Xiaoliang Zhang

List of Publications by Year
in descending order

71 papers	2,707 citations	186265 28 h-index	182427 51 g-index
73 all docs	73 docs citations	73 times ranked	3146 citing authors

#	Article	IF	Citations
1	Thermal transport mechanism for different structure. , 2022, , 47-113.		0
2	Broad low-frequency phonon resonance for increased across-tube heat transport. Physical Review B, 2022, 105, .	3.2	5
3	Systematic investigations on doping dependent thermal transport properties of single crystal silicon by time-domain thermoreflectance measurements. International Journal of Thermal Sciences, 2022, 177, 107558.	4.9	9
4	The in-depth description of phonon transport mechanisms for XC (X=Si, Ge) under hydrostatic pressure: Considering pressure-induced phase transitions. International Journal of Heat and Mass Transfer, 2022, 191, 122851.	4.8	4
5	Zintl Phase Compounds Mg3Sb2âˆ’xBix (x = 0, 1, and 2) Monolayers: Electronic, Phonon and Thermoelectric Properties From ab Initio Calculations. Frontiers in Mechanical Engineering, 2022, 8, .	1.8	7
6	The Abnormally Excellent Figure of Merit of 14,14,18-Graphyne at Room Temperature: A Study on the Thermoelectric Characteristic of Graphyne. ACS Applied Energy Materials, 2022, 5, 6363-6372.	5.1	6
7	Giant Manipulation of Phonon Hydrodynamics in Ferroelectric Bilayer Boron Nitride at Room Temperature and Beyond. ACS Applied Energy Materials, 2022, 5, 8781-8790.	5.1	4
8	The first-principles and BTE investigation of phonon transport in 1T-TiSe₂. Physical Chemistry Chemical Physics, 2021, 23, 1627-1638.	2.8	9
9	Ultralow lattice thermal conductivity and dramatically enhanced thermoelectric properties of monolayer InSe induced by an external electric field. Physical Chemistry Chemical Physics, 2021, 23, 13633-13646.	2.8	10
10	Ironâ€"oxygen covalency in perovskites to dominate syngas yield in chemical looping partial oxidation. Journal of Materials Chemistry A, 2021, 9, 13008-13018.	10.3	43
11	Effects of spinâ€"phonon coupling on two-dimensional ferromagnetic semiconductors: a case study of iron and ruthenium trihalides. Nanoscale, 2021, 13, 7714-7722.	5.6	13
12	The effective regulation of nanotwinning on the multichannel thermal transport in hybrid organicâ€"inorganic halide perovskite. Nano Energy, 2021, 82, 105747.	16.0	13
13	Study on the interfacial thermal conductance between metals and phase change materials. International Journal of Heat and Mass Transfer, 2021, 168, 120823.	4.8	6
14	Pressure dependent thermoreflectance spectroscopy induced by interband transitions in metallic nano-film. IScience, 2021, 24, 102990.	4.1	5
15	Phonon transport anomaly in metavalent bonded materials: contradictory to the conventional theory. Journal of Materials Science, 2021, 56, 18534-18549.	3.7	11
16	Ultra-high thermal conductivities of tetrahedral carbon allotropes with non-simple structures. Physical Chemistry Chemical Physics, 2021, 23, 24550-24556.	2.8	2
17	Potential thermoelectric materials: first-principles prediction of low lattice thermal conductivity of two-dimensional (2D) orthogonal ScX₂ (X = C and N) compounds. Physical Chemistry Chemical Physics, 2021, 23, 23718-23729.	2.8	2
18	Why thermal conductivity of CaO is lower than that of CaS: a study from the perspective of phonon splitting of optical mode. Nanotechnology, 2021, 32, 025709.	2.6	13

#	Article	IF	Citations
19	Molecular dynamics simulation of effects of nanoparticles on frictional heating and tribological properties at various temperatures. Friction, 2020, 8, 531-541.	6.4	31
20	A first-principles study of the thermoelectric properties of rhombohedral GeSe. Physical Chemistry Chemical Physics, 2020, 22, 1911-1922.	2.8	32
21	Ultra-low thermal conductivity and high thermoelectric performance of two-dimensional triphosphides (InP₃, GaP₃, SbP₃ and SnP₃): a comprehensive first-principles study. Nanoscale, 2020, 12, 3330-3342.	5.6	68
22	Low thermal conductivity of peanut-shaped carbon nanotube and its insensitive response to uniaxial strain. Nanotechnology, 2020, 31, 115701.	2.6	4
23	Tailoring phononic, electronic, and thermoelectric properties of orthorhombic GeSe through hydrostatic pressure. Scientific Reports, 2019, 9, 9490.	3.3	21
24	Self-Assembled Monolayers for the Polymer/Semiconductor Interface with Improved Interfacial Thermal Management. ACS Applied Materials & Interfaces, 2019, 11, 42708-42714.	8.0	27
25	Efficient thermal conductivity modulation by manipulating interlayer interactions: A comparative study of bilayer graphene and graphite. Journal of Applied Physics, 2019, 126, .	2.5	21
26	Effects of tensile strain and finite size on thermal conductivity in monolayer WSe₂. Physical Chemistry Chemical Physics, 2019, 21, 468-477.	2.8	60
27	Disparate strain response of the thermal transport properties of bilayer penta-graphene as compared to that of monolayer penta-graphene. Physical Chemistry Chemical Physics, 2019, 21, 15647-15655.	2.8	28
28	Unexpected anisotropy of (14,14,14)-Graphyne: A comprehensive study on the thermal transport properties of graphyne based nanomaterials. Carbon, 2019, 143, 189-199.	10.3	23
29	Extremely Low Thermal Conductivity of Polycrystalline Silicene. Journal of Physical Chemistry C, 2018, 122, 9220-9228.	3.1	20
30	In-situ Cutting of Graphene into Short Nanoribbons with Applications to Ni-Zn Batteries. Scientific Reports, 2018, 8, 5657.	3.3	15
31	Alkaline treatment of used carbon-brush anodes for restoring power generation of microbial fuel cells. RSC Advances, 2018, 8, 36754-36760.	3.6	5
32	Thermal transport crossover from crystalline to partial-crystalline partial-liquid state. Nature Communications, 2018, 9, 4712.	12.8	39
33	Pressure tuning of the thermal conductivity of gallium arsenide from first-principles calculations. Physical Chemistry Chemical Physics, 2018, 20, 30331-30339.	2.8	16
34	Anomalous pressure effect on the thermal conductivity of ZnO, GaN, and AlN from first-principles calculations. Physical Review B, 2018, 98, .	3.2	42
35	Iodine nanoparticle-enhancing electrical and thermal transport for carbon nanotube fibers. Applied Thermal Engineering, 2018, 141, 913-920.	6.0	45
36	Nonmonotonic Diameter Dependence of Thermal Conductivity of Extremely Thin Si Nanowires: Competition between Hydrodynamic Phonon Flow and Boundary Scattering. Nano Letters, 2017, 17, 1269-1276.	9.1	56

#	Article	IF	Citations
37	Thermal transport in novel carbon allotropes with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:m or <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:m hybridization: An <i>ab initio</i> study. Physical Review B, 2017, 95, .	3.2	42
38	Thermal stability and thermal conductivity of phosphorene in phosphorene/graphene van der Waals heterostructures. Physical Chemistry Chemical Physics, 2017, 19, 17180-17186.	2.8	37
39	Molecular Origin of Electric Double-Layer Capacitance at Multilayer Graphene Edges. Journal of Physical Chemistry Letters, 2017, 8, 153-160.	4.6	52
40	Giant reduction in thermal conductivity of extended type-I silicon clathrates and prominent thermal effect of 6d guest Wyckoff positions. Journal of Materials Chemistry C, 2017, 5, 10578-10588.	5.5	18
41	Metric for strong intrinsic fourth-order phonon anharmonicity. Physical Review B, 2017, 95, .	3.2	26
42	Theoretical prediction of thermal transport in BC 2 N monolayer. Nano Energy, 2017, 38, 249-256.	16.0	44
43	Tailoring thermal conductivity of AlN films by periodically aligned surface nano-grooves. Applied Physics Letters, 2016, 109, 133107.	3.3	2
44	Insight into the collective vibrational modes driving ultralow thermal conductivity of perovskite solar cells. Physical Review B, 2016, 94, .	3.2	52
45	Methodology for determining the electronic thermal conductivity of metals via direct nonequilibrium<i>ab initio</i>molecular dynamics. Physical Review B, 2016, 94, .	3.2	17
46	Robustly Engineering Thermal Conductivity of Bilayer Graphene by Interlayer Bonding. Scientific Reports, 2016, 6, 22011.	3.3	27
47	Resonant bonding driven giant phonon anharmonicity and low thermal conductivity of phosphorene. Physical Review B, 2016, 94, .	3.2	114
48	An excellent candidate for largely reducing interfacial thermal resistance: a nano-confined mass graded interface. Nanoscale, 2016, 8, 1994-2002.	5.6	59
49	Low thermal conductivity of graphyne nanotubes from molecular dynamics study. Physical Review B, 2015, 91, .	3.2	65
50	Quantitatively analyzing phonon spectral contribution of thermal conductivity based on nonequilibrium molecular dynamics simulations. I. From space Fourier transform. Physical Review B, 2015, 92, .	3.2	62
51	Tuning thermal conductivity of crystalline polymer nanofibers by interchain hydrogen bonding. RSC Advances, 2015, 5, 87981-87986.	3.6	54
52	Bilateral substrate effect on the thermal conductivity of two-dimensional silicon. Nanoscale, 2015, 7, 6014-6022.	5.6	80
53	Adhesion and friction studies on silicon dioxide nanoparticle-textured surfaces prepared by the spin-coating process. Journal of Adhesion Science and Technology, 2015, 29, 1014-1025.	2.6	2
54	The unexpected non-monotonic inter-layer bonding dependence of the thermal conductivity of bilayered boron nitride. Nanoscale, 2015, 7, 7143-7150.	5.6	24

#	Article	IF	Citations
55	Decoupling and matching network for monopole antenna arrays in ultrahigh field MRI. Quantitative Imaging in Medicine and Surgery, 2015, 5, 546-51.	2.0	4
56	Thermal conductivity of silicene calculated using an optimized Stillinger-Weber potential. Physical Review B, 2014, 89, .	3.2	213
57	Degradation of plasma-treated poly(p-phenylene benzobisoxazole) fiber and its adhesion with bismaleimide resin. RSC Advances, 2014, 4, 3893-3899.	3.6	5
58	Magnetic wall decoupling method for monopole coil array in ultrahigh field MRI: a feasibility test. Quantitative Imaging in Medicine and Surgery, 2014, 4, 79-86.	2.0	22
59	A monopole/loop dual-tuned RF coil for ultrahigh field MRI. Quantitative Imaging in Medicine and Surgery, 2014, 4, 225-31.	2.0	14
60	Thermal Conductivity of Zeolitic Imidazolate Framework-8: A Molecular Simulation Study. Journal of Physical Chemistry C, 2013, 117, 18441-18447.	3.1	117
61	Energy efficient transmission in relay-based cooperative networks using auction game. , 2013, , .		5
62	Anomalous thermal response of silicene to uniaxial stretching. Physical Review B, 2013, 87, .	3.2	179
63	Thermal rectification at silicon/horizontally aligned carbon nanotube interfaces. Journal of Applied Physics, 2013, 113, 194307.	2.5	51
64	Multidimensional resource allocation strategy for high-speed railway MIMO-OFDM system. , 2012, , .		5
65	A Low-Frequency Wave Motion Mechanism Enables Efficient Energy Transport in Carbon Nanotubes at High Heat Fluxes. Nano Letters, 2012, 12, 3410-3416.	9.1	47
66	Sum rate maximization antenna selection via discrete stochastic approximation in MIMO two-way AF relay with imperfect CSI. , 2012, , .		5
67	An energy efficiency power and sub-carrier allocation for the downlink multi-user CoMP in multi-cell systems. , 2012, , .		5
68	Nonlinear optical properties of graphene-based materials. Science Bulletin, 2012, 57, 2971-2982.	1.7	144
69	3-[3-(3-florophenyl-2-propyn-1-ylthio)-1, 2, 5-thiadiazol-4-yl]-1, 2, 5, 6-tetrahydro-1- methylpyridine oxalate, a novel xanomeline derivative, improves neural cells proliferation and survival in adult mice. Neural Regeneration Research, 2012, 7, 24-30.	3.0	3
70	Thermal conductivity reduction in core-shell nanowires. Physical Review B, 2011, 84, .	3.2	92
71	Nonlinear optical properties of graphene oxide in nanosecond and picosecond regimes. Applied Physics Letters, 2009, 94, .	3.3	304