Jie Chen

List of Publications by Year
in descending order

72 papers	4,788 citations	87723 38 h-index	95083 68 g-index
72 all docs	72 docs citations	72 times ranked	3752 citing authors

#	Article	IF	Citations
1	Thermal Conductivity of Polymers and Their Nanocomposites. Advanced Materials, 2018, 30, e1705544.	11.1	442
2	Experimental study of thermal rectification in suspended monolayer graphene. Nature Communications, 2017, 8, 15843.	5.8	210
3	Size-dependent phononic thermal transport in low-dimensional nanomaterials. Physics Reports, 2020, 860, 1-26.	10.3	209
4	Substrate coupling suppresses size dependence of thermal conductivity in supported graphene. Nanoscale, 2013, 5, 532-536.	2.8	189
5	Interfacial thermal resistance: Past, present, and future. Reviews of Modern Physics, 2022, 94, .	16.4	178
6	Remarkable Reduction of Thermal Conductivity in Silicon Nanotubes. Nano Letters, 2010, 10, 3978-3983.	4.5	167
7	Kapitza Resistance between Few-Layer Graphene and Water: Liquid Layering Effects. Nano Letters, 2015, 15, 5744-5749.	4.5	164
8	Strain Engineering of Kapitza Resistance in Few-Layer Graphene. Nano Letters, 2014, 14, 819-825.	4.5	150
9	Thermal Transport in Conductive Polymerâ€"Based Materials. Advanced Functional Materials, 2020, 30, 1904704.	7.8	122
10	Tunable thermal conductivity of Si1â^'xGex nanowires. Applied Physics Letters, 2009, 95, .	1.5	120
11	Thermal transport in graphene with defect and doping: Phonon modes analysis. Carbon, 2017, 116, 139-144.	5.4	118
12	Randomness-Induced Phonon Localization in Graphene Heat Conduction. Journal of Physical Chemistry Letters, 2018, 9, 3959-3968.	2.1	110
13	Covalently Bonded Grapheneâ€"Carbon Nanotube Hybrid for Highâ€Performance Thermal Interfaces. Advanced Functional Materials, 2015, 25, 7539-7545.	7.8	109
14	Thermal contact resistance across nanoscale silicon dioxide and silicon interface. Journal of Applied Physics, 2012, 112, .	1.1	108
15	Tailoring the Thermal and Mechanical Properties of Graphene Film by Structural Engineering. Small, 2018, 14, e1801346.	5.2	106
16	The Impact of Interlayer Rotation on Thermal Transport Across Graphene/Hexagonal Boron Nitride van der Waals Heterostructure. Nano Letters, 2021, 21, 2634-2641.	4.5	104
17	Impacts of Atomistic Coating on Thermal Conductivity of Germanium Nanowires. Nano Letters, 2012, 12, 2826-2832.	4.5	96
18	Phonon coherent resonance and its effect on thermal transport in core-shell nanowires. Journal of Chemical Physics, 2011, 135, 104508.	1.2	94

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19	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
20	Emerging Theory, Materials, and Screening Methods: New Opportunities for Promoting Thermoelectric Performance. Annalen Der Physik, 2019, 531, 1800437.	0.9	83
21	Phonon thermal conduction in novel 2D materials. Journal of Physics Condensed Matter, 2016, 28, 483001.	0.7	81
22	Ordered water layers by interfacial charge decoration leading to an ultra-low Kapitza resistance between graphene and water. Carbon, 2018, 135, 263-269.	5.4	80
23	Significant reduction of graphene thermal conductivity by phononic crystal structure. International Journal of Heat and Mass Transfer, 2015, 91, 428-432.	2.5	79
24	Hexagonal boron nitride: a promising substrate for graphene with high heat dissipation. Nanotechnology, 2017, 28, 225704.	1.3	79
25	A Review of Simulation Methods in Micro/Nanoscale Heat Conduction. ES Energy & Environments, 2018, , .	0.5	78
26	Conformal hexagonal-boron nitride dielectric interface for tungsten diselenide devices with improved mobility and thermal dissipation. Nature Communications, 2019, 10, 1188.	5.8	71
27	How to improve the accuracy of equilibrium molecular dynamics for computation of thermal conductivity?. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 2392-2396.	0.9	70
28	Thermal conductivity of suspended few-layer MoS₂. Nanoscale, 2018, 10, 2727-2734.	2.8	70
29	Comparison of isotope effects on thermal conductivity of graphene nanoribbons and carbon nanotubes. Applied Physics Letters, 2013, 103, .	1.5	68
30	Disorder limits the coherent phonon transport in two-dimensional phononic crystal structures. Nanoscale, 2019, 11, 11839-11846.	2.8	66
31	Engineering the thermal conductivity along an individual silicon nanowire by selective helium ion irradiation. Nature Communications, 2017, 8, 15919.	5.8	65
32	Suppressing Thermal Conductivity of Suspended Triâ€layer Graphene by Gold Deposition. Advanced Materials, 2013, 25, 6884-6888.	11.1	62
33	Reducing lattice thermal conductivity in schwarzites via engineering the hybridized phonon modes. Carbon, 2018, 139, 289-298.	5.4	52
34	A universal gauge for thermal conductivity of silicon nanowires with different cross sectional geometries. Journal of Chemical Physics, 2011, 135, 204705.	1.2	49
35	Edge states induce boundary temperature jump in molecular dynamics simulation of heat conduction. Physical Review B, 2009, 80, .	1.1	45
36	Accurate description of high-order phonon anharmonicity and lattice thermal conductivity from molecular dynamics simulations with machine learning potential. Physical Review B, 2022, 105, .	1.1	45

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37	Negative Gaussian curvature induces significant suppression of thermal conduction in carbon crystals. Nanoscale, 2017, 9, 14208-14214.	2.8	43
38	Thermal rectification in Y-junction carbon nanotube bundle. Carbon, 2018, 140, 673-679.	5.4	42
39	Remarkable thermal rectification in pristine and symmetric monolayer graphene enabled by asymmetric thermal contact. Journal of Applied Physics, 2020, 127, .	1.1	40
40	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
41	Machine learning approach for the prediction and optimization of thermal transport properties. Frontiers of Physics, 2021, 16, 1.	2.4	39
42	Heat Conduction Theory Including Phonon Coherence. Physical Review Letters, 2022, 128, 015901.	2.9	35
43	Thermal conductivity of nanowires. Chinese Physics B, 2018, 27, 035101.	0.7	30
44	Strong four-phonon scattering in monolayer and hydrogenated bilayer BAs with horizontal mirror symmetry. Applied Physics Letters, 2022, 120, .	1.5	30
45	Ultrafast cooling by covalently bonded graphene-carbon nanotube hybrid immersed in water. Nanotechnology, 2016, 27, 465705.	1.3	27
46	Coherent thermal transport in nano-phononic crystals: An overview. APL Materials, 2021, 9, .	2.2	26
47	Impact of Nanoscale Roughness on Heat Transport across the Solidâ€“Solid Interface. Advanced Materials Interfaces, 2020, 7, 1901582.	1.9	24
48	Total-transmission and total-reflection of individual phonons in phononic crystal nanostructures. APL Materials, 2021, 9, .	2.2	24
49	A perspective on the hydrodynamic phonon transport in two-dimensional materials. Journal of Applied Physics, 2021, 130, .	1.1	24
50	Accuracy of Machine Learning Potential for Predictions of Multiple-Target Physical Properties*. Chinese Physics Letters, 2020, 37, 126301.	1.3	24
51	Lattice thermal conductivity of Î² ₁₂ and Ï‡ ₃ borophene*. Chinese Physics B, 2020, 29, 126503.	0.7	24
52	Ultra-low lattice thermal conductivity and promising thermoelectric figure of merit in borophene via chlorination. Nano Research, 2022, 15, 3804-3811.	5.8	24
53	Generalized decay law for particlelike and wavelike thermal phonons. Physical Review B, 2021, 103, .	1.1	23
54	Reducing Kapitza resistance between graphene/water interface via interfacial superlattice structure. Nanotechnology, 2022, 33, 035707.	1.3	23

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55	How coherence is governing diffuson heat transfer in amorphous solids. Npj Computational Materials, 2022, 8, .	3.5	22
56	Hydrodynamic phonon transport in bulk crystalline polymers. Physical Review B, 2020, 102, .	1.1	21
57	Tunable phonon nanocapacitor built by carbon schwarzite based host-guest system. Physical Review B, 2020, 101, .	1.1	20
58	Optimization of interfacial thermal transport in Si/Ge heterostructure driven by machine learning. International Journal of Heat and Mass Transfer, 2022, 182, 122014.	2.5	17
59	Hopping processes explain linear rise in temperature of thermal conductivity in thermoelectric clathrates with off-center guest atoms. Physical Review B, 2017, 96, .	1.1	15
60	Tunable phononic thermal transport in two-dimensional C6CaC6 via guest atom intercalation. Journal of Applied Physics, 2021, 129, .	1.1	15
61	Copper diffusion rates and hopping pathways in superionic Cu2Se. Acta Materialia, 2021, 215, 117026.	3.8	15
62	Revisit to the Impacts of Rattlers on Thermal Conductivity of Clathrates. Frontiers in Energy Research, 2018, 6, .	1.2	14
63	Enhancement of the lattice thermal conductivity of two-dimensional functionalized MXenes by inversion symmetry breaking. Physical Review B, 2022, 105, .	1.1	14
64	Effect of boundary chain folding on thermal conductivity of lamellar amorphous polyethylene. RSC Advances, 2019, 9, 33549-33557.	1.7	13
65	A phononic rectifier based on carbon schwarzite hostâ€“guest system. Chinese Physics B, 2020, 29, 124402.	0.7	10
66	Off-center rattling triggers high-temperature thermal transport in thermoelectric clathrates: Nonperturbative approach. Physical Review B, 2018, 97, .	1.1	9
67	Imaging properties of a two-dimensional photonic crystal with rectangular air holes embedded in a silicon slab. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 163-171.	1.0	7
68	Ultra-strong stability of double-sided fluorinated monolayer graphene and its electrical property characterization. Scientific Reports, 2020, 10, 17562.	1.6	7
69	Significant Reduction in Thermal Conductivity of Lithium Cobalt Oxide Cathode Upon Charging: Propagating and Non-propagating Thermal Energy Transport. ES Energy & Environments, 2018, , .	0.5	7
70	Dynamics of elastic waves in two-dimensional phononic crystals with chaotic defect. Applied Physics Letters, 2007, 91, 121902.	1.5	5
71	Thermal self-synchronization of nano-objects. Journal of Applied Physics, 2021, 130, .	1.1	5
72	Phononic Thermal Transport in Yttrium Hydrides Allotropes. Frontiers in Materials, 2020, 7, .	1.2	4