

# Zhiyuan Zeng

## List of Publications by Year in descending order

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98  
papers

18,350  
citations

31902

53  
h-index

35952

97  
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105  
docs citations

105  
times ranked

22516  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal dichalcogenide nanosheets: preparation, properties and applications. <i>Chemical Society Reviews</i> , 2013, 42, 1934.	18.7	1,809
2	Single-Layer Semiconducting Nanosheets: High-Yield Preparation and Device Fabrication. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 11093-11097.	7.2	1,517
3	Synthesis of Few-Layer MoS <sub>2</sub> Nanosheet-Coated TiO <sub>2</sub> Nanobelt Heterostructures for Enhanced Photocatalytic Activities. <i>Small</i> , 2013, 9, 140-147.	5.2	1,166
4	Single-Layer MoS <sub>2</sub> -Based Nanoprobes for Homogeneous Detection of Biomolecules. <i>Journal of the American Chemical Society</i> , 2013, 135, 5998-6001.	6.6	995
5	Graphene-Based Electrodes. <i>Advanced Materials</i> , 2012, 24, 5979-6004.	11.1	829
6	Fabrication of Flexible MoS <sub>2</sub> Thin-Film Transistor Arrays for Practical Gas Sensing Applications. <i>Small</i> , 2012, 8, 2994-2999.	5.2	817
7	Solution-phase epitaxial growth of noble metal nanostructures on dispersible single-layer molybdenum disulfide nanosheets. <i>Nature Communications</i> , 2013, 4, 1444.	5.8	756
8	Three-Dimensional Graphene Foam Supported Fe <sub>3</sub> O <sub>4</sub> Lithium Battery Anodes with Long Cycle Life and High Rate Capability. <i>Nano Letters</i> , 2013, 13, 6136-6143.	4.5	738
9	One-step synthesis of Ni <sub>3</sub> S <sub>2</sub> nanorod@Ni(OH) <sub>2</sub> nanosheet core-shell nanostructures on a three-dimensional graphene network for high-performance supercapacitors. <i>Energy and Environmental Science</i> , 2013, 6, 2216-2221.	15.6	554
10	An Effective Method for the Fabrication of Few-Layer-Thick Inorganic Nanosheets. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 9052-9056.	7.2	520
11	Synthesis of Free-Standing Metal Sulfide Nanoarrays via Anion Exchange Reaction and Their Electrochemical Energy Storage Application. <i>Small</i> , 2014, 10, 766-773.	5.2	413
12	Preparation of MoS <sub>2</sub> -Polyvinylpyrrolidone Nanocomposites for Flexible Nonvolatile Rewritable Memory Devices with Reduced Graphene Oxide Electrodes. <i>Small</i> , 2012, 8, 3517-3522.	5.2	393
13	Electrochemically Reduced Single-Layer MoS <sub>2</sub> Nanosheets: Characterization, Properties, and Sensing Applications. <i>Small</i> , 2012, 8, 2264-2270.	5.2	373
14	A general method for the large-scale synthesis of uniform ultrathin metal sulphide nanocrystals. <i>Nature Communications</i> , 2012, 3, 1177.	5.8	368
15	Growth of noble metal nanoparticles on single-layer TiS <sub>2</sub> and TaS <sub>2</sub> nanosheets for hydrogen evolution reaction. <i>Energy and Environmental Science</i> , 2014, 7, 797-803.	15.6	323
16	Strategies of regulating Zn <sup>2+</sup> solvation structures for dendrite-free and side reaction-suppressed zinc-ion batteries. <i>Energy and Environmental Science</i> , 2022, 15, 499-528.	15.6	313
17	Visualization of Electrode-Electrolyte Interfaces in LiPF <sub>6</sub> /EC/DEC Electrolyte for Lithium Ion Batteries via in Situ TEM. <i>Nano Letters</i> , 2014, 14, 1745-1750.	4.5	304
18	MnO <sub>2</sub> -Based Materials for Environmental Applications. <i>Advanced Materials</i> , 2021, 33, e2004862.	11.1	252

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19	A Solution-Processed Hole Extraction Layer Made from Ultrathin MoS <sub>2</sub> Nanosheets for Efficient Organic Solar Cells. <i>Advanced Energy Materials</i> , 2013, 3, 1262-1268.	10.2	231
20	Surface-Confined Fabrication of Ultrathin Nickel Cobalt-Layered Double Hydroxide Nanosheets for High-Performance Supercapacitors. <i>Advanced Functional Materials</i> , 2018, 28, 1803272.	7.8	215
21	Cobalt Oxide Nanowall Arrays on Reduced Graphene Oxide Sheets with Controlled Phase, Grain Size, and Porosity for Li-Ion Battery Electrodes. <i>Journal of Physical Chemistry C</i> , 2011, 115, 8400-8406.	1.5	196
22	Surface modification-induced phase transformation of hexagonal close-packed gold square sheets. <i>Nature Communications</i> , 2015, 6, 6571.	5.8	195
23	Hollow core-shell nanostructure supercapacitor electrodes: gap matters. <i>Energy and Environmental Science</i> , 2012, 5, 9085.	15.6	184
24	Fabrication of Graphene Nanomesh by Using an Anodic Aluminum Oxide Membrane as a Template. <i>Advanced Materials</i> , 2012, 24, 4138-4142.	11.1	183
25	A facile, relative green, and inexpensive synthetic approach toward large-scale production of SnS <sub>2</sub> nanoplates for high-performance lithium-ion batteries. <i>Nanoscale</i> , 2013, 5, 1456.	2.8	177
26	Formation of two-dimensional transition metal oxide nanosheets with nanoparticles as intermediates. <i>Nature Materials</i> , 2019, 18, 970-976.	13.3	169
27	Formation of monometallic Au and Pd and bimetallic Au-Pd nanoparticles confined in mesopores via Ar glow-discharge plasma reduction and their catalytic applications in aerobic oxidation of benzyl alcohol. <i>Journal of Catalysis</i> , 2012, 289, 105-117.	3.1	155
28	Intercalation and exfoliation chemistries of transition metal dichalcogenides. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15417-15444.	5.2	154
29	ZnIn <sub>2</sub> S <sub>4</sub> -Based Photocatalysts for Energy and Environmental Applications. <i>Small Methods</i> , 2021, 5, e2100887.	4.6	153
30	Metallic 1T Phase Enabling MoS <sub>2</sub> Nanodots as an Efficient Agent for Photoacoustic Imaging Guided Photothermal Therapy in the Near-Infrared Window. <i>Small</i> , 2020, 16, e2004173.	5.2	150
31	Memory Devices Using a Mixture of MoS <sub>2</sub> and Graphene Oxide as the Active Layer. <i>Small</i> , 2013, 9, 727-731.	5.2	144
32	In Situ Study of Lithiation and Delithiation of MoS <sub>2</sub> Nanosheets Using Electrochemical Liquid Cell Transmission Electron Microscopy. <i>Nano Letters</i> , 2015, 15, 5214-5220.	4.5	135
33	Preparation of MoS <sub>2</sub> -MoO <sub>3</sub> Hybrid Nanomaterials for Light-Emitting Diodes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 12560-12565.	7.2	133
34	Forest of Gold Nanowires: A New Type of Nanocrystal Growth. <i>ACS Nano</i> , 2013, 7, 2733-2740.	7.3	126
35	Preparation of Single-Layer MoS <sub>2</sub> and Mo <sub>2</sub> Se <sub>2</sub> and Mo <sub>2</sub> W <sub>2</sub> S <sub>2</sub> Nanosheets with High-Concentration Metallic 1T Phase. <i>Small</i> , 2016, 12, 1866-1874.	5.2	126
36	Investigation of MoS <sub>2</sub> and Graphene Nanosheets by Magnetic Force Microscopy. <i>ACS Nano</i> , 2013, 7, 2842-2849.	7.3	117

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37	Electrochemical performance of ZnO nanoplates as anode materials for Ni/Zn secondary batteries. <i>Journal of Power Sources</i> , 2008, 179, 395-400.	4.0	112
38	A Safe Flexible Self-Powered Wristband System by Integrating Defective MnO <sub>2</sub> Nanosheet-Based Zinc-Ion Batteries with Perovskite Solar Cells. <i>ACS Nano</i> , 2021, 15, 10597-10608.	7.3	109
39	Three-Dimensional Graphene Network Composites for Detection of Hydrogen Peroxide. <i>Small</i> , 2013, 9, 1703-1707.	5.2	107
40	High-yield production of mono- or few-layer transition metal dichalcogenide nanosheets by an electrochemical lithium ion intercalation-based exfoliation method. <i>Nature Protocols</i> , 2022, 17, 358-377.	5.5	100
41	Electrochemical investigation on nanoflower-like CuO/Ni composite film as anode for lithium ion batteries. <i>Electrochimica Acta</i> , 2009, 54, 1160-1165.	2.6	98
42	Liquid-Phase Epitaxial Growth of Two-Dimensional Semiconductor Hetero-nanostructures. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 1841-1845.	7.2	88
43	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. <i>Scientific Reports</i> , 2012, 2, 981.	1.6	85
44	Stabilizing zinc anode via a chelation and desolvation electrolyte additive. , 2022, 1, 100007.		83
45	Fabrication of metal oxide nanobranches on atomic-layer-deposited TiO <sub>2</sub> nanotube arrays and their application in energy storage. <i>Nanoscale</i> , 2013, 5, 6040.	2.8	79
46	Graphene Oxide as a Carbon Source for Controlled Growth of Carbon Nanowires. <i>Small</i> , 2011, 7, 1199-1202.	5.2	75
47	Nickel Foam-Supported Porous NiO <sup>*</sup> -Ag Film Electrode for Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2008, 155, A438.	1.3	70
48	Highly efficient photocatalytic hydrogen evolution and simultaneous formaldehyde degradation over Z-scheme ZnIn <sub>2</sub> S <sub>4</sub> -NiO/BiVO <sub>4</sub> hierarchical heterojunction under visible light irradiation. <i>Chemical Engineering Journal</i> , 2021, 423, 130164.	6.6	70
49	A Novel Graphene-Polysulfide Anode Material for High-Performance Lithium-Ion Batteries. <i>Scientific Reports</i> , 2013, 3, 2341.	1.6	68
50	Flexible electronics based on 2D transition metal dichalcogenides. <i>Journal of Materials Chemistry A</i> , 2021, 10, 89-121.	5.2	66
51	In situ TEM study of the Li <sup>+</sup> -Au reaction in an electrochemical liquid cell. <i>Faraday Discussions</i> , 2014, 176, 95-107.	1.6	60
52	Atomic-Layer-Deposition-Assisted Formation of Carbon Nanoflakes on Metal Oxides and Energy Storage Application. <i>Small</i> , 2014, 10, 300-307.	5.2	60
53	In situ TEM visualization of LiF nanosheet formation on the cathode-electrolyte interphase (CEI) in liquid-electrolyte lithium-ion batteries. <i>Matter</i> , 2022, 5, 1235-1250.	5.0	56
54	Electrochemical performances of nanostructured Ni <sub>3</sub> P <sup>*</sup> -Ni films electrodeposited on nickel foam substrate. <i>Journal of Power Sources</i> , 2008, 185, 519-525.	4.0	55

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55	Electrode roughness dependent electrodeposition of sodium at the nanoscale. <i>Nano Energy</i> , 2020, 72, 104721.	8.2	54
56	Size-selective synthesis of platinum nanoparticles on transition-metal dichalcogenides for the hydrogen evolution reaction. <i>Chemical Communications</i> , 2021, 57, 2879-2882.	2.2	51
57	Investigation into the Phase-Activity Relationship of MnO <sub>2</sub> Nanomaterials toward Ozone-Assisted Catalytic Oxidation of Toluene. <i>Small</i> , 2021, 17, e2103052.	5.2	51
58	Controlling Reversible Elastic Deformation of Carbon Nanotube Rings. <i>Journal of the American Chemical Society</i> , 2011, 133, 9654-9657.	6.6	49
59	Recent Developments of Two-Dimensional Anode Materials and Their Composites in Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 7440-7461.	2.5	48
60	Recent advances in wearable self-powered energy systems based on flexible energy storage devices integrated with flexible solar cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 18887-18905.	5.2	47
61	Electrochemical deposition of Pt nanoparticles on carbon nanotube patterns for glucose detection. <i>Analyst</i> , 2010, 135, 1726.	1.7	46
62	Self-Sacrifice Template Construction of Uniform Yolk-Shell ZnS@C for Superior Alkali-Ion Storage. <i>Advanced Science</i> , 2022, 9, e2200247.	5.6	46
63	Printable Ink Design towards Customizable Miniaturized Energy Storage Devices. , 2020, 2, 1041-1056.		45
64	Simultaneous Electrochemical Exfoliation and Covalent Functionalization of MoS <sub>2</sub> Membrane for Ion Sieving. <i>Advanced Materials</i> , 2022, 34, e2201416.	11.1	45
65	InVO <sub>4</sub> -based photocatalysts for energy and environmental applications. <i>Chemical Engineering Journal</i> , 2022, 428, 131145.	6.6	44
66	Crystallization of Mordenite Platelets using Cooperative Organic Structure-Directing Agents. <i>Journal of the American Chemical Society</i> , 2019, 141, 20155-20165.	6.6	42
67	Nanostructured Si/TiC composite anode for Li-ion batteries. <i>Electrochimica Acta</i> , 2008, 53, 2724-2728.	2.6	41
68	Visualization of Colloidal Nanocrystal Formation and Electrode-Electrolyte Interfaces in Liquids Using TEM. <i>Accounts of Chemical Research</i> , 2017, 50, 1808-1817.	7.6	40
69	Laser-induced graphene for environmental applications: progress and opportunities. <i>Materials Chemistry Frontiers</i> , 2021, 5, 4874-4891.	3.2	35
70	Periodic nanostructures: preparation, properties and applications. <i>Chemical Society Reviews</i> , 2021, 50, 6423-6482.	18.7	34
71	Hierarchical protonated titanate nanostructures for lithium-ion batteries. <i>Nanoscale</i> , 2011, 3, 4074.	2.8	33
72	Nitrogen-induced interfacial electronic structure of NiS <sub>2</sub> /CoS <sub>2</sub> with optimized water and hydrogen binding abilities for efficient alkaline hydrogen evolution electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2022, 10, 719-725.	5.2	33

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73	Design of 3d transition metal anchored B <sub>5</sub> N <sub>3</sub> catalysts for electrochemical CO <sub>2</sub> reduction to methane. Journal of Materials Chemistry A, 2022, 10, 9737-9745.	5.2	31
74	Emerging elemental two-dimensional materials for energy applications. Journal of Materials Chemistry A, 2021, 9, 18793-18817.	5.2	30
75	Mn dopant induced high-valence Ni <sup>3+</sup> sites and oxygen vacancies for enhanced water oxidation. Materials Chemistry Frontiers, 2020, 4, 1993-1999.	3.2	28
76	Advanced Electron Energy Loss Spectroscopy for Battery Studies. Advanced Functional Materials, 2022, 32, 2107190.	7.8	26
77	Induced Coiling Action: Exploring the Intrinsic Defects in Five-Fold Twinned Silver Nanowires. ACS Nano, 2012, 6, 6033-6039.	7.3	25
78	Electrochemical properties of Si/LiTi <sub>2</sub> O <sub>4</sub> nanocomposite as anode materials for Li-ion secondary batteries. Journal of Electroanalytical Chemistry, 2008, 616, 7-13.	1.9	22
79	Transient Solid-State Laser Activation of Indium for High-Performance Reduction of CO <sub>2</sub> to Formate. Small, 2022, 18, e2201311.	5.2	22
80	Boosting Zn <sup>2+</sup> Diffusion via Tunnel-Type Hydrogen Vanadium Bronze for High-Performance Zinc Ion Batteries. ACS Applied Materials & Interfaces, 2022, 14, 7909-7916.	4.0	21
81	Electrochemical Properties of a Mesoporous Si <sup>+</sup> TiO <sub>2</sub> Nanocomposite Film Anode for Lithium-Ion Batteries. Electrochemical and Solid-State Letters, 2008, 11, A105.	2.2	20
82	A long-standing polarized electric field in TiO <sub>2</sub> @BaTiO <sub>3</sub> /CdS nanocomposite for effective photocatalytic hydrogen evolution. Fuel, 2022, 314, 122758.	3.4	20
83	Exploration of Energy Storage Materials for Water Desalination via Next-Generation Capacitive Deionization. Frontiers in Chemistry, 2020, 8, 415.	1.8	19
84	Direct Detection and Visualization of the H <sup>+</sup> Reaction Process in a VO <sub>2</sub> Cathode for Aqueous Zinc-Ion Batteries. Journal of Physical Chemistry Letters, 2021, 12, 7076-7084.	2.1	19
85	Stretchable transparent conductive elastomers for skin-integrated electronics. Journal of Materials Chemistry C, 2020, 8, 15105-15111.	2.7	18
86	Electrochemical investigation on silicon/titanium carbide nanocomposite film anode for Li-ion batteries. Thin Solid Films, 2009, 517, 4767-4771.	0.8	17
87	Ta <sub>2</sub> S <sub>2</sub> nanosheet-based room-temperature dosage meter for nitric oxide. APL Materials, 2014, 2, .	2.2	16
88	Gold-based nanoalloys: synthetic methods and catalytic applications. Journal of Materials Chemistry A, 2021, 9, 19025-19053.	5.2	16
89	Modification Strategies of Layered Double Hydroxides for Superior Supercapacitors. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	16
90	Electrochemical biosensing platforms on the basis of reduced graphene oxide and its composites with Au nanodots. Analyst, The, 2020, 145, 3749-3756.	1.7	8

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91	High-yield Exfoliation of Ultrathin 2D Ni <sub>3</sub> Cr <sub>2</sub> P <sub>2</sub> S <sub>9</sub> and Ni <sub>3</sub> Cr <sub>2</sub> P <sub>2</sub> Se <sub>9</sub> Nanosheets. <i>Small</i> , 2021, 17, e2006866.	5.2	8
92	Self-Assembly of 2D Nanosheets into 1D Nanostructures for Sensing NO <sub>2</sub> . <i>Small Structures</i> , 2021, 2, 2100067.	6.9	8
93	Unveiling the Dynamic Oxidative Etching Mechanisms of Nanostructured Metals/Metallic Oxides in Liquid Media Through In Situ Transmission Electron Microscopy. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	7
94	Rational design of fly ash-based composites for sustainable lithium-ion battery anodes. <i>Electrochimica Acta</i> , 2022, 410, 140035.	2.6	6
95	Investigation into the Phase-Activity Relationship of MnO <sub>2</sub> Nanomaterials toward Ozone-Assisted Catalytic Oxidation of Toluene ( <i>Small</i> 50/2021). <i>Small</i> , 2021, 17, .	5.2	1
96	Visualization of Electrochemical Reaction Dynamics in Liquids Using TEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 884-885.	0.2	0
97	Liquid Cell TEM Study of Nucleation and Growth of Dendrites. <i>Microscopy and Microanalysis</i> , 2018, 24, 250-251.	0.2	0
98	Controlled Synthesis of Hollow Hemispheric ZnO Shells/Cages on Graphite Fiber. <i>ISRN Nanotechnology</i> , 2011, 2011, 1-5.	1.3	0