

# Spinels: Controlled Preparation, Oxygen Reduction/Evolution Beyond

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Citation Report

#	ARTICLE	IF	CITATIONS
2	Synthesis of Nitrogen-Doped Porous Carbon Spheres with Improved Porosity toward the Electrocatalytic Oxygen Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 11105-11116.	3.2	61
3	Adjusting the catalytic properties of cobalt ferrite nanoparticles by pulsed laser fragmentation in water with defined energy dose. <i>Scientific Reports</i> , 2017, 7, 13161.	1.6	54
4	Spinels: Controlled Preparation, Oxygen Reduction/Evolution Reaction Application, and Beyond. <i>Chemical Reviews</i> , 2017, 117, 10121-10211.	23.0	1,157
5	Electrospun Thin-Walled $\text{CuCo}_2\text{O}_4$ @C Nanotubes as Bifunctional Oxygen Electrocatalysts for Rechargeable Zn-Air Batteries. <i>Nano Letters</i> , 2017, 17, 7989-7994.	4.5	199
6	Rational Bottom-Up Engineering of Electrocatalysts by Atomic Layer Deposition: A Case Study of $\text{Fe}_3\text{CoS}_4$ -Based Catalysts for Electrochemical Hydrogen Evolution. <i>ACS Energy Letters</i> , 2017, 2, 2778-2785.	8.8	61
7	Nanocarbon-Based Electrocatalysts for Rechargeable Aqueous Li/Zn-Air Batteries. <i>ChemElectroChem</i> , 2018, 5, 1745-1763.	1.7	34
8	A structurally versatile nickel phosphite acting as a robust bifunctional electrocatalyst for overall water splitting. <i>Energy and Environmental Science</i> , 2018, 11, 1287-1298.	15.6	205
9	Well-Tuned Surface Oxygen Chemistry of Cation Off-Stoichiometric Spinel Oxides for Highly Selective and Sensitive Formaldehyde Detection. <i>Chemistry of Materials</i> , 2018, 30, 2018-2027.	3.2	64
10	Bifunctional electrocatalysts of MOF-derived $\text{Co}_4\text{N/C}$ on bamboo-like $\text{MnO}$ nanowires for high-performance liquid- and solid-state Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9716-9722.	5.2	167
11	Aqueous rechargeable zinc/sodium vanadate batteries with enhanced performance from simultaneous insertion of dual carriers. <i>Nature Communications</i> , 2018, 9, 1656.	5.8	1,162
12	Transition-metal-oxide-based catalysts for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 8194-8209.	5.2	259
13	Enhancement of Oxygen Transfer by Design Nickel Foam Electrode for Zinc-Air Battery. <i>Journal of the Electrochemical Society</i> , 2018, 165, A809-A818.	1.3	41
14	Atomic-Level $\text{Co}_3\text{O}_4$ Layer Stabilized by Metallic Cobalt Nanoparticles: A Highly Active and Stable Electrocatalyst for Oxygen Reduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 7052-7060.	4.0	45
15	Band engineering of multicomponent semiconductors: a general theoretical model on the anion group. <i>Energy and Environmental Science</i> , 2018, 11, 692-701.	15.6	14
16	Cation, magnetic, and charge ordering in $\text{MnFe}_3\text{O}_5$ . <i>Journal of Materials Chemistry C</i> , 2018, 6, 3271-3275.	2.7	14
17	Graphene-Based Nanomaterials for Sodium-Ion Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1702469.	10.2	170
18	The effect of ZIF-8 on the phase structure and morphology of bead-like $\text{CuMn}_2\text{O}_4/\text{ZnO}$ photocatalytic electrospun nanofibers. <i>Materials Letters</i> , 2018, 216, 199-202.	1.3	23
19	Advanced Architectures and Relatives of Air Electrodes in Zn-Air Batteries. <i>Advanced Science</i> , 2018, 5, 1700691.	5.6	645

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20	Facile Synthesis of Mesoporous and Thin-Walled Ni <sup>x</sup> Co Sulfide Nanotubes as Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2018, 1, 495-502.	2.5	28
21	Carbon Nanosheets Containing Discrete Co-N <sub>x</sub> -B <sub>y</sub> -C Active Sites for Efficient Oxygen Electrocatalysis and Rechargeable Zn-Air Batteries. <i>ACS Nano</i> , 2018, 12, 1894-1901.	7.3	419
22	Alcohol Solvent Effects in the Synthesis of Co <sub>3</sub> O <sub>4</sub> Metal-Oxide Nanoparticles: Disproof of a Surface-Ligand Thermodynamic Effect en Route to Alternative Kinetic and Thermodynamic Explanations. <i>Inorganic Chemistry</i> , 2018, 57, 1517-1526.	1.9	7
23	Enhancing the Oxygen Electroreduction Activity through Electron Tunnelling: CoO <sub>x</sub> Ultrathin Films on Pd(100). <i>ACS Catalysis</i> , 2018, 8, 2343-2352.	5.5	32
24	ssDNA-tailorable oxidase-mimicking activity of spinel MnCo <sub>2</sub> O <sub>4</sub> for sensitive biomolecular detection in food sample. <i>Sensors and Actuators B: Chemical</i> , 2018, 269, 79-87.	4.0	75
25	Cation exchange synthesis of Ni <sub>x</sub> Co <sub>(3-x)</sub> O <sub>4</sub> (x = 1.25) nanoparticles on aminated carbon nanotubes with high catalytic bifunctionality for the oxygen reduction/evolution reaction toward efficient Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9517-9527.	5.2	65
26	Enhancement of the performance in Li-O <sub>2</sub> cells of a NiCo <sub>2</sub> O <sub>4</sub> based porous positive electrode by Cr(III) doping. <i>Materials Letters</i> , 2018, 224, 113-117.	1.3	8
27	Bifunctional Electrocatalysts for Overall Water Splitting from an Iron/Nickel-Based Bimetallic Metal-Organic Framework/Dicyandiamide Composite. <i>Angewandte Chemie</i> , 2018, 130, 9059-9064.	1.6	81
28	Bifunctional Electrocatalysts for Overall Water Splitting from an Iron/Nickel-Based Bimetallic Metal-Organic Framework/Dicyandiamide Composite. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8921-8926.	7.2	291
29	High-performance rechargeable aqueous Zn-ion batteries with a poly(benzoquinonyl sulfide) cathode. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1391-1396.	3.0	173
30	Recent Advances in Magnetic Nanomaterial-Based Mechanotransduction for Cell Fate Regulation. <i>Advanced Materials</i> , 2018, 30, e1705673.	11.1	57
31	Design strategies for non-precious metal oxide electrocatalysts for oxygen evolution reactions. <i>Current Opinion in Electrochemistry</i> , 2018, 10, 16-23.	2.5	35
32	Insights into the durability of Co-Fe spinel oxygen evolution electrocatalysts via operando studies of the catalyst structure. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7034-7041.	5.2	47
33	Electrochemical assessment of Ca <sub>3</sub> Co <sub>4</sub> O <sub>9</sub> nanofibres obtained by Solution Blow Spinning. <i>Materials Letters</i> , 2018, 221, 81-84.	1.3	23
34	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. <i>Chemical Reviews</i> , 2018, 118, 6337-6408.	23.0	1,552
35	Rapid low-temperature synthesis of perovskite/carbon nanocomposites as superior electrocatalysts for oxygen reduction in Zn-air batteries. <i>Nano Research</i> , 2018, 11, 3282-3293.	5.8	44
36	Engineering the Surface Structure of Binary/Ternary Ferrite Nanoparticles as High-Performance Electrocatalysts for the Oxygen Evolution Reaction. <i>ChemCatChem</i> , 2018, 10, 1075-1083.	1.8	19
37	Electronic Tuning of Co, Ni-Based Nanostructured (Hydr)oxides for Aqueous Electrocatalysis. <i>Advanced Functional Materials</i> , 2018, 28, 1804886.	7.8	87

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38	Spin state engineered Zn <sub>x</sub> Co <sub>3-x</sub> O <sub>4</sub> as an efficient oxygen evolution electrocatalyst. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 29452-29461.	1.3	29
39	Self-assembled Mn <sub>3</sub> O <sub>4</sub> nano-clusters over carbon nanotube threads with enhanced supercapacitor performance. <i>New Journal of Chemistry</i> , 2018, 42, 19608-19614.	1.4	29
40	Copper in Natural Oxide Spinel: The New Mineral Thermaerogenite CuAl <sub>2</sub> O <sub>4</sub> , Cuprospinel and Cu-Enriched Varieties of Other Spinel-Group Members from Fumaroles of the Tolbachik Volcano, Kamchatka, Russia. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 498.	0.8	16
41	Synergistic Electro-Catalysis of Pd/PdO Nanoparticles and Cr(III)-Doped NiCo <sub>2</sub> O <sub>4</sub> Nanofibers in Aprotic Li-O <sub>2</sub> Batteries. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3605-A3612.	1.3	6
42	Multifunctional Ferrite Nanoparticles: From Current Trends Toward the Future. , 2018, , 59-116.		34
43	Flexible and Tailorable Na <sup>+</sup> CO <sub>2</sub> Batteries Based on an All-Solid-State Polymer Electrolyte. <i>ChemElectroChem</i> , 2018, 5, 3628-3632.	1.7	42
44	Relationships Between Crystal, Internal Microstructures, and Physicochemical Properties of Copper-Zinc-Iron Multinary Spinel Hierarchical Nano-microspheres. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 35919-35931.	4.0	18
45	One-step construction of porous mixed spinel-type MnCo <sub>x</sub> O <sub>4</sub> /NCNT as an efficient bi-functional oxygen electrocatalyst. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 19451-19459.	3.8	11
46	Non-Noble Metal Electrocatalysts for the Oxygen Reduction Reaction in Fuel Cells. , 2018, , 235-262.		1
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49	Design of a Three-Dimensional Interconnected Hierarchical Micro-Mesoporous Structure of Graphene as Support Material for Spinel NiCo <sub>2</sub> O <sub>4</sub> Electrocatalysts toward Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 27469-27476.	1.5	51
50	Nickel-Based Bicarbonates as Bifunctional Catalysts for Oxygen Evolution and Reduction Reaction in Alkaline Media. <i>Chemistry - A European Journal</i> , 2018, 24, 17665-17671.	1.7	15
51	Cobalt-Based Metal-Organic Framework Nanoarrays as Bifunctional Oxygen Electrocatalysts for Rechargeable Zn-Air Batteries. <i>Chemistry - A European Journal</i> , 2018, 24, 18413-18418.	1.7	60
52	Needle grass array of nanostructured nickel cobalt sulfide electrode for clean energy generation. <i>Surface and Coatings Technology</i> , 2018, 354, 306-312.	2.2	26
53	Emerging Materials in Heterogeneous Electrocatalysis Involving Oxygen for Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 33737-33767.	4.0	52
54	Structural engineering of transition metal-based nanostructured electrocatalysts for efficient water splitting. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 838-854.	2.3	40
55	X-ray emission spectroscopy: an effective route to extract site occupation of cations. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 28990-29000.	1.3	16

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57	A Layered "Tunnel Intergrowth Structure for High-Performance Sodium-Ion Oxide Cathode. Advanced Energy Materials, 2018, 8, 1800492.	10.2	116
58	Graphene-wrapped nitrogen-doped hollow carbon spheres for high-activity oxygen electroreduction. Materials Chemistry Frontiers, 2018, 2, 1489-1497.	3.2	19
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61	Fe-Containing Magnesium Aluminate Support for Stability and Carbon Control during Methane Reforming. ACS Catalysis, 2018, 8, 5983-5995.	5.5	66
62	Spinel photocatalysts for environmental remediation, hydrogen generation, CO <sub>2</sub> reduction and photoelectrochemical water splitting. Journal of Materials Chemistry A, 2018, 6, 11078-11104.	5.2	176
63	Mesoporous Hollow Nitrogen-Doped Carbon Nanospheres with Embedded MnFe <sub>2</sub> O <sub>4</sub> /Fe Hybrid Nanoparticles as Efficient Bifunctional Oxygen Electrocatalysts in Alkaline Media. ACS Applied Materials & Interfaces, 2018, 10, 20440-20447.	4.0	73
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66	One-step mild synthesis of Mn-based spinel MnII CrIII <sub>2</sub> O <sub>4</sub> /MnII MnIII <sub>2</sub> O <sub>4</sub> /C and Co-based spinel CoCr <sub>2</sub> O <sub>4</sub> /C nanoparticles as battery-type electrodes for high-performance supercapacitor application. Electrochimica Acta, 2018, 283, 197-211.	2.6	29
67	Mn <sub>3</sub> O <sub>4</sub> Quantum Dots Supported on Nitrogen-Doped Partially Exfoliated Multiwall Carbon Nanotubes as Oxygen Reduction Electrocatalysts for High-Performance Zn "Air Batteries. ACS Applied Materials & Interfaces, 2018, 10, 23900-23909.	4.0	55
68	Novel Nanomaterials as Electrocatalysts for Fuel Cells. , 2018, , 169-204.		5
69	Rapid inkjet printing of high catalytic activity Co <sub>3</sub> O <sub>4</sub> /N-rGO layers for oxygen reduction reaction. Applied Catalysis A: General, 2018, 563, 9-17.	2.2	17
70	Improving Electrocatalysts for Oxygen Evolution Using Ni <sub>x</sub> Fe <sub>3-x</sub> O <sub>4</sub> /Ni Hybrid Nanostructures Formed by Solvothermal Synthesis. ACS Energy Letters, 2018, 3, 1698-1707.	8.8	132
71	Ternary PtVCo dendrites for the hydrogen evolution reaction, oxygen evolution reaction, overall water splitting and rechargeable Zn "air batteries. Inorganic Chemistry Frontiers, 2018, 5, 2425-2431.	3.0	23
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74	Fine Tuning the Heterostructured Interfaces by Topological Transformation of Layered Double Hydroxide Nanosheets. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 10411-10420.	1.8	51
75	Accelerated active phase transformation of NiO powered by Pt single atoms for enhanced oxygen evolution reaction. <i>Chemical Science</i> , 2018, 9, 6803-6812.	3.7	96
76	Spent alkaline battery-derived manganese oxides as efficient oxygen electrocatalysts for Zn-air batteries. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 2167-2173.	3.0	29
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78	Transition metal oxide-based oxygen reduction reaction electrocatalysts for energy conversion systems with aqueous electrolytes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10595-10626.	5.2	162
79	Core/shell design of efficient electrocatalysts based on NiCo <sub>2</sub> O <sub>4</sub> nanowires and NiMn LDH nanosheets for rechargeable zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10243-10252.	5.2	158
80	Rational design and synthesis of highly oriented copper-zinc ferrite QDs/titania NAE nano-heterojunction composites with novel photoelectrochemical and photoelectrocatalytic behaviors. <i>Dalton Transactions</i> , 2018, 47, 12769-12782.	1.6	18
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83	Integrated Mesoporous PtPd Film/Ni Foam: An Efficient Binder-Free Cathode for Zn-Air Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 12367-12374.	3.2	20
84	Metal-Air Batteries: From Static to Flow System. <i>Advanced Energy Materials</i> , 2018, 8, 1801396.	10.2	156
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86	Mechanism and activity of CO oxidation on (001) and (110) surfaces of spinel Co <sub>3</sub> O <sub>4</sub> , NiCo <sub>2</sub> O <sub>4</sub> and NiFe <sub>2</sub> O <sub>4</sub> : A DFT study. <i>Surface Science</i> , 2018, 677, 278-283.	0.8	18
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89	Superaerophobic P-doped Ni(OH) <sub>2</sub> /NiMoO <sub>4</sub> hierarchical nanosheet arrays grown on Ni foam for electrocatalytic overall water splitting. <i>Dalton Transactions</i> , 2018, 47, 8787-8793.	1.6	64
90	Multifunctional mixed valence N-doped CNT@MFe <sub>2</sub> O <sub>4</sub> hybrid nanomaterials: from engineered one-pot coprecipitation to application in energy storage paper supercapacitors. <i>Nanoscale</i> , 2018, 10, 12820-12840.	2.8	26
91	Multifunctional nanostructured electrocatalysts for energy conversion and storage: current status and perspectives. <i>Nanoscale</i> , 2018, 10, 11241-11280.	2.8	258

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92	Construction of hierarchical FeP/Ni <sub>2</sub> P hollow nanospindles for efficient oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14103-14111.	5.2	109
93	Self-Assembly of Three-Dimensional Zinc-Doped NiCo <sub>2</sub> O <sub>4</sub> as Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>Chemistry - A European Journal</i> , 2018, 24, 13002-13008.	1.7	51
94	Asymmetric Supercapacitors Assembled by Dual Spinel Ferrites@Graphene Nanocomposites as Electrodes. <i>ACS Applied Energy Materials</i> , 2018, 1, 3206-3215.	2.5	44
95	Layered Metal-Organic Framework-Derived Metal Oxide/Carbon Nanosheet Arrays for Catalyzing the Oxygen Evolution Reaction. <i>ACS Energy Letters</i> , 2018, 3, 1655-1661.	8.8	176
96	Oxygen reduction reaction on gold in alkaline solutions – The inner or outer sphere mechanisms in the light of recent achievements. <i>Current Opinion in Electrochemistry</i> , 2019, 14, 180-185.	2.5	23
97	Nature of Active Sites and an Oxygen-Assisted Reaction Mechanism for Mercury Capture by Spinel-Type CuMn <sub>2</sub> O <sub>4</sub> Sorbents. <i>Energy &amp; Fuels</i> , 2019, 33, 8920-8926.	2.5	15
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100	Single Nickel Atoms on Nitrogen-Doped Graphene Enabling Enhanced Kinetics of Lithium-Sulfur Batteries. <i>Advanced Materials</i> , 2019, 31, e1903955.	11.1	447
101	Spatially-controlled porous nanoflake arrays derived from MOFs: An efficiently long-life oxygen electrode. <i>Nano Research</i> , 2019, 12, 2528-2534.	5.8	16
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103	Construction of mass-transfer channel in air electrode with bifunctional catalyst for rechargeable zinc-air battery. <i>Electrochimica Acta</i> , 2019, 320, 134564.	2.6	41
104	Nanostructured Fe-Ni Sulfide: A Multifunctional Material for Energy Generation and Storage. <i>Catalysts</i> , 2019, 9, 597.	1.6	21
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107	Structure, magnetic behavior and OER activity of CoFe <sub>2</sub> O <sub>4</sub> powders obtained using agar-agar from red seaweed (Rhodophyta). <i>Materials Chemistry and Physics</i> , 2019, 237, 121847.	2.0	42
108	Preparation and photoluminescence of NiFe <sub>2</sub> O <sub>4</sub> nanoparticles. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 15379-15387.	1.1	15
109	Precipitates shape up. <i>Nature Chemistry</i> , 2019, 11, 685-686.	6.6	5

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111	Mn-doped atomic SnO <sub>2</sub> layers for highly efficient CO <sub>2</sub> electrochemical reduction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 19651-19656.	5.2	63
112	Solution Combustion Synthesis as a Novel Route to Preparation of Catalysts. <i>International Journal of Self-Propagating High-Temperature Synthesis</i> , 2019, 28, 77-109.	0.2	19
113	Hierarchical nickel cobalt oxide spinel microspheres catalyze mineralization of humic substances during wet air oxidation at atmospheric pressure. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117858.	10.8	28
114	Electrocatalytic evaluation of Co <sub>3</sub> O <sub>4</sub> and NiCo <sub>2</sub> O <sub>4</sub> rosettes-like hierarchical spinel as bifunctional materials for oxygen evolution (OER) and reduction (ORR) reactions in alkaline media. <i>Journal of Electroanalytical Chemistry</i> , 2019, 847, 113190.	1.9	85
115	Photoinduced Oxygen Reduction Reaction Boosts the Output Voltage of a Zinc-Air Battery. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12460-12464.	7.2	102
116	A review of transition metal-based bifunctional oxygen electrocatalysts. <i>Journal of the Chinese Chemical Society</i> , 2019, 66, 829-865.	0.8	82
117	Chromium substituted iron oxide nanowires as affordable electrocatalysts for oxygen evolution reaction. <i>Journal of Nanoparticle Research</i> , 2019, 21, 1.	0.8	11
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119	Photoinduced Oxygen Reduction Reaction Boosts the Output Voltage of a Zinc-Air Battery. <i>Angewandte Chemie</i> , 2019, 131, 12590-12594.	1.6	33
120	Facile synthesis of ternary spinel Co-Mn-Ni nanorods as efficient bi-functional oxygen catalysts for rechargeable zinc-air batteries. <i>Journal of Power Sources</i> , 2019, 435, 226761.	4.0	42
121	Template-free Synthesis of Stable Cobalt Manganese Spinel Hollow Nanostructured Catalysts for Highly Water-Resistant CO Oxidation. <i>IScience</i> , 2019, 21, 19-30.	1.9	11
122	Two cobalt(II) coordination polymers based on 5-i-butoxyisophthalate and dipyriddy: Syntheses, structures and efficient oxygen evolution reaction. <i>Journal of Solid State Chemistry</i> , 2019, 278, 120913.	1.4	26
123	Partial Sulfurization of a 2D MOF Array for Highly Efficient Oxygen Evolution Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 41595-41601.	4.0	91
124	Structure Analysis of Nanocomposite ZnO:Fe <sub>2</sub> O <sub>3</sub> based Mineral Yarosite as Fe <sub>2</sub> O <sub>3</sub> Source and its Application Probability. <i>Materials Today: Proceedings</i> , 2019, 13, 36-40.	0.9	4
125	A low temperature solid state reaction to produce hollow Mn <sub>x</sub> Fe <sub>3-x</sub> O <sub>4</sub> nanoparticles as anode for lithium-ion batteries. <i>Nano Energy</i> , 2019, 66, 104199.	8.2	21
126	Solid-State Gelation for Nanostructured Perovskite Oxide Aerogels. <i>Chemistry of Materials</i> , 2019, 31, 9422-9429.	3.2	17
127	On-site generated metal organic framework-deriving core/shell ZnCo <sub>2</sub> O <sub>4</sub> /ZnO nanoarray for better water oxidation. <i>Nanotechnology</i> , 2019, 30, 495405.	1.3	8

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