

# Michael E Manley

## List of Publications by Year in descending order

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77  
papers

1,939  
citations

257450

24  
h-index

254184

43  
g-index

80  
all docs

80  
docs citations

80  
times ranked

2407  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metallization of vanadium dioxide driven by large phonon entropy. Nature, 2014, 515, 535-539.	27.8	252
2	Formation of a New Dynamical Mode in $\text{U}^{1\pm}$ -Uranium Observed by Inelastic X-Ray and Neutron Scattering. Physical Review Letters, 2006, 96, 125501.	7.8	107
3	Intrinsic localized modes observed in the high-temperature vibrational spectrum of NaI. Physical Review B, 2009, 79, .	3.2	103
4	Phonon localization drives polar nanoregions in a relaxor ferroelectric. Nature Communications, 2014, 5, 3683.	12.8	98
5	Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations. Science Advances, 2016, 2, e1501814.	10.3	91
6	Paramagnon drag in high thermoelectric figure of merit Li-doped MnTe. Science Advances, 2019, 5, eaat9461.	10.3	90
7	Einstein modes in the phonon density of states of the single-filled skutterudite $\text{Yb}_{1-x}\text{Co}_x\text{Sb}_3$ . Physical Review B, 2010, 82, .	3.2	77
8	Large Harmonic Softening of the Phonon Density of States of Uranium. Physical Review Letters, 2001, 86, 3076-3079.	7.8	76
9	Impact of intrinsic localized modes of atomic motion on materials properties. Acta Materialia, 2010, 58, 2926-2935.	7.9	58
10	Intrinsic anharmonic localization in thermoelectric PbSe. Nature Communications, 2019, 10, 1928.	12.8	51
11	Heat capacity and microstructure of ordered and disordered Pd <sub>3</sub> V. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 1167-1178.	0.6	48
12	Phonon dispersion in uranium measured using inelastic x-ray scattering. Physical Review B, 2003, 67, .	3.2	43
13	Symmetry-breaking dynamical pattern and localization observed in the equilibrium vibrational spectrum of NaI. Scientific Reports, 2011, 1, 4.	3.3	43
14	Uncovering design principles for amorphous-like heat conduction using two-channel lattice dynamics. Materials Today Physics, 2021, 18, 100344.	6.0	42
15	Thermal Energy Transport in Oxide Nuclear Fuel. Chemical Reviews, 2022, 122, 3711-3762.	47.7	37
16	High frequency atomic tunneling yields ultralow and glass-like thermal conductivity in chalcogenide single crystals. Nature Communications, 2020, 11, 6039.	12.8	36
17	Energy localization on the Al sublattice of Pt <sub>3</sub> Al with L <sub>12</sub> order. Journal of Applied Physics, 2013, 114, .	2.5	35
18	No role for phonon entropy in the fcc to fcc volume collapse transition in Ce <sub>0.9</sub> Th <sub>0.1</sub> at ambient pressure. Physical Review B, 2003, 67, .	3.2	34

#	ARTICLE	IF	CITATIONS
19	Intrinsic nature of thermally activated dynamical modes in $\hat{I}_{\pm}$ -U. Nonequilibrium mode creation by x-ray and neutron scattering. Physical Review B, 2008, 77, .	3.2	33
20	Symmetry and correlations underlying hidden order in $URu_2Si_2$ . Physical Review B, 2015, 91, .	3.2	32
21	Vibrational and electronic entropy of $\hat{I}^2$ -cerium and $\hat{I}^3$ -cerium measured by inelastic neutron scattering. Physical Review B, 2002, 65, .	3.2	31
22	Observation of a Continuous Phase Transition in a Shape-Memory Alloy. Physical Review Letters, 2008, 101, 135703.	7.8	27
23	Phonon density of states of $\hat{I}_{\pm}$ - and $\hat{I}'$ -plutonium by inelastic x-ray scattering. Physical Review B, 2009, 79, .	3.2	27
24	Pinning Frequencies of the Collective Modes in $\hat{I}_{\pm}$ -Uranium. Physical Review Letters, 2006, 96, 076401.	7.8	26
25	Measurement of the phonon density of states of $PuO_2(+2\%Ga)$ : A critical test of theory. Physical Review B, 2012, 85, .	3.2	25
26	Phonons, magnons, and lattice thermal transport in antiferromagnetic semiconductor MnTe. Physical Review Materials, 2019, 3, .	2.4	25
27	Glassy Phonon Heralds a Strain Glass State in a Shape Memory Alloy. Physical Review Letters, 2018, 120, 245701.	7.8	24
28	Valence-band UPS, 6p core-level XPS, and LEED of a uranium (001) single crystal. Physical Review B, 2006, 73, .	3.2	23
29	Intrinsically localized mode in $\hat{I}_{\pm}$ -U as a precursor to a solid-state phase transition. Physical Review B, 2008, 77, .	3.2	21
30	Lattice vibrations boost demagnetization entropy in a shape-memory alloy. Physical Review B, 2015, 92, .	3.2	19
31	Kinks and cracks in S1 ice under across-column compression. Philosophical Magazine Letters, 1997, 75, 83-90.	1.2	18
32	Thermal acoustic excitations with atomic-scale wavelengths in amorphous silicon. Physical Review Materials, 2019, 3, .	2.4	18
33	Giant isotope effect on phonon dispersion and thermal conductivity in methylammonium lead iodide. Science Advances, 2020, 6, eaaz1842.	10.3	17
34	Nonlinear propagating modes beyond the phonons in fluorite-structured crystals. Communications Physics, 2020, 3, .	5.3	17
35	Angle-resolved photoemission and first-principles electronic structure of single-crystalline $\hat{I}_{\pm}$ -U(001). Physical Review B, 2007, 75, .	3.2	16
36	Microstructural strain energy of $\hat{I}_{\pm}$ -uranium determined by calorimetry and neutron diffractometry. Physical Review B, 2002, 66, .	3.2	14

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37	Supersonic propagation of lattice energy by phasons in fersalite. Nature Communications, 2018, 9, 1823.	12.8	14
38	Impact of anharmonicity on the vibrational entropy and specific heat of $\text{UO}_2$ . Physical Review Materials, 2019, 3, .	2.4	5
39	Anharmonic Origin of the Giant Thermal Expansion of NaBr. Physical Review Letters, 2020, 125, 085504.	7.8	13
40	Phonon densities of states of gamma-cerium and delta-cerium measured by time-of-flight inelastic neutron scattering. Philosophical Magazine Letters, 2000, 80, 591-596.	1.2	12
41	Multiple high-temperature transitions driven by dynamical structures in NaI. Physical Review B, 2014, 89, .	3.2	12
42	Spin dynamics and a nearly continuous magnetic phase transition in an entropy-stabilized oxide antiferromagnet. Physical Review Materials, 2020, 4, .	2.4	11
43	Real-space visualization of short-range antiferromagnetic correlations in a magnetically enhanced thermoelectric. Matter, 2022, 5, 1853-1864.	10.0	11
44	On the strain-rate sensitivity of columnar ice. Journal of Glaciology, 1997, 43, 408-410.	2.2	10
45	Phonon densities of states of gamma-cerium and delta-cerium measured by inelastic neutron scattering. Philosophical Magazine Letters, 1999, 79, 297-304.	1.2	10
46	Phonon dispersion of Mo-stabilized $\text{U}$ measured using inelastic x-ray scattering. Physical Review B, 2019, 100, .	3.2	10
47	Assessment of empirical interatomic potential to predict thermal conductivity in $\text{ThO}_2$ and $\text{UO}_2$ . Journal of Physics Condensed Matter, 2021, 33, 275402.	1.8	9
48	CHES: The future direct geometry spectrometer at the second target station. Review of Scientific Instruments, 2022, 93, .	1.3	9
49	Temperature-dependent lattice dynamics in iridium. Physical Review Materials, 2020, 4, .	2.4	8
50	Unexpected similarity of the dynamic magnetic susceptibilities of $\text{f}^3$ -cerium and $\text{f}^2$ -cerium. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2001, 81, 675-687.	0.6	7
51	Soft-phonon feature, site defects, and a frustrated phase transition in $\text{Ni}_5\text{O}_4\text{Fe}_3$ : Experiments and first-principles calculations. Physical Review B, 2008, 77, .	3.2	6
52	Lattice dynamical origin of peak thermoelectric performance in $\text{AgPb}_m\text{SbTe}_{2+m}$ observed by inelastic neutron scattering. Journal of Applied Physics, 2011, 109, 083722.	2.5	6
53	Phonon Spectroscopy in Antimony and Tellurium Oxides. Journal of Physical Chemistry A, 2020, 124, 7869-7880.	2.5	6
54	Magnetic, transport and thermal properties of $\text{f}^2$ -phase $\text{UZr}_2$ . Philosophical Magazine Letters, 2021, 101, 1-11.	1.2	5

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55	Canted antiferromagnetic order and spin dynamics in the honeycomb-lattice compound $\text{TbMnO}_3$ . Physical Review B, 2021, 103, .		
56	Vibration-dominated negative mixing entropy for C impurities in $\text{U}$ . Physical Review B, 2005, 72, .	3.2	4
57	Three-mode coupling interference patterns in the dynamic structure factor of a relaxor ferroelectric. Physical Review B, 2016, 94, .	3.2	4
58	Phonon-confinement entropy and the formation of $\text{CeH}_{2.84}$ by fracture. Physical Review B, 2008, 78, .	3.2	3
59	Hidden disorder in the $\text{Pu-1.9 at.\%Ga}$ . Physical Review B, 2012, 85, .	3.2	3
60	Photoelectric Effect in Uranium. Journal of the Physical Society of Japan, 2006, 75, 56-57.	1.6	2
61	Structural and dynamical fluctuations in off-stoichiometric NiMnGa shape-memory alloys. Applied Physics Letters, 2014, 104, 241905.	3.3	2
62	Phonon localization transition in relaxor ferroelectric PZN-5%PT. Applied Physics Letters, 2017, 110, 132901.	3.3	2
63	Correspondence: Reply to "Phantom phonon localization in relaxors". Nature Communications, 2017, 8, 1936.	12.8	2
64	Phonon Dispersion in Actinides Measured with Inelastic X-Ray Scattering: New Opportunities to Solve Some Old Problems. AIP Conference Proceedings, 2003, , .	0.4	1
65	Response to comment on "Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations". Science Advances, 2019, 5, eaaw4367.	10.3	1
66	Prediction and observation of intermodulation sidebands from anharmonic phonons in NaBr. Physical Review B, 2021, 103, .	3.2	1
67	The 22nd National School on Neutron & X-ray Scattering 2020 "Upsides of going virtual. Neutron News, 2020, 31, 4-6.	0.2	1
68	Thermodynamics of phonon-stabilized Fermi distributions with application to uranium. Philosophical Magazine, 2003, 83, 2467-2473.	1.6	0
69	The importance of high temperature electron-phonon coupling to the thermodynamic properties of $\text{Ce}_{0.9}\text{Th}_{0.1}$ and other f-electron bonded metals. Materials Research Society Symposia Proceedings, 2003, 802, 43.	0.1	0
70	Intrinsically Localized Modes in Uranium and the Prospect for Finding them in Plutonium. Materials Research Society Symposia Proceedings, 2008, 1104, 1.	0.1	0
71	Intrinsic Localized Lattice Modes and Thermal Transport: Potential Application in a Thermal Rectifier. Materials Research Society Symposia Proceedings, 2009, 1172, 101.	0.1	0
72	Measurement of the Phonon Density of States of $\text{PuO}_2(+2\%\text{Ga})$ . Materials Research Society Symposia Proceedings, 2012, 1444, 141.	0.1	0

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73	Glassy Phenomena and Precursors in the Lattice Dynamics. Springer Series in Materials Science, 2018, , 101-117.	0.6	0
74	On the strain-rate sensitivity of columnar ice. Journal of Glaciology, 1997, 43, 408-410.	2.2	0
75	The 23 <sup>rd</sup> National School on Neutron & X-Ray Scattering 2021â€”Virtual School with Remote Experiments. Neutron News, 2021, 32, 12-16.	0.2	0
76	Four Point and Biaxial Flexure Strength of PZT Ceramics: A Probabilistic Approach. Ceramic Engineering and Science Proceedings, 0, , 885-894.	0.1	0
77	Suppressed thermal conductivity in hyperstoichiometric uranium dioxide controlled by phonon lifetimes. Applied Physics Letters, 2022, 121, 012202.	3.3	0