

Huibo Cao

List of Publications by Year in descending order

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181
papers

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citations

81839

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189
docs citations

189
times ranked

7187
citing authors

#	ARTICLE	IF	CITATIONS
19	Atomic-scale observation of structural and electronic orders in the layered compound $\hat{I}\pm$ -RuCl ₃ . Nature Communications, 2016, 7, 13774.	5.8	66
20	Anharmonicity and atomic distribution of SnTe and PbTe thermoelectrics. Physical Review B, 2014, 90, .	1.1	64
21	A New Magnetic Topological Quantum Material Candidate by Design. ACS Central Science, 2019, 5, 900-910.	5.3	63
22	Origin of the phase transition in IrTe ₂ : Structural modulation and local bonding instability. Physical Review B, 2013, 88, .	1.1	62
23	The nature of spin excitations in the one-third magnetization plateau phase of Ba ₃ CoSb ₂ O ₉ . Nature Communications, 2018, 9, 2666.	5.8	62
24	Anisotropic spin fluctuations in detwinned FeSe. Nature Materials, 2019, 18, 709-716.	13.3	60
25	Anisotropic susceptibilities in the honeycomb Kitaev system $\hat{I}\pm$. Physical Review B, 2018, 98, .	1.1	59
26	Spin glass and semiconducting behavior in one-dimensional BaFe ₂ As ₂ Se ₃ (x=0.2) crystals. Physical Review B, 2011, 84, .	1.1	58
27	A Transition from Localized to Strongly Correlated Electron Behavior and Mixed Valence Driven by Physical or Chemical Pressure in ACo ₂ As ₂ (A = Eu and Ca). Journal of the American Chemical Society, 2016, 138, 2724-2731.	6.6	55
28	Antiferromagnetic order and superlattice structure in nonsuperconducting and superconducting Rb _{1-x} Fe _x Se. Physical Review B, 2011, 84, .	1.1	54
29	Realization of Large Electric Polarization and Strong Magnetoelectric Coupling in BiMn ₃ Cr ₄ O ₁₂ . Advanced Materials, 2017, 29, 1703435.	11.1	50
30	Symmetry-lowering lattice distortion at the spin reorientation in MnBi single crystals. Physical Review B, 2014, 90, .	1.1	49
31	Magnetic order in single crystals of Na ₃ Mn ₃ O ₇ with a honeycomb arrangement of Mn ²⁺ ions. Physical Review Materials, 2018, 2, 094401.	0.9	49
32	Magnetic and structural properties near the Lifshitz point in Fe _{1-x} Te. Physical Review B, 2013, 88, .	1.1	48
33	High pressure floating zone growth and structural properties of ferrimagnetic quantum paraelectric BaFe ₁₂ O ₁₉ . APL Materials, 2015, 3, 062512.	2.2	48
34	Competition between the structural phase transition and superconductivity in Ir _{1-x} Pt _x . Physical Review B, 2013, 88, .	1.1	46
35	Mechanical control of crystal symmetry and superconductivity in Weyl semimetal MoTe ₂ . Physical Review Materials, 2018, 2, .	1.1	45
36	Antiferromagnetism in the van der Waals layered spin-lozenge semiconductor CrTe ₃ . Physical Review B, 2017, 95, .	1.1	44

#	ARTICLE	IF	CITATIONS
37	A suite-level review of the neutron single-crystal diffraction instruments at Oak Ridge National Laboratory. <i>Review of Scientific Instruments</i> , 2018, 89, 092802.	0.6	43
38	Antiferromagnetic order in the pyrochlores $\text{Ge}_2\text{R}_2\text{Mn}_2$		

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#	ARTICLE	IF	CITATIONS
55	Spin Reorientation in $\text{TlFe}_{1.6}\text{Se}_2$ Complete Vacancy Ordering. Physical Review Letters, 2012, 109, 077003.	1.6	12
56	Magnetic structure and spin excitations in BaMn_2S_2 . Physical Review B, 2014, 89, .	1.1	8
57	Spin-valley locking and bulk quantum Hall effect in a noncentrosymmetric Dirac semimetal BaMnSb_2 . Nature Communications, 2021, 12, 4062.	5.8	32
58	Structural and magnetic characterization of the one-dimensional S_5 antiferromagnetic chain system		

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73	Structure-property correlation in stabilizing axial magnetic anisotropy in octahedral Co(II) complexes. Cell Reports Physical Science, 2021, 2, 100404.	2.8	23
74	Spin excitations in metallic kagome lattice FeSn and CoSn. Communications Physics, 2021, 4, .	2.0	23
75	Strong competition between orbital ordering and itinerancy in a frustrated spinel vanadate. Physical Review B, 2015, 91, .	1.1	22
76	Magnetic order induces symmetry breaking in the single-crystalline orthorhombic CuMnAs semimetal. Physical Review B, 2017, 96, .	1.1	22
77	Nontrivial topology in the layered Dirac nodal-line semimetal candidate SrZnSb_2 with distorted Sb square nets. Physical Review B, 2019, 100, .	1.1	21
78	Unusual phase transitions and magnetoelastic coupling in $\text{TlFe}_{1.6}\text{Se}_2$ single crystals. Physical Review B, 2011, 83, .	1.1	21
79	Excess-hole induced high temperature polarized state and its correlation with the multiferroicity in single crystalline DyMnO_3 . Applied Physics Letters, 2014, 105, 052906.	1.5	21
80	Next-generation diamond cell and applications to single-crystal neutron diffraction. Review of Scientific Instruments, 2018, 89, 092902.	0.6	20
81	Influence of interstitial Mn on magnetism in the room-temperature ferromagnet $\text{Mn}_{1-x}\text{Co}_x$. Physical Review B, 2015, 91, .	1.1	19
82	Transition from Sign-Reversed to Sign-Preserved Cooper-Pairing Symmetry in Sulfur-Doped Iron Selenide Superconductors. Physical Review Letters, 2016, 116, 197004.	2.9	19
83	Large linear magnetoelectric effect and field-induced ferromagnetism and ferroelectricity in DyCrO_4 . NPG Asia Materials, 2019, 11, .	3.8	19
84	Magnetic and electronic structures of antiferromagnetic topological material candidate EuMg_2Bi_2 . Journal of Applied Physics, 2021, 129, .	1.1	19
85	Noncollinear magnetic structure and magnetoelectric coupling in buckled honeycomb Co_4O_9 single-crystal neutron diffraction study. Physical Review B, 2020, 102, .	1.1	18
86	Field-induced magnetic structures in $\text{Tb}_2\text{Ti}_2\text{O}_7$ at low temperatures: From spin-ice to spin-flip structures. Physical Review B, 2010, 82, .	1.1	17
87	Magnetoelectric coupling in the spin-two-leg ladder antiferromagnet C_9Co_9 . Physical Review B, 2020, 102, .	1.1	17
88	Observation of novel charge ordering and spin reorientation in perovskite oxide PbFeO_3 . Nature Communications, 2021, 12, 1917.	5.8	17
89	Neutron scattering investigation of proposed Kosterlitz-Thouless transitions in the triangular-lattice Ising antiferromagnet TmMgGaO_4 . Physical Review B, 2021, 103, .	1.1	16
90	Magnetic properties of the $S=12$ quasisquare lattice antiferromagnet $\text{CuF}_2(\text{H}_2\text{O})_2(\text{pyz})$ ($\text{pyz}=\text{pyrazine}$) investigated by neutron scattering. Physical Review B, 2012, 86, .	1.1	15

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91	Spin-lattice coupling mediated multiferroicity in D_2O . Physical Review B, 2016, 94, .	1.1	15
92	Flat-band magnetism and helical magnetic order in Ni-doped $SrCo_2$. Physical Review B, 2019, 100, .	1.1	15
93	Uranium compounds and the origin of magnetic anisotropy in uranium compounds. Physical Review B, 2019, 99, .	1.1	15
94	Canted antiferromagnetic order in the monoaxial chiral magnets $V_1/3TaS_2$ and $V_1/3NbS_2$. Physical Review Materials, 2020, 4, .	0.9	15
95	Unusual Electrical and Magnetic Properties in Layered $EuZn_2As_2$. Advanced Quantum Technologies, 2022, 5, .	1.8	15
96	Role of the third dimension in searching for Majorana fermions in $U\hat{\pm}$ via phonons. Physical Review Research, 2022, 4, .	1.1	13
97	Flux growth and physical properties of Mo_3Sb_7 single crystals. Physical Review B, 2019, 99, .	1.1	13
98	Electron doping evolution of structural and antiferromagnetic phase transitions in $NaFe_{1-x}Co_xAs$ pnictides. Physical Review B, 2016, 94, .	1.1	13
99	Improving superconductivity in $BaFe_2As_2$ -based crystals by cobalt clustering and electronic uniformity. Scientific Reports, 2017, 7, 949.	1.6	13
100	Intertwined Magnetic and Nematic Orders in Semiconducting $KFe_0.8Mn_0.2$. Physical Review Letters, 2019, 122, 087201.	2.9	13
101	Field-induced magnetic phase transitions and the resultant giant anomalous Hall effect in the antiferromagnetic half-Heusler compound $DyPtBi$. Physical Review B, 2020, 102, .	1.1	13
102	Vacancy defect control of colossal thermopower in $FeSb_2$. Npj Quantum Materials, 2021, 6, .	1.8	13
103	Neutron diffraction study of magnetism in van der Waals layered $MnBi_{2n}Te_{3n+1}$. Journal Physics D: Applied Physics, 2021, 54, 174003.	1.3	13
104	Field-tunable toroidal moment in a chiral-lattice magnet. Nature Communications, 2021, 12, 5339.	5.8	13
105	Mott localization in a pure stripe antiferromagnet $RbMn_2S_2$. Physical Review B, 2015, 92, .	1.1	12
106	Evolution of the nuclear and magnetic structures of $TlFe_{1.6}Se_2$ with temperature. Physical Review B, 2012, 85, .	1.1	11
107	Magnetic structure of quasi-one-dimensional antiferromagnetic $TaFe_{1+y}Te_3$. Physical Review B, 2012, 85, .	1.1	11
108	Single crystal magnetic structure and susceptibility of $CoSe_2O_5$. Journal of Solid State Chemistry, 2016, 236, 39-44.	1.4	11

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109	Magnetic exchange couplings in the single-molecule magnet of Mn ₁₂ Ac. Journal of Chemical Physics, 2008, 128, 154711.	1.2	10
110	Role of magnetism in superconductivity of BaFe ₂ As ₂ . Physical Review Letters, 2010, 105, 257201.	1.1	10
111	Reinvestigation of crystalsymmetry and fluctuations in La ₂ VO ₃ . Physical Review B, 2021, 104, .		
112	Structural distortion and incommensurate noncollinear magnetism in EuAg ₄ . Physical Review Materials, 2020, 4, .		
113	Competing Phases, Complex Structure, and Complementary Diffraction Studies of R ₃ FeAl _{4-x} MgxTt ₂ Intermetallics (R = Y, Dy, Er, Yb; Tt = Si or Ge; x < 0.5). Chemistry of Materials, 2013, 25, 3363-3372.	3.2	9
114	Synthesis, Crystal Structure, and Magnetic Properties of Novel Intermetallic Compounds R ₂ Co ₂ SiC (R = Pr, Nd). Inorganic Chemistry, 2014, 53, 6141-6148.	1.9	9
115	Controlling Magnetic Ordering in Ca _{1-x} EuxCo ₂ As ₂ by Chemical Compression. Chemistry of Materials, 2016, 28, 7459-7469.	3.2	9
116	Anomalous bulk modulus in vanadate spinels. Physical Review B, 2016, 94, .	1.1	9
117	Helimagnetism in MnBi ₂ Se ₄ Driven by Spin-Frustrating Interactions Between Antiferromagnetic Chains. Crystals, 2021, 11, 242.	1.0	9
118	Complex magnetic phase diagram with multistep spin-flop transitions in La ₂ VO ₃ . Physical Review B, 2019, 100, .	1.1	8
119	Anomalous magnetic behavior of Ba ₂ CoO ₇ with isolated CrO ₆ octahedra. Physical Review B, 2018, 98, .	1.1	8
120	Lattice distortion in the spin-orbital entangled state in RVO ₃ perovskites. Physical Review B, 2019, 100, .	1.1	8
121	Magnetic properties of ferrimagnetic Mn ₃ Si ₂ Se ₆ . Journal of Magnetism and Magnetic Materials, 2020, 511, 166936.	1.0	8
122	Flat-band-induced itinerant ferromagnetism in RbCo ₂ Se ₂ . Physical Review B, 2021, 103, .	1.1	8
123	Crystal field splitting and orbital ordering in Nb ₂ O ₉ . Physical Review Materials, 2020, 4, .	0.9	8
124	Toward tunable quantum transport and novel magnetic states in Eu _{1-x} SrxMn _{1-z} Sb ₂ (z ≈ 0.05). NPG Asia Materials, 2022, 14, .	3.8	8
125	Crystal field interaction and local structure bias on the complex spin and orbital ordering in DyTbMnO ₃ . Physical Review B, 2019, 100, .		
126	Tuning the ferroelectric state in multiferroic TbMnO ₃ single crystal by a trapped-charge-induced internal electric field. Journal of Applied Physics, 2014, 116, .	1.1	7

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127	Evolution of the magnetic and structural properties of V_2O_4 Neutron diffraction and NiNb_2O_6 studies of two polymorphs of nickel niobate NiNb_2O_6 Physical Review B, 2017, 96, .	1.1	7
128	Electronic phase separation and magnetic-field-induced phenomena in molecular multiferroic ND_2 Physical Review B, 2018, 98, .	1.1	7
129	Spin-flop phase transition in the orthorhombic antiferromagnetic topological semimetal $\text{Cu}_{0.95}\text{MnAs}$. Journal of Magnetism and Magnetic Materials, 2019, 469, 570-573.	1.0	7
131	Observation of a Large Magnetic Anisotropy and a Field-Induced Magnetic State in $\text{SrCo}(\text{VO}_4)_2(\text{OH})$: A Structure with a Quasi One-Dimensional Magnetic Chain. Inorganic Chemistry, 2020, 59, 1029-1037.	1.9	7
132	Quantum spin state transitions in the spin-1 equilateral triangular lattice antiferromagnet $\text{Na}_2\text{Ir}_2\text{O}_4$ Physical Review B, 2021, 104, .	1.1	7
133	PIONEER, a high-resolution single-crystal polarized neutron diffractometer. Review of Scientific Instruments, 2022, 93, .	0.6	7
134	Magnetic order in $\text{Tb}_2\text{Zr}_2\text{O}_7$ high pressure: From ordered spin ice to spin liquid and antiferromagnetic order. Physical Review B, 2009, 80, .	1.1	6
135	Temperature-driven phase transformation in Y_3Co : Neutron scattering and first-principles studies. Physical Review B, 2013, 88, .	1.1	6
136	Absence of structural transition in $\text{M}_{0.5}\text{Tj}$ Magnetoelastic coupling tuned by competing anisotropies in $\text{M}_{0.5}\text{Tj}$ Physical Review B, 2017, 96, .	1.1	6
137	Cesium vacancy ordering in $\text{Mn}_2\text{Ni}_2\text{O}_7$ Physical Review B, 2017, 96, .	1.1	6
138	Local breaking of fourfold rotational symmetry by short-range magnetic order in heavily overdoped $\text{Ba}_{1-x}\text{Mn}_2\text{O}_7$ Physical Review B, 2017, 96, .	1.1	6
139	$\text{Na}_2\text{Mn}_3\text{Se}_4$: Strongly Frustrated Antiferromagnetic Semiconductor with Complex Magnetic Structure. Inorganic Chemistry, 2019, 58, 5799-5806.	1.9	6
141	Ferromagnetic $\text{Cr}_4\text{PtGa}_{17}$: A Half-Heusler-Type Compound with a Breathing Pyrochlore Lattice. Journal of the American Chemical Society, 2021, 143, 14342-14351.	6.6	6
142	Incommensurate magnetism in K_2MnS_6 and prospects for tunable frustration in a triangular lattice of pseudo-1D spin chains. Physical Review Materials, 2019, 3, .	1.1	6
143	Quantum tunneling of magnetization in Fe -substituted Mn_{12} studied by ac magnetic susceptibility. Physical Review B, 2005, 72, .	1.1	5
144	Spin density and non-collinear magnetization in frustrated pyrochlore from polarized neutron scattering. Physica B: Condensed Matter, 2009, 404, 2509-2512.	1.3	5

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145	Structural and magnetic phase transitions in CeCu_2Si_2		

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163	Bilayer Square Lattice Tb ₂ SrAl ₂ O ₇ with Structural Z ₈ Vortices and Magnetic Frustration. Chemistry of Materials, 2022, 34, 1225-1234.	3.2	3
164	Evidence for pressure induced unconventional quantum criticality in the coupled spin ladder antiferromagnet C9H18N2CuBr4. Nature Communications, 2022, 13, .	5.8	3
165	Field induced ground states in Tb2Ti2O7 spin liquid. Journal of Physics: Conference Series, 2009, 145, 012021.	0.3	2
166	Competition between the inter- and intra-sublattice interactions in Yb2V2O7. Physical Review B, 2015, 91, .	1.1	2
167	Publisher's Note: Structural and magnetic phase transitions in $\text{Ca}_{1-x}\text{Mn}_x\text{O}_{0.73}$ electron-overdoped FeAs layers [Phys. Rev. B 93 , 054522 (2016)]. Physical Review B, 2016, 93, .		
168	U ₈ Al ₁₉ Si ₆ , A Uranium Aluminide Silicide with a Stuffed Supercell Grown from Aluminum Flux. Chemistry of Materials, 2018, 30, 3806-3812.	3.2	2
169	Magnetic properties of the low-dimensional BaM2Si2O7 system (M=Cu, Co, Mn). Physical Review B, 2019, 100, .	1.1	2
170	Magnetic field induced phase transition in spinel GeNi2O4. Physical Review B, 2020, 102, .	1.1	2
171	Competition of three-dimensional magnetic phases in CaMn_2O_4 : A structural perspective. Physical Review B, 2020, 102, .	1.1	2
172	Publisher's Note: Spin Reorientation in TlFe1.6Se2 with Complete Vacancy Ordering [Phys. Rev. Lett. 109 , 077003 (2012)]. Physical Review Letters, 2012, 109, .	2.9	1
173	Three-dimensional magnetic interactions in quasi-two-dimensional PdAs ₂ O ₆ . Journal of Physics Condensed Matter, 2017, 29, 235801.	0.7	1
174	Geometric and Magnetic Structures of K ₂ Re ₆ as an Antiferromagnetic Insulator with Ferromagnetic Spin-Canting Originated from Spin-Orbit Coupling. Journal of Physical Chemistry C, 2019, 123, 1645-1652.	1.5	1
175	Coexistence of Magnetoelectric and Antiferroelectric-like Orders in Mn3Ta2O8. Inorganic Chemistry, 2021, 60, 15078-15084.	1.9	1
176	Magnetic order and fluctuations in the quasi-two-dimensional planar magnet Sr(Co _{1-x} Ni _x) ₂ As ₂ . Physical Review B, 2020, 102, .	1.1	1
177	Non-magnetic ion site disorder effects on the quantum magnetism of a spin-1/2 equilateral triangular lattice antiferromagnet. Journal of Physics Condensed Matter, 2022, 34, 205401.	0.7	1
178	Anticollinear order and degeneracy lifting in square lattice antiferromagnet LaSrCrO_4 . Physical Review B, 2022, 105, .		
179	Publisher's Note: Unusual phase transitions and magnetoelastic coupling in TlFe1.6Se2 single crystals [Phys. Rev. B 83 , 224510 (2011)]. Physical Review B, 2011, 84, .	1.1	0
180	Magnetic structure of the chiral triangular magnet MnSb2O6. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C387-C387.	0.0	0

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181	<p>Anisotropic properties, charge ordering, and ferrimagnetic structures in the strongly correlated <math>\hat{V}^2</math> PO<math>_5</math> single crystal. <i>Physical Review Materials</i>, 2020, 4, .</p>		