# Douglas Abernathy

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 194 papers | 5,963 citations | 42 h-index | 69 g-index |
| 215 ext. papers | 7,009 ext. citations | 6.7 avg, IF | 5.28 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 194 | Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr. *Nature Materials*, **2021**, 20, 977-983 | 27 | 24 |
| 193 | Soft anharmonic phonons and ultralow thermal conductivity in Mg(Sb, Bi) thermoelectrics. *Science Advances*, **2021**, 7, | 14.3 | 9 |
| 192 | Uncovering design principles for amorphous-like heat conduction using two-channel lattice dynamics. *Materials Today Physics*, **2021**, 18, 100344 | 8 | 13 |
| 191 | Neutron thermalization in nuclear graphite: A modern story of a classic moderator. *Annals of Nuclear Energy*, **2021**, 161, 108437 | 1.7 | 0 |
| 190 | Thermal neutron scattering measurements and modeling of yttrium-hydrides for high temperature moderator applications. *Annals of Nuclear Energy*, **2021**, 157, 108224 | 1.7 | 1 |
| 189 | Magnetic Field Effect on Topological Spin Excitations in CrI3. *Physical Review X*, **2021**, 11, | 9.1 | 2 |
| 188 | Quasiparticle twist dynamics in non-symmorphic materials. *Materials Today Physics*, **2021**, 100548 | 8 | 0 |
| 187 | Phonon spectrum of underdoped HgBa2CuO4+□investigated by neutron scattering. *Physical Review B*, **2020**, 101, | 3.3 | 5 |
| 186 | Observation of High-Frequency Transverse Phonons in Metallic Glasses. *Physical Review Letters*, **2020**, 124, 225902 | 7.4 | 6 |
| 185 | Vacancy-driven variations in the phonon density of states of fast neutron irradiated nuclear graphite. *Carbon*, **2020**, 168, 42-54 | 10.4 | 5 |
| 184 | Experimental determination of the temperature-dependent Van Hove function in a ZrPt liquid. *Journal of Chemical Physics*, **2020**, 152, 074506 | 3.9 | 7 |
| 183 | Strong local moment antiferromagnetic spin fluctuations in V-doped LiFeAs. *Npj Quantum Materials* , **2020**, 5, | 5 | 3 |
| 182 | Anharmonic lattice dynamics and superionic transition in AgCrSe. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 3930-3937 | 11.5 | 36 |
| 181 | Magnetically driven phonon instability enables the metal□nsulator transition in h-FeS. *Nature Physics*, **2020**, 16, 669-675 | 16.2 | 10 |
| 180 | Magnetic order and fluctuations in the quasi-two-dimensional planar magnet Sr(Co1□Nix)2As2. *Physical Review B*, **2020**, 102, | 3.3 | 1 |
| 179 | Temporally decoherent and spatially coherent vibrations in metal halide perovskites. *Physical Review B*, **2020**, 102, | 3.3 | 3 |
| 178 | Controlling phonon lifetimes via sublattice disordering in AgBiSe2. *Physical Review Materials*, **2020**, 4, | 3.2 | 3 |

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| 177 | Temperature-dependent lattice dynamics in iridium. *Physical Review Materials*, **2020**, 4, | 3.2 | 4 |
| 176 | Giant low-temperature anharmonicity in silicon nanocrystals. *Physical Review Materials*, **2020**, 4, | 3.2 | 1 |
| 175 | Anharmonic Origin of the Giant Thermal Expansion of NaBr. *Physical Review Letters*, **2020**, 125, 085504 | 7.4 | 4 |
| 174 | Nonlinear propagating modes beyond the phonons in fluorite-structured crystals. *Communications Physics*, **2020**, 3, | 5.4 | 7 |
| 173 | Temperature-dependent phonon lifetimes and thermal conductivity of silicon by inelastic neutron scattering and ab initio calculations. *Physical Review B*, **2020**, 102, | 3.3 | 5 |
| 172 | Frustrated magnetic interactions in an = 3/2 bilayer honeycomb lattice compound BiMnO(NO). *Physical Review B*, **2019**, 100, | 3.3 | 3 |
| 171 | Response to comment on "Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations". *Science Advances*, **2019**, 5, eaaw4367 | 14.3 | 0 |
| 170 | Long-Range Antiferromagnetic Order in a Rocksalt High Entropy Oxide. *Chemistry of Materials*, **2019**, 31, 3705-3711 | 9.6 | 66 |
| 169 | Coexistence of Ferromagnetic and Stripe Antiferromagnetic Spin Fluctuations in SrCo_{2}As_{2}. *Physical Review Letters*, **2019**, 122, 117204 | 7.4 | 11 |
| 168 | Energy dependence of the flux and elastic resolution for the ARCS neutron spectrometer. *Physica B: Condensed Matter*, **2019**, 562, 26-30 | 2.8 | 7 |
| 167 | Recent developments of MCViNE and its applications at SNS. *Journal of Physics Communications*, **2019**, 3, 085005 | 1.2 | 10 |
| 166 | Plaquette instability competing with bicollinear ground state in detwinned FeTe. *Physical Review B*, **2019**, 100, | 3.3 | 5 |
| 165 | Competing magnetic phases and itinerant magnetic frustration in SrCo2As2. *Physical Review B*, **2019**, 100, | 3.3 | 6 |
| 164 | Vibrational properties of uranium fluorides. *Physica B: Condensed Matter*, **2019**, 570, 194-205 | 2.8 | 5 |
| 163 | Impact of anharmonicity on the vibrational entropy and specific heat of UO2. *Physical Review Materials*, **2019**, 3, | 3.2 | 9 |
| 162 | Super-resolution energy spectra from neutron direct-geometry spectrometers. *Review of Scientific Instruments*, **2019**, 90, 105109 | 1.7 | 9 |
| 161 | Lattice dynamics of the hybrid improper ferroelectrics (Ca,Sr)3Ti2O7. *Physical Review B*, **2019**, 100, | 3.3 | 4 |
| 160 | Dynamic magnetic response across the pressure-induced structural phase transition in CeNi. *Physical Review B*, **2019**, 99, | 3.3 | 1 |

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| 159 | Selective breakdown of phonon quasiparticles across superionic transition in CuCrSe2. *Nature Physics*, **2019**, 15, 73-78 | 16.2 | 48 |
| 158 | Tuning mobility and stability of lithium ion conductors based on lattice dynamics. *Energy and Environmental Science*, **2018**, 11, 850-859 | 35.4 | 105 |
| 157 | Nuclear quantum effect with pure anharmonicity and the anomalous thermal expansion of silicon. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 1992-1997 | 11.5 | 43 |
| 156 | Momentum-resolved observations of the phonon instability driving geometric improper ferroelectricity in yttrium manganite. *Nature Communications*, **2018**, 9, 15 | 17.4 | 18 |
| 155 | Event-based processing of neutron scattering data at the Spallation Neutron Source. *Journal of Applied Crystallography*, **2018**, 51, 616-629 | 3.8 | 21 |
| 154 | Supersonic propagation of lattice energy by phasons in fresnoite. *Nature Communications*, **2018**, 9, 1823 | 17.4 | 7 |
| 153 | Glassy Phonon Heralds a Strain Glass State in a Shape Memory Alloy. *Physical Review Letters*, **2018**, 120, 245701 | 7.4 | 17 |
| 152 | Temperature dependence of phonons in FeGe2. *Physical Review Materials*, **2018**, 2, | 3.2 | 6 |
| 151 | Stabilization of Polar Nanoregions in Pb-free Ferroelectrics. *Physical Review Letters*, **2018**, 120, 207603 | 7.4 | 30 |
| 150 | Doping evolution of spin fluctuations and their peculiar suppression at low temperatures in Ca(Fe1⊠Cox)2As2. *Physical Review B*, **2018**, 97, | 3.3 | 4 |
| 149 | Discovery of coexisting Dirac and triply degenerate magnons in a three-dimensional antiferromagnet. *Nature Communications*, **2018**, 9, 2591 | 17.4 | 36 |
| 148 | Relevance of Kondo physics for the temperature dependence of the bulk modulus in plutonium. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E268 | 11.5 | 7 |
| 147 | Lattice dynamics and thermal transport in multiferroic CuCrO2. *Physical Review B*, **2017**, 95, | 3.3 | 10 |
| 146 | Separating the configurational and vibrational entropy contributions in metallic glasses. *Nature Physics*, **2017**, 13, 900-905 | 16.2 | 55 |
| 145 | Higgs mode and its decay in a two-dimensional antiferromagnet. *Nature Physics*, **2017**, 13, 633-637 | 16.2 | 84 |
| 144 | Phonon localization transition in relaxor ferroelectric PZN-5%PT. *Applied Physics Letters*, **2017**, 110, 132901 | 3.4 | 2 |
| 143 | Design and operating characteristic of a vacuum furnace for time-of-flight inelastic neutron scattering measurements. *Review of Scientific Instruments*, **2017**, 88, 105116 | 1.7 | 7 |
| 142 | Effective One-Dimensional Coupling in the Highly Frustrated Square-Lattice Itinerant Magnet CaCo_{2-y}As_{2}. *Physical Review Letters*, **2017**, 119, 147201 | 7.4 | 18 |

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| 141 | Muon spin relaxation and inelastic neutron scattering investigations of the all-in/all-out antiferromagnet Nd2Hf2O7. *Physical Review B*, **2017**, 95, | 3.3 | 11 |
| 140 | Correspondence: Reply to QPhantom phonon localization in relaxorsQ*Nature Communications*, **2017**, 8, 1936 | 17.4 | 2 |
| 139 | Characterization of plastic and boron carbide additive manufactured neutron collimators. *Review of Scientific Instruments*, **2017**, 88, 123102 | 1.7 | 12 |
| 138 | Robust antiferromagnetic spin waves across the metal-insulator transition in hole-doped BaMn2As2. *Physical Review B*, **2017**, 95, | 3.3 | 4 |
| 137 | Pseudo-Goldstone Magnons in the Frustrated S=3/2 Heisenberg Helimagnet ZnCr2Se4 with a Pyrochlore Magnetic Sublattice. *Physical Review X*, **2017**, 7, | 9.1 | 11 |
| 136 | Spin excitations used to probe the nature of exchange coupling in the magnetically ordered ground state of Pr0.5Ca0.5MnO3. *Physical Review B*, **2016**, 94, | 3.3 | 6 |
| 135 | Light atom quantum oscillations in UC and US. *Physical Review B*, **2016**, 93, | 3.3 | 4 |
| 134 | Structural phase transition and phonon instability in Cu12Sb4S13. *Physical Review B*, **2016**, 93, | 3.3 | 37 |
| 133 | Neutron scattering studies of spin-phonon hybridization and superconducting spin gaps in the high-temperature superconductor La2(Sr,Ba)xCuO4. *Physical Review B*, **2016**, 93, | 3.3 | 4 |
| 132 | Electron doping evolution of the magnetic excitations in NaFe1CoxAs. *Physical Review B*, **2016**, 93, | 3.3 | 10 |
| 131 | Orbital Selective Spin Excitations and their Impact on Superconductivity of LiFe_{1-x}Co_{x}As. *Physical Review Letters*, **2016**, 116, 247001 | 7.4 | 28 |
| 130 | Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations. *Science Advances*, **2016**, 2, e1501814 | 14.3 | 61 |
| 129 | Weak coupling of pseudoacoustic phonons and magnon dynamics in the incommensurate spin-ladder compound Sr14Cu24O41. *Physical Review B*, **2016**, 94, | 3.3 | 10 |
| 128 | MCViNE An object oriented Monte Carlo neutron ray tracing simulation package. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2016**, 810, 86-99 | 1.2 | 31 |
| 127 | Commensurate antiferromagnetic excitations as a signature of the pseudogap in the tetragonal high-Tc cuprate HgBa2CuO(4+) *Nature Communications*, **2016**, 7, 10819 | 17.4 | 45 |
| 126 | Magnon spectrum of the helimagnetic insulator Cu2OSeO3. *Nature Communications*, **2016**, 7, 10725 | 17.4 | 31 |
| 125 | First-principles studies of atomic dynamics in tetrahedrite thermoelectrics. *APL Materials*, **2016**, 4, 104815 | 5.7 | 8 |
| 124 | Hourglass Dispersion and Resonance of Magnetic Excitations in the Superconducting State of the Single-Layer Cuprate HgBa_{2}CuO_{4+}Near Optimal Doping. *Physical Review Letters*, **2016**, 117, 277002 | 7.4 | 20 |

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| 123 | Momentum and energy dependent resolution function of the ARCS neutron chopper spectrometer at high momentum transfer: Comparing simulation and experiment. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2016**, 835, 34-41 | 1.2 | 5 |
| 122 | Three-mode coupling interference patterns in the dynamic structure factor of a relaxor ferroelectric. *Physical Review B*, **2016**, 94, | 3.3 | 4 |
| 121 | Phonon anharmonicity and negative thermal expansion in SnSe. *Physical Review B*, **2016**, 94, | 3.3 | 68 |
| 120 | Thermally Driven Electronic Topological Transition in FeTi. *Physical Review Letters*, **2016**, 117, 076402 | 7.4 | 3 |
| 119 | The valence-fluctuating ground state of plutonium. *Science Advances*, **2015**, 1, e1500188 | 14.3 | 66 |
| 118 | Twisting phonons in complex crystals with quasi-one-dimensional substructures. *Nature Communications*, **2015**, 6, 6723 | 17.4 | 52 |
| 117 | Heavy-impurity resonance, hybridization, and phonon spectral functions in Fe1−xMxSi (M=Ir, Os). *Physical Review B*, **2015**, 91, | 3.3 | 23 |
| 116 | Phonon anharmonicity of monoclinic zirconia and yttrium-stabilized zirconia. *Physical Review B*, **2015**, 91, | 3.3 | 12 |
| 115 | Lattice vibrations boost demagnetization entropy in a shape-memory alloy. *Physical Review B*, **2015**, 92, | 3.3 | 17 |
| 114 | Energy dependence of the spin excitation anisotropy in uniaxial-strained BaFe1.9Ni0.1As2. *Physical Review B*, **2015**, 92, | 3.3 | 16 |
| 113 | Magnetic excitations in an S=12 diamond-shaped tetramer compound Cu2PO4OH. *Physical Review B*, **2015**, 92, | 3.3 | 4 |
| 112 | Phonon quarticity induced by changes in phonon-tracked hybridization during lattice expansion and its stabilization of rutile TiO2. *Physical Review B*, **2015**, 92, | 3.3 | 12 |
| 111 | Electron-phonon coupling and thermal transport in the thermoelectric compound Mo3Sb7−xTex. *Physical Review B*, **2015**, 92, | 3.3 | 16 |
| 110 | Spin dynamics near a putative antiferromagnetic quantum critical point in Cu-substituted BaFe2As2 and its relation to high-temperature superconductivity. *Physical Review B*, **2015**, 92, | 3.3 | 7 |
| 109 | Extracting source parameters from beam monitors on a chopper spectrometer. *EPJ Web of Conferences*, **2015**, 83, 03001 | 0.3 | 5 |
| 108 | The ARCS radial collimator. *EPJ Web of Conferences*, **2015**, 83, 03014 | 0.3 | 4 |
| 107 | High-Tc Layered Ferrielectric Crystals by Coherent Spinodal Decomposition. *ACS Nano*, **2015**, 9, 12365-73 | 16.7 | 39 |
| 106 | Magnetic structure and crystal-field states of the pyrochlore antiferromagnet Nd2Zr2O7. *Physical Review B*, **2015**, 92, | 3.3 | 54 |

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|---|---|---|---|
| 105 | Phonon anharmonicity in silicon from 100 to 1500 K. *Physical Review B*, **2015**, 91, | 3.3 | 34 |
| 104 | Phonon localization drives polar nanoregions in a relaxor ferroelectric. *Nature Communications*, **2014**, 5, 3683 | 17.4 | 80 |
| 103 | Molecular quantum magnetism in LiZn2Mo3O8. *Physical Review Letters*, **2014**, 112, 027202 | 7.4 | 40 |
| 102 | Anharmonic lattice dynamics of Ag2O studied by inelastic neutron scattering and first-principles molecular dynamics simulations. *Physical Review B*, **2014**, 89, | 3.3 | 24 |
| 101 | Effect of Pnictogen Height on Spin Waves in Iron Pnictides. *Physical Review Letters*, **2014**, 112, | 7.4 | 48 |
| 100 | Metallization of vanadium dioxide driven by large phonon entropy. *Nature*, **2014**, 515, 535-9 | 50.4 | 192 |
| 99 | Evidence for a common physical origin of the Landau and BEC theories of superfluidity. *Physical Review Letters*, **2014**, 113, 215302 | 7.4 | 11 |
| 98 | Direct measurement of the spin gap in a quasi-one-dimensional clinopyroxene: NaTiSi2O6. *Physical Review B*, **2014**, 90, | 3.3 | 3 |
| 97 | Modified magnetism within the coherence volume of superconducting Fe1+δexTe1−x. *Physical Review B*, **2014**, 90, | 3.3 | 5 |
| 96 | A radial collimator for a time-of-flight neutron spectrometer. *Review of Scientific Instruments*, **2014**, 85, 085101 | 1.7 | 19 |
| 95 | A comparison of four direct geometry time-of-flight spectrometers at the Spallation Neutron Source. *Review of Scientific Instruments*, **2014**, 85, 045113 | 1.7 | 82 |
| 94 | Phonon density of states and anharmonicity of UO2. *Physical Review B*, **2014**, 89, | 3.3 | 37 |
| 93 | Multiple high-temperature transitions driven by dynamical structures in NaI. *Physical Review B*, **2014**, 89, | 3.3 | 9 |
| 92 | Using Monte Carlo ray tracing simulations to model the quantum harmonic oscillator modes observed in uranium nitride. *Physical Review B*, **2014**, 89, | 3.3 | 17 |
| 91 | Direct observation of dynamic charge stripes in La2-xSrxNiO4. *Nature Communications*, **2014**, 5, 3467 | 17.4 | 32 |
| 90 | Anharmonicity and atomic distribution of SnTe and PbTe thermoelectrics. *Physical Review B*, **2014**, 90, | 3.3 | 51 |
| 89 | Crystallography and physical properties of BaCo2As2,Ba0.94K0.06Co2As2, and Ba0.78K0.22Co2As2. *Physical Review B*, **2014**, 90, | 3.3 | 18 |
| 88 | Phonon spectrum of SrFe2As2 determined using multizone phonon refinement. *Physical Review B*, **2014**, 89, | 3.3 | 8 |

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| 87 | Neutron scattering measurements of spatially anisotropic magnetic exchange interactions in semiconducting K0.85 Fe1.54Se2 (TN = 280 K. *Physical Review Letters*, **2014**, 112, 177002 | 7.4 | 15 |
| 86 | Phonon scattering rates and atomic ordering in Ag1−Sb1+xTe2+x(x=0,0.1,0.2) investigated with inelastic neutron scattering and synchrotron diffraction. *Physical Review B*, **2014**, 90, | 3.3 | 12 |
| 85 | Electronic structure and vibrational entropies of fcc Au-Fe alloys. *Physical Review B*, **2013**, 87, | 3.3 | 15 |
| 84 | Phonon densities of states of face-centered-cubic Ni-Fe alloys. *Journal of Applied Physics*, **2013**, 113, 17A308 | 2.5 | 6 |
| 83 | Glass-like phonon scattering from a spontaneous nanostructure in AgSbTe2. *Nature Nanotechnology*, **2013**, 8, 445-51 | 28.7 | 122 |
| 82 | Effects of temperature and pressure on phonons in FeSi1−Alx. *Physical Review B*, **2013**, 87, | 3.3 | 21 |
| 81 | Doping dependence of the spin excitations in the Fe-based superconductors Fe1+yTe1−Sex. *Physical Review B*, **2013**, 87, | 3.3 | 11 |
| 80 | Stripe antiferromagnetic spin fluctuations in SrCo2As2. *Physical Review Letters*, **2013**, 111, 157001 | 7.4 | 38 |
| 79 | Inelastic neutron scattering study of a nonmagnetic collapsed tetragonal phase in nonsuperconducting CaFe2As2: evidence of the impact of spin fluctuations on superconductivity in the iron-arsenide compounds. *Physical Review Letters*, **2013**, 111, 227002 | 7.4 | 36 |
| 78 | Inelastic neutron scattering study of phonon density of states in nanostructured Si1−Gex thermoelectrics. *Physical Review B*, **2012**, 86, | 3.3 | 6 |
| 77 | Absence of long-range chemical ordering in equimolar FeCoCrNi. *Applied Physics Letters*, **2012**, 100, 251907 | 3.4 | 144 |
| 76 | Effect of Li-deficiency impurities on the electron-overdoped LiFeAs superconductor. *Physical Review B*, **2012**, 86, | 3.3 | 25 |
| 75 | Electron-phonon coupling in the conventional superconductor YNi2B2C at high phonon energies studied by time-of-flight neutron spectroscopy. *Physical Review Letters*, **2012**, 109, 057001 | 7.4 | 22 |
| 74 | Design and operation of the wide angular-range chopper spectrometer ARCS at the Spallation Neutron Source. *Review of Scientific Instruments*, **2012**, 83, 015114 | 1.7 | 163 |
| 73 | Quantum oscillations of nitrogen atoms in uranium nitride. *Nature Communications*, **2012**, 3, 1124 | 17.4 | 15 |
| 72 | Bose-Einstein condensation in liquid 4He near the liquid-solid transition line. *Physical Review B*, **2012**, 85, | 3.3 | 19 |
| 71 | Neutron scattering studies of spin excitations in superconducting Rb0.82Fe1.68Se2. *Physical Review B*, **2012**, 86, | 3.3 | 16 |
| 70 | Magnetic excitations in underdoped Ba(Fe1−Cox)2As2 with x=0.047. *Physical Review B*, **2012**, 86, | 3.3 | 28 |

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|---|---|---|---|
| 69 | Role of magnetic exchange energy on charge ordering in R1/3Sr2/3FeO3 (R=La,Pr,andNd). *Physical Review B*, **2011**, 84, | 3.3 | 14 |
| 68 | Structural relationship between negative thermal expansion and quartic anharmonicity of cubic ScF3. *Physical Review Letters*, **2011**, 107, 195504 | 7.4 | 170 |
| 67 | Spin waves and magnetic exchange interactions in insulating Rb(0.89)Fe(1.58)Se(2). *Nature Communications*, **2011**, 2, 580 | 17.4 | 76 |
| 66 | Nonharmonic phonons in MgB2 at elevated temperatures. *Physical Review B*, **2011**, 83, | 3.3 | 4 |
| 65 | Symmetry-breaking dynamical pattern and localization observed in the equilibrium vibrational spectrum of NaI. *Scientific Reports*, **2011**, 1, 4 | 4.9 | 35 |
| 64 | Positive vibrational entropy of chemical ordering in FeV. *Physical Review Letters*, **2011**, 107, 115501 | 7.4 | 30 |
| 63 | Comparison of FANS and ARCS incoherent inelastic neutron scattering measurements of hydrogen trapped at dislocations in deformed Pd. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2011**, 654, 522-526 | 1.2 | 3 |
| 62 | Phonon softening and metallization of a narrow-gap semiconductor by thermal disorder. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4725-4730 | 11.5 | 83 |
| 61 | Neutron scattering studies of spin excitations in hole-doped Ba(0.67)K(0.33)Fe(2)As(2) superconductor. *Scientific Reports*, **2011**, 1, 115 | 4.9 | 65 |
| 60 | Spin waves in the ([illegible]0) magnetically ordered iron chalcogenide Fe1.05Te. *Physical Review Letters*, **2011**, 106, 057004 | 7.4 | 89 |
| 59 | Antiferromagnetic spin excitations in single crystals of nonsuperconducting Li1[illegible]FeAs. *Physical Review B*, **2011**, 83, | 3.3 | 26 |
| 58 | Ultrathin aluminum sample cans for single crystal inelastic neutron scattering. *Review of Scientific Instruments*, **2011**, 82, 055117 | 1.7 | 4 |
| 57 | Dynamics of Water Confined on the Surface of Titania and Cassiterite Nanoparticles. *Materials Research Society Symposia Proceedings*, **2011**, 1352, 47 | | 2 |
| 56 | Evolution of spin excitations into the superconducting state in FeTe1[illegible]Sex. *Nature Physics*, **2010**, 6, 182-186 | 20.2 | 142 |
| 55 | Phonon density of states of model ferroelectrics. *Materials Research Society Symposia Proceedings*, **2010**, 1262, 1 | | 0 |
| 54 | Effects of chemical composition and B2 order on phonons in bcc Fe[illegible]o alloys. *Journal of Applied Physics*, **2010**, 108, 023519 | 2.5 | 10 |
| 53 | Anisotropic and quasipropagating spin excitations in superconducting Ba(Fe0.926Co0.074)2As2. *Physical Review B*, **2010**, 82, | 3.3 | 48 |
| 52 | Effects of composition, temperature, and magnetism on phonons in bcc Fe-V alloys. *Physical Review B*, **2010**, 82, | 3.3 | 17 |

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| 51 | Quantitative structure refinement from the ARCS chopper spectrometer. *Journal of Physics: Conference Series*, **2010**, 251, 012080 | 0.3 | 2 |
| 50 | Spin excitations in BaFe1.84Co0.16As2 superconductor observed by inelastic neutron scattering. *Physical Review B*, **2009**, 80, | 3.3 | 12 |
| 49 | Two-dimensional resonant magnetic excitation in BaFe1.84Co0.16As2. *Physical Review Letters*, **2009**, 102, 107005 | 7.4 | 228 |
| 48 | Atomic pair distribution function analysis from the ARCS chopper spectrometer at the Spallation Neutron Source. *Journal of Applied Crystallography*, **2009**, 42, 724-725 | 3.8 | 5 |
| 47 | Phonon density of states and heat capacity of La3□Te4. *Physical Review B*, **2009**, 80, | 3.3 | 78 |
| 46 | Phonon density of states of LaFeAsO(1-x)Fx. *Physical Review Letters*, **2008**, 101, 157004 | 7.4 | 63 |
| 45 | The Spallation Neutron Source in Oak Ridge: A powerful tool for materials research. *Physica B: Condensed Matter*, **2006**, 385-386, 955-960 | 2.8 | 117 |
| 44 | The Spallation Neutron Source: A Powerful Tool for Materials Research. *AIP Conference Proceedings* , **2005**, | 0 | 12 |
| 43 | Optimizing Fermi-chopper spectrometers for the Spallation Neutron Source. *Applied Physics A: Materials Science and Processing*, **2002**, 74, s1595-s1597 | 2.6 | 3 |
| 42 | Dynamics and correlations in magnetic colloidal systems studied by X-ray photon correlation spectroscopy. *European Physical Journal E*, **2001**, 4, 263-271 | 1.5 | 44 |
| 41 | Resonant magnetic X-ray scattering from ultrathin Ho□metal films down to a few atomic layers. *Journal of Electron Spectroscopy and Related Phenomena*, **2001**, 114-116, 953-957 | 1.7 | 23 |
| 40 | Electronic time-focusing of pulsed-source neutron chopper data: binning to minimize effects of proton pulse and chopper opening time variations. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2001**, 459, 221-228 | 1.2 | |
| 39 | The thermal focusing mirror of the ESRF Troika beam line:. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2001**, 467-468, 305-308 | 1.2 | 1 |
| 38 | Dynamics of dense, charge-stabilized suspensions of colloidal silica studied by correlation spectroscopy with coherent X-rays. *Journal of Applied Crystallography*, **2000**, 33, 424-427 | 3.8 | 35 |
| 37 | Using direct illumination CCDs as high-resolution area detectors for X-ray scattering. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2000**, 451, 596-609 | 1.2 | 80 |
| 36 | Magnetic splitting of valence states in ferromagnetic and antiferromagnetic lanthanide metals. *Physical Review Letters*, **2000**, 84, 5624-7 | 7.4 | 29 |
| 35 | Photon correlation spectroscopy: X rays versus visible light. *Physical Review E*, **2000**, 61, 1676-80 | 2.4 | 35 |
| 34 | The magnetic structure of orthorhombic ErNi 2 B 2 C. *Europhysics Letters*, **1999**, 47, 352-357 | 1.6 | 22 |

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| 33 | Structure and dynamics of surfactant-stabilized aggregates of palladium nanoparticles under dilute and semidilute conditions: Static and dynamic x-ray scattering. *Physical Review E*, **1999**, 59, 642-649 | 2.4 | 27 |
| 32 | Coherent x-ray diffraction imaging of silicon oxide growth. *Physical Review B*, **1999**, 60, 9965-9972 | 3.3 | 44 |
| 31 | Coherent Propagation of X Rays in a Planar Waveguide with a Tunable Air Gap. *Physical Review Letters*, **1999**, 82, 1696-1699 | 7.4 | 78 |
| 30 | Small angle X-ray scattering from dynamic processes. *Current Opinion in Colloid and Interface Science*, **1998**, 3, 305-311 | 7.6 | 5 |
| 29 | Small-angle X-ray scattering using coherent undulator radiation at the ESRF. *Journal of Synchrotron Radiation*, **1998**, 5, 37-47 | 2.4 | 93 |
| 28 | Strain relaxation of boron nitride thin films on silicon. *Applied Physics Letters*, **1998**, 73, 777-779 | 3.4 | 32 |
| 27 | q Dependence of the Growth-Oscillation Period of X-Ray Reflectivity in Heteroepitaxy: Ho/W(110). *Physical Review Letters*, **1997**, 79, 3954-3957 | 7.4 | 35 |
| 26 | Dynamics of Block Copolymer Micelles Revealed by X-Ray Intensity Fluctuation Spectroscopy. *Physical Review Letters*, **1997**, 78, 1275-1278 | 7.4 | 109 |
| 25 | A new x-ray diffraction method for structural investigations of solid-liquid interfaces. *Review of Scientific Instruments*, **1997**, 68, 4169-4176 | 1.7 | 20 |
| 24 | Diffraction and correlation spectroscopy with coherent x rays **1997**, | | 15 |
| 23 | Layering of a liquid metal in contact with a hard wall. *Nature*, **1997**, 390, 379-381 | 50.4 | 220 |
| 22 | Speckle Structure in Small-Angle Coherent X-ray Scattering. *Journal of Applied Crystallography*, **1997**, 30, 828-832 | 3.8 | 7 |
| 21 | Casting technique for the fabrication of pinholes for X-ray radiation. *Journal of Synchrotron Radiation*, **1997**, 4, 64-6 | 2.4 | |
| 20 | Chiral melting of the Si(113) (3 □1) reconstruction. *Physica B: Condensed Matter*, **1996**, 221, 126-133 | 2.8 | |
| 19 | 1D X-ray speckle patterns: A novel probe of interfacial disorder in semiconductor superlattices. *Solid-State Electronics*, **1996**, 40, 531-535 | 1.7 | 2 |
| 18 | Faceting of stepped silicon (113) surfaces: Self assembly of nanoscale gratings. *Physica B: Condensed Matter*, **1996**, 221, 105-125 | 2.8 | 13 |
| 17 | Self-assembly of organic films on a liquid metal. *Nature*, **1996**, 384, 250-252 | 50.4 | 110 |
| 16 | Photon Correlation Spectroscopy of Colloidal Palladium Using a Coherent X-Ray Beam. *Physical Review Letters*, **1996**, 77, 5437-5440 | 7.4 | 95 |

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