Guang-Zhao Qin

List of Publications by Year
in descending order

		185998	149479
81 papers	3,357 citations	28 h-index	56 g-index
83 all docs	83 docs citations	83 times ranked	3165 citing authors

#	Article	IF	Citations
1	Enhancing thermal conductivity of silicone rubber composites by in-situ constructing SiC networks: A finite-element study based on first principles calculation. Nano Research, 2023, 16, 1430-1440.	5.8	13
2	Two-dimensional layered MSi₂N₄ (M = Mo, W) as promising thermal management materials: a comparative study. Physical Chemistry Chemical Physics, 2022, 24, 3086-3093.	1.3	24
3	Two-dimensional buckling structure induces the ultra-low thermal conductivity: a comparative study of the group GaX (X = N, P, As). Journal of Materials Chemistry C, 2022, 10, 1436-1444.	2.7	13
4	Abnormal enhancement of thermal conductivity by planar structure: A comparative study of graphene-like materials. International Journal of Thermal Sciences, 2022, 174, 107438.	2.6	14
5	Measurement of the thermal conductivity of the components of biodiesels: Methyl laurate and methyl myristate. Fluid Phase Equilibria, 2022, 556, 113409.	1.4	11
6	Experimental Studies of Thermal Conductivity of Three Biodiesel Compounds: Methyl Pentanoate, Methyl Octanoate, and Methyl Decanoate. Journal of Chemical & Engineering Data, 2022, 67, 45-53.	1.0	12
7	The consistent behavior of negative Poisson's ratio with interlayer interactions. Materials Advances, 2022, 3, 4334-4341.	2.6	7
8	Half-negative Poissonâ€™s ratio in graphene+ with intrinsic Dirac nodal loop. Cell Reports Physical Science, 2022, 3, 100790.	2.8	14
9	Hydrodynamically enhanced thermal transport due to strong interlayer interactions: A case study of strained bilayer graphene. Physical Review B, 2022, 105, .	1.1	15
10	Accessing negative Poissonâ€™s ratio of graphene by machine learning interatomic potentials. Nanotechnology, 2022, 33, 275710.	1.3	3
11	Thermal conductivity of polydisperse hexagonal BN/polyimide composites: Iterative EMT model and machine learning based on first principles investigation. Chemical Engineering Journal, 2022, 437, 135438.	6.6	32
12	Anisotropic thermal and electrical transport properties induced high thermoelectric performance in an Ir₂Cl₂O₂ monolayer. Physical Chemistry Chemical Physics, 2022, 24, 11268-11277.	1.3	17
13	The stable behavior of low thermal conductivity in 1T-sandwich structure with different components. Journal of Applied Physics, 2022, 131, .	1.1	2
14	Electrically-driven robust tuning of lattice thermal conductivity. Physical Chemistry Chemical Physics, 2022, 24, 17479-17484.	1.3	5
15	N-doped graphene film prepared by rapid thermal shock for ultra-sensitive temperature reading. Applied Surface Science, 2022, 600, 154117.	3.1	0
16	Multifunctional two-dimensional graphene-like boron nitride allotrope of g-B3N5: A competitor to g-BN?. Journal of Alloys and Compounds, 2022, 921, 165913.	2.8	3
17	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.	1.3	10
18	Novel optimization perspectives for thermoelectric properties based on Rashba spin splitting: a mini review. Nanoscale, 2021, 13, 18032-18043.	2.8	10

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19	The exceptionally high thermal conductivity after â€˜alloyingâ€™ two-dimensional gallium nitride (GaN) and aluminum nitride (AlN). Nanotechnology, 2021, 32, 135401.	1.3	22
20	Computationally Guided Synthesis of High Performance Thermoelectric Materials: Defect Engineering in AgGaTe₂. Advanced Electronic Materials, 2021, 7, 2001262.	2.6	10
21	Intrinsically low lattice thermal conductivity of monolayer hexagonal aluminum nitride (h-AlN) from first-principles: A comparative study with graphene. International Journal of Thermal Sciences, 2021, 162, 106772.	2.6	23
22	Measurements and calculations of thermal conductivity for liquid n-octane and n-decane. Fluid Phase Equilibria, 2021, 533, 112940.	1.4	23
23	Uniform Strain-Dependent Thermal Conductivity of Pentagonal and Hexagonal Silicene. Frontiers in Materials, 2021, 8, .	1.2	1
24	Measurement and modeling of thermal conductivity for short chain methyl esters: Methyl butyrate and methyl caproate. Journal of Chemical Thermodynamics, 2021, 159, 106486.	1.0	22
25	Different Effects of Mg and Si Doping on the Thermal Transport of Gallium Nitride. Frontiers in Materials, 2021, 8, .	1.2	9
26	Two-dimensional Al2I2Se2: A promising anisotropic thermoelectric material. Journal of Alloys and Compounds, 2021, 876, 160191.	2.8	37
27	On the microscopic view of the low thermal conductivity of buckling two-dimensional materials from molecular dynamics. Chemical Physics Letters, 2021, 780, 138954.	1.2	0
28	Thermal conductivity measurements for long-chain n-alkanes at evaluated temperature and pressure: n-dodecane and n-tetradecane. Journal of Chemical Thermodynamics, 2021, 162, 106566.	1.0	18
29	Ultra-high thermal conductivities of tetrahedral carbon allotropes with non-simple structures. Physical Chemistry Chemical Physics, 2021, 23, 24550-24556.	1.3	2
30	Unique Arrangement of Atoms Leads to Low Thermal Conductivity: A Comparative Study of Monolayer Mg₂C. Journal of Physical Chemistry Letters, 2021, 12, 10353-10358.	2.1	7
31	Quasi-bonding driven abnormal isotropic thermal transport in intrinsically anisotropic nanostructure: a case of study of a phosphorus nanotube array. Nanotechnology, 2020, 31, 095704.	1.3	3
32	Negative Poissonâ€™s ratio in two-dimensional honeycomb structures. Npj Computational Materials, 2020, 6, .	3.5	56
33	Giant effect of spinâ€"lattice coupling on the thermal transport in two-dimensional ferromagnetic CrI₃. Journal of Materials Chemistry C, 2020, 8, 3520-3526.	2.7	31
34	Thermal transport properties of GaN with biaxial strain and electron-phonon coupling. Journal of Applied Physics, 2020, 127, .	1.1	59
35	Rashba spin splitting and perpendicular magnetic anisotropy of Gd-adsorbed zigzag graphene nanoribbon modulated by edge states under external electric fields. Physical Review B, 2020, 101, .	1.1	11
36	First-principles study of electronic, optical and thermal transport properties of group IIIâ€"VI monolayer MX (Mâ€‰=â€‰Ga, In; Xâ€‰=â€‰S, Se). Journal of Applied Physics, 2019, 125, .	1.1	61

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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, .	1.1	21
38	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.	1.3	28
39	Exploring T-carbon for energy applications. Nanoscale, 2019, 11, 5798-5806.	2.8	38
40	Two-dimensional magnetic metalâ€“organic frameworks with the Shastry-Sutherland lattice. Chemical Science, 2019, 10, 10381-10387.	3.7	21
41	A C20 fullerene-based sheet with ultrahigh thermal conductivity. Nanoscale, 2018, 10, 6099-6104.	2.8	12
42	Lone-Pair Electrons Do Not Necessarily Lead to Low Lattice Thermal Conductivity: An Exception of Two-Dimensional Penta-CN₂. Journal of Physical Chemistry Letters, 2018, 9, 2474-2483.	2.1	38
43	Thermal transport properties of monolayer phosphorene: a mini-review of theoretical studies. Frontiers in Energy, 2018, 12, 87-96.	1.2	6
44	Accelerating evaluation of converged lattice thermal conductivity. Npj Computational Materials, 2018, 4, .	3.5	50
45	Thermal Transport in Phosphorene. Small, 2018, 14, e1702465.	5.2	36
46	Bond saturation significantly enhances thermal energy transport in two-dimensional pentagonal materials. Nano Energy, 2018, 45, 1-9.	8.2	15
47	Methodology Perspective of Computing Thermal Transport in Low-Dimensional Materials and Nanostructures: The Old and the New. ACS Omega, 2018, 3, 3278-3284.	1.6	11
48	Unconventional thermal transport enhancement with large atom mass: a comparative study of 2D transition dichalcogenides. 2D Materials, 2018, 5, 015022.	2.0	12
49	Lone-pair electrons induced anomalous enhancement of thermal transport in strained planar two-dimensional materials. Nano Energy, 2018, 50, 425-430.	8.2	55
50	On the diversity in the thermal transport properties of graphene: A first-principles-benchmark study testing different exchange-correlation functionals. Computational Materials Science, 2018, 151, 153-159.	1.4	34
51	Dependence of phonon transport properties with stacking thickness in layered ZnO. Journal Physics D: Applied Physics, 2018, 51, 315303.	1.3	9
52	Origin of anisotropic negative Poisson's ratio in graphene. Nanoscale, 2018, 10, 10365-10370.	2.8	43
53	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, .	1.1	42
54	Low thermal conductivity of monolayer ZnO and its anomalous temperature dependence. Physical Chemistry Chemical Physics, 2017, 19, 12882-12889.	1.3	55

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55	External electric field driving the ultra-low thermal conductivity of silicene. Nanoscale, 2017, 9, 7227-7234.	2.8	69
56	Orbitally driven low thermal conductivity of monolayer gallium nitride (GaN) with planar honeycomb structure: a comparative study. Nanoscale, 2017, 9, 4295-4309.	2.8	155
57	Metric for strong intrinsic fourth-order phonon anharmonicity. Physical Review B, 2017, 95, .	1.1	26
58	Unconventional magnetic anisotropy in one-dimensional Rashba system realized by adsorbing Gd atom on zigzag graphene nanoribbons. Nanoscale, 2017, 9, 11657-11666.	2.8	15
59	Anomalously temperature-dependent thermal conductivity of monolayer GaN with large deviations from the traditional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mi>T</mml:mi></mml:ma law. Physical Review B, 2017, 95, .	1.1	101
60	Unprecedented mechanical response of the lattice thermal conductivity of auxetic carbon crystals. Carbon, 2017, 122, 374-380.	5.4	12
61	Two-dimensional silicon. Series in Materials Science and Engineering, 2017, , 43-76.	0.1	0
62	Tinselenidene: a Two-dimensional Auxetic Material with Ultralow Lattice Thermal Conductivity and Ultrahigh Hole Mobility. Scientific Reports, 2016, 6, 19830.	1.6	155
63	Nontrivial contribution of FrÃ¶hlich electron-phonon interaction to lattice thermal conductivity of wurtzite GaN. Applied Physics Letters, 2016, 109, .	1.5	53
64	Disparate Strain Dependent Thermal Conductivity of Two-dimensional Penta-Structures. Nano Letters, 2016, 16, 3831-3842.	4.5	183
65	Strain-modulated electronic and thermal transport properties of two-dimensional O-silica. Nanotechnology, 2016, 27, 265706.	1.3	18
66	Diverse anisotropy of phonon transport in two-dimensional group IVâ€“VI compounds: A comparative study. Nanoscale, 2016, 8, 11306-11319.	2.8	234
67	Surface Chemical Tuning of Phonon and Electron Transport in Free-Standing Silicon Nanowire Arrays. Nano Letters, 2016, 16, 6364-6370.	4.5	16
68	Insight into the collective vibrational modes driving ultralow thermal conductivity of perovskite solar cells. Physical Review B, 2016, 94, .	1.1	52
69	Methodology for determining the electronic thermal conductivity of metals via direct nonequilibrium<i>ab initio</i>molecular dynamics. Physical Review B, 2016, 94, .	1.1	17
70	Phonon transport in the ground state of two-dimensional silicon and germanium. RSC Advances, 2016, 6, 69956-69965.	1.7	20
71	Large tunability of lattice thermal conductivity of monolayer silicene via mechanical strain. Physical Review B, 2016, 93, .	1.1	166
72	Resonant bonding driven giant phonon anharmonicity and low thermal conductivity of phosphorene. Physical Review B, 2016, 94, .	1.1	114

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73	Anisotropic intrinsic lattice thermal conductivity of phosphorene from first principles. Physical Chemistry Chemical Physics, 2015, 17, 4854-4858.	1.3	379
74	Energetics and magnetism of Co-doped GaN(0001) surfaces: A first-principles study. Journal of Applied Physics, 2014, 116, .	1.1	6
75	Thermal conductivity of silicene calculated using an optimized Stillinger-Weber potential. Physical Review B, 2014, 89, .	1.1	213
76	Hinge-like structure induced unusual properties of black phosphorus and new strategies to improve the thermoelectric performance. Scientific Reports, 2014, 4, 6946.	1.6	202
77	Behavior of aluminum adsorption and incorporation at GaN(0001) surface: First-principles study. Journal of Applied Physics, 2013, 114, .	1.1	20
78	Diverse Thermal Transport Properties of Two-Dimensional Materials: A Comparative Review. , 0, , .		2
79	Activated Lone-Pair Electrons Lead to Low Lattice Thermal Conductivity: A Case Study of Boron Arsenide. SSRN Electronic Journal, 0, , .	0.4	0
80	Anisotropy of thermal transport in phosphorene: A comparative first-principles study using different exchange-correlation functional. Materials Advances, 0, , .	2.6	0
81	Introductory Chapter: Thermoelectricity â€“ Recent Advances, New Perspectives, and Applications. , 0, , .		0