

Zhi-Yu Wang

List of Publications by Citations

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101
papers

13,602
citations

53
h-index

108
g-index

108
ext. papers

14,967
ext. citations

12.3
avg, IF

6.87
L-index

#	Paper	IF	Citations
101	Metal oxide hollow nanostructures for lithium-ion batteries. <i>Advanced Materials</i> , 2012 , 24, 1903-11	23.6	1322
100	Enhancing lithium-sulphur battery performance by strongly binding the discharge products on amino-functionalized reduced graphene oxide. <i>Nature Communications</i> , 2014 , 5, 5002	16.9	782
99	Assembling carbon-coated γ -Fe ₂ O ₃ hollow nanohorns on the CNT backbone for superior lithium storage capability. <i>Energy and Environmental Science</i> , 2012 , 5, 5252-5256	35	706
98	Quasiemulsion-templated formation of γ -Fe ₂ O ₃ hollow spheres with enhanced lithium storage properties. <i>Journal of the American Chemical Society</i> , 2011 , 133, 17146-8	16	694
97	Metal-Organic-Framework-Derived Hybrid Carbon Nanocages as a Bifunctional Electrocatalyst for Oxygen Reduction and Evolution. <i>Advanced Materials</i> , 2017 , 29, 1700874	23.6	503
96	Fast formation of SnO ₂ nanoboxes with enhanced lithium storage capability. <i>Journal of the American Chemical Society</i> , 2011 , 133, 4738-41	16	497
95	Sustainable Synthesis and Assembly of Biomass-Derived B/N Co-Doped Carbon Nanosheets with Ultrahigh Aspect Ratio for High-Performance Supercapacitors. <i>Advanced Functional Materials</i> , 2016 , 26, 111-119	15.4	482
94	Metal-organic-framework-engaged formation of Co nanoparticle-embedded carbon@Co ₉ S ₈ double-shelled nanocages for efficient oxygen reduction. <i>Energy and Environmental Science</i> , 2016 , 9, 107-111	35	422
93	Stabilizing the MXenes by Carbon Nanoplatelet for Developing Hierarchical Nanohybrids with Efficient Lithium Storage and Hydrogen Evolution Capability. <i>Advanced Materials</i> , 2017 , 29, 1607017	23.6	362
92	Formation of SnO ₂ hollow nanospheres inside mesoporous silica nanoreactors. <i>Journal of the American Chemical Society</i> , 2011 , 133, 21-3	16	362
91	Amorphous CoSnO ₃ @C nanoboxes with superior lithium storage capability. <i>Energy and Environmental Science</i> , 2013 , 6, 87-91	35	299
90	Hierarchical nickel sulfide hollow spheres for high performance supercapacitors. <i>RSC Advances</i> , 2011 , 1, 397	3.6	295
89	Boosting electrocatalytic oxygen evolution by synergistically coupling layered double hydroxide with MXene. <i>Nano Energy</i> , 2018 , 44, 181-190	16.9	293
88	A flexible TiO ₂ (B)-based battery electrode with superior power rate and ultralong cycle life. <i>Advanced Materials</i> , 2013 , 25, 3462-7	23.6	271
87	Green Synthesis of NiO Nanobelts with Exceptional Pseudo-Capacitive Properties. <i>Advanced Energy Materials</i> , 2012 , 2, 1188-1192	21.6	272
86	Controlled synthesis of hierarchical NiO nanosheet hollow spheres with enhanced supercapacitive performance. <i>Journal of Materials Chemistry</i> , 2011 , 21, 6602		251
85	Aggregation-Resistant 3D MXene-Based Architecture as Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <i>ACS Nano</i> , 2018 , 12, 8017-8028	16.4	249

84	Fe ₂ O ₃ nanotubes with superior lithium storage capability. <i>Chemical Communications</i> , 2011 , 47, 8061-3	5.7	247
83	TiO ₂ nanocages: fast synthesis, interior functionalization and improved lithium storage properties. <i>Advanced Materials</i> , 2012 , 24, 4124-9	23.6	236
82	Superhierarchical Cobalt-Embedded Nitrogen-Doped Porous Carbon Nanosheets as Two-in-One Hosts for High-Performance Lithium-Sulfur Batteries. <i>Advanced Materials</i> , 2018 , 30, e1706895	23.6	228
81	Engineering nonspherical hollow structures with complex interiors by template-engaged redox etching. <i>Journal of the American Chemical Society</i> , 2010 , 132, 16271-7	16	223
80	Ultralong FeMoO ₃ Nanobelts: Synthesis and Effect of Binder Choice on Their Lithium Storage Properties. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 12508-12513	3.7	220
79	Graphene-wrapped TiO ₂ hollow structures with enhanced lithium storage capabilities. <i>Nanoscale</i> , 2011 , 3, 2158-61	7.5	218
78	One-pot synthesis of uniform carbon-coated MoO ₂ nanospheres for high-rate reversible lithium storage. <i>Chemical Communications</i> , 2010 , 46, 6906-8	5.7	171
77	Synthesis of MoS ₂ -C one-dimensional nanostructures with improved lithium storage properties. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 3765-8	9.4	170
76	TiO ₂ hollow spheres with large amount of exposed (001) facets for fast reversible lithium storage. <i>Journal of Materials Chemistry</i> , 2011 , 21, 1677-1680		165
75	A Top-Down Strategy toward 3D Carbon Nanosheet Frameworks Decorated with Hollow Nanostructures for Superior Lithium Storage. <i>Advanced Functional Materials</i> , 2016 , 26, 7590-7598	15.4	164
74	Nitrogen-doped activated carbon derived from prawn shells for high-performance supercapacitors. <i>Electrochimica Acta</i> , 2016 , 190, 1134-1141	6.7	163
73	CuO nanostructures supported on Cu substrate as integrated electrodes for highly reversible lithium storage. <i>Nanoscale</i> , 2011 , 3, 1618-23	7.5	155
72	Interconnected MoO ₂ nanocrystals with carbon nanocoating as high-capacity anode materials for lithium-ion batteries. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 4853-7	9.4	149
71	A hierarchically porous and hydrophilic 3D nickel/carbon/MXene electrode for accelerating oxygen and hydrogen evolution at high current densities. <i>Nano Energy</i> , 2019 , 63, 103880	16.9	133
70	TiO ₂ nanotube arrays grafted with Fe ₂ O ₃ hollow nanorods as integrated electrodes for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 122-127	12.8	121
69	Freestanding Flexible Li ₂ S Paper Electrode with High Mass and Capacity Loading for High-Energy LiS Batteries. <i>Advanced Energy Materials</i> , 2017 , 7, 1700018	21.6	118
68	Highly atom-economic synthesis of graphene/MnO ₂ hybrid composites for electrochemical supercapacitors. <i>Nanoscale</i> , 2013 , 5, 2999-3005	7.5	115
67	Mesoporous single-crystal CoSn(OH) ₆ hollow structures with multilevel interiors. <i>Scientific Reports</i> , 2013 , 3, 1391	4.7	114

66	MXene-Based Electrode with Enhanced Pseudocapacitance and Volumetric Capacity for Power-Type and Ultra-Long Life Lithium Storage. <i>ACS Nano</i> , 2018 , 12, 3928-3937	16.4	113
65	Nitrogen-Doped Graphene on Transition Metal Substrates as Efficient Bifunctional Catalysts for Oxygen Reduction and Oxygen Evolution Reactions. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 22578-22587	9.4	102
64	Sulfur-infiltrated graphene-backboned mesoporous carbon nanosheets with a conductive polymer coating for long-life lithium-sulfur batteries. <i>Nanoscale</i> , 2015 , 7, 7569-73	7.5	98
63	Dually fixed SnO ₂ nanoparticles on graphene nanosheets by polyaniline coating for superior lithium storage. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 2444-51	9.4	90
62	A Polymetallic Metal-Organic Framework-Derived Strategy toward Synergistically Multidoped Metal Oxide Electrodes with Ultralong Cycle Life and High Volumetric Capacity. <i>Advanced Functional Materials</i> , 2017 , 27, 1605332	15.4	90
61	Low temperature plasma synthesis of mesoporous Fe ₃ O ₄ nanorods grafted on reduced graphene oxide for high performance lithium storage. <i>Nanoscale</i> , 2014 , 6, 2286-91	7.5	87
60	Engineering Multifunctional Collaborative Catalytic Interface Enabling Efficient Hydrogen Evolution in All pH Range and Seawater. <i>Advanced Energy Materials</i> , 2019 , 9, 1901333	21.6	85
59	In situ synthesis of super-long Cu nanowires inside carbon nanotubes with coal as carbon source. <i>Carbon</i> , 2006 , 44, 1845-1847	10.1	71
58	Free-standing, hierarchically porous carbon nanotube film as a binder-free electrode for high-energy LiO ₂ batteries. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 12033	12.8	71
57	CVD synthesis of coal-gas-derived carbon nanotubes and nanocapsules containing magnetic iron carbide and oxide. <i>Carbon</i> , 2006 , 44, 2565-2568	10.1	70
56	Fabrication and characterization of magnetic Fe ₃ O ₄ /CNT composites. <i>Journal of Physics and Chemistry of Solids</i> , 2010 , 71, 673-676	3.9	69
55	Nitrogen-rich carbon coupled multifunctional metal oxide/graphene nano hybrids for long-life lithium storage and efficient oxygen reduction. <i>Nano Energy</i> , 2015 , 12, 578-587	16.9	67
54	One-step synthesis of SnO ₂ and TiO ₂ hollow nanostructures with various shapes and their enhanced lithium storage properties. <i>Chemistry - A European Journal</i> , 2012 , 18, 7561-7	4.6	65
53	Nitrogen-doped graphene nanoribbons for high-performance lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 16832-16835	12.8	64
52	SBA-15 derived carbon-supported SnO ₂ nanowire arrays with improved lithium storage capabilities. <i>Journal of Materials Chemistry</i> , 2011 , 21, 13860		61
51	Formation of Pt-TiO ₂ -rGO 3-phase junctions with significantly enhanced electro-activity for methanol oxidation. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 473-6	3.5	59
50	Boosting redox activity on MXene-induced multifunctional collaborative interface in high Li ₂ S loading cathode for high-energy Li-S and metallic Li-free rechargeable batteries. <i>Journal of Energy Chemistry</i> , 2019 , 37, 183-191	11.9	57
49	Multilevel Hollow MXene Tailored Low-Pt Catalyst for Efficient Hydrogen Evolution in Full-pH Range and Seawater. <i>Advanced Functional Materials</i> , 2020 , 30, 1910028	15.4	57

48	Ultrastable and high-capacity carbon nanofiber anodes derived from pitch/polyacrylonitrile for flexible sodium-ion batteries. <i>Carbon</i> , 2018 , 135, 187-194	10.1	52
47	Synthesis of branched carbon nanotubes from coal. <i>Carbon</i> , 2006 , 44, 1321-1324	10.1	50
46	Synthesis of double-walled carbon nanotubes from coal in hydrogen-free atmosphere. <i>Fuel</i> , 2007 , 86, 282-286	7	48
45	Shape-Control and Characterization of Magnetite Prepared via a One-Step Solvothermal Route. <i>Crystal Growth and Design</i> , 2010 , 10, 2863-2869	3.4	49
44	Rational design of high-performance sodium-ion battery anode by molecular engineering of coal tar pitch. <i>Chemical Engineering Journal</i> , 2018 , 342, 52-60	14.6	48
43	Accelerating polysulfide redox conversion on bifunctional electrocatalytic electrode for stable Li-S batteries. <i>Energy Storage Materials</i> , 2019 , 20, 98-107	19.2	46
42	Fe ₂ O ₃ -mediated growth and carbon nanocoating of ultrafine SnO ₂ nanorods as anode materials for Li-ion batteries. <i>Journal of Materials Chemistry</i> , 2012 , 22, 2526-2531		46
41	A general strategy for synthesis of silver dendrites by galvanic displacement under hydrothermal conditions. <i>Journal of Physics and Chemistry of Solids</i> , 2008 , 69, 1296-1300	3.9	46
40	Liquid-Liquid Diffusion-Assisted Crystallization: A Fast and Versatile Approach Toward High Quality Mixed Quantum Dot-Salt Crystals. <i>Advanced Functional Materials</i> , 2015 , 25, 2638-2645	15.4	42
39	Towards efficient electrocatalysts for oxygen reduction by doping cobalt into graphene-supported graphitic carbon nitride. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 19657-19661	12.8	40
38	Achieving ultralong life sodium storage in amorphous cobalt in binary sulfide nanoboxes sheathed in N-doped carbon. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 10398-10405	12.8	38
37	A Molecular-Cage Strategy Enabling Efficient Chemisorption-Electrocatalytic Interface in Nanostructured Li ₂ S Cathode for Li Metal-Free Rechargeable Cells with High Energy. <i>Advanced Functional Materials</i> , 2019 , 29, 1905986	15.4	30
36	Compressible graphene aerogel supported CoO nanostructures as a binder-free electrode for high-performance lithium-ion batteries. <i>RSC Advances</i> , 2015 , 5, 8929-8932	3.6	31
35	Ultrafine Fe ₃ O ₄ Quantum Dots on Hybrid Carbon Nanosheets for Long-Life, High-Rate Alkali-Metal Storage. <i>ChemElectroChem</i> , 2016 , 3, 38-44	4.3	30
34	Rational design of metal oxide hollow nanostructures decorated carbon nanosheets for superior lithium storage. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 17718-17725	12.8	27
33	Facile synthesis of graphene-supported mesoporous Mn ₃ O ₄ nanosheets with a high-performance in Li-ion batteries. <i>RSC Advances</i> , 2014 , 4, 5367	3.6	27
32	Carbon Nanotube Templated Synthesis of CeF ₃ Nanowires. <i>Chemistry of Materials</i> , 2007 , 19, 3364-3366	9.5	26
31	Characterizations of Al ₂ O ₃ thin film composite anode materials for lithium-ion batteries. <i>Electrochemistry Communications</i> , 2009 , 11, 1179-1182	5.1	26

30	Synthesis of different CuO nanostructures from Cu(OH) ₂ nanorods through changing drying medium for lithium-ion battery anodes. <i>RSC Advances</i> , 2015 , 5, 28611-28618	3.6	25
29	Long life rechargeable Li-O ₂ batteries enabled by enhanced charge transfer in nanocable-like Fe@N-doped carbon nanotube catalyst. <i>Science China Materials</i> , 2017 , 60, 415-426	7	23
28	Water-assisted fabrication of aligned micro-sized carbon tubes made of self-assembled multi-wall carbon nanotubes. <i>Chemical Communications</i> , 2006 , 594-6	5.7	23
27	General synthesis of zeolitic imidazolate framework-derived planar-N-doped porous carbon nanosheets for efficient oxygen reduction. <i>Energy Storage Materials</i> , 2017 , 7, 181-188	19.2	22
26	2021 Roadmap: electrocatalysts for green catalytic processes. <i>JPhys Materials</i> , 2021 , 4, 022004	4	21
25	Energy-saving hydrogen production by chlorine-free hybrid seawater splitting coupling hydrazine degradation. <i>Nature Communications</i> , 2021 , 12, 4182	16.9	18
24	Single-atom Pt promoted Mo ₂ C for electrochemical hydrogen evolution reaction. <i>Journal of Energy Chemistry</i> , 2021 , 57, 371-377	11.9	17
23	Microporous MOFs Engaged in the Formation of Nitrogen-Doped Mesoporous Carbon Nanosheets for High-Rate Supercapacitors. <i>Chemistry - A European Journal</i> , 2018 , 24, 2681-2686	4.6	16
22	General synthesis of MXene by green etching chemistry of fluoride-free Lewis acidic melts. <i>Rare Metals</i> , 2020 , 39, 1237-1238	5.4	16
21	Boosting the Electrocatalysis of MXenes by Plasmon-Induced Thermalization and Hot-Electron Injection. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 9416-9420	16.1	16
20	Coordination-driven self-assembly: construction of a Fe ₃ O ₄ /graphene hybrid 3D framework and its long cycle lifetime for lithium-ion batteries. <i>RSC Advances</i> , 2015 , 5, 40249-40257	3.6	15
19	Chemically converting graphene oxide to graphene with organic base for Suzuki reaction. <i>Materials Research Bulletin</i> , 2015 , 67, 77-82	5	15
18	Carbonate-assisted hydrothermal synthesis of porous, hierarchical CuO microspheres and CuO/GO for high-performance lithium-ion battery anodes. <i>RSC Advances</i> , 2015 , 5, 85179-85186	3.6	14
17	Hydrogen-Bonding Crosslinking MXene to Highly Robust and Ultralight Aerogels for Strengthening Lithium Metal Anode. <i>Small Science</i> , 2021 , 1, 2100021		13
16	TiO ₂ mesoporous single crystals with controllable architectures and TiO ₂ /graphene oxide nanocomposites for high-performance lithium ion battery anodes. <i>Electrochimica Acta</i> , 2016 , 190, 25-32	6.7	12
15	Carbon dioxide-assisted fabrication of self-organized tubular carbon micropatterns on silicon substrates. <i>Carbon</i> , 2010 , 48, 1465-1472	10.1	12
14	Fabrication, magnetic properties and self-assembly of hierarchical crystalline hexapod magnetites. <i>RSC Advances</i> , 2012 , 2, 4329	3.6	9
13	A quasi-solid-state rechargeable cell with high energy and superior safety enabled by stable redox chemistry of Li ₂ S in gel electrolyte. <i>Energy and Environmental Science</i> , 2021 , 14, 2278-2290	35	8

12	TiO ₂ /C composites nanorods synthesized by internal-reflux method for lithium-ion battery anode materials. <i>Materials Letters</i> , 2014 , 117, 124-127	3.2	8
11	Shear behaviour of structural silicone adhesively bonded steel-glass orthogonal lap joints. <i>Journal of Adhesion Science and Technology</i> , 2018 , 32, 2693-2708	1.9	4
10	Nanohybrids: Stabilizing the MXenes by Carbon Nanoplatting for Developing Hierarchical Nanohybrids with Efficient Lithium Storage and Hydrogen Evolution Capability (Adv. Mater. 24/2017). <i>Advanced Materials</i> , 2017 , 29,	23.6	3
9	Stabilizing MXene by Hydration Chemistry in Aqueous Solution. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 26587-26591	16.1	3
8	Dynamic compressive creep behaviour of structural silicone-to-aluminum and silicone-based sealant-to-aluminum joints. <i>Journal of Adhesion Science and Technology</i> , 2019 , 33, 2293-2306	1.9	2
7	Hollow TiO ₂ microspheres: template-free synthesis, remarkable structure stability, and improved photoelectric performance. <i>New Journal of Chemistry</i> , 2016 , 40, 4751-4755	3.5	2
6	Boosting the Electrocatalysis of MXenes by Plasmon-Induced Thermalization and Hot-Electron Injection. <i>Angewandte Chemie</i> , 2021 , 133, 9502-9506	3.5	2
5	Energy-saving Hydrogen Production by Seawater Electrolysis Coupling Sulfion Degradation.. <i>Advanced Materials</i> , 2022 , e2109321	23.6	2
4	A TiCT MXene-Based Energy-Harvesting Soft Actuator with Self-Powered Humidity Sensing and Real-Time Motion Tracking Capability. <i>ACS Nano</i> , 2021 , 15, 16811-16818	16.4	2
3	A LiS-based all-solid-state battery with high energy and superior safety.. <i>Science Advances</i> , 2022 , 8, eabl8390	13.9	0
2	Fast Peel-Off Ultrathin, Transparent, and Free-Standing Films Assembled from Low-Dimensional Materials Using MXene Sacrificial Layers and Produced Bubbles.. <i>Small Methods</i> , 2021 , e2101388	12.6	1
1	High-Energy and Safe Lithium Battery Enabled by Solid-state Redox Chemistry in Fireproof Gel Electrolyte.. <i>Advanced Materials</i> , 2022 , e2201981	23.6	