

Zhen-Hua Sun

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

104 papers	7,741 citations	42 h-index	87 g-index
115 ext. papers	9,219 ext. citations	12.2 avg, IF	6.4 L-index

#	Paper	IF	Citations
104	More Reliable Lithium-Sulfur Batteries: Status, Solutions and Prospects. <i>Advanced Materials</i> , 2017 , 29, 1606823	24	1054
103	Conductive porous vanadium nitride/graphene composite as chemical anchor of polysulfides for lithium-sulfur batteries. <i>Nature Communications</i> , 2017 , 8, 14627	17.4	757
102	3D Graphene-Foam-Reduced-Graphene-Oxide Hybrid Nested Hierarchical Networks for High-Performance Li-S Batteries. <i>Advanced Materials</i> , 2016 , 28, 1603-9	24	430
101	Carbon materials for LiS batteries: Functional evolution and performance improvement. <i>Energy Storage Materials</i> , 2016 , 2, 76-106	19.4	406
100	Understanding the photothermal conversion efficiency of gold nanocrystals. <i>Small</i> , 2010 , 6, 2272-80	11	395
99	pH-Controlled reversible assembly and disassembly of gold nanorods. <i>Small</i> , 2008 , 4, 1287-92	11	239
98	The Regulating Role of Carbon Nanotubes and Graphene in Lithium-Ion and Lithium-Sulfur Batteries. <i>Advanced Materials</i> , 2019 , 31, e1800863	24	234
97	Metal-Organic Frameworks (MOFs)-Derived Nitrogen-Doped Porous Carbon Anchored on Graphene with Multifunctional Effects for Lithium-Sulfur Batteries. <i>Advanced Functional Materials</i> , 2018 , 28, 1707592	15.6	198
96	A general approach to the synthesis of gold-metal sulfide core-shell and heterostructures. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 2881-5	16.4	180
95	The Rechargeable Aluminum Battery: Opportunities and Challenges. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 11978-11996	16.4	168
94	A Sulfur-Rich Copolymer@CNT Hybrid Cathode with Dual-Confinement of Polysulfides for High-Performance Lithium-Sulfur Batteries. <i>Advanced Materials</i> , 2017 , 29, 1603835	24	167
93	Magnetically Motive Porous Sphere Composite and Its Excellent Properties for the Removal of Pollutants in Water by Adsorption and Desorption Cycles. <i>Advanced Materials</i> , 2006 , 18, 1968-1971	24	143
92	Key Aspects of Lithium Metal Anodes for Lithium Metal Batteries. <i>Small</i> , 2019 , 15, e1900687	11	134
91	Magnetically recyclable nanocatalysts (MRNCs): a versatile integration of high catalytic activity and facile recovery. <i>Nanoscale</i> , 2012 , 4, 6244-55	7.7	133
90	Polysulfide immobilization and conversion on a conductive polar MoC@MoOx material for lithium-sulfur batteries. <i>Energy Storage Materials</i> , 2018 , 10, 56-61	19.4	132
89	Covalently functionalized carbon nanotube supported Pd nanoparticles for catalytic reduction of 4-nitrophenol. <i>Nanoscale</i> , 2014 , 6, 6609-16	7.7	130
88	A highly reversible Co3S4 microsphere cathode material for aluminum-ion batteries. <i>Nano Energy</i> , 2019 , 56, 100-108	17.1	120

87	An Aluminum-Sulfur Battery with a Fast Kinetic Response. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 1898-1902	16.4	111
86	Plasmon coupling in clusters composed of two-dimensionally ordered gold nanocubes. <i>Small</i> , 2009 , 5, 2111-9	11	110
85	Heteroatoms dual-doped hierarchical porous carbon-selenium composite for durable LiSe and NaSe batteries. <i>Nano Energy</i> , 2018 , 49, 137-146	17.1	103
84	Effects of dyes, gold nanocrystals, pH, and metal ions on plasmonic and molecular resonance coupling. <i>Journal of the American Chemical Society</i> , 2010 , 132, 4806-14	16.4	85
83	Curvature-directed assembly of gold nanocubes, nanobranches, and nanospheres. <i>Langmuir</i> , 2009 , 25, 1692-8	4	74
82	Catalytic oxidation of olefins and alcohols by molecular oxygen under air pressure over Cu ₂ (OH)PO ₄ and Cu ₄ O(PO ₄) ₂ catalysts. <i>Journal of Catalysis</i> , 2003 , 218, 460-464	7.3	71
81	Homogeneous and Fast Ion Conduction of PEO-Based Solid-State Electrolyte at Low Temperature. <i>Advanced Functional Materials</i> , 2020 , 30, 2007172	15.6	71
80	Structure-related electrochemical performance of organosulfur compounds for lithium-sulfur batteries. <i>Energy and Environmental Science</i> , 2020 , 13, 1076-1095	35.4	69
79	The growth and enhanced catalytic performance of Au@Pd core-shell nanodendrites. <i>Nanoscale</i> , 2013 , 5, 139-42	7.7	69
78	Engineering Gold Nanorod-Copper Sulfide Heterostructures with Enhanced Photothermal Conversion Efficiency and Photostability. <i>Small</i> , 2018 , 14, e1703077	11	68
77	Mesoporous TiN microspheres as an efficient polysulfide barrier for lithium-sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 14359-14366	13	66
76	In Situ one-step electrochemical preparation of graphene oxide nanosheet-modified electrodes for biosensors. <i>ChemSusChem</i> , 2011 , 4, 1587-91	8.3	63
75	Fabrication of porous SnO ₂ composites with high initial coulomb efficiency and good cyclic performance for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 9462	13	59
74	One-pot synthesis of (Au nanorod)-(metal sulfide) core-shell nanostructures with enhanced gas-sensing property. <i>Small</i> , 2012 , 8, 1167-72, 1124	11	59
73	Incorporation of Gold Nanorods and Their Enhancement of Fluorescence in Mesoporous Silica Thin Films. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 18895-18903	3.8	51
72	From interlayer to lightweight capping layer: Rational design of mesoporous TiO ₂ threaded with CNTs for advanced LiB batteries. <i>Carbon</i> , 2019 , 143, 523-530	10.4	50
71	Multifunctional Mesoporous Silica Microspheres from an Ultrasonic Aerosol Spray. <i>Advanced Functional Materials</i> , 2008 , 18, 2956-2962	15.6	49
70	Self-supporting porous CoS ₂ /rGO sulfur host prepared by bottom-up assembly for lithium-sulfur batteries. <i>Journal of Alloys and Compounds</i> , 2018 , 749, 586-593	5.7	48

69	A gradient bi-functional graphene-based modified electrode for vanadium redox flow batteries. <i>Energy Storage Materials</i> , 2018 , 13, 66-71	19.4	47
68	Ultrahigh energy density and stable supercapacitor with 2D NiCoAl Layered double hydroxide. <i>Electrochimica Acta</i> , 2017 , 253, 324-332	6.7	46
67	Reliable liquid electrolytes for lithium metal batteries. <i>Energy Storage Materials</i> , 2020 , 30, 113-129	19.4	44
66	Spherical structures composed of multiwalled carbon nanotubes: formation mechanism and catalytic performance. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 7581-5	16.4	44
65	One-Pot Synthesis of Noble Metal/Zinc Oxide Composites with Controllable Morphology and High Catalytic Performance. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 16417-16425	9.5	43
64	Insights into the deposition chemistry of Li ions in nonaqueous electrolyte for stable Li anodes. <i>Chemical Society Reviews</i> , 2021 , 50, 3178-3210	58.5	43
63	Formation of better catalytically active titanium species in Ti-MCM-41 by vapor-phase silylation. <i>Journal of Catalysis</i> , 2005 , 235, 423-427	7.3	42
62	Surfactant-free hydrothermal synthesis of sub-10 nm Fe ₂ O ₃ -polymer porous composites with high catalytic activity for reduction of nitroarenes. <i>Chemical Communications</i> , 2013 , 49, 10088-90	5.8	40
61	Necklace-like MoC sulphophilic sites embedded in interconnected carbon networks for LiS batteries with high sulfur loading. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 11298-11304	13	39
60	Aerosol-spray diverse mesoporous metal oxides from metal nitrates. <i>Scientific Reports</i> , 2015 , 5, 9923	4.9	39
59	Ion-Dipole Chemistry Drives Rapid Evolution of Li Ions Solvation Sheath in Low-Temperature Li Batteries. <i>Advanced Energy Materials</i> , 2021 , 11, 2100935	21.8	38
58	Super-hydrophobic ordered mesoporous carbon monolith. <i>Carbon</i> , 2006 , 44, 1336-1339	10.4	37
57	Plasmonic gold-superparamagnetic hematite heterostructures. <i>Langmuir</i> , 2011 , 27, 5071-5	4	36
56	Efficient polysulfide blocker from conductive niobium nitride@graphene for Li-S batteries. <i>Journal of Energy Chemistry</i> , 2020 , 45, 135-141	12	36
55	Electrospun carbon nanofibers with MnS sulphophilic sites as efficient polysulfide barriers for high-performance wide-temperature-range LiS batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 12121-12220	13	35
54	Lithium-Sulfur Batteries: Metal-Organic Frameworks (MOFs)-Derived Nitrogen-Doped Porous Carbon Anchored on Graphene with Multifunctional Effects for Lithium-Sulfur Batteries (Adv. Funct. Mater. 38/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870274	15.6	35
53	Electrochemical process of sulfur in carbon materials from electrode thickness to interlayer. <i>Journal of Energy Chemistry</i> , 2019 , 31, 119-124	12	34
52	Ordered mesoporous titanasilicates with better catalytically active titanium sites assembled from preformed titanasilicate precursors with zeolite building units in alkaline media. <i>Microporous and Mesoporous Materials</i> , 2004 , 72, 193-201	5.3	34

51	Catalytic hydroxylation of 2,3,6-trimethylphenol with hydrogen peroxide over copper hydroxyphosphate (Cu ₂ (OH)PO ₄). <i>Applied Catalysis A: General</i> , 2002 , 236, 17-22	5.1	30
50	An Aluminum-Sulfur Battery with a Fast Kinetic Response. <i>Angewandte Chemie</i> , 2018 , 130, 1916-1920	3.6	29
49	A 3D Multifunctional Architecture for Lithium-Sulfur Batteries with High Areal Capacity. <i>Small Methods</i> , 2018 , 2, 1800067	12.8	28
48	Single-atom catalysts for metal-sulfur batteries: Current progress and future perspectives. <i>Journal of Energy Chemistry</i> , 2021 , 54, 452-466	12	28
47	Precursor-directed synthesis of quasi-spherical barium ferrite particles with good dispersion and magnetic properties. <i>CrystEngComm</i> , 2013 , 15, 808-815	3.3	27
46	Tunable Interaction between Metal-Organic Frameworks and Electroactive Components in Lithium-Sulfur Batteries: Status and Perspectives. <i>Advanced Energy Materials</i> , 2021 , 11, 2100387	21.8	26
45	An alkali metal-Selenium battery with a wide temperature range and low self-discharge. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 21774-21782	13	24
44	Transverse oxidation of gold nanorods assisted by selective end capping of silver oxide. <i>Journal of Materials Chemistry</i> , 2011 , 21, 11537		23
43	Fluorescent Mesostructured Polythiophene-Silica Composite Particles Synthesized by in Situ Polymerization of Structure-Directing Monomers. <i>Chemistry of Materials</i> , 2007 , 19, 6222-6229	9.6	23
42	Porous V ₂ O ₅ -SnO ₂ /CNTs composites as high performance cathode materials for lithium-ion batteries. <i>Journal of Energy Chemistry</i> , 2013 , 22, 347-355	12	22
41	Immobilizing Carbon Nanotubes on SiC Foam as a Monolith Catalyst for Oxidative Dehydrogenation Reactions. <i>ChemCatChem</i> , 2013 , 5, 1713-1717	5.2	22
40	An in-situ solidification strategy to block polysulfides in Lithium-Sulfur batteries. <i>Energy Storage Materials</i> , 2021 , 37, 224-232	19.4	22
39	Porous polymer supported palladium catalyst for cross coupling reactions with high activity and recyclability. <i>Science China Chemistry</i> , 2012 , 55, 2095-2103	7.9	21
38	Hydrothermal transformation from Au core-sulfide shell to Au nanoparticle-decorated sulfide hybrid nanostructures. <i>Nanoscale</i> , 2010 , 2, 1650-2	7.7	21
37	Catalytic Epoxidation of Styrene by Molecular Oxygen over a Novel Catalyst of Copper Hydroxyphosphate Cu ₂ (OH)PO ₄ . <i>Catalysis Letters</i> , 2001 , 76, 105-109	2.8	21
36	Direct encoding of silica submicrospheres with cadmium telluride nanocrystals. <i>Journal of Materials Chemistry</i> , 2009 , 19, 7002		20
35	High-temperature synthesis of stable ordered mesoporous silica materials using mesoporous carbon as a hard template. <i>Microporous and Mesoporous Materials</i> , 2005 , 86, 81-88	5.3	20
34	Development of Graphene-based Materials for Lithium-Sulfur Batteries. <i>Wuli Huaxue Xuebao/Acta Physico-Chimica Sinica</i> , 2018 , 34, 377-390	3.8	19

33	Hybrid Solid Polymer Electrolytes with Two-Dimensional Inorganic Nanofillers. <i>Chemistry - A European Journal</i> , 2018 , 24, 18180-18203	4.8	19
32	Easy fabrication of flexible and multilayer nanocarbon-based cathodes with a high unreal sulfur loading by electrostatic spraying for lithium-sulfur batteries. <i>Carbon</i> , 2018 , 138, 18-25	10.4	18
31	Noncovalent functionalization of multi-walled carbon nanotubes as metal-free catalysts for the reduction of nitrobenzene. <i>Catalysis Science and Technology</i> , 2014 , 4, 1730-1733	5.5	18
30	A Rechargeable Quasi-symmetrical MoS ₂ Battery. <i>Joule</i> , 2018 , 2, 1278-1286	27.8	17
29	Improving the photocatalytic activity of graphitic carbon nitride by thermal treatment in a high-pressure hydrogen atmosphere. <i>Progress in Natural Science: Materials International</i> , 2018 , 28, 183-188	3.6	17
28	Die wiederaufladbare Aluminiumbatterie: Möglichkeiten und Herausforderungen. <i>Angewandte Chemie</i> , 2019 , 131, 12104-12124	3.6	15
27	A General Approach to the Synthesis of Gold-Metal Sulfide Core-Shell and Heterostructures. <i>Angewandte Chemie</i> , 2009 , 121, 2925-2929	3.6	13
26	Nanoscale metal-organic framework composites for phototherapy and synergistic therapy of cancer. <i>Materials Chemistry Frontiers</i> , 2021 , 5, 1632-1654	7.8	13
25	Hydrothermal synthesis and intercalation behavior of a layered titanium phosphate Ti ₂ (H ₂ PO ₄)(HPO ₄)(PO ₄) ₂ · 0.5C ₆ N ₂ H ₁₆ , with an extended E-phase intercalated into organic amine. <i>Polyhedron</i> , 2004 , 23, 3033-3042	2.7	12
24	A salt-derived solid electrolyte interphase by electroreduction of water-in-salt electrolyte for uniform lithium deposition. <i>Journal of Power Sources</i> , 2019 , 439, 227073	8.9	11
23	Fast lithium ion transport in solid polymer electrolytes from polysulfide-bridged copolymers. <i>Nano Energy</i> , 2020 , 75, 104976	17.1	11
22	Ni ₂ P electrocatalysts decorated hollow carbon spheres as bi-functional mediator against shuttle effect and Li dendrite for Li-S batteries. <i>Nano Energy</i> , 2021 , 90, 106584	17.1	11
21	Oriented outperforms disorder: Thickness-independent mass transport for lithium-sulfur batteries. <i>Carbon</i> , 2019 , 154, 90-97	10.4	10
20	Formation of different gold nanocrystal core-resin shell structures through the control of the core assembly and shell polymerization. <i>Langmuir</i> , 2012 , 28, 9082-92	4	10
19	A Novel Ion-exchange Method for the Synthesis of Nano-SnO/micro-C Hybrid Structure as High Capacity Anode Material in Lithium Ion Batteries. <i>Journal of Materials Science and Technology</i> , 2013 , 29, 609-612	9.1	10
18	Factors of Kinetics Processes in Lithium-Sulfur Reactions. <i>Energy Technology</i> , 2019 , 7, 1900574	3.5	9
17	A high tenacity electrode by assembly of a soft sorbent and a hard skeleton for lithium-sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 22459-22464	13	9
16	Double Ionic-Electronic Transfer Interface Layers for All-Solid-State Lithium Batteries. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 18448-18453	16.4	8

15	Micro-Macroscopic Coupled Electrode Architecture for High-Energy-Density Lithium-Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7393-7402	6.1	6
14	Highly cross-linked carbon sponge enables room-temperature long-life semi-liquid Na/polysulfide battery. <i>Materials Today Energy</i> , 2019 , 14, 100342	7	6
13	A Stable Hexagonal Mesoporous Aluminophosphate Assembled from Preformed Aluminophosphate Precursors. <i>Chemistry Letters</i> , 2005 , 34, 516-517	1.7	6
12	Lithium Batteries: The Regulating Role of Carbon Nanotubes and Graphene in Lithium-Ion and Lithium-Sulfur Batteries (Adv. Mater. 9/2019). <i>Advanced Materials</i> , 2019 , 31, 1970066	24	6
11	Coupling anodic/cathodic energy storage through in situ heterostructure regulation of ordered microporous carbon for sodium-ion hybrid capacitors. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 3360-3368	13	5
10	Conductive Fe ₂ N/N-rGO composite boosts electrochemical redox reactions in wide temperature accommodating lithium-sulfur batteries. <i>Chemical Engineering Journal</i> , 2022 , 427, 131622	14.7	5
9	Sphärische Partikel aus mehrwandigen Kohlenstoff-Nanoröhren: Bildungsmechanismus und katalytische Leistung. <i>Angewandte Chemie</i> , 2012 , 124, 7699-7704	3.6	3
8	Synthesis and Catalytic Activity of Cu-Incorporated MCM-41 with Spheres-within-a-Sphere Hollow Structure. <i>Chinese Journal of Chemistry</i> , 2006 , 24, 1653-1656	4.9	3
7	Reducing the shuttle effect with the interactions of polar TiN and non-polar graphene for lithium-sulfur batteries. <i>CrystEngComm</i> , 2020 , 22, 1555-1559	3.3	3
6	An ultrathin and highly efficient interlayer for Lithium-Sulfur batteries with high sulfur loading and lean electrolyte. <i>Journal of Materials Chemistry A</i> ,	13	2
5	Role of Catalytic Materials on Conversion of Sulfur Species for Room Temperature Sodium-Sulfur Battery. <i>Energy and Environmental Materials</i> ,	13	2
4	An Interlayer Containing Dissociated LiNO ₃ with Fast Release Speed for Stable Lithium Metal Batteries with 400 Wh kg ⁻¹ Energy Density. <i>Small</i> , 2020 , 16, 202349	11	2
3	Lithium Metal Batteries: Ion-Dipole Chemistry Drives Rapid Evolution of Li Ions Solvation Sheath in Low-Temperature Li Batteries (Adv. Energy Mater. 28/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170112	21.8	1
2	Conjugated diketone-linked polyimide cathode material for organic lithium-ion batteries. <i>Chemical Engineering Journal</i> , 2022 , 444, 136598	14.7	1
1	Sulfur-Carbon Composite Cathodes. <i>Modern Aspects of Electrochemistry</i> , 2022 , 19-82		0