Gang Zhang

List of Publications by Year
in descending order

203 papers	17,578 citations	13087 68 h-index	14736 127 g-index
204 all docs	204 docs citations	204 times ranked	15553 citing authors

#	Article	IF	Citations
1	<i>Colloquium</i>: Phononics: Manipulating heat flow with electronic analogs and beyond. Reviews of Modern Physics, 2012, 84, 1045-1066.	16.4	1,106
2	Polarity-Reversed Robust Carrier Mobility in Monolayer MoS₂ Nanoribbons. Journal of the American Chemical Society, 2014, 136, 6269-6275.	6.6	761
3	Layer-dependent Band Alignment and Work Function of Few-Layer Phosphorene. Scientific Reports, 2014, 4, 6677.	1.6	731
4	Comparison of DFT Methods for Molecular Orbital Eigenvalue Calculations. Journal of Physical Chemistry A, 2007, 111, 1554-1561.	1.1	693
5	Ultrafast and Directional Diffusion of Lithium in Phosphorene for High-Performance Lithium-Ion Battery. Nano Letters, 2015, 15, 1691-1697.	4.5	628
6	Extraordinary Photoluminescence and Strong Temperature/Angle-Dependent Raman Responses in Few-Layer Phosphorene. ACS Nano, 2014, 8, 9590-9596.	7.3	604
7	Towards intrinsic charge transport in monolayer molybdenum disulfide by defect and interface engineering. Nature Communications, 2014, 5, 5290.	5.8	563
8	Lattice vibrational modes and phonon thermal conductivity of monolayer MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2014, 89, .	1.1	387
9	Energetics, Charge Transfer, and Magnetism of Small Molecules Physisorbed on Phosphorene. Journal of Physical Chemistry C, 2015, 119, 3102-3110.	1.5	347
10	Electronic Properties of Phosphorene/Graphene and Phosphorene/Hexagonal Boron Nitride Heterostructures. Journal of Physical Chemistry C, 2015, 119, 13929-13936.	1.5	295
11	Thermal conductivity of nanotubes revisited: Effects of chirality, isotope impurity, tube length, and temperature. Journal of Chemical Physics, 2005, 123, 114714.	1.2	281
12	Analyzing the Carrier Mobility in Transitionâ€Metal Dichalcogenide MoS₂ Fieldâ€Effect Transistors. Advanced Functional Materials, 2017, 27, 1604093.	7.8	265
13	Strong Thermal Transport Anisotropy and Strain Modulation in Single-Layer Phosphorene. Journal of Physical Chemistry C, 2014, 118, 25272-25277.	1.5	250
14	Violation of Fourier's law and anomalous heat diffusion in silicon nanowires. Nano Today, 2010, 5, 85-90.	6.2	222
15	Highâ€Performance Monolayer WS₂ Fieldâ€Effect Transistors on Highâ€Î° Dielectrics. Advanced Materials, 2015, 27, 5230-5234.	11.1	218
16	Realization of Roomâ€Temperature Phononâ€Limited Carrier Transport in Monolayer MoS₂ by Dielectric and Carrier Screening. Advanced Materials, 2016, 28, 547-552.	11.1	218
17	Tunable, Strain-Controlled Nanoporous MoS₂ Filter for Water Desalination. ACS Nano, 2016, 10, 1829-1835.	7.3	212
18	Size-dependent phononic thermal transport in low-dimensional nanomaterials. Physics Reports, 2020, 860, 1-26.	10.3	209

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19	Thermoelectric properties of two-dimensional transition metal dichalcogenides. Journal of Materials Chemistry C, 2017, 5, 7684-7698.	2.7	204
20	Coexistence of size-dependent and size-independent thermal conductivities in phosphorene. Physical Review B, 2014, 90, .	1.1	203
21	Giant Phononic Anisotropy and Unusual Anharmonicity of Phosphorene: Interlayer Coupling and Strain Engineering. Advanced Functional Materials, 2015, 25, 2230-2236.	7.8	198
22	Substrate coupling suppresses size dependence of thermal conductivity in supported graphene. Nanoscale, 2013, 5, 532-536.	2.8	189
23	Remarkable Reduction of Thermal Conductivity in Silicon Nanotubes. Nano Letters, 2010, 10, 3978-3983.	4.5	167
24	Phonon thermal conductivity of monolayer MoS₂ sheet and nanoribbons. Applied Physics Letters, 2013, 103, 133113.	1.5	167
25	A Novel Solid-State Thermal Rectifier Based On Reduced Graphene Oxide. Scientific Reports, 2012, 2, 523.	1.6	156
26	Thermal Conductivity of Amorphous Materials. Advanced Functional Materials, 2020, 30, 1903829.	7.8	149
27	Alâ€Doped Black Phosphorus pâ€“n Homojunction Diode for High Performance Photovoltaic. Advanced Functional Materials, 2017, 27, 1604638.	7.8	145
28	Impacts of doping on thermal and thermoelectric properties of nanomaterials. Nanoscale, 2010, 2, 1058.	2.8	142
29	Thermal transport in nanostructures. AIP Advances, 2012, 2, .	0.6	138
30	Strain effects on thermoelectric properties of two-dimensional materials. Mechanics of Materials, 2015, 91, 382-398.	1.7	137
31	Highly Itinerant Atomic Vacancies in Phosphorene. Journal of the American Chemical Society, 2016, 138, 10199-10206.	6.6	134
32	Recent Advances in the Study of Phosphorene and its Nanostructures. Critical Reviews in Solid State and Materials Sciences, 2017, 42, 1-82.	6.8	130
33	Topological Defects at the Graphene/<i>h</i>-BN interface Abnormally Enhance Its Thermal Conductance. Nano Letters, 2016, 16, 4954-4959.	4.5	129
34	High oscillator strength interlayer excitons in two-dimensional heterostructures for mid-infrared photodetection. Nature Nanotechnology, 2020, 15, 675-682.	15.6	129
35	Tunable thermal conductivity of Si1âˆ’xGex nanowires. Applied Physics Letters, 2009, 95, .	1.5	120
36	Thermal conduction and rectification in few-layer graphene Y Junctions. Nanoscale, 2011, 3, 4604.	2.8	120

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37	Electronic Properties of Edge-Hydrogenated Phosphorene Nanoribbons: A First-Principles Study. Journal of Physical Chemistry C, 2014, 118, 22368-22372.	1.5	117
38	Machine Learning Approaches for Thermoelectric Materials Research. Advanced Functional Materials, 2020, 30, 1906041.	7.8	114
39	Biaxial Compressive Strain Engineering in Graphene/Boron Nitride Heterostructures. Scientific Reports, 2012, 2, 893.	1.6	113
40	Cr₂TiC₂-based double MXenes: novel 2D bipolar antiferromagnetic semiconductor with gate-controllable spin orientation toward antiferromagnetic spintronics. Nanoscale, 2019, 11, 356-364.	2.8	112
41	Gapless<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>MoS</mml:mtext><mml:mn>2</mml:mn></mml:msu possessing both massless Dirac and heavy fermions. Physical Review B, 2014, 89, .	1.1	109
42	Thermal contact resistance across nanoscale silicon dioxide and silicon interface. Journal of Applied Physics, 2012, 112, .	1.1	108
43	A direct Z-scheme PtS₂/arsenene van der Waals heterostructure with high photocatalytic water splitting efficiency. Nanoscale, 2020, 12, 17281-17289.	2.8	108
44	Exceptional Optical Absorption of Buckled Arsenene Covering a Broad Spectral Range by Molecular Doping. ACS Omega, 2018, 3, 8514-8520.	1.6	107
45	Anomalous heat conduction and anomalous diffusion in low dimensional nanoscale systems. European Physical Journal B, 2012, 85, 1.	0.6	106
46	Modulating Carrier Density and Transport Properties of MoS₂ by Organic Molecular Doping and Defect Engineering. Chemistry of Materials, 2016, 28, 8611-8621.	3.2	105
47	Ultra-low thermal conductivity of two-dimensional phononic crystals in the incoherent regime. Npj Computational Materials, 2018, 4, .	3.5	99
48	Phonon thermal conductivity of monolayer MoS2: A comparison with single layer graphene. Applied Physics Letters, 2014, 105, .	1.5	97
49	Impacts of Atomistic Coating on Thermal Conductivity of Germanium Nanowires. Nano Letters, 2012, 12, 2826-2832.	4.5	96
50	Material platforms for defect qubits and single-photon emitters. Applied Physics Reviews, 2020, 7, .	5.5	96
51	Anomalous heat conduction and anomalous diffusion in nonlinear lattices, single walled nanotubes, and billiard gas channels. Chaos, 2005, 15, 015121.	1.0	95
52	Phonon coherent resonance and its effect on thermal transport in core-shell nanowires. Journal of Chemical Physics, 2011, 135, 104508.	1.2	94
53	A Bond-order Theory on the Phonon Scattering by Vacancies in Two-dimensional Materials. Scientific Reports, 2014, 4, 5085.	1.6	91
54	Strain-tunable electronic and transport properties of MoS2 nanotubes. Nano Research, 2014, 7, 518-527.	5.8	89

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55	Molecular Dynamics Simulations of Heat Conduction in Nanostructures: Effect of Heat Bath. Journal of the Physical Society of Japan, 2010, 79, 074604.	0.7	88
56	Few-Layer PdSe₂ Sheets: Promising Thermoelectric Materials Driven by High Valley Convergence. ACS Omega, 2018, 3, 5971-5979.	1.6	87
57	Thermal conductivity of penta-graphene from molecular dynamics study. Journal of Chemical Physics, 2015, 143, 154703.	1.2	85
58	From brittle to ductile: a structure dependent ductility of diamond nanothread. Nanoscale, 2016, 8, 11177-11184.	2.8	84
59	Two-dimensional honeycomb borophene oxide: strong anisotropy and nodal loop transformation. Nanoscale, 2019, 11, 2468-2475.	2.8	84
60	Charge Transfer and Functionalization of Monolayer InSe by Physisorption of Small Molecules for Gas Sensing. Journal of Physical Chemistry C, 2017, 121, 10182-10193.	1.5	83
61	Emerging Theory, Materials, and Screening Methods: New Opportunities for Promoting Thermoelectric Performance. Annalen Der Physik, 2019, 531, 1800437.	0.9	83
62	Phonon coherence and its effect on thermal conductivity of nanostructures. Advances in Physics: X, 2018, 3, 1480417.	1.5	82
63	Efficient approach for modeling phonon transmission probability in nanoscale interfacial thermal transport. Physical Review B, 2015, 91, .	1.1	80
64	Thermal Conductance of the 2D MoS2/h-BN and graphene/h-BN Interfaces. Scientific Reports, 2017, 7, 43886.	1.6	79
65	Engineering of charge carriers<i>via</i>a two-dimensional heterostructure to enhance the thermoelectric figure of merit. Nanoscale, 2018, 10, 7077-7084.	2.8	76
66	Stretchâ€Driven Increase in Ultrahigh Thermal Conductance of Hydrogenated Borophene and Dimensionality Crossover in Phonon Transmission. Advanced Functional Materials, 2018, 28, 1801685.	7.8	76
67	The Critical Role of Substrate in Stabilizing Phosphorene Nanoflake: A Theoretical Exploration. Journal of the American Chemical Society, 2016, 138, 4763-4771.	6.6	72
68	Thermal conductivity of a new carbon nanotube analog: The diamond nanothread. Carbon, 2016, 98, 232-237.	5.4	71
69	Thermal Transport in 2D Semiconductorsâ€”Considerations for Device Applications. Advanced Functional Materials, 2020, 30, 1903929.	7.8	71
70	Superior lattice thermal conductance of single-layer borophene. Npj 2D Materials and Applications, 2017, 1, .	3.9	70
71	Direction dependent thermal conductivity of monolayer phosphorene: Parameterization of Stillinger-Weber potential and molecular dynamics study. Journal of Applied Physics, 2015, 117, .	1.1	69
72	Comparison of isotope effects on thermal conductivity of graphene nanoribbons and carbon nanotubes. Applied Physics Letters, 2013, 103, .	1.5	68

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73	Design of Phosphorene for Hydrogen Evolution Performance Comparable to Platinum. Chemistry of Materials, 2019, 31, 8948-8956.	3.2	66
74	Spin-gapless semiconductors for future spintronics and electronics. Physics Reports, 2020, 888, 1-57.	10.3	64
75	Î±-Ag₂S: A Ductile Thermoelectric Material with High <i>ZT</i>. ACS Omega, 2020, 5, 5796-5804.	1.6	64
76	Thermoelectric performance of silicon nanowires. Applied Physics Letters, 2009, 94, 213108.	1.5	63
77	Large thermoelectric figure of merit in Si1âˆ'xGex nanowires. Applied Physics Letters, 2010, 96, .	1.5	63
78	Diamond Nanothread as a New Reinforcement for Nanocomposites. Advanced Functional Materials, 2016, 26, 5279-5283.	7.8	63
79	Thermal properties of two-dimensional materials. Chinese Physics B, 2017, 26, 034401.	0.7	63
80	The best features of diamond nanothread for nanofibre applications. Nature Communications, 2017, 8, 14863.	5.8	62
81	Black Phosphorus Nâ€Type Fieldâ€Effect Transistor with Ultrahigh Electron Mobility via Aluminum Adatoms Doping. Small, 2017, 13, 1602909.	5.2	61
82	Tailoring the phase transition temperature to achieve high-performance cubic GeTe-based thermoelectrics. Journal of Materials Chemistry A, 2020, 8, 18880-18890.	5.2	61
83	Achieving high thermoelectric quality factor toward high figure of merit in GeTe. Materials Today Physics, 2020, 14, 100239.	2.9	61
84	Impacts of length and geometry deformation on thermal conductivity of graphene nanoribbons. Journal of Applied Physics, 2013, 113, .	1.1	60
85	Thermal conductivity of silicon nanowires: From fundamentals to phononic engineering. Physica Status Solidi - Rapid Research Letters, 2013, 7, 754-766.	1.2	59
86	MoS2-graphene in-plane contact for high interfacial thermal conduction. Nano Research, 2017, 10, 2944-2953.	5.8	59
87	Exploring Ag(111) Substrate for Epitaxially Growing Monolayer Stanene: A First-Principles Study. Scientific Reports, 2016, 6, 29107.	1.6	58
88	Anomalous vibrational energy diffusion in carbon nanotubes. Journal of Chemical Physics, 2005, 123, 014705.	1.2	57
89	Tunable Mechanical and Thermal Properties of One-Dimensional Carbyne Chain: Phase Transition and Microscopic Dynamics. Journal of Physical Chemistry C, 2015, 119, 24156-24164.	1.5	57
90	Sixfold degenerate nodal-point phonons: Symmetry analysis and materials realization. Physical Review B, 2021, 104, .	1.1	57

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91	Thermo-mechanical correlation in two-dimensional materials. Nanoscale, 2021, 13, 1425-1442.	2.8	53
92	Remarkably enhanced ferromagnetism in a super-exchange governed Cr₂Ge₂Te₆ monolayer <i>via</i> molecular adsorption. Journal of Materials Chemistry C, 2019, 7, 5084-5093.	2.7	52
93	Interfacial thermal resistance and thermal rectification between suspended and encased single layer graphene. Journal of Applied Physics, 2014, 116, .	1.1	51
94	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. Advanced Materials, 2018, 30, e1804928.	11.1	50
95	A universal gauge for thermal conductivity of silicon nanowires with different cross sectional geometries. Journal of Chemical Physics, 2011, 135, 204705.	1.2	49
96	Controllable Thermal Rectification Realized in Binary Phase Change Composites. Scientific Reports, 2015, 5, 8884.	1.6	49
97	Phonon surface scattering controlled length dependence of thermal conductivity of silicon nanowires. Physical Chemistry Chemical Physics, 2013, 15, 14647.	1.3	48
98	Thermal Conduction Across Graphene Cross-Linkers. Journal of Physical Chemistry C, 2014, 118, 12541-12547.	1.5	47
99	Orbitally driven giant thermal conductance associated with abnormal strain dependence in hydrogenated graphene-like borophene. Npj Computational Materials, 2019, 5, .	3.5	47
100	The morphology and temperature dependent tensile properties of diamond nanothreads. Carbon, 2016, 107, 304-309.	5.4	46
101	High density mechanical energy storage with carbon nanothread bundle. Nature Communications, 2020, 11, 1905.	5.8	45
102	Manipulating Interfacial Thermal Conduction of 2D Janus Heterostructure via a Thermoâ€Mechanical Coupling. Advanced Functional Materials, 2022, 32, .	7.8	45
103	Theory of substrate-directed heat dissipation for single-layer graphene and other two-dimensional crystals. Physical Review B, 2016, 94, .	1.1	43
104	Graphene helicoid as novel nanospring. Carbon, 2017, 120, 258-264.	5.4	42
105	Quantum thermal transport in stanene. Physical Review B, 2016, 94, .	1.1	41
106	Strain engineering on the thermal conductivity and heat flux of thermoelectric Bi2Te3 nanofilm. Nano Energy, 2015, 17, 104-110.	8.2	40
107	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer PtSe2: A First-Principles Study. ACS Omega, 2017, 2, 8640-8648.	1.6	40
108	Thermoelectric figure of merit in Ga-doped [0001] ZnO nanowires. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 978-981.	0.9	39

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109	Nanotube-terminated zigzag edges of phosphorene formed by self-rolling reconstruction. Nanoscale, 2016, 8, 17940-17946.	2.8	39
110	Design of phosphorene/graphene heterojunctions for high and tunable interfacial thermal conductance. Nanoscale, 2018, 10, 19854-19862.	2.8	38
111	Symmetry-enforced ideal lanternlike phonons in the ternary nitride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Li</mml:mi><mml:mn>1</mml:mn></mml:m[illegible] Physical Review B, 2021, 104, .	6.1	38
112	Revealing the Grain Boundary Formation Mechanism and Kinetics during Polycrystalline MoS₂ Growth. ACS Applied Materials & Interfaces, 2019, 11, 46090-46100.	4.0	37
113	Remarkable Reduction of Interfacial Thermal Resistance in Nanophononic Heterostructures. Advanced Functional Materials, 2020, 30, 2004003.	7.8	37
114	Thermal conduction across the one-dimensional interface between a MoS2 monolayer and metal electrode. Nano Research, 2016, 9, 2372-2383.	5.8	35
115	Unusual phonon behavior and ultra-low thermal conductance of monolayer InSe. Nanoscale, 2018, 10, 480-487.	2.8	34
116	Large enhancement of thermoelectric performance in MoS ₂ / <i>h</i> -BN heterostructure due to vacancy-induced band hybridization. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13929-13936.	3.3	34
117	High thermoelectric figure of merit in silicon-germanium superlattice structured nanowires. Applied Physics Letters, 2012, 101, 233114.	1.5	33
118	Three-Fold Enhancement of In-Plane Thermal Conductivity of Borophene through Metallic Atom Intercalation. Nano Letters, 2020, 20, 7619-7626.	4.5	33
119	Phonon stability and phonon transport of graphene-like borophene. Nanotechnology, 2020, 31, 315709.	1.3	33
120	Effects Of Structural Phase Transition On Thermoelectric Performance in Lithium-Intercalated Molybdenum Disulfide (Li_{<i>x</i>}MoS₂). ACS Applied Materials & Interfaces, 2019, 11, 12184-12189.	4.0	31
121	Two-dimensional heterostructures for photocatalytic water splitting: a review of recent progress. Nano Futures, 2020, 4, 032006.	1.0	31
122	The important role of strain on phonon hydrodynamics in diamond-like bi-layer graphene. Nanotechnology, 2020, 31, 335711.	1.3	30
123	Graphene-based thermal modulators. Nano Research, 2015, 8, 2755-2762.	5.8	29
124	Decoupled electron and phonon transports in hexagonal boron nitride-silicene bilayer heterostructure. Journal of Applied Physics, 2016, 119, .	1.1	29
125	General theories and features of interfacial thermal transport. Chinese Physics B, 2018, 27, 034401.	0.7	28
126	Origin of ultrafast growth of monolayer WSe2 via chemical vapor deposition. Npj Computational Materials, 2019, 5, .	3.5	28

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127	Breakdown of Hooke's law at the nanoscale â€“ 2D material-based nanosprings. Nanoscale, 2018, 10, 18961-18968.	2.8	27
128	Low interfacial thermal resistance between crossed ultra-thin carbon nanothreads. Carbon, 2020, 165, 216-224.	5.4	27
129	Thermal conductivity of configurable two-dimensional carbon nanotube architecture and strain modulation. Applied Physics Letters, 2014, 105, .	1.5	26
130	Magnetic order-dependent phonon properties in 2D magnet CrI₃. Nanoscale, 2021, 13, 10882-10890.	2.8	26
131	Graphene Helicoid: Distinct Properties Promote Application of Graphene Related Materials in Thermal Management. Journal of Physical Chemistry C, 2018, 122, 7605-7612.	1.5	25
132	Thickness dependent semiconductor-to-metal transition of two-dimensional polyaniline with unique work functions. Nanoscale, 2017, 9, 12025-12031.	2.8	24
133	From two-dimensional nano-sheets to roll-up structures: expanding the family of nanoscroll. Nanotechnology, 2017, 28, 385704.	1.3	24
134	Designing good compatibility factor in segmented Bi0.5Sb1.5Te3 â€“ GeTe thermoelectrics for high power conversion efficiency. Nano Energy, 2022, 96, 107147.	8.2	24
135	Thermoelectric properties of phosphorene at the nanoscale. Journal of Materials Research, 2016, 31, 3179-3186.	1.2	23
136	Vastly enhancing the chemical stability of phosphorene by employing an electric field. Nanoscale, 2017, 9, 4219-4226.	2.8	22
137	Thermoelectric Properties of Hexagonal M2C3 (M = As, Sb, and Bi) Monolayers from First-Principles Calculations. Nanomaterials, 2019, 9, 597.	1.9	22
138	Unique topological nodal line states and associated exceptional thermoelectric power factor platform in Nb₃GeTe₆ monolayer and bulk. Nanoscale, 2020, 12, 16910-16916.	2.8	22
139	Unusual Twisting Phonons and Breathing Modes in Tubeâ€Terminated Phosphorene Nanoribbons and Their Effects on Thermal Conductivity. Advanced Functional Materials, 2017, 27, 1702776.	7.8	21
140	Anisotropic Wetting Characteristics of Water Droplets on Phosphorene: Roles of Layer and Defect Engineering. Journal of Physical Chemistry C, 2018, 122, 4622-4627.	1.5	21
141	Rich novel zero-dimensional (0D), 1D, and 2D topological elements predicted in the P63/m type ternary boride HfIr3B4. Nanoscale, 2020, 12, 8314-8319.	2.8	21
142	Prediction of 2D IVâ€“VI semiconductors: auxetic materials with direct bandgap and strong optical absorption. Nanoscale, 2022, 14, 8463-8473.	2.8	21
143	A kinetic Monte Carlo model for the growth and etching of graphene during chemical vapor deposition. Carbon, 2019, 146, 399-405.	5.4	20
144	Perovskite-type <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>YRh</mml:mi></mml:mrow><mml:mn>3</m mathvariant="normal">B</mml:mi></mml:math> with multiple types of nodal point and nodal line states. Physical Review B, 2021, 103, .	1.1	20

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145	Time-reversal-breaking Weyl nodal lines in two-dimensional A₃C₂ (A = Ti, Zr,) Tj ETQq1 1 0.784314 rgBT /Over 8235-8241.	2.8	20
146	Flexible elemental thermoelectrics with ultra-high power density. Materials Today Energy, 2022, 25, 100964.	2.5	20
147	From Two- to Three-Dimensional van der Waals Layered Structures of Boron Crystals: An Ab Initio Study. ACS Omega, 2019, 4, 8015-8021.	1.6	19
148	Abnormal thermal conductivity enhancement in covalently bonded bilayer borophene allotrope. Nano Research, 2022, 15, 3818-3824.	5.8	19
149	Thermal stability and thermal conductivity of solid electrolytes. APL Materials, 2022, 10, .	2.2	19
150	Hourglass Weyl and Dirac nodal line phonons, and drumhead-like and torus phonon surface states in orthorhombic-type KCuS. Physical Chemistry Chemical Physics, 2022, 24, 2752-2757.	1.3	18
151	Phononic nodal points with quadratic dispersion and multifold degeneracy in the cubic compound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ta</mml:mi><mml:mn>3</mml:mn></mml: Physical Review B, 2022, 105, .	1.1	18
152	Magnonâ€“phonon interaction in antiferromagnetic two-dimensional MXenes. Nanotechnology, 2020, 31, 435705.	1.3	17
153	Surrogate Model via Artificial Intelligence Method for Accelerating Screening Materials and Performance Prediction. Advanced Functional Materials, 2021, 31, 2006245.	7.8	17
154	Controlling anisotropic electrical conductivity in porous graphene-nanotube thin films. Carbon, 2020, 165, 139-149.	5.4	16
155	Strain tuning of closed topological nodal lines and opposite pockets in quasi-two-dimensional Î±-phase FeSi2. Physical Chemistry Chemical Physics, 2020, 22, 13650-13658.	1.3	16
156	Intersecting nodal rings in orthorhombic-type BaLi₂Sn compound. Journal of Materials Chemistry C, 2020, 8, 5461-5466.	2.7	16
157	High thermal conductivity driven by the unusual phonon relaxation time platform in 2D monolayer boron arsenide. RSC Advances, 2020, 10, 25305-25310.	1.7	16
158	Hybrid Structures and Strain-Tunable Electronic Properties of Carbon Nanothreads. Journal of Physical Chemistry C, 2018, 122, 3101-3106.	1.5	15
159	High thermal conductivity in covalently bonded bi-layer honeycomb boron arsenide. Materials Today Physics, 2021, 17, 100346.	2.9	15
160	Effects of lithium insertion on thermal conductivity of silicon nanowires. Applied Physics Letters, 2015, 106, .	1.5	14
161	Remarkable reduction of thermal conductivity in phosphorene phononic crystal. Journal of Physics Condensed Matter, 2016, 28, 175401.	0.7	14
162	Large diffusion anisotropy and orientation sorting of phosphorene nanoflakes under a temperature gradient. Nanoscale, 2018, 10, 1660-1666.	2.8	14

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163	Thermal transport in lithium-ion battery: A micro perspective for thermal management. Frontiers of Physics, 2022, 17, 1.	2.4	14
164	Wall â€œThicknessâ€• Effects on Raman Spectrum Shift, Thermal Conductivity, and Young's Modulus of Single-Walled Nanotubes. Journal of Physical Chemistry B, 2005, 109, 23823-23826.	1.2	13
165	Kinetic theory for the formation of diamond nanothreads with desired configurations: a strainâ€"temperature controlled phase diagram. Nanoscale, 2018, 10, 9664-9672.	2.8	13
166	Controlling the electronic properties of 2D/3D pillared graphene and glass-like carbon <i>via</i> metal atom doping. Nanoscale, 2019, 11, 16414-16427.	2.8	13
167	Diverse topological states in a ternary NdAsPd compound. Journal of Materials Chemistry C, 2020, 8, 7741-7748.	2.7	13
168	Modification of thermal transport in few-layer MoS₂ by atomic-level defect engineering. Nanoscale, 2021, 13, 11561-11567.	2.8	12
169	An all-atom kinetic Monte Carlo model for chemical vapor deposition growth of graphene on Cu(1â€‰1â€‰1) substrate. Journal of Physics Condensed Matter, 2020, 32, 155401.	0.7	11
170	Remarkable Role of Grain Boundaries in the Thermal Transport Properties of Phosphorene. ACS Omega, 2020, 5, 17416-17422.	1.6	11
171	Anomalous strain effect on the thermal conductivity of low-buckled two-dimensional silicene. National Science Review, 2021, 8, nwaa220.	4.6	11
172	Effects of molecular adsorption on the spin-wave spectrum and magnon relaxation in two-dimensional Cr₂Ge₂Te₆. Physical Chemistry Chemical Physics, 2020, 22, 22047-22054.	1.3	11
173	Magnon relaxation time in ferromagnetic Cr2Ge2Te6 monolayer governed by magnon-phonon interaction. Applied Physics Letters, 2021, 118, .	1.5	11
174	In situ transmission electron microscopy study of the formation and migration of vacancy defects in atomically thin black phosphorus. 2D Materials, 2021, 8, 025004.	2.0	11
175	Magnon-magnon interaction and magnon relaxation time in a ferromagnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cr</mml:mi><mml:mn>2</mml:mn></mml:... monolayer. Physical Review B, 2020, 102, .	2.1	11
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