Yan Wang

List of Publications by Year in Descending Order

38 papers	1,302 citations	21 h-index	36 g-index
43 ext. papers	1,592 ext. citations	6 avg, IF	4.91 L-index

#	Paper	IF	Citations
38	First-principles study of the impact of chemical doping and functional groups on the absorption spectra of graphene. *Semiconductor Science and Technology*, **2022**, 37, 025013	1.8	0
37	Complex temperature dependence of coherent and incoherent lattice thermal transport in superlattices. *Nanotechnology*, **2021**, 32, 065401	3.4	1
36	Big-data-accelerated aperiodic Si/Ge superlattice prediction for quenching thermal conduction via pattern analysis. *Energy and AI*, **2021**, 3, 100046	12.6	8
35	Strain engineering of polar optical phonon scattering mechanism - an effective way to optimize the power-factor and lattice thermal conductivity of ScN. *Physical Chemistry Chemical Physics*, **2021**, 23, 23288-23302	3.6	0
34	Multiscale Structural Modulation of Anisotropic Graphene Framework for Polymer Composites Achieving Highly Efficient Thermal Energy Management. *Advanced Science*, **2021**, 8, 2003734	13.6	38
33	Scalable and controlled creation of nanoholes in graphene by microwave-assisted chemical etching for improved electrochemical properties. *Carbon*, **2020**, 161, 880-891	10.4	12
32	The dimensionality effect on phonon localization in graphene/hexagonal boron nitride superlattices. *2D Materials*, **2020**, 7, 035029	5.9	9
31	First-principles Modeling of Thermal Transport in Materials: Achievements, Opportunities, and Challenges. *International Journal of Thermophysics*, **2020**, 41, 1	2.1	21
30	Quenching Thermal Transport in Aperiodic Superlattices: A Molecular Dynamics and Machine Learning Study. *ACS Applied Materials & Interfaces*, **2020**, 12, 8795-8804	9.5	23
29	Strong strain hardening in ultrafast melt-quenched nanocrystalline Cu: The role of fivefold twins. *Journal of Applied Physics*, **2019**, 126, 075103	2.5	15
28	Scalable Production of Integrated Graphene Nanoarchitectures for Ultrafast Solar-Thermal Conversion and Vapor Generation. *Matter*, **2019**, 1, 1017-1032	12.7	40
27	Metal-Level Thermally Conductive yet Soft Graphene Thermal Interface Materials. *ACS Nano*, **2019**, 13, 11561-11571	16.7	117
26	Reducing interfacial thermal resistance between metal and dielectric materials by a metal interlayer. *Journal of Applied Physics*, **2019**, 125, 045302	2.5	17
25	Multifunctional Solar Waterways: Plasma-Enabled Self-Cleaning Nanoarchitectures for Energy-Efficient Desalination. *Advanced Energy Materials*, **2019**, 9, 1901286	21.8	66
24	Significantly enhanced convective heat transfer through surface modification in nanochannels. *International Journal of Heat and Mass Transfer*, **2019**, 136, 702-708	4.9	21
23	Carbon nanomaterials for thermal rectification **2019**, 103-119		
22	Carbon nanomaterials for thermoelectric applications **2019**, 121-137		

21	The critical particle size for enhancing thermal conductivity in metal nanoparticle-polymer composites. *Journal of Applied Physics*, **2018**, 123, 074302	2.5	11
20	Carbon-Based Materials for Thermoelectrics. *Advances in Condensed Matter Physics*, **2018**, 2018, 1-29	1	26
19	Lattice thermal transport in superhard hexagonal diamond and wurtzite boron nitride: A comparative study with cubic diamond and cubic boron nitride. *Carbon*, **2018**, 139, 85-93	10.4	16
18	Innovative Nanomaterials for Thermal Applications. *Journal of Nanomaterials*, **2017**, 2017, 1-2	3.2	1
17	Ultralow Lattice Thermal Conductivity of the Random Multilayer Structure with Lattice Imperfections. *Scientific Reports*, **2017**, 7, 8134	4.9	28
16	Metal/dielectric thermal interfacial transport considering cross-interface electron-phonon coupling: Theory, two-temperature molecular dynamics, and thermal circuit. *Physical Review B*, **2016**, 93,	3.3	36
15	Effect of interlayer on interfacial thermal transport and hot electron cooling in metal-dielectric systems: An electron-phonon coupling perspective. *Journal of Applied Physics*, **2016**, 119, 065103	2.5	27
14	First principles calculation of lattice thermal conductivity of metals considering phonon-phonon and phonon-electron scattering. *Journal of Applied Physics*, **2016**, 119, 225109	2.5	88
13	Optimization of the random multilayer structure to break the random-alloy limit of thermal conductivity. *Applied Physics Letters*, **2015**, 106, 073104	3.4	45
12	Two-Dimensional Thermal Transport in Graphene: A Review of Numerical Modeling Studies. *Nanoscale and Microscale Thermophysical Engineering*, **2014**, 18, 155-182	3.7	48
11	Phonon lateral confinement enables thermal rectification in asymmetric single-material nanostructures. *Nano Letters*, **2014**, 14, 592-6	11.5	153
10	Decomposition of coherent and incoherent phonon conduction in superlattices and random multilayers. *Physical Review B*, **2014**, 90,	3.3	86
9	Measurement of thermal conductivity of PbTe nanocrystal coated glass fibers by the 3ωmethod. *Nano Letters*, **2013**, 13, 5006-12	11.5	24
8	An Evaluation of Energy Transfer Pathways in Thermal Transport Across Solid/Solid Interfaces **2013** ,		1
7	The effects of diameter and chirality on the thermal transport in free-standing and supported carbon-nanotubes. *Applied Physics Letters*, **2012**, 100, 233105	3.4	40
6	Two-temperature nonequilibrium molecular dynamics simulation of thermal transport across metal-nonmetal interfaces. *Physical Review B*, **2012**, 85,	3.3	84
5	Edge effect on thermal transport in graphene nanoribbons: A phonon localization mechanism beyond edge roughness scattering. *Applied Physics Letters*, **2012**, 101, 013101	3.4	72
4	Tunable thermal rectification in graphene nanoribbons through defect engineering: A molecular dynamics study. *Applied Physics Letters*, **2012**, 100, 163101	3.4	75

3	Nonlinear thermal transport and negative differential thermal conductance in graphene nanoribbons. *Applied Physics Letters*, **2011**, 99, 113101	3.4	52
2	Necessary conditions for thermal rectification and negative differential thermal conductance in graphene nanoribbons. *Materials Research Society Symposia Proceedings*, **2011**, 1347, 1		
1	Linear and Nonlinear Thermal Transport in Graphene: Molecular Dynamics Simulations. *Materials Research Society Symposia Proceedings*, **2011**, 1347, 1		