

Jiantao Zai

List of Publications by Year in Descending Order

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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.

109
papers

4,865
citations

42
h-index

67
g-index

116
ext. papers

5,555
ext. citations

8.6
avg, IF

5.74
L-index

#	Paper	IF	Citations
109	Low cost, robust, environmentally friendly, wood supported 3D-hierarchical CuSnS for efficient solar powered steam generation.. <i>Journal of Colloid and Interface Science</i> , 2022 , 615, 707-715	9.3	1
108	Flow Electrochemistry Enables Microbial Atmospheric CO ₂ Fixation via Coupling with Iodine-Mediated Organic Reactions. <i>ACS Sustainable Chemistry and Engineering</i> , 2022 , 10, 541-551	8.3	1
107	Photogenerated reactive oxygen species and hyperthermia by CuSnS nanoflakes for advanced photocatalytic and photothermal antibacterial therapy.. <i>Journal of Nanobiotechnology</i> , 2022 , 20, 195	9.4	1
106	Donor-Acceptor Heterosystem-Functionalized Porous Hollow Carbon Microsphere for High-Performance Li-S Cathode Materials with S up to 93 wt. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 48872-48880	9.5	5
105	Bioinspired Activation of N ₂ on Asymmetrical Coordinated Fe Grafted 1T MoS ₂ at Room Temperature <i>Chinese Journal of Chemistry</i> , 2021 , 39, 1898-1904	4.9	1
104	Copper vacancy activated plasmonic Cu ₃ SnS ₄ for highly efficient photocatalytic hydrogen generation: Broad solar absorption, efficient charge separation and decreased HER overpotential. <i>Nano Research</i> , 2021 , 14, 3358-3364	10	4
103	Light absorption, photocarrier dynamic properties of hierarchical SnS ₂ microspheres and their performances on photodegradation of high concentration Rhodamine B. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2021 , 415, 113320	4.7	3
102	High power and stable P-doped yolk-shell structured Si@C anode simultaneously enhancing conductivity and Li ⁺ diffusion kinetics. <i>Nano Research</i> , 2021 , 14, 1004-1011	10	20
101	Porous urchin-like 3D Co(II)Co(III) layered double hydroxides for high performance heterogeneous Fenton degradation. <i>CrystEngComm</i> , 2021 , 23, 1234-1242	3.3	2
100	Interlocked 3D active carbon fibers and monolithic I-doped Bi ₂ O ₂ CO ₃ structure built by 2D face-to-face interaction: endowed with cycling stability and photocatalytic activity. <i>CrystEngComm</i> , 2021 , 23, 3204-3211	3.3	1
99	Morphology genetic 3D hierarchical SnO ₂ microstructures constructed by Sub 5 nm nanocrystals for highly sensitive ethanol-sensor. <i>Nanotechnology</i> , 2021 , 32,	3.4	1
98	Chemical Coupled PEDOT:PSS/Si Electrode: Suppressed Electrolyte Consumption Enables Long-Term Stability. <i>Nano-Micro Letters</i> , 2021 , 13, 54	19.5	10
97	Sandwiched Cu ₇ S ₄ @graphite felt electrode for high performance aqueous polysulfide/iodide redox flow batteries: Enhanced cycling stability and electrocatalytic dynamics of polysulfides. <i>Materials Chemistry and Physics</i> , 2020 , 250, 123143	4.4	6
96	Cu ₂ CoGeS ₄ nanocrystals for high performance aqueous polysulfide/iodide redox flow batteries: enhanced selectively towards the electrocatalytic conversion of polysulfides. <i>Sustainable Energy and Fuels</i> , 2020 , 4, 2892-2899	5.8	7
95	A Facile Synthesis of Urchin-Like ZnMn ₂ O ₄ Architectures with Enhanced Electrochemical Lithium Storage. <i>ChemistrySelect</i> , 2020 , 5, 1491-1495	1.8	4
94	Fe doping promoted electrocatalytic N ₂ reduction reaction of 2H MoS ₂ . <i>Chinese Chemical Letters</i> , 2020 , 31, 2487-2490	8.1	21
93	Glycerol-crosslinked PEDOT:PSS as bifunctional binder for Si anodes: Improved interfacial compatibility and conductivity. <i>Journal of Colloid and Interface Science</i> , 2020 , 565, 270-277	9.3	22

92	Well-defined CoSe@MoSe hollow heterostructured nanocubes with enhanced dissociation kinetics for overall water splitting. <i>Nanoscale</i> , 2020 , 12, 326-335	7.7	36
91	One-step construction of multi-doped nanoporous carbon-based nanoarchitecture as an advanced bifunctional oxygen electrode for Zn-Air batteries. <i>Applied Catalysis B: Environmental</i> , 2020 , 265, 118594	21.8	34
90	Catalyst-Free Decarboxylation of Carboxylic Acids and Deoxygenation of Alcohols by Electro-Induced Radical Formation. <i>Chemistry - A European Journal</i> , 2020 , 26, 3226-3230	4.8	20
89	Nanoscale control of grain boundary potential barrier, dopant density and filled trap state density for higher efficiency perovskite solar cells. <i>Information Materials</i> , 2020 , 2, 409-423	23.1	16
88	Self-Supported NaTi(PO) Nanorod Arrays: Balancing Na and Electron Kinetics via Optimized Carbon Coating for High-Power Sodium-Ion Capacitor. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 50388-50396	8.5	8
87	The combination of intercalation and conversion reactions to improve the volumetric capacity of the cathode in LiB batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 3618-3623	13	16
86	Utilizing the Space-Charge Region of the FeNi-LDH/CoP p-n Junction to Promote Performance in Oxygen Evolution Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 11903-11909	16.4	163
85	Utilizing the Space-Charge Region of the FeNi-LDH/CoP p-n Junction to Promote Performance in Oxygen Evolution Electrocatalysis. <i>Angewandte Chemie</i> , 2019 , 131, 12029-12035	3.6	13
84	Carbon coated porous silicon flakes with high initial coulombic efficiency and long-term cycling stability for lithium ion batteries. <i>Sustainable Energy and Fuels</i> , 2019 , 3, 2361-2365	5.8	4
83	Multi-functional NiS ₂ /FeS ₂ /N-doped carbon nanorods derived from metal-organic frameworks with fast reaction kinetics for high performance overall water splitting and lithium-ion batteries. <i>Journal of Power Sources</i> , 2019 , 436, 226857	8.9	19
82	Highly active nanostructured CoS/CoS heterojunction electrocatalysts for aqueous polysulfide/iodide redox flow batteries. <i>Nature Communications</i> , 2019 , 10, 3367	17.4	106
81	Flower-like SnS composite with 3D pyrolyzed bacterial cellulose as the anode for lithium-ion batteries with ultralong cycle life and superior rate capability. <i>Dalton Transactions</i> , 2019 , 48, 833-838	4.3	6
80	Photovoltaic Counter Electrodes: An Alternative Approach to Extend Light Absorption Spectra and Enhance Performance of Dye-Sensitized Solar Cells. <i>ChemPlusChem</i> , 2019 , 84, 241-246	2.8	5
79	FeC nanoparticles encapsulated in highly crystalline porous graphite: salt-template synthesis and enhanced electrocatalytic oxygen evolution activity and stability. <i>Chemical Communications</i> , 2018 , 54, 3158-3161	5.8	30
78	Boron-doped porous Si anode materials with high initial coulombic efficiency and long cycling stability. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 3022-3027	13	81
77	A highly efficient nano-graphite electron transport layer for high performance ZnO/Si solar cells. <i>Sustainable Energy and Fuels</i> , 2018 , 2, 820-826	5.8	2
76	Si@SiO _x /Graphene Nanosheets Composite: Ball Milling Synthesis and Enhanced Lithium Storage Performance. <i>Frontiers in Materials</i> , 2018 , 4,	4	13
75	Fe _{1-x} Co _x S ₂ Solid Solutions with Tunable Energy Structures to Enhance the Performance of Triiodide Reduction in Dye-Sensitized Solar Cells. <i>ChemNanoMat</i> , 2018 , 4, 1043-1047	3.5	8

74	Co stabilized metallic 1Td MoS ₂ monolayers: Bottom-up synthesis and enhanced capacitance with ultra-long cycling stability. <i>Materials Today Energy</i> , 2018 , 7, 10-17	7	21
73	Incorporation of Co into MoS ₂ /graphene nanocomposites: One effective way to enhance the cycling stability of Li/Na storage. <i>Journal of Power Sources</i> , 2018 , 373, 103-109	8.9	47
72	Porous Si@C ball-in-ball hollow spheres for lithium-ion capacitors with improved energy and power densities. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 21098-21103	13	42
71	3D Hierarchical Co-Al Layered Double Hydroxides with Long-Term Stabilities and High Rate Performances in Supercapacitors. <i>Nano-Micro Letters</i> , 2017 , 9, 21	19.5	43
70	Formation of NiFeO/Expanded Graphite Nanocomposites with Superior Lithium Storage Properties. <i>Nano-Micro Letters</i> , 2017 , 9, 34	19.5	31
69	Improving the catalytic performance of Ni ₃ S ₄ -PtCo heteronanorods via Mott-Schottky effect toward the reduction of iodine couples in dye-sensitized solar cells. <i>Electrochimica Acta</i> , 2017 , 241, 89-97	6.7	38
68	Design and synthesis of the composites of multiporous NiMnO ₃ micro-nano structure spheres and graphene with alleviated side reaction and enhanced performances as anode materials for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , 2017 , 716, 270-277	5.7	11
67	AlO coated metal sulfides: one-pot synthesis and enhanced lithium storage stability via localized in situ conversion reactions. <i>Dalton Transactions</i> , 2017 , 46, 1260-1265	4.3	4
66	Honeycomb-like metallic nickel selenide nanosheet arrays as binder-free electrodes for high-performance hybrid asymmetric supercapacitors. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 22527-22535	13.35	94
65	Activation of Passive Nanofillers in Composite Polymer Electrolyte for Higher Performance Lithium-Ion Batteries. <i>Advanced Sustainable Systems</i> , 2017 , 1, 1700043	5.9	20
64	A candidate strategy to achieve high initial Coulombic efficiency and long cycle life of Si anode materials: exterior carbon coating on porous Si microparticles. <i>Materials Today Energy</i> , 2017 , 5, 299-304	7	17
63	Synergistically Enhanced Electrochemical Performance of NiS-PtX (X = Fe, Ni) Heteronanorods as Heterogeneous Catalysts in Dye-Sensitized Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 27607-27617	9.5	26
62	Rice husk-derived hybrid lithium-ion capacitors with ultra-high energy. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 24502-24507	13	44
61	A hierarchical CoFeS/reduced graphene oxide composite for highly efficient counter electrodes in dye-sensitized solar cells. <i>Dalton Transactions</i> , 2017 , 46, 9511-9516	4.3	35
60	Rose-like I-doped BiOCO microspheres with enhanced visible light response: DFT calculation, synthesis and photocatalytic performance. <i>Journal of Hazardous Materials</i> , 2017 , 321, 464-472	12.8	62
59	Colloidal synthesis of wurtz-stannite Cu ₂ CdGeS ₄ nanocrystals with high catalytic activity toward iodine redox couples in dye-sensitized solar cells. <i>Chemical Communications</i> , 2016 , 52, 10866-9	5.8	19
58	Regeneration of Metal Sulfides in the Delithiation Process: The Key to Cyclic Stability. <i>Advanced Energy Materials</i> , 2016 , 6, 1601056	21.8	83
57	Na ₂ Ge ₄ O ₉ nanoparticles encapsulated in 3D carbon networks with long-term stability and superior rate capability in lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 10552-10557	13	34

56	Hierarchical Cu ₂ XSe nanotubes constructed by two-unit-cell-thick nanosheets: room-temperature synthesis and promoted electrocatalytic activity towards polysulfides. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 4790-4796	13	16
55	Crystallization of a perovskite film for higher performance solar cells by controlling water concentration in methyl ammonium iodide precursor solution. <i>Nanoscale</i> , 2016 , 8, 2693-703	7.7	81
54	Incorporation of plasmonic Au nanostars into photoanodes for high efficiency dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 545-551	13	41
53	Atomically thin layered NiFe double hydroxides assembled 3D microspheres with promoted electrochemical performances. <i>Journal of Power Sources</i> , 2016 , 325, 675-681	8.9	42
52	Facile Synthesis of Porous Zn-Sn-O Nanocubes and Their Electrochemical Performances. <i>Nano-Micro Letters</i> , 2016 , 8, 174-181	19.5	20
51	Silica Wastes to High-Performance Lithium Storage Materials: A Rational Designed Al ₂ O ₃ Coating Assisted Magnesiothermic Process. <i>Small</i> , 2016 , 12, 5281-5287	11	43
50	A sol-hydrothermal route to truncated tetragonal bipyramid nanocrystals and hierarchical hollow microspheres of anatase TiO ₂ for application in dye-sensitized solar cells. <i>RSC Advances</i> , 2016 , 6, 69798-69806 ¹	3.7	1
49	Homogenously hexagonal prismatic AgBiS ₂ nanocrystals: controlled synthesis and application in quantum dot-sensitized solar cells. <i>CrystEngComm</i> , 2015 , 17, 1902-1905	3.3	31
48	Dye-Sensitized Solar Cells Based on Porous Hollow Tin Oxide Nanofibers. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 2027-2032	2.9	23
47	3D hierarchical FeSe ₂ microspheres: Controlled synthesis and applications in dye-sensitized solar cells. <i>Nano Energy</i> , 2015 , 15, 205-215	17.1	122
46	The role of Mott-Schottky heterojunctions in PtCo-Cu ₂ ZnGeS ₄ as counter electrodes in dye-sensitized solar cells. <i>Chemical Communications</i> , 2015 , 51, 8950-3	5.8	39
45	N-type hedgehog-like CuBi ₂ O ₄ hierarchical microspheres: room temperature synthesis and their photoelectrochemical properties. <i>CrystEngComm</i> , 2015 , 17, 4019-4025	3.3	35
44	Water Soluble CuInSe ₂ Nanoplates: Controlled Synthesis, Photoelectric Response and Electrocatalytic Reduction of Polysulfides. <i>ChemNanoMat</i> , 2015 , 1, 52-57	3.5	5
43	Efficient Ag ₈ GeS ₆ counter electrode prepared from nanocrystal ink for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 20359-20365	13	25
42	Hierarchical Cu ₇ S ₄ nanotubes assembled by hexagonal nanoplates with high catalytic performance for quantum dot-sensitized solar cells. <i>Journal of Power Sources</i> , 2015 , 299, 212-220	8.9	29
41	Interfacial Study To Suppress Charge Carrier Recombination for High Efficiency Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 26445-54	9.5	77
40	Three dimensional metal oxides-graphene composites and their applications in lithium ion batteries. <i>RSC Advances</i> , 2015 , 5, 8814-8834	3.7	51
39	Electrospun carbon nanofibers with surface-attached platinum nanoparticles as cost-effective and efficient counter electrode for dye-sensitized solar cells. <i>Nano Energy</i> , 2015 , 11, 550-556	17.1	81

38	Efficient Counter Electrode Manufactured from Ag ₂ S Nanocrystal Ink for Dye-Sensitized Solar Cells. <i>Chemistry - A European Journal</i> , 2015 , 21, 15153-7	4.8	32
37	Rationally designed n-n heterojunction with highly efficient solar hydrogen evolution. <i>ChemSusChem</i> , 2015 , 8, 1218-25	8.3	76
36	Rational design and fabrication of skeletal Cu ₇ S ₄ nanocages for efficient counter electrode in quantum dot-sensitized solar cells. <i>Nano Energy</i> , 2015 , 12, 186-196	17.1	46
35	Ultrathin FeSe ₂ nanosheets: controlled synthesis and application as a heterogeneous catalyst in dye-sensitized solar cells. <i>Chemistry - A European Journal</i> , 2015 , 21, 4085-91	4.8	94
34	The role of Mott-Schottky heterojunctions in Ag-Ag ₈ SnS ₆ as counter electrodes in dye-sensitized solar cells. <i>ChemSusChem</i> , 2015 , 8, 817-20	8.3	54
33	Polydopamine functionalized graphene/NiFe ₂ O ₄ nanocomposite with improving Li storage performances. <i>Nano Energy</i> , 2014 , 6, 51-58	17.1	85
32	Bottom-up synthesis of high surface area mesoporous crystalline silicon and evaluation of its hydrogen evolution performance. <i>Nature Communications</i> , 2014 , 5, 3605	17.4	176
31	CoFeO-Graphene Nanocomposites Synthesized through An Ultrasonic Method with Enhanced Performances as Anode Materials for Li-ion Batteries. <i>Nano-Micro Letters</i> , 2014 , 6, 307-315	19.5	65
30	AgIn _x Ga _{1-x} S ₂ solid solution nanocrystals: synthesis, band gap tuning and photocatalytic activity. <i>CrystEngComm</i> , 2014 , 16, 10123-10130	3.3	16
29	Highly efficient Ag ₂ O/Bi ₂ O ₃ -n heterojunction photocatalysts with improved visible-light responsive activity. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 11698-705	9.5	224
28	Novel Bi ₂ S ₃ /Bi ₂ O ₂ CO ₃ heterojunction photocatalysts with enhanced visible light responsive activity and wastewater treatment. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 4208	13	189
27	SnO ₂ /C composites fabricated by a biotemplating method from cotton and their electrochemical performances. <i>CrystEngComm</i> , 2014 , 16, 3318-3322	3.3	24
26	TiO ₂ coated urchin-like SnO ₂ microspheres for efficient dye-sensitized solar cells. <i>Nano Research</i> , 2014 , 7, 1154-1163	10	63
25	Dual conductive network-enabled graphene/Si ₃ N ₄ composite anode with high areal capacity for lithium-ion batteries. <i>Nano Energy</i> , 2014 , 6, 211-218	17.1	137
24	Cube-in-Cube Hollow Cu ₉ S ₅ Nanostructures with Enhanced Photocatalytic Activities in Solar H ₂ Evolution. <i>Chemistry - A European Journal</i> , 2014 , 20, 13413-13413	4.8	1
23	Cube-in-cube hollow Cu ₉ S ₅ nanostructures with enhanced photocatalytic activities in solar H ₂ evolution. <i>Chemistry - A European Journal</i> , 2014 , 20, 13576-82	4.8	14
22	Metal Oxide Nanocrystals and Their Properties for Application in Solar Cells 2014 , 671-707		1
21	Nearly monodispersed In(OH) ₃ hierarchical nanospheres and nanocubes: tunable ligand-assisted synthesis and their conversion into hierarchical In ₂ O ₃ for gas sensing. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 735-745	13	71

20	Synthesis of Ni-doped NiO/RGONS nanocomposites with enhanced rate capabilities as anode materials for Li ion batteries. <i>CrystEngComm</i> , 2013 , 15, 6663	3.3	31
19	Direct growth of SnO ₂ nanorods on graphene as high capacity anode materials for lithium ion batteries. <i>RSC Advances</i> , 2013 , 3, 20573	3.7	32
18	The fabrication of hollow cubic-like CuInS ₂ cages using Cu ₂ O crystals as sacrificing template. <i>Materials Chemistry and Physics</i> , 2013 , 143, 15-18	4.4	9
17	Improved rate capability of SiO ₂ composite anodes by boron doping for lithium-ion batteries. <i>Electrochemistry Communications</i> , 2013 , 36, 29-32	5.1	60
16	MnFe ₂ O ₄ -graphene nanocomposites with enhanced performances as anode materials for Li-ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 3939-45	3.6	110
15	3D-hierarchical Cu ₃ SnS ₄ flowerlike microspheres: controlled synthesis, formation mechanism and photocatalytic activity for H ₂ evolution from water. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 4316	13	75
14	Co ₃ O ₄ nanorods/graphene nanosheets nanocomposites for lithium ion batteries with improved reversible capacity and cycle stability. <i>Journal of Power Sources</i> , 2012 , 202, 230-235	8.9	147
13	Band gap-tunable (CuIn) _x Zn ₂ (1-x)S ₂ solid solutions: preparation and efficient photocatalytic hydrogen production from water under visible light without noble metals. <i>Journal of Materials Chemistry</i> , 2012 , 22, 23929		54
12	3D-hierarchical NiO/graphene nanosheet composites as anodes for lithium ion batteries with improved reversible capacity and cycle stability. <i>RSC Advances</i> , 2012 , 2, 3410	3.7	72
11	3D-hierarchical SnS ₂ micro/nano-structures: controlled synthesis, formation mechanism and lithium ion storage performances. <i>CrystEngComm</i> , 2012 , 14, 1364-1375	3.3	92
10	Magnetite modified graphene nanosheets with improved rate performance and cyclic stability for Li ion battery anodes. <i>RSC Advances</i> , 2012 , 2, 4397	3.7	18
9	3D hierarchical ZnIn ₂ S ₄ : The preparation and photocatalytic properties on water splitting. <i>International Journal of Hydrogen Energy</i> , 2012 , 37, 16986-16993	6.7	83
8	Controlled synthesis of monodispersed AgGaS ₂ 3D nanoflowers and the shape evolution from nanoflowers to colloids. <i>Journal of Solid State Chemistry</i> , 2011 , 184, 1227-1235	3.3	8
7	Hierarchical Bi ₂ O ₂ CO ₃ microspheres with improved visible-light-driven photocatalytic activity. <i>CrystEngComm</i> , 2011 , 13, 4010	3.3	155
6	High stability and superior rate capability of three-dimensional hierarchical SnS ₂ microspheres as anode material in lithium ion batteries. <i>Journal of Power Sources</i> , 2011 , 196, 3650-3654	8.9	154
5	Control of the morphology and composition of yttrium fluoride via a salt-assisted hydrothermal method. <i>CrystEngComm</i> , 2010 , 12, 199-206	3.3	42
4	Self-assembled heavy lanthanide orthovanadate architecture with controlled dimensionality and morphology. <i>Chemistry - A European Journal</i> , 2009 , 15, 1233-40	4.8	84
3	Synthesis of 3-D Hierarchical Dendrites of Lead Chalcogenides in Large Scale via Microwave-Assistant Method. <i>Crystal Growth and Design</i> , 2007 , 7, 425-429	3.5	67

2	Conversion of Cu ₂ O nanocrystals into hollow Cu _{2-x} Se nanocages with the preservation of morphologies. <i>Chemical Communications</i> , 2006 , 4548-50	5.8	73
1	Artificial cathode solid electrolyte interphase to endow highly stable lithium storage of FeF ₂ nanocrystals. <i>Science China Materials</i> ,1	7.1	2