

# Jin-Wu Jiang

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

102  
papers

4,244  
citations

37  
h-index

64  
g-index

107  
ext. papers

4,945  
ext. citations

4.7  
avg, IF

6.47  
L-index

#	Paper	IF	Citations
102	Tuning the shell structure deformation of APS thermal barrier coatings: A molecular dynamics study. <i>AIP Advances</i> , <b>2022</b> , 12, 035001	1.5	
101	Thermal-fluctuation gradient induced tangential entropic forces in layered two-dimensional materials. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2022</b> , 163, 104871	5	0
100	Physical description of the monoclinic phase of zirconia based on the bond-order characteristic of the Tersoff potential. <i>Frontiers of Physics</i> , <b>2021</b> , 16, 1	3.7	1
99	Tunable thermal expansion coefficient of transition-metal dichalcogenide lateral heterostructures. <i>Nanotechnology</i> , <b>2020</b> , 31, 405709	3.4	3
98	Multiscale computational understanding and growth of 2D materials: a review. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	49
97	Carbon rings as building blocks for single-walled carbon nanotubes. <i>Nano Futures</i> , <b>2020</b> , 4, 025001	3.6	
96	Buckling of cylindrical shells subjected to a finite number of lateral loads: application to single-walled carbon nanotubes. <i>Nanotechnology</i> , <b>2020</b> , 31, 205711	3.4	2
95	A high performance wearable strain sensor with advanced thermal management for motion monitoring. <i>Nature Communications</i> , <b>2020</b> , 11, 3530	17.4	141
94	Machine learning-based design of porous graphene with low thermal conductivity. <i>Carbon</i> , <b>2020</b> , 157, 262-269	10.4	35
93	Misfit strain-induced energy dissipation for graphene/MoS heterostructure nanomechanical resonators. <i>Nanotechnology</i> , <b>2019</b> , 30, 265701	3.4	2
92	Misfit Strain-Induced Buckling for Transition-Metal Dichalcogenide Lateral Heterostructures: A Molecular Dynamics Study. <i>Acta Mechanica Sinica</i> , <b>2019</b> , 32, 17-28	2	24
91	Diameter-dependent polygonal cross section for holey phenine nanotubes. <i>Nanotechnology</i> , <b>2019</b> , 31, 085702	3.4	1
90	Strain tunable phononic topological bandgaps in two-dimensional hexagonal boron nitride. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 082511	2.5	5
89	Strain engineering for thermal conductivity of diamond nanothread forests. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 085301	3	4
88	The art of designing carbon allotropes. <i>Frontiers of Physics</i> , <b>2019</b> , 14, 1	3.7	30
87	An analytic investigation for the edge effect on mechanical properties of graphene nanoribbons. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 064301	2.5	3
86	Irreversible crumpling of graphene from hydrostatic and biaxial compression. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 015302	3	2

85	Nanomechanical resonators based on group IV element monolayers. <i>Nanotechnology</i> , <b>2018</b> , 29, 165503	3.4	3
84	Topologically protected interface phonons in two-dimensional nanomaterials: hexagonal boron nitride and silicon carbide. <i>Nanoscale</i> , <b>2018</b> , 10, 13913-13923	7.7	20
83	Effect of interlayer space on the structure and Poisson's ratio of a graphene/MoS <sub>2</sub> tubular van der Waals heterostructure. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 084302	2.5	3
82	Edge-mode based graphene nanomechanical resonators for high-sensitivity mass sensor. <i>Europhysics Letters</i> , <b>2018</b> , 123, 36002	1.6	1
81	Modulation of thermal conductivity in single-walled carbon nanotubes by fullerene encapsulation: enhancement or reduction?. <i>Nanoscale</i> , <b>2018</b> , 10, 18249-18256	7.7	7
80	Negative Poisson's ratio in graphene oxide. <i>Nanoscale</i> , <b>2017</b> , 9, 4007-4012	7.7	38
79	Interfacial thermal conductance in graphene/black phosphorus heterogeneous structures. <i>Carbon</i> , <b>2017</b> , 117, 399-410	10.4	58
78	The effects of vacancy and oxidation on black phosphorus nanoresonators. <i>Nanotechnology</i> , <b>2017</b> , 28, 135202	3.4	13
77	An empirical description for the hinge-like mechanism in single-layer black phosphorus: The angle-angle cross interaction. <i>Acta Mechanica Solida Sinica</i> , <b>2017</b> , 30, 227-233	2	
76	Molecular dynamics simulations for mechanical properties of borophene: parameterization of valence force field model and Stillinger-Weber potential. <i>Scientific Reports</i> , <b>2017</b> , 7, 45516	4.9	30
75	Twin graphene: A novel two-dimensional semiconducting carbon allotrope. <i>Carbon</i> , <b>2017</b> , 118, 370-375	10.4	97
74	Self-cleaning by harnessing wrinkles in two-dimensional layered crystals. <i>Nanoscale</i> , <b>2017</b> , 10, 312-318	7.7	4
73	Tunable negative Poisson's ratio in hydrogenated graphene. <i>Nanoscale</i> , <b>2016</b> , 8, 15948-53	7.7	27
72	Intrinsic Negative Poisson's Ratio for Single-Layer Graphene. <i>Nano Letters</i> , <b>2016</b> , 16, 5286-90	11.5	77
71	Interlayer breathing and shear modes in few-layer black phosphorus. <i>Journal of Physics Condensed Matter</i> , <b>2016</b> , 28, 165401	1.8	8
70	Reply to the Comment on Parametrization of Stillinger-Weber potential based on valence force field model: application to single-layer MoS <sub>2</sub> and black phosphorus. <i>Nanotechnology</i> , <b>2016</b> , 27, 238002	3.4	2
69	Mechanical strain effects on black phosphorus nanoresonators. <i>Nanoscale</i> , <b>2016</b> , 8, 901-5	7.7	24
68	Negative Poisson's Ratio in Single-Layer Graphene Ribbons. <i>Nano Letters</i> , <b>2016</b> , 16, 2657-62	11.5	90

67	Thermal conductivities of single- and multi-layer phosphorene: a molecular dynamics study. <i>Nanoscale</i> , <b>2016</b> , 8, 483-91	7.7	129
66	Interfacial thermal conductance in graphene/MoS2 heterostructures. <i>Carbon</i> , <b>2016</b> , 96, 888-896	10.4	77
65	Strain engineering for mechanical properties in graphene nanoribbons revisited: The warping edge effect. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 234301	2.5	2
64	Self-assembly of water molecules using graphene nanoresonators. <i>RSC Advances</i> , <b>2016</b> , 6, 110466-110470	3.7	5
63	Auxetic nanomaterials: Recent progress and future development. <i>Applied Physics Reviews</i> , <b>2016</b> , 3, 041101	11.3	71
62	Buckled graphene for efficient energy harvest, storage and conversion. <i>Nanotechnology</i> , <b>2016</b> , 27, 405402	4.4	2
61	A Stillinger-Weber potential for single-layered black phosphorus, and the importance of cross-pucker interactions for a negative Poisson's ratio and edge stress-induced bending. <i>Nanoscale</i> , <b>2015</b> , 7, 6059-68	7.7	69
60	Thermal conduction in single-layer black phosphorus: highly anisotropic?. <i>Nanotechnology</i> , <b>2015</b> , 26, 055701	3.4	50
59	The strain rate effect on the buckling of single-layer MoS2. <i>Scientific Reports</i> , <b>2015</b> , 5, 7814	4.9	9
58	Manipulating the Thermal Conductivity of Monolayer MoS2 via Lattice Defect and Strain Engineering. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 16358-16365	3.8	112
57	Parametrization of Stillinger-Weber potential based on valence force field model: application to single-layer MoS2 and black phosphorus. <i>Nanotechnology</i> , <b>2015</b> , 26, 315706	3.4	154
56	A Gaussian treatment for the friction issue of Lennard-Jones potential in layered materials: Application to friction between graphene, MoS2, and black phosphorus. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 124304	2.5	46
55	Intrinsic twisting instability of kinked silicon nanowires for intracellular recording. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 28515-24	3.6	3
54	Effects of electron-phonon interaction on thermal and electrical transport through molecular nano-conductors. <i>AIP Advances</i> , <b>2015</b> , 5, 053204	1.5	24
53	The third principal direction besides armchair and zigzag in single-layer black phosphorus. <i>Nanotechnology</i> , <b>2015</b> , 26, 365702	3.4	11
52	Strain engineering for thermal conductivity of single-walled carbon nanotube forests. <i>Carbon</i> , <b>2015</b> , 81, 688-693	10.4	13
51	Analytic study of strain engineering of the electronic bandgap in single-layer black phosphorus. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	54
50	Modelling heat conduction in polycrystalline hexagonal boron-nitride films. <i>Scientific Reports</i> , <b>2015</b> , 5, 13228	4.9	90

49	Elastic bending modulus for single-layer black phosphorus. <i>Journal Physics D: Applied Physics</i> , <b>2015</b> , 48, 455305	3	21
48	Mechanical properties and fracture behavior of single-layer phosphorene at finite temperatures. <i>Journal Physics D: Applied Physics</i> , <b>2015</b> , 48, 395303	3	86
47	Graphene versus MoS <sub>2</sub> : A short review. <i>Frontiers of Physics</i> , <b>2015</b> , 10, 287-302	3.7	137
46	A review on the flexural mode of graphene: lattice dynamics, thermal conduction, thermal expansion, elasticity and nanomechanical resonance. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 083001	1.8	55
45	MoS <sub>2</sub> nanoresonators: intrinsically better than graphene?. <i>Nanoscale</i> , <b>2014</b> , 6, 3618-25	7.7	59
44	Thermal conductivity of freestanding single wall carbon nanotube sheet by Raman spectroscopy. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 19958-65	9.5	39
43	Phonon bandgap engineering of strained monolayer MoS <sub>2</sub> . <i>Nanoscale</i> , <b>2014</b> , 6, 8326-33	7.7	38
42	The buckling of single-layer MoS <sub>2</sub> under uniaxial compression. <i>Nanotechnology</i> , <b>2014</b> , 25, 355402	3.4	32
41	Phonon modes in single-walled molybdenum disulphide nanotubes: lattice dynamics calculation and molecular dynamics simulation. <i>Nanotechnology</i> , <b>2014</b> , 25, 105706	3.4	12
40	Mechanical properties of single-layer black phosphorus. <i>Journal Physics D: Applied Physics</i> , <b>2014</b> , 47, 385304	3.04	157
39	Coarse-grained potentials of single-walled carbon nanotubes. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2014</b> , 71, 197-218	5	56
38	Negative poisson's ratio in single-layer black phosphorus. <i>Nature Communications</i> , <b>2014</b> , 5, 4727	17.4	478
37	Tension-induced phase transition of single-layer molybdenum disulphide (MoS <sub>2</sub> ) at low temperatures. <i>Nanotechnology</i> , <b>2014</b> , 25, 295701	3.4	32
36	Mechanical properties of MoS <sub>2</sub> /graphene heterostructures. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 033108	3.4	102
35	Thermal conductivity of silicene nanosheets and the effect of isotopic doping. <i>Journal Physics D: Applied Physics</i> , <b>2014</b> , 47, 165301	3	41
34	Adsorbate migration effects on continuous and discontinuous temperature-dependent transitions in the quality factors of graphene nanoresonators. <i>Nanotechnology</i> , <b>2014</b> , 25, 025501	3.4	10
33	Registry effect on the thermal conductivity of few-layer graphene. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 164313	2.5	5
32	Elastic bending modulus of single-layer molybdenum disulfide (MoS <sub>2</sub> ): finite thickness effect. <i>Nanotechnology</i> , <b>2013</b> , 24, 435705	3.4	109

31	Thermal conductivity of carbon nanocoils. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 233511	3.4	27
30	A surface stacking fault energy approach to predicting defect nucleation in surface-dominated nanostructures. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2013</b> , 61, 1915-1934	5	27
29	Molecular dynamics simulations of single-layer molybdenum disulphide (MoS <sub>2</sub> ): Stillinger-Weber parametrization, mechanical properties, and thermal conductivity. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 064307	2.5	263
28	Why twisting angles are diverse in graphene Moiré patterns?. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 194304	4.5	6
27	Polar surface effects on the thermal conductivity of ZnO nanowires: a shell-like surface reconstruction-induced preserving mechanism. <i>Nanoscale</i> , <b>2013</b> , 5, 11035-43	7.7	7
26	Modulation of thermal conductivity in kinked silicon nanowires: phonon interchanging and pinching effects. <i>Nano Letters</i> , <b>2013</b> , 13, 1670-4	11.5	54
25	A theoretical analysis of cohesive energy between carbon nanotubes, graphene and substrates. <i>Carbon</i> , <b>2013</b> , 57, 108-119	10.4	84
24	A comparative study of two molecular mechanics models based on harmonic potentials. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 063509	2.5	22
23	Preserving the Q-factors of ZnO nanoresonators via polar surface reconstruction. <i>Nanotechnology</i> , <b>2013</b> , 24, 405705	3.4	2
22	Size-sensitive Young's modulus of kinked silicon nanowires. <i>Nanotechnology</i> , <b>2013</b> , 24, 185702	3.4	4
21	Mechanical oscillation of kinked silicon nanowires: A natural nanoscale spring. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 123104	3.4	10
20	Temperature-dependent mechanical properties of single-layer molybdenum disulphide: Molecular dynamics nanoindentation simulations. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 231913	3.4	28
19	Thermal conductivity dependence on chain length in amorphous polymers. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 184304	2.5	33
18	Orientation dependent thermal conductance in single-layer MoS <sub>2</sub> . <i>Scientific Reports</i> , <b>2013</b> , 3, 2209	4.9	55
17	Acoustic and breathing phonon modes in bilayer graphene with Moiré patterns. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 023113	3.4	21
16	Morphology and in-plane thermal conductivity of hybrid graphene sheets. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 211909	3.4	47
15	Superior thermal conductivity and extremely high mechanical strength in polyethylene chains from ab initio calculation. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 124304	2.5	26
14	Bright and dark modes induced by graphene bubbles. <i>Europhysics Letters</i> , <b>2012</b> , 97, 36004	1.6	1

13	High thermoelectric figure of merit in silicon-germanium superlattice structured nanowires. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 233114	3.4	29
12	Enhancing the mass sensitivity of graphene nanoresonators via nonlinear oscillations: the effective strain mechanism. <i>Nanotechnology</i> , <b>2012</b> , 23, 475501	3.4	32
11	Joule heating and thermoelectric properties in short single-walled carbon nanotubes: Electron-phonon interaction effect. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 124319	2.5	35
10	First principle study of the thermal conductance in graphene nanoribbon with vacancy and substitutional silicon defects. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 113114	3.4	61
9	Graphene-based torsional resonator from molecular-dynamics simulation. <i>Europhysics Letters</i> , <b>2011</b> , 96, 66007	1.6	4
8	Manipulation of heat current by the interface between graphene and white graphene. <i>Europhysics Letters</i> , <b>2011</b> , 96, 16003	1.6	18
7	A universal exponential factor in the dimensional crossover from graphene to graphite. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 124311	2.5	1
6	Topology-induced thermal rectification in carbon nanodevice. <i>Europhysics Letters</i> , <b>2010</b> , 89, 46005	1.6	37
5	Thermal contraction in silicon nanowires at low temperatures. <i>Nanoscale</i> , <b>2010</b> , 2, 2864-7	7.7	6
4	A full spd tight-binding treatment for electronic bands of graphitic tubes. <i>Solid State Communications</i> , <b>2009</b> , 149, 82-86	1.6	17
3	Raman and infrared properties and layer dependence of the phonon dispersions in multilayered graphene. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	65
2	Chiral symmetry analysis and rigid rotational invariance for the lattice dynamics of single-wall carbon nanotubes. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	27
1	Strain Engineering for the Kapitza Resistance of the $ZrO_{2}/(\alpha)\text{-Al}_{2}O_{3}$ and $YSZ/(\alpha)\text{-Al}_{2}O_{3}$ Interfaces. <i>Acta Mechanica Sinica</i> , 1	2	0