

Gang Zhang

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195
papers

13,267
citations

59
h-index

111
g-index

204
ext. papers

15,529
ext. citations

7.8
avg, IF

7.15
L-index

#	Paper	IF	Citations
195	Colloquium: Phononics: Manipulating heat flow with electronic analogs and beyond. <i>Reviews of Modern Physics</i> , 2012 , 84, 1045-1066	40.5	882
194	Layer-dependent band alignment and work function of few-layer phosphorene. <i>Scientific Reports</i> , 2014 , 4, 6677	4.9	594
193	Polarity-reversed robust carrier mobility in monolayer MoS ₂ nanoribbons. <i>Journal of the American Chemical Society</i> , 2014 , 136, 6269-75	16.4	572
192	Comparison of DFT methods for molecular orbital eigenvalue calculations. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 1554-61	2.8	556
191	Extraordinary photoluminescence and strong temperature/angle-dependent Raman responses in few-layer phosphorene. <i>ACS Nano</i> , 2014 , 8, 9590-6	16.7	529
190	Ultrafast and directional diffusion of lithium in phosphorene for high-performance lithium-ion battery. <i>Nano Letters</i> , 2015 , 15, 1691-7	11.5	512
189	Towards intrinsic charge transport in monolayer molybdenum disulfide by defect and interface engineering. <i>Nature Communications</i> , 2014 , 5, 5290	17.4	448
188	Lattice vibrational modes and phonon thermal conductivity of monolayer MoS ₂ . <i>Physical Review B</i> , 2014 , 89,	3.3	314
187	Energetics, Charge Transfer, and Magnetism of Small Molecules Physisorbed on Phosphorene. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 3102-3110	3.8	283
186	Thermal conductivity of nanotubes revisited: effects of chirality, isotope impurity, tube length, and temperature. <i>Journal of Chemical Physics</i> , 2005 , 123, 114714	3.9	256
185	Electronic Properties of Phosphorene/Graphene and Phosphorene/Hexagonal Boron Nitride Heterostructures. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 13929-13936	3.8	244
184	Strong Thermal Transport Anisotropy and Strain Modulation in Single-Layer Phosphorene. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 25272-25277	3.8	219
183	Violation of Fourier's law and anomalous heat diffusion in silicon nanowires. <i>Nano Today</i> , 2010 , 5, 85-90	17.9	191
182	Analyzing the Carrier Mobility in Transition-Metal Dichalcogenide MoS ₂ Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2017 , 27, 1604093	15.6	178
181	High-Performance Monolayer WS ₂ Field-Effect Transistors on High- ϵ Dielectrics. <i>Advanced Materials</i> , 2015 , 27, 5230-4	24	177
180	Tunable, Strain-Controlled Nanoporous MoS ₂ Filter for Water Desalination. <i>ACS Nano</i> , 2016 , 10, 1829-35	16.7	174
179	Giant Phononic Anisotropy and Unusual Anharmonicity of Phosphorene: Interlayer Coupling and Strain Engineering. <i>Advanced Functional Materials</i> , 2015 , 25, 2230-2236	15.6	169

178	Realization of Room-Temperature Phonon-Limited Carrier Transport in Monolayer MoS ₂ by Dielectric and Carrier Screening. <i>Advanced Materials</i> , 2016 , 28, 547-52	24	161
177	Coexistence of size-dependent and size-independent thermal conductivities in phosphorene. <i>Physical Review B</i> , 2014 , 90,	3.3	159
176	Substrate coupling suppresses size dependence of thermal conductivity in supported graphene. <i>Nanoscale</i> , 2013 , 5, 532-6	7.7	153
175	Phonon thermal conductivity of monolayer MoS ₂ sheet and nanoribbons. <i>Applied Physics Letters</i> , 2013 , 103, 133113	3.4	145
174	Remarkable reduction of thermal conductivity in silicon nanotubes. <i>Nano Letters</i> , 2010 , 10, 3978-83	11.5	140
173	A novel solid-state thermal rectifier based on reduced graphene oxide. <i>Scientific Reports</i> , 2012 , 2, 523	4.9	137
172	Thermoelectric properties of two-dimensional transition metal dichalcogenides. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 7684-7698	7.1	125
171	Al-Doped Black Phosphorus p-n Homojunction Diode for High Performance Photovoltaic. <i>Advanced Functional Materials</i> , 2017 , 27, 1604638	15.6	120
170	Impacts of doping on thermal and thermoelectric properties of nanomaterials. <i>Nanoscale</i> , 2010 , 2, 1058-69	7.9	118
169	Recent Advances in the Study of Phosphorene and its Nanostructures. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2017 , 42, 1-82	10.1	113
168	Thermal transport in nanostructures. <i>AIP Advances</i> , 2012 , 2, 041410	1.5	113
167	Highly Itinerant Atomic Vacancies in Phosphorene. <i>Journal of the American Chemical Society</i> , 2016 , 138, 10199-206	16.4	112
166	Thermal conduction and rectification in few-layer graphene Y junctions. <i>Nanoscale</i> , 2011 , 3, 4604-7	7.7	111
165	Size-dependent phononic thermal transport in low-dimensional nanomaterials. <i>Physics Reports</i> , 2020 , 860, 1-26	27.7	110
164	Electronic Properties of Edge-Hydrogenated Phosphorene Nanoribbons: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 22368-22372	3.8	108
163	Strain effects on thermoelectric properties of two-dimensional materials. <i>Mechanics of Materials</i> , 2015 , 91, 382-398	3.3	103
162	Tunable thermal conductivity of Si _{1-x} Ge _x nanowires. <i>Applied Physics Letters</i> , 2009 , 95, 073117	3.4	103
161	Biaxial compressive strain engineering in graphene/boron nitride heterostructures. <i>Scientific Reports</i> , 2012 , 2, 893	4.9	101

160	Topological Defects at the Graphene/h-BN interface Abnormally Enhance Its Thermal Conductance. <i>Nano Letters</i> , 2016 , 16, 4954-9	11.5	95
159	Anomalous heat conduction and anomalous diffusion in low dimensional nanoscale systems. <i>European Physical Journal B</i> , 2012 , 85, 1	1.2	93
158	Gapless MoS2 allotrope possessing both massless Dirac and heavy fermions. <i>Physical Review B</i> , 2014 , 89,	3.3	92
157	Anomalous heat conduction and anomalous diffusion in nonlinear lattices, single walled nanotubes, and billiard gas channels. <i>Chaos</i> , 2005 , 15, 15121	3.3	89
156	Impacts of atomistic coating on thermal conductivity of germanium nanowires. <i>Nano Letters</i> , 2012 , 12, 2826-32	11.5	88
155	Phonon coherent resonance and its effect on thermal transport in core-shell nanowires. <i>Journal of Chemical Physics</i> , 2011 , 135, 104508	3.9	86
154	Phonon thermal conductivity of monolayer MoS2: A comparison with single layer graphene. <i>Applied Physics Letters</i> , 2014 , 105, 103902	3.4	84
153	Thermal contact resistance across nanoscale silicon dioxide and silicon interface. <i>Journal of Applied Physics</i> , 2012 , 112, 064319	2.5	84
152	Ultra-low thermal conductivity of two-dimensional phononic crystals in the incoherent regime. <i>Npj Computational Materials</i> , 2018 , 4,	10.9	82
151	CrTiC-based double MXenes: novel 2D bipolar antiferromagnetic semiconductor with gate-controllable spin orientation toward antiferromagnetic spintronics. <i>Nanoscale</i> , 2018 , 11, 356-364	7.7	77
150	Modulating Carrier Density and Transport Properties of MoS2 by Organic Molecular Doping and Defect Engineering. <i>Chemistry of Materials</i> , 2016 , 28, 8611-8621	9.6	76
149	Exceptional Optical Absorption of Buckled Arsenene Covering a Broad Spectral Range by Molecular Doping. <i>ACS Omega</i> , 2018 , 3, 8514-8520	3.9	73
148	Thermal Conductivity of Amorphous Materials. <i>Advanced Functional Materials</i> , 2020 , 30, 1903829	15.6	73
147	Strain-tunable electronic and transport properties of MoS2 nanotubes. <i>Nano Research</i> , 2014 , 7, 518-527	10	72
146	Molecular Dynamics Simulations of Heat Conduction in Nanostructures: Effect of Heat Bath. <i>Journal of the Physical Society of Japan</i> , 2010 , 79, 074604	1.5	71
145	A bond-order theory on the phonon scattering by vacancies in two-dimensional materials. <i>Scientific Reports</i> , 2014 , 4, 5085	4.9	70
144	Thermal conductivity of penta-graphene from molecular dynamics study. <i>Journal of Chemical Physics</i> , 2015 , 143, 154703	3.9	68
143	Charge Transfer and Functionalization of Monolayer InSe by Physisorption of Small Molecules for Gas Sensing. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 10182-10193	3.8	65

142	From brittle to ductile: a structure dependent ductility of diamond nanothread. <i>Nanoscale</i> , 2016 , 8, 11177-84	7.84	65
141	Thermal Conductance of the 2D MoS/h-BN and graphene/h-BN Interfaces. <i>Scientific Reports</i> , 2017 , 7, 43886	4.9	64
140	Efficient approach for modeling phonon transmission probability in nanoscale interfacial thermal transport. <i>Physical Review B</i> , 2015 , 91,	3.3	64
139	Two-dimensional honeycomb borophene oxide: strong anisotropy and nodal loop transformation. <i>Nanoscale</i> , 2019 , 11, 2468-2475	7.7	62
138	Few-Layer PdSe Sheets: Promising Thermoelectric Materials Driven by High Valley Convergence. <i>ACS Omega</i> , 2018 , 3, 5971-5979	3.9	61
137	Comparison of isotope effects on thermal conductivity of graphene nanoribbons and carbon nanotubes. <i>Applied Physics Letters</i> , 2013 , 103, 013111	3.4	60
136	The Critical Role of Substrate in Stabilizing Phosphorene Nanoflake: A Theoretical Exploration. <i>Journal of the American Chemical Society</i> , 2016 , 138, 4763-71	16.4	59
135	Phonon coherence and its effect on thermal conductivity of nanostructures. <i>Advances in Physics: X</i> , 2018 , 3, 1480417	5.1	58
134	Stretch-Driven Increase in Ultrahigh Thermal Conductance of Hydrogenated Borophene and Dimensionality Crossover in Phonon Transmission. <i>Advanced Functional Materials</i> , 2018 , 28, 1801685	15.6	58
133	Large thermoelectric figure of merit in Si _{1-x} Ge _x nanowires. <i>Applied Physics Letters</i> , 2010 , 96, 173108	3.4	58
132	Thermoelectric performance of silicon nanowires. <i>Applied Physics Letters</i> , 2009 , 94, 213108	3.4	57
131	Direction dependent thermal conductivity of monolayer phosphorene: Parameterization of Stillinger-Weber potential and molecular dynamics study. <i>Journal of Applied Physics</i> , 2015 , 117, 214308	2.5	56
130	High oscillator strength interlayer excitons in two-dimensional heterostructures for mid-infrared photodetection. <i>Nature Nanotechnology</i> , 2020 , 15, 675-682	28.7	56
129	Black Phosphorus N-Type Field-Effect Transistor with Ultrahigh Electron Mobility via Aluminum Adatoms Doping. <i>Small</i> , 2017 , 13, 1602909	11	56
128	Thermal conductivity of a new carbon nanotube analog: The diamond nanothread. <i>Carbon</i> , 2016 , 98, 232-237	10.4	55
127	Thermal conductivity of silicon nanowires: From fundamentals to phononic engineering. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 754-766	2.5	54
126	Impacts of length and geometry deformation on thermal conductivity of graphene nanoribbons. <i>Journal of Applied Physics</i> , 2013 , 113, 044306	2.5	53
125	Exploring Ag(111) Substrate for Epitaxially Growing Monolayer Stanene: A First-Principles Study. <i>Scientific Reports</i> , 2016 , 6, 29107	4.9	52

124	A direct Z-scheme PtS/arsenene van der Waals heterostructure with high photocatalytic water splitting efficiency. <i>Nanoscale</i> , 2020 , 12, 17281-17289	7.7	51
123	Superior lattice thermal conductance of single-layer borophene. <i>Npj 2D Materials and Applications</i> , 2017 , 1,	8.8	51
122	Anomalous vibrational energy diffusion in carbon nanotubes. <i>Journal of Chemical Physics</i> , 2005 , 123, 014705	3.9	51
121	Machine Learning Approaches for Thermoelectric Materials Research. <i>Advanced Functional Materials</i> , 2020 , 30, 1906041	15.6	50
120	Diamond Nanothread as a New Reinforcement for Nanocomposites. <i>Advanced Functional Materials</i> , 2016 , 26, 5279-5283	15.6	49
119	Tunable Mechanical and Thermal Properties of One-Dimensional Carbyne Chain: Phase Transition and Microscopic Dynamics. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 24156-24164	3.8	48
118	A universal gauge for thermal conductivity of silicon nanowires with different cross sectional geometries. <i>Journal of Chemical Physics</i> , 2011 , 135, 204705	3.9	46
117	Thermal properties of two-dimensional materials. <i>Chinese Physics B</i> , 2017 , 26, 034401	1.2	45
116	MoS ₂ -graphene in-plane contact for high interfacial thermal conduction. <i>Nano Research</i> , 2017 , 10, 2944-2953	4.4	44
115	Engineering of charge carriers via a two-dimensional heterostructure to enhance the thermoelectric figure of merit. <i>Nanoscale</i> , 2018 , 10, 7077-7084	7.7	44
114	The best features of diamond nanothread for nanofibre applications. <i>Nature Communications</i> , 2017 , 8, 14863	17.4	43
113	Controllable thermal rectification realized in binary phase change composites. <i>Scientific Reports</i> , 2015 , 5, 8884	4.9	43
112	Thermal Conduction Across Graphene Cross-Linkers. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 12541-12547	3.8	41
111	Phonon surface scattering controlled length dependence of thermal conductivity of silicon nanowires. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 14647-52	3.6	41
110	Interfacial thermal resistance and thermal rectification between suspended and encased single layer graphene. <i>Journal of Applied Physics</i> , 2014 , 116, 134303	2.5	41
109	Thermal Transport in 2D Semiconductors—Considerations for Device Applications. <i>Advanced Functional Materials</i> , 2020 , 30, 1903929	15.6	41
108	Emerging Theory, Materials, and Screening Methods: New Opportunities for Promoting Thermoelectric Performance. <i>Annalen Der Physik</i> , 2019 , 531, 1800437	2.6	39
107	Theory of substrate-directed heat dissipation for single-layer graphene and other two-dimensional crystals. <i>Physical Review B</i> , 2016 , 94,	3.3	39

106	Achieving high thermoelectric quality factor toward high figure of merit in GeTe. <i>Materials Today Physics</i> , 2020 , 14, 100239	8	37
105	The morphology and temperature dependent tensile properties of diamond nanothreads. <i>Carbon</i> , 2016 , 107, 304-309	10.4	37
104	Design of Phosphorene for Hydrogen Evolution Performance Comparable to Platinum. <i>Chemistry of Materials</i> , 2019 , 31, 8948-8956	9.6	37
103	Material platforms for defect qubits and single-photon emitters. <i>Applied Physics Reviews</i> , 2020 , 7, 031308	7.3	37
102	Thermoelectric figure of merit in Ga-doped [0001] ZnO nanowires. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012 , 376, 978-981	2.3	35
101	Quantum thermal transport in stanene. <i>Physical Review B</i> , 2016 , 94,	3.3	34
100	Tailoring the phase transition temperature to achieve high-performance cubic GeTe-based thermoelectrics. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 18880-18890	13	33
99	Graphene helicoid as novel nanospring. <i>Carbon</i> , 2017 , 120, 258-264	10.4	32
98	Remarkably enhanced ferromagnetism in a super-exchange governed Cr ₂ Ge ₂ Te ₆ monolayer via molecular adsorption. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 5084-5093	7.1	32
97	Orbitally driven giant thermal conductance associated with abnormal strain dependence in hydrogenated graphene-like borophene. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	31
96	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer PtSe: A First-Principles Study. <i>ACS Omega</i> , 2017 , 2, 8640-8648	3.9	31
95	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. <i>Advanced Materials</i> , 2018 , 30, e1804928	24	31
94	High thermoelectric figure of merit in silicon-germanium superlattice structured nanowires. <i>Applied Physics Letters</i> , 2012 , 101, 233114	3.4	29
93	Nanotube-terminated zigzag edges of phosphorene formed by self-rolling reconstruction. <i>Nanoscale</i> , 2016 , 8, 17940-17946	7.7	28
92	Strain engineering on the thermal conductivity and heat flux of thermoelectric Bi ₂ Te ₃ nanofilm. <i>Nano Energy</i> , 2015 , 17, 104-110	17.1	27
91	Spin-gapless semiconductors for future spintronics and electronics. <i>Physics Reports</i> , 2020 , 888, 1-57	27.7	27
90	Thermal conduction across the one-dimensional interface between a MoS ₂ monolayer and metal electrode. <i>Nano Research</i> , 2016 , 9, 2372-2383	10	27
89	Thermo-mechanical correlation in two-dimensional materials. <i>Nanoscale</i> , 2021 , 13, 1425-1442	7.7	27

88	Decoupled electron and phonon transports in hexagonal boron nitride-silicene bilayer heterostructure. <i>Journal of Applied Physics</i> , 2016 , 119, 065102	2.5	25
87	Unusual phonon behavior and ultra-low thermal conductance of monolayer InSe. <i>Nanoscale</i> , 2017 , 10, 480-487	7.7	25
86	Design of phosphorene/graphene heterojunctions for high and tunable interfacial thermal conductance. <i>Nanoscale</i> , 2018 , 10, 19854-19862	7.7	25
85	Graphene-based thermal modulators. <i>Nano Research</i> , 2015 , 8, 2755-2762	10	24
84	Thermal conductivity of configurable two-dimensional carbon nanotube architecture and strain modulation. <i>Applied Physics Letters</i> , 2014 , 105, 153105	3.4	24
83	BiAgS: A Ductile Thermoelectric Material with High. <i>ACS Omega</i> , 2020 , 5, 5796-5804	3.9	22
82	Thickness dependent semiconductor-to-metal transition of two-dimensional polyaniline with unique work functions. <i>Nanoscale</i> , 2017 , 9, 12025-12031	7.7	22
81	High density mechanical energy storage with carbon nanothread bundle. <i>Nature Communications</i> , 2020 , 11, 1905	17.4	21
80	Remarkable Reduction of Interfacial Thermal Resistance in Nanophononic Heterostructures. <i>Advanced Functional Materials</i> , 2020 , 30, 2004003	15.6	21
79	Effects Of Structural Phase Transition On Thermoelectric Performance in Lithium-Intercalated Molybdenum Disulfide (Li MoS). <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 12184-12189	9.5	20
78	Breakdown of Hooke's law at the nanoscale - 2D material-based nanosprings. <i>Nanoscale</i> , 2018 , 10, 18961-18968	17.1	20
77	Origin of ultrafast growth of monolayer WSe2 via chemical vapor deposition. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	20
76	Vastly enhancing the chemical stability of phosphorene by employing an electric field. <i>Nanoscale</i> , 2017 , 9, 4219-4226	7.7	19
75	General theories and features of interfacial thermal transport. <i>Chinese Physics B</i> , 2018 , 27, 034401	1.2	19
74	Phonon stability and phonon transport of graphene-like borophene. <i>Nanotechnology</i> , 2020 , 31, 315709	3.4	18
73	Graphene Helicoid: Distinct Properties Promote Application of Graphene Related Materials in Thermal Management. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 7605-7612	3.8	18
72	From two-dimensional nano-sheets to roll-up structures: expanding the family of nanoscroll. <i>Nanotechnology</i> , 2017 , 28, 385704	3.4	18
71	Two-dimensional heterostructures for photocatalytic water splitting: a review of recent progress. <i>Nano Futures</i> , 2020 , 4, 032006	3.6	18

70	Anisotropic Wetting Characteristics of Water Droplets on Phosphorene: Roles of Layer and Defect Engineering. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 4622-4627	3.8	17
69	Revealing the Grain Boundary Formation Mechanism and Kinetics during Polycrystalline MoS Growth. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 46090-46100	9.5	17
68	Unusual Twisting Phonons and Breathing Modes in Tube-Terminated Phosphorene Nanoribbons and Their Effects on Thermal Conductivity. <i>Advanced Functional Materials</i> , 2017 , 27, 1702776	15.6	17
67	Three-Fold Enhancement of In-Plane Thermal Conductivity of Borophene through Metallic Atom Intercalation. <i>Nano Letters</i> , 2020 , 20, 7619-7626	11.5	17
66	Thermoelectric properties of phosphorene at the nanoscale. <i>Journal of Materials Research</i> , 2016 , 31, 3179-3186	2.5	17
65	Thermoelectric Properties of Hexagonal $M\bar{1}\bar{1}1$ ($M = \text{As, Sb, and Bi}$) Monolayers from First-Principles Calculations. <i>Nanomaterials</i> , 2019 , 9,	5.4	16
64	The important role of strain on phonon hydrodynamics in diamond-like bi-layer graphene. <i>Nanotechnology</i> , 2020 , 31, 335711	3.4	16
63	Large enhancement of thermoelectric performance in MoS/BN heterostructure due to vacancy-induced band hybridization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 13929-13936	11.5	14
62	Low interfacial thermal resistance between crossed ultra-thin carbon nanothreads. <i>Carbon</i> , 2020 , 165, 216-224	10.4	14
61	Rich novel zero-dimensional (0D), 1D, and 2D topological elements predicted in the $P6/m$ type ternary boride HfIrB . <i>Nanoscale</i> , 2020 , 12, 8314-8319	7.7	14
60	A kinetic Monte Carlo model for the growth and etching of graphene during chemical vapor deposition. <i>Carbon</i> , 2019 , 146, 399-405	10.4	14
59	Wall "thickness" effects on Raman spectrum shift, thermal conductivity, and Young's modulus of single-walled nanotubes. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 23823-6	3.4	13
58	Effects of lithium insertion on thermal conductivity of silicon nanowires. <i>Applied Physics Letters</i> , 2015 , 106, 173901	3.4	12
57	Large diffusion anisotropy and orientation sorting of phosphorene nanoflakes under a temperature gradient. <i>Nanoscale</i> , 2018 , 10, 1660-1666	7.7	12
56	Hybrid Structures and Strain-Tunable Electronic Properties of Carbon Nanothreads. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 3101-3106	3.8	11
55	Manipulating Interfacial Thermal Conduction of 2D Janus Heterostructure via a Thermo-Mechanical Coupling. <i>Advanced Functional Materials</i> , 2018 , 28, 1801846	15.6	11
54	Unique topological nodal line states and associated exceptional thermoelectric power factor platform in NbGeTe monolayer and bulk. <i>Nanoscale</i> , 2020 , 12, 16910-16916	7.7	11
53	Strain tuning of closed topological nodal lines and opposite pockets in quasi-two-dimensional $\bar{1}\bar{1}1$ phase FeSi. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 13650-13658	3.6	10

52	High thermal conductivity driven by the unusual phonon relaxation time platform in 2D monolayer boron arsenide.. <i>RSC Advances</i> , 2020 , 10, 25305-25310	3.7	10
51	Remarkable reduction of thermal conductivity in phosphorene phononic crystal. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 175401	1.8	10
50	Intersecting nodal rings in orthorhombic-type BaLi ₂ Sn compound. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 5461-5466	7.1	9
49	High thermal conductivity in covalently bonded bi-layer honeycomb boron arsenide. <i>Materials Today Physics</i> , 2021 , 17, 100346	8	9
48	Controlling anisotropic electrical conductivity in porous graphene-nanotube thin films. <i>Carbon</i> , 2020 , 165, 139-149	10.4	8
47	Symmetry-enforced ideal lanternlike phonons in the ternary nitride Li ₆ WN ₄ . <i>Physical Review B</i> , 2021 , 104,	3.3	8
46	Surrogate Model via Artificial Intelligence Method for Accelerating Screening Materials and Performance Prediction. <i>Advanced Functional Materials</i> , 2021 , 31, 2006245	15.6	8
45	Controlling the electronic properties of 2D/3D pillared graphene and glass-like carbon via metal atom doping. <i>Nanoscale</i> , 2019 , 11, 16414-16427	7.7	7
44	Impacts of image force on the Schottky barrier height at metal-carbon nanotube contacts. <i>Applied Physics Letters</i> , 2012 , 100, 173104	3.4	7
43	The correlation between electric field emission phenomenon and Schottky contact reverse bias characteristics in nanostructured systems. <i>Journal of Applied Physics</i> , 2011 , 109, 114316	2.5	7
42	Time-reversal-breaking Weyl nodal lines in two-dimensional AC (A = Ti, Zr, and Hf) intrinsically ferromagnetic materials with high Curie temperature. <i>Nanoscale</i> , 2021 , 13, 8235-8241	7.7	7
41	From Two- to Three-Dimensional van der Waals Layered Structures of Boron Crystals: An Ab Initio Study. <i>ACS Omega</i> , 2019 , 4, 8015-8021	3.9	6
40	Enhanced photoresponse of highly air-stable palladium diselenide by thickness engineering. <i>Nanophotonics</i> , 2020 , 9, 2467-2474	6.3	6
39	Kinetic theory for the formation of diamond nanothreads with desired configurations: a strain-temperature controlled phase diagram. <i>Nanoscale</i> , 2018 , 10, 9664-9672	7.7	6
38	Magnon-phonon interaction in antiferromagnetic two-dimensional MXenes. <i>Nanotechnology</i> , 2020 , 31, 435705	3.4	6
37	Perovskite-type YRh ₃ B with multiple types of nodal point and nodal line states. <i>Physical Review B</i> , 2021 , 103,	3.3	6
36	Evolution of intrinsic vacancies and prolonged lifetimes of vacancy clusters in black phosphorene. <i>Nanoscale</i> , 2019 , 11, 20987-20995	7.7	6
35	Magnetic order-dependent phonon properties in 2D magnet CrI. <i>Nanoscale</i> , 2021 , 13, 10882-10890	7.7	6

34	Spontaneous directional motion of water molecules in single-walled carbon nanotubes with a stiffness gradient. <i>Nanoscale Advances</i> , 2019 , 1, 1175-1180	5.1	5
33	Flexible Elemental Thermoelectrics with Ultra-high Power Density. <i>Materials Today Energy</i> , 2022 , 100964	4	5
32	In situ transmission electron microscopy study of the formation and migration of vacancy defects in atomically thin black phosphorus. <i>2D Materials</i> , 2021 , 8, 025004	5.9	5
31	An all-atom kinetic Monte Carlo model for chemical vapor deposition growth of graphene on Cu(1 1 1) substrate. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 155401	1.8	5
30	Effects of molecular adsorption on the spin-wave spectrum and magnon relaxation in two-dimensional CrGeTe. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 22047-22054	3.6	5
29	Sixfold degenerate nodal-point phonons: Symmetry analysis and materials realization. <i>Physical Review B</i> , 2021 , 104,	3.3	5
28	Diverse topological states in a ternary NdAsPd compound. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 7741-7748	4	5
27	An Anomalous Magneto-Optic Effect in Epitaxial Indium Selenide Layers. <i>Nano Letters</i> , 2020 , 20, 5330-5338	3.5	4
26	Emission Red Shift and Temperature Increase in Electrically Powered ZnO Nanowires. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 8283-8287	3.8	4
25	Significant Reduction in Thermal Conductivity of Lithium Cobalt Oxide Cathode Upon Charging: Propagating and Non-propagating Thermal Energy Transport. <i>ES Energy & Environments</i> , 2018 ,	2.9	4
24	Anomalous strain effect on the thermal conductivity of low-buckled two-dimensional silicene. <i>National Science Review</i> , 2021 , 8, nwaa220	10.8	4
23	Unveiling the competitive role of etching in graphene growth during chemical vapor deposition. <i>2D Materials</i> , 2019 , 6, 015031	5.9	4
22	Modification of thermal transport in few-layer MoS by atomic-level defect engineering. <i>Nanoscale</i> , 2021 , 13, 11561-11567	7.7	4
21	Magnon relaxation time in ferromagnetic Cr ₂ Ge ₂ Te ₆ monolayer governed by magnon-phonon interaction. <i>Applied Physics Letters</i> , 2021 , 118, 023102	3.4	4
20	Etching mechanisms, kinetics, and pattern formation in multilayered WSe ₂ . <i>Materials Today Advances</i> , 2020 , 7, 100075	7.4	3
19	Gate-tunable cross-plane heat dissipation in single-layer transition metal dichalcogenides. <i>Physical Review Research</i> , 2020 , 2,	3.9	3
18	Abnormal thermal conductivity enhancement in covalently bonded bilayer borophene allotrope. <i>Nano Research</i> , ¹	10	3
17	Remarkably high thermal-driven MoS grain boundary migration mobility and its implications on defect healing. <i>Nanoscale</i> , 2020 , 12, 17746-17753	7.7	3

16	Filling the gap: thermal properties and device applications of graphene. <i>Science China Information Sciences</i> , 2021 , 64, 1	3.4	3
15	Thermal transport in lithium-ion battery: A micro perspective for thermal management. <i>Frontiers of Physics</i> , 2022 , 17, 1	3.7	3
14	Theoretical analysis of thermal boundary conductance of MoS-SiO ₂ and WS-SiO ₂ interface. <i>Nanotechnology</i> , 2020 ,	3.4	3
13	Magnon-magnon interaction and magnon relaxation time in a ferromagnetic Cr ₂ Ge ₂ Te ₆ monolayer. <i>Physical Review B</i> , 2020 , 102,	3.3	2
12	Strain engineering and lattice vibration manipulation of atomically thin TaS films.. <i>RSC Advances</i> , 2020 , 10, 16718-16726	3.7	2
11	Carbon nanothreads enable remarkable enhancement in the thermal conductivity of polyethylene. <i>Nanoscale</i> , 2021 , 13, 6934-6943	7.7	2
10	Reply to: Detectivities of WS/HfS heterojunctions.. <i>Nature Nanotechnology</i> , 2022 ,	28.7	2
9	Designing good compatibility factor in segmented Bi _{0.5} Sb _{1.5} Te ₃ /GeTe thermoelectrics for high power conversion efficiency. <i>Nano Energy</i> , 2022 , 96, 107147	17.1	2
8	Thermal stability and thermal conductivity of solid electrolytes. <i>APL Materials</i> , 2022 , 10, 040902	5.7	2
7	Neural network representation and optimization of thermoelectric states of multiple interacting quantum dots. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 16165-16173	3.6	1
6	Staggering transport of edge states and symmetry analysis of electronic and optical properties of stanene. <i>Nanoscale</i> , 2020 , 12, 20890-20897	7.7	1
5	Remarkable Role of Grain Boundaries in the Thermal Transport Properties of Phosphorene. <i>ACS Omega</i> , 2020 , 5, 17416-17422	3.9	1
4	Coexistence of different dimensional topological states in stable ternary compound PrSbPt. <i>Materials Today Physics</i> , 2021 , 18, 100348	8	1
3	Eliminating Edge Electronic and Phonon States of Phosphorene Nanoribbon by Unique Edge Reconstruction. <i>Small</i> , 2021 , e2105130	11	0
2	Strain-induced quantum phase transition in the CSc monolayer: towards multiple gapless fermions. <i>Nanoscale</i> , 2021 , 13, 9723-9731	7.7	0
1	Anomalous Thermal Transport in Nanostructures 319-334		