

Pinwen Zhu

List of Publications by Year in descending order

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57
papers

1,240
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394286

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1940
citing authors

#	ARTICLE	IF	CITATIONS
1	Unusual suppression of tungsten 5d electron depletion in superhard tungsten tetraboride solid solution with chromium under compression. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 035401.	0.7	1
2	The discovery of a superhard P-type transparent semiconductor: Al _{2.69} B ₅₀ . <i>Materials Horizons</i> , 2022, 9, 748-755.	6.4	3
3	Insight the effect of rigid boron chain substructure on mechanical, magnetic and electrical properties of $\hat{\Gamma}^2$ -FeB. <i>Journal of Alloys and Compounds</i> , 2022, 896, 162767.	2.8	8
4	Twinned Martensitic Substructure in a Water Quenched Fe $\hat{\Gamma}$ 1.0 wt% C Alloy. <i>Acta Metallurgica Sinica (English Letters)</i> , 2022, 35, 1157-1163.	1.5	4
5	Pressure-induced bandgap engineering and photoresponse enhancement of wurtzite CuInS ₂ nanocrystals. <i>Nanoscale</i> , 2022, 14, 2668-2675.	2.8	5
6	Surface Modification towards Integral Bulk Catalysts of Transition Metal Borides for Hydrogen Evolution Reaction. <i>Catalysts</i> , 2022, 12, 222.	1.6	4
7	Synthesis, Characterization, and First-Principles Analysis of the MAB-Like Ternary Transition-Metal Boride Fe(MoB) ₂ . <i>Inorganic Chemistry</i> , 2022, 61, 11046-11056.	1.9	6
8	An electrically conductive and ferromagnetic nano-structure manganese mono-boride with high Vickers hardness. <i>Nanoscale</i> , 2021, 13, 18570-18577.	2.8	9
9	Compression-Driven Internanocluster Reaction for Synthesis of Unconventional Gold Nanoclusters. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12253-12257.	7.2	8
10	Compression-Driven Internanocluster Reaction for Synthesis of Unconventional Gold Nanoclusters. <i>Angewandte Chemie</i> , 2021, 133, 12361-12365.	1.6	0
11	Magnetic, Electronic, and Mechanical Properties of Bulk $\hat{\Gamma}^2$ -Fe ₂ N Synthesized at High Pressures. <i>ACS Omega</i> , 2021, 6, 12591-12597.	1.6	4
12	Progress in functional studies of transition metal borides*. <i>Chinese Physics B</i> , 2021, 30, 108103.	0.7	8
13	Pressure-induced structural phase transition in corundum-related class Cu ₃ TeO ₆ . <i>High Pressure Research</i> , 2021, 41, 318-327.	0.4	2
14	Revealing the Unusual Boron-Pinned Layered Substructure in Superconducting Hard Molybdenum Semiboride. <i>ACS Omega</i> , 2021, 6, 21436-21443.	1.6	5
15	Tailoring the d-band center by borophene subunits in chromic diboride toward the hydrogen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2021, 8, 5130-5138.	3.0	5
16	Constructing 1D Boron Chains in the Structure of Transition Metal Monoborides for Hydrogen Evolution Reactions. <i>Catalysts</i> , 2021, 11, 1265.	1.6	5
17	Robust Hydrophobic Materials by Surface Modification in Transition-Metal Diborides. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 58162-58169.	4.0	6
18	Modifying microscopic structures of MoS ₂ by high pressure and high temperature used in hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2020, 357, 136868.	2.6	11

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19	Synthesis and characterization of a strong ferromagnetic and high hardness intermetallic compound Fe ₂ B. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 27425-27432.	1.3	15
20	Synthesis and high-pressure studies of strontium diazenide by synchrotron X-ray diffraction and DFT calculations. <i>RSC Advances</i> , 2020, 10, 26308-26312.	1.7	0
21	Pressure and temperature-dependent optical properties of TiTa ₂ O ₇ . <i>RSC Advances</i> , 2020, 10, 25379-25384.	1.7	3
22	Lasing Behavior of a Single ZnO Nanowire Resonating in Fabry-Pérot Mode under Pressure. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7523-7530.	1.5	3
23	TiB ₂ -reinforced B ₄ C composites produced by reaction sintering at high-pressure and high temperature. <i>High Pressure Research</i> , 2020, 40, 245-256.	0.4	2
24	Electrical Transport Properties and Band Structure of CuInSe ₂ under High Pressure. <i>Journal of Physical Chemistry C</i> , 2019, 123, 20757-20763.	1.5	3
25	Temperature-Dependent Lasing of CsPbI ₃ Triangular Pyramid. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7056-7061.	2.1	9
26	Role of TM-TM Connection Induced by Opposite d-Electron States on the Hardness of Transition-Metal (TM = Cr, W) Mononitrides. <i>Inorganic Chemistry</i> , 2019, 58, 15573-15579.	1.9	10
27	Emerging High Coercivity and Huge Exchange Bias Effect in Single Phased Mn ¹⁺ x Ru x Co ₂ O ₄ Compounds. <i>Advanced Electronic Materials</i> , 2019, 5, 1900572.	2.6	1
28	Revealing the Unusual Rigid Boron Chain Substructure in Hard and Superconductive Tantalum Monoboride. <i>Chemistry - A European Journal</i> , 2019, 25, 5051-5057.	1.7	9
29	Lasing-Mode Switch of a Hexagonal ZnO Pyramid Driven by Pressure within a Diamond Anvil Cell. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 610-616.	2.1	10
30	Modulating Band Gap of Boron Doping in Amorphous Carbon Nano-Film. <i>Materials</i> , 2019, 12, 1780.	1.3	8
31	Unprecedented strength in pure iron via high-pressure induced nanotwinned martensite. <i>Materials Research Letters</i> , 2019, 7, 354-360.	4.1	22
32	Superconductivity with high hardness in Mo ₃ C ₂ . <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 1282-1288.	3.0	16
33	Optical Behaviors of a Microsized Single-Crystal MAPbI ₃ Plate under High Pressure. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30221-30227.	1.5	10
34	Investigation the origin and mechanical properties of unusual rigid diamond-like net analogues in manganese tetraboride. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 85, 104845.	1.7	7
35	Modulating Hardness in Molybdenum Monoborides by Adjusting an Array of Boron Zigzag Chains. <i>Chemistry of Materials</i> , 2019, 31, 200-206.	3.2	22
36	Excellent mechanical properties of metastable c-WN fabricated at high pressure and high temperature. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 66, 63-67.	1.7	18

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37	Nanotwinned diamond synthesized from multicore carbon onion. <i>Carbon</i> , 2017, 120, 405-410.	5.4	28
38	Synthesis and Mechanical Character of Hexagonal Phase $\hat{\Gamma}$ -WN. <i>Inorganic Chemistry</i> , 2017, 56, 3970-3975.	1.9	25
39	Manganese mono-boride, an inexpensive room temperature ferromagnetic hard material. <i>Scientific Reports</i> , 2017, 7, 43759.	1.6	47
40	Abnormal Pressure-Induced Photoluminescence Enhancement and Phase Decomposition in Pyrochlore $\text{La}_{2}\text{Sn}_{2}\text{O}_{7}$. <i>Advanced Materials</i> , 2017, 29, 1701513.	11.1	31
41	Highly Active, Nonprecious Electrocatalyst Comprising Borophene Subunits for the Hydrogen Evolution Reaction. <i>Journal of the American Chemical Society</i> , 2017, 139, 12370-12373.	6.6	335
42	Ultrastrong Boron Frameworks in ZrB_{12} : A Highway for Electron Conducting. <i>Advanced Materials</i> , 2017, 29, 1604003.	11.1	71
43	WB ₂ : not a superhard material for strong polarization character of interlayer W-B bonding. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 8919-8924.	1.3	28
44	Hydrogen Evolution Reaction of $\hat{\Gamma}$ -Mo _{0.5} W _{0.5} C Achieved by High Pressure High Temperature Synthesis. <i>Catalysts</i> , 2016, 6, 208.	1.6	3
45	Exploring the coordination change of vanadium and structure transformation of metavanadate MgV_2O_6 under high pressure. <i>Scientific Reports</i> , 2016, 6, 38566.	1.6	25
46	Carbon nano-onions: large-scale preparation, functionalization and their application as anode material for rechargeable lithium ion batteries. <i>RSC Advances</i> , 2016, 6, 92285-92298.	1.7	28
47	Investigating Robust Honeycomb Borophenes Sandwiching Manganese Layers in Manganese Diboride. <i>Inorganic Chemistry</i> , 2016, 55, 11140-11146.	1.9	31
48	Discovery of Superconductivity in Hard Hexagonal $\hat{\Gamma}$ -NbN. <i>Scientific Reports</i> , 2016, 6, 22330.	1.6	36
49	Pressure induced structural transition of small carbon nano-onions. <i>RSC Advances</i> , 2016, 6, 2914-2919.	1.7	10
50	Electronic Topological Transition in Ag_2Te at High-pressure. <i>Scientific Reports</i> , 2015, 5, 14681.	1.6	20
51	Structural Phase Transition and Electrical Transport Properties of CuInS_2 Nanocrystals under High Pressure. <i>Journal of Physical Chemistry C</i> , 2015, 119, 2963-2968.	1.5	22
52	Hexagonal-structured $\hat{\Gamma}$ -NbN: ultra-incompressibility, high shear rigidity and a possible hard superconducting material. <i>Scientific Reports</i> , 2015, 5, 10811.	1.6	46
53	Exploring the high pressure behavior of 2D and quasi-3D boron layers in MoB_2 . <i>RSC Advances</i> , 2014, 4, 52878-52882.	1.7	8
54	Exploring Hardness and the Distorted sp^2 Hybridization of B-B Bonds in WB_3 . <i>Chemistry of Materials</i> , 2014, 26, 5297-5302.	3.2	80

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55	Enhanced Vickers hardness by quasi-3D boron network in MoB ₂ . RSC Advances, 2013, 3, 18317.	1.7	53
56	Manganese borides synthesized at high pressure and high temperature. Journal of Applied Physics, 2012, 111, 112616.	1.1	13
57	Ferromagnetic Properties of Y-Doped AlN Nanorods. Journal of Physical Chemistry C, 2010, 114, 15574-15577.	1.5	38