

Andrew F May

List of Publications by Year in descending order

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129
papers

8,068
citations

66315

42
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48277

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137
all docs

137
docs citations

137
times ranked

8010
citing authors

#	ARTICLE	IF	CITATIONS
1	Tuning the room temperature ferromagnetism in Fe_5GeTe_2 by arsenic substitution. 2D Materials, 2022, 9, 015013.	2.0	14
2	Synthesis, Crystal Structure, and Physical Properties of BaSnS_2 . Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	2
3	Observation of a Novel Lattice Instability in Ultrafast Photoexcited SnSe. Physical Review X, 2022, 12, .	2.8	10
4	Observation of photo-induced plasmon-phonon coupling in PbTe via ultrafast x-ray scattering. Structural Dynamics, 2022, 9, 024301.	0.9	3
5	Revealing room temperature ferromagnetism in exfoliated Fe_5GeTe_2 flakes with quantum magnetic imaging. 2D Materials, 2022, 9, 025017.	2.0	17
6	Magnetic properties of Fe-substituted NiBr_2 single crystals. Journal of Magnetism and Magnetic Materials, 2022, 169452.	1.0	0
7	Magnetic properties of $\text{Mn}_3\text{Si}_2\text{Te}_6$. Physical Review B, 2022, 105, .	1.1	9
8	Van Hove singularity in the magnon spectrum of the antiferromagnetic quantum honeycomb lattice. Nature Communications, 2021, 12, 171.	5.8	24
9	Twisting the thermoelectric potential. Nature Materials, 2021, 20, 451-452.	13.3	3
10	Resonant ultrasound spectroscopy probe for in-situ neutron scattering measurements. Proceedings of Meetings on Acoustics, 2021, , .	0.3	3
11	Tuning the flat bands of the kagome metal CoSn with Fe, In, or Ni doping. Physical Review Materials, 2021, 5, .	0.9	17
12	Hierarchical excitations from correlated spin tetrahedra on the breathing pyrochlore lattice. Physical Review B, 2021, 103, .	1.1	5
13	Intrinsic anharmonicity and thermal properties of ultralow thermal conductivity $\text{Ba}_6\text{Mn}_2\text{O}_{19}$. Physical Review Materials, 2021, 5, .	0.9	1
14	Complex magnetic phases in the polar tetragonal intermetallic NdCoGe_3 . Physical Review B, 2021, 103, .	1.1	1
15	Suppressed incommensurate order in swedenborgite $\text{Ca}_{0.5}\text{Y}_{0.5}\text{BaCo}_4\text{O}_7$. Physical Review B, 2021, 104, .	1.1	4
16	Self-regulated growth of candidate topological superconducting parkerite by molecular beam epitaxy. APL Materials, 2021, 9, 101110.	2.2	3
17	Synthesis and anisotropic magnetism in quantum spin liquid candidates YbSe_2 ($\chi = K$ and $T_j = 1.1$ K) and ETQq_1 ($\chi = 0.784314$ K). Physical Review B, 2021, 103, .	2.2	17
18	Cluster Frustration in the Breathing Pyrochlore Magnet $\text{LiGaCr}_4\text{S}_8$. Physical Review Letters, 2020, 125, 167201.	2.2	10

#	ARTICLE	IF	CITATIONS
19	Evidence of a magnetic transition in atomically thin Cr ₂ TiC ₂ T _x MXene. <i>Nanoscale Horizons</i> , 2020, 5, 1557-1565.	4.1	51
20	Thermal Properties of the Quaternary Chalcogenide BaCdSnSe 4. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000363.	1.2	3
21	Comprehensive Electrical Control of Metamagnetic Transition of a Quasi-2D Antiferromagnet by In Situ Anisotropic Strain. <i>Advanced Materials</i> , 2020, 32, e2002451.	11.1	10
22	A practical guide for crystal growth of van der Waals layered materials. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	44
23	Giant isotope effect on phonon dispersion and thermal conductivity in methylammonium lead iodide. <i>Science Advances</i> , 2020, 6, eaaz1842.	4.7	17
24	Flat bands in the CoSn-type compounds. <i>Physical Review B</i> , 2020, 102, .	1.1	52
25	Extended anharmonic collapse of phonon dispersions in SnS and SnSe. <i>Nature Communications</i> , 2020, 11, 4430.	5.8	46
26	Magnetism of Nd ₂ O ₃ single crystals near the Néel temperature. <i>Physical Review B</i> , 2020, 102, .	1.1	0
27	Emergent phenomena and proximity effects in two-dimensional magnets and heterostructures. <i>Nature Materials</i> , 2020, 19, 1276-1289.	13.3	213
28	Thermal properties of BaCu ₂ SnQ ₄ (Q = S, Se) quaternary chalcogenides. <i>Applied Physics Letters</i> , 2020, 117, 092101.	1.5	3
29	Weakly coupled alternating chains in the distorted honeycomb lattice compound $\text{Na}_2\text{Mg}_2\text{Mg}_2$. <i>Physical Review B</i> , 2020, 102, .	1.1	11
30	Magnetic properties of ferrimagnetic Mn ₃ Si ₂ Se ₆ . <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 511, 166936.	1.0	8
31	Anharmonic lattice dynamics and superionic transition in AgCrSe ₂ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 3930-3937.	3.3	73
32	Tuning magnetic order in the van der Waals metal $\text{Fe}_{1-x}\text{Co}_x$ by cobalt substitution. <i>Physical Review Materials</i> , 2020, 4, .	1.1	5
33	Interlayer magnetism in $\text{Fe}_{1-x}\text{Co}_x$. <i>Physical Review Materials</i> , 2020, 4, .	1.1	5
34	Controlling phonon lifetimes via sublattice disordering in $\text{Ag}_x\text{Bi}_{1-x}$. <i>Physical Review Materials</i> , 2020, 4, .	1.1	5
35	Optical conductivity of metal alloys with residual resistivities near or above the Mott-Ioffe-Regel limit. <i>Physical Review B</i> , 2019, 100, .	1.1	5
36	Multicomponent fluctuation spectrum at the quantum critical point in CeCu _{6-x} Ag _x . <i>Npj Quantum Materials</i> , 2019, 4, .	1.8	4

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37	Evolution of structural, magnetic, and transport properties in MnBi . Physical Review B, 2019, 100, .	1.1	10
38	STEM Study of Structure and Local Short-Range Orders in the Fe_5GeTe_2 Crystals with Ferromagnetism Near Room Temperature. Microscopy and Microanalysis, 2019, 25, 956-957.	0.2	1
39	Magnetic correlations and structure in bixbyite across the spin-glass transition. Physical Review B, 2019, 100, .	1.1	10
40	Intrinsic anharmonic localization in thermoelectric PbSe. Nature Communications, 2019, 10, 1928.	5.8	51
41	Magnetic excitations in the quasi-two-dimensional ferromagnet $\text{Fe}_3\text{V}_2\text{O}_7$ measured with inelastic neutron scattering. Physical Review B, 2019, 99, .	1.1	26
42	Ferromagnetism Near Room Temperature in the Cleavable van der Waals Crystal Fe_5GeTe_2 . ACS Nano, 2019, 13, 4436-4442.	7.3	266
43	Crystal field splitting, local anisotropy, and low-energy excitations in the quantum magnet YbCl_3 . Physical Review B, 2019, 100, .	1.1	26
44	Selective breakdown of phonon quasiparticles across superionic transition in CuCrSe_2 . Nature Physics, 2019, 15, 73-78.	6.5	88
45	Influence of cobalt substitution on the magnetism of NiBr_2 . Physical Review Materials, 2019, 3, .	0.9	3
46	Physical properties and thermal stability of Fe_5GeTe_2 single crystals. Synthesis, Semiconductors, and Heat capacity of triangular lattice materials NaErSe_2 and KErSe_2 . Physical Review Materials, 2019, 3, .	0.9	25
47	Synthesis, Semiconductors, and Heat capacity of triangular lattice materials NaErSe_2 and KErSe_2 . Physical Review Materials, 2019, 3, .	0.9	25
48	High-pressure nuclear inelastic scattering with backscattering monochromatization. Journal of Synchrotron Radiation, 2019, 26, 1592-1599.	1.0	4
49	Negative thermal expansion and magnetoelastic coupling in the breathing pyrochlore lattice material $\text{LiGaCr}_4\text{S}_8$. Physical Review B, 2018, 97, .	1.1	4
50	Spin-gap and two-dimensional magnetic excitations in $\text{Sr}_2\text{Cr}_2\text{O}_7$. Physical Review B, 2018, 98, .	1.1	16
51	Behavior of the breathing pyrochlore lattice $\text{Ba}_3\text{Yb}_2\text{Zn}_5\text{O}_{11}$ in applied magnetic field. Journal of Physics Condensed Matter, 2018, 30, 455801.	0.7	11
52	Temperature dependent electronic transport in concentrated solid solutions of the d-transition metals Ni, Fe, Co and Cr from first principles. Physical Review B, 2018, 98, .	1.1	16
53	Two-dimensional itinerant ferromagnetism in atomically thin Fe_3GeTe_2 . Nature Materials, 2018, 17, 778-782.	13.3	995
54	Single-crystal high entropy perovskite oxide epitaxial films. Physical Review Materials, 2018, 2, .	0.9	102

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55	Impact of Sn substitution on the structure and magnetism of $\text{Sr}_{2-x}\text{Mn}_x\text{O}_7$. Physical Review Materials, 2018, 2, .	2.9	11
56	Physical properties of the trigonal binary compound Nd_2O_3 . Physical Review Materials, 2018, 2, .	0.9	9
57	Model-free reconstruction of magnetic correlations in frustrated magnets. IUCrJ, 2018, 5, 410-416.	1.0	17
58	Lattice dynamics and thermal transport in multiferroic CuCrO_2 . Physical Review B, 2017, 95, .	1.1	19
59	New insights into the structure, chemistry, and properties of Cu_4SnS_4 . Journal of Solid State Chemistry, 2017, 253, 192-201.	1.4	23
60	Heat capacity, resistivity, and angular dependent magnetization studies of single crystal $\text{Nd}_{1-x}\text{Fe}_x\text{B}_4$ for $x=0.17$. Journal of Magnetism and Magnetic Materials, 2017, 435, 100-106.	1.0	0
61	Magnetic order and interactions in ferrimagnetic Mn_3Mn . Physical Review B, 2017, 95, .	1.1	10
62	Growth and electrical transport properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films on Sr_2IrO_4 single crystals. Physical Review B, 2017, 95, .	1.1	8
63	Quantum critical behavior in the asymptotic limit of high disorder in the medium entropy alloy $\text{NiCoCr}_{0.8}$. Npj Quantum Materials, 2017, 2, .	1.8	18
64	Introduction to Modeling Thermoelectric Transport at High Temperatures. , 2017, , 207-224.		16
65	High-temperature magnetostructural transition in van der Waals-layered $\text{Li}_x\text{M}_2\text{S}_2$. Physical Review Materials, 2017, 1, .	1.1	17
66	Dynamic defect correlations dominate activated electronic transport in SrTiO_3 . Scientific Reports, 2016, 6, 30141.	1.6	3
67	Candidate Elastic Quantum Critical Point in LaCu_6 . Physical Review Letters, 2016, 117, 235701.	2.9	14
68	Phonon anharmonicity and negative thermal expansion in SnSe . Physical Review B, 2016, 94, .	1.1	90
69	Structural phase transition and phonon instability in $\text{Cu}_{12}\text{S}_{13}$. Physical Review B, 2016, 93, .	1.1	48
70	Magnetic structure and phase stability of the van der Waals bonded ferromagnet Fe_2O_3 . Physical Review B, 2016, 93, .	1.1	20
71	Anisotropic Exchange within Decoupled Tetrahedra in the Quantum Breathing Pyrochlore $\text{Ba}_3\text{Mn}_2\text{O}_{13}$. Physical Review Letters, 2016, 116, 257204.	2.9	55
72	The origin of incipient ferroelectricity in lead telluride. Nature Communications, 2016, 7, 12291.	5.8	58

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73	Quantum Critical Behavior in a Concentrated Ternary Solid Solution. Scientific Reports, 2016, 6, 26179.	1.6	50
74	Competing magnetic ground states and their coupling to the crystal lattice in CuFe ₂ Ge ₂ . Scientific Reports, 2016, 6, 35325.	1.6	9
75	Benefits of Carrier Pocket Anisotropy to Thermoelectric Performance: The Case of p -Type AgBiSe_2 . Scientific Reports, 2016, 6, 26179.	1.5	84
76	Heavy-impurity resonance, hybridization, and phonon spectral functions in AgBiSe_2 .		

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91	Orbital Occupancy and Charge Doping in Iron-Based Superconductors. <i>Advanced Materials</i> , 2014, 26, 6193-6198.	11.1	13
92	Competing magnetic phases and field-induced dynamics in DyRuAsO. <i>Physical Review B</i> , 2014, 90, .	1.1	6
93	Electronic and thermoelectric properties of CoSbS and FeSbS. <i>Physical Review B</i> , 2013, 87, .	1.1	45
94	Thermoelectric properties of polycrystalline NiSi ₃ P ₄ . <i>Journal of Applied Physics</i> , 2013, 113, 103707.	1.1	5
95	Glass-like phonon scattering from a spontaneous nanostructure in AgSbTe ₂ . <i>Nature Nanotechnology</i> , 2013, 8, 445-451.	15.6	161
96	Crystal and Magnetic Structures and Physical Properties of a New Pyroxene NaMnGe ₂ O ₆ Synthesized under High Pressure. <i>Journal of the American Chemical Society</i> , 2013, 135, 2776-2786.	6.6	23
97	Flux growth and physical properties of Mo ₃ Sb Influence of Spin Fluctuations on the Thermal Conductivity in Superconducting Ba(Fe _{1-x} Ti _x) ₂ As ₂ Single Crystals. <i>Physical Review B</i> , 2012, 87, .	1.1	13
98	Transport, thermal, and magnetic properties of the narrow-gap semiconductor CrSb ₂ .	1.1	10
99	Physical Review B, 2012, 86, .	1.1	43
100	Publisher's Note: Spin Reorientation in TlFe _{1.6} Se ₂ with Complete Vacancy Ordering [Phys. Rev. Lett. 109, 077003 (2012)]. <i>Physical Review Letters</i> , 2012, 109, .	2.9	1
101	Evolution of the nuclear and magnetic structures of TlFe _{1.6} Se ₂ with temperature. <i>Physical Review B</i> , 2012, 85, .	1.1	11
102	Properties of single crystalline Zn ₂ Sb ($x = \text{Ca, Eu, Yb}$). <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	50
103	Crystallographic and Magnetic Phase Transitions in the Layered Ruthenium Oxyarsenides TbRuAsO and DyRuAsO. <i>Inorganic Chemistry</i> , 2012, 51, 8502-8508.	1.9	3
104	Structural and physical properties of layered oxy-arsenides LnRuAsO (Ln=La, Nd, Sm, Gd). <i>Journal of Solid State Chemistry</i> , 2012, 191, 71-75.	1.4	14
105	Spin Reorientation in TlFe _{1.6} Se ₂ with Complete Vacancy Ordering. <i>Physical Review Letters</i> , 2012, 109, 077003.	1.1	11
106	Physical properties of Ce ₃ Te ₄ below room temperature. <i>Physical Review B</i> , 2012, 86, .	1.1	11
107	Structure and Properties of Single Crystalline Bi ₂ and EuMg ₂ Bi ₂ .	1.1	75
108	Structure and Properties of Single Crystalline CaMg ₂ Bi ₂ , EuMg ₂ Bi ₂ , and YbMg ₂ Bi ₂ . <i>Inorganic Chemistry</i> , 2011, 50, 11127-11133.	1.9	74

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109	Transport and optical properties of heavily hole-doped semiconductors BaCu ₂ Se ₂ and BaCu ₂ Te ₂ . Journal of Solid State Chemistry, 2011, 184, 2744-2750.	1.4	25
110	Giant anharmonic phonon scattering in PbTe. Nature Materials, 2011, 10, 614-619.	13.3	561
111	Self-Tuning the Carrier Concentration of PbTe/Ag ₂ Te Composites with Excess Ag for High Thermoelectric Performance. Advanced Energy Materials, 2011, 1, 291-296.	10.2	224
112	Thermoelectric properties of Co-, Ir-, and Os-doped FeSi alloys: Evidence for strong electron-phonon coupling. Physical Review B, 2011, 83, .	1.1	64
113	Unusual phase transitions and magnetoelastic coupling in TlFe _{1.6} Se ₂ single crystals. Physical Review B, 2011, 83, .	1.1	21
114	Publisher's Note: Unusual phase transitions and magnetoelastic coupling in TlFe _{1.6} Se ₂ single crystals [Phys. Rev. B 83, 224510 (2011)]. Physical Review B, 2011, 84, .	1.1	0
115	Valence band study of thermoelectric Zintl phase $SrZn_{1.1}Mn_{32}$		
116	Zintl Chemistry for Designing High Efficiency Thermoelectric Materials. Chemistry of Materials, 2010, 22, 624-634.	3.2	560
117	Electronic structure and transport in thermoelectric compounds AZn ₂ Sb ₂ (A = Sr, Ca, Yb, Eu). Dalton Transactions, 2010, 39, 1046-1054.	1.6	184
118	Optimizing Thermoelectric Efficiency in La ₃ Te ₄ via Yb Substitution. Chemistry of Materials, 2010, 22, 2995-2999.	3.2	49
119	Electron and phonon scattering in the high-temperature thermoelectric $La_{1.1}Mn_{44}$		
120	Transport properties of the layered Zintl compound SrZnSb ₂ . Journal of Applied Physics, 2009, 106, .	1.1	32
121	Characterization and analysis of thermoelectric transport in $Ba_{1.1}Mn_{32}$		
122	Thermal Stability and Phase Purity in Polycrystalline Ba ₈ Ga _x Ge _{46-<i>x</i>} . Journal of Electronic Materials, 2009, 38, 1423-1426.	1.0	9
123	Influence of band structure on the large thermoelectric performance of lanthanum telluride. Physical Review B, 2009, 79, .	1.1	129
124	Phonon density of states and heat capacity of $La_{1.1}Mn_{32}$		
125	Thermoelectric properties of p-type LiZnSb: Assessment of <i>ab initio</i> calculations. Journal of Applied Physics, 2009, 105, .	1.1	62
126	Traversing the Metal-Insulator Transition in a Zintl Phase: Rational Enhancement of Thermoelectric Efficiency in Yb ₁₄ Mn ₁₄ Al _x Sb ₁₁ . Advanced Functional Materials, 2008, 18, 2795-2800.	7.8	294

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127	Thermoelectric performance of lanthanum telluride produced via mechanical alloying. Physical Review B, 2008, 78, .	1.1	224
128	The single chain limit of structural relaxation in a polyolefin blend. Journal of Chemical Physics, 2006, 125, 024906.	1.2	12
129	The Role of Environment in Structural Relaxation of Miscible Polymer Blends. Macromolecules, 2005, 38, 6598-6609.	2.2	10