

Austin J Minnich

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

8,649
citations

136885

32
h-index

128225

60
g-index

61
all docs

61
docs citations

61
times ranked

8730
citing authors

#	ARTICLE	IF	CITATIONS
1	Digital Quantum Simulation of Open Quantum Systems Using Quantum Imaginary Time Evolution. PRX Quantum, 2022, 3, .	3.5	48
2	Theory of drain noise in high electron mobility transistors based on real-space transfer. Journal of Applied Physics, 2022, 131, .	1.1	5
3	Enhancing anisotropy of thermal conductivity based on tandem acoustic Bragg reflectors. Journal of Applied Physics, 2022, 131, 075110.	1.1	1
4	Origin of high thermal conductivity in disentangled ultra-high molecular weight polyethylene films: ballistic phonons within enlarged crystals. Nature Communications, 2022, 13, 2452.	5.8	13
5	Quantum Computation of Finite-Temperature Static and Dynamical Properties of Spin Systems Using Quantum Imaginary Time Evolution. PRX Quantum, 2021, 2, .	3.5	68
6	Electronic noise of warm electrons in semiconductors from first principles. Physical Review Materials, 2021, 5, .	0.9	8
7	Origin of micrometer-scale propagation lengths of heat-carrying acoustic excitations in amorphous silicon. Physical Review Materials, 2021, 5, .	0.9	13
8	Gold/ultra-high molecular weight polyethylene nanocomposites for electrical energy storage: Enhanced recovery efficiency upon uniaxial deformation. Journal of Applied Polymer Science, 2021, 138, 51232.	1.3	6
9	Characterization of self-heating in cryogenic high electron mobility transistors using Schottky thermometry. Journal of Applied Physics, 2021, 130, .	1.1	5
10	Quasiballistic electron transport in cryogenic SiGe HBTs studied using an exact, semi-analytic solution to the Boltzmann equation. Journal of Applied Physics, 2021, 130, 174504.	1.1	1
11	Annealing-based manipulation of thermal phonon transport from light-emitting diodes to graphene. Journal of Applied Physics, 2021, 130, .	1.1	3
12	Determining eigenstates and thermal states on a quantum computer using quantum imaginary time evolution. Nature Physics, 2020, 16, 205-210.	6.5	317
13	High frequency atomic tunneling yields ultralow and glass-like thermal conductivity in chalcogenide single crystals. Nature Communications, 2020, 11, 6039.	5.8	36
14	Electronic structure of bulk manganese oxide and nickel oxide from coupled cluster theory. Physical Review B, 2020, 101, .	1.1	27
15	A coupled cluster framework for electrons and phonons. Journal of Chemical Physics, 2020, 153, 224112.	1.2	17
16	Ballistic thermal phonons traversing nanocrystalline domains in oriented polyethylene. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17163-17168.	3.3	23
17	Generalized Fourier's law for nondiffusive thermal transport: Theory and experiment. Physical Review B, 2019, 100, .	1.1	22
18	Thermal transport and phonon focusing in complex molecular crystals: <i>Ab initio</i> study of polythiophene. Physical Review B, 2019, 100, .	1.1	8

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19	Electronic Modulation of Near-Field Radiative Transfer in Graphene Field Effect Heterostructures. Nano Letters, 2019, 19, 3898-3904.	4.5	36
20	Intrinsic anharmonic localization in thermoelectric PbSe. Nature Communications, 2019, 10, 1928.	5.8	51
21	Ab initio based investigation of thermal transport in superlattices using the Boltzmann equation: Assessing the role of phonon coherence. Journal of Applied Physics, 2019, 125, 055107.	1.1	4
22	Thermal Transport in Disordered Materials. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 81-116.	1.4	66
23	Thermal acoustic excitations with atomic-scale wavelengths in amorphous silicon. Physical Review Materials, 2019, 3, .	0.9	18
24	Propagating elastic vibrations dominate thermal conduction in amorphous silicon. Physical Review B, 2018, 97, .	1.1	55
25	Heat dissipation in the quasiballistic regime studied using the Boltzmann equation in the spatial frequency domain. Physical Review B, 2018, 97, .	1.1	21
26	Active Radiative Thermal Switching with Graphene Plasmon Resonators. ACS Nano, 2018, 12, 2474-2481.	7.3	70
27	Quasiballistic Thermal Transport from Nanoscale Heaters and the Role of the Spatial Frequency. Physical Review Applied, 2018, 10, .	1.5	12
28	Spectrally Resolved Specular Reflections of Thermal Phonons from Atomically Rough Surfaces. Physical Review X, 2018, 8, .	2.8	18
29	Dynamic optical control of near-field radiative transfer. Optics Express, 2018, 26, A729.	1.7	12
30	Coherent control of thermal phonon transport in van der Waals superlattices. Nanoscale, 2018, 10, 14432-14440.	2.8	13
31	Phonon transmission at crystalline-amorphous interfaces studied using mode-resolved atomistic Green's functions. Physical Review B, 2018, 97, .	1.1	33
32	Ultralow Thermal Conductivity and Mechanical Resilience of Architected Nanolattices. Nano Letters, 2018, 18, 4755-4761.	4.5	55
33	Daytime Radiative Cooling Using Near-Black Infrared Emitters. ACS Photonics, 2017, 4, 626-630.	3.2	485
34	Spatial-Temporal Imaging of Anisotropic Photocarrier Dynamics in Black Phosphorus. Nano Letters, 2017, 17, 3675-3680.	4.5	56
35	Thermal transport in nanocrystalline Si and SiGe by ab initio based Monte Carlo simulation. Scientific Reports, 2017, 7, 44254.	1.6	41
36	Intrinsic localized mode and low thermal conductivity of PbSe. Physical Review B, 2017, 95, .	1.1	84

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37	Ab initio study of mode-resolved phonon transmission at Si/Ge interfaces using atomistic Green's functions. <i>Physical Review B</i> , 2017, 96, .	1.1	36
38	Elastic and thermal properties of free-standing molybdenum disulfide membranes measured using ultrafast transient grating spectroscopy. <i>APL Materials</i> , 2017, 5, .	2.2	17
39	Semiconductor-based Multilayer Selective Solar Absorber for Unconcentrated Solar Thermal Energy Conversion. <i>Scientific Reports</i> , 2017, 7, 5362.	1.6	38
40	Lattice Thermal Conductivity of Polyethylene Molecular Crystals from First-Principles Including Nuclear Quantum Effects. <i>Physical Review Letters</i> , 2017, 119, 185901.	2.9	51
41	Experimental metrology to obtain thermal phonon transmission coefficients at solid interfaces. <i>Physical Review B</i> , 2017, 95, .	1.1	82
42	Heat conduction in multifunctional nanotrusses studied using Boltzmann transport equation. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	12
43	Role of thermalizing and nonthermalizing walls in phonon heat conduction along thin films. <i>Physical Review B</i> , 2016, 93, .	1.1	12
44	Sub-amorphous thermal conductivity in amorphous heterogeneous nanocomposites. <i>RSC Advances</i> , 2016, 6, 105154-105160.	1.7	24
45	Temperature-Dependent Mean Free Path Spectra of Thermal Phonons Along the c -Axis of Graphite. <i>Nano Letters</i> , 2016, 16, 1643-1649.	4.5	73
46	Spectral mapping of thermal conductivity through nanoscale ballistic transport. <i>Nature Nanotechnology</i> , 2015, 10, 701-706.	15.6	271
47	Length Dependent Thermal Conductivity Measurements Yield Phonon Mean Free Path Spectra in Nanostructures. <i>Scientific Reports</i> , 2015, 5, 9121.	1.6	55
48	Semi-analytical solution to the frequency-dependent Boltzmann transport equation for cross-plane heat conduction in thin films. <i>Journal of Applied Physics</i> , 2015, 117, 175306.	1.1	67
49	Analytical Green's function of the multidimensional frequency-dependent phonon Boltzmann equation. <i>Physical Review B</i> , 2014, 90, .	1.1	35
50	Transport regimes in quasiballistic heat conduction. <i>Physical Review B</i> , 2014, 89, .	1.1	74
51	Coherent and incoherent thermal transport in nanomeshes. <i>Physical Review B</i> , 2014, 89, .	1.1	83
52	Importance of frequency-dependent grain boundary scattering in nanocrystalline silicon and silicon-germanium thermoelectrics. <i>Semiconductor Science and Technology</i> , 2014, 29, 124004.	1.0	56
53	Direct Measurement of Room-Temperature Nondiffusive Thermal Transport Over Micron Distances in a Silicon Membrane. <i>Physical Review Letters</i> , 2013, 110, 025901.	2.9	330
54	Coherent Phonon Heat Conduction in Superlattices. <i>Science</i> , 2012, 338, 936-939.	6.0	489

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55	Experimental Evidence of Non-Diffusive Thermal Transport in Si and GaAs. Materials Research Society Symposia Proceedings, 2011, 1347, 1.	0.1	11
56	Theoretical studies on the thermoelectric figure of merit of nanograined bulk silicon. Applied Physics Letters, 2010, 97, .	1.5	57
57	Thermal conductance and phonon transmissivity of metal-graphite interfaces. Journal of Applied Physics, 2010, 107, .	1.1	174
58	High-Thermoelectric Performance of Nanostructured Bismuth Antimony Telluride Bulk Alloys. Science, 2008, 320, 634-638.	6.0	4,843