Zhi-Yu Wang

List of Publications by Year
in descending order

105 papers	17,017 citations	20759 60 h-index	28224 105 g-index
108 all docs	108 docs citations	108 times ranked	17611 citing authors

#	Article	IF	Citations
1	Metal Oxide Hollow Nanostructures for Lithiumâ€ion Batteries. Advanced Materials, 2012, 24, 1903-1911.	11.1	1,414
2	Enhancing lithiumâ€“sulphur battery performance by strongly binding the discharge products on amino-functionalized reduced graphene oxide. Nature Communications, 2014, 5, 5002.	5.8	892
3	Assembling carbon-coated Î±-Fe₂O₃hollow nanohorns on the CNT backbone for superior lithium storage capability. Energy and Environmental Science, 2012, 5, 5252-5256.	15.6	767
4	Quasiemulsion-Templated Formation of Î±-Fe₂O₃ Hollow Spheres with Enhanced Lithium Storage Properties. Journal of the American Chemical Society, 2011, 133, 17146-17148.	6.6	750
5	Metalâ€“Organicâ€Frameworkâ€Derived Hybrid Carbon Nanocages as a Bifunctional Electrocatalyst for Oxygen Reduction and Evolution. Advanced Materials, 2017, 29, 1700874.	11.1	678
6	Sustainable Synthesis and Assembly of Biomassâ€Derived B/N Coâ€Doped Carbon Nanosheets with Ultrahigh Aspect Ratio for Highâ€Performance Supercapacitors. Advanced Functional Materials, 2016, 26, 111-119.	7.8	607
7	Stabilizing the MXenes by Carbon Nanoplating for Developing Hierarchical Nanohybrids with Efficient Lithium Storage and Hydrogen Evolution Capability. Advanced Materials, 2017, 29, 1607017.	11.1	583
8	Fast Formation of SnO₂ Nanoboxes with Enhanced Lithium Storage Capability. Journal of the American Chemical Society, 2011, 133, 4738-4741.	6.6	521
9	Metalâ€“organic-framework-engaged formation of Co nanoparticle-embedded carbon@Co₉S₈ double-shelled nanocages for efficient oxygen reduction. Energy and Environmental Science, 2016, 9, 107-111.	15.6	499
10	Boosting electrocatalytic oxygen evolution by synergistically coupling layered double hydroxide with MXene. Nano Energy, 2018, 44, 181-190.	8.2	458
11	Aggregation-Resistant 3D MXene-Based Architecture as Efficient Bifunctional Electrocatalyst for Overall Water Splitting. ACS Nano, 2018, 12, 8017-8028.	7.3	425
12	Formation of SnO₂ Hollow Nanospheres inside Mesoporous Silica Nanoreactors. Journal of the American Chemical Society, 2011, 133, 21-23.	6.6	391
13	Amorphous CoSnO₃@C nanoboxes with superior lithium storage capability. Energy and Environmental Science, 2013, 6, 87-91.	15.6	337
14	Hierarchical nickel sulfide hollow spheres for high performance supercapacitors. RSC Advances, 2011, 1, 397.	1.7	322
15	Superhierarchical Cobaltâ€Embedded Nitrogenâ€Doped Porous Carbon Nanosheets as Twoâ€inâ€One Hosts for Highâ€Performance Lithiumâ€“Sulfur Batteries. Advanced Materials, 2018, 30, e1706895.	11.1	300
16	Green Synthesis of NiO Nanobelts with Exceptional Pseudoâ€Capacitive Properties. Advanced Energy Materials, 2012, 2, 1188-1192.	10.2	297
17	A Flexible TiO₂(B)â€Based Battery Electrode with Superior Power Rate and Ultralong Cycle Life. Advanced Materials, 2013, 25, 3462-3467.	11.1	286
18	Controlled synthesis of hierarchical NiO nanosheet hollow spheres with enhanced supercapacitive performance. Journal of Materials Chemistry, 2011, 21, 6602.	6.7	280

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19	A hierarchically porous and hydrophilic 3D nickelâ€“iron/MXene electrode for accelerating oxygen and hydrogen evolution at high current densities. Nano Energy, 2019, 63, 103880.	8.2	275
20	Î±-Fe2O3 nanotubes with superior lithium storage capability. Chemical Communications, 2011, 47, 8061.	2.2	265
21	TiO₂ Nanocages: Fast Synthesis, Interior Functionalization and Improved Lithium Storage Properties. Advanced Materials, 2012, 24, 4124-4129.	11.1	250
22	Ultralong Î±-MoO₃ Nanobelts: Synthesis and Effect of Binder Choice on Their Lithium Storage Properties. Journal of Physical Chemistry C, 2012, 116, 12508-12513.	1.5	246
23	Engineering Nonspherical Hollow Structures with Complex Interiors by Template-Engaged Redox Etching. Journal of the American Chemical Society, 2010, 132, 16271-16277.	6.6	241
24	Energy-saving hydrogen production by chlorine-free hybrid seawater splitting coupling hydrazine degradation. Nature Communications, 2021, 12, 4182.	5.8	233
25	Graphene-wrapped TiO2 hollow structures with enhanced lithium storage capabilities. Nanoscale, 2011, 3, 2158.	2.8	223
26	Nitrogen-doped activated carbon derived from prawn shells for high-performance supercapacitors. Electrochimica Acta, 2016, 190, 1134-1141.	2.6	217
27	A Topâ€Down Strategy toward 3D Carbon Nanosheet Frameworks Decorated with Hollow Nanostructures for Superior Lithium Storage. Advanced Functional Materials, 2016, 26, 7590-7598.	7.8	201
28	Engineering Multifunctional Collaborative Catalytic Interface Enabling Efficient Hydrogen Evolution in All pH Range and Seawater. Advanced Energy Materials, 2019, 9, 1901333.	10.2	196
29	One-pot synthesis of uniform carbon-coated MoO2 nanospheres for high-rate reversible lithium storage. Chemical Communications, 2010, 46, 6906.	2.2	185
30	Synthesis of MoS₂â€“C One-Dimensional Nanostructures with Improved Lithium Storage Properties. ACS Applied Materials & Interfaces, 2012, 4, 3765-3768.	4.0	183
31	TiO₂hollow spheres with large amount of exposed (001) facets for fast reversible lithium storage. Journal of Materials Chemistry, 2011, 21, 1677-1680.	6.7	182
32	CuO nanostructures supported on Cu substrate as integrated electrodes for highly reversible lithium storage. Nanoscale, 2011, 3, 1618.	2.8	174
33	Interconnected MoO₂ Nanocrystals with Carbon Nanocoating as High-Capacity Anode Materials for Lithium-ion Batteries. ACS Applied Materials & Interfaces, 2011, 3, 4853-4857.	4.0	167
34	MXene-Based Electrode with Enhanced Pseudocapacitance and Volumetric Capacity for Power-Type and Ultra-Long Life Lithium Storage. ACS Nano, 2018, 12, 3928-3937.	7.3	163
35	Freestanding Flexible Li₂S Paper Electrode with High Mass and Capacity Loading for Highâ€Energy Liâ€“S Batteries. Advanced Energy Materials, 2017, 7, 1700018.	10.2	152
36	Multilevel Hollow MXene Tailored Lowâ€Pt Catalyst for Efficient Hydrogen Evolution in Fullâ€pH Range and Seawater. Advanced Functional Materials, 2020, 30, 1910028.	7.8	150

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37	Mesoporous Single-crystal CoSn(OH)6 Hollow Structures with Multilevel Interiors. Scientific Reports, 2013, 3, 1391.	1.6	131
38	TiO₂nanotube arrays grafted with Fe₂O₃hollow nanorods as integrated electrodes for lithium-ion batteries. Journal of Materials Chemistry A, 2013, 1, 122-127.	5.2	130
39	Highly atom-economic synthesis of graphene/Mn3O4 hybrid composites for electrochemical supercapacitors. Nanoscale, 2013, 5, 2999.	2.8	128
40	Nitrogen-Doped Graphene on Transition Metal Substrates as Efficient Bifunctional Catalysts for Oxygen Reduction and Oxygen Evolution Reactions. ACS Applied Materials & Interfaces, 2017, 9, 22578-22587.	4.0	128
41	A Polymetallic Metalâ€Organic Frameworkâ€Derived Strategy toward Synergistically Multidoped Metal Oxide Electrodes with Ultralong Cycle Life and High Volumetric Capacity. Advanced Functional Materials, 2017, 27, 1605332.	7.8	116
42	Sulfur-infiltrated graphene-backboned mesoporous carbon nanosheets with a conductive polymer coating for long-life lithiumâ€“sulfur batteries. Nanoscale, 2015, 7, 7569-7573.	2.8	106
43	Dually Fixed SnO₂ Nanoparticles on Graphene Nanosheets by Polyaniline Coating for Superior Lithium Storage. ACS Applied Materials & Interfaces, 2015, 7, 2444-2451.	4.0	99
44	Low temperature plasma synthesis of mesoporous Fe3O4 nanorods grafted on reduced graphene oxide for high performance lithium storage. Nanoscale, 2014, 6, 2286.	2.8	97
45	Energyâ€Saving Hydrogen Production by Seawater Electrolysis Coupling Sulfion Degradation. Advanced Materials, 2022, 34, e2109321.	11.1	95
46	Rational design of high-performance sodium-ion battery anode by molecular engineering of coal tar pitch. Chemical Engineering Journal, 2018, 342, 52-60.	6.6	87
47	Accelerating polysulfide redox conversion on bifunctional electrocatalytic electrode for stable Li-S batteries. Energy Storage Materials, 2019, 20, 98-107.	9.5	87
48	Fabrication and characterization of magnetic Fe3O4â€“CNT composites. Journal of Physics and Chemistry of Solids, 2010, 71, 673-676.	1.9	82
49	CVD synthesis of coal-gas-derived carbon nanotubes and nanocapsules containing magnetic iron carbide and oxide. Carbon, 2006, 44, 2565-2568.	5.4	80
50	Ultrastable and high-capacity carbon nanofiber anodes derived from pitch/polyacrylonitrile for flexible sodium-ion batteries. Carbon, 2018, 135, 187-194.	5.4	80
51	Boosting redox activity on MXene-induced multifunctional collaborative interface in high Li2S loading cathode for high-energy Li-S and metallic Li-free rechargeable batteries. Journal of Energy Chemistry, 2019, 37, 183-191.	7.1	80
52	Free-standing, hierarchically porous carbon nanotube film as a binder-free electrode for high-energy Liâ€“O2 batteries. Journal of Materials Chemistry A, 2013, 1, 12033.	5.2	78
53	Boosting the Electrocatalysis of MXenes by Plasmonâ€Induced Thermalization and Hotâ€Electron Injection. Angewandte Chemie - International Edition, 2021, 60, 9416-9420.	7.2	78
54	Nitrogen-rich carbon coupled multifunctional metal oxide/graphene nanohybrids for long-life lithium storage and efficient oxygen reduction. Nano Energy, 2015, 12, 578-587.	8.2	76

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55	Nitrogen-doped graphene nanoribbons for high-performance lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 16832-16835.	5.2	75
56	In situ synthesis of super-long Cu nanowires inside carbon nanotubes with coal as carbon source. Carbon, 2006, 44, 1845-1847.	5.4	74
57	A Ti₃C₂T_x MXene-Based Energy-Harvesting Soft Actuator with Self-Powered Humidity Sensing and Real-Time Motion Tracking Capability. ACS Nano, 2021, 15, 16811-16818.	7.3	74
58	Single-atom Pt promoted Mo2C for electrochemical hydrogen evolution reaction. Journal of Energy Chemistry, 2021, 57, 371-377.	7.1	69
59	Formation of Ptâ€“TiO₂â€“rGO 3-phase junctions with significantly enhanced electro-activity for methanol oxidation. Physical Chemistry Chemical Physics, 2012, 14, 473-476.	1.3	67
60	One-Step Synthesis of SnO2and TiO2Hollow Nanostructures with Various Shapes and Their Enhanced Lithium Storage Properties. Chemistry - A European Journal, 2012, 18, 7561-7567.	1.7	67
61	SBA-15 derived carbon-supported SnO2 nanowire arrays with improved lithium storage capabilities. Journal of Materials Chemistry, 2011, 21, 13860.	6.7	61
62	Stabilizing MXene by Hydration Chemistry in Aqueous Solution. Angewandte Chemie - International Edition, 2021, 60, 26587-26591.	7.2	61
63	2021 Roadmap: electrocatalysts for green catalytic processes. JPhys Materials, 2021, 4, 022004.	1.8	57
64	Synthesis of double-walled carbon nanotubes from coal in hydrogen-free atmosphere. Fuel, 2007, 86, 282-286.	3.4	55
65	A Li ₂ S-based all-solid-state battery with high energy and superior safety. Science Advances, 2022, 8, eabl8390.	4.7	54
66	Shape-Control and Characterization of Magnetite Prepared via a One-Step Solvothermal Route. Crystal Growth and Design, 2010, 10, 2863-2869.	1.4	53
67	Synthesis of branched carbon nanotubes from coal. Carbon, 2006, 44, 1321-1324.	5.4	52
68	Liquidâ€“Liquid Diffusionâ€Assisted Crystallization: A Fast and Versatile Approach Toward High Quality Mixed Quantum Dotâ€Salt Crystals. Advanced Functional Materials, 2015, 25, 2638-2645.	7.8	52
69	General synthesis of MXene by green etching chemistry of fluoride-free Lewis acidic melts. Rare Metals, 2020, 39, 1237-1238.	3.6	52
70	A Molecularâ€Cage Strategy Enabling Efficient Chemisorptionâ€“Electrocatalytic Interface in Nanostructured Li₂S Cathode for Li Metalâ€Free Rechargeable Cells with High Energy. Advanced Functional Materials, 2019, 29, 1905986.	7.8	51
71	A general strategy for synthesis of silver dendrites by galvanic displacement under hydrothermal conditions. Journal of Physics and Chemistry of Solids, 2008, 69, 1296-1300.	1.9	48
72	Towards efficient electrocatalysts for oxygen reduction by doping cobalt into graphene-supported graphitic carbon nitride. Journal of Materials Chemistry A, 2015, 3, 19657-19661.	5.2	47

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73	Î±-Fe₂O₃-mediated growth and carbon nanocoating of ultrafine SnO₂nanorods as anode materials for Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 2526-2531.	6.7	46
74	Achieving ultralong life sodium storage in amorphous cobaltâ€“tin binary sulfide nanoboxes sheathed in N-doped carbon. Journal of Materials Chemistry A, 2017, 5, 10398-10405.	5.2	45
75	Hydrogenâ€Bonding Crosslinking MXene to Highly Robust and Ultralight Aerogels for Strengthening Lithium Metal Anode. Small Science, 2021, 1, 2100021.	5.8	41
76	A quasi-solid-state rechargeable cell with high energy and superior safety enabled by stable redox chemistry of Li₂S in gel electrolyte. Energy and Environmental Science, 2021, 14, 2278-2290.	15.6	40
77	Compressible graphene aerogel supported CoO nanostructures as a binder-free electrode for high-performance lithium-ion batteries. RSC Advances, 2015, 5, 8929-8932.	1.7	32
78	Ultrafine Fe₃O₄ Quantum Dots on Hybrid Carbon Nanosheets for Longâ€Life, Highâ€Rate Alkaliâ€Metal Storage. ChemElectroChem, 2016, 3, 38-44.	1.7	32
79	General synthesis of zeolitic imidazolate framework-derived planar-N-doped porous carbon nanosheets for efficient oxygen reduction. Energy Storage Materials, 2017, 7, 181-188.	9.5	31
80	Facile synthesis of graphene-supported mesoporous Mn3O4 nanosheets with a high-performance in Li-ion batteries. RSC Advances, 2014, 4, 5367.	1.7	30
81	Rational design of metal oxide hollow nanostructures decorated carbon nanosheets for superior lithium storage. Journal of Materials Chemistry A, 2016, 4, 17718-17725.	5.2	30
82	Carbon Nanotube Templated Synthesis of CeF3 Nanowires. Chemistry of Materials, 2007, 19, 3364-3366.	3.2	29
83	A Highâ€Energy and Safe Lithium Battery Enabled by Solidâ€State Redox Chemistry in a Fireproof Gel Electrolyte. Advanced Materials, 2022, 34, e2201981.	11.1	27
84	Characterizations of Alâ€“Y thin film composite anode materials for lithium-ion batteries. Electrochemistry Communications, 2009, 11, 1179-1182.	2.3	26
85	Synthesis of different CuO nanostructures from Cu(OH)₂ nanorods through changing drying medium for lithium-ion battery anodes. RSC Advances, 2015, 5, 28611-28618.	1.7	26
86	Long life rechargeable Li-O2 batteries enabled by enhanced charge transfer in nanocable-like Fe@N-doped carbon nanotube catalyst. Science China Materials, 2017, 60, 415-426.	3.5	26
87	Water-assisted fabrication of aligned microsized carbon tubes made of self-assembled multi-wall carbon nanotubes. Chemical Communications, 2006, , 594-596.	2.2	23
88	Hydrogen Production and Water Desalination with Onâ€demand Electricity Output Enabled by Electrochemical Neutralization Chemistry. Angewandte Chemie - International Edition, 2022, 61, .	7.2	23
89	NiCo (oxy)selenide electrocatalysts via anionic regulation for high-performance lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2022, 10, 5410-5419.	5.2	22
90	Microporous MOFs Engaged in the Formation of Nitrogenâ€Doped Mesoporous Carbon Nanosheets for Highâ€Rate Supercapacitors. Chemistry - A European Journal, 2018, 24, 2681-2686.	1.7	21

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91	Carbonate-assisted hydrothermal synthesis of porous, hierarchical CuO microspheres and CuO/GO for high-performance lithium-ion battery anodes. RSC Advances, 2015, 5, 85179-85186.	1.7	19
92	Chemically converting graphene oxide to graphene with organic base for Suzuki reaction. Materials Research Bulletin, 2015, 67, 77-82.	2.7	16
93	Coordination-driven self-assembly: construction of a Fe₃O₄â€“graphene hybrid 3D framework and its long cycle lifetime for lithium-ion batteries. RSC Advances, 2015, 5, 40249-40257.	1.7	16
94	Carbon dioxide-assisted fabrication of self-organized tubular carbon micropatterns on silicon substrates. Carbon, 2010, 48, 1465-1472.	5.4	14
95	TiO2 mesoporous single crystals with controllable architectures and TiO2/graphene oxide nanocomposites for high-performance lithium ion battery anodes. Electrochimica Acta, 2016, 190, 25-32.	2.6	14
96	Fabrication, magnetic properties and self-assembly of hierarchical crystalline hexapod magnetites. RSC Advances, 2012, 2, 4329.	1.7	10
97	TiO2/C composites nanorods synthesized by internal-reflux method for lithium-ion battery anode materials. Materials Letters, 2014, 117, 124-127.	1.3	9
98	Shear behaviour of structural silicone adhesively bonded steel-glass orthogonal lap joints. Journal of Adhesion Science and Technology, 2018, 32, 2693-2708.	1.4	6
99	Stabilizing MXene by Hydration Chemistry in Aqueous Solution. Angewandte Chemie, 2021, 133, 26791-26795.	1.6	5
100	Hydrogen Production and Water Desalination with Onâ€demand Electricity Output Enabled by Electrochemical Neutralization Chemistry. Angewandte Chemie, 2022, 134, .	1.6	5
101	Nanohybrids: Stabilizing the MXenes by Carbon Nanoplating for Developing Hierarchical Nanohybrids with Efficient Lithium Storage and Hydrogen Evolution Capability (Adv. Mater. 24/2017). Advanced Materials, 2017, 29, .	11.1	4
102	Boosting the Electrocatalysis of MXenes by Plasmonâ€Induced Thermalization and Hotâ€Electron Injection. Angewandte Chemie, 2021, 133, 9502-9506.	1.6	4
103	Hollow TiO2 microspheres: template-free synthesis, remarkable structure stability, and improved photoelectric performance. New Journal of Chemistry, 2016, 40, 4751-4755.	1.4	3
104	Fast Peelâ€Off Ultrathin, Transparent, and Freeâ€Standing Films Assembled from Lowâ€Dimensional Materials Using MXene Sacrificial Layers and Produced Bubbles. Small Methods, 2021, , 2101388.	4.6	3
105	Dynamic compressive creep behaviour of structural silicone-to-aluminum and silicone-based sealant-to-aluminum joints. Journal of Adhesion Science and Technology, 2019, 33, 2293-2306.	1.4	2