Xiaoliang Zhang

List of Publications by Year
in descending order

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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	Nonlinear optical properties of graphene oxide in nanosecond and picosecond regimes. Applied Physics Letters, 2009, 94, .	3.3	304
2	Thermal conductivity of silicene calculated using an optimized Stillinger-Weber potential. Physical Review B, 2014, 89, .	3.2	213
3	Anomalous thermal response of silicene to uniaxial stretching. Physical Review B, 2013, 87, .	3.2	179
4	Nonlinear optical properties of graphene-based materials. Science Bulletin, 2012, 57, 2971-2982.	1.7	144
5	Thermal Conductivity of Zeolitic Imidazolate Framework-8: A Molecular Simulation Study. Journal of Physical Chemistry C, 2013, 117, 18441-18447.	3.1	117
6	Resonant bonding driven giant phonon anharmonicity and low thermal conductivity of phosphorene. Physical Review B, 2016, 94, .	3.2	114
7	Thermal conductivity reduction in core-shell nanowires. Physical Review B, 2011, 84, .	3.2	92
8	Bilateral substrate effect on the thermal conductivity of two-dimensional silicon. Nanoscale, 2015, 7, 6014-6022.	5.6	80
9	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
10	Low thermal conductivity of graphyne nanotubes from molecular dynamics study. Physical Review B, 2015, 91, .	3.2	65
11	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
12	Effects of tensile strain and finite size on thermal conductivity in monolayer WSe₂. Physical Chemistry Chemical Physics, 2019, 21, 468-477.	2.8	60
13	An excellent candidate for largely reducing interfacial thermal resistance: a nano-confined mass graded interface. Nanoscale, 2016, 8, 1994-2002.	5.6	59
14	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
15	Tuning thermal conductivity of crystalline polymer nanofibers by interchain hydrogen bonding. RSC Advances, 2015, 5, 87981-87986.	3.6	54
16	Insight into the collective vibrational modes driving ultralow thermal conductivity of perovskite solar cells. Physical Review B, 2016, 94, .	3.2	52
17	Molecular Origin of Electric Double-Layer Capacitance at Multilayer Graphene Edges. Journal of Physical Chemistry Letters, 2017, 8, 153-160.	4.6	52
18	Thermal rectification at silicon/horizontally aligned carbon nanotube interfaces. Journal of Applied Physics, 2013, 113, 194307.	2.5	51

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19	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
20	Iodine nanoparticle-enhancing electrical and thermal transport for carbon nanotube fibers. Applied Thermal Engineering, 2018, 141, 913-920.	6.0	45
21	Theoretical prediction of thermal transport in BC 2 N monolayer. Nano Energy, 2017, 38, 249-256.	16.0	44
22	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
23	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 ab initio study. Physical Review B, 2017, 95, .	3.2	42
24	Anomalous pressure effect on the thermal conductivity of ZnO, GaN, and AlN from first-principles calculations. Physical Review B, 2018, 98, .	3.2	42
25	Thermal transport crossover from crystalline to partial-crystalline partial-liquid state. Nature Communications, 2018, 9, 4712.	12.8	39
26	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
27	A first-principles study of the thermoelectric properties of rhombohedral GeSe. Physical Chemistry Chemical Physics, 2020, 22, 1911-1922.	2.8	32
28	Molecular dynamics simulation of effects of nanoparticles on frictional heating and tribological properties at various temperatures. Friction, 2020, 8, 531-541.	6.4	31
29	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
30	Robustly Engineering Thermal Conductivity of Bilayer Graphene by Interlayer Bonding. Scientific Reports, 2016, 6, 22011.	3.3	27
31	Self-Assembled Monolayers for the Polymer/Semiconductor Interface with Improved Interfacial Thermal Management. ACS Applied Materials & Interfaces, 2019, 11, 42708-42714.	8.0	27
32	Metric for strong intrinsic fourth-order phonon anharmonicity. Physical Review B, 2017, 95, .	3.2	26
33	The unexpected non-monotonic inter-layer bonding dependence of the thermal conductivity of bilayered boron nitride. Nanoscale, 2015, 7, 7143-7150.	5.6	24
34	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
35	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
36	Tailoring phononic, electronic, and thermoelectric properties of orthorhombic GeSe through hydrostatic pressure. Scientific Reports, 2019, 9, 9490.	3.3	21

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37	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
38	Extremely Low Thermal Conductivity of Polycrystalline Silicene. Journal of Physical Chemistry C, 2018, 122, 9220-9228.	3.1	20
39	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
40	Methodology for determining the electronic thermal conductivity of metals via direct nonequilibriumab initiomolecular dynamics. Physical Review B, 2016, 94, .	3.2	17
41	Pressure tuning of the thermal conductivity of gallium arsenide from first-principles calculations. Physical Chemistry Chemical Physics, 2018, 20, 30331-30339.	2.8	16
42	In-situ Cutting of Graphene into Short Nanoribbons with Applications to Ni-Zn Batteries. Scientific Reports, 2018, 8, 5657.	3.3	15
43	A monopole/loop dual-tuned RF coil for ultrahigh field MRI. Quantitative Imaging in Medicine and Surgery, 2014, 4, 225-31.	2.0	14
44	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
45	The effective regulation of nanotwinning on the multichannel thermal transport in hybrid organicâ€“inorganic halide perovskite. Nano Energy, 2021, 82, 105747.	16.0	13
46	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
47	Phonon transport anomaly in metavalent bonded materials: contradictory to the conventional theory. Journal of Materials Science, 2021, 56, 18534-18549.	3.7	11
48	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
49	The first-principles and BTE investigation of phonon transport in 1T-TiSe₂. Physical Chemistry Chemical Physics, 2021, 23, 1627-1638.	2.8	9
50	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
51	Zintl Phase Compounds Mg3Sb2â^'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
52	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
53	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
54	Multidimensional resource allocation strategy for high-speed railway MIMO-OFDM system. , 2012, , .		5

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55	Sum rate maximization antenna selection via discrete stochastic approximation in MIMO two-way AF relay with imperfect CSI. , 2012, , .		5
56	An energy efficiency power and sub-carrier allocation for the downlink multi-user CoMP in multi-cell systems. , 2012, , .		5
57	Energy efficient transmission in relay-based cooperative networks using auction game. , 2013, , .		5
58	Degradation of plasma-treated poly(p-phenylene benzobisoxazole) fiber and its adhesion with bismaleimide resin. RSC Advances, 2014, 4, 3893-3899.	3.6	5
59	Alkaline treatment of used carbon-brush anodes for restoring power generation of microbial fuel cells. RSC Advances, 2018, 8, 36754-36760.	3.6	5
60	Pressure dependent thermoreflectance spectroscopy induced by interband transitions in metallic nano-film. IScience, 2021, 24, 102990.	4.1	5
61	Broad low-frequency phonon resonance for increased across-tube heat transport. Physical Review B, 2022, 105, .	3.2	5
62	Low thermal conductivity of peanut-shaped carbon nanotube and its insensitive response to uniaxial strain. Nanotechnology, 2020, 31, 115701.	2.6	4
63	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
64	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
65	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
66	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
67	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
68	Tailoring thermal conductivity of AlN films by periodically aligned surface nano-grooves. Applied Physics Letters, 2016, 109, 133107.	3.3	2
69	Ultra-high thermal conductivities of tetrahedral carbon allotropes with non-simple structures. Physical Chemistry Chemical Physics, 2021, 23, 24550-24556.	2.8	2
70	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
71	Thermal transport mechanism for different structure. , 2022, , 47-113.		0