methanol catalysts, kinetics, reactor designs and modelling, process integration, optimisation, and techno-economics. <i>Sustainable Energy and Fuels</i> , 2021, 5, 3490-3569.	2.5	41
579	Can sustainable ammonia synthesis pathways compete with fossil-fuel based Haber-Bosch processes?. <i>Energy and Environmental Science</i> , 2021, 14, 2535-2548.	15.6	162
580	Tuning polyoxometalate composites with carbonaceous materials towards oxygen bifunctional activity. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9228-9237.	5.2	21

#	ARTICLE	IF	CITATIONS
581	Multifactor theoretical modeling of solar thermal fuels built on azobenzene and norbornadiene scaffolds. <i>Sustainable Energy and Fuels</i> , 2021, 5, 2335-2346.	2.5	10
582	Enhancing the Catalytic Kinetics of Electrodes by using a Multidimensional Carbon Network for Applications in Vanadium Redox Flow Batteries. <i>ChemElectroChem</i> , 2020, 7, 1023-1028.	1.7	10
583	Storage in Hybrid Renewable Energy Systems. <i>Green Energy and Technology</i> , 2020, , 139-172.	0.4	5
584	Supercapattery: Merit merge of capacitive and Nernstian charge storage mechanisms. <i>Current Opinion in Electrochemistry</i> , 2020, 21, 358-367.	2.5	25
585	Recent advances in prelithiation materials and approaches for lithium-ion batteries and capacitors. <i>Energy Storage Materials</i> , 2020, 32, 497-516.	9.5	125
586	Effect of positive electrode modification on the performance of zinc-bromine redox flow batteries. <i>Journal of Energy Storage</i> , 2020, 29, 101462.	3.9	32
587	Structural design of gas diffusion layer for proton exchange membrane fuel cell at varying humidification. <i>Journal of Power Sources</i> , 2020, 467, 228355.	4.0	32
588	Charging activation and desulfurization of MnS unlock the active sites and electrochemical reactivity for Zn-ion batteries. <i>Nano Energy</i> , 2020, 75, 104869.	8.2	66
590	Symmetric, Robust, and High-Voltage Organic Redox Flow Battery Model Based on a Helical Carbenium Ion Electrolyte. <i>ACS Applied Energy Materials</i> , 2021, 4, 9-14.	2.5	29
591	Microscopic dynamics in room-temperature ionic liquids confined in materials for supercapacitor applications. <i>Sustainable Energy and Fuels</i> , 2020, 4, 1554-1576.	2.5	21
592	Grid balancing with a large-scale electrolyser providing primary reserve. <i>IET Renewable Power Generation</i> , 2020, 14, 3070-3078.	1.7	35
593	Direct and continuous generation of pure acetic acid solutions via electrocatalytic carbon monoxide reduction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	93
594	Understanding the influencing factors of porous cathode contributions to the impedance of a sodium-nickel chloride (ZEBRA) battery. <i>Functional Materials Letters</i> , 2021, 14, 2141002.	0.7	4
595	Modeling Costs and Benefits of Energy Storage Systems. <i>Annual Review of Environment and Resources</i> , 2020, 45, 445-469.	5.6	19
596	Degradation of Commercial Lithium-Ion Cells as a Function of Chemistry and Cycling Conditions. <i>Journal of the Electrochemical Society</i> , 2020, 167, 120532.	1.3	221
597	Vanadium Redox Flow Batteries: A Review Oriented to Fluid-Dynamic Optimization. <i>Energies</i> , 2021, 14, 176.	1.6	44
598	Bioinspired tailoring of nanoarchitected nickel sulfide@nickel permeated carbon composite as highly durable and redox chemistry enabled battery-type electrode for hybrid supercapacitors. <i>Journal of Materials Chemistry A</i> , 2021, 9, 25208-25219.	5.2	32
599	3D printing of advanced lithium batteries: a designing strategy of electrode/electrolyte architectures. <i>Journal of Materials Chemistry A</i> , 2021, 9, 25237-25257.	5.2	50

#	ARTICLE	IF	CITATIONS
600	Current density in solar fuel technologies. Energy and Environmental Science, 2021, 14, 5760-5787.	15.6	32
601	Fabrication of ternary composites with polymeric carbon nitride/MoS <sub>2</sub> /reduced graphene oxide ternary hybrid aerogel as high-performance electrode materials for supercapacitors. New Journal of Chemistry, 2021, 45, 20660-20671.	1.4	1
602	Grid Integration of Large Scale Renewable Energy Sources: Challenges, Issues and Mitigation Technique. , 2021, , .		0
603	Energy Storage Analysis and Flow Rate Optimization Research of Vanadium Redox Flow Battery. Journal of Physics: Conference Series, 2021, 2022, 012021.	0.3	1
604	Solar Photovoltaics. , 2021, , 60-71.		0
605	Policy Frameworks and Institutions for Decarbonisation: The Energy Sector as "Litmus Test"™. , 2021, , 7-38.		0
606	Construction of NiCo <sub>2</sub> S <sub>4</sub> /Ni <sub>3</sub> S <sub>2</sub> nanoarrays on Ni foam substrate as an enhanced electrode for hydrogen evolution reaction and supercapacitors. International Journal of Hydrogen Energy, 2021, 46, 39226-39235.	3.8	18
607	Toad egg-like bismuth nanoparticles encapsulated in an N-doped carbon microrod via supercritical acetone as anodes in lithium-ion batteries. Journal of Industrial and Engineering Chemistry, 2022, 106, 128-141.	2.9	7
608	The Economics of Variable Renewable Energy and Electricity Storage. Annual Review of Resource Economics, 2021, 13, 443-467.	1.5	33
609	Discovery of Energy Storage Molecular Materials Using Quantum Chemistry-Guided Multiobjective Bayesian Optimization. Chemistry of Materials, 2021, 33, 8133-8144.	3.2	32
610	Rivalry at the Interface: Ion Desolvation and Electrolyte Degradation in Model Ethylene Carbonate Complexes of Li <sup>+</sup> , Na <sup>+</sup> , and Mg <sup>2+</sup> with PF <sub>6</sub> <sup>-</sup> on the Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> (111) Surface. ACS Omega, 2021, 6, 29735-29745.	1.6	4
612	Decarbonisation Strategies and Economic Opportunities in Australia. , 2021, , 203-236.		0
614	Hydropower. , 2021, , 125-138.		0
615	Transitioning to a Prosperous, Resilient and Carbon-Free Economy. , 2021, , .		1
619	Financing the Transition. , 2021, , 621-645.		0
621	Ternary Ionogel Electrolytes Enable Quasi-Solid-State Potassium Dual-Ion Intercalation Batteries. Advanced Energy and Sustainability Research, 2022, 3, 2100122.	2.8	6
622	Tetrathiafulvalene-Cobalt Metal-Organic Frameworks for Lithium-Ion Batteries with Superb Rate Capability. Inorganic Chemistry, 2021, 60, 17074-17082.	1.9	9
623	Forests. , 2021, , 462-500.		0

#	ARTICLE	IF	CITATIONS
625	Solar Thermal Energy. , 2021, , 72-104.		1
626	Improving the Governance of Governments. , 2021, , 591-620.		2
627	Low Power Modular Battery Management System with a Wireless Communication Interface. Energies, 2021, 14, 6320.	1.6	9
628	Trade and Climate Change. , 2021, , 571-590.		1
632	Industry and Manufacturing. , 2021, , 408-438.		0
636	Buildings and Precincts. , 2021, , 301-337.		0
637	Preparation and sodium ions storage performance of vanadium pentoxide/titanium dioxide composite. Ionics, 2021, 27, 5179.	1.2	1
638	PEMFC Poly-Generation Systems: Developments, Merits, and Challenges. Sustainability, 2021, 13, 11696.	1.6	16
639	Conjugated Polyelectrolytes: Underexplored Materials for Pseudocapacitive Energy Storage. Advanced Materials, 2022, 34, e2104206.	11.1	25
642	Land Use. , 2021, , 441-461.		0
643	Social Movements for Change. , 2021, , 646-667.		0
644	Decarbonisation Strategies and Economic Opportunities in Indonesia. , 2021, , 237-268.		0
645	Mining, Metals, Oil and Gas. , 2021, , 529-568.		0
646	The Hydrogen Economy. , 2021, , 173-200.		0
647	National Climate Change Adaptation Case Study: Early Adaptation to Climate Change through Climate-Compatible Development and Adaptation Pathways. , 2021, , 365-388.		1
648	Urban Water. , 2021, , 338-364.		0
649	Preparation of High-Performance Multifunctional Carbon as Electrode for Supercapacitors using Recycling Scutellaria baicalensis Georgi Extracting Waste. International Journal of Electrochemical Science, 2021, 16, 211127.	0.5	1
650	Coupled power plant and geostorage simulations of porous media compressed air energy storage (PM-CAES). Energy Conversion and Management, 2021, 249, 114849.	4.4	14

#	ARTICLE	IF	CITATIONS
651	Unlocking the energy storage potential of polypyrrole via electrochemical graphene oxide for high performance zinc-ion hybrid supercapacitors. <i>Journal of Power Sources</i> , 2021, 516, 230663.	4.0	36
652	In-situ grafting of Au and Cu nanoparticles over graphitic carbon nitride sheets and unveiling its superior supercapacitive performance as a hybrid composite electrode material. <i>Journal of Energy Storage</i> , 2021, 44, 103308.	3.9	16
653	Nanotechnology for Electrical Energy Systems. , 2020, , 1-24.		0
654	Flexible planar supercapacitors by straightforward filtration and laser processing steps. <i>Nanotechnology</i> , 2020, 31, 495403.	1.3	4
655	Polymorphic Purity and Structural Charge Discharge Evolution of $\text{LiVOPO}_4$ Cathodes. <i>Journal of Physical Chemistry C</i> , 2021, 125, 24301-24309.	1.5	3
656	Valuation of Pumped Storage in Capacity Expansion Planning—A South African Case Study. <i>Energies</i> , 2021, 14, 6999.	1.6	3
657	Fe <sub>2</sub> O <sub>3</sub> decorated graphene oxide/polypyrrole matrix for high energy density flexible supercapacitor. <i>Surfaces and Interfaces</i> , 2021, 27, 101572.	1.5	17
658	Anion Rectifying Polymeric Single Lithium-Ion Conductors. <i>Advanced Functional Materials</i> , 2022, 32, 2107753.	7.8	25
659	A new approach for coupling the short- and long-term planning models to design a pathway to carbon neutrality in a coal-based power system. <i>Energy</i> , 2022, 239, 122438.	4.5	32
660	Carbon Dioxide Utilization—Bioelectrochemical Approaches. , 2021, , 83-108.		2
661	In-situ evolution of the NiO nanosheets on 3D-Ni-foam as a self-supported electrode for energy storage device applications. <i>Materials Letters</i> , 2022, 308, 131052.	1.3	3
662	Numerical simulation of CaCO <sub>3</sub> /CaO charging process in a spiral coil reactor. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	0
663	On the Use of Thermal Energy Storage for Flexible Baseload Power Plants: Thermodynamic Analysis of Options for a Nuclear Rankine Cycle. <i>Journal of Heat Transfer</i> , 2020, 142, .	1.2	10
664	Sonochemical synthesis of welded titanium dioxide-silver nanocomposite as a 3-dimensional direct ink writing printed cathode electrode material for high-performance supercapacitor. <i>Journal of Energy Storage</i> , 2022, 45, 103524.	3.9	18
665	High-performance Zn battery with transition metal ions co-regulated electrolytic MnO <sub>2</sub> . <i>EScience</i> , 2021, 1, 178-185.	25.0	138
666	Metal-Air Batteries—A Review. <i>Energies</i> , 2021, 14, 7373.	1.6	59
667	Surface Reconstruction Enabled Efficient Hydrogen Generation on a Cobalt-Iron Phosphate Electrocatalyst in Neutral Water. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 53798-53809.	4.0	14
668	Solvent Co-intercalation: An Emerging Mechanism in Li-, Na-, and K-Ion Capacitors. <i>ACS Energy Letters</i> , 2021, 6, 4228-4244.	8.8	40

#	ARTICLE	IF	CITATIONS
669	Conceptualization of a new generation of smart energy systems and the transition toward them using anticipatory systems. <i>European Journal of Futures Research</i> , 2021, 9, .	1.5	4
670	Carbon/air secondary battery system and demonstration of its charge-discharge. <i>Journal of Power Sources</i> , 2021, 516, 230681.	4.0	2
672	Facile approach to thin polypyrrole encapsulation of lamellar iron (II) selenide with much improved performance for lithium-ion storage. <i>Functional Materials Letters</i> , 2020, 13, 2050041.	0.7	2
673	A promising rosy future for supercapacitors: Suitability of MoS <sub>2</sub> hollow nanoroses for supercapacitor electrodes. <i>International Journal of Materials Research</i> , 0, , .	0.1	1
674	Renewable Energy Powered Membrane Technology: Energy Consumption Analysis of Ultrafiltration Backwash Configurations. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
675	Increased performance of an all-organic redox flow battery model <i>via</i> nitration of the [4]helicenium DMQA ion electrolyte. <i>Materials Advances</i> , 2022, 3, 216-223.	2.6	13
676	Flexible and self-standing polyimide/lignin-derived carbon nanofibers for high-performance supercapacitor electrode material applications. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2022, 275, 115530.	1.7	10
677	Recent progress of magnetic field application in lithium-based batteries. <i>Nano Energy</i> , 2022, 92, 106703.	8.2	55
678	Optimal sizing of residential battery systems with multi-year dynamics and a novel rainflow-based model of storage degradation: An extensive Italian case study. <i>Electric Power Systems Research</i> , 2022, 203, 107675.	2.1	19
679	The Precision SOC Estimation for Fire Prevention of the EES Using ANN. , 2021, , .		0
680	Advanced Semiconductor/Conductor Materials. , 2022, , 557-596.		3
681	Honeycomb-like phosphorus doped nickel/carbon: A highly efficient electrocatalyst for oxygen reduction to H <sub>2</sub> O <sub>2</sub> . <i>Chemical Engineering Journal</i> , 2022, 433, 133651.	6.6	15
682	Polyoxometalate@ZIF-67 derived carbon-based catalyst for efficient electrochemical overall seawater splitting and oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 2178-2186.	3.8	19
683	Perspective“Electrochemical Gasification: Revisiting an Old Reaction in New Perspective and Turning “Black”Hydrogen to “Blue”. <i>Journal of the Electrochemical Society</i> , 2021, 168, 114516.	1.3	4
684	Multifunctional Nickel“Cobalt Phosphates for High-Performance Hydrogen Gas Batteries and Self-Powered Water Splitting. <i>ACS Applied Energy Materials</i> , 2021, 4, 12927-12934.	2.5	12
685	Scalable synthesis of <sup>13</sup> -Fe <sub>2</sub> O <sub>3</sub> “based composite films as freestanding negative electrodes with ultra-high areal capacitances for high-performance asymmetric supercapacitors. <i>Cellulose</i> , 2022, 29, 321-340.	2.4	7
686	Rapid Microwave“Assisted Synthesis and Electrode Optimization of Organic Anode Materials in Sodium“Ion Batteries. <i>Small Methods</i> , 2021, 5, e2101016.	4.6	7
687	Influence of heat treatment on the discharge performance of Mg-Al and Mg-Zn alloys as anodes for the Mg-air battery. <i>Chemical Engineering Journal</i> , 2022, 433, 133797.	6.6	25

#	ARTICLE	IF	CITATIONS
688	Tuning the Nanoparticle Interfacial Properties and Stability of the Core-Shell Structure in Zn-Doped NiMoO <sub>4</sub> @AWO <sub>4</sub> . ACS Applied Materials & Interfaces, 2021, 13, 56116-56130.	4.0	30
689	Energy Harvesting and Storing Materials. , 2022, , 507-555.		4
690	Towards Net Zero Energy Factory: A multi-objective approach to optimally size and operate industrial flexibility solutions. International Journal of Electrical Power and Energy Systems, 2022, 137, 107796.	3.3	15
691	<i>In Situ</i> Wet Synthesis of N-ZnO/N-rGO Nanohybrids as an Electrode Material for High-Performance Supercapacitors and Simultaneous Nonenzymatic Electrochemical Sensing of Ascorbic Acid, Dopamine, and Uric Acid at Their Interface. Journal of Physical Chemistry C, 2021, 125, 24837-24848.	1.5	13
692	Progress and prospects of reversible solid oxide fuel cell materials. IScience, 2021, 24, 103464.	1.9	51
693	Vanadium redox flow batteries: Flow field design and flow rate optimization. Journal of Energy Storage, 2022, 45, 103526.	3.9	61
694	Carbon microsphere encapsulated SnS for use as an anode material in full-cell sodium-ion battery. International Journal of Energy Research, 0, , .	2.2	4
695	Lithium Storage Performance and Investigation of Electrochemical Mechanism of Cobalt Vanadate Nanowires Assembled by Nanosheets. ACS Applied Energy Materials, 2021, 4, 13401-13409.	2.5	12
696	Square-Scheme Electrochemistry in Battery Electrodes. Accounts of Materials Research, 2022, 3, 33-41.	5.9	6
697	Comparing lithium and sodium ion batteries for their applicability within energy storage systems. Energy Storage, 2022, 4, .	2.3	4
698	Poly(vinylidene fluoride-trifluoroethylene-chlorofluoroethylene): A New Binder for Conventional and Printable Lithium-Ion Batteries. ACS Applied Energy Materials, 0, , .	2.5	5
699	Review Pseudocapacitive Energy Storage Materials from H <sub>2</sub> g-Phase Compounds to High-Entropy Ceramics. Journal of the Electrochemical Society, 2021, 168, 120521.	1.3	12
700	Anode Material Options Toward 500 Wh kg <sup>-1</sup> Lithium-Sulfur Batteries. Advanced Science, 2022, 9, e2103910.	5.6	63
701	Recent advances of the graphite exfoliation processes and structural modification of graphene: a review. Journal of Nanoparticle Research, 2021, 23, 1.	0.8	17
702	Morphology evolution and performance of zinc electrode in acid battery environment with ionic liquid. Journal of Energy Storage, 2021, , 103569.	3.9	0
703	High-performance asymmetric supercapacitor based on urchin-like cobalt manganese oxide nanoneedles and biomass-derived carbon nanosheet electrode materials. Journal of Energy Storage, 2022, 47, 103616.	3.9	12
704	Closed-Loop Electrolyte Design for Lithium-Mediated Ammonia Synthesis. ACS Central Science, 2021, 7, 2073-2082.	5.3	24
705	Electrochemical Properties of Pristine and Vanadium Doped LiFePO <sub>4</sub> Nanocrystallized Glasses. Energies, 2021, 14, 8042.	1.6	5

#	ARTICLE	IF	CITATIONS
706	Emerging Best Practices for Modeling Energy Storage in Integrated Resource Plans: An overview and a comparison. IEEE Electrification Magazine, 2021, 9, 38-46.	1.8	0
707	High entropy spinel metal oxide (CoCrFeMnNi) <sub>3</sub> O <sub>4</sub> nanoparticles as novel efficient electrocatalyst for methanol oxidation and oxygen evolution reactions. Journal of Environmental Chemical Engineering, 2022, 10, 106932.	3.3	51
708	MnSn(OH) <sub>6</sub> derived Mn <sub>2</sub> SnO <sub>4</sub> @Mn <sub>2</sub> O <sub>3</sub> composites as electrode materials for high-performance Supercapacitors. Materials Research Bulletin, 2022, 148, 111678.	2.7	8
709	Viologens: a versatile organic molecule for energy storage applications. Journal of Materials Chemistry A, 2021, 9, 27215-27233.	5.2	38
710	One-dimensional polymer-derived ceramic nanowires with electrocatalytically active metallic silicide tips as cathode catalysts for Zn-air batteries. RSC Advances, 2021, 11, 39707-39717.	1.7	8
711	FeCoNi nanoalloys embedded in hierarchical N-rich carbon matrix with enhanced oxygen electrocatalysis for rechargeable Zn-air batteries. Journal of Materials Chemistry A, 2021, 9, 27701-27708.	5.2	22
712	Thermodynamic Efficiency and Bounds of Pumped Thermal Electricity Storage Under Whole Process Ecological Optimization. SSRN Electronic Journal, 0, , .	0.4	0
713	Iron-based electrode materials for solid oxide fuel cells and electrolyzers. Energy and Environmental Science, 2021, 14, 6287-6319.	15.6	48
714	A review on recent advances and trends in symmetrical electrodes for solid oxide cells. Journal of Power Sources, 2022, 520, 230852.	4.0	58
715	A high-performance tri-electrolyte aluminum-air microfluidic cell with a co-laminar-flow-and-bridging-electrolyte configuration. Applied Energy, 2022, 307, 118168.	5.1	2
716	Boosting ion dynamics by developing graphitic carbon Nitride/Carbon hybrid electrode materials for ionogel supercapacitor. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 276, 115573.	1.7	9
717	Grid-connected lithium-ion battery energy storage system: A bibliometric analysis for emerging future directions. Journal of Cleaner Production, 2022, 334, 130272.	4.6	27
718	Lithium transport and intermetallic generation in Li-Bi liquid metal batteries. Electrochimica Acta, 2022, 405, 139779.	2.6	5
719	Fabrication of highly-conductive porous capacitor electrodes by the insertion of Cu-nanoparticles into N-doped flocculated carbon catalysts. Journal of Colloid and Interface Science, 2022, 610, 106-115.	5.0	1
720	Carbon Dioxide Emissions, Capture, Storage and Utilization: Review of Materials, Processes and Technologies. Progress in Energy and Combustion Science, 2022, 89, 100965.	15.8	200
721	A new Li <sub>2</sub> Mn <sub>3</sub> O <sub>7</sub> cathode for aqueous Zn-Ion battery with high specific capacity and long cycle life based on the realization of the reversible Li <sup>+</sup> and H <sup>+</sup> co-extraction/insertion. Chemical Engineering Journal, 2022, 433, 134507.	6.6	13
722	Charging Optimization for Li-Ion Battery in Electric Vehicles: A Review. IEEE Transactions on Transportation Electrification, 2022, 8, 3068-3089.	5.3	29
723	LED LIGHTING SYSTEM IN MIXED DC AND AC NETWORKS. Vestnik Årno-Ural'skogo Gosudarstvennogo Universiteta: SeriÅnergetika, 2021, 21, 73-81.	1.0	0

#	ARTICLE	IF	CITATIONS
724	Constructing High-Performance Lithium-Ion Hybrid Capacitors Based on the Electrode Framework Matching Strategy. <i>ACS Applied Energy Materials</i> , 2022, 5, 1963-1971.	2.5	7
725	Unraveling the State of Charge-Dependent Electronic and Ionic Structureâ€“Property Relationships in NCM622 Cells by Multiscale Characterization. <i>ACS Applied Energy Materials</i> , 2022, 5, 1731-1742.	2.5	10
726	Mixed-conducting properties of annealed polyacrylonitrile activated by n-doping of conjugated domains. <i>Chemical Science</i> , 2021, 13, 225-235.	3.7	4
727	Bench-scale demonstration of thermochemical energy storage using the Magnesium-Manganese-Oxide redox system. <i>Journal of Energy Storage</i> , 2022, 45, 103682.	3.9	10
728	Design and fabrication of Co <sub>3</sub> O <sub>4</sub> anchored PANI binary composite supercapacitors with enhanced electrochemical performance and stability. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 2829.	1.1	4
729	Towards a new renewable power system using energy storage: An economic and social analysis. <i>Energy Conversion and Management</i> , 2022, 252, 115056.	4.4	56
730	Surface effects on buckling of nanowire electrode. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, 71, 033101.	0.2	1
731	3D Flowerâ€“Like Zinc Cobaltite for Electrocatalytic Reduction of Nitrate to Ammonia under Ambient Conditions. <i>ChemSusChem</i> , 2022, 15, .	3.6	21
732	Chemical redox of lithium-ion solid electroactive material in a packed bed flow reactor. <i>Chemical Engineering Science</i> , 2022, 251, 117443.	1.9	7
733	High performance of the flow-type one-compartment hydrogen peroxide fuel cell using buckypaper and narrow fuel pathway under physiological conditions. <i>Sustainable Energy and Fuels</i> , 2022, 6, 841-850.	2.5	11
734	A high-energy efficiency static membrane-free zincâ€“bromine battery enabled by a high concentration hybrid electrolyte. <i>Sustainable Energy and Fuels</i> , 2022, 6, 1148-1155.	2.5	17
735	Zinc Anode for Mild Aqueous Zinc-Ion Batteries: Challenges, Strategies, and Perspectives. <i>Nano-Micro Letters</i> , 2022, 14, 42.	14.4	207
736	POM Anolyte for Allâ€“Anion Redox Flow Batteries with High Capacity Retention and Coulombic Efficiency at Mild pH. <i>Advanced Materials</i> , 2022, 34, e2107425.	11.1	18
737	Recent advances on graphene-based materials as cathode materials in lithium-sulfur batteries. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 8630-8657.	3.8	21
738	Atomic Layer Deposition for Thin Film Solid-State Battery and Capacitor. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2023, 10, 851-873.	2.7	2
739	Why does the capacity of vanadium selenide based aqueous zinc ion batteries continue to increase during long cycles?. <i>Journal of Colloid and Interface Science</i> , 2022, 615, 30-37.	5.0	9
740	Materials and technologies for energy storage: Status, challenges, and opportunities. <i>MRS Bulletin</i> , 2021, 46, 1153-1163.	1.7	10
741	Photoinduced Rechargeable Lithium-Ion Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 4071-4078.	4.0	37

#	ARTICLE	IF	CITATIONS
742	PERFORMANCE EVALUATION OF ADVANCED ENERGY STORAGE SYSTEMS: A REVIEW. Energy and Environment, 2023, 34, 1094-1141.	2.7	11
743	Recent advances of energy storage technologies for grid: A comprehensive review. Energy Storage, 2022, 4, .	2.3	26
744	Ultrathick MoS <sub>2</sub> Films with Exceptionally High Volumetric Capacitance. Advanced Energy Materials, 2022, 12, .	10.2	44
745	Storing energy in Chinaâ€”an overview. , 2022, , 771-791.		2
746	High performance gas diffusion layers with added deterministic structures. Energy and Environmental Science, 2022, 15, 1293-1306.	15.6	12
747	Asymmetric supercapacitor based on novel coal fly ash derived metalâ€”organic frameworks as positive electrode and its derived carbon as negative electrode. Journal of Applied Electrochemistry, 2022, 52, 821-834.	1.5	5
748	High strength hydrogels enable dendrite-free Zn metal anodes and high-capacity Znâ€”MnO <sub>2</sub> batteries <i>via</i> a modified mechanical suppression effect. Journal of Materials Chemistry A, 2022, 10, 3122-3133.	5.2	17
749	Interfacial water asymmetry at ideal electrochemical interfaces. Journal of Chemical Physics, 2022, 156, 014705.	1.2	12
750	Lithium-ion batteries under pulsed current operation to stabilize future grids. Cell Reports Physical Science, 2022, 3, 100708.	2.8	19
751	Electrochemical Studies of Novel X-Type Barium Hexaferrite Nanoplatelets for Supercapacitor Applications. Journal of Superconductivity and Novel Magnetism, 2022, 35, 915-923.	0.8	11
752	Technological innovation <i>vs.</i> tightening raw material markets: falling battery costs put at risk. Energy Advances, 2022, 1, 136-145.	1.4	21
753	Boosting Reversibility and Stability of Li Storage in SnO <sub>2</sub> â€”Mo Multilayers: Introduction of Interfacial Oxygen Redistribution. Advanced Materials, 2022, 34, e2106366.	11.1	23
754	Ice-Assisted Synthesis of Highly Crystallized Prussian Blue Analogues for All-Climate and Long-Calendar-Life Sodium Ion Batteries. Nano Letters, 2022, 22, 1302-1310.	4.5	68
755	Cationâ€”Dependent Hydrogel Templateâ€”Activation Strategy: Constructing 3D Anode and High Specific Surface Cathode for Dualâ€”Carbon Potassiumâ€”Ion Hybrid Capacitor. Small, 2022, 18, e2106712.	5.2	7
756	Highly active and durable Fe <sub>x</sub> Cu <sub>y</sub> Ni <sub>1-x-y</sub> /FeOOH/NiOOH/CuO complex oxides for oxygen evolution reaction in alkaline media. International Journal of Hydrogen Energy, 2022, 47, 6691-6699.	3.8	16
757	A comprehensive review on the recycling of spent lithium-ion batteries: Urgent status and technology advances. Journal of Cleaner Production, 2022, 340, 130535.	4.6	115
758	Thermo-economic assessments of pumped-thermal electricity storage systems employing sensible heat storage materials. Renewable Energy, 2022, 186, 431-456.	4.3	47
759	CO <sub>2</sub> conversion via coupled plasma-electrolysis process. Journal of CO <sub>2</sub> Utilization, 2022, 57, 101904.	3.3	13

#	ARTICLE	IF	CITATIONS
760	Developing a holistic fuzzy hierarchy-cloud assessment model for the connection risk of renewable energy microgrid. <i>Energy</i> , 2022, 245, 123235.	4.5	7
761	Effect of osmotic ballast properties on the performance of a concentration gradient battery. <i>Water Research</i> , 2022, 212, 118076.	5.3	3
762	Magnesiothermic reduction improved route to high-yield synthesis of interconnected porous Si@C networks anode of lithium ions batteries. <i>Energy Storage Materials</i> , 2022, 46, 384-393.	9.5	52
763	A low-cost and non-corrosive electropolishing strategy for long-life zinc metal anode in rechargeable aqueous battery. <i>Energy Storage Materials</i> , 2022, 46, 223-232.	9.5	12
764	An All-Organic battery with 2.8ÅV output voltage. <i>Chemical Engineering Journal</i> , 2022, 434, 134651.	6.6	8
765	A review of lithium-O <sub>2</sub> /CO <sub>2</sub> and lithium-CO <sub>2</sub> batteries: Advanced electrodes/materials/electrolytes and functional mechanisms. <i>Nano Energy</i> , 2022, 95, 106964.	8.2	27
766	Facile one-step growth of nickel sulfide nano-architecture as binder less electrodes for efficient supercapacitor applications. <i>Materials Science in Semiconductor Processing</i> , 2022, 142, 106524.	1.9	8
767	Recent development and prospect of membranes for alkaline zinc-iron flow battery. , 2022, 2, 100029.		8
768	Doping and interface engineering in a sandwich Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> /MoS <sub>2</sub> ∞P <sub>x</sub> heterostructure for efficient hydrogen evolution. <i>Journal of Materials Chemistry C</i> , 2022, 10, 4140-4147.	2.7	26
769	Highly Reversible Anhydrous Zinc-Ion Batteries Based on Ammonium Vanadate Nanosheets. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
770	Preparation of N/O-codoped quinoline pitch-based porous carbons for high-quality supercapacitor electrodes. <i>New Journal of Chemistry</i> , 2022, 46, 5266-5277.	1.4	5
771	Coupled Heat-Power Operation of Smart Buildings via Modular Pumped Hydro Storage. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 0, , 1-12.	1.4	1
772	Selenium-Doped Amorphous Black Phosphorus@TiO <sub>2</sub> /C Heterostructures for High-Performance Li/Na/K Ion Batteries. <i>Inorganic Chemistry</i> , 2022, 61, 3121-3131.	1.9	17
773	Anisotropic Thermal Characterisation of Large-Format Lithium-Ion Pouch Cells**. <i>Batteries and Supercaps</i> , 2022, 5, .	2.4	7
774	Accelerating CO <sub>2</sub> Electroreduction to Multicarbon Products via Synergistic Electric- Thermal Field on Copper Nanoneedles. <i>Journal of the American Chemical Society</i> , 2022, 144, 3039-3049.	6.6	147
775	Unleashing energy storage ability of aqueous battery electrolytes. <i>Materials Futures</i> , 2022, 1, 022001.	3.1	17
776	A comprehensive review of stationary energy storage devices for large scale renewable energy sources grid integration. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 159, 112213.	8.2	353
777	Natural Quinone Molecules as Effective Cath Ode Materials for Lithium-Ion Batteries: A First-Principles Study. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0

#	ARTICLE	IF	CITATIONS
778	Lithium-ion battery degradation: how to model it. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 7909-7922.	1.3	73
780	Atomistic insight into the dopant impacts at the garnet $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12}$ solid electrolyte grain boundaries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 10083-10091.	5.2	13
781	Carbon Felt Electrode Modified by Lotus Seed Shells for High-Performance Vanadium Redox Flow Battery. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
782	Improvement Corrosion Resistance and Surface Modification of CrAl Binary Alloy Coating on Stainless Steel as Bipolar Plates for Proton Exchange Membrane Fuel Cells. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
783	An open-source platform for 3D-printed redox flow battery test cells. <i>Sustainable Energy and Fuels</i> , 2022, 6, 1529-1540.	2.5	7
784	Boosting the Energy Density of $\text{CoFe}_2\text{O}_4$ Nanocubes by Non-Covalently Grafting Over Cu/Graphitic Carbon Nitride as Solid-State Asymmetric Supercapacitors. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
785	Nuclear Power Coupled With Thermal Energy Storage: Impact of Technical Performance on Economics in an Exemplary Electricity Grid. , 2022, 1, .		3
786	Corrosion Inhibition Mechanisms of CrAl Binary Alloy Coating as Metallic Bipolar Plates for Pemfc. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
787	A controlled nucleation and growth of Si nanowires by using a TiN diffusion barrier layer for lithium-ion batteries. <i>Nanoscale Advances</i> , 2022, 4, 1962-1969.	2.2	4
788	Ready-to-use binder-free $\text{Co}(\text{OH})_2$ plates@porous rGO layers/Ni foam electrode for high-performance supercapacitors. <i>RSC Advances</i> , 2022, 12, 9276-9291.	1.7	9
789	Power-to-X for Renewable-Based Hybrid Energy Systems. <i>Power Systems</i> , 2022, , 23-40.	0.3	1
790	Refurbished Carbon Materials from Waste Supercapacitors as Industrial-Grade Electrodes: Empowering Electronic Waste. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
791	A brief review of heterostructure electrolytes for high-performance solid oxide fuel cells at reduced temperatures. <i>Journal of the Korean Ceramic Society</i> , 2022, 59, 131-152.	1.1	12
792	Communicationâ€”Demonstrating the Role of Mass Transport in Double Layer Formation. <i>Journal of the Electrochemical Society</i> , 2022, 169, 020578.	1.3	0
793	Trilayer Metalâ€”Organic Frameworks as Multifunctional Electrocatalysts for Energy Conversion and Storage Applications. <i>Journal of the American Chemical Society</i> , 2022, 144, 3411-3428.	6.6	142
794	Mapping and Scientometric Measures on Research Publications of Energy Storage and Conversion. <i>Topics in Catalysis</i> , 0, , 1.	1.3	0
795	Identification Method of Energy Storage Operating Conditions based on Random Forest. , 2022, , .		0
796	Electrochemical evaluation of porous $\text{CaFe}_2\text{O}_4$ anode material prepared via solution combustion synthesis at increasing fuel-to-oxidizer ratios and calcination temperatures. <i>Scientific Reports</i> , 2022, 12, 3082.	1.6	5

#	ARTICLE	IF	CITATIONS
797	Characterization of metal-organic frameworks by transmission electron microscopy. <i>Advances in Physics: X</i> , 2022, 7, .	1.5	3
798	Boosting the high-temperature discharge performance of nickel-hydrogen batteries based on perovskite oxide Co-coated LaFeO <sub>3</sub> as proton insertion anode. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14961-14970.	3.8	7
799	Machine learning in energy storage materials. , 2022, 1, 175-195.		45
800	Crystal structure, ion transport and optical properties of new high-conductivity Ag <sub>7</sub> (Si <sub>1-x</sub> Gex) <sub>5</sub> I solid solutions. <i>Journal of Materials Science</i> , 2022, 57, 6706-6722.	1.7	11
801	Applicability of Hydropower Generation and Pumped Hydro Energy Storage in the Middle East and North Africa. <i>Energies</i> , 2022, 15, 2412.	1.6	31
802	Construction of <i>Carbon-Coated Cobalt Sulfide Hybrid Networks Interconnected</i> by Carbon Nanotubes for <i>Performance-Enhanced Potassium-Ion Storage</i> . <i>Chinese Journal of Chemistry</i> , 2022, 40, 1313-1320.	2.6	3
803	Non-Electrode Components for Rechargeable Aqueous Zinc Batteries: Electrolytes, Solid-Electrolyte-Interphase, Current Collectors, Binders, and Separators. <i>Advanced Materials</i> , 2022, 34, e2108206.	11.1	58
804	Enhanced Wettability of a PTFE Porous Membrane for a High-Temperature Stable Lithium-Ion Battery Separator. <i>Chemical Engineering and Technology</i> , 2022, 45, 737-744.	0.9	4
805	Charge Carriers for Next-Generation Redox Flow Batteries. , 0, , .		0
806	Can Large-Scale Offshore Membrane Desalination Cost-Effectively and Ecologically Address Water Scarcity in the Middle East?. <i>Membranes</i> , 2022, 12, 323.	1.4	7
807	A Proton-Barrier Separator Induced via Hofmeister Effect for High-Performance Electrolytic MnO <sub>2</sub> -Zn Batteries. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	41
808	Fast Charging Anode Materials for Lithium-Ion Batteries: Current Status and Perspectives. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	185
809	Ionogels as Polymer Electrolytes for Lithium-Metal Batteries: Comparison of Poly(ethylene glycol) Diacrylate and an Imidazolium-Based Ionic Liquid Crosslinker. <i>ACS Applied Polymer Materials</i> , 2022, 4, 2794-2805.	2.0	11
810	Solidified-Air Energy Storage: Conceptualization and Thermodynamic Analysis. <i>Energies</i> , 2022, 15, 2159.	1.6	0
811	Comparative Study of Conventional Electrolytes for Rechargeable Magnesium Batteries. <i>Batteries and Supercaps</i> , 2022, 5, .	2.4	11
812	Operation of liquid e-fuel cells using air as oxidant. <i>Applied Energy</i> , 2022, 311, 118677.	5.1	7
813	Stochastic Density Functional Theory on Lane Formation in Electric-Field-Driven Ionic Mixtures: Flow-Kernel-Based Formulation. <i>Entropy</i> , 2022, 24, 500.	1.1	5
814	Thermodynamic efficiency and bounds of pumped thermal electricity storage under whole process ecological optimization. <i>Renewable Energy</i> , 2022, 188, 711-720.	4.3	2

#	ARTICLE	IF	CITATIONS
815	Ultra-high electric breakdown strength, excellent dielectric energy storage density, and improved electrocaloric effect in Pb-free (1-x)Ba(Zr <sub>0.15</sub> Ti <sub>0.85</sub> )O <sub>3-x</sub> NaNbO <sub>3</sub> ceramics. <i>Ceramics International</i> , 2022, 48, 10789-10802.	2.3	10
816	Aqueous zinc batteries: Design principles toward organic cathodes for grid applications. <i>IScience</i> , 2022, 25, 104204.	1.9	20
817	Enhancement of Anodically Treated Stainless Steel by NiFeP-Catalyst Electrodeposition as Bifunctional Electrodes for Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2022, 169, 044501.	1.3	9
818	Interpenetrating network structures assembled by $\alpha$ -string of candle-like PPY nanotube-interweaved NiCo-MOF-74 polyhedrons for high-performance supercapacitors. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 646, 128954.	2.3	16
819	Reversible cycling performance of a flat-tube solid oxide cell for seawater electrolysis. <i>Energy Conversion and Management</i> , 2022, 258, 115543.	4.4	7
820	LaCrO <sub>3</sub> -CeO <sub>2</sub> -Based Nanocomposite Electrodes for Efficient Symmetrical Solid Oxide Fuel Cells. <i>ACS Applied Energy Materials</i> , 2022, 5, 4536-4546.	2.5	7
821	Ion-plus salinity gradient flow Battery. <i>Chemical Engineering Science</i> , 2022, 253, 117580.	1.9	5
822	Effect of molar concentration on the crystallite structures and electrochemical properties of cobalt fluoride hydroxide for hybrid supercapacitors. <i>Electrochimica Acta</i> , 2022, 414, 140203.	2.6	10
823	Structurally modulated and functionalized carbon nanotubes as potential filler for Nafion matrix toward improved power output and durability in proton exchange membrane fuel cells operating at reduced relative humidity. <i>Journal of Membrane Science</i> , 2022, 649, 120393.	4.1	46
824	Green, Turquoise, Blue, or Grey? Environmentally friendly Hydrogen Production in Transforming Energy Systems. <i>Progress in Energy and Combustion Science</i> , 2022, 90, 100996.	15.8	208
825	Facile synthesis of graphene oxide-polyaniline-copper cobaltite (GO/PANI/CuCo <sub>2</sub> O <sub>4</sub> ) hybrid nanocomposite for supercapacitor applications. <i>Synthetic Metals</i> , 2022, 286, 117036.	2.1	30
826	Electrochemical characterization of a microbial electrolysis cell during the bio-electrochemical conversion of CO <sub>2</sub> to CH <sub>4</sub> . <i>Biochemical Engineering Journal</i> , 2022, 182, 108431.	1.8	2
827	High reversible cycling performance of carbon dioxide electrolysis by flat-tube solid oxide cell. <i>Applied Energy</i> , 2022, 314, 118969.	5.1	8
828	Liquid air as an emerging energy vector towards carbon neutrality: A multi-scale systems perspective. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 159, 112201.	8.2	22
829	Natural quinone molecules as effective cathode materials for nonaqueous lithium-ion batteries. <i>Journal of Power Sources</i> , 2022, 531, 231291.	4.0	15
830	Synthesis and electrochemical investigation of Z-type barium hexaferrite nanoplatelets. <i>Inorganic Chemistry Communication</i> , 2022, 139, 109412.	1.8	13
831	Tetrafunctional template-assisted strategy to precisely construct co-doped Sb@C nanofiber with longitudinal tunnels for ultralong-life and high-rate sodium storage. <i>Energy Storage Materials</i> , 2022, 48, 90-100.	9.5	27
832	Ultrasonically decorated zinc cobaltate on nanocellulose interface for supercapacitors. <i>Surfaces and Interfaces</i> , 2022, 30, 101915.	1.5	7

#	ARTICLE	IF	CITATIONS
833	Highly durable aqueous Zn ion batteries based on a Zn anode coated by three-dimensional cross-linked and branch-liked bismuth-PVDF layer. <i>Journal of Colloid and Interface Science</i> , 2022, 617, 422-429.	5.0	16
834	Power storage using sand and engineered materials as an alternative for existing energy storage technologies. <i>Journal of Energy Storage</i> , 2022, 51, 104381.	3.9	4
835	A polybromide confiner with selective bromide conduction for high performance aqueous zinc-bromine batteries. <i>Energy Storage Materials</i> , 2022, 49, 11-18.	9.5	20
836	A Novel PV based ANN Optimized Converter for off grids Locomotives. , 2021, , .		7
837	Coordinated Charging and Discharging of Electric Vehicles for Power Imbalance Mitigation. , 2021, , .		0
838	Switching Optimally Balanced Fe-N Interaction Enables Extremely Stable Energy Storage. <i>Energy and Environmental Materials</i> , 2023, 6, .	7.3	29
839	The Development of Energy Storage in China: Policy Evolution and Public Attitude. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	6
840	Developing Shunt-Current Minimized Soluble-Lead-Redox-Flow-Batteries. <i>Journal of the Electrochemical Society</i> , 2021, 168, 120552.	1.3	3
841	Facile Hydrothermal Synthesis and Supercapacitor Performance of Mesoporous Necklace-Type ZnCo <sub>2</sub> O <sub>4</sub> Nanowires. <i>Catalysts</i> , 2021, 11, 1516.	1.6	11
842	Si@C/TiO <sub>2</sub> @C/Hollow-C Nanocomposite as a Lithium-Ion Battery Anode Produced by Refining Silicon and Ti-6Al-4V Residuals. <i>ACS Applied Energy Materials</i> , 2021, 4, 14526-14536.	2.5	6
843	Uniform Distribution of Li Deposition and High Utilization of Transferred Metallic Li Achieved by an Unusual Free-Standing Skeleton for High-Performance Li Metal Batteries. <i>ACS Applied Energy Materials</i> , 2022, 5, 539-548.	2.5	5
844	Implicit Solvation Methods for Catalysis at Electrified Interfaces. <i>Chemical Reviews</i> , 2022, 122, 10777-10820.	23.0	82
845	Structural and Electrochemical Properties of Physically and Chemically Activated Carbon Nanoparticles for Supercapacitors. <i>Nanomaterials</i> , 2022, 12, 122.	1.9	12
847	Cloud Energy Storage Based Embedded Battery Technology Architecture for Residential Users Cost Minimization. <i>IEEE Access</i> , 2022, 10, 43685-43702.	2.6	15
848	Hydrogen liquefaction: a review of the fundamental physics, engineering practice and future opportunities. <i>Energy and Environmental Science</i> , 2022, 15, 2690-2731.	15.6	106
849	Predicting the Redox Potentials of Phenazine Derivatives Using DFT-Assisted Machine Learning. <i>ACS Omega</i> , 2022, 7, 11742-11755.	1.6	7
850	Technical benchmarking and challenges of kilowatt scale vanadium redox flow battery. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2022, 11, .	1.9	11
851	China's energy transitions for carbon neutrality: challenges and opportunities. , 2022, 1, 1.		50

#	ARTICLE	IF	CITATIONS
852	$\langle \text{mml:math xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \text{ altimg}=\text{"si1.svg"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle L \langle \text{mml:mi} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle a \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 0.7 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle$		

#	ARTICLE	IF	CITATIONS
870	Performance and Durability of Proton Exchange Membrane Vapor-Fed Unitized Regenerative Fuel Cells. Journal of the Electrochemical Society, 2022, 169, 054514.	1.3	6
871	Hybrid Energy Storage Design and Dispatch Strategy Evaluation with Sensitivity Analysis: <sc>Techno-Economic-Environmental</sc> Assessment. Energy Storage, 0, , .	2.3	5
872	Construction of Hierarchical NiCo <sub>2</sub> O <sub>4</sub> @NiFe-LDH Core-Shell Heterostructure for High-performance Positive Electrode for Supercapacitor. ChemNanoMat, 2022, 8, .	1.5	8
873	Development of Electroactive and Stable Current Collectors for Aqueous Batteries. Journal of the Electrochemical Society, 2022, 169, 050516.	1.3	0
874	Optimal design and evaluation of electrochemical CO <sub>2</sub> reduction system with renewable energy generation using two-stage stochastic programming. Journal of CO <sub>2</sub> Utilization, 2022, 61, 102026.	3.3	3
875	Refurbished carbon materials from waste supercapacitors as industrial-grade electrodes: Empowering electronic waste. Energy Storage Materials, 2022, 49, 564-574.	9.5	15
876	High-performance solid-state supercapacitors integrated with thermal management systems based on phase change materials: All in one. Chemical Engineering Journal, 2022, 446, 136787.	6.6	8
877	Sub-zero temperature electrolytes for lithium-sulfur batteries: Functional mechanisms, challenges and perspectives. Chemical Engineering Journal, 2022, 443, 136637.	6.6	12
878	Design of antimony nanocomposite for high areal capacity sodium battery anodes. Journal of Alloys and Compounds, 2022, 914, 165336.	2.8	3
879	Cation and anion (de)intercalation into MXene/Perovskite oxides for high-rate intercalation pseudocapacitance. Energy Storage Materials, 2022, 50, 86-95.	9.5	28
880	Recent Advances in Energy Storage Systems for Renewable Source Grid Integration: A Comprehensive Review. Sustainability, 2022, 14, 5985.	1.6	53
881	Low-temperature water electrolysis: fundamentals, progress, and new strategies. Materials Advances, 2022, 3, 5598-5644.	2.6	50
882	Design and Simulation of Wind Energy Conversion System to Electricity On The Coast of Kebumen. , 2021, , .		0
883	Production of a hybrid capacitive storage device via hydrogen gas and carbon electrodes coupling. Nature Communications, 2022, 13, 2805.	5.8	26
884	Electric-field-induced oscillations in ionic fluids: a unified formulation of modified Poisson-Nernst-Planck models and its relevance to correlation function analysis. Soft Matter, 2022, 18, 4280-4304.	1.2	7
885	Vanadium nitride nanoparticle decorated N-doped carbon nanotube/N-doped carbon nanosheet hybrids <i>via</i> a C <sub>3</sub> N <sub>4</sub> self-sacrificing method for electrochemical capacitors. RSC Advances, 2022, 12, 15354-15360.	1.7	10
886	Recent trends, challenges, and perspectives in piezoelectric-driven self-chargable electrochemical supercapacitors. , 2022, 4, 833-855.		16
887	The rational investigation of bimetallic selenides as electrode materials for hybrid supercapacitors. Electrochimica Acta, 2022, 424, 140627.	2.6	13

#	ARTICLE	IF	CITATIONS
888	Layered P2-NaxMn3/4Ni1/4O2 Cathode Materials For Sodium-Ion Batteries: Synthesis, Electrochemistry and Influence of Ambient Storage. <i>Frontiers in Energy Research</i> , 2022, 10, .	1.2	9
889	Bio-waste wood-derived porous activated carbon with tuned microporosity for high performance supercapacitors. <i>Journal of Energy Storage</i> , 2022, 52, 104928.	3.9	23
890	The Effect of the Zn Content on the Electrochemical Performance of Al-Zn-Sn-Ga Alloys. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
891	Chemical equilibrium of the magnesium manganese oxide redox system for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2022, 259, 117750.	1.9	3
892	Nitrogen-Rich Carbonaceous Materials for Advanced Oxygen Electrocatalysis: Synthesis, Characterization, and Activity of Nitrogen Sites. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	59
893	Advancing battery design based on environmental impacts using an aqueous Al-ion cell as a case study. <i>Scientific Reports</i> , 2022, 12, .	1.6	2
894	Topology optimization for the design of porous electrodes. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, .	1.7	14
895	Topology Optimization of 3D Flow Fields for Flow Batteries. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050540.	1.3	12
896	A review on the integrated optimization techniques and machine learning approaches for modeling, prediction, and decision making on integrated energy systems. <i>Renewable Energy</i> , 2022, 194, 822-849.	4.3	47
897	Significant improvement in electrical characteristics and energy storage performance of NBT-based ceramics. <i>Ceramics International</i> , 2022, 48, 26973-26983.	2.3	8
898	A bright future of hydrogels in flexible batteries and Supercapacitors storage systems: A review. <i>International Journal of Energy Research</i> , 2022, 46, 13276-13307.	2.2	5
899	Comprehensive Analysis of Critical Issues in All-Vanadium Redox Flow Battery. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 7786-7810.	3.2	59
900	Does the thermal conductivity of gas diffusion layer matter in polymer electrolyte fuel cells?. <i>Journal of Power Sources</i> , 2022, 540, 231539.	4.0	7
901	Co-solvent modified methylsulfonylmethane-based hybrid deep eutectic solvent electrolytes for high-voltage symmetric supercapacitors. <i>Electrochimica Acta</i> , 2022, 424, 140612.	2.6	3
902	A low-strain metal organic framework for ultra-stable and long-life sodium-ion batteries. <i>Journal of Power Sources</i> , 2022, 541, 231701.	4.0	7
903	Environmental impact assessments of compressed air energy storage systems: a review. , 2022, , 249-276.		2
904	Economic Model for Coordinating Large-Scale Energy Storage Power Plant With Demand Response Management Options in Smart Grid Energy Management. <i>IEEE Access</i> , 2023, 11, 16483-16492.	2.6	1
905	On-chip high-energy interdigital micro-supercapacitors with 3D nanotubular array electrodes. <i>Journal of Materials Chemistry A</i> , 2022, 10, 14051-14059.	5.2	13

#	ARTICLE	IF	CITATIONS
906	Diatomic Doped Carbon Coating Boosting the High-Rate Performance and Super Long-Cycle Stability of Na <sub>3</sub> v <sub>2</sub> (Po <sub>4</sub> ) <sub>3</sub> Cathode Material. SSRN Electronic Journal, 0, , .	0.4	0
907	How the Way a Naphthalimide Unit is Implemented Affects the Photophysical and -catalytic Properties of Cu(I) Photosensitizers. Frontiers in Chemistry, 0, 10, .	1.8	7
908	Enhancing the Performance of Ceramic-Rich Polymer Composite Electrolytes Using Polymer Grafted LLZO. Inorganics, 2022, 10, 81.	1.2	4
909	Microsupercapacitive Stone Module for Natural Energy Storage. ACS Nano, 2022, 16, 11708-11719.	7.3	4
910	DNA Scaffolds with Manganese Oxide/Oxyhydroxide Nanoparticles for Highly Stable Supercapacitance Electrodes. ACS Applied Nano Materials, 2022, 5, 8902-8912.	2.4	4
911	Microstructural engineering of high-power redox flow battery electrodes via non-solvent induced phase separation. Cell Reports Physical Science, 2022, 3, 100943.	2.8	13
912	Metal Substitution versus Oxygen-Storage Modifier to Regulate the Oxygen Redox Reactions in Sodium-Deficient Three-Layered Oxides. Batteries, 2022, 8, 56.	2.1	4
913	Ammonia: A versatile candidate for the use in energy storage systems. Renewable Energy, 2022, 194, 955-977.	4.3	54
914	Welfare, development, and cost-efficiency: A global synthesis on incentivizing energy efficiency measures through co-benefits. Energy Research and Social Science, 2022, 89, 102666.	3.0	5
915	Corrosion of non-noble metal-based catalysts during oxygen evolution reaction under on/off operation. Corrosion Science, 2022, 205, 110437.	3.0	6
916	Life cycle assessment of power-to-methane systems with CO <sub>2</sub> supplied by the chemical looping combustion of biomass. Energy Conversion and Management, 2022, 267, 115866.	4.4	11
917	ZIF-derived holey electrode with enhanced mass transfer and N-rich catalytic sites for high-power and long-life vanadium flow batteries. Journal of Energy Chemistry, 2022, 72, 545-553.	7.1	19
918	Facile Electrochemically Induced Vacancy Modulation of NiCo <sub>2</sub> O <sub>4</sub> Cathode Toward High-Performance Aqueous Zn-Based Battery. SSRN Electronic Journal, 0, , .	0.4	0
919	1,2,3-Trimethoxypropane: a bio-sourced glyme as electrolyte for lithiumâ€“O <sub>2</sub> batteries. Green Chemistry, 2022, 24, 6016-6025.	4.6	1
920	Synchrotron radiation based X-ray techniques for analysis of cathodes in Li rechargeable batteries. RSC Advances, 2022, 12, 20360-20378.	1.7	5
921	High performance transition metal-based electrocatalysts for green hydrogen production. Chemical Communications, 2022, 58, 7874-7889.	2.2	14
922	Operando synchrotron X-ray studies of MnVOH@SWCNT nanocomposites as cathodes for high-performance aqueous zinc-ion batteries. Journal of Materials Chemistry A, 2022, 10, 14540-14554.	5.2	9
923	Diatomic Doped Carbon Coating Boosting the High-Rate Performance and Super Long-Cycle Stability of Na <sub>3</sub> v <sub>2</sub> (Po <sub>4</sub> ) <sub>3</sub> Cathode Material. SSRN Electronic Journal, 0, , .	0.4	0

#	ARTICLE	IF	CITATIONS
924	A Review of Modeling, Management, and Applications of Grid-Connected Li-Ion Battery Storage Systems. IEEE Transactions on Smart Grid, 2022, 13, 4505-4524.	6.2	32
925	A classification of energy forms according to the levels of organization of matter. , 2022, 26, 92-101.		0
926	Nanostructuring versus microstructuring in battery electrodes. Nature Reviews Materials, 2022, 7, 736-746.	23.8	92
927	The Strategies for Increasing Grid-Integrated Share of Renewable Energy with Energy Storage and Existing Coal Fired Power Generation in China. Energies, 2022, 15, 4699.	1.6	2
928	Theory-Driven Design of a Cationic Accelerator for High-Performance Electrolytic MnO <sub>2</sub> -Zn Batteries. Advanced Materials, 2022, 34, .	11.1	53
929	Review- Ionic Liquids Applications in Flow Batteries. Journal of the Electrochemical Society, 0, , .	1.3	5
930	Efficient high-rate aqueous alkaline battery with dual-ion intercalation chemistry enabled by asymmetric electrode polarization. Cell Reports Physical Science, 2022, 3, 100981.	2.8	1
931	Turn Hazardous Endosulfan into S-Doped Alkynyl Carbon Material for Energy Storage and Hg(II) Adsorption via a Green Mechanochemical Process. ACS Sustainable Chemistry and Engineering, 2022, 10, 9216-9224.	3.2	5
932	Zinc-ion battery based on heteroatom-doped improved-quality graphene film as a functional current collector. International Journal of Energy Research, 2022, 46, 16658-16669.	2.2	5
933	3D Hierarchical Porous Fe/Ni-P as Practical Bifunctional Electrode for Alkaline Water Electrolysis. ChemSusChem, 2022, 15, .	3.6	8
934	Energy storage systems: a review. Energy Storage and Saving, 2022, 1, 166-216.	3.0	160
935	Boosting the Performance of La <sub>0.8</sub> Sr <sub>0.2</sub> MnO <sub>3</sub> Electrodes by The Incorporation of Nanocomposite Active Layers. Advanced Materials Interfaces, 2022, 9, .	1.9	9
936	H <sub>2</sub> contribution to power grid stability in high renewable penetration scenarios. International Journal of Hydrogen Energy, 2023, 48, 11956-11969.	3.8	12
937	Sulfur-Functionalized Titanium Carbide Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> (MXene) Nanosheets Modified Light Absorbers for Ambient Fabrication of Sb <sub>2</sub> S <sub>3</sub> Solar Cells. ACS Applied Nano Materials, 2022, 5, 12107-12116.	2.4	7
938	Integration of a well-designed biomass pair in electrochemical hydrogen pump reactor: ethylene glycol dehydrogenation and levulinic acid hydrogenation. International Journal of Hydrogen Energy, 2022, , .	3.8	0
939	Synthesis and characterization of Mg <sup>2+</sup> substituted MnFe <sub>2</sub> O <sub>4</sub> nanoparticles for supercapacitor applications. Ceramics International, 2022, 48, 30695-30703.	2.3	33
940	A high-performance pseudocapacitive negatrodde for lithium-ion capacitor based on a tetrathiafulvalene-cobalt metal-organic framework. Electrochimica Acta, 2022, 426, 140828.	2.6	3
941	Whither rentierism following the 2014 oil price decline: Trajectories of policy adjustment in the Arab Gulf. Energy Research and Social Science, 2022, 91, 102717.	3.0	1

#	ARTICLE	IF	CITATIONS
942	High-performance garnet solid-state battery enabled by improved interfaces. <i>Journal of Power Sources</i> , 2022, 542, 231798.	4.0	1
943	Experimental evaluation of compressed air energy storage as a potential replacement of electrochemical batteries. <i>Journal of Energy Storage</i> , 2022, 54, 105263.	3.9	14
944	Nanosecond laser lithography enables concave-convex zinc metal battery anodes with ultrahigh areal capacity. <i>Energy Storage Materials</i> , 2022, 51, 273-285.	9.5	26
945	Compressed air energy storage in integrated energy systems: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 167, 112701.	8.2	105
946	The interfacial ionic transport of two-dimensional ZnAl-mixed metal oxides nanocomposite. <i>Journal of Alloys and Compounds</i> , 2022, 921, 166118.	2.8	5
947	Fluffy-Like Cation-Exchanged Prussian Blue Analogues for Sodium-Ion Battery Cathodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 32149-32156.	4.0	9
948	Designing a Bimodal BaTiO <sub>3</sub> Artificial Layer to Boost the Dielectric Effect toward Highly Reversible Dendrite-Free Zn Metal Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 35613-35622.	4.0	12
949	Energy-efficient system and charge balancing topology for electric vehicle application. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 53, 102516.	1.7	11
950	Preparation and optimization of silver niobate-based lead-free ceramic energy storage materials. <i>Ceramics International</i> , 2022, , .	2.3	3
951	Lignin-Derived Quinone Redox Moieties for Bio-Based Supercapacitors. <i>Polymers</i> , 2022, 14, 3106.	2.0	10
952	Co-doped CeO <sub>2</sub> /N <sub>2</sub> C nanorods as a bifunctional oxygen electrocatalyst and its application in rechargeable Zn-air batteries. <i>Nanotechnology</i> , 2022, 33, 415404.	1.3	3
953	Defect Engineered Ternary Spinel: An Efficient Cathode for an Aqueous Rechargeable Zinc-Ion Battery of Long-Term Cyclability. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 37577-37586.	4.0	12
954	Nickel sulfide film by potentiodynamic deposition as competent electrode for supercapacitor. <i>MRS Energy &amp; Sustainability</i> , 2022, 9, 534-545.	1.3	2
955	Advances in Microfluidic Technologies for Energy Storage and Release Systems. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	2
956	Battery Energy Storage for Photovoltaic Application in South Africa: A Review. <i>Energies</i> , 2022, 15, 5962.	1.6	6
957	LED Lighting Agrosystem with Parallel Power Supply from Photovoltaic Modules and a Power Grid. <i>Agriculture (Switzerland)</i> , 2022, 12, 1215.	1.4	2
958	Aqueous OH <sup>-</sup> /H <sup>+</sup> Dual-Ion Zn-Based Batteries. <i>ChemSusChem</i> , 2023, 16, .	3.6	3
959	A comprehensive state-of-the-art review of electrochemical battery storage systems for power grids. <i>International Journal of Energy Research</i> , 2022, 46, 17786-17812.	2.2	13

#	ARTICLE	IF	CITATIONS
960	Low-temperature thermal energy storage with polymer-derived ceramic aerogels. <i>International Journal of Applied Ceramic Technology</i> , 0, .	1.1	2
961	Estimation of activity coefficients for aqueous organic redox flow batteries: Theoretical basis and equations. <i>IScience</i> , 2022, 25, 104901.	1.9	1
962	Novel Ethylene Glycol Substituted Benzoxadiazole and Benzothiadiazole as Anolytes for Nonaqueous Organic Redox Flow Batteries. <i>ChemElectroChem</i> , 2022, 9, .	1.7	8
963	Suppressing the Loss of Polymer-Based Dielectrics for High Power Energy Storage. <i>Advanced Materials</i> , 2023, 35, .	11.1	30
964	Numerical investigation of the transient performance of a reversible solid oxide cell during the mode switching process. <i>Energy Conversion and Management</i> , 2022, 268, 116048.	4.4	3
965	A novel gas turbine simulator for testing hybrid solar-Brayton energy systems. <i>Energy Conversion and Management</i> , 2022, 268, 116051.	4.4	1
966	Prussian blue analogue derived bimetallic phosphide for high areal capacity and binder-free sodium-ion battery anode. <i>Journal of Power Sources</i> , 2022, 546, 231940.	4.0	4
967	Highly efficient unitized regenerative hydrogen peroxide cycle cell with ultralow overpotential for renewable energy storage. <i>Journal of Power Sources</i> , 2022, 545, 231948.	4.0	5
968	Co-Nx-enriched porous carbon nanofibers as efficient oxygen electrocatalyst for flexible Zn-air batteries. <i>Journal of Power Sources</i> , 2022, 544, 231865.	4.0	10
969	An Overview of Renewable Energy Scenario in India and its Impact on Grid Inertia and Frequency Response. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 168, 112842.	8.2	12
970	Structural design of microporous layer to mitigate carbon corrosion in proton exchange membrane fuel cells. <i>Carbon</i> , 2022, 199, 189-199.	5.4	7
971	High energy density solid-state supercapacitors based on porous carbon electrodes derived from pre-treated bio-waste precursor sugarcane bagasse. <i>Journal of Energy Storage</i> , 2022, 55, 105421.	3.9	10
972	Tailoring layered transition metal compounds for high-performance aqueous zinc-ion batteries. <i>Energy Storage Materials</i> , 2022, 52, 250-283.	9.5	23
973	Carbon felt electrode modified by lotus seed shells for high-performance vanadium redox flow battery. <i>Chemical Engineering Journal</i> , 2022, 450, 138377.	6.6	26
974	PtCuFe alloy nanochains: Synthesis and composition-performance relationship in methanol oxidation and hydrogen evolution reactions. <i>Journal of Colloid and Interface Science</i> , 2022, 628, 153-161.	5.0	29
975	Advanced dual-gradient carbon nanofibers/graphite felt composite electrode for the next-generation vanadium flow battery. <i>Journal of Materials Science and Technology</i> , 2023, 136, 32-42.	5.6	15
976	Optimal design and integration of decentralized electrochemical energy storage with renewables and fossil plants. <i>Energy and Environmental Science</i> , 2022, 15, 4119-4136.	15.6	21
977	Surface and diffusive capacity controlled electrochemistry in nickel boride/nickel borate. <i>Journal of Industrial and Engineering Chemistry</i> , 2022, 116, 351-358.	2.9	3

#	ARTICLE	IF	CITATIONS
978	Simulating key properties of lithium-ion batteries with a fault-tolerant quantum computer. <i>Physical Review A</i> , 2022, 106, .	1.0	12
979	Rethinking residential energy storage: GHG minimization potential of a Carbon Reinforced Concrete facade with function integrated supercapacitors. <i>Building and Environment</i> , 2022, 224, 109520.	3.0	3
980	Latest eco-friendly avenues on hydrogen production towards a circular bioeconomy: Currents challenges, innovative insights, and future perspectives. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 168, 112916.	8.2	122
981	Highly ion selective composite proton exchange membranes for vanadium redox flow batteries by the incorporation of UiO-66-NH <sub>2</sub> threaded with ion conducting polymers. <i>Journal of Membrane Science</i> , 2022, 662, 121003.	4.1	16
982	SPEEK-based composite proton exchange membrane regulated by local semi-interpenetrating network structure for vanadium flow battery. <i>Journal of Membrane Science</i> , 2022, 662, 120973.	4.1	10
983	Experimental assessment of the discharge characteristics of multi-type retired lithium-ion batteries in parallel for echelon utilization. <i>Journal of Energy Storage</i> , 2022, 55, 105539.	3.9	9
984	Grain boundary metal-insulator transitions in polycrystalline LiCoO <sub>2</sub> . <i>Journal of Power Sources</i> , 2022, 547, 231918.	4.0	0
985	A user-friendly lithium battery simulator based on open-source CFD. <i>Digital Chemical Engineering</i> , 2022, 5, 100055.	1.2	5
986	Morphology engineering of Co-MOF nanostructures to tune their electrochemical performances for electrocatalyst and energy-storage applications supported by DFT studies. <i>Applied Surface Science</i> , 2022, 605, 154691.	3.1	9
987	Effect of Anionic, Cationic and Non-Ionic Surfactants with Naf as Binary Additives on the Performance of Soluble Lead Redox Flow Battery. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
988	On the History and Future of 100% Renewable Energy Systems Research. <i>IEEE Access</i> , 2022, 10, 78176-78218.	2.6	138
989	Soluble and stable symmetric tetrazines as anolytes in redox flow batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 18745-18752.	5.2	15
990	Advances in the regulation of kinetics of cathodic H <sup>+</sup> /Zn <sup>2+</sup> interfacial transport in aqueous Zn/MnO <sub>2</sub> electrochemistry. <i>Nanoscale</i> , 2022, 14, 14433-14454.	2.8	5
991	Exploration of Cu/g-C <sub>3</sub> N <sub>4</sub> Nanocomposites as a Cost-Effective High-Performance Asymmetric Supercapacitor Electrode Material. <i>IEEE Nanotechnology Magazine</i> , 2022, 21, 474-480.	1.1	5
992	Hydrolysis of ionic clusters to induce interconnective sieving pores in ion-conductive membranes for vanadium flow batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 24510-24518.	5.2	1
993	Caffeine as an Energy Storage Material for Next-Generation Lithium Batteries. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
994	Bayesian optimization with known experimental and design constraints for chemistry applications. , 2022, 1, 732-744.		16
995	Recent advances in cathode materials for aqueous zinc-ion batteries: Mechanisms, materials, challenges, and opportunities. <i>MRS Energy &amp; Sustainability</i> , 2022, 9, 248-280.	1.3	7

#	ARTICLE	IF	CITATIONS
996	Grid scale energy storage: The alkali-ion battery systems of choice. Current Opinion in Electrochemistry, 2022, 36, 101130.	2.5	4
997	High-Pressure-Resistant Flexible Seven-in-One Microsensor Embedded in High-Pressure Proton Exchange Membrane Water Electrolyzer for Real-Time Microscopic Measurement. Membranes, 2022, 12, 919.	1.4	2
998	ECOPT <sup>2</sup> : An adaptable life cycle assessment model for the environmentally constrained optimization of prospective technology transitions. Journal of Industrial Ecology, 0, , .	2.8	1
999	Combining Quantum Dot and Perovskite Photovoltaic Cells for Efficient Photon to Electricity Conversion in Energy Storage Devices. Energy Technology, 2022, 10, 2200598.	1.8	0
1000	Recent advances in the energy harvesting device technology using hetero-atom doped carbon nanotubes. Materials Today: Proceedings, 2022, , .	0.9	2
1001	Amorphous MoO <sub>2</sub> /C Nanospheresâ€“Porous Graphene Composites for Pseudocapacitive Li Storage. ACS Applied Nano Materials, 2022, 5, 13463-13472.	2.4	4
1002	Resistance Breakdown of a Membraneless Hydrogenâ€“Bromine Redox Flow Battery. ACS Sustainable Chemistry and Engineering, 2022, 10, 12985-12992.	3.2	5
1003	Rechargeable Batteries for Grid Scale Energy Storage. Chemical Reviews, 2022, 122, 16610-16751.	23.0	340
1004	Life cycle assessment of a renewable energy system with hydrogen-battery storage for a remote off-grid community. International Journal of Hydrogen Energy, 2022, 47, 32822-32834.	3.8	22
1005	Connection of Bipolar Plate with Graphite Felt Electrode for Vanadium Flow Battery Using a Powder Thermal Unification Method. Journal of the Electrochemical Society, 0, , .	1.3	0
1006	Electrospun Metalâ€“Organic Framework Nanofiber Membranes for Energy Storage and Environmental Protection. Advanced Fiber Materials, 2022, 4, 1463-1485.	7.9	35
1007	High-Voltage Symmetric Nonaqueous Redox Flow Battery Based on Modularly Tunable [Ru <sub>2</sub> M( <sup>1/4</sup> O)(CH <sub>3</sub> CO <sub>2</sub> ) <sub>6</sub> (py) <sub>3</sub> ] (M = Ru, Mn, Co, Ni, Zn) Cluster Compounds with Multielectron Storage Capability. , 2022, 4, 2159-2165.		2
1008	Boosting Energy Storage of Poly(vinylidene difluoride) Nanocomposite Based Flexible Self-Standing Film with Low Amount of Hydroxylated V <sub>2</sub> O <sub>5</sub> . ACS Applied Energy Materials, 2022, 5, 12837-12850.	2.5	5
1009	Predicting Capacity Fading Behaviors of Lithium Ion Batteries: An Electrochemical Protocol-Integrated Digital-Twin Solution. Journal of the Electrochemical Society, 2022, 169, 100504.	1.3	2
1010	Recent advances in NASICON-type oxide electrolytes for solid-state sodium-ion rechargeable batteries. Ionics, 2022, 28, 5289-5319.	1.2	12
1011	Flameâ€“Retardant Crosslinked Polymer Stabilizes Graphiteâ€“Silicon Composite Anode for Selfâ€“Extinguishing Lithiumâ€“Ion Batteries. Advanced Energy Materials, 2022, 12, , .	10.2	6
1012	Performance enhancement through parameter optimization for a rechargeable zinc-air flow battery. Journal of Industrial and Engineering Chemistry, 2022, 115, 570-582.	2.9	9
1013	Different ion-based electrolytes for electrochromic devices: A review. Solar Energy Materials and Solar Cells, 2022, 248, 112037.	3.0	23

#	ARTICLE	IF	CITATIONS
1014	Stable and highly efficient Co@Bi nanoalloy decorated on reduced graphene oxide (Co@Bi@rGO) anode for formaldehyde and urea oxidation reactions. <i>Materials Chemistry and Physics</i> , 2022, 292, 126843.	2.0	1
1015	Development of polyanionic sodium-ion battery insertion materials. , 2022, , .		0
1016	Synthesis of Different Manganese Tungstate Nanostructures for Enhanced Charge Storage Application: Theoretical support of the Experimental Findings. <i>Physical Chemistry Chemical Physics</i> , 0, , .	1.3	1
1017	A prototype of high-performance two-electron non-aqueous organic redox flow battery operated at 40 °C. <i>Journal of Materials Chemistry A</i> , 2022, 10, 24685-24693.	5.2	5
1018	The Load Shifting Potential of Domestic Refrigerators in Smart Grids: A Comprehensive Review. <i>Energies</i> , 2022, 15, 7666.	1.6	6
1019	Nickel Hydroxide-Supported Ru Single Atoms and Pd Nanoclusters for Enhanced Electrocatalytic Hydrogen Evolution and Ethanol Oxidation. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	43
1020	Two-Dimensional MXene as a Nanofluidic Anolyte Additive for Enhancing Performance of Vanadium Redox Flow Batteries. <i>Batteries and Supercaps</i> , 2022, 5, .	2.4	6
1021	Hydrous and Amorphous Cobalt Phosphate Thin-Film Electrodes Synthesized by the SILAR Method for High-Performing Flexible Hybrid Energy Storage Devices. <i>Energy &amp; Fuels</i> , 2022, 36, 12791-12806.	2.5	6
1022	In-situ Ni@rGO Scaffold @3D Graphite Felt for High Power Polyhalide Hybrid Redox Flow Battery. <i>Advanced Materials Technologies</i> , 0, , 2200869.	3.0	1
1023	Development of 10kW Proton Exchange Membrane Fuel Cell Combined Heat and Power System for Domestic Building Services. , 0, , .		2
1024	Effect of Lithium Salt Concentration on Materials Characteristics and Electrochemical Performance of Hybrid Inorganic/Polymer Solid Electrolyte for Solid-State Lithium-Ion Batteries. <i>Batteries</i> , 2022, 8, 173.	2.1	13
1025	Capital cost evaluation of conventional and emerging redox flow batteries for grid storage applications. <i>Electrochimica Acta</i> , 2023, 437, 141460.	2.6	14
1026	Scalable production of hydrogen evolution corrosion resistant Zn-Al alloy anode for electrolytic MnO <sub>2</sub> /Zn batteries. <i>Energy Storage Materials</i> , 2023, 54, 570-578.	9.5	11
1027	Li-Ion Diffusion Correlations in LiAlGeO <sub>4</sub> : Quasielastic Neutron Scattering and Ab Initio Simulation. <i>ACS Applied Energy Materials</i> , 2022, 5, 14119-14126.	2.5	1
1028	Thermodynamic analysis and parameter optimization of a Chemical Looping Electricity Storage system. <i>Journal of Energy Storage</i> , 2022, 55, 105832.	3.9	1
1029	Demonstrating the Use of a Fungal Synthesized Quinone in a Redox Flow Battery. <i>Batteries and Supercaps</i> , 2023, 6, .	2.4	6
1030	Phosphate ions functionalized spinel iron cobaltite derived from metal organic framework gel for high-performance asymmetric supercapacitors. <i>Journal of Colloid and Interface Science</i> , 2023, 630, 751-761.	5.0	5
1031	Endotaxial Intergrowth of Copper Telluride in GeTe-Rich Germanium Antimony Tellurides Leads to High Thermoelectric Performance. <i>Chemistry of Materials</i> , 2022, 34, 10025-10039.	3.2	5

#	ARTICLE	IF	CITATIONS
1032	The flexible roles of distributed energy storages in peer-to-peer transactive energy market: A state-of-the-art review. <i>Applied Energy</i> , 2022, 327, 120085.	5.1	11
1033	Selection of energy storage technologies under neutrosophic decision environment. <i>Cleaner Engineering and Technology</i> , 2022, 11, 100576.	2.1	2
1034	Scalable design of zinc-bromine battery in 3-dimensional honeycomb lattice for superior low-cost battery. <i>Journal of Power Sources</i> , 2023, 553, 232243.	4.0	0
1035	Facile synthesis of nano-Ag decorated Nb2O5 on the 3D graphene framework for high-performance lithium storage. <i>Chemical Engineering Science</i> , 2023, 265, 118215.	1.9	1
1036	Multifunctional cationic molecular brushes-assisted fabrication of two-dimensional MoS2/carbon composites for ultrafast and long-term sodium storage. <i>Carbon</i> , 2023, 202, 187-193.	5.4	2
1037	Flexible zinc ion hybrid supercapacitors enabled by N/S co-doped porous carbon and bacterial cellulose/ZnSO4 electrolyte. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2023, 656, 130424.	2.3	7
1038	Facile electrochemically induced vacancy modulation of NiCo2O4 cathode toward high-performance aqueous Zn-based battery. <i>Chemical Engineering Journal</i> , 2023, 453, 139736.	6.6	9
1039	Electrochemical Impedance Spectroscopy Analysis of BiMetallic Au@Cu/g-C3N4 Nanocomposite as a Supercapacitor Electrode Material. <i>Lecture Notes in Electrical Engineering</i> , 2022, , 455-463.	0.3	1
1040	From anode to cell: synergistic protection strategies and perspectives for stabilized Zn metal in mild aqueous electrolytes. <i>Energy Storage Materials</i> , 2023, 54, 623-640.	9.5	41
1041	Silane-functionalized carbon with super-hydrophobicity advancing microporous layer for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2023, 555, 232342.	4.0	7
1042	Unraveling the Influence of the Electrolyte on the Polarization Resistance of Nanostructured La0.6Sr0.4Co0.2Fe0.8O3- $\delta$ Cathodes. <i>Nanomaterials</i> , 2022, 12, 3936.	1.9	2
1043	Disclosing the Redox Pathway Behind the Excellent Performance of CuS in Solid-State Batteries. <i>Small Methods</i> , 2022, 6, .	4.6	1
1044	Performance of BaCe0.8Y0.2O3- $\delta$ Proton Electrolyte Materials for Solid Oxide Fuel Cells by Compositing the Transition Metal Oxide NiO. <i>Coatings</i> , 2022, 12, 1692.	1.2	0
1045	In Situ Reconstruction Ni $\delta$ O Octahedral Active Sites for Promoting Electrocatalytic Oxygen Evolution of Nickel Phosphate. <i>Small</i> , 2023, 19, .	5.2	5
1046	Enhanced supercapacitor performance of ZnO/SnO2:rGO nanocomposites under redox additive electrolyte. <i>Journal of Alloys and Compounds</i> , 2023, 935, 167994.	2.8	19
1047	Redox Flow Batteries: Electrolyte Chemistries Unlock the Thermodynamic Limits. <i>Chemistry - an Asian Journal</i> , 2023, 18, .	1.7	8
1048	Proton-Trapping Agent for Mitigating Hydrogen Evolution Corrosion of Zn for an Electrolytic MnO <sub>2</sub> /Zn Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 51900-51909.	4.0	3
1049	Atomically dispersed Co-N4C2 catalytic sites for wide-temperature Na-Se batteries. <i>Nano Energy</i> , 2023, 105, 108005.	8.2	7

#	ARTICLE	IF	CITATIONS
1050	A novel composite based on NiCo <sub>2</sub> O <sub>4</sub> @NG/MnOOH nanorods for high-performance supercapacitor electrodes. <i>Journal of Energy Storage</i> , 2022, 56, 105949.	3.9	8
1051	A Review of the Application of Carbon Materials for Lithium Metal Batteries. <i>Batteries</i> , 2022, 8, 246.	2.1	9
1052	Synergy between copper single atoms and cobalt particles for high performance frigestable aqueous Al-air batteries. <i>Applied Surface Science</i> , 2023, 611, 155779.	3.1	3
1053	Water based adsorption thermal battery: Sorption mechanisms and applications. <i>Energy Storage Materials</i> , 2023, 54, 794-821.	9.5	13
1054	Related Applications of Solid-State Electrolytes in Lithium-Sulfur Batteries. <i>Advances in Analytical Chemistry</i> , 2022, 12, 341-352.	0.1	0
1055	Environmental trade-offs and externalities of electrochemical-based batteries: Quantitative analysis between lithium-ion and vanadium redox flow units. <i>Journal of Environmental Management</i> , 2023, 326, 116807.	3.8	3
1056	Metal-organic framework derived vanadium oxide supported nanoporous carbon structure as a bifunctional electrocatalyst for potential application in metal air batteries. <i>RSC Advances</i> , 2022, 13, 652-664.	1.7	5
1057	Practical production of heteroatom-bridged and mixed amorphous-crystalline silicon for stable and fast-charging batteries. <i>Journal of Materials Chemistry A</i> , 2023, 11, 1694-1703.	5.2	6
1058	Studies on sodium-ion batteries: Searching for the proper combination of the cathode material, the electrolyte and the working voltage. The role of magnesium substitution in layered manganese-rich oxides, and pyrrolidinium ionic liquid. <i>Electrochimica Acta</i> , 2023, 439, 141654.	2.6	2
1059	Solid electrolyte membrane-containing rechargeable high-temperature molten salt electrolyte-based batteries. <i>Sustainable Energy and Fuels</i> , 2023, 7, 330-354.	2.5	2
1060	Calcium hydroxide and porous silicon-impregnated silicon carbide-based composites for thermochemical energy storage. <i>Applied Thermal Engineering</i> , 2023, 220, 119675.	3.0	12
1061	Energizing organic phase change materials using silver nanoparticles for thermal energy storage. <i>Journal of Energy Storage</i> , 2023, 58, 106361.	3.9	14
1062	Wind farm energy surplus storage solution with second-life vehicle batteries in isolated grids. <i>Energy Policy</i> , 2023, 173, 113373.	4.2	10
1063	Symmetrical solid oxide fuel cells based on titanate nanocomposite electrodes. <i>Journal of the European Ceramic Society</i> , 2023, 43, 1548-1558.	2.8	5
1064	Towards optimized membranes for aqueous organic redox flow batteries: Correlation between membrane properties and cell performance. <i>Renewable and Sustainable Energy Reviews</i> , 2023, 173, 113059.	8.2	12
1065	Cost-effective Reliability Improvement Methods in Power Systems with Renewables. , 2022, , .		0
1066	Sulfur-doped hard carbon hybrid anodes with dual lithium-ion/metal storage bifunctionality for high-energy-density lithium-ion batteries. , 2023, 5, .		5
1067	Phase Change Materials for Renewable Energy Storage at Intermediate Temperatures. <i>Chemical Reviews</i> , 2023, 123, 491-514.	23.0	31

#	ARTICLE	IF	CITATIONS
1068	Facile synthesis of fullerene-C60 and rGO-supported KCdCl3-based halide perovskite nanocomposites toward effective electrode material for supercapacitor. <i>Journal of Applied Electrochemistry</i> , 2023, 53, 673-687.	1.5	3
1069	A social life cycle assessment of vanadium redox flow and lithium-ion batteries for energy storage. <i>Journal of Industrial Ecology</i> , 2023, 27, 223-237.	2.8	8
1070	Magnetolectric Coupling for Metal-Air Batteries. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	8
1071	Research in Electrochromic Supercapacitor – A Focused Review. <i>Batteries and Supercaps</i> , 2023, 6, .	2.4	12
1072	A scalable DG solver for the electroneutral Nernst-Planck equations. <i>Journal of Computational Physics</i> , 2022, , 111859.	1.9	2
1073	A Novel Electrode for Value-Generating Anode Reactions in Water Electrolyzers at Industrial Current Densities. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	26
1074	Magnetic and Electrochemical Properties of $\text{Fe}_4\text{N}$ Nanoparticles with Cuboidal and Rodlike Morphologies. <i>Journal of Physical Chemistry C</i> , 2023, 127, 728-735.	1.5	2
1075	The electric field cavity array effect of 2D nano-sieves. <i>Nature Communications</i> , 2022, 13, .	5.8	1
1076	A Novel Electrode for Value-Generating Anode Reactions in Water Electrolyzers at Industrial Current Densities. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	4
1077	Ultralow-Temperature Aqueous Conductive Polymer-Hydrogen Gas Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 1021-1028.	4.0	1
1078	Building Bridges: Unifying Design and Development Aspects for Advancing Non-Aqueous Redox-Flow Batteries. <i>Batteries</i> , 2023, 9, 4.	2.1	6
1079	Effect of anionic, cationic and non-ionic surfactants with NaF as binary additives on the performance of soluble lead redox flow battery. <i>Electrochimica Acta</i> , 2023, 441, 141767.	2.6	0
1080	SOMAS: a platform for data-driven material discovery in redox flow battery development. <i>Scientific Data</i> , 2022, 9, .	2.4	4
1081	Intrinsic Interfacial Dynamic Engineering of Zincophilic Microbrushes via Regulating Zn Deposition for Highly Reversible Aqueous Zinc Ion Battery. <i>Advanced Materials</i> , 2023, 35, .	11.1	24
1082	A systematic evaluation of adiabatic-compressed air energy storage (A-CAES) based on generating side photovoltaic: A case study on western China. <i>Energy Storage</i> , 2023, 5, .	2.3	2
1083	Effect of Cold-Working on the Discharge Performance of Commercially Pure Aluminum and AA7050 Alloy Anodes in Primary Alkaline Aluminum-air Battery. <i>Journal of the Electrochemical Society</i> , 0, , .	1.3	0
1084	Electric Vehicle Charging Systems: Comprehensive Review. <i>Energies</i> , 2023, 16, 255.	1.6	13
1085	Accelerated design of electrodes for liquid metal battery by machine learning. <i>Energy Storage Materials</i> , 2023, 56, 205-217.	9.5	8

#	ARTICLE	IF	CITATIONS
1086	Azo-functionalised metal-organic framework for charge storage in sodium-ion batteries. <i>Chemical Communications</i> , 2023, 59, 1321-1324.	2.2	2
1087	Interface modified BTO@PS-co-mah/PS composite dielectrics with enhanced breakdown strength and ultralow dielectric loss. <i>RSC Advances</i> , 2023, 13, 1278-1287.	1.7	0
1088	Protecting lithium metal anodes in lithium-sulfur batteries: A review. <i>Energy Material Advances</i> , 2023, 4, .	4.7	51
1089	Electrochemical Evaluation of Different Graphite Felt Electrode Treatments in Full Vanadium Redox Flow Batteries. <i>Batteries</i> , 2023, 9, 39.	2.1	0
1090	Strengths, weaknesses, opportunities, and threats (SWOT) analysis of supercapacitors: A review. <i>Journal of Energy Chemistry</i> , 2023, 79, 611-638.	7.1	33
1091	Synergistically boosting the anchoring effect and catalytic activity of MXenes as bifunctional electrocatalysts for sodium-sulfur batteries by single-atom catalyst engineering. <i>Nanoscale</i> , 2023, 15, 2747-2755.	2.8	7
1092	Carbon footprint and service coverage tradeoffs in geo-diverse sites. <i>Future Generation Computer Systems</i> , 2023, 143, 1-14.	4.9	0
1093	Progress on carbon for electrochemical capacitors. , 2023, 2, .		13
1094	A Polymer Lost in the Shuffle: The Perspective of Poly(para)phenylenes. <i>Macromolecular Chemistry and Physics</i> , 2023, 224, .	1.1	1
1095	Health prognostics for lithium-ion batteries: mechanisms, methods, and prospects. <i>Energy and Environmental Science</i> , 2023, 16, 338-371.	15.6	66
1096	Aqueous transition-metal ion batteries: Materials and electrochemistry. <i>EnergyChem</i> , 2023, 5, 100097.	10.1	6
1097	A Bibliometric Analysis and Disruptive Innovation Evaluation for the Field of Energy Security. <i>Sustainability</i> , 2023, 15, 969.	1.6	4
1098	Recent advances in and perspectives on pseudocapacitive materials for Supercapacitorsâ€”A review. <i>Journal of Power Sources</i> , 2023, 557, 232558.	4.0	32
1099	The Preparation and Modification of Strontium Titanate Ceramic Films for High-Performance Flexible Supercapacitor. <i>ChemElectroChem</i> , 2023, 10, .	1.7	3
1100	Unlocking the NaCl-AlCl <sub>3</sub> phase diagram for low-cost, long-duration Na-Al batteries. <i>Energy Storage Materials</i> , 2023, 56, 108-120.	9.5	2
1101	Caffeine as an energy storage material for next-generation lithium batteries. <i>Energy Storage Materials</i> , 2023, 56, 13-24.	9.5	2
1102	Organic redox flow battery: Are organic redox materials suited to aqueous solvents or organic solvents?. <i>Journal of Power Sources</i> , 2023, 558, 232611.	4.0	7
1103	Rational design of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene coupled with hierarchical CoS for a flexible supercapattery. <i>Electrochimica Acta</i> , 2023, 441, 141825.	2.6	10

#	ARTICLE	IF	CITATIONS
1104	Anionic conductive group tunable amphoteric polybenzimidazole ion conductive membrane for vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2023, 670, 121351.	4.1	10
1105	Multi-objective thermo-economic optimisation of Joule-Brayton pumped thermal electricity storage systems: Role of working fluids and sensible heat storage materials. <i>Applied Thermal Engineering</i> , 2023, 223, 119972.	3.0	12
1106	Design optimization of integrated cooling inserts in modular Fischer-Tropsch reactors. <i>Chemical Engineering Science</i> , 2023, 268, 118423.	1.9	1
1107	Long cycle life and high rate aqueous zinc-ion batteries enabled by polypyrrole bridging ammonium vanadium bronze nanosheet cathodes. <i>Journal of Alloys and Compounds</i> , 2023, 939, 168669.	2.8	2
1108	An Analysis of the Potential of Hydrogen Energy Technology on Demand Side Based on a Carbon Tax: A Case Study in Japan. <i>Energies</i> , 2023, 16, 342.	1.6	1
1109	Corrosion of Passive Aluminum Anodes in a Chloroaluminate Deep Eutectic Solvent for Secondary Batteries: The Bad, the Good, and the Ugly. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 882-892.	4.0	1
1110	Beyond lithium: Solid-state sodium-ion batteries and their potential applications. , 2023, , 223-262.		0
1111	Preparing La-Doped $\text{LiAl}_5\text{O}_8$ from the Electrode Materials of Waste Lithium-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2023, 11, 1386-1393.	3.2	0
1112	Single-step synthesis of $\text{Mn}_3\text{N}_2$ , $\text{Mn}_x\text{O}_n$ and $\text{Mn}_3\text{O}_4$ nanoparticles by thermal plasma arc discharge technique and their comparative study as electrode material for supercapacitor application. <i>Journal of Alloys and Compounds</i> , 2023, 942, 169121.	2.8	4
1113	Creating water-in-salt-like environment using coordinating anions in non-concentrated aqueous electrolytes for efficient Zn batteries. <i>Energy and Environmental Science</i> , 2023, 16, 1982-1991.	15.6	15
1114	Electrochemically robust oxide-supported dendritic Pt and Ir nanoparticles for highly effective polymer electrolyte membrane-unitized regenerative fuel cells. <i>Journal of Materials Chemistry A</i> , 2023, 11, 5864-5872.	5.2	2
1115	Capacity degradation analysis of the rechargeable iron ion batteries using post-mortem analysis and the impedance spectroscopy. <i>Ionics</i> , 2023, 29, 1497-1506.	1.2	8
1116	Perovskite-type $\text{Nd}_{0.75}\text{Ba}_{0.25}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ cathode for intermediate temperature solid oxide fuel cells. <i>Ionics</i> , 0, , .	1.2	4
1117	Scalable novel lanthanide-ligand complex for robust flexible micro-supercapacitors. <i>Journal of Power Sources</i> , 2023, 564, 232801.	4.0	0
1118	2D graphitic carbon nitride as the efficient cathode material for the non-aqueous rechargeable iron-ion battery under an ambient environment. <i>Journal of Power Sources</i> , 2023, 567, 232943.	4.0	15
1119	Molecular scale roughness effects on electric double layer structure in asymmetric ionic liquids. <i>Electrochimica Acta</i> , 2023, 450, 142261.	2.6	2
1120	Recent advances in metal/covalent organic frameworks based materials: Their synthesis, structure design and potential applications for hydrogen production. <i>Coordination Chemistry Reviews</i> , 2023, 483, 215066.	9.5	29
1121	Optimization of melting performance of a heat storage tank under rotation conditions: Based on taguchi design and response surface method. <i>Energy</i> , 2023, 271, 127100.	4.5	33

#	ARTICLE	IF	CITATIONS
1122	THESEUS: A techno-economic design, integration and downselection framework for energy storage. Energy Conversion and Management, 2023, 284, 116976.	4.4	3
1123	High-entropy NaCl-type metal chalcogenides as K-ion storage materials: role of the cocktail effect. Energy Storage Materials, 2023, 59, 102770.	9.5	5
1124	Promoting amorphization of commercial TiO <sub>2</sub> upon sodiation to boost the sodium storage performance. Journal of Energy Chemistry, 2023, 81, 379-388.	7.1	5
1125	A mini review on mathematical modeling of co-electrolysis at cell, stack and system levels. Fuel Processing Technology, 2023, 244, 107724.	3.7	3
1126	An improved energy management operation strategy for integrating adiabatic compressed air energy storage with renewables in decentralized applications. Energy Conversion and Management, 2023, 286, 117027.	4.4	10
1127	Black phosphorus stabilized by titanium disulfide and graphite via chemical bonds for high-performance lithium storage. Journal of Colloid and Interface Science, 2023, 643, 1-8.	5.0	2
1128	Recent electrochemical-energy-storage applications of metal-organic frameworks featuring iron-series elements (Fe, Co, and Ni). Journal of Energy Storage, 2023, 65, 107217.	3.9	5
1129	3D Ti <sub>3</sub> C <sub>2</sub> TX@PANI-reduced graphene oxide hydrogel and defective reduced graphene oxide hydrogel as anode and cathode for high-energy asymmetric supercapacitor. Journal of Alloys and Compounds, 2023, 948, 169593.	2.8	3
1130	Along-flow-path gradient flow field enabling uniform distributions of reactants for redox flow batteries. Journal of Power Sources, 2023, 570, 233012.	4.0	6
1131	A two-level optimization framework for battery energy storage systems to enhance economics and minimize long-term capacity fading. Journal of Energy Storage, 2023, 63, 106943.	3.9	1
1132	Materials availability and supply chain considerations for vanadium in grid-scale redox flow batteries. Journal of Power Sources, 2023, 560, 232605.	4.0	5
1133	Lamellar and Nanofiber-Based Proton Exchange Membranes for Hydrogen Fuel Cell. , 2023, , 167-217.		0
1134	Low-Voltage Hydrogen Peroxide Electrolyzer for Highly Efficient Power-to-Hydrogen Conversion. ACS Sustainable Chemistry and Engineering, 2023, 11, 2599-2606.	3.2	3
1135	Are biologically synthesized electrolytes the future in green energy storage?. Energy Storage, 2023, 5, .	2.3	2
1136	Enhanced supercapacitive energy storage performance of metal organic frameworks derived shuttle-like vanadium selenide in K <sub>3</sub> Fe(CN) <sub>6</sub> -based redox electrolyte. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	0
1137	Zn glutarate protective layers in situ form on Zn anodes for Zn redox flow batteries. Energy Storage Materials, 2023, 57, 195-204.	9.5	9
1138	Vacancy-Defective Cobalt Nitride Nanostructures for Sonocatalytic Hydrogen Production Using Various Water Resources. ACS Applied Nano Materials, 2023, 6, 2636-2645.	2.4	0
1139	High-rate performance and super long-cycle stability of Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> cathode material coated by diatomic doped carbon. Rare Metals, 2023, 42, 1570-1582.	3.6	12

#	ARTICLE	IF	CITATIONS
1140	Water Energy Nexus and Energy Transition—A Review. <i>Energies</i> , 2023, 16, 1879.	1.6	11
1141	The effect of the Zn content on the electrochemical performance of Al-Zn-Sn-Ga alloys. <i>Materials Chemistry and Physics</i> , 2023, 299, 127510.	2.0	1
1142	Single-atom electrocatalyst and gel polymer electrolyte boost the energy density and life of aluminum-sulfur batteries. <i>Journal of Materials Science and Technology</i> , 2023, 152, 86-93.	5.6	3
1143	Decarbonization potential of future sustainable propulsion—A review of road transportation. <i>Energy Science and Engineering</i> , 2024, 12, 438-455.	1.9	4
1144	Recent developments of nanocomposites in energy-related applications. , 2023, , 111-127.		0
1145	Recent progress of dendrite-free stable zinc anodes for advanced zinc-based rechargeable batteries: Fundamentals, challenges, and perspectives. <i>SusMat</i> , 2023, 3, 180-206.	7.8	15
1146	In Situ Generation of Pt <sub>2</sub> Co <sub>3</sub> NanoAlloys in Porous N-Doped Carbon for Highly Efficient Electrocatalytic Hydrogen Evolution. <i>ChemCatChem</i> , 2023, 15, .	1.8	2
1147	Thermodynamic and Structural Effects of Fe Doping in Magnesium Manganese Oxides for Thermochemical Energy Storage. <i>Energy &amp; Fuels</i> , 2023, 37, 4692-4700.	2.5	0
1148	China's electric vehicle and climate ambitions jeopardized by surging critical material prices. <i>Nature Communications</i> , 2023, 14, .	5.8	24
1149	Technical and economic analysis of energy storage in the compressed air technology with low capacity for the production plant. <i>Energy Conversion and Management</i> , 2023, 282, 116872.	4.4	4
1150	Ferroelectric Ceramic-Polymer Nanocomposites for Applications in Dielectric Energy Storage Capacitors. , 2023, , 463-498.		1
1151	Amorphous non-doped and Se-, Cu-, and Zn-doped Sb <sub>2</sub> S <sub>3</sub> nanoparticles prepared by a hot-injection method: bandgap tuning and possible observation of the quantum size effect. <i>Journal of Nanoparticle Research</i> , 2023, 25, .	0.8	1
1152	An Innovative Converterless Solar PV Control Strategy for a Grid Connected Hybrid PV/Wind/Fuel-Cell System Coupled With Battery Energy Storage. <i>IEEE Access</i> , 2023, 11, 23245-23259.	2.6	32
1153	Sustainability Assessment of Energy Storage Technologies Based on Commercialization Viability: MCDM Model. <i>Sustainability</i> , 2023, 15, 4707.	1.6	8
1154	Recent Advances and Perspectives of Lewis Acidic Etching Route: An Emerging Preparation Strategy for MXenes. <i>Nano-Micro Letters</i> , 2023, 15, .	14.4	24
1155	Hydrogen economy driven by offshore wind in regional comprehensive economic partnership members. <i>Energy and Environmental Science</i> , 2023, 16, 2014-2029.	15.6	7
1156	Optimal capacity of variable-speed pumped storage for wind power consumption based on double-layer stochastic programming. <i>Journal of Renewable and Sustainable Energy</i> , 2023, 15, .	0.8	2
1157	Synthesis of high-purity Li <sub>2</sub> S nanocrystals <i>via</i> metathesis for solid-state electrolyte applications. <i>Journal of Materials Chemistry A</i> , 2023, 11, 7652-7661.	5.2	4

#	ARTICLE	IF	CITATIONS
1158	Highly Conductive Proton Selectivity Membrane Enabled by Hollow Carbon Sieving Nanospheres for Energy Storage Devices. <i>Engineering</i> , 2023, 28, 69-78.	3.2	3
1159	Sb Ultra-Small Nanoparticles Embedded within N, S co-Doped Flexible Carbon Nanofiber Films with Longitudinal Tunnels as High Performance Anode Materials for Sodium-Ion Batteries. <i>Batteries and Supercaps</i> , 2023, 6, .	2.4	1
1160	Tuning coordination environment of iron ions to ensure ultra-high pseudocapacitive capability in iron oxide. <i>Nano Research</i> , 0, , .	5.8	0
1161	Synergistic Utilization of a CeO <sub>2</sub> -Anchored Bifunctionalized Metal-Organic Framework in a Polymer Nanocomposite toward Achieving High Power Density and Durability of PEMFC. <i>ACS Sustainable Chemistry and Engineering</i> , 2023, 11, 5270-5283.	3.2	14
1162	All-Solid-State Thin Film Li-Ion Batteries: New Challenges, New Materials, and New Designs. <i>Batteries</i> , 2023, 9, 186.	2.1	8
1163	Role of International Oil Companies in the Net-Zero Emission Energy Transition. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2023, 14, 301-322.	3.3	3
1164	Characterization of CrAl coating on stainless steel bipolar plates for polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2024, 51, 1208-1226.	3.8	1
1165	Accelerated Perovskite Oxide Development for Thermochemical Energy Storage by a High-Throughput Combinatorial Approach. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	2
1166	Manganese-based flow battery based on the MnCl <sub>2</sub> electrolyte for energy storage. <i>Chemical Engineering Journal</i> , 2023, 465, 142602.	6.6	4
1167	Anion Intercalation into Graphite Drives Surface Wetting. <i>Journal of the American Chemical Society</i> , 2023, 145, 8007-8020.	6.6	9
1169	The TWh challenge: Next generation batteries for energy storage and electric vehicles. , 2023, 1, 100015.		12
1170	Engineering a manganese-based oxide heterostructure cathode for high-performance aqueous potassium-ion storage. <i>Materials Advances</i> , 0, , .	2.6	1
1171	Simulating the Impact of Glassy Carbon Foam Electrodes on the Performance of Sodium Iodine Batteries. <i>Journal of the Electrochemical Society</i> , 2023, 170, 040517.	1.3	1
1172	Investigation of the AlB <sub>2</sub> intermetallic phases effect on Al-Zn-B alloys™ electrochemical performance in Al-air battery anodes. <i>Applied Physics A: Materials Science and Processing</i> , 2023, 129, .	1.1	2
1173	Influence of Rotational Speed on Isothermal Piston Compression System. <i>Entropy</i> , 2023, 25, 644.	1.1	0
1174	Electrochemically Activated Expanded Graphite with Tailor-made Pores for Magnesium-Organocation Hybrid Batteries. <i>ChemSusChem</i> , 0, , .	3.6	0
1175	A Review of Cobalt-Based Metal Hydroxide Electrode for Applications in Supercapacitors. <i>Advances in Materials Science and Engineering</i> , 2023, 2023, 1-15.	1.0	3
1176	Investigating the Effect of Nonideal Conditions on the Performance of a Planar Sb <sub>2</sub> Se <sub>3</sub> -Based Solar Cell through SCAPS-1D Simulation. <i>Energy &amp; Fuels</i> , 2023, 37, 6722-6732.	2.5	2

#	ARTICLE	IF	CITATIONS
1177	Statistical and machine learning-based durability-testing strategies for energy storage. <i>Joule</i> , 2023, 7, 920-934.	11.7	7
1178	High-rate, high-capacity electrochemical energy storage in hydrogen-bonded fused aromatics. <i>Joule</i> , 2023, 7, 986-1002.	11.7	8
1179	Developing Cathode Materials for Aqueous Zinc Ion Batteries: Challenges and Practical Prospects. <i>Advanced Functional Materials</i> , 2024, 34, .	7.8	45
1180	Understanding technological innovation and evolution of energy storage in China: Spatial differentiation of innovations in lithium-ion battery industry. <i>Journal of Energy Storage</i> , 2023, 66, 107307.	3.9	8
1181	Quasi-solid-state hybrid supercapacitors assembled by Ni-Co-P@C/Ni-B nanoarrays and porous carbon nanofibers with N-doped C nanocages. <i>Chemical Engineering Journal</i> , 2023, 466, 143064.	6.6	11
1182	Quasi-Solid Aqueous Electrolytes for Low-Cost Sustainable Alkali-Metal Batteries. <i>Advanced Materials</i> , 2023, 35, .	11.1	35
1183	Maximizing uninterrupted solar electricity in spectral-splitting photovoltaic-thermal systems integrated with CO <sub>2</sub> battery. <i>Journal of Energy Storage</i> , 2023, 66, 107402.	3.9	2
1184	Preparation and Characterization of a LiFePO <sub>4</sub> -Lithium Salt Composite Cathode for All-Solid-State Li-Metal Batteries. <i>Batteries</i> , 2023, 9, 236.	2.1	2
1185	Recent advances in porous carbon nanosheets for high-performance metal-ion capacitors. <i>Chemical Engineering Journal</i> , 2023, 466, 143077.	6.6	18
1194	<i>Sustainable Energy, Fuel and Chemicals</i> . , 2021, , 488-588.		0
1200	Evaluation Indicators of Power Grid Planning Considering Large-Scale New Energy Access. <i>Lecture Notes on Data Engineering and Communications Technologies</i> , 2023, , 279-289.	0.5	0
1205	<i>Case studies and analysis of solar photovoltaics</i> . , 2023, , 237-279.		0
1221	Boosting Lean Electrolyte Lithium-Sulfur Battery Performance with Transition Metals: A Comprehensive Review. <i>Nano-Micro Letters</i> , 2023, 15, .	14.4	15
1228	Synthesis of chromite manganese (MnCr <sub>2</sub> O <sub>4</sub> ) and its potential test as anode of potassium-ion battery (KIB). <i>AIP Conference Proceedings</i> , 2023, , .	0.3	0
1233	<i>Analysis of Alternative Energy Systems Usage Leading to Sustainable Development Goals and Environmental Policies in Ecology</i> . , 2023, , .		0
1244	<i>Polymer blend nanocomposites with CNTs for energy storage applications</i> . , 2023, , 241-270.		1
1245	<i>Polymers with carbon-based quantum dots for energy storage</i> . , 2023, , 311-343.		0
1248	<i>Two-Stage Robust Optimization for Microgrid Dispatch with Uncertainties</i> . , 2023, , .		0

#	ARTICLE	IF	CITATIONS
1253	A new class of pseudocapacitive electrode materials for electrochemical energy storage in rechargeable batteries. , 2023, , 181-224.		0
1260	Energy Management of Hybrid power generation with ANFIS Controller. , 2022, , .		0
1279	Electrochemical Energy Storage (EcES). Energy Storage in Batteries. Green Energy and Technology, 2023, , 59-75.	0.4	0
1282	Mn-based cathode materials for rechargeable batteries. Science China Chemistry, 2024, 67, 87-105.	4.2	3
1288	Small-molecule organic electrode materials for rechargeable batteries. Science China Chemistry, 2023, 66, 3070-3104.	4.2	6
1289	Zinc-Bromine Rechargeable Batteries: From Device Configuration, Electrochemistry, Material to Performance Evaluation. Nano-Micro Letters, 2023, 15, .	14.4	2
1295	On Energy Storage Chemistry of Aqueous Zn-Ion Batteries: From Cathode to Anode. Electrochemical Energy Reviews, 2023, 6, .	13.1	7
1317	Design and Performance of Organic Flow Batteries. Green Energy and Technology, 2023, , 69-90.	0.4	0
1322	Provision of kinetic energy support from wind turbines for frequency regulation services in the modern grid. , 2024, , 167-180.		0
1325	Sizing of BESS to Support Primary Frequency Control in a O&G FPSO with Wind Power Integration. , 2023, , .		0
1338	Metal-air batteries for powering robot. Journal of Materials Chemistry A, 0, , .	5.2	0
1342	Iron-based fluorophosphate $\text{Na}_2\text{FePO}_4\text{F}$ as a cathode for aqueous zinc-ion batteries. Chemical Communications, 0, , .	2.2	0
1361	Laser-induced Zinc Metal Battery Anodes with Ultra-long Cycling Performance. , 2023, , .		0
1371	Development of Evaluation Index System for Emergency Capability of Power Grid Under the Background of New Power System. , 2023, , .		0
1394	Roadmap for rechargeable batteries: present and beyond. Science China Chemistry, 0, , .	4.2	0
1424	Cloud Analytics. Advances in Computer and Electrical Engineering Book Series, 2024, , 253-267.	0.2	0
1428	Sustainability of Pumped Hydropower for Short-Term Storage of Wind Farm Electricity. Lecture Notes in Mechanical Engineering, 2024, , 778-785.	0.3	0