Takuma Shiga

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4839120/publications.pdf

Version: 2024-02-01

44 papers	1,763 citations	361045 20 h-index	264894 42 g-index
44 all docs	44 docs citations	44 times ranked	2404 citing authors

#	Article	IF	Citations
1	First-principles calculations of phonon transport across a vacuum gap. Physical Review B, 2022, 105, .	1.1	11
2	Relationship between local coordinates and thermal conductivity in amorphous carbon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	4
3	Topological descriptor of thermal conductivity in amorphous Si. Journal of Chemical Physics, 2022, 156, .	1.2	8
4	Thermal conduction through individual cellulose nanofibers. Applied Physics Letters, 2021, 118, .	1.5	14
5	Anisotropic thermal conductivity measurement of organic thin film with bidirectional 3Ï‰ method. Review of Scientific Instruments, 2021, 92, 034902.	0.6	6
6	Surface phonons limit heat conduction in thin films. Physical Review B, 2021, 103, .	1.1	4
7	How mass disorder affects heat conduction in ternary amorphous alloys. AIP Advances, 2021, 11, 065026.	0.6	1
8	Synergistic phonon scattering in epitaxial silicon multilayers with germanium nanodot inclusions. Physical Review B, 2021, 104, .	1.1	2
9	Extreme near-field heat transfer between gold surfaces. Physical Review B, 2021, 104, .	1.1	19
10	Hybrid Thermal Transport Characteristics of Doped Organic Semiconductor Poly(3,4-ethylenedioxythiophene):Tosylate. Journal of Physical Chemistry C, 2019, 123, 26735-26741.	1.5	35
11	Scalable Multi-nanostructured Silicon for Room-Temperature Thermoelectrics. ACS Applied Energy Materials, 2019, 2, 7083-7091.	2.5	17
12	Enhancing Thermal Boundary Conductance of Graphiteâ€“Metal Interface by Triazine-Based Molecular Bonding. ACS Applied Materials & Interfaces, 2019, 11, 37295-37301.	4.0	13
13	Isolation of Single-Wired Transition-Metal Monochalcogenides by Carbon Nanotubes. Nano Letters, 2019, 19, 4845-4851.	4.5	61
14	One-directional thermal transport in densely aligned single-wall carbon nanotube films. Applied Physics Letters, 2019, 115, .	1.5	23
15	Superlubrication by phonon confinement. Physical Review B, 2018, 97, .	1.1	17
16	Ultimate Confinement of Phonon Propagation in Silicon Nanocrystalline Structure. Physical Review Letters, 2018, 120, 045901.	2.9	45
17	Modulating temperature dependence of thermal conductivity by nanostructuring. Japanese Journal of Applied Physics, 2018, 57, 120312.	0.8	2
18	Molecular dynamics study on heat conduction in poly(3,4-ethylenedioxythiophene). Japanese Journal of Applied Physics, 2018, 57, 101601.	0.8	8

#	Article	IF	Citations
19	Modeling Heat Conduction in Nanoporous Silicon with Geometry Distributions. Physical Review Applied, 2018, 10, .	1.5	13
20	Akhiezer mechanism limits coherent heat conduction in phononic crystals. Physical Review B, 2018, 98, .	1.1	14
21	Revisiting PbTe to identify how thermal conductivity is really limited. Physical Review B, 2018, 97, .	1.1	28
22	Thermal phonon engineering by tailored nanostructures. Japanese Journal of Applied Physics, 2018, 57, 080101.	0.8	105
23	Thermal rectification in restructured graphene with locally modulated temperature dependence of thermal conductivity. Physical Review B, 2017, 96, .	1.1	19
24	Designing Nanostructures for Phonon Transport via Bayesian Optimization. Physical Review X, 2017, 7, .	2.8	127
25	Modulation of thermal and thermoelectric transport in individual carbon nanotubes by fullerene encapsulation. Nature Materials, 2017, 16, 892-897.	13.3	99
26	Effects of defects on thermoelectric properties of carbon nanotubes. Physical Review B, 2017, 95, .	1.1	61
27	Phonon-interference resonance effects by nanoparticles embedded in a matrix. Physical Review B, 2017, 96, .	1.1	24
28	Effects of phonon interference through long range interatomic bonds on thermal interface conductance. Low Temperature Physics, 2016, 42, 711-716.	0.2	10
29	Harmonic phonon theory for calculating thermal conductivity spectrum from first-principles dispersion relations. Applied Physics Letters, 2016, 108, .	1.5	8
30	Long-range interatomic forces can minimize heat transfer: From slowdown of longitudinal optical phonons to thermal conductivity minimum. Physical Review B, 2016, 94, .	1.1	5
31	Thermally induced nonlinear vibration of single-walled carbon nanotubes. Physical Review B, 2015, 92, .	1.1	12
32	Phonon transport in perovskite SrTiO₃from first principles. Applied Physics Express, 2015, 8, 071501.	1.1	58
33	Origin of anomalous anharmonic lattice dynamics of lead telluride. Applied Physics Express, 2014, 7, 041801.	1.1	22
34	Probing and tuning inelastic phonon conductance across finite-thickness interface. Applied Physics Express, 2014, 7, 121801.	1.1	49
35	Scaling laws of cumulative thermal conductivity for short and long phonon mean free paths. Applied Physics Letters, 2014, 105, .	1.5	28
36	Influence of mass contrast in alloy phonon scattering. Japanese Journal of Applied Physics, 2014, 53, 021802.	0.8	11

#	Article	IF	Citations
37	Thermal resistance and phonon scattering at the interface between carbon nanotube and amorphous polyethylene. International Journal of Heat and Mass Transfer, 2013, 67, 1024-1029.	2.5	72
38	Phonon transport analysis of silicon germanium alloys using molecular dynamics simulations. Journal of Applied Physics, 2013, 113, .	1.1	28
39	Importance of local force fields on lattice thermal conductivity reduction in PbTe 1âˆ'x Se x alloys. Europhysics Letters, 2013, 102, 46002.	0.7	39
40	Graphene-diamond hybrid structure as spin-polarized conducting wire with thermally efficient heat sinks. Applied Physics Letters, 2012, 100, .	1.5	18
41	Microscopic mechanism of low thermal conductivity in lead telluride. Physical Review B, 2012, 85, .	1.1	115
42	Thermal Conductance of Buckled Carbon Nanotubes. Japanese Journal of Applied Physics, 2012, 51, 015102.	0.8	8
43	Effect of bending buckling of carbon nanotubes on thermal conductivity of carbon nanotube materials. Journal of Applied Physics, 2012, 111, .	1.1	37
44	Phonon conduction in PbSe, PbTe, and PbTe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>âˆ'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>from first-principles calculations. Physical Review B, 2012, 85, .	1.1	463