Junhua Zhao

List of Publications by Year
in descending order

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		136885	110317
142	4,699	32	64
papers	citations	h-index	g-index

143	143	143	5069
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Unusual thermal properties of graphene origami crease: A molecular dynamics study. Green Energy and Environment, 2022, 7, 86-94.	4.7	18
2	Arbitrary-shape-adaptable strain sensor array with optimized circuit layout via direct-ink-writing: Scalable design and hierarchical printing. Materials and Design, 2022, 214, 110388.	3.3	13
3	Highly Regulatable Heat Conductance of Grapheneâ€“Sericin Hybrid for Responsive Textiles. Advanced Functional Materials, 2022, 32, .	7.8	21
4	Surface effect induced thickness-dependent stress intensity factors of nano-thickness cracked metal plates. Engineering Fracture Mechanics, 2022, 261, 108235.	2.0	2
5	Thermal conductivity of Aluminum/Graphene metal-matrix composites: From the thermal boundary conductance to thermal regulation. Materials Today Communications, 2022, 30, 103147.	0.9	13
6	Coarse-Grained Potentials of Poly(vinyl alcohol)/Graphene Oxide Interfaces. Macromolecules, 2022, 55, 1104-1119.	2.2	6
7	Revealing Density Thresholds of Carbon Nanotube Cross-Links for Load Transfer: A Graph Theory Strategy. ACS Nano, 2022, 16, 6929-6936.	7.3	2
8	Interlayer shear coupling in bilayer graphene. Npj 2D Materials and Applications, 2022, 6, .	3.9	4
9	High-precision resistance strain sensors of multilayer composite structure via direct ink writing: Optimized layer flatness and interfacial strength. Composites Science and Technology, 2021, 201, 108530.	3.8	26
10	Huge stretchability and reversibility of helical graphenes using molecular dynamics simulations and simplified theoretical models. Mechanics of Materials, 2021, 153, 103683.	1.7	11
11	Fracture behavior dependent on crack-tip shapes in nanoscale crack-defect monolayer boron nitride sheets. International Journal of Smart and Nano Materials, 2021, 12, 36-48.	2.0	4
12	Unprecedented enhancement of wear resistance for epoxy-resin graphene composites. Nanoscale, 2021, 13, 2855-2867.	2.8	34
13	A heat and force locating sensor with nanoscale precision: a knitted graphene sheet. Nanoscale, 2021, 13, 5826-5833.	2.8	12
14	Stabilities and catapults of truncated carbon nanocones. Nanotechnology, 2021, 32, 185705.	1.3	2
15	An analogous ellipse equation for describing the coupling relationship of friction and adhesion between a probe tip and graphene. Mechanics of Materials, 2021, 156, 103791.	1.7	1
16	An anti-shrinkage model of an ultraviolet-curing coating filled with hollow polyurethane acrylate microspheres. Mechanics of Materials, 2021, 163, 104091.	1.7	2
17	Recent progress in the development of thermal interface materials: a review. Physical Chemistry Chemical Physics, 2021, 23, 753-776.	1.3	44
18	Strain-rate-dependent constitutive and damage models for a low-yielding-strength steel under dynamic loadings. Journal of Mechanical Science and Technology, 2021, 35, 4405-4417.	0.7	0

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19	Nonlinear vibrations of helical graphene resonators in the dynamic nano-indentation testing. Nanotechnology, 2020, 31, 025709.	1.3	5
20	Bubbleâ€“bubble interaction effects on multiple bubbles dynamics in an ultrasonic cavitation field. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2020, 234, 1051-1060.	1.0	3
21	Numerical study of thermal conductivity based on phosphorene anisotropy: Including [110] direction and related phosphorus nanotubes. Materials Today Communications, 2020, 22, 100814.	0.9	2
22	Modulating mechanical anisotropy of two-dimensional materials by controlling their defects. Carbon, 2020, 158, 77-88.	5.4	13
23	Water flow inside various geometric nano-confinement channels. Physical Chemistry Chemical Physics, 2020, 22, 24633-24639.	1.3	6
24	Computational Study on Strain-Engineered Graphene Nanopores for Selective Gas Separation. ACS Applied Nano Materials, 2020, 3, 11474-11480.	2.4	6
25	Nanoconfined Water Dynamics in Multilayer Graphene Nanopores. Journal of Physical Chemistry C, 2020, 124, 17819-17828.	1.5	21
26	Tuning graphene thermal modulator by rotating. International Journal of Smart and Nano Materials, 2020, 11, 310-323.	2.0	3
27	Atomic structure causing an obvious difference in thermal conductance at the Pdâ€“H₂O interface: a molecular dynamics simulation. Nanoscale, 2020, 12, 17870-17879.	2.8	27
28	Strain-Rate Effect on the Stress and Strain Concentration in a Visco-Plastic Plate With An Elliptic Hole. International Journal of Steel Structures, 2020, 20, 1256-1267.	0.6	3
29	A theoretical study on three long-range interactions between two nanoparticles under the humid condition. Journal of Applied Physics, 2020, 128, 095107.	1.1	0
30	Effect of T-Shape Shoulder Fillet on the Plastic Deformation Properties of SS400 and LYS160 Steel. Materials, 2020, 13, 1528.	1.3	1
31	Accurate prediction of shear buckling capacity of low-yield-strength steel considering plastic deformations. Journal of Constructional Steel Research, 2020, 172, 106183.	1.7	1
32	Mechanical properties of CNT-reinforced Ni3Al composites: the role of chirality, temperature, and volume fraction. Journal of Physics Condensed Matter, 2020, 32, 205301.	0.7	5
33	Thermal Transport in Graphene Oxide Films: Theoretical Analysis and Molecular Dynamics Simulation. Nanomaterials, 2020, 10, 285.	1.9	12
34	Strain rate effects on dynamic tensile properties of open-hole composite laminates. Composites Communications, 2020, 19, 226-232.	3.3	13
35	Molecular Insights into the Abnormal Wetting Behavior of Ionic Liquids Induced by the Solidified Ionic Layer. Industrial & Engineering Chemistry Research, 2020, 59, 8028-8036.	1.8	14
36	Crease-induced targeted cutting and folding of graphene origami. Carbon, 2020, 165, 259-266.	5.4	11

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37	Wrinkling behavior of graphene on substrates with different surface morphologies. Mechanics of Materials, 2019, 137, 103144.	1.7	18
38	Shear properties of the liquid bridge between two graphene films using a refined molecular kinetics theory and molecular dynamics simulations. Mechanics of Materials, 2019, 137, 103124.	1.7	4
39	Finite element analysis and molecular dynamics simulations of nanoscale crack-hole interactions in chiral graphene nanoribbons. Engineering Fracture Mechanics, 2019, 218, 106571.	2.0	15
40	Failure mode transformation of ZnO nanowires under uniaxial compression: from phase transition to buckling. Nanotechnology, 2019, 30, 375702.	1.3	1
41	Study on the impact resistance of honeycomb sandwich structures under low-velocity/heavy mass. Composite Structures, 2019, 226, 111223.	3.1	51
42	Thermal rectification of graphene on substrates with inhomogeneous stiffness. Carbon, 2019, 154, 81-89.	5.4	19
43	Thermo-breathing vibration of carbon nanoscrolls. Journal of Applied Physics, 2019, 126, 014301.	1.1	2
44	Improvements of mechanical properties of multilayer open-hole graphene papers. Journal of Applied Physics, 2019, 126, 104301.	1.1	7
45	Flexural Wave Propagation in Mass Chain-Filled Carbon Nanotubes. Materials, 2019, 12, 2986.	1.3	2
46	High-sensitive and stretchable resistive strain gauges: Parametric design and DIW fabrication. Composite Structures, 2019, 223, 110955.	3.1	20
47	Thermal Conductivity of Defective Graphene Oxide: A Molecular Dynamic Study. Molecules, 2019, 24, 1103.	1.7	59
48	Fracture Toughnesses and Crack Growth Angles of Single-Layer Graphyne Sheets. Acta Mechanica Solida Sinica, 2019, 32, 339-355.	1.0	6
49	Thermal Conductivity of Two Types of 2D Carbon Allotropes: a Molecular Dynamics Study. Nanoscale Research Letters, 2019, 14, 7.	3.1	10
50	Novel nonlinear coarse-grained potentials of carbon nanotubes. Journal of the Mechanics and Physics of Solids, 2019, 128, 79-104.	2.3	37
51	Influence of adhesion strength on cavitation erosion resistance of diamond-like carbon coating. Industrial Lubrication and Tribology, 2019, 71, 724-730.	0.6	4
52	Influence of thermostatting on nonequilibrium molecular dynamics simulations of heat conduction in solids. Journal of Chemical Physics, 2019, 151, 234105.	1.2	126
53	A black phosphorus nanoconveyor belt system. Applied Physics Letters, 2019, 115, .	1.5	4
54	High ductile fracture of a low-yield-strength steel with a part-through curve crack. Acta Mechanica, 2019, 230, 319-331.	1.1	3

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55	Strain engineering for thermal conductivity of diamond nanothread forests. Journal Physics D: Applied Physics, 2019, 52, 085301.	1.3	9
56	Buckling behaviors of metal nanowires encapsulating carbon nanotubes by considering surface/interface effects from a refined beam model. Carbon, 2019, 141, 348-362.	5.4	19
57	Size- and edge-effect cohesive energy and shear strength between graphene, carbon nanotubes and nanofibers: Continuum modeling and molecular dynamics simulations. Composite Structures, 2019, 208, 150-167.	3.1	27
58	Efficient selection methods for black phosphorene nanoribbons. Nanoscale, 2018, 10, 4385-4390.	2.8	11
59	Local strain field engineering on interfacial thermal resistance of graphene nanoribbon. Applied Physics Letters, 2018, 112, .	1.5	8
60	The interface strength and delamination of fiber-reinforced composites using a continuum modeling approach. Composites Part B: Engineering, 2018, 137, 225-234.	5.9	22
61	Elastic T-stress and I-II mixed mode stress intensity factors for a through-wall crack in an inner-pressured pipe. International Journal of Pressure Vessels and Piping, 2018, 159, 67-72.	1.2	10
62	Nonlinear vibrations of circular single-layer black phosphorus resonators. Applied Physics Letters, 2018, 113, .	1.5	13
63	Interfacial thermal conductance of buckling carbon nanotubes. AIP Advances, 2018, 8, 065116.	0.6	1
64	Additive manufacturing of elastomeric foam with cell unit design for broadening compressive stress plateau. Rapid Prototyping Journal, 2018, 24, 1579-1585.	1.6	15
65	Fracture properties of nanoscale single-crystal silicon plates: Molecular dynamics simulations and finite element method. Engineering Fracture Mechanics, 2018, 202, 1-19.	2.0	11
66	Constitutive modeling of neo-Hookean materials with spherical voids in finite deformation. Extreme Mechanics Letters, 2018, 24, 47-57.	2.0	8
67	Buckling behaviors of single-walled carbon nanotubes inserted with a linear carbon-atom chain. Nanotechnology, 2018, 29, 335704.	1.3	11
68	Loading direction-dependent shear behavior at different temperatures of single-layer chiral graphene sheets. Acta Mechanica Sinica/Lixue Xuebao, 2018, 34, 542-548.	1.5	7
69	Finite Element Simulations of Dynamic Fracture of Full-Scale Gas Transmission Pipelines. Acta Mechanica Solida Sinica, 2018, 31, 357-368.	1.0	2
70	A modified direct measurement of shear moduli of two-dimensional materials. Journal of Applied Physics, 2018, 124, .	1.1	2
71	Thermal conductivity of graphene nanoribbons under shear deformation: A molecular dynamics simulation. Scientific Reports, 2017, 7, 41398.	1.6	53
72	Interfacial thermal conductance in graphene/black phosphorus heterogeneous structures. Carbon, 2017, 117, 399-410.	5.4	85

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73	Buckling behaviour of composites with double walled nanotubes from carbon and phosphorus. Physical Chemistry Chemical Physics, 2017, 19, 10922-10930.	1.3	14
74	Thermo-mechanical vibration of a single-layer graphene sheet and a single-walled carbon nanotube on a substrate. Journal of Applied Physics, 2017, 121, .	1.1	7
75	The peeling behavior of nanowires and carbon nanotubes from a substrate using continuum modeling. Journal of Applied Physics, 2017, 121, .	1.1	6
76	Nonlinear vibrations of carbon chain resonators tuned by temperature. Materials Research Express, 2017, 4, 105026.	0.8	2
77	A theoretical analysis of peeling behavior between nanowires and substrates in the ambient condition with high relative humidity. Mechanics of Materials, 2017, 114, 243-253.	1.7	8
78	Thermal conductivity of a h-BCN monolayer. Physical Chemistry Chemical Physics, 2017, 19, 27326-27331.	1.3	44
79	The chirality-dependent fracture properties of single-layer graphene sheets: Molecular dynamics simulations and finite element method. Journal of Applied Physics, 2017, 122, .	1.1	8
80	Large stretchability and failure mechanism of graphene kirigami under tension. Soft Matter, 2017, 13, 8930-8939.	1.2	16
81	The Vibration of a Linear Carbon Chain in Carbon Nanotubes. Materials, 2017, 10, 478.	1.3	11
82	The Influence of Crosslink Density on the Failure Behavior in Amorphous Polymers by Molecular Dynamics Simulations. Materials, 2016, 9, 234.	1.3	49
83	The Lightweight Design of a Seismic Low-Yield-Strength Steel Shear Panel Damper. Materials, 2016, 9, 424.	1.3	22
84	Plastic Behavior of Metallic Damping Materials under Cyclical Shear Loading. Materials, 2016, 9, 496.	1.3	6
85	Superhigh moduli and tension-induced phase transition of monolayer gamma-boron at finite temperatures. Scientific Reports, 2016, 6, 23233.	1.6	5
86	The vibration of nanosprings affected by van der Waals interactions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160242.	1.0	3
87	Thermal stability of a free nanotube from single-layer black phosphorus. Nanotechnology, 2016, 27, 235703.	1.3	32
88	Thermal conductivity of graphene kirigami: Ultralow and strain robustness. Carbon, 2016, 104, 203-213.	5.4	69
89	Strength and stability analysis of a single-walled black phosphorus tube under axial compression. Nanotechnology, 2016, 27, 275701.	1.3	19
90	The Young's moduli of three types of carbon allotropes: a molecular mechanics model and a finite-element method. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150628.	1.0	6

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91	3D flexible water channel: stretchability of nanoscale water bridge. Nanoscale, 2016, 8, 5676-5681.	2.8	23
92	Thermal conductivities of single- and multi-layer phosphorene: a molecular dynamics study. Nanoscale, 2016, 8, 483-491.	2.8	159
93	Study on the dynamics responses of a transmission system made from carbon nanotubes. Journal of Applied Physics, 2015, 117, .	1.1	21
94	A stable high-speed rotational transmission system based on nanotubes. Applied Physics Letters, 2015, 106, .	1.5	38
95	Does Hooke's law work in helical nanosprings?. Physical Chemistry Chemical Physics, 2015, 17, 20990-20997.	1.3	6
96	Binding energy and mechanical stability of two parallel and crossing carbon nanotubes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150229.	1.0	12
97	A nonlinear continuum model of van der Waals interactions in crystalline polymers. Acta Mechanica, 2015, 226, 3495-3499.	1.1	1
98	The interface strength and debonding for composite structures: Review and recent developments. Composite Structures, 2015, 129, 8-26.	3.1	32
99	Temperature-dependent mechanical properties of monolayer black phosphorus by molecular dynamics simulations. Applied Physics Letters, 2015, 107, .	1.5	73
100	The tensile and shear failure behavior dependence on chain length and temperature in amorphous polymers. Computational Materials Science, 2015, 96, 567-572.	1.4	18
101	Continuum modeling of the cohesive energy for the interfaces between films, spheres, coats and substrates. Computational Materials Science, 2015, 96, 432-438.	1.4	20
102	A theoretical analysis of interface debonding for coated sphere with functionally graded interphase. Composite Structures, 2014, 117, 288-297.	3.1	20
103	Binding energy and mechanical stability of single- and multi-walled carbon nanotube serpentines. Journal of Chemical Physics, 2014, 140, 204704.	1.2	17
104	Understanding Water Permeation in Graphene Oxide Membranes. ACS Applied Materials & Interfaces, 2014, 6, 5877-5883.	4.0	415
105	Wetting of Graphene Oxide: A Molecular Dynamics Study. Langmuir, 2014, 30, 3572-3578.	1.6	190
106	Breakdown of fast water transport in graphene oxides. Physical Review E, 2014, 89, 012113.	0.8	164
107	Stochastic predictions of bulk properties of amorphous polyethylene based on molecular dynamics simulations. Mechanics of Materials, 2014, 68, 70-84.	1.7	118
108	Coarse-grained potentials of single-walled carbon nanotubes. Journal of the Mechanics and Physics of Solids, 2014, 71, 197-218.	2.3	61

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109	Tension-induced phase transition of single-layer molybdenum disulphide (MoS2) at low temperatures. Nanotechnology, 2014, 25, 295701.	1.3	42
110	Mechanotunable monatomic metal structures at graphene edges. Physical Chemistry Chemical Physics, 2014, 16, 10295.	1.3	3
111	Ultrafast viscous water flow through nanostrand-channelled graphene oxide membranes. Nature Communications, 2013, 4, 2979.	5.8	673
112	Thermal conductivity of carbon nanocoils. Applied Physics Letters, 2013, 103, .	1.5	28
113	Size-dependent mechanical behavior of nanoscale polymer particles through coarse-grained molecular dynamics simulation. Nanoscale Research Letters, 2013, 8, 541.	3.1	14
114	Defect-activated self-assembly of multilayered graphene paper: a mechanically robust architecture with high strength. Journal of Materials Chemistry A, 2013, 1, 2002-2010.	5.2	12
115	A theoretical analysis of cohesive energy between carbon nanotubes, graphene and substrates. Carbon, 2013, 57, 108-119.	5.4	99
116	The mechanical properties of three types of carbon allotropes. Nanotechnology, 2013, 24, 095702.	1.3	79
117	An analytical solution on interface debonding for large diameter carbon nanotube-reinforced composite with functionally graded variation interphase. Composite Structures, 2013, 104, 261-269.	3.1	37
118	A comparative study of two molecular mechanics models based on harmonic potentials. Journal of Applied Physics, 2013, 113, .	1.1	23
119	Effects of the dispersion of polymer wrapped two neighbouring single walled carbon nanotubes (SWNTs) on nanoengineering load transfer. Composites Part B: Engineering, 2013, 45, 1714-1721.	5.9	43
120	Size-sensitive Youngâ€™s modulus of kinked silicon nanowires. Nanotechnology, 2013, 24, 185702.	1.3	6
121	Challenges of the Modeling Methods for Investigating the Interaction between the CNT and the Surrounding Polymer. Advances in Materials Science and Engineering, 2013, 2013, 1-10.	1.0	27
122	Temperature-dependent mechanical properties of single-layer molybdenum disulphide: Molecular dynamics nanoindentation simulations. Applied Physics Letters, 2013, 103, .	1.5	37
123	Thermal conductivity dependence on chain length in amorphous polymers. Journal of Applied Physics, 2013, 113, .	1.1	42
124	Quasi-analytical solution for the stable system of the multi-layer folded graphene wrinkles. Journal of Applied Physics, 2013, 114, 063511.	1.1	14
125	Superior thermal conductivity and extremely high mechanical strength in polyethylene chains from ab initio calculation. Journal of Applied Physics, 2012, 111, 124304.	1.1	28
126	An analytical molecular mechanics model for the elastic properties of crystalline polyethylene. Journal of Applied Physics, 2012, 112, 033516.	1.1	10

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127	Knitted graphene-nanoribbon sheet: a mechanically robust structure. Nanoscale, 2012, 4, 785-791.	2.8	22
128	Three-parameter Kâ€“Tâ€“Tz characterization of the crack-tip fields in compact-tension-shear specimens. Engineering Fracture Mechanics, 2012, 92, 72-88.	2.0	29
129	Loading and unloading of a spherical contact: From elastic to elasticâ€“perfectly plastic materials. International Journal of Mechanical Sciences, 2012, 56, 70-76.	3.6	37
130	Strain engineering of thermal conductivity in graphene sheets and nanoribbons: a demonstration of magic flexibility. Nanotechnology, 2011, 22, 105705.	1.3	346
131	Size-dependent elastic properties of crystalline polymers via a molecular mechanics model. Applied Physics Letters, 2011, 99, .	1.5	17
132	Coarse-Grained Molecular Dynamics Simulations on Size Effect of Glassy Polyethylene Particles. Journal of Nanoscience and Nanotechnology, 2010, 10, 7340-7342.	0.9	5
133	Thermomechanical properties dependence on chain length in bulk polyethylene: Coarse-grained molecular dynamics simulations. Journal of Materials Research, 2010, 25, 537-544.	1.2	33
134	Elasticity of Single-Crystal Calcite by First-Principles Calculations. Journal of Computational and Theoretical Nanoscience, 2009, 6, 1181-1188.	0.4	12
135	Three-parameter approach for elasticâ€“plastic stress field of an embedded elliptical crack. Engineering Fracture Mechanics, 2009, 76, 2429-2444.	2.0	20
136	Three-dimensional stress fields near notches and cracks. International Journal of Fracture, 2008, 151, 151-160.	1.1	24
137	The influence of Poissonâ€™s ratio on thickness-dependent stress concentration at elliptic holes in elastic plates. International Journal of Fatigue, 2008, 30, 165-171.	2.8	43
138	Three-parameter approach for elasticâ€“plastic fracture of the semi-elliptical surface crack under tension. International Journal of Mechanical Sciences, 2008, 50, 1168-1182.	3.6	34
139	The in-plane and out-of-plane stress constraint factors and Kâ^'Tâ^'Tz description of stress field near the border of a semi-elliptical surface crack. International Journal of Fatigue, 2007, 29, 435-443.	2.8	44
140	The in-plane and out-of-plane stress constraint factors and K-T-Tzdescription of stress fields near the border of a quarter-elliptical corner crack. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 673-681.	1.7	13
141	Three-parameter description of the stress field near the border of an embedded elliptical crack. Acta Mechanica, 2007, 190, 29-44.	1.1	8
142	Three dimensional K-Tz stress fields around the embedded center elliptical crack front in elastic plates. Acta Mechanica Sinica/Lixue Xuebao, 2006, 22, 148-155.	1.5	17