Xiaolei Wang

List of Publications by Year
in descending order

70 papers	5,584 citations	66343 42 h-index	98798 67 g-index
72 all docs	72 docs citations	72 times ranked	8062 citing authors

#	Article	IF	Citations
1	Design and Synthesis of Hierarchical Nanowire Composites for Electrochemical Energy Storage. Advanced Functional Materials, 2009, 19, 3420-3426.	14.9	440
2	Structural and chemical synergistic encapsulation of polysulfides enables ultralong-life lithiumâ€“sulfur batteries. Energy and Environmental Science, 2016, 9, 2533-2538.	30.8	330
3	Highâ€Performance Supercapacitors Based on Nanocomposites of Nb₂O₅ Nanocrystals and Carbon Nanotubes. Advanced Energy Materials, 2011, 1, 1089-1093.	19.5	312
4	Pomegranateâ€Inspired Design of Highly Active and Durable Bifunctional Electrocatalysts for Rechargeable Metalâ€“Air Batteries. Angewandte Chemie - International Edition, 2016, 55, 4977-4982.	13.8	258
5	Chemisorption of polysulfides through redox reactions with organic molecules for lithiumâ€“sulfur batteries. Nature Communications, 2018, 9, 705.	12.8	207
6	Microwave-assisted pyrolysis of sewage sludge: A review. Fuel Processing Technology, 2019, 187, 84-104.	7.2	190
7	Two-Dimensional Phosphorus-Doped Carbon Nanosheets with Tunable Porosity for Oxygen Reactions in Zinc-Air Batteries. ACS Catalysis, 2018, 8, 2464-2472.	11.2	175
8	Building Robust Architectures of Carbon and Metal Oxide Nanocrystals toward High-Performance Anodes for Lithium-Ion Batteries. ACS Nano, 2012, 6, 9911-9919.	14.6	165
9	Sulfur Atoms Bridging Fewâ€Layered MoS₂ with Sâ€Doped Graphene Enable Highly Robust Anode for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1501106.	19.5	165
10	Sulfur covalently bonded graphene with large capacity and high rate for high-performance sodium-ion batteries anodes. Nano Energy, 2015, 15, 746-754.	16.0	164
11	Evidence of covalent synergy in siliconâ€“sulfurâ€“graphene yielding highly efficient and long-life lithium-ion batteries. Nature Communications, 2015, 6, 8597.	12.8	163
12	Implementing an in-situ carbon network in Si/reduced graphene oxide for high performance lithium-ion battery anodes. Nano Energy, 2016, 19, 187-197.	16.0	148
13	High-performance flexible lithium-ion electrodes based on robust network architecture. Energy and Environmental Science, 2012, 5, 6845.	30.8	144
14	Enhanced Reversible Sodiumâ€Ion Intercalation by Synergistic Coupling of Fewâ€Layered MoS₂ and Sâ€Doped Graphene. Advanced Functional Materials, 2017, 27, 1702562.	14.9	132
15	3D Nanocomposite Architectures from Carbonâ€Nanotubeâ€Threaded Nanocrystals for Highâ€Performance Electrochemical Energy Storage. Advanced Materials, 2014, 26, 339-345.	21.0	125
16	Highâ€Performance Energyâ€Storage Architectures from Carbon Nanotubes and Nanocrystal Building Blocks. Advanced Materials, 2012, 24, 2030-2036.	21.0	112
17	Alloyed semiconductor nanocrystals with broad tunable band gaps. Chemical Communications, 2009, , 4221.	4.1	111
18	3D Hierarchical Carbon-Rich Micro-/Nanomaterials for Energy Storage and Catalysis. Electrochemical Energy Reviews, 2021, 4, 269-335.	25.5	108

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19	3D N-doped hybrid architectures assembled from 0D T-Nb2O5 embedded in carbon microtubes toward high-rate Li-ion capacitors. Nano Energy, 2019, 56, 118-126.	16.0	105
20	Synthesis of Quaternary Semiconductor Nanocrystals with Tunable Band Gaps. Chemistry of Materials, 2009, 21, 2489-2493.	6.7	102
21	Carbon-Coated Silicon Nanowires on Carbon Fabric as Self-Supported Electrodes for Flexible Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 9551-9558.	8.0	101
22	Gas Pickering Emulsion Templated Hollow Carbon for High Rate Performance Lithium Sulfur Batteries. Advanced Functional Materials, 2016, 26, 8408-8417.	14.9	98
23	Flexible, three-dimensional ordered macroporous TiO2 electrode with enhanced electrodeâ€“electrolyte interaction in high-power Li-ion batteries. Nano Energy, 2016, 24, 72-77.	16.0	91
24	Tuning Shell Numbers of Transition Metal Oxide Hollow Microspheres toward Durable and Superior Lithium Storage. ACS Nano, 2017, 11, 11521-11530.	14.6	88
25	Realizing high-performance lithium-sulfur batteries via rational design and engineering strategies. Nano Energy, 2021, 82, 105761.	16.0	82
26	High-performance flexible electrode based on electrodeposition of polypyrrole/MnO2 on carbon cloth for supercapacitors. Journal of Power Sources, 2016, 326, 357-364.	7.8	81
27	A Lithiumâ€“Sulfur Battery using a 2D Current Collector Architecture with a Largeâ€Sized Sulfur Host Operated under High Areal Loading and Low E/S Ratio. Advanced Materials, 2018, 30, e1804271.	21.0	74
28	Bifunctionally active and durable hierarchically porous transition metal-based hybrid electrocatalyst for rechargeable metal-air batteries. Applied Catalysis B: Environmental, 2018, 239, 677-687.	20.2	64
29	Sulfur Nanogranular Film-Coated Three-Dimensional Graphene Sponge-Based High Power Lithium Sulfur Battery. ACS Applied Materials & Interfaces, 2016, 8, 1984-1991.	8.0	63
30	Efficient Zn Metal Anode Enabled by O,N-Codoped Carbon Microflowers. Nano Letters, 2022, 22, 1350-1357.	9.1	63
31	Nb2O5-carbon core-shell nanocomposite as anode material for lithium ion battery. Journal of Energy Chemistry, 2013, 22, 357-362.	12.9	62
32	Hierarchical Ni-Mo2C/N-doped carbon Mott-Schottky array for water electrolysis. Applied Catalysis B: Environmental, 2021, 292, 120168.	20.2	60
33	An Ultrafast, Durable, and Highâ€Loading Polymer Anode for Aqueous Zincâ€Ion Batteries and Supercapacitors. Advanced Materials, 2022, 34, e2200077.	21.0	60
34	Highly Oriented Graphene Sponge Electrode for Ultra High Energy Density Lithium Ion Hybrid Capacitors. ACS Applied Materials & Interfaces, 2016, 8, 25297-25305.	8.0	59
35	Highly Active and Durable Nanocrystalâ€Decorated Bifunctional Electrocatalyst for Rechargeable Zincâ€“Air Batteries. ChemSusChem, 2015, 8, 3129-3138.	6.8	57
36	Composites of MnO2 nanocrystals and partially graphitized hierarchically porous carbon spheres with improved rate capability for high-performance supercapacitors. Carbon, 2015, 93, 258-265.	10.3	56

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37	A General Synthesis of Cuâ^'Inâ^'S Based Multicomponent Solid-Solution Nanocrystals with Tunable Band Gap, Size, and Structure. Journal of Physical Chemistry C, 2010, 114, 17293-17297.	3.1	53
38	Ultrafast, long-life, high-loading, and wide-temperature zinc ion supercapacitors. Energy Storage Materials, 2022, 46, 233-242.	18.0	53
39	Fast lithium-ion storage of Nb₂O₅ nanocrystals in situ grown on carbon nanotubes for high-performance asymmetric supercapacitors. RSC Advances, 2015, 5, 41179-41185.	3.6	51
40	Building sponge-like robust architectures of CNTâ€“grapheneâ€“Si composites with enhanced rate and cycling performance for lithium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 3962-3967.	10.3	51
41	Compact high volumetric and areal capacity lithium sulfur batteries through rock salt induced nano-architectured sulfur hosts. Journal of Materials Chemistry A, 2017, 5, 21435-21441.	10.3	45
42	Hierarchical Chestnut-Burr Like Structure of Copper Cobalt Oxide Electrocatalyst Directly Grown on Ni Foam for Anion Exchange Membrane Water Electrolysis. ACS Sustainable Chemistry and Engineering, 2020, 8, 2344-2349.	6.7	45
43	N, Oâ€Codoped Carbon Nanosheet Array Enabling Stable Lithium Metal Anode. Advanced Functional Materials, 2021, 31, 2102354.	14.9	45
44	Bimetallic CoNi Alloy Nanoparticles Embedded in Pomegranate-like Nitrogen-Doped Carbon Spheres for Electrocatalytic Oxygen Reduction and Evolution. ACS Applied Nano Materials, 2020, 3, 1354-1362.	5.0	39
45	Vanadium Pentoxide Nanorods Anchored to and Wrapped with Graphene Nanosheets for Highâ€Power Asymmetric Supercapacitors. ChemElectroChem, 2015, 2, 1264-1269.	3.4	31
46	Tetragonal VNb9O24.9-based nanorods: a novel form of lithium battery anode with superior cyclability. Journal of Materials Chemistry A, 2013, 1, 12409.	10.3	29
47	Bimetallic metal-organic framework derived doped carbon nanostructures as high-performance electrocatalyst towards oxygen reactions. Nano Research, 2021, 14, 1533-1540.	10.4	29
48	Abundant Defects-Induced Interfaces Enabling Effective Anchoring for Polysulfides and Enhanced Kinetics in Lean Electrolyte Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 46767-46775.	8.0	25
49	Î±-NiS grown on reduced graphene oxide and single-wall carbon nanotubes as electrode materials for high-power supercapacitors. RSC Advances, 2015, 5, 27940-27945.	3.6	24
50	Design of ultralong single-crystal nanowire-based bifunctional electrodes for efficient oxygen and hydrogen evolution in a mild alkaline electrolyte. Journal of Materials Chemistry A, 2017, 5, 10895-10901.	10.3	23
51	Facile ball milling preparation of sulfur-doped carbon as peroxymonosulfate activator for efficient removal of organic pollutants. Journal of Environmental Chemical Engineering, 2021, 9, 106536.	6.7	22
52	Characterization of niobium and vanadium oxide nanocomposites with improved rate performance and cycling stability. Electrochimica Acta, 2013, 102, 351-357.	5.2	20
53	Pomegranateâ€Inspired Design of Highly Active and Durable Bifunctional Electrocatalysts for Rechargeable Metalâ€“Air Batteries. Angewandte Chemie, 2016, 128, 5061-5066.	2.0	20
54	Building Ni₉S₈/MoS₂ Nanosheets Decorated NiMoO₄ Nanorods Heterostructure for Enhanced Water Splitting. Advanced Materials Interfaces, 2021, 8, 2101483.	3.7	18

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55	Hollow waxberry-like cobaltâ€“nickel oxide/S,N-codoped carbon nanospheres as a trifunctional electrocatalyst for OER, ORR, and HER. RSC Advances, 2020, 10, 27788-27793.	3.6	17
56	Strained lattice platinumâ€“palladium alloy nanowires for efficient electrocatalysis. Inorganic Chemistry Frontiers, 2020, 7, 1713-1718.	6.0	17
57	Platinumâ€“palladium alloy nanotetrahedra with tuneable lattice-strain for enhanced intrinsic activity. Catalysis Science and Technology, 2020, 10, 6173-6179.	4.1	16
58	Mechanism investigation of enhanced electrochemical H2O2 production performance on oxygen-rich hollow porous carbon spheres. Nano Research, 2022, 15, 4599-4605.	10.4	16
59	Enhanced polysulfide regulation via honeycomb-like carbon with catalytic MoC for lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2021, 9, 21760-21770.	10.3	15
60	Better lithium-ion storage materials made through hierarchical assemblies of active nanorods and nanocrystals. Journal of Materials Chemistry A, 2014, 2, 17536-17544.	10.3	12
61	Flexible high performance lithium ion battery electrode based on a free-standing TiO₂ nanocrystals/carbon cloth composite. RSC Advances, 2016, 6, 35479-35485.	3.6	12
62	Hetero-architectured coreâ€“shell NiMoO4@Ni9S8/MoS2 nanorods enabling high-performance supercapacitors. Journal of Materials Research, 2022, 37, 284-293.	2.6	11
63	Regulating the lattice strain of platinumâ€“copper catalysts for enhancing collaborative electrocatalysis. Inorganic Chemistry Frontiers, 2022, 9, 249-258.	6.0	10
64	Modulating the Multiple Intrinsic Properties of Platinum-Iron Alloy Nanowires towards Enhancing Collaborative Electrocatalysis. Materials Chemistry Frontiers, 0, , .	5.9	6
65	Modulating the intrinsic properties of platinumâ€“cobalt nanowires for enhanced electrocatalysis of the oxygen reduction reaction. New Journal of Chemistry, 2022, 46, 8122-8130.	2.8	5
66	Simultaneous shape and size measurements of irregular rough particles by an IPI system with double receivers. Journal of Modern Optics, 2019, 66, 1226-1234.	1.3	4
67	LiPAA with Shortâ€chain Anion Facilitating Li₂S_x (xâ€‰=â€‰4) Reduction in Leanâ€electrolyte Lithiumâ€“sulfur Battery. Energy and Environmental Materials, 2022, 5, 877-882.	12.8	4
68	Batteries: Gas Pickering Emulsion Templated Hollow Carbon for High Rate Performance Lithium Sulfur Batteries (Adv. Funct. Mater. 46/2016). Advanced Functional Materials, 2016, 26, 8563-8563.	14.9	1
69	Vanadium Pentoxide Nanorods Anchored to and Wrapped with Graphene Nanosheets for Highâ€Power Asymmetric Supercapacitors. ChemElectroChem, 2015, 2, 1210-1210.	3.4	0
70	N,Sâ€Codoped hollow carbon dodecahedron/sulfides composites enabling highâ€performance lithiumâ€ion intercalation. Electrochemical Science Advances, 2021, 1, e2100001.	2.8	0