

# Xinyu Zhang

## 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.

81  
papers

2,540  
citations

26  
h-index

48  
g-index

83  
ext. papers

3,631  
ext. citations

6.8  
avg, IF

5.69  
L-index

#	Paper	IF	Citations
81	Rational design of fly ash-based composites for sustainable lithium-ion battery anodes. <i>Electrochimica Acta</i> , <b>2022</b> , 410, 140035	6.7	2
80	Regulating solvation structure to stabilize zinc anode by fastening the free water molecules with an inorganic colloidal electrolyte. <i>Nano Energy</i> , <b>2022</b> , 93, 106839	17.1	13
79	Taming the challenges of activity and selectivity in catalysts for electrochemical N <sub>2</sub> fixation via single metal atom supported on WS <sub>2</sub> . <i>Applied Surface Science</i> , <b>2022</b> , 571, 151357	6.7	3
78	Architecting Nb-TiO <sub>2</sub> x/(Ti 0.9 Nb 0.1 ) <sub>3</sub> C 2 T x MXene Nanohybrid Anode for High-Performance Lithium-Ion Batteries. <i>Advanced Materials Interfaces</i> , <b>2022</b> , 9, 2101658	4.6	1
77	Stabilizing zinc anode via a chelation and desolvation electrolyte additive <b>2021</b> ,		23
76	A self-sacrifice template strategy to synthesize Co-LDH/MXene for lithium-ion batteries. <i>Chemical Communications</i> , <b>2021</b> , 57, 11378-11381	5.8	3
75	Elimination of Zinc Dendrites by Graphene Oxide Electrolyte Additive for Zinc-Ion Batteries. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 4602-4609	6.1	21
74	Oxygen defect enriched (NH <sub>4</sub> ) <sub>2</sub> V <sub>10</sub> O <sub>25</sub> ·nH <sub>2</sub> O nanosheets for superior aqueous zinc-ion batteries. <i>Nano Energy</i> , <b>2021</b> , 84, 105876	17.1	59
73	Manipulating Crystallographic Orientation of Zinc Deposition for Dendrite-free Zinc Ion Batteries. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2101299	21.8	77
72	TMN <sub>4</sub> complex embedded graphene as bifunctional electrocatalysts for high efficiency OER/ORR. <i>Journal of Energy Chemistry</i> , <b>2021</b> , 55, 437-443	12	36
71	High-throughput identification of high activity and selectivity transition metal single-atom catalysts for nitrogen reduction. <i>Nano Energy</i> , <b>2021</b> , 80, 105527	17.1	23
70	Ni <sub>3</sub> S <sub>2</sub> Nanoparticles Anchored on d-Ti <sub>3</sub> C <sub>2</sub> Nanosheets with Enhanced Sodium Storage. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 2593-2599	6.1	7
69	Two Birds with One Stone: Boosting Zinc-Ion Insertion/Extraction Kinetics and Suppressing Vanadium Dissolution of VO via La Incorporation Enable Advanced Zinc-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 38416-38424	9.5	15
68	Ti <sub>3</sub> C <sub>2</sub> MXene-Encapsulated NiFe-LDH Hybrid Anode for High-Performance Lithium-Ion Batteries and Capacitors. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 7821-7828	6.1	13
67	Revealing the impacts of oxygen defects on Zn <sup>2+</sup> storage performance in V <sub>2</sub> O <sub>5</sub> . <i>Materials Today Energy</i> , <b>2021</b> , 21, 100824	7	10
66	Modulating Zn deposition via ceramic-cellulose separator with interfacial polarization effect for durable zinc anode. <i>Nano Energy</i> , <b>2021</b> , 89, 106322	17.1	38
65	Strongly coupled tungsten oxide/carbide heterogeneous hybrid for ultrastable aqueous rocking-chair zinc-ion batteries. <i>Chemical Engineering Journal</i> , <b>2021</b> , 426, 131893	14.7	11

64	High-throughput screening of single metal atom anchored on N-doped boron phosphide for N reduction. <i>Nanoscale</i> , <b>2021</b> , 13, 13437-13450	7.7	1
63	Flower-like W/WO as a novel cathode for aqueous zinc-ion batteries. <i>Chemical Communications</i> , <b>2021</b> , 57, 7549-7552	5.8	5
62	Inhibition of Manganese Dissolution in Mn <sub>2</sub> O <sub>3</sub> Cathode with Controllable Ni <sup>2+</sup> Incorporation for High-Performance Zinc Ion Battery. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2009412	15.6	54
61	High-Performance and Binder-Free Anodized ZrTiAlV Alloy Anode Material for Lithium Ion Microbatteries. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 11326-11332	6.1	1
60	NiMn Layered Double Hydroxide Nanosheets In-situ Anchored on Ti <sub>3</sub> C <sub>2</sub> MXene via Chemical Bonds for Superior Supercapacitors. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 5949-5964	6.1	53
59	Eco-Friendly Conductive Cotton-Based Textile Electrodes Using Silver- and Carbon-Coated Fabrics for Advanced Flexible Supercapacitors. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 8977-8986	4.1	15
58	NiCo-LDH/Ti <sub>3</sub> C <sub>2</sub> MXene hybrid materials for lithium ion battery with high-rate capability and long cycle life. <i>Journal of Energy Chemistry</i> , <b>2020</b> , 50, 143-153	12	51
57	Strain stiffening, high load-invariant hardness, and electronic anomalies of boron phosphide under pressure. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	14
56	Constructing MoS <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> heterojunction with enhanced oxygen evolution reaction activity: A theoretical insight. <i>Applied Surface Science</i> , <b>2020</b> , 510, 145489	6.7	30
55	Vacancy mediated alloying strengthening effects on Al/Al <sub>3</sub> Zr interface and stabilization of L1 <sub>2</sub> -Al <sub>3</sub> Zr: A first-principles study. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 825, 153825	5.7	3
54	Spatial Separation of Charge Carriers via Heterogeneous Structural Defects in Graphitic Carbon Nitride for Photocatalytic Hydrogen Evolution. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 4428-4436	5.6	14
53	Atomic diffusion mediated by vacancy defects in L1 <sub>2</sub> -Zr <sub>3</sub> Al: A first-principles study. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 821, 153223	5.7	1
52	Mechanochemical reactions of MnO <sub>2</sub> and graphite nanosheets as a durable zinc ion battery cathode. <i>Applied Surface Science</i> , <b>2020</b> , 534, 147630	6.7	45
51	NiMn-Layered Double Hydroxides Chemically Anchored on Ti <sub>3</sub> C <sub>2</sub> MXene for Superior Lithium Ion Storage. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 11119-11130	6.1	21
50	Ni-Co Double Hydroxide Grown on Graphene Oxide for Enhancing Lithium Ion Storage. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 13032-13037	4.1	12
49	Vanadium-Based Oxide on Two-Dimensional Vanadium Carbide MXene (V <sub>2</sub> O <sub>x</sub> @V <sub>2</sub> CT <sub>x</sub> ) as Cathode for Rechargeable Aqueous Zinc-Ion Batteries. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 4677-4689	6.1	61
48	A universal and facile approach to suppress dendrite formation for a Zn and Li metal anode. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 9331-9344	13	62
47	Effect of grain size on $\beta$ -variant selection in a ZrTiAlV alloy. <i>Science China Technological Sciences</i> , <b>2019</b> , 62, 982-988	3.5	1

46	Influence of Co Ions on the Microstructure and Mechanical Properties of Ni-W/Diamond Nano-Composite Coatings. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2019</b> , 19, 4083-4089	1.3	3
45	Study on the correlation between microstructures and corrosion properties of novel ZrTiAlV alloys. <i>Materials Science and Engineering C</i> , <b>2019</b> , 101, 92-102	8.3	10
44	SiCx/TiCx Nanostructured Material from Ti3SiC2 for High Rate Performance of Lithium Storage. <i>ChemistrySelect</i> , <b>2019</b> , 4, 7766-7772	1.8	3
43	Revealing Ni-based layered double hydroxides as high-efficiency electrocatalysts for the oxygen evolution reaction: a DFT study. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 23091-23097	13	35
42	Vanadium Diboride (VB) Synthesized at High Pressure: Elastic, Mechanical, Electronic, and Magnetic Properties and Thermal Stability. <i>Inorganic Chemistry</i> , <b>2018</b> , 57, 1096-1105	5.1	39
41	Facile synthesis of a ZnO-BiOI p-n nano-heterojunction with excellent visible-light photocatalytic activity. <i>Beilstein Journal of Nanotechnology</i> , <b>2018</b> , 9, 789-800	3	16
40	Rational design and synthesis of SiC/TiC@SiO/TiO porous core-shell nanostructure with excellent Li-ion storage performance. <i>Chemical Communications</i> , <b>2018</b> , 54, 12622-12625	5.8	7
39	Enhancement of Hydrogen Evolution Reaction Performance of Graphitic Carbon Nitride with Incorporated Nickel Boride. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 16198-16204	8.3	25
38	Heterostructured d-Ti C /TiO g-C N Nanocomposites with Enhanced Visible-Light Photocatalytic Hydrogen Production Activity. <i>ChemSusChem</i> , <b>2018</b> , 11, 4226-4236	8.3	84
37	Facile Electrodeposition of Ni-Cu-P Dendrite Nanotube Films with Enhanced Hydrogen Evolution Reaction Activity and Durability. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 35224-35233	9.5	44
36	WS and C-TiO Nanorods Acting as Effective Charge Separators on g-C N to Boost Visible-Light Activated Hydrogen Production from Seawater. <i>ChemSusChem</i> , <b>2018</b> , 11, 4077-4085	8.3	50
35	Insights into the Li+ storage mechanism of TiC@C-TiO2 core-shell nanostructures as high performance anodes. <i>Nano Energy</i> , <b>2018</b> , 50, 25-34	17.1	35
34	Multihierarchical Structure of Hybridized Phosphates Anchored on Reduced Graphene Oxide for High Power Hybrid Energy Storage Devices. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 5679-5685	8.3	38
33	Effect of Ag+ and PO4 <sup>3-</sup> ratios on the microstructure and photocatalytic activity of Ag3PO4. <i>Functional Materials Letters</i> , <b>2016</b> , 09, 1650063	1.2	10
32	Co-electrodeposition of hard Ni-W/diamond nanocomposite coatings. <i>Scientific Reports</i> , <b>2016</b> , 6, 22285	4.9	16
31	Structural Transformation of MXene (V2C, Cr2C, and Ta2C) with O Groups during Lithiation: A First-Principles Investigation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 74-81	9.5	120
30	Elastic, magnetic and electronic properties of iridium phosphide Ir2P. <i>Scientific Reports</i> , <b>2016</b> , 6, 21787	4.9	14
29	Carbon-Doped ZnO Nanostructures: Facile Synthesis and Visible Light Photocatalytic Applications. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 20544-20554	3.8	163

28	Anisotropy in elasticity and thermodynamic properties of zirconium tetraboride under high pressure. <i>RSC Advances</i> , <b>2015</b> , 5, 77399-77406	3.7	10
27	Polymorphism in glassy silicon: inherited from liquid-liquid phase transition in supercooled liquid. <i>Scientific Reports</i> , <b>2015</b> , 5, 8590	4.9	14
26	Pressure-induced zigzag phosphorus chain and superconductivity in boron monophosphide. <i>Scientific Reports</i> , <b>2015</b> , 5, 8761	4.9	16
25	Theoretical prediction of structural stability, electronic and elastic properties of ZrSi <sub>2</sub> under pressure. <i>RSC Advances</i> , <b>2015</b> , 5, 36779-36786	3.7	11
24	The high concentration and uniform distribution of diamond particles in Ni-diamond composite coatings by sediment co-deposition. <i>Surface and Interface Analysis</i> , <b>2015</b> , 47, 331-339	1.5	9
23	Effect of aspect ratio and surface defects on the photocatalytic activity of ZnO nanorods. <i>Scientific Reports</i> , <b>2014</b> , 4, 4596	4.9	624
22	First-principles investigations on thermodynamic properties of the ordered and disordered Si <sub>0.5</sub> Ge <sub>0.5</sub> alloys. <i>Applied Physics A: Materials Science and Processing</i> , <b>2014</b> , 115, 667-670	2.6	8
21	Mechanical-assisted preparation and photocatalytic properties of almost-visible light-driven ZnO/ZnFe <sub>2</sub> O <sub>4</sub> nanocomposites. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1641, 1		2
20	First principle study of elastic and thermodynamic properties of ZrZn <sub>2</sub> and HfZn <sub>2</sub> under high pressure. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 083514	2.5	15
19	In situ high pressure synthesis of cBN-based composites. <i>Functional Materials Letters</i> , <b>2014</b> , 07, 1450040 <sub>1.2</sub>		5
18	First-principles study of ZrC <sub>x</sub> N <sub>1-x</sub> alloys with electron concentration modulation. <i>Journal of Materials Science</i> , <b>2013</b> , 48, 7743-7748	4.3	9
17	Pressure-induced pseudoatom bonding collapse and isosymmetric phase transition in Zr <sub>2</sub> Cu: first-principles predictions. <i>Journal of Chemical Physics</i> , <b>2013</b> , 139, 234504	3.9	10
16	First-principles structural design of superhard material of ZrB <sub>4</sub> . <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 20894-9	3.6	42
15	First principle study of elastic and thermodynamic properties of FeB <sub>4</sub> under high pressure. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 183517	2.5	36
14	Different topological insulating behavior in E <sub>g</sub> As and GaS-II under uniaxial tension. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	4
13	Deformation-induced bonding evolution of iron tetraboride and its electronic origin. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 1022-1025	2.5	10
12	Effect of Ag addition on the thermal stability and glass-forming ability of Zr <sub>35</sub> Ti <sub>30</sub> Cu <sub>7.5</sub> Be <sub>27.5</sub> bulk metallic glass. <i>Science Bulletin</i> , <b>2012</b> , 57, 1219-1222		5
11	Disorder-activated Raman spectra of cubic rocksalt-type Li <sub>1-x</sub> /2Ga <sub>1-x</sub> /2M <sub>x</sub> O (M = Mg, Zn) alloys. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 043501	2.5	13

10	Strength and bonding nature of superhard Z-carbon from first-principle study. <i>AIP Advances</i> , <b>2012</b> , 2, 022160	1.5	6
9	Structural, elastic, and thermal properties of Laves phase ZrV <sub>2</sub> under pressure. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 113523	2.5	55
8	Atomic packing and short-to-medium range order evolution of Zr-Pd metallic glass. <i>Science Bulletin</i> , <b>2011</b> , 56, 3908-3911		7
7	Supreme shear modulus predicted in the monocarbide system: the Rex W <sub>1-x</sub> C alloy. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2009</b> , 3, 299-301	2.5	12
6	Phase Transition of Shock-Loaded ZrTiCuNiBe Bulk Metallic Glass under Continuous Heating. <i>Materials Transactions</i> , <b>2008</b> , 49, 869-873	1.3	1
5	Potential superhard cubic spinel CSi <sub>2</sub> N <sub>4</sub> : First-principles investigations. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 083533	2.5	21
4	The fluidity and molding ability of glass-forming Zr-based alloy melt <b>2008</b> , 51, 438-444		6
3	Ultrastiff carbides uncovered in first principles. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 061905	3.4	41
2	Modification Strategies of Layered Double Hydroxides for Superior Supercapacitors. <i>Advanced Energy and Sustainability Research</i> , 2100183	1.6	1
1	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> ,	35.4	36