

# Hongbin Zhang

## List of Publications by Year in descending order

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70  
papers

1,972  
citations

257429

24  
h-index

265191

42  
g-index

72  
all docs

72  
docs citations

72  
times ranked

2593  
citing authors



#	ARTICLE	IF	CITATIONS
19	Boosting Thermoelectric Performance of 2D Transition-Metal Dichalcogenides by Complex Cluster Substitution: The Role of Octahedral Au <sub>6</sub> Clusters. ACS Applied Energy Materials, 2021, 4, 12163-12176.	5.1	33
20	Quantum anomalous Hall phase in (001) double-perovskite monolayers via intersite spin-orbit coupling. Physical Review B, 2014, 90, .	3.2	30
21	An accelerating approach of designing ferromagnetic materials via machine learning modeling of magnetic ground state and Curie temperature. Materials Research Letters, 2021, 9, 169-174.	8.7	26
22	Designing of magnetic MAB phases for energy applications. Journal of Materials Chemistry A, 2021, 9, 8805-8813.	10.3	26
23	Role of Spin-Flip Transitions in the Anomalous Hall Effect of FePt Alloy. Physical Review Letters, 2011, 106, 117202.	7.8	25
24	High throughput screening for two-dimensional topological insulators. 2D Materials, 2018, 5, 045023.	4.4	25
25	High throughput study on magnetic ground states with Hubbard $U$ corrections in transition metal dihalide monolayers. Nanoscale Advances, 2020, 2, 495-501.	4.6	25
26	Optical properties of single crystalline SrMoO <sub>3</sub> thin films. Journal of Applied Physics, 2016, 119, .	2.5	24
27	High-Throughput Screening and Automated Processing toward Novel Topological Insulators. Journal of Physical Chemistry Letters, 2018, 9, 6224-6231.	4.6	24
28	Two-dimensional layered MSi <sub>2</sub> N <sub>4</sub> (M = Mo, W) as promising thermal management materials: a comparative study. Physical Chemistry Chemical Physics, 2022, 24, 3086-3093.	2.8	24
29	High-throughput design of magnetic materials. Electronic Structure, 2021, 3, 033001.	2.8	23
30	Engineering quantum anomalous Hall phases with orbital and spin degrees of freedom. Physical Review B, 2013, 87, .	3.2	22
31	Anisotropy of spin relaxation and transverse transport in metals. Journal of Physics Condensed Matter, 2013, 25, 163201.	1.8	22
32	Multifunctional antiperovskites driven by strong magnetostructural coupling. Npj Computational Materials, 2021, 7, .	8.7	22
33	High-throughput design of 211 $\bar{1}$ M <sub>2</sub> AX compounds. Physical Review Materials, 2019, 3, .	2.4	21
34	Designing rare-earth free permanent magnets in heusler alloys via interstitial doping. Acta Materialia, 2020, 186, 355-362.	7.9	20
35	Anisotropic intrinsic anomalous Hall effect in ordered 3dPt alloys. Physical Review B, 2011, 84, .	3.2	19
36	Stability predictions of magnetic M <sub>2</sub> AX compounds. Journal of Physics Condensed Matter, 2019, 31, 405902.	1.8	17

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37	Magnetization-direction tunable nodal-line and Weyl phases. <i>Physical Review B</i> , 2018, 98, .	3.2	16
38	Giant voltage-induced modification of magnetism in micron-scale ferromagnetic metals by hydrogen charging. <i>Nature Communications</i> , 2020, 11, 4849.	12.8	16
39	Effects of Doping Ni on the Microstructures and Thermoelectric Properties of Co-Excessive NbCoSn Half-Heusler Compounds. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 34533-34542.	8.0	16
40	Tailoring the anomalous Hall effect in the noncollinear antiperovskite $\text{Mn}_2\text{Sn}$ . <i>Physical Review B</i> , 2020, 101, .	8.3	15
41	Experimental and computational analysis of binary Fe-Sn ferromagnetic compounds. <i>Acta Materialia</i> , 2019, 180, 126-140.	7.9	14
42	Engineering perpendicular magnetic anisotropy in Fe via interstitial nitrogenation: N choose $\langle i \rangle K \langle /i \rangle$ . <i>APL Materials</i> , 2016, 4, .	5.1	13
43	Exploring the Electronic Structure and Chemical Homogeneity of Individual $\text{Bi}_2\text{Te}_3$ Nanowires by Nano-Angle-Resolved Photoemission Spectroscopy. <i>Nano Letters</i> , 2016, 16, 4001-4007.	9.1	13
44	Two-dimensional buckling structure induces the ultra-low thermal conductivity: a comparative study of the group GaX (X = N, P, As). <i>Journal of Materials Chemistry C</i> , 2022, 10, 1436-1444.	5.5	13
45	First-principles investigation of the significant anisotropy and ultrahigh thermoelectric efficiency of a novel two-dimensional $\text{Ga}_2\text{X}_2\text{S}_2$ at room temperature. <i>International Journal of Extreme Manufacturing</i> , 2022, 4, 025001.	12.7	13
46	Single crystal growth of $\text{MgB}_2$ by using Mg-self-flux method at ambient pressure. <i>Journal of Crystal Growth</i> , 2004, 268, 123-127.	1.5	12
47	Edge dislocation and superstructure in $\text{MgB}_2$ superconducting crystals. <i>Superconductor Science and Technology</i> , 2005, 18, 1513-1516.	3.5	10
48	Effect of N, C, and B interstitials on the structural and magnetic properties of alloys with $\text{Cu}_3\text{Au}$ structure. <i>Physical Review Research</i> , 2020, 2, .	3.6	10
49	Thermal conductivity of h-BN monolayers using machine learning interatomic potential. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 105903.	1.8	9
50	Self-powered topological insulator $\text{Bi}_2\text{Te}_3/\text{Ge}$ heterojunction photodetector driven by long-lived excitons transfer. <i>Nanotechnology</i> , 2022, 33, 255502.	2.6	9
51	Inverse design of crystal structures for multicomponent systems. <i>Acta Materialia</i> , 2022, 231, 117898.	7.9	9
52	Magnetic and magnetocaloric properties of the $\text{Co}_{2-x}\text{Mn}_x\text{B}$ system by experiment and density functional theory. <i>Acta Materialia</i> , 2019, 165, 270-277.	7.9	8
53	Giant anomalous Hall and anomalous Nernst conductivities in antiperovskites and their tunability via magnetic fields. <i>Physical Review Materials</i> , 2022, 6, .	2.4	8
54	Phase equilibria of the Zn-Ti system: Experiments, first-principles calculations and Calphad assessment. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2019, 64, 213-224.	1.6	7

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55	DFT Calculations and Thermodynamic Re-Assessment of the Fe-Y Binary System. Journal of Phase Equilibria and Diffusion, 2021, 42, 348-362.	1.4	7
56	Tuning the size of skyrmion by strain at the Co/Pt3 interfaces. IScience, 2022, 25, 104039.	4.1	7
57	Spin Hall conductivity and anomalous Hall conductivity in full Heusler compounds. New Journal of Physics, 2022, 24, 053027.	2.9	7
58	Evolution of anisotropy in bcc Fe distorted by interstitial boron. Physical Review B, 2018, 97, .	3.2	6
59	Investigations on exchange interactions and Curie temperatures of Zr <sub>2</sub> CoZ compounds by using first-principles and Monte Carlo calculations. Journal of Magnetism and Magnetic Materials, 2019, 477, 190-197.	2.3	6
60	Strong phonon-magnon coupling of an O/Fe(001) surface. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	5.1	6
61	Epitaxy Induced Highly Ordered Sm <sub>2</sub> Co <sub>17</sub> â€“SmCo <sub>5</sub> Nanoscale Thin-Film Magnets. ACS Applied Materials & Interfaces, 2021, 13, 32415-32423.	8.0	6
62	Enhanced anomalous Nernst effects in ferromagnetic materials driven by Weyl nodes. Journal Physics D: Applied Physics, 2022, 55, 074003.	2.8	6
63	Thermal Transport and Mechanical Properties of Layered Oxychalcogenides LaCuOX (X = S, Se, and Te). ACS Applied Energy Materials, 2022, 5, 6943-6951.	5.1	5
64	Magnetic properties of the Laves-type phases Ti <sub>2</sub> Co <sub>3</sub> Si and Ti <sub>2</sub> Fe <sub>3</sub> Si and their solid solution. Journal of Materials Chemistry C, 2016, 4, 7430-7435.	5.5	4
65	Infrared Optical Conductivity of Bulk Bi <sub>2</sub> Te <sub>2</sub> Se. Crystals, 2020, 10, 553.	2.2	3
66	Creating a Ferromagnetic Ground State with <i>T<sub>c</sub></i> Above Room Temperature in a Paramagnetic Alloy through Nonâ€“Equilibrium Nanostructuring. Advanced Materials, 2022, 34, e2108793.	21.0	3
67	Chemical long range ordering in all-d-metal Heusler alloys. Journal of Applied Physics, 2022, 131, .	2.5	3
68	Multifunctional two-dimensional graphene-like boron nitride allotrope of g-B <sub>3</sub> N <sub>5</sub> : A competitor to g-BN?. Journal of Alloys and Compounds, 2022, 921, 165913.	5.5	3
69	Thermodynamic Reassessment of the Au-In Binary System Supported with First-Principles Calculations. Journal of Phase Equilibria and Diffusion, 2021, 42, 479-488.	1.4	2
70	Microwave synthesis and magnetic properties of Laves-type Ti <sub>2</sub> M <sub>3</sub> Si (Mâ€“=â€“Mn) Tj ETQq0 0 0 rgB	0.8	2