Zhi-Guo Wang

List of Publications by Year in Descending Order

117 papers	2,692 citations	31 h-index	47 g-index
119 ext. papers	3,345 ext. citations	5.5 avg, IF	5.7 L-index

#	Paper	IF	Citations
117	Electronic properties of MoS2/Be2C van der Waals heterostructure: Effect of Bi-axil strain and vertical electric field. *Physica E: Low-Dimensional Systems and Nanostructures*, **2022**, 139, 115172	3	
116	Thermoelectric performance of ZrNX (X = Cl, Br and I) monolayers.. *Physical Chemistry Chemical Physics*, **2021**, 24, 560-567	3.6	1
115	Improved Thermoelectric Performance of Monolayer HfS by Strain Engineering. *ACS Omega*, **2021**, 6, 29820-29829	3.9	3
114	Pedestrian re-identification based on attribute mining and reasoning. *IET Image Processing*, **2021**, 15, 2399-2411	1.7	1
113	Threshold displacement energy of lattice atoms in yttrium ion garnet, an ab initio molecular dynamics study. *Chemical Physics Letters*, **2021**, 771, 138518	2.5	
112	High Thermoelectric Performance of Sb2Si2Te6 Monolayers. *Journal of Physical Chemistry C*, **2021**, 125, 16413-16419	3.8	4
111	DAFV: A Unified and Real-Time Framework of Joint Detection and Attributes Recognition for Fast Vehicles. *Lecture Notes in Computer Science*, **2021**, 353-365	0.9	
110	SAN-GAL: Spatial Attention Network Guided by Attribute Label for Person Re-identification. *Wireless Communications and Mobile Computing*, **2021**, 2021, 1-8	1.9	
109	First-Principles Molecular Dynamics Study of the Threshold Displacement Energy in LiFe5O8. *Crystal Research and Technology*, **2021**, 56, 2100076	1.3	
108	Two-dimensional hetero-nanostructured electrocatalyst of Ni/NiFe-layered double oxide for highly efficient hydrogen evolution reaction in alkaline medium. *Chemical Engineering Journal*, **2021**, 426, 131827	14.7	6
107	Plasma-Treated Ultrathin Ternary FePSe Nanosheets as a Bifunctional Electrocatalyst for Efficient Zinc-Air Batteries. *ACS Applied Materials & Interfaces*, **2020**, 12, 29393-29403	9.5	5
106	Lead-Free CsCuSbCl Layered Double Perovskite Nanocrystals. *Journal of the American Chemical Society*, **2020**, 142, 11927-11936	16.4	66
105	Elastic softening of group IVA (Si, Ge and Sn) materials by electron and lithium doping. *Modern Physics Letters B*, **2020**, 34, 2050140	1.6	1
104	Electronic Modulation of Nickel Disulfide toward Efficient Water Electrolysis. *Small*, **2020**, 16, e1905885	11	31
103	Cu- and Fe-Codoped Ni Porous Networks as an Active Electrocatalyst for Hydrogen Evolution in Alkaline Medium. *ACS Applied Materials & Interfaces*, **2020**, 12, 2380-2389	9.5	15
102	The effects of monovalent metal cations on the crystal and electronic structures of CsMBiCl (M = Ag, Cu, Na, K, Rb, and Cs) perovskites. *Journal of Chemical Physics*, **2020**, 153, 141101	3.9	11
101	Intrinsic defects in yttrium iron garnet: A first-principles study. *Journal of Applied Physics*, **2020**, 128, 183904	2.5	6

100	The dependence of interfacial properties on the layer number in 1T?/2H-MoS2 van der Waals heterostructures. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2020**, 384, 126747	2.3	1
99	Mechanical Properties of Two-Dimensional Materials (Graphene, Silicene and MoS2 Monolayer) Upon Lithiation. *Journal of Electronic Materials*, **2020**, 49, 5713-5720	1.9	3
98	Density Functional Theory Study on the Hydrogen Evolution Reaction in the S-rich SnS2 Nanosheets. *Electrocatalysis*, **2020**, 11, 604-611	2.7	5
97	Black reduced porous SnO2 nanosheets for CO2 electroreduction with high formate selectivity and low overpotential. *Applied Catalysis B: Environmental*, **2020**, 260, 118134	21.8	67
96	Nanostructured NiSeS on Porous-Carbon Skeletons as Highly Efficient Electrocatalyst for Hydrogen Evolution in Acidic Medium. *Inorganic Chemistry*, **2020**, 59, 6018-6025	5.1	7
95	Transition metal atom (Ti, V, Mn, Fe, and Co) anchored silicene for hydrogen evolution reaction.. *RSC Advances*, **2019**, 9, 26321-26326	3.7	11
94	Lowering Charge Transfer Barrier of LiMnO via Nickel Surface Doping To Enhance Li Intercalation Kinetics at Subzero Temperatures. *Journal of the American Chemical Society*, **2019**, 141, 14038-14042	16.4	77
93	Surface treated nickel phosphide nanosheet with oxygen as highly efficient bifunctional electrocatalysts for overall water splitting. *Applied Surface Science*, **2019**, 496, 143741	6.7	4
92	Robust Piezo-Phototronic Effect in Multilayer InSe for High-Performance Self-Powered Flexible Photodetectors. *ACS Nano*, **2019**, 13, 7291-7299	16.7	65
91	Triggering Catalytic Active Sites for Hydrogen Evolution Reaction by Intrinsic Defects in Janus Monolayer MoSSe. *Journal of Physical Chemistry C*, **2019**, 123, 12261-12267	3.8	29
90	Trapping polysulfide on two-dimensional molybdenum disulfide for Li-S batteries through phase selection with optimized binding. *Beilstein Journal of Nanotechnology*, **2019**, 10, 774-780	3	5
89	Optical Properties and Photocatalytic Applications of Two-Dimensional Janus Group-III Monochalcogenides. *Journal of Physical Chemistry C*, **2019**, 123, 11388-11396	3.8	68
88	Tuning the n-type contact of graphene on Janus MoSSe monolayer by strain and electric field. *Physica E: Low-Dimensional Systems and Nanostructures*, **2019**, 110, 148-152	3	16
87	Defects in Li-rich manganese-based layered oxide: A first-principles study. *Modern Physics Letters B*, **2019**, 33, 1950098	1.6	2
86	Ultra-sensitive UV and H2S dual functional sensors based on porous In2O3 nanoparticles operated at room temperature. *Journal of Alloys and Compounds*, **2019**, 770, 721-731	5.7	21
85	An ab initio molecular dynamics study on the threshold displacement energies in yttrium aluminum garnet. *Journal of Applied Physics*, **2019**, 126, 055701	2.5	3
84	Strain Engineering and Electric Field Tunable Electronic Properties of Janus MoSSe/WX2 (X = S, Se) van der Waals Heterostructures. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1900261	1.3	7
83	Two-Dimensional van der Waals Materials with Aligned In-Plane Polarization and Large Piezoelectric Effect for Self-Powered Piezoelectric Sensors. *Nano Letters*, **2019**, 19, 5410-5416	11.5	74

82	A two-dimensional MoS/CN broken-gap heterostructure, a first principles study.. *RSC Advances*, **2019**, 9, 19837-19843	3.7	16
81	Mechanical elasticity and piezoelectricity in monolayer transition-metal dichalcogenide alloys. *Journal of Physics and Chemistry of Solids*, **2019**, 135, 109081	3.9	2
80	Eliminating Trap-States and Functionalizing Vacancies in 2D Semiconductors by Electrochemistry. *Small*, **2019**, 15, e1901899	11	2
79	Highly Efficient and Stable Hydrogen Production in All pH Range by Two-Dimensional Structured Metal-Doped Tungsten Semicarbides. *Research*, **2019**, 2019, 4029516	7.8	27
78	High intrinsic catalytic activity of boron nanotubes for hydrogen evolution reaction: an ab initio study. *Materials Research Express*, **2019**, 6, 025036	1.7	3
77	Density functional theory study of aluminium and chromium doped Yttrium ion garnet. *Materials Research Express*, **2019**, 6, 036105	1.7	6
76	Mechanical and electronic properties of Janus monolayer transition metal dichalcogenides. *Journal of Physics Condensed Matter*, **2018**, 30, 215301	1.8	43
75	Anomalous Li Storage Capability in Atomically Thin Two-Dimensional Sheets of Nonlayered MoO. *Nano Letters*, **2018**, 18, 1506-1515	11.5	43
74	Sodium adsorption and diffusion on monolayer black phosphorus with intrinsic defects. *Applied Surface Science*, **2018**, 427, 189-197	6.7	27
73	Improving the catalytic activity for hydrogen evolution of monolayered SnSeS by mechanical strain. *Beilstein Journal of Nanotechnology*, **2018**, 9, 1820-1827	3	9
72	Adsorption and diffusion of lithium on heteroatom-doped monolayer molybdenum disulfide. *Applied Surface Science*, **2018**, 455, 911-918	6.7	21
71	Effect of oxygen doping on the hydrogen evolution reaction in MoS2 monolayer. *Journal of the Taiwan Institute of Chemical Engineers*, **2018**, 82, 163-168	5.3	12
70	Catalytic activity for the hydrogen evolution reaction of edges in Janus monolayer MoXY (X/Y = S, Se, and Te). *Physical Chemistry Chemical Physics*, **2018**, 20, 29423-29429	3.6	15
69	2H -p1 T? phase transformation in Janus monolayer MoSSe and MoSTe: an efficient hole injection contact for 2H-MoS2. *Journal of Materials Chemistry C*, **2018**, 6, 13000-13005	7.1	21
68	O2 plasma and cation tuned nickel phosphide nanosheets for highly efficient overall water splitting. *Nano Energy*, **2018**, 54, 82-90	17.1	73
67	Triggering basal plane active sites of monolayer MoS2 for the hydrogen evolution reaction by phosphorus doping. *Journal of Nanoparticle Research*, **2018**, 20, 1	2.3	5
66	Design of active nickel single-atom decorated MoS2 as a pH-universal catalyst for hydrogen evolution reaction. *Nano Energy*, **2018**, 53, 458-467	17.1	147
65	Large Intercalation Pseudocapacitance in 2D VO (B): Breaking through the Kinetic Barrier. *Advanced Materials*, **2018**, 30, e1803594	24	32

64	Grain Boundaries Trigger Basal Plane Catalytic Activity for the Hydrogen Evolution Reaction in Monolayer MoS2. *Electrocatalysis*, **2018**, 9, 744-751	2.7	15
63	Effect of Fe content on Cu2Fe x Zn1− SnS4 single crystals fabricated by flux growth method. *Journal Physics D: Applied Physics*, **2018**, 51, 295107	3	1
62	Layer-Dependent Chemically Induced Phase Transition of Two-Dimensional MoS. *Nano Letters*, **2018**, 18, 3435-3440	11.5	50
61	Structural, electronic and mechanical properties of two-dimensional Janus transition metal carbides and nitrides. *Physica E: Low-Dimensional Systems and Nanostructures*, **2018**, 103, 307-313	3	18
60	Modeling and Simulation of Piezoelectrically Driven Self-Charging Lithium Ion Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 15893-15897	9.5	15
59	Composites of Piezoelectric Materials and Silicon as Anodes for Lithium-Ion Batteries. *ChemElectroChem*, **2017**, 4, 1523-1527	4.3	6
58	Efficiently Synergistic Hydrogen Evolution Realized by Trace Amount of Pt-Decorated Defect-Rich SnS Nanosheets. *ACS Applied Materials & Interfaces*, **2017**, 9, 37750-37759	9.5	54
57	Ab initio study of adsorption and diffusion of lithium on transition metal dichalcogenide monolayers. *Beilstein Journal of Nanotechnology*, **2017**, 8, 2711-2718	3	17
56	Mechanical bending induced catalytic activity enhancement of monolayer 1 T MoS2 for hydrogen evolution reaction. *Journal of Nanoparticle Research*, **2017**, 19, 1	2.3	10
55	Facet-dependent magnesiation behavior of Sn as an anode for magnesium ion batteries. *RSC Advances*, **2017**, 7, 44547-44551	3.7	8
54	Rhenium doping induced structural transformation in mono-layered MoS2 with improved catalytic activity for hydrogen evolution reaction. *Journal Physics D: Applied Physics*, **2017**, 50, 405303	3	16
53	Atomic scale study of surface orientations and energies of Ti2O3 crystals. *Applied Physics Letters*, **2017**, 111, 181603	3.4	3
52	Density functional theory analysis of surface structures of spinel LiNi0.5Mn1.5O4 cathode materials. *Journal of Materials Science*, **2017**, 52, 605-612	4.3	7
51	Electric field enhanced adsorption and diffusion of adatoms in MoS2 monolayer. *Materials Chemistry and Physics*, **2016**, 183, 392-397	4.4	20
50	Electron Transfer Governed Crystal Transformation of Tungsten Trioxide upon Li Ions Intercalation. *ACS Applied Materials & Interfaces*, **2016**, 8, 24567-72	9.5	18
49	Room-Temperature High-Performance H2S Sensor Based on Porous CuO Nanosheets Prepared by Hydrothermal Method. *ACS Applied Materials & Interfaces*, **2016**, 8, 20962-8	9.5	166
48	Origin of Structural Transformation in Mono- and Bi-Layered Molybdenum Disulfide. *Scientific Reports*, **2016**, 6, 26666	4.9	55
47	Controlled growth of vertical 3D MoS2(1−)Se2x nanosheets for an efficient and stable hydrogen evolution reaction. *Journal of Materials Chemistry A*, **2016**, 4, 18060-18066	13	61

46	Cathode Materials: Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transition-Metal Oxide Cathodes (Adv. Energy Mater. 9/2016). *Advanced Energy Materials*, **2016**, 6,	21.8	2
45	Density functional theory study of diffusion of lithium in Li–Sn alloys. *Journal of Materials Science*, **2016**, 51, 3271-3276	4.3	17
44	Tuning the electronic properties of single-walled SiC nanotubes by external electric field. *Physica E: Low-Dimensional Systems and Nanostructures*, **2016**, 81, 192-195	3	8
43	Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transition-Metal Oxide Cathodes. *Advanced Energy Materials*, **2016**, 6, 1502455	21.8	72
42	Enhancement of adsorption and diffusion of lithium in single-walled carbon nanotubes by external electric field. *Journal of Nanoparticle Research*, **2016**, 18, 1	2.3	5
41	Monolayer black phosphorus as potential anode materials for Mg-ion batteries. *Journal of Materials Science*, **2016**, 51, 7355-7360	4.3	41
40	Atomic-Resolution Visualization of Distinctive Chemical Mixing Behavior of Ni, Co, and Mn with Li in Layered Lithium Transition-Metal Oxide Cathode Materials. *Chemistry of Materials*, **2015**, 27, 5393-5401	9.6	87
39	Composition Dependence of Lithium Diffusion in Lithium Silicide: A Density Functional Theory Study. *ChemElectroChem*, **2015**, 2, 1292-1297	4.3	15
38	Defect-Mediated Lithium Adsorption and Diffusion on Monolayer Molybdenum Disulfide. *Scientific Reports*, **2015**, 5, 18712	4.9	65
37	Oxygen Deficiency and Defect Chemistry in Delithiated Spinel LiNi0.5Mn1.5O4 Cathodes for Li-Ion Batteries. *ChemElectroChem*, **2015**, 2, 1182-1186	4.3	16
36	Out-of-Cell Oxygen Diffusivity Evaluation in Lithium–Air Batteries. *ChemElectroChem*, **2014**, 1, 2052-2057	4.3	6
35	Structure and electronic properties of transition metal dichalcogenide MX2 (M = Mo, W, Nb; X = S, Se) monolayers with grain boundaries. *Materials Chemistry and Physics*, **2014**, 147, 1068-1073	4.4	21
34	Comparison of tetragonal and cubic tin as anode for Mg ion batteries. *ACS Applied Materials & Interfaces*, **2014**, 6, 6786-9	9.5	41
33	Modelling and simulation of electron-rich effect on Li diffusion in group IVA elements (Si, Ge and Sn) for Li ion batteries. *Journal of Materials Chemistry A*, **2014**, 2, 13976-13982	13	37
32	Tensile behavior of single crystalline GaN nanotube bundles: An atomistic-level study. *International Journal of Modern Physics B*, **2014**, 28, 1450135	1.1	1
31	Lithium and sodium diffusion in solid electrolyte materials of AM2(PO4)3(A = Li, Na, M = Ti, Sn and Zr). *International Journal of Modern Physics B*, **2014**, 28, 1450176	1.1	9
30	First principles prediction of nitrogen-doped carbon nanotubes as a high-performance cathode for Li–S batteries. *RSC Advances*, **2013**, 3, 16775	3.7	40
29	Electron-rich driven electrochemical solid-state amorphization in Li-Si alloys. *Nano Letters*, **2013**, 13, 4511–4516	11.5	45

28	Antisite defects in La0.7Sr0.3MnO3 and La0.7Sr0.3FeO3. *Applied Physics Letters*, **2013**, 102, 151911	3.4	6
27	Single-layered V2O5 a promising cathode material for rechargeable Li and Mg ion batteries: an ab initio study. *Physical Chemistry Chemical Physics*, **2013**, 15, 8705-9	3.6	73
26	Structure and electronic properties of boron nitride sheet with grain boundaries. *Journal of Nanoparticle Research*, **2012**, 14, 1	2.3	14
25	Modification of Defect Structures in Graphene by Electron Irradiation: Ab Initio Molecular Dynamics Simulations. *Journal of Physical Chemistry C*, **2012**, 116, 16070-16079	3.8	55
24	Novel Electronic and Magnetic Properties of Graphene Nanoflakes in a Boron Nitride Layer. *Journal of Physical Chemistry C*, **2012**, 116, 7581-7586	3.8	34
23	Electronic and optical properties of two-dimensional covalent organic frameworks. *Journal of Materials Chemistry*, **2012**, 22, 16964		33
22	First principles study of the electronic properties of twinned SiC nanowires. *Journal of Nanoparticle Research*, **2011**, 13, 185-191	2.3	18
21	First principles study of p-type doping in SiC nanowires: role of quantum effect. *Journal of Nanoparticle Research*, **2011**, 13, 2887-2892	2.3	1
20	Dual-donor codoping approach to realize low-resistance n-type ZnS semiconductor. *Applied Physics Letters*, **2011**, 99, 052109	3.4	2
19	Review on the temperature memory effect in shape memory alloys. *International Journal of Smart and Nano Materials*, **2011**, 2, 101-119	3.6	21
18	TENSILE BEHAVIOR OF AMORPHOUS LAYER COATED SILICON CARBIDE NANOWIRES: AN ATOMIC SIMULATION. *Modern Physics Letters B*, **2011**, 25, 325-332	1.6	2
17	Dual cylindrical metallic grating-cladding polymer hollow waveguide for terahertz transmission with low loss. *Applied Physics Letters*, **2010**, 97, 133502	3.4	7
16	Mechanical behavior of twinned SiC nanowires under combined tension-torsion and compression-torsion strain. *Journal of Applied Physics*, **2010**, 108, 013504	2.5	9
15	Defects in gallium nitride nanowires: First principles calculations. *Journal of Applied Physics*, **2010**, 108, 044305	2.5	26
14	Charge separation in wurtzite/zinc-blende heterojunction GaN nanowires. *ChemPhysChem*, **2010**, 11, 3329-32	3.2	5
13	Stone–Wales defects created by low energy recoils in single-walled silicon carbide nanotubes. *Journal of Applied Physics*, **2009**, 106, 084305	2.5	15
12	Controlling electronic structures by irradiation in single-walled SiC nanotubes: a first-principles molecular dynamics study. *Nanotechnology*, **2009**, 20, 075708	3.4	20
11	Direct formation of SiO2/SnO2 composite nanoparticles with high surface area and high thermal stability by sol–gel-hydrothermal process. *Journal of Sol-Gel Science and Technology*, **2009**, 49, 196-201	2.3	11

10	Tuning the band structures of single walled silicon carbide nanotubes with uniaxial strain: A first principles study. *Applied Physics Letters*, **2008**, 92, 183116	3.4	28
9	Atomistic simulations of the mechanical properties of silicon carbide nanowires. *Physical Review B*, **2008**, 77,	3.3	54
8	Nanomechanical behavior of single crystalline SiC nanotubes revealed by molecular dynamics simulations. *Journal of Applied Physics*, **2008**, 104, 093506	2.5	6
7	Orientation and temperature dependence of the tensile behavior of GaN nanowires: an atomistic study. *Journal of Materials Science: Materials in Electronics*, **2008**, 19, 863-867	2.1	3
6	Atomistic simulations of the size, orientation, and temperature dependence of tensile behavior in GaN nanowires. *Physical Review B*, **2007**, 76,	3.3	39
5	Thermal conductivity of GaN nanotubes simulated by nonequilibrium molecular dynamics. *Physical Review B*, **2007**, 75,	3.3	16
4	Atomistic study of the melting behavior of single crystalline wurtzite gallium nitride nanowires. *Journal of Materials Research*, **2007**, 22, 742-747	2.5	6
3	Energy-efficient speed tuning for real-time applications. *Cluster Computing*,1	2.1	0
2	Strain and electric field tuning the electronic properties of two-dimensional MoS2/ScCl3 van der Waals heterostructure. *Journal of Materials Science: Materials in Electronics*,1	2.1	
1	Transition Metal Atoms Anchored on CuPS3 Monolayer for Enhancing Catalytic Performance of Hydrogen Evolution Reactions. *Electrocatalysis*,1	2.7	0