Guang-Zhao Qin

List of Publications by Year in Descending Order

68 papers	2,170 citations	23 h-index	46 g-index
83 ext. papers	2,743 ext. citations	5.3 avg, IF	5.4 L-index

#	Paper	IF	Citations
68	Measurement of the thermal conductivity of the components of biodiesels: Methyl laurate and methyl myristate. *Fluid Phase Equilibria*, **2022**, 556, 113409	2.5	2
67	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	2.8	2
66	Two-dimensional layered MSiN (M = Mo, W) as promising thermal management materials: a comparative study.. *Physical Chemistry Chemical Physics*, **2022**,	3.6	3
65	Abnormal enhancement of thermal conductivity by planar structure: A comparative study of graphene-like materials. *International Journal of Thermal Sciences*, **2022**, 174, 107438	4.1	0
64	Half-negative Poisson□ ratio in graphene+ with intrinsic Dirac nodal loop. *Cell Reports Physical Science*, **2022**, 3, 100790	6.1	1
63	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	14.7	4
62	The stable behavior of low thermal conductivity in 1T-sandwich structure with different components. *Journal of Applied Physics*, **2022**, 131, 185702	2.5	1
61	Unique Arrangement of Atoms Leads to Low Thermal Conductivity: A Comparative Study of Monolayer MgC. *Journal of Physical Chemistry Letters*, **2021**, 12, 10353-10358	6.4	2
60	Computationally Guided Synthesis of High Performance Thermoelectric Materials: Defect Engineering in AgGaTe2. *Advanced Electronic Materials*, **2021**, 7, 2001262	6.4	3
59	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	4.1	2
58	Measurements and calculations of thermal conductivity for liquid n-octane and n-decane. *Fluid Phase Equilibria*, **2021**, 533, 112940	2.5	8
57	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	3.6	2
56	Novel optimization perspectives for thermoelectric properties based on Rashba spin splitting: a mini review. *Nanoscale*, **2021**, 13, 18032-18043	7.7	4
55	The exceptionally high thermal conductivity after 'alloying' two-dimensional gallium nitride (GaN) and aluminum nitride (AlN). *Nanotechnology*, **2021**, 32, 135401	3.4	5
54	Measurement and modeling of thermal conductivity for short chain methyl esters: Methyl butyrate and methyl caproate. *Journal of Chemical Thermodynamics*, **2021**, 159, 106486	2.9	5
53	Two-dimensional Al2I2Se2: A promising anisotropic thermoelectric material. *Journal of Alloys and Compounds*, **2021**, 876, 160191	5.7	7
52	On the microscopic view of the low thermal conductivity of buckling two-dimensional materials from molecular dynamics. *Chemical Physics Letters*, **2021**, 780, 138954	2.5	

51	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	2.9	4
50	Ultra-high thermal conductivities of tetrahedral carbon allotropes with non-simple structures. *Physical Chemistry Chemical Physics*, **2021**, 23, 24550-24556	3.6	1
49	Negative Poisson□s ratio in two-dimensional honeycomb structures. *Npj Computational Materials*, **2020**, 6,	10.9	27
48	Giant effect of spin□lattice coupling on the thermal transport in two-dimensional ferromagnetic CrI3. *Journal of Materials Chemistry C*, **2020**, 8, 3520-3526	7.1	13
47	Thermal transport properties of GaN with biaxial strain and electron-phonon coupling. *Journal of Applied Physics*, **2020**, 127, 035102	2.5	29
46	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,	3.3	3
45	Quasi-bonding driven abnormal isotropic thermal transport in intrinsically anisotropic nanostructure: a case of study of a phosphorus nanotube array. *Nanotechnology*, **2020**, 31, 095704	3.4	2
44	Efficient thermal conductivity modulation by manipulating interlayer interactions: A comparative study of bilayer graphene and graphite. *Journal of Applied Physics*, **2019**, 126, 125104	2.5	7
43	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	3.6	12
42	Exploring T-carbon for energy applications. *Nanoscale*, **2019**, 11, 5798-5806	7.7	28
41	First-principles study of electronic, optical and thermal transport properties of group III□VI monolayer MX (M = Ga, In; X = S, Se). *Journal of Applied Physics*, **2019**, 125, 245104	2.5	32
40	Two-dimensional magnetic metal-organic frameworks with the Shastry-Sutherland lattice. *Chemical Science*, **2019**, 10, 10381-10387	9.4	11
39	A C fullerene-based sheet with ultrahigh thermal conductivity. *Nanoscale*, **2018**, 10, 6099-6104	7.7	6
38	Lone-Pair Electrons Do Not Necessarily Lead to Low Lattice Thermal Conductivity: An Exception of Two-Dimensional Penta-CN. *Journal of Physical Chemistry Letters*, **2018**, 9, 2474-2483	6.4	17
37	Thermal transport properties of monolayer phosphorene: a mini-review of theoretical studies. *Frontiers in Energy*, **2018**, 12, 87-96	2.6	2
36	Accelerating evaluation of converged lattice thermal conductivity. *Npj Computational Materials*, **2018**, 4,	10.9	26
35	Thermal Transport in Phosphorene. *Small*, **2018**, 14, e1702465	11	24
34	Bond saturation significantly enhances thermal energy transport in two-dimensional pentagonal materials. *Nano Energy*, **2018**, 45, 1-9	17.1	12

33	Methodology Perspective of Computing Thermal Transport in Low-Dimensional Materials and Nanostructures: The Old and the New. *ACS Omega*, **2018**, 3, 3278-3284	3.9	8
32	Dependence of phonon transport properties with stacking thickness in layered ZnO. *Journal Physics D: Applied Physics*, **2018**, 51, 315303	3	6
31	Origin of anisotropic negative Poisson's ratio in graphene. *Nanoscale*, **2018**, 10, 10365-10370	7.7	22
30	Unconventional thermal transport enhancement with large atom mass: a comparative study of 2D transition dichalcogenides. *2D Materials*, **2018**, 5, 015022	5.9	8
29	Lone-pair electrons induced anomalous enhancement of thermal transport in strained planar two-dimensional materials. *Nano Energy*, **2018**, 50, 425-430	17.1	32
28	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	3.2	24
27	Thermal transport in novel carbon allotropes with sp2 or sp3 hybridization: An ab initio study. *Physical Review B*, **2017**, 95,	3.3	32
26	Low thermal conductivity of monolayer ZnO and its anomalous temperature dependence. *Physical Chemistry Chemical Physics*, **2017**, 19, 12882-12889	3.6	37
25	External electric field driving the ultra-low thermal conductivity of silicene. *Nanoscale*, **2017**, 9, 7227-7234	7.7	39
24	Orbitally driven low thermal conductivity of monolayer gallium nitride (GaN) with planar honeycomb structure: a comparative study. *Nanoscale*, **2017**, 9, 4295-4309	7.7	101
23	Metric for strong intrinsic fourth-order phonon anharmonicity. *Physical Review B*, **2017**, 95,	3.3	19
22	Unconventional magnetic anisotropy in one-dimensional Rashba system realized by adsorbing Gd atom on zigzag graphene nanoribbons. *Nanoscale*, **2017**, 9, 11657-11666	7.7	9
21	Anomalously temperature-dependent thermal conductivity of monolayer GaN with large deviations from the traditional 1/T law. *Physical Review B*, **2017**, 95,	3.3	71
20	Unprecedented mechanical response of the lattice thermal conductivity of auxetic carbon crystals. *Carbon*, **2017**, 122, 374-380	10.4	7
19	Two-dimensional silicon. *Series in Materials Science and Engineering*, **2017**, 43-76		
18	Methodology for determining the electronic thermal conductivity of metals via direct nonequilibrium ab initio molecular dynamics. *Physical Review B*, **2016**, 94,	3.3	16
17	Phonon transport in the ground state of two-dimensional silicon and germanium. *RSC Advances*, **2016**, 6, 69956-69965	3.7	12
16	Large tunability of lattice thermal conductivity of monolayer silicene via mechanical strain. *Physical Review B*, **2016**, 93,	3.3	132

15	Resonant bonding driven giant phonon anharmonicity and low thermal conductivity of phosphorene. *Physical Review B*, **2016**, 94,	3.3	79
14	Diverse Thermal Transport Properties of Two-Dimensional Materials: A Comparative Review **2016**,		2
13	Tinselenidene: a Two-dimensional Auxetic Material with Ultralow Lattice Thermal Conductivity and Ultrahigh Hole Mobility. *Scientific Reports*, **2016**, 6, 19830	4.9	119
12	Nontrivial contribution of Fröhlich electron-phonon interaction to lattice thermal conductivity of wurtzite GaN. *Applied Physics Letters*, **2016**, 109, 242103	3.4	34
11	Disparate Strain Dependent Thermal Conductivity of Two-dimensional Penta-Structures. *Nano Letters*, **2016**, 16, 3831-42	11.5	132
10	Strain-modulated electronic and thermal transport properties of two-dimensional O-silica. *Nanotechnology*, **2016**, 27, 265706	3.4	13
9	Diverse anisotropy of phonon transport in two-dimensional group IV-VI compounds: A comparative study. *Nanoscale*, **2016**, 8, 11306-19	7.7	170
8	Surface Chemical Tuning of Phonon and Electron Transport in Free-Standing Silicon Nanowire Arrays. *Nano Letters*, **2016**, 16, 6364-6370	11.5	14
7	Insight into the collective vibrational modes driving ultralow thermal conductivity of perovskite solar cells. *Physical Review B*, **2016**, 94,	3.3	41
6	Anisotropic intrinsic lattice thermal conductivity of phosphorene from first principles. *Physical Chemistry Chemical Physics*, **2015**, 17, 4854-8	3.6	296
5	Thermal conductivity of silicene calculated using an optimized Stillinger-Weber potential. *Physical Review B*, **2014**, 89,	3.3	173
4	Hinge-like structure induced unusual properties of black phosphorus and new strategies to improve the thermoelectric performance. *Scientific Reports*, **2014**, 4, 6946	4.9	181
3	Energetics and magnetism of Co-doped GaN(0001) surfaces: A first-principles study. *Journal of Applied Physics*, **2014**, 116, 224503	2.5	6
2	Behavior of aluminum adsorption and incorporation at GaN(0001) surface: First-principles study. *Journal of Applied Physics*, **2013**, 114, 194307	2.5	16
1	Introductory Chapter: Thermoelectricity – Recent Advances, New Perspectives, and Applications		