Zhiting Tian

List of Publications by Year
in descending order

66 papers	3,517 citations	159358 30 h-index	133063 59 g-index
66 all docs	66 docs citations	66 times ranked	3927 citing authors

#	ARTICLE	IF	CITATIONS
1	Resonant bonding leads to low lattice thermal conductivity. Nature Communications, 2014, 5, 3525.	5.8	484
2	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: 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
3	Enhancement of thermoelectric figure-of-merit by resonant states of aluminium doping in lead selenide. Energy and Environmental Science, 2012, 5, 5246-5251.	15.6	372
4	Enhancing phonon transmission across a Si/Ge interface by atomic roughness: First-principles study with the Green's function method. Physical Review B, 2012, 86, .	1.1	232
5	First-principles simulation of electron mean-free-path spectra and thermoelectric properties in silicon. Europhysics Letters, 2015, 109, 57006.	0.7	144
6	On the importance of optical phonons to thermal conductivity in nanostructures. Applied Physics Letters, 2011, 99, .	1.5	137
7	Heat Transfer in Thermoelectric Materials and Devices. Journal of Heat Transfer, 2013, 135, .	1.2	119
8	Thermal Interface Conductance Between Aluminum and Silicon by Molecular Dynamics Simulations. Journal of Computational and Theoretical Nanoscience, 2015, 12, 168-174.	0.4	78
9	COMPREHENSIVE REVIEW OF HEAT TRANSFER IN THERMOELECTRIC MATERIALS AND DEVICES. Annual Review of Heat Transfer, 2014, 17, 425-483.	0.3	72
10	Enhancing solid-liquid interface thermal transport using self-assembled monolayers. Applied Physics Letters, 2015, 106, .	1.5	65
11	Green's function studies of phonon transport across Si/Ge superlattices. Physical Review B, 2014, 89, .	1.1	60
12	Rigorous formalism of anharmonic atomistic Green's function for three-dimensional interfaces. Physical Review B, 2020, 101, .	1.1	60
13	Non-diffusive relaxation of a transient thermal grating analyzed with the Boltzmann transport equation. Journal of Applied Physics, 2013, 114, 104302.	1.1	58
14	A molecular dynamics study of effective thermal conductivity in nanocomposites. International Journal of Heat and Mass Transfer, 2013, 61, 577-582.	2.5	57
15	Singleâ€Crystal SnSe Thermoelectric Fibers via Laserâ€Induced Directional Crystallization: From 1D Fibers to Multidimensional Fabrics. Advanced Materials, 2020, 32, e2002702.	11.1	57
16	Effects of Aperiodicity and Roughness on Coherent Heat Conduction in Superlattices. Nanoscale and Microscale Thermophysical Engineering, 2015, 19, 272-278.	1.4	56
17	New horizons in thermoelectric materials: Correlated electrons, organic transport, machine learning, and more. Journal of Applied Physics, 2019, 125, .	1.1	50
18	Effects of polymer topology and morphology on thermal transport: A molecular dynamics study of bottlebrush polymers. Applied Physics Letters, 2017, 110, .	1.5	46

#	Article	IF	Citations
19	Effects of polymer chain confinement on thermal conductivity of ultrathin amorphous polystyrene films. Applied Physics Letters, 2015, 107, .	1.5	45
20	Effect of aluminum on the thermoelectric properties of nanostructured PbTe. Nanotechnology, 2013, 24, 345705.	1.3	44
21	A modeling comparison between a two-stage and three-stage cascaded thermoelectric generator. Journal of Power Sources, 2017, 365, 266-272.	4.0	43
22	Thermal conductance across harmonic-matched epitaxial Al-sapphire heterointerfaces. Communications Physics, 2020, 3, .	2.0	41
23	Phonon wave-packet interference and phonon tunneling based energy transport across nanostructured thin films. Applied Physics Letters, 2010, 96, .	1.5	39
24	Chain rotation significantly reduces thermal conductivity of single-chain polymers. Journal of Materials Research, 2019, 34, 126-133.	1.2	39
25	Unusually low and density-insensitive thermal conductivity of three-dimensional gyroid graphene. Nanoscale, 2017, 9, 13477-13484.	2.8	38
26	Applications and Impacts of Nanoscale Thermal Transport in Electronics Packaging. Journal of Electronic Packaging, Transactions of the ASME, 2021, 143, .	1.2	38
27	Thermoelectric properties of crystalline and amorphous polypyrrole: A computational study. Applied Thermal Engineering, 2017, 111, 1441-1447.	3.0	34
28	Significantly High Thermal Rectification in an Asymmetric Polymer Molecule Driven by Diffusive versus Ballistic Transport. Nano Letters, 2018, 18, 43-48.	4.5	34
29	Thermal Switching of Thermoresponsive Polymer Aqueous Solutions. ACS Macro Letters, 2018, 7, 53-58.	2.3	33
30	Supercompliant and Soft <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:msub><mml:mrow><mml:mi>CH</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mm Physical Review Letters, 2019, 123, 155901.	2.9	33
31	Thermal Transport in Polymers: A Review. Journal of Heat Transfer, 2021, 143, .	1.2	32
32	Boron arsenide phonon dispersion from inelastic x-ray scattering: Potential for ultrahigh thermal conductivity. Physical Review B, 2016, 94, .	1.1	29
33	A comprehensive model of a lead telluride thermoelectric generator. Energy, 2018, 142, 813-821.	4.5	29
34	The importance of van der Waals interactions to thermal transport in Graphene-C60 heterostructures. Carbon, 2019, 148, 196-203.	5.4	26
35	Thermal boundary conductance across epitaxial metal/sapphire interfaces. Physical Review B, 2020, 102, .	1.1	26
36	Remarkably Weak Anisotropy in Thermal Conductivity of Two-Dimensional Hybrid Perovskite Butylammonium Lead Iodide Crystals. Nano Letters, 2021, 21, 3708-3714.	4.5	26

#	Article	IF	Citations
37	A new dimensionless number for thermoelectric generator performance. Applied Thermal Engineering, 2019, 152, 858-864.	3.0	24
38	Direct observation of phonon Anderson localization in Si/Ge aperiodic superlattices. Physical Review B, 2021, 103, .	1.1	24
39	Thermal Transport Properties of Black Phosphorus: A Topical Review. Nanoscale and Microscale Thermophysical Engineering, 2017, 21, 45-57.	1.4	20
40	Modeling assisted evaluation of direct electricity generation from waste heat of wastewater via a thermoelectric generator. Science of the Total Environment, 2018, 635, 1215-1224.	3.9	19
41	Simple Theoretical Model for Thermal Conductivity of Crystalline Polymers. ACS Applied Polymer Materials, 2019, 1, 2566-2570.	2.0	17
42	Importance of the Hubbard correction on the thermal conductivity calculation of strongly correlated materials: a case study of ZnO. Scientific Reports, 2016, 6, 36875.	1.6	16
43	Tuning the material properties of a water-soluble ionic polymer using different counterions for material extrusion additive manufacturing. Polymer, 2019, 176, 283-292.	1.8	16
44	Anderson Localization for Better Thermoelectrics?. ACS Nano, 2019, 13, 3750-3753.	7.3	16
45	Tunable thermal conductivity of Ï€-conjugated two-dimensional polymers. Nanoscale, 2018, 10, 13924-13929.	2.8	15
46	Experimental Phonon Dispersion and Lifetimes of Tetragonal CH3NH3PbI3 Perovskite Crystals. Journal of Physical Chemistry Letters, 2019, 10, 1-6.	2.1	15
47	Inelastic x-ray scattering measurements of phonon dispersion and lifetimes in PbTe_{1âˆ’<i>x</i>}Se<i>_x</i>alloys. Journal of Physics Condensed Matter, 2015, 27, 375403.	0.7	14
48	Modeling of a Thermoelectric Generator Device. , 0, , .		14
49	High thermal conductivity and ultrahigh thermal boundary conductance of homoepitaxial AlN thin films. APL Materials, 2022, 10, .	2.2	12
50	Ultrahigh thermal conductivity in three-dimensional covalent organic frameworks. Materials Today Physics, 2021, 21, 100536.	2.9	9
51	Large thermal conductivity of boron suboxides despite complex structures. Applied Physics Letters, 2021, 118, .	1.5	8
52	Thermal Percolation in Well-Defined Nanocomposite Thin Films. ACS Applied Materials & Interfaces, 2022, 14, 14579-14587.	4.0	7
53	Thermomechanical Analysis of a Bioâ€Inspired Lightweight Multifunctional Structure. Advanced Engineering Materials, 2020, 22, 2000371.	1.6	5
54	Hydrogen Bonds Significantly Enhance Out-of-Plane Thermal and Electrical Transport in 2D Graphamid: Implications for Energy Conversion and Storage. ACS Applied Nano Materials, 2020, 3, 11090-11097.	2.4	5

#	Article	IF	Citations
55	A Molecular Dynamics Study of Thermal Conductivity in Nanocomposites via the Phonon Wave Packet Method. , 2009, , .		4
56	Phonon Transmission Across Silicon Grain Boundaries by Atomistic Green's Function Method. Frontiers in Physics, 2019, 7, .	1.0	4
57	Advances in phase-change materials. Journal of Applied Physics, 2021, 130, .	1.1	4
58	Pore-Confined Polymers Enhance the Thermal Conductivity of Polymer Nanocomposites. ACS Macro Letters, 2022, 11, 116-120.	2.3	3
59	Topological phonon-magnon hybrid excitations in a two-dimensional honeycomb ferromagnet. Physical Review B, 2021, 104, .	1.1	2
60	Thermal interface doping strategies based on Bayesian optimization. Surfaces and Interfaces, 2022, 30, 101847.	1.5	2
61	Toward enhancing thermal conductivity of polymer-based thin films for microelectronics cooling. , 2017, , .		1
62	Doping-Enabled Reconfigurable Strongly Correlated Phase in a Quasi-2D Perovskite. Journal of Physical Chemistry Letters, 2021, 12, 5091-5098.	2.1	1
63	A Multi-Mode Four-Switch Buck-Boost Derived DC-DC Converter with an Intermediate Battery Interface for Solar Thermoelectric Generation. , 2021, , .		1
64	Thermomechanical Analysis of a Bioâ€Inspired Lightweight Multifunctional Structure. Advanced Engineering Materials, 2020, 22, 2070050.	1.6	0
65	Modeling of Organic Thermoelectric Material Properties. , 2021, , 241-258.		0
66	Introduction to the atomistic Greenâ€™s function approach: application to nanoscale phonon transport. , 0, , 4-1-4-26.		0