

Douglas Abernathy

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194
papers

5,963
citations

42
h-index

69
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215
ext. papers

7,009
ext. citations

6.7
avg, IF

5.28
L-index

#	Paper	IF	Citations
194	Two-dimensional resonant magnetic excitation in BaFe _{1.84} Co _{0.16} As ₂ . <i>Physical Review Letters</i> , 2009 , 102, 107005	7.4	228
193	Layering of a liquid metal in contact with a hard wall. <i>Nature</i> , 1997 , 390, 379-381	50.4	220
192	Metallization of vanadium dioxide driven by large phonon entropy. <i>Nature</i> , 2014 , 515, 535-9	50.4	192
191	Structural relationship between negative thermal expansion and quartic anharmonicity of cubic ScF ₃ . <i>Physical Review Letters</i> , 2011 , 107, 195504	7.4	170
190	Design and operation of the wide angular-range chopper spectrometer ARCS at the Spallation Neutron Source. <i>Review of Scientific Instruments</i> , 2012 , 83, 015114	1.7	163
189	X-ray intensity fluctuation spectroscopy observations of critical dynamics in Fe ₃ Al. <i>Physical Review Letters</i> , 1995 , 74, 2010-2013	7.4	162
188	Absence of long-range chemical ordering in equimolar FeCoCrNi. <i>Applied Physics Letters</i> , 2012 , 100, 251907	3.4	144
187	Evolution of spin excitations into the superconducting state in FeTe _{1-x} Sex. <i>Nature Physics</i> , 2010 , 6, 182-186	16.2	142
186	Glass-like phonon scattering from a spontaneous nanostructure in AgSbTe ₂ . <i>Nature Nanotechnology</i> , 2013 , 8, 445-51	28.7	122
185	The Spallation Neutron Source in Oak Ridge: A powerful tool for materials research. <i>Physica B: Condensed Matter</i> , 2006 , 385-386, 955-960	2.8	117
184	Self-assembly of organic films on a liquid metal. <i>Nature</i> , 1996 , 384, 250-252	50.4	110
183	Dynamics of Block Copolymer Micelles Revealed by X-Ray Intensity Fluctuation Spectroscopy. <i>Physical Review Letters</i> , 1997 , 78, 1275-1278	7.4	109
182	Tuning mobility and stability of lithium ion conductors based on lattice dynamics. <i>Energy and Environmental Science</i> , 2018 , 11, 850-859	35.4	105
181	Photon Correlation Spectroscopy of Colloidal Palladium Using a Coherent X-Ray Beam. <i>Physical Review Letters</i> , 1996 , 77, 5437-5440	7.4	95
180	Small-angle X-ray scattering using coherent undulator radiation at the ESRF. <i>Journal of Synchrotron Radiation</i> , 1998 , 5, 37-47	2.4	93
179	Spin waves in the (D) magnetically ordered iron chalcogenide Fe _{1.05} Te. <i>Physical Review Letters</i> , 2011 , 106, 057004	7.4	89
178	Higgs mode and its decay in a two-dimensional antiferromagnet. <i>Nature Physics</i> , 2017 , 13, 633-637	16.2	84

177	Phonon softening and metallization of a narrow-gap semiconductor by thermal disorder. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 4725-4730	11.5	83
176	A comparison of four direct geometry time-of-flight spectrometers at the Spallation Neutron Source. <i>Review of Scientific Instruments</i> , 2014 , 85, 045113	1.7	82
175	Phonon localization drives polar nanoregions in a relaxor ferroelectric. <i>Nature Communications</i> , 2014 , 5, 3683	17.4	80
174	Using direct illumination CCDs as high-resolution area detectors for X-ray scattering. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2000 , 451, 596-609	1.2	80
173	Phonon density of states and heat capacity of La ₃ NiTe ₄ . <i>Physical Review B</i> , 2009 , 80,	3.3	78
172	Coherent Propagation of X Rays in a Planar Waveguide with a Tunable Air Gap. <i>Physical Review Letters</i> , 1999 , 82, 1696-1699	7.4	78
171	Spin waves and magnetic exchange interactions in insulating Rb(0.89)Fe(1.58)Se(2). <i>Nature Communications</i> , 2011 , 2, 580	17.4	76
170	Oriental epitaxy and lateral structure of the hexagonally reconstructed Pt(001) and Au(001) surfaces. <i>Physical Review B</i> , 1992 , 45, 9272-9291	3.3	71
169	Phonon anharmonicity and negative thermal expansion in SnSe. <i>Physical Review B</i> , 2016 , 94,	3.3	68
168	Long-Range Antiferromagnetic Order in a Rocksalt High Entropy Oxide. <i>Chemistry of Materials</i> , 2019 , 31, 3705-3711	9.6	66
167	The valence-fluctuating ground state of plutonium. <i>Science Advances</i> , 2015 , 1, e1500188	14.3	66
166	Neutron scattering studies of spin excitations in hole-doped Ba(0.67)K(0.33)Fe(2)As(2) superconductor. <i>Scientific Reports</i> , 2011 , 1, 115	4.9	65
165	Phonon density of states of LaFeAsO(1-x)Fx. <i>Physical Review Letters</i> , 2008 , 101, 157004	7.4	63
164	Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations. <i>Science Advances</i> , 2016 , 2, e1501814	14.3	61
163	Separating the configurational and vibrational entropy contributions in metallic glasses. <i>Nature Physics</i> , 2017 , 13, 900-905	16.2	55
162	Magnetic structure and crystal-field states of the pyrochlore antiferromagnet Nd ₂ Zr ₂ O ₇ . <i>Physical Review B</i> , 2015 , 92,	3.3	54
161	Twisting phonons in complex crystals with quasi-one-dimensional substructures. <i>Nature Communications</i> , 2015 , 6, 6723	17.4	52
160	Anharmonicity and atomic distribution of SnTe and PbTe thermoelectrics. <i>Physical Review B</i> , 2014 , 90,	3.3	51

159	Effect of Pnictogen Height on Spin Waves in Iron Pnictides. <i>Physical Review Letters</i> , 2014 , 112,	7.4	48
158	Anisotropic and quasipropagating spin excitations in superconducting Ba(Fe _{0.926} Co _{0.074}) ₂ As ₂ . <i>Physical Review B</i> , 2010 , 82,	3.3	48
157	Selective breakdown of phonon quasiparticles across superionic transition in CuCrSe ₂ . <i>Nature Physics</i> , 2019 , 15, 73-78	16.2	48
156	Commensurate antiferromagnetic excitations as a signature of the pseudogap in the tetragonal high-Tc cuprate HgBa ₂ CuO(4+ δ). <i>Nature Communications</i> , 2016 , 7, 10819	17.4	45
155	Dynamics and correlations in magnetic colloidal systems studied by X-ray photon correlation spectroscopy. <i>European Physical Journal E</i> , 2001 , 4, 263-271	1.5	44
154	Coherent x-ray diffraction imaging of silicon oxide growth. <i>Physical Review B</i> , 1999 , 60, 9965-9972	3.3	44
153	Nuclear quantum effect with pure anharmonicity and the anomalous thermal expansion of silicon. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 1992-1997	11.5	43
152	Oriental epitaxy of the hexagonally reconstructed Pt(001) surface. <i>Physical Review Letters</i> , 1991 , 67, 3117-3120	7.4	42
151	Molecular quantum magnetism in LiZn ₂ Mo ₃ O ₈ . <i>Physical Review Letters</i> , 2014 , 112, 027202	7.4	40
150	High-Tc Layered Ferrielectric Crystals by Coherent Spinodal Decomposition. <i>ACS Nano</i> , 2015 , 9, 12365-73	16.7	39
149	Stripe antiferromagnetic spin fluctuations in SrCo ₂ As ₂ . <i>Physical Review Letters</i> , 2013 , 111, 157001	7.4	38
148	Structural phase transition and phonon instability in Cu ₁₂ Sb ₄ S ₁₃ . <i>Physical Review B</i> , 2016 , 93,	3.3	37
147	Phonon density of states and anharmonicity of UO ₂ . <i>Physical Review B</i> , 2014 , 89,	3.3	37
146	Anharmonic lattice dynamics and superionic transition in AgCrSe. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 3930-3937	11.5	36
145	Inelastic neutron scattering study of a nonmagnetic collapsed tetragonal phase in nonsuperconducting CaFe ₂ As ₂ : evidence of the impact of spin fluctuations on superconductivity in the iron-arsenide compounds. <i>Physical Review Letters</i> , 2013 , 111, 227002	7.4	36
144	Reconstruction of the (111) and (001) surfaces of Au and Pt: thermal behavior. <i>Surface Science</i> , 1993 , 283, 260-276	1.8	36
143	Discovery of coexisting Dirac and triply degenerate magnons in a three-dimensional antiferromagnet. <i>Nature Communications</i> , 2018 , 9, 2591	17.4	36
142	Symmetry-breaking dynamical pattern and localization observed in the equilibrium vibrational spectrum of NaI. <i>Scientific Reports</i> , 2011 , 1, 4	4.9	35

141	q Dependence of the Growth-Oscillation Period of X-Ray Reflectivity in Heteroepitaxy: Ho/W(110). <i>Physical Review Letters</i> , 1997 , 79, 3954-3957	7.4	35
140	Dynamics of dense, charge-stabilized suspensions of colloidal silica studied by correlation spectroscopy with coherent X-rays. <i>Journal of Applied Crystallography</i> , 2000 , 33, 424-427	3.8	35
139	Photon correlation spectroscopy: X rays versus visible light. <i>Physical Review E</i> , 2000 , 61, 1676-80	2.4	35
138	Phonon anharmonicity in silicon from 100 to 1500 K. <i>Physical Review B</i> , 2015 , 91,	3.3	34
137	Observation and explanation of one-dimensional x-ray speckle patterns from synthetic multilayers. <i>Physical Review B</i> , 1995 , 52, 9917-9924	3.3	34
136	Direct observation of dynamic charge stripes in La _{2-x} Sr _x NiO ₄ . <i>Nature Communications</i> , 2014 , 5, 3467	17.4	32
135	Strain relaxation of boron nitride thin films on silicon. <i>Applied Physics Letters</i> , 1998 , 73, 777-779	3.4	32
134	Thermal roughness of a close-packed metal surface: Pt(001). <i>Physical Review Letters</i> , 1992 , 69, 941-944	7.4	32
133	MCViNE [An object oriented Monte Carlo neutron ray tracing simulation package. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016 , 810, 86-99	1.2	31
132	Critical behavior at chiral melting: Disorder of the Si(113)-(3 x 1) reconstruction. <i>Physical Review Letters</i> , 1993 , 71, 750-753	7.4	31
131	Magnon spectrum of the helimagnetic insulator Cu ₂ OSeO ₃ . <i>Nature Communications</i> , 2016 , 7, 10725	17.4	31
130	Positive vibrational entropy of chemical ordering in FeV. <i>Physical Review Letters</i> , 2011 , 107, 115501	7.4	30
129	Stabilization of Polar Nanoregions in Pb-free Ferroelectrics. <i>Physical Review Letters</i> , 2018 , 120, 207603	7.4	30
128	Magnetic splitting of valence states in ferromagnetic and antiferromagnetic lanthanide metals. <i>Physical Review Letters</i> , 2000 , 84, 5624-7	7.4	29
127	Orbital Selective Spin Excitations and their Impact on Superconductivity of LiFe _{1-x} Co _x As. <i>Physical Review Letters</i> , 2016 , 116, 247001	7.4	28
126	Magnetic excitations in underdoped Ba(Fe _{1-x} Cox) ₂ As ₂ with x=0.047. <i>Physical Review B</i> , 2012 , 86,	3.3	28
125	Structure and dynamics of surfactant-stabilized aggregates of palladium nanoparticles under dilute and semidilute conditions: Static and dynamic x-ray scattering. <i>Physical Review E</i> , 1999 , 59, 642-649	2.4	27
124	Antiferromagnetic spin excitations in single crystals of nonsuperconducting Li _{1-x} FeAs. <i>Physical Review B</i> , 2011 , 83,	3.3	26

123	Effect of Li-deficiency impurities on the electron-overdoped LiFeAs superconductor. <i>Physical Review B</i> , 2012 , 86,	3.3	25
122	Anharmonic lattice dynamics of Ag ₂ O studied by inelastic neutron scattering and first-principles molecular dynamics simulations. <i>Physical Review B</i> , 2014 , 89,	3.3	24
121	Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr ₃ . <i>Nature Materials</i> , 2021 , 20, 977-983	27	24
120	Heavy-impurity resonance, hybridization, and phonon spectral functions in Fe _{1-x} M _x Si (M=Ir, Os). <i>Physical Review B</i> , 2015 , 91,	3.3	23
119	Resonant magnetic X-ray scattering from ultrathin Ho metal films down to a few atomic layers. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2001 , 114-116, 953-957	1.7	23
118	Chiral melting of the Si(113) (3 x 1) reconstruction. <i>Physical Review B</i> , 1994 , 49, 2691-2705	3.3	23
117	Electron-phonon coupling in the conventional superconductor YNi ₂ B ₂ C at high phonon energies studied by time-of-flight neutron spectroscopy. <i>Physical Review Letters</i> , 2012 , 109, 057001	7.4	22
116	The magnetic structure of orthorhombic ErNi ₂ B ₂ C. <i>Europhysics Letters</i> , 1999 , 47, 352-357	1.6	22
115	Event-based processing of neutron scattering data at the Spallation Neutron Source. <i>Journal of Applied Crystallography</i> , 2018 , 51, 616-629	3.8	21
114	Effects of temperature and pressure on phonons in FeSi _{1-x} Al _x . <i>Physical Review B</i> , 2013 , 87,	3.3	21
113	Asymmetrically cut crystals as optical elements for highly collimated x-ray beams. <i>Review of Scientific Instruments</i> , 1995 , 66, 1506-1509	1.7	21
112	A new x-ray diffraction method for structural investigations of solid-liquid interfaces. <i>Review of Scientific Instruments</i> , 1997 , 68, 4169-4176	1.7	20
111	Hourglass Dispersion and Resonance of Magnetic Excitations in the Superconducting State of the Single-Layer Cuprate HgBa ₂ CuO _{4+δ} Near Optimal Doping. <i>Physical Review Letters</i> , 2016 , 117, 277002	7.4	20
110	A radial collimator for a time-of-flight neutron spectrometer. <i>Review of Scientific Instruments</i> , 2014 , 85, 085101	1.7	19
109	Bose-Einstein condensation in liquid 4He near the liquid-solid transition line. <i>Physical Review B</i> , 2012 , 85,	3.3	19
108	Effective One-Dimensional Coupling in the Highly Frustrated Square-Lattice Itinerant Magnet CaCo _{2-y} As ₂ . <i>Physical Review Letters</i> , 2017 , 119, 147201	7.4	18
107	Momentum-resolved observations of the phonon instability driving geometric improper ferroelectricity in yttrium manganite. <i>Nature Communications</i> , 2018 , 9, 15	17.4	18
106	Crystallography and physical properties of BaCo ₂ As ₂ , Ba _{0.94} K _{0.06} Co ₂ As ₂ , and Ba _{0.78} K _{0.22} Co ₂ As ₂ . <i>Physical Review B</i> , 2014 , 90,	3.3	18

105	Glassy Phonon Heralds a Strain Glass State in a Shape Memory Alloy. <i>Physical Review Letters</i> , 2018 , 120, 245701	7.4	17
104	Using Monte Carlo ray tracing simulations to model the quantum harmonic oscillator modes observed in uranium nitride. <i>Physical Review B</i> , 2014 , 89,	3.3	17
103	Lattice vibrations boost demagnetization entropy in a shape-memory alloy. <i>Physical Review B</i> , 2015 , 92,	3.3	17
102	Effects of composition, temperature, and magnetism on phonons in bcc Fe-V alloys. <i>Physical Review B</i> , 2010 , 82,	3.3	17
101	Energy dependence of the spin excitation anisotropy in uniaxial-strained BaFe _{1.9} Ni _{0.1} As ₂ . <i>Physical Review B</i> , 2015 , 92,	3.3	16
100	Electron-phonon coupling and thermal transport in the thermoelectric compound Mo ₃ Sb ₇ Te _x . <i>Physical Review B</i> , 2015 , 92,	3.3	16
99	Neutron scattering studies of spin excitations in superconducting Rb _{0.82} Fe _{1.68} Se ₂ . <i>Physical Review B</i> , 2012 , 86,	3.3	16
98	Neutron scattering measurements of spatially anisotropic magnetic exchange interactions in semiconducting K _{0.85} Fe _{1.54} Se ₂ (TN = 280 K). <i>Physical Review Letters</i> , 2014 , 112, 177002	7.4	15
97	Electronic structure and vibrational entropies of fcc Au-Fe alloys. <i>Physical Review B</i> , 2013 , 87,	3.3	15
96	Quantum oscillations of nitrogen atoms in uranium nitride. <i>Nature Communications</i> , 2012 , 3, 1124	17.4	15
95	Diffraction and correlation spectroscopy with coherent x rays 1997 ,		15
94	Role of magnetic exchange energy on charge ordering in R _{1/3} Sr _{2/3} FeO ₃ (R=La,Pr,andNd). <i>Physical Review B</i> , 2011 , 84,	3.3	14
93	Faceting of stepped silicon (113) surfaces: Self assembly of nanoscale gratings. <i>Physica B: Condensed Matter</i> , 1996 , 221, 105-125	2.8	13
92	Uncovering design principles for amorphous-like heat conduction using two-channel lattice dynamics. <i>Materials Today Physics</i> , 2021 , 18, 100344	8	13
91	Characterization of plastic and boron carbide additive manufactured neutron collimators. <i>Review of Scientific Instruments</i> , 2017 , 88, 123102	1.7	12
90	Phonon anharmonicity of monoclinic zirconia and yttrium-stabilized zirconia. <i>Physical Review B</i> , 2015 , 91,	3.3	12
89	Phonon quarticity induced by changes in phonon-tracked hybridization during lattice expansion and its stabilization of rutile TiO ₂ . <i>Physical Review B</i> , 2015 , 92,	3.3	12
88	Phonon scattering rates and atomic ordering in Ag _{1-x} Sb _{1+x} Te _{2+x} (x=0,0.1,0.2) investigated with inelastic neutron scattering and synchrotron diffraction. <i>Physical Review B</i> , 2014 , 90,	3.3	12

87	Spin excitations in BaFe _{1.84} Co _{0.16} As ₂ superconductor observed by inelastic neutron scattering. <i>Physical Review B</i> , 2009 , 80,	3.3	12
86	The Spallation Neutron Source: A Powerful Tool for Materials Research. <i>AIP Conference Proceedings</i> , 2005 ,	0	12
85	Coexistence of Ferromagnetic and Stripe Antiferromagnetic Spin Fluctuations in SrCo ₂ As ₂ . <i>Physical Review Letters</i> , 2019 , 122, 117204	7.4	11
84	Evidence for a common physical origin of the Landau and BEC theories of superfluidity. <i>Physical Review Letters</i> , 2014 , 113, 215302	7.4	11
83	Muon spin relaxation and inelastic neutron scattering investigations of the all-in/all-out antiferromagnet Nd ₂ Hf ₂ O ₇ . <i>Physical Review B</i> , 2017 , 95,	3.3	11
82	Pseudo-Goldstone Magnons in the Frustrated S=3/2 Heisenberg Helimagnet ZnCr ₂ Se ₄ with a Pyrochlore Magnetic Sublattice. <i>Physical Review X</i> , 2017 , 7,	9.1	11
81	Doping dependence of the spin excitations in the Fe-based superconductors Fe _{1+y} Te _{1-x} Se _x . <i>Physical Review B</i> , 2013 , 87,	3.3	11
80	Lattice dynamics and thermal transport in multiferroic CuCrO ₂ . <i>Physical Review B</i> , 2017 , 95,	3.3	10
79	Magnetically driven phonon instability enables the metal-insulator transition in h-FeS. <i>Nature Physics</i> , 2020 , 16, 669-675	16.2	10
78	Electron doping evolution of the magnetic excitations in NaFe _{1-x} Co _x As. <i>Physical Review B</i> , 2016 , 93,	3.3	10
77	Weak coupling of pseudoacoustic phonons and magnon dynamics in the incommensurate spin-ladder compound Sr ₁₄ Cu ₂₄ O ₄₁ . <i>Physical Review B</i> , 2016 , 94,	3.3	10
76	Recent developments of MCViNE and its applications at SNS. <i>Journal of Physics Communications</i> , 2019 , 3, 085005	1.2	10
75	Effects of chemical composition and B2 order on phonons in bcc Fe-Co alloys. <i>Journal of Applied Physics</i> , 2010 , 108, 023519	2.5	10
74	Multiple high-temperature transitions driven by dynamical structures in NaI. <i>Physical Review B</i> , 2014 , 89,	3.3	9
73	Impact of anharmonicity on the vibrational entropy and specific heat of UO ₂ . <i>Physical Review Materials</i> , 2019 , 3,	3.2	9
72	Soft anharmonic phonons and ultralow thermal conductivity in Mg(Sb, Bi) thermoelectrics. <i>Science Advances</i> , 2021 , 7,	14.3	9
71	Super-resolution energy spectra from neutron direct-geometry spectrometers. <i>Review of Scientific Instruments</i> , 2019 , 90, 105109	1.7	9
70	Phonon spectrum of SrFe ₂ As ₂ determined using multizone phonon refinement. <i>Physical Review B</i> , 2014 , 89,	3.3	8

69	First-principles studies of atomic dynamics in tetrahedrite thermoelectrics. <i>APL Materials</i> , 2016 , 4, 104815-17	8
68	Relevance of Kondo physics for the temperature dependence of the bulk modulus in plutonium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E268	11.5 7
67	Design and operating characteristic of a vacuum furnace for time-of-flight inelastic neutron scattering measurements. <i>Review of Scientific Instruments</i> , 2017 , 88, 105116	1.7 7
66	Energy dependence of the flux and elastic resolution for the ARCS neutron spectrometer. <i>Physica B: Condensed Matter</i> , 2019 , 562, 26-30	2.8 7
65	Experimental determination of the temperature-dependent Van Hove function in a ZrPt liquid. <i>Journal of Chemical Physics</i> , 2020 , 152, 074506	3.9 7
64	Supersonic propagation of lattice energy by phasons in fresnoite. <i>Nature Communications</i> , 2018 , 9, 18231-7.4	7
63	Spin dynamics near a putative antiferromagnetic quantum critical point in Cu-substituted BaFe ₂ As ₂ and its relation to high-temperature superconductivity. <i>Physical Review B</i> , 2015 , 92,	3.3 7
62	Speckle Structure in Small-Angle Coherent X-ray Scattering. <i>Journal of Applied Crystallography</i> , 1997 , 30, 828-832	3.8 7
61	High-Q-resolution X-ray diffraction of ordered FeAl single crystals. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 1995 , 51, 746-753	7
60	Fast Na diffusion and anharmonic phonon dynamics in superionic Na ₃ PS ₄ . <i>Energy and Environmental Science</i> ,	35.4 7
59	Nonlinear propagating modes beyond the phonons in fluorite-structured crystals. <i>Communications Physics</i> , 2020 , 3,	5.4 7
58	Observation of High-Frequency Transverse Phonons in Metallic Glasses. <i>Physical Review Letters</i> , 2020 , 124, 225902	7.4 6
57	Spin excitations used to probe the nature of exchange coupling in the magnetically ordered ground state of Pr _{0.5} Ca _{0.5} MnO ₃ . <i>Physical Review B</i> , 2016 , 94,	3.3 6
56	Competing magnetic phases and itinerant magnetic frustration in SrCo ₂ As ₂ . <i>Physical Review B</i> , 2019 , 100,	3.3 6
55	Inelastic neutron scattering study of phonon density of states in nanostructured Si _{1-x} Gex thermoelectrics. <i>Physical Review B</i> , 2012 , 86,	3.3 6
54	Phonon densities of states of face-centered-cubic Ni-Fe alloys. <i>Journal of Applied Physics</i> , 2013 , 113, 17A308	6
53	Remanence on microscopic and macroscopic scales in the reentrant spin glass EuxSr _{1-x} S. <i>Physical Review B</i> , 1987 , 36, 3956-3959	3.3 6
52	Temperature dependence of phonons in FeGe ₂ . <i>Physical Review Materials</i> , 2018 , 2,	3.2 6

51	Phonon spectrum of underdoped HgBa ₂ CuO ₄ —investigated by neutron scattering. <i>Physical Review B</i> , 2020 , 101,	3.3	5
50	Vacancy-driven variations in the phonon density of states of fast neutron irradiated nuclear graphite. <i>Carbon</i> , 2020 , 168, 42-54	10.4	5
49	Plaquette instability competing with bicollinear ground state in detwinned FeTe. <i>Physical Review B</i> , 2019 , 100,	3.3	5
48	Vibrational properties of uranium fluorides. <i>Physica B: Condensed Matter</i> , 2019 , 570, 194-205	2.8	5
47	Modified magnetism within the coherence volume of superconducting Fe _{1+x} Te _{1-x} . <i>Physical Review B</i> , 2014 , 90,	3.3	5
46	Extracting source parameters from beam monitors on a chopper spectrometer. <i>EPJ Web of Conferences</i> , 2015 , 83, 03001	0.3	5
45	Atomic pair distribution function analysis from the ARCS chopper spectrometer at the Spallation Neutron Source. <i>Journal of Applied Crystallography</i> , 2009 , 42, 724-725	3.8	5
44	Small angle X-ray scattering from dynamic processes. <i>Current Opinion in Colloid and Interface Science</i> , 1998 , 3, 305-311	7.6	5
43	Temperature-dependent phonon lifetimes and thermal conductivity of silicon by inelastic neutron scattering and ab initio calculations. <i>Physical Review B</i> , 2020 , 102,	3.3	5
42	Momentum and energy dependent resolution function of the ARCS neutron chopper spectrometer at high momentum transfer: Comparing simulation and experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016 , 835, 34-41	1.2	5
41	Light atom quantum oscillations in UC and US. <i>Physical Review B</i> , 2016 , 93,	3.3	4
40	Neutron scattering studies of spin-phonon hybridization and superconducting spin gaps in the high-temperature superconductor La _{2-x} (Sr,Ba) _x CuO ₄ . <i>Physical Review B</i> , 2016 , 93,	3.3	4
39	Robust antiferromagnetic spin waves across the metal-insulator transition in hole-doped BaMn ₂ As ₂ . <i>Physical Review B</i> , 2017 , 95,	3.3	4
38	Magnetic excitations in an S=12 diamond-shaped tetramer compound Cu ₂ PO ₄ OH. <i>Physical Review B</i> , 2015 , 92,	3.3	4
37	The ARCS radial collimator. <i>EPJ Web of Conferences</i> , 2015 , 83, 03014	0.3	4
36	Nonharmonic phonons in MgB ₂ at elevated temperatures. <i>Physical Review B</i> , 2011 , 83,	3.3	4
35	Ultrathin aluminum sample cans for single crystal inelastic neutron scattering. <i>Review of Scientific Instruments</i> , 2011 , 82, 055117	1.7	4
34	Temperature-dependent lattice dynamics in iridium. <i>Physical Review Materials</i> , 2020 , 4,	3.2	4

33	Anharmonic Origin of the Giant Thermal Expansion of NaBr. <i>Physical Review Letters</i> , 2020 , 125, 085504	7.4	4
32	Three-mode coupling interference patterns in the dynamic structure factor of a relaxor ferroelectric. <i>Physical Review B</i> , 2016 , 94,	3.3	4
31	Lattice dynamics of the hybrid improper ferroelectrics (Ca,Sr)3Ti2O7. <i>Physical Review B</i> , 2019 , 100,	3.3	4
30	Doping evolution of spin fluctuations and their peculiar suppression at low temperatures in Ca(Fe1-xCox)2As2. <i>Physical Review B</i> , 2018 , 97,	3.3	4
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