

Shanmin Wang

List of Publications by Year in descending order

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89
papers

2,836
citations

218381

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docs citations

93
times ranked

3175
citing authors

#	ARTICLE	IF	CITATIONS
1	Manipulating Crystallographic Orientation of Zinc Deposition for Dendrite-free Zinc Ion Batteries. <i>Advanced Energy Materials</i> , 2021, 11, 2101299.	10.2	304
2	A New Molybdenum Nitride Catalyst with Rhombohedral MoS ₂ Structure for Hydrogenation Applications. <i>Journal of the American Chemical Society</i> , 2015, 137, 4815-4822.	6.6	195
3	Inhibition of Manganese Dissolution in Mn ₂ O ₃ Cathode with Controllable Ni ²⁺ Incorporation for High-performance Zinc Ion Battery. <i>Advanced Functional Materials</i> , 2021, 31, 2009412.	7.8	176
4	Modulating Zn deposition via ceramic-cellulose separator with interfacial polarization effect for durable zinc anode. <i>Nano Energy</i> , 2021, 89, 106322.	8.2	162
5	Synthesis, Crystal Structure, and Elastic Properties of Novel Tungsten Nitrides. <i>Chemistry of Materials</i> , 2012, 24, 3023-3028.	3.2	154
6	Vanadium-Based Oxide on Two-Dimensional Vanadium Carbide MXene (V ₂ O _x @V ₂ CT _x) as Cathode for Rechargeable Aqueous Zinc-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 4677-4689.	2.5	138
7	Experimental visualization of lithium conduction pathways in garnet-type Li ₇ La ₃ Zr ₂ O ₁₂ . <i>Chemical Communications</i> , 2012, 48, 9840.	2.2	95
8	Regulating solvation structure to stabilize zinc anode by fastening the free water molecules with an inorganic colloidal electrolyte. <i>Nano Energy</i> , 2022, 93, 106839.	8.2	88
9	The Hardest Superconducting Metal Nitride. <i>Scientific Reports</i> , 2015, 5, 13733.	1.6	78
10	Mechanochemical reactions of MnO ₂ and graphite nanosheets as a durable zinc ion battery cathode. <i>Applied Surface Science</i> , 2020, 534, 147630.	3.1	77
11	Effective Hamiltonian for nickelate oxides $\text{Nd}_{1-x}\text{Ni}_x\text{O}_{2-x}$. <i>Physical Review Research</i> , 2020, 2, .	1.6	76
12	Ultrastrong Boron Frameworks in ZrB ₁₂ : A Highway for Electron Conducting. <i>Advanced Materials</i> , 2017, 29, 1604003.	11.1	71
13	Nanosintering mechanism of MgAl ₂ O ₄ transparent ceramics under high pressure. <i>Materials Chemistry and Physics</i> , 2010, 123, 529-533.	2.0	61
14	Hardness, elastic, and electronic properties of chromium monoboride. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	54
15	Insights into the Li ⁺ storage mechanism of TiC@C-TiO ₂ core-shell nanostructures as high performance anodes. <i>Nano Energy</i> , 2018, 50, 25-34.	8.2	53
16	Synthesis, Hardness, and Electronic Properties of Stoichiometric VN and CrN. <i>Crystal Growth and Design</i> , 2016, 16, 351-358.	1.4	50
17	Experimental invalidation of phase-transition-induced elastic softening in CrN. <i>Physical Review B</i> , 2012, 86, .	1.1	47
18	Pressure calibration for the cubic press by differential thermal analysis and the high-pressure fusion curve of aluminum. <i>High Pressure Research</i> , 2009, 29, 806-814.	0.4	40

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19	Synthesis of Stoichiometric and Bulk CrN through a Solid-State Ion-Exchange Reaction. Chemistry - A European Journal, 2012, 18, 15459-15463.	1.7	39
20	Carbonization of Ethylenediamine Coimpregnated CoMo/Al ₂ O ₃ Catalysts Sulfided by Organic Sulfiding Agent. ACS Catalysis, 2014, 4, 2556-2565.	5.5	39
21	NiMn-Layered Double Hydroxides Chemically Anchored on Ti ₃ C ₂ MXene for Superior Lithium Ion Storage. ACS Applied Energy Materials, 2020, 3, 11119-11130.	2.5	38
22	Raman spectroscopy evidence for dimerization and Mott collapse in V_2O_5 under pressures. Physical Review Materials, 2019, 3, .	1.7	35
23	Wear resistance and thermal stability enhancement of PDC sintered with Ti-coated diamond and cBN. International Journal of Refractory Metals and Hard Materials, 2020, 92, 105278.	1.7	35
24	Ultrahigh-pressure densification of nanocrystalline WB ceramics. Journal of Materials Research, 2010, 25, 637-640.	1.2	31
25	Synthesis of Onion-Like γ -MoN Catalyst for Selective Hydrogenation. Journal of Physical Chemistry C, 2017, 121, 19451-19460.	1.5	29
26	Phase-Transition Induced Elastic Softening and Band Gap Transition in Semiconducting PbS at High Pressure. Inorganic Chemistry, 2013, 52, 8638-8643.	1.9	27
27	Sulfur-catalyzed phase transition in MoS ₂ under high pressure and temperature. Journal of Physics and Chemistry of Solids, 2014, 75, 100-104.	1.9	26
28	High-pressure and high-temperature sintering of nanostructured bulk NiAl materials. Journal of Materials Research, 2009, 24, 2089-2096.	1.2	25
29	Revisit of Pressure-Induced Phase Transition in PbSe: Crystal Structure, and Thermoelastic and Electrical Properties. Inorganic Chemistry, 2015, 54, 4981-4989.	1.9	25
30	Strain-Mediated High Conductivity in Ultrathin Antiferromagnetic Metallic Nitrides. Advanced Materials, 2021, 33, 2005920.	11.1	25
31	Strain stiffening, high load-invariant hardness, and electronic anomalies of boron phosphide under pressure. Physical Review B, 2020, 101, .	1.1	24
32	Pressure-induced coordination changes in LiBO ₂ . Journal of Solid State Chemistry, 2009, 182, 3041-3048.	1.4	23
33	GaN crystals prepared through solid-state metathesis reaction from NaGaO ₂ and BN under high pressure and high temperature. Journal of Alloys and Compounds, 2011, 509, L124-L127.	2.8	22
34	High Pressure Phase-Transformation Induced Texture Evolution and Strengthening in Zirconium Metal: Experiment and Modeling. Scientific Reports, 2015, 5, 12552.	1.6	21
35	Pressure-Enhanced Ferromagnetism in Layered CrSiTe ₃ Flakes. Nano Letters, 2021, 21, 7946-7952.	4.5	20
36	Pressure-driven switching of magnetism in layered CrCl ₃ . Nanoscale, 2020, 12, 22935-22944.	2.8	19

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37	Unusual Mott transition in multiferroic PbCrO_3 . Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15320-15325.	3.3	18
38	Pressure-Induced Phase Transition and Band Gap Engineering in Propylammonium Lead Bromide Perovskite. Journal of Physical Chemistry C, 2019, 123, 15204-15208.	1.5	18
39	Pressure-Dependent Intermediate Magnetic Phase in Thin Fe_3GeTe_2 Flakes. Journal of Physical Chemistry Letters, 2020, 11, 7313-7319.	2.1	18
40	Effects of graphene addition on mechanical properties of polycrystalline diamond compact. Ceramics International, 2020, 46, 11255-11260.	2.3	17
41	Large-volume cubic press produces high temperatures above 4000 Kelvin for study of the refractory materials at pressures. Review of Scientific Instruments, 2020, 91, 015118.	0.6	17
42	Ultra-incompressible High-Entropy Diborides. Journal of Physical Chemistry Letters, 2021, 12, 3106-3113.	2.1	17
43	Nanocrystalline MoS_2 through directional growth along the (0 0 2) crystal plane under high pressure. Materials Chemistry and Physics, 2011, 130, 170-174.	2.0	15
44	Elastic, magnetic and electronic properties of iridium phosphide Ir_2P . Scientific Reports, 2016, 6, 21787.	1.6	15
45	High-pressure x-ray diffraction study of $\text{YBO}_3/\text{Eu}^{3+}$, GdBO_3 , and EuBO_3 : Pressure-induced amorphization in GdBO_3 . Journal of Applied Physics, 2014, 115, .	1.1	14
46	Pressure-Induced Structural Symmetry Transition in Layered InSe . Laser and Photonics Reviews, 2019, 13, 1900012.	4.4	13
47	Pressure induced phase transition of PbNiO_3 from LiNbO_3 -type to perovskite. Solid State Communications, 2014, 196, 8-12.	0.9	12
48	Bandgap widening by pressure-induced disorder in two-dimensional lead halide perovskite. Applied Physics Letters, 2020, 116, 101901.	1.5	12
49	Structural twinning-induced insulating phase in CrN (111) films. Physical Review Materials, 2021, 5, .	0.9	12
50	Probing the continuum scattering and magnetic collapse in single-crystalline $\text{Li}_2\text{Ir}_2\text{O}_7$ by Raman spectroscopy. Physical Review B, 2020, 101, .	1.1	11
51	Enhanced Hardness in Transition-Metal Monocarbides via Optimal Occupancy of Bonding Orbitals. ACS Applied Materials & Interfaces, 2021, 13, 14365-14376.	4.0	11
52	Enhanced thermal and mechanical performance of polycrystalline diamond compact by introducing polycrystalline cubic boron nitride at the grain boundaries. International Journal of Refractory Metals and Hard Materials, 2021, 96, 105468.	1.7	11
53	Fragile Pressure-Induced Magnetism in FeSe Superconductors with a Thickness Reduction. Nano Letters, 2021, 21, 9310-9317.	4.5	11
54	Room-Temperature Ferromagnetism at an Oxide-Nitride Interface. Physical Review Letters, 2022, 128, 017202.	2.9	11

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55	Anomalous pressure-induced phase transformation in nano-crystalline erbium sesquioxide (Er_2O_3): partial amorphization under compression. High Pressure Research, 2014, 34, 70-77.	0.4	10
56	Crystal structures and formation mechanisms of boron-rich tungsten borides. Physical Review B, 2021, 104, .	1.1	10
57	Anisotropic electronic phase transition in CrN epitaxial thin films. Applied Physics Letters, 2022, 120, .	1.5	10
58	Tuning of Optical Behavior in Monolayer and Bilayer Molybdenum Disulfide Using Hydrostatic Pressure. Journal of Physical Chemistry Letters, 2022, 13, 161-167.	2.1	10
59	Enhanced Structural Stability of Sb_2Se_3 via Pressure-Induced Alloying and Amorphization. Journal of Physical Chemistry C, 2020, 124, 3421-3428.	1.5	8
60	Nanoindentation behavior of nanostructured bulk (Fe,Cr)Al and (Fe,Cr)Al- Al_2O_3 nanocomposites. Journal of Alloys and Compounds, 2019, 792, 348-356.	2.8	7
61	Synthesis of low-density from high-density in the presence of melt under high pressure. Solid State Communications, 2010, 150, 2106-2108.	0.9	6
62	Pressure-induced anomalies and structural instability in compressed $\hat{\Gamma}^2$ - Sb_2O_3 . Physical Chemistry Chemical Physics, 2018, 20, 11430-11436.	1.3	6
63	Magnetic origin of phase stability in cubic $\hat{\Gamma}^3$ -MoN. Applied Physics Letters, 2018, 113, 221901.	1.5	6
64	Effect of Fe, Co and Ni promoters on MoS_2 based catalysts for chemoselective hydrogenation of nitroarenes. RSC Advances, 2020, 10, 8055-8065.	1.7	6
65	Novel Nitride Materials Synthesized at High Pressure. Crystals, 2021, 11, 614.	1.0	6
66	Rational design of fly ash-based composites for sustainable lithium-ion battery anodes. Electrochimica Acta, 2022, 410, 140035.	2.6	6
67	Concurrent Pressure-Induced Spin-State Transitions and Jahn-Teller Distortions in MnTe. Chemistry of Materials, 2022, 34, 3931-3940.	3.2	6
68	Phase Stability and Compressibility of $3R$ - MoN_2 at High Pressure. Scientific Reports, 2019, 9, 10524.	1.6	5
69	Tuning superconductivity in vanadium nitride films by adjusting strain. Physical Review B, 2022, 105, .	1.1	5
70	Phase transition of NaGaO_2 at high pressure and high temperature. Solid State Communications, 2012, 152, 540-544.	0.9	4
71	Isosymmetric phase transitions, ultrahigh ductility, and topological nodal lines in $\hat{\Gamma}_\pm$ - $\text{A}g_2\text{O}$. Physical Review B, 2021, 102, .	1.1	4
72	Strain-driven structural selection and amorphization during first-order phase transitions in nanocrystalline Ho_2O_3 under pressure. Physical Review B, 2021, 103, .	1.2	4

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73	Improper multiferroiclike transition in a metal. <i>Physical Review B</i> , 2022, 105, .	1.1	4
74	X-ray scattering of calcite thin films deposited by atomic layer deposition: Studies in air and in calcite saturated water solution. <i>Thin Solid Films</i> , 2014, 565, 277-284.	0.8	3
75	Stoichiometric $\hat{\Gamma}$ -NbN: The Most Incompressible Cubic Transition Metal Mononitride. <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1700063.	0.7	3
76	Synthesis of single-crystal perovskite PbCrO_3 through a new reaction route at high pressure. <i>High Pressure Research</i> , 2018, 38, 136-144.	0.4	3
77	Thermally Induced Anomaly in the Shear Behavior of Magnetite at High Pressure. <i>Physical Review Applied</i> , 2018, 10, .	1.5	3
78	Operation of large-volume cubic press above 8â€…GPa and 2500Â°C with a centimeter-sized cell volume using an optimized hybrid assembly. <i>High Pressure Research</i> , 2021, 41, 132-141.	0.4	3
79	$\text{LnCu}_3(\text{OH})_6\text{Cl}_3$ (Ln = Gd, Tb, Dy): Heavy lanthanides on spin-1/2 kagome magnets*. <i>Chinese Physics B</i> , 2021, 30, 100601.	0.7	3
80	High-Pressure and High-Temperature Synthesis and In Situ High-Pressure Synchrotron X-ray Diffraction Study of HfSi_2 . <i>Inorganic Chemistry</i> , 2021, 60, 15215-15222.	1.9	3
81	Giant Viscoelasticity near Mott Criticality in PbCrO_3 with Large Lattice Anomalies. <i>Physical Review Letters</i> , 2022, 128, 095702.	2.9	3
82	New exploration on phase transition and structure of PbS under high pressure and temperature. <i>Journal of Applied Physics</i> , 2013, 113, 043509.	1.1	2
83	Compressibility and thermoelasticity of CrN . <i>High Pressure Research</i> , 2020, 40, 423-433.	0.4	2
84	Growth of Millimeter Size B_6O Single Crystals in a $\text{B-H}_3\text{BO}_3$ System at High Pressure and High Temperature. <i>Crystal Growth and Design</i> , 2020, 20, 3732-3736.	1.4	2
85	Calibration of Manganin pressure gauge for diamond-anvil cells. <i>Review of Scientific Instruments</i> , 2021, 92, 033905.	0.6	2
86	Strengthening Superhard Materials by Nanostructure Engineering. <i>Journal of Superhard Materials</i> , 2021, 43, 307-329.	0.5	2
87	Pressure-induced polymerization and bandgap-adjustment of TPEPA. <i>RSC Advances</i> , 2022, 12, 11996-12001.	1.7	1
88	Unravelling mechanisms for the formation of amorphous bands in B_6O under nonhydrostatic pressure. <i>Scripta Materialia</i> , 2022, 209, 114376.	2.6	0
89	Dzyaloshinskii-Moriya anisotropy effect on field-induced magnon condensation in the kagome antiferromagnet $\hat{\Gamma}_\pm$. <i>Physical Review B</i> , 2021, 104, .	1.1	0