

Philip B Allen

List of Publications by Year in descending order

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48
papers

2,471
citations

236925

25
h-index

214800

47
g-index

49
all docs

49
docs citations

49
times ranked

2540
citing authors

#	ARTICLE	IF	CITATIONS
1	Heat pulse propagation and nonlocal phonon heat transport in one-dimensional harmonic chains. Physical Review B, 2022, 105, .	3.2	5
2	Nonlocal thermal transport modeling using the thermal distributor. Physical Review B, 2022, 105, .	3.2	0
3	Theory of thermal expansion: Quasi-harmonic approximation and corrections from quasi-particle renormalization. Modern Physics Letters B, 2020, 34, 2050025.	1.9	28
4	Joule heating in Boltzmann theory of metals. Physical Review B, 2020, 102, .	3.2	3
5	Analysis of nonlocal phonon thermal conductivity simulations showing the ballistic to diffusive crossover. Physical Review B, 2018, 97, .	3.2	9
6	Quasiparticles and phonon satellites in spectral functions of semiconductors and insulators: Cumulants applied to the full first-principles theory and the Fröhlich polaron. Physical Review B, 2018, 97, .	3.2	60
7	Temperature in a Peierls-Boltzmann treatment of nonlocal phonon heat transport. Physical Review B, 2018, 98, .	3.2	14
8	Thermal conductivity from phonon quasiparticles with subminimal mean free path in the MgSiO_3 perovskite. Physical Review B, 2017, 96, .	3.2	15
9	Low-temperature semiconductor band-gap thermal shifts: shifts from ordinary acoustic and from piezoacoustic coupling. Physical Review B, 2017, 95, .	3.2	10
10	Influence of Fröhlich polaron coupling on renormalized electron bands in polar semiconductors: Results for zinc-blende GaN. Physical Review B, 2016, 94, .	3.2	35
11	Special quasicrystalline structures: Role of short-range order in the semiconductor alloy $(\text{GaN})_{1-x}(\text{ZnO})_x$. Physical Review B, 2016, 93, .	3.2	28
12	Anharmonic phonon quasiparticle theory of zero-point and thermal shifts in insulators: Heat capacity, bulk modulus, and thermal expansion. Physical Review B, 2015, 92, .	3.2	32
13	Electronic and nuclear quantum effects on the ice XI/ice Ih phase transition. Physical Review B, 2015, 92, .	3.2	18
14	Temperature and composition dependence of short-range order and entropy, and statistics of bond length: the semiconductor alloy $(\text{GaN})_{1-x}(\text{ZnO})_x$. Journal of Physics Condensed Matter, 2014, 26, 274204.	1.8	3
15	Size effects in thermal conduction by phonons. Physical Review B, 2014, 90, .	3.2	23
16	Improved Callaway model for lattice thermal conductivity. Physical Review B, 2013, 88, .	3.2	78
17	Evolutionary method for predicting surface reconstructions with variable stoichiometry. Physical Review B, 2013, 87, .	3.2	99

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19	Phonon quasiparticles and anharmonic perturbation theory tested by molecular dynamics on a model system. <i>Physical Review B</i> , 2010, 82, .	3.2	36
20	Photocatalytic Water Oxidation at the GaN (101̄...0)âˆ™Water Interface. <i>Journal of Physical Chemistry C</i> , 2010, 114, 13695-13704.	3.1	74
21	Lattice thermal conductivity: Computations and theory of the high-temperature breakdown of the phonon-gas model. <i>Physical Review B</i> , 2010, 82, .	3.2	60
22	Density functional calculation of electronic structure and phonon spectra of $\text{Na}_2\text{Zr}_7\text{Si}_8$. <i>Physical Review B</i> , 2009, 79, .	3.2	7
23	Water Adsorption on the GaN (101̄...0) Nonpolar Surface. <i>Journal of Physical Chemistry C</i> , 2009, 113, 3365-3368.	3.1	51
24	Infrared properties of ferropericlae Mg_3Mn_8 . Experiment and theory. <i>Physical Review B</i> , 2008, 77, .	3.2	18
25	Nanocrystalline Nanowires:Â 2. Phonons. <i>Nano Letters</i> , 2007, 7, 11-14.	9.1	20
26	Nanocrystalline Nanowires:Â III. Electrons. <i>Nano Letters</i> , 2007, 7, 1220-1223.	9.1	11
27	Nanocrystalline Nanowires:Â I. Structure. <i>Nano Letters</i> , 2007, 7, 6-10.	9.1	29
28	Reexamination of the Jahn-Teller instability in C_6H_6^+ and C_6H_6^+ . <i>Physical Review A</i> , 2005, 72, .	2.5	16
29	Quantum electrical dipole in triangular systems: A model for spontaneous polarity in metal clusters. <i>Physical Review A</i> , 2005, 71, .	2.5	13
30	Density-Functional-Based Determination of Vibrational Polarizabilities in Molecules within the Double-Harmonic Approximation:â€‰ Derivation and Application. <i>Journal of Chemical Theory and Computation</i> , 2005, 1, 590-596.	5.3	39
31	Density-functional study of the cubic-to-rhombohedral transition in AlF_3 . <i>Physical Review B</i> , 2004, 69, .	3.2	17
32	Polaronic signatures in mid-infrared spectra:â€‰ Prediction for LaMnO_3 and CaMnO_3 . <i>Physical Review B</i> , 2002, 65, .	3.2	6
33	Topological doping of a three-dimensional Peierls system: Predicted structure of doped BaBiO_3 . <i>Physical Review B</i> , 2002, 66, .	3.2	6
34	First glimpse of the orbiton. <i>Nature</i> , 2001, 410, 155-158.	27.8	18
35	Is kinky conventional?. <i>Nature</i> , 2001, 412, 494-495.	27.8	41
36	Misbehaviour in metals. <i>Nature</i> , 2000, 405, 1007-1008.	27.8	13

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37	Theory of Sound Attenuation in Glasses: The Role of Thermal Vibrations. Physical Review Letters, 1999, 82, 1478-1481.	7.8	75
38	Diffusons, locons and propagons: Character of atomic vibrations in amorphous Si. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1715-1731.	0.6	377
39	Diffusons, locons and propagons: character of atomic vibrations in amorphous Si. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1715-1731.	0.6	9
40	Evolution of a vibrational wave packet on a disordered chain. American Journal of Physics, 1998, 66, 497-506.	0.7	47
41	Polaron defects in a charge density wave: a model for lightly doped BaBiO ₃ . Zeitschrift für Physik B-Condensed Matter, 1997, 104, 613-618.	1.1	6
42	Anharmonic Decay of Vibrational States in Amorphous Silicon. Physical Review Letters, 1996, 77, 3839-3842.	7.8	102
43	Zero-point and isotope shifts: Relation to thermal shifts. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1994, 70, 527-534.	0.6	33
44	Thermal conductivity of disordered harmonic solids. Physical Review B, 1993, 48, 12581-12588.	3.2	463
45	Phonon suppression of coherence peak in nuclear spin relaxation rate of superconductors. Nature, 1991, 349, 396-398.	27.8	127
46	Thermal Conductivity of Glasses: Theory and Application to Amorphous Si. Physical Review Letters, 1989, 62, 645-648.	7.8	173
47	Isotope shift controversies. Nature, 1988, 335, 396-397.	27.8	30
48	Universal high-temperature saturation in phonon and electron transport. Physical Review B, 1984, 29, 2884-2890.	3.2	43