

Hai-Fei Zhan

List of Publications by Year in descending order

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105
papers

1,999
citations

201385

27
h-index

301761

39
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107
all docs

107
docs citations

107
times ranked

1823
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Covalent Functionalization on Thermal Transport across Graphene-Polymer Interfaces. <i>Journal of Physical Chemistry C</i> , 2015, 119, 12731-12738.	1.5	126
2	From brittle to ductile: a structure dependent ductility of diamond nanothread. <i>Nanoscale</i> , 2016, 8, 11177-11184.	2.8	84
3	Thermal Transport in 3D Nanostructures. <i>Advanced Functional Materials</i> , 2020, 30, 1903841.	7.8	83
4	Thermal conductivity of a new carbon nanotube analog: The diamond nanothread. <i>Carbon</i> , 2016, 98, 232-237.	5.4	71
5	Diamond Nanothread as a New Reinforcement for Nanocomposites. <i>Advanced Functional Materials</i> , 2016, 26, 5279-5283.	7.8	63
6	The best features of diamond nanothread for nanofibre applications. <i>Nature Communications</i> , 2017, 8, 14863.	5.8	62
7	Graphene and Carbon Nanotube Hybrid Structure: A Review. <i>Procedia IUTAM</i> , 2017, 21, 94-101.	1.2	61
8	First-principles investigation of mechanical, electronic and optical properties of H-, F- and Cl-diamane. <i>Applied Surface Science</i> , 2020, 528, 147035.	3.1	47
9	The morphology and temperature dependent tensile properties of diamond nanothreads. <i>Carbon</i> , 2016, 107, 304-309.	5.4	46
10	High density mechanical energy storage with carbon nanothread bundle. <i>Nature Communications</i> , 2020, 11, 1905.	5.8	45
11	Modeling heat transfer during friction stir welding using a meshless particle method. <i>International Journal of Heat and Mass Transfer</i> , 2017, 104, 288-300.	2.5	43
12	Graphene helicoid as novel nanospring. <i>Carbon</i> , 2017, 120, 258-264.	5.4	42
13	Single layer diamond - A new ultrathin 2D carbon nanostructure for mechanical resonator. <i>Carbon</i> , 2020, 161, 809-815.	5.4	42
14	A multiscale evaluation of the surface integrity in boring trepanning association deep hole drilling. <i>International Journal of Machine Tools and Manufacture</i> , 2017, 123, 48-56.	6.2	37
15	Underlying burning resistant mechanisms for titanium alloy. <i>Materials and Design</i> , 2018, 156, 588-595.	3.3	37
16	A fundamental numerical and theoretical study for the vibrational properties of nanowires. <i>Journal of Applied Physics</i> , 2012, 111, 124303.	1.1	36
17	Structure-mediated thermal transport of monolayer graphene allotropes nanoribbons. <i>Carbon</i> , 2014, 77, 416-423.	5.4	35
18	Numerical exploration of plastic deformation mechanisms of copper nanowires with surface defects. <i>Computational Materials Science</i> , 2011, 50, 3425-3430.	1.4	34

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19	Beat phenomena in metal nanowires, and their implications for resonance-based elastic property measurements. <i>Nanoscale</i> , 2012, 4, 6779.	2.8	34
20	A new data-driven topology optimization framework for structural optimization. <i>Computers and Structures</i> , 2020, 239, 106310.	2.4	34
21	Theoretical and numerical investigation of bending properties of Cu nanowires. <i>Computational Materials Science</i> , 2012, 55, 73-80.	1.4	33
22	Graphene ripples generated by grain boundaries in highly ordered pyrolytic graphite. <i>Carbon</i> , 2014, 68, 330-336.	5.4	31
23	Formation of carbon nanoscrolls from graphene nanoribbons: A molecular dynamics study. <i>Computational Materials Science</i> , 2015, 96, 300-305.	1.4	31
24	Mechanical Properties of a Single-Layer Diamane under Tension and Bending. <i>Journal of Physical Chemistry C</i> , 2021, 125, 915-922.	1.5	31
25	Suppressed Thermal Conductivity of Bilayer Graphene with Vacancy-Initiated Linkages. <i>Journal of Physical Chemistry C</i> , 2015, 119, 1748-1752.	1.5	30
26	Failure mechanism of monolayer graphene under hypervelocity impact of spherical projectile. <i>Scientific Reports</i> , 2016, 6, 33139.	1.6	30
27	Mechanical Properties of Penta-Graphene Nanotubes. <i>Journal of Physical Chemistry C</i> , 2017, 121, 9642-9647.	1.5	28
28	Tensile properties of a boron/nitrogen-doped carbon nanotube-graphene hybrid structure. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 329-336.	1.5	27
29	Breakdown of Hooke's law at the nanoscale - 2D material-based nanosprings. <i>Nanoscale</i> , 2018, 10, 18961-18968.	2.8	27
30	Low interfacial thermal resistance between crossed ultra-thin carbon nanothreads. <i>Carbon</i> , 2020, 165, 216-224.	5.4	27
31	Thermal conductivity of configurable two-dimensional carbon nanotube architecture and strain modulation. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	26
32	Analytical solution to bending and contact strength of spiral bevel gears in consideration of friction. <i>International Journal of Mechanical Sciences</i> , 2017, 128-129, 475-485.	3.6	26
33	Graphene Helicoid: Distinct Properties Promote Application of Graphene Related Materials in Thermal Management. <i>Journal of Physical Chemistry C</i> , 2018, 122, 7605-7612.	1.5	25
34	Thermal conductivity of Si nanowires with faulted stacking layers. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 015303.	1.3	22
35	Modified beam theories for bending properties of nanowires considering surface/intrinsic effects and axial extension effect. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	20
36	Development of Mechanically Enhanced Polycaprolactone Composites by a Functionalized Titanate Nanofiller for Melt Electrowriting in 3D Printing. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 47993-48006.	4.0	20

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37	Mechanical bending properties of sodium titanate (Na ₂ Ti ₃ O ₇) nanowires. RSC Advances, 2014, 4, 56970-56976.	1.7	18
38	A general Neural Particle Method for hydrodynamics modeling. Computer Methods in Applied Mechanics and Engineering, 2022, 393, 114740.	3.4	18
39	Surface effects on the dual-mode vibration of Ag^{a} silver nanowires with different cross-sections. Journal Physics D: Applied Physics, 2012, 45, 465304.	1.3	17
40	Bending properties of Ag nanowires with pre-existing surface defects. Computational Materials Science, 2014, 81, 45-51.	1.4	17
41	One-step plasma electrolytic oxidation with Graphene oxide for Ultra-low porosity Corrosion-resistant TiO ₂ coatings. Applied Surface Science, 2022, 594, 153477.	3.1	17
42	<i>In situ</i> mechanical resonance behaviour of pristine and defective zinc blende GaAs nanowires. Nanoscale, 2018, 10, 2588-2595.	2.8	15
43	<i>In Situ</i> Atomic-Scale Study on the Ultralarge Bending Behaviors of TiO ₂ α /Anatase Dual-Phase Nanowires. Nano Letters, 2019, 19, 7742-7749.	4.5	15
44	Damage and self-healing characteristics of monolayer graphene enhanced Cu under ballistic impact. Mechanics of Materials, 2021, 155, 103736.	1.7	15
45	3D Printed Multi-Functional Scaffolds Based on Poly(μ -Caprolactone) and Hydroxyapatite Composites. Nanomaterials, 2021, 11, 2456.	1.9	15
46	Advanced Numerical Characterization of Mono-Crystalline Copper with Defects. Advanced Science Letters, 2011, 4, 1293-1301.	0.2	15
47	Tailoring the Resonance of Bilayer Graphene Sheets by Interlayer sp^3 Bonds. Journal of Physical Chemistry C, 2014, 118, 732-739.	1.5	14
48	Thermal conduction of one-dimensional carbon nanomaterials and nanoarchitectures. Chinese Physics B, 2018, 27, 038103.	0.7	14
49	A novel super-elastic carbon nanofiber with cup-stacked carbon nanocones and a screw dislocation. Carbon, 2019, 154, 98-107.	5.4	14
50	Two-dimensional graphene heterojunctions: The tunable mechanical properties. Carbon, 2015, 95, 1061-1068.	5.4	13
51	Role of Nitrogen on the Mechanical Properties of the Novel Carbon Nitride Nanothreads. Journal of Physical Chemistry C, 2019, 123, 28977-28984.	1.5	13
52	Graphene with Patterned Fluorination: Morphology Modulation and Implications. Journal of Physical Chemistry C, 2015, 119, 27562-27568.	1.5	12
53	Damage characteristics of aluminum nanorod under hypervelocity impact. Computational Materials Science, 2020, 174, 109490.	1.4	12
54	Molecular Dynamics Simulation of Chiral Carbon Nanothread Bundles for Nanofiber Applications. ACS Applied Nano Materials, 2020, 3, 10218-10225.	2.4	12

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55	Tailorable Burning Behavior of Ti14 Alloy by Controlling Semi-Solid Forging Temperature. <i>Materials</i> , 2016, 9, 697.	1.3	11
56	MD INVESTIGATIONS FOR MECHANICAL PROPERTIES OF COPPER NANOWIRES WITH AND WITHOUT SURFACE DEFECTS. <i>International Journal of Computational Methods</i> , 2012, 09, 1240003.	0.8	10
57	Carbon nanothreads enable remarkable enhancement in the thermal conductivity of polyethylene. <i>Nanoscale</i> , 2021, 13, 6934-6943.	2.8	10
58	Numerical Exploration of the Defect's Effect on Mechanical Properties of Nanowires under Torsion. <i>Advanced Materials Research</i> , 0, 335-336, 498-501.	0.3	9
59	TENSILE PROPERTIES OF GRAPHENE-NANOTUBE HYBRID STRUCTURES: A MOLECULAR DYNAMICS STUDY. <i>International Journal of Computational Materials Science and Engineering</i> , 2013, 02, 1350020.	0.5	9
60	Carbon nanotube-based super nanotubes: tunable thermal conductivity in three dimensions. <i>RSC Advances</i> , 2015, 5, 48164-48168.	1.7	9
61	Effective Enhancement of a Carbon Nanothread on the Mechanical Properties of the Polyethylene Nanocomposite. <i>Journal of Physical Chemistry C</i> , 2021, 125, 5781-5792.	1.5	9
62	A bio-inspired B-Spline Offset Feature for structural topology optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 386, 114081.	3.4	9
63	Unexpected dynamic recrystallization behavior of Ti-7Cu alloy in semi-solid state. <i>Journal of Alloys and Compounds</i> , 2017, 712, 468-476.	2.8	7
64	Morphological evolution of Ti2Cu in Ti-13Cu-Al alloy after cooling from semi-solid state. <i>Journal of Alloys and Compounds</i> , 2020, 848, 156639.	2.8	7
65	Multiscale exploit the role of copper on the burn resistant behavior of Ti-Cu alloy. <i>Journal of Alloys and Compounds</i> , 2021, 863, 158639.	2.8	7
66	Resonance of graphene nanoribbons doped with nitrogen and boron: a molecular dynamics study. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 717-725.	1.5	6
67	Tuning the resonance properties of 2D carbon nanotube networks towards a mechanical resonator. <i>Nanotechnology</i> , 2015, 26, 315501.	1.3	6
68	A general approach to tune the vibration properties of the mounting system in the high-speed and heavy-duty engine. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 247-257.	1.5	6
69	Nanojoint Formation between Ceramic Titanate Nanowires and Spot Melting of Metal Nanowires with Electron Beam. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 9143-9151.	4.0	6
70	Graphynes: an alternative lightweight solution for shock protection. <i>Beilstein Journal of Nanotechnology</i> , 2019, 10, 1588-1595.	1.5	6
71	Impacts from the stacking morphology on the tensile performance of double-walled carbon nanotube bundles. <i>Carbon</i> , 2021, 178, 345-354.	5.4	6
72	A data-driven smoothed particle hydrodynamics method for fluids. <i>Engineering Analysis With Boundary Elements</i> , 2021, 132, 12-32.	2.0	6

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73	Tensile Performance of Polymer Nanocomposites with Randomly Dispersed Carbon Nanothreads. <i>Macromolecules</i> , 2021, 54, 11486-11496.	2.2	6
74	Deformation and damage characteristics of copper/honeycomb-graphene under shock loading. <i>International Journal of Mechanical Sciences</i> , 2022, 230, 107544.	3.6	6
75	A New Particle Generation Method for Arbitrary 2D Geometries in SPH Modeling. <i>International Journal of Computational Methods</i> , 2017, 14, 1750023.	0.8	5
76	Atypical Defect Motions in Brittle Layered Sodium Titanate Nanowires. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6052-6059.	2.1	5
77	How Gaseous Environment Influences a Carbon Nanotube-Based Mechanical Resonator. <i>Journal of Physical Chemistry C</i> , 2019, 123, 25925-25933.	1.5	5
78	Atomic-scale investigation on the ultra-large bending behaviours of layered sodium titanate nanowires. <i>Nanoscale</i> , 2019, 11, 11847-11855.	2.8	5
79	Atomistic Mechanisms of Ultralarge Bending Deformation of Single-Crystalline TiO ₂ -B Nanowires. <i>Journal of Physical Chemistry C</i> , 2020, 124, 11174-11182.	1.5	5
80	Vibrational characteristics of rotating soft cylinders. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021, 64, 1.	2.0	5
81	Tuneable Resonance Properties of Graphene by Nitrogen-Dopant. <i>Applied Mechanics and Materials</i> , 2014, 553, 3-9.	0.2	4
82	Thermal Conductivity of Diamond Nanothread. , 2017, , 185-204.		4
83	Isothermal Diffusion Behavior and Surface Performance of Cu/Ni Coating on TC4 Alloy. <i>Materials</i> , 2019, 12, 3884.	1.3	4
84	Tensile properties of functionalized carbon nanothreads. <i>Nano Materials Science</i> , 2022, 4, 220-226.	3.9	4
85	Mechanical Properties of Single-Layer Diamond Reinforced Poly(vinyl alcohol) Nanocomposites through Atomistic Simulation. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100292.	1.7	4
86	Tensile Properties of Si Nanowires with Faulted Stacking Layers. <i>Science of Advanced Materials</i> , 2014, 6, 1489-1492.	0.1	4
87	Graphdiyne family-tunable solution to shock resistance. <i>Materials Research Express</i> , 2020, 7, 115602.	0.8	4
88	General existence of flexural mode doublets in nanowires targeting vectorial sensing applications. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 4136-4144.	1.3	3
89	Exceptional Deformability of Wurtzite Zinc Oxide Nanowires with Growth Axial Stacking Faults. <i>Nano Letters</i> , 2021, 21, 4327-4334.	4.5	3
90	Numerical investigation of mechanical properties of nanowires: a review. <i>Interaction and Multiscale Mechanics</i> , 2012, 5, 115-129.	0.4	3

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91	Torsional Properties of Bundles with Randomly Packed Carbon Nanotubes. <i>Nanomaterials</i> , 2022, 12, 760.	1.9	3
92	Atomistic Investigation of the Titanium Carbide MXenes under Impact Loading. <i>Nanomaterials</i> , 2022, 12, 2456.	1.9	3
93	Exploration of the Defect's Effect on the Mechanical Properties of Different Orientated Nanowires. <i>Advanced Materials Research</i> , 0, 328-330, 1239-1244.	0.3	2
94	Atomistic Insights on the Rheological Property of Polycaprolactone Composites with the Addition of Graphene. <i>Advanced Materials Technologies</i> , 0, , 2100507.	3.0	2
95	Atomistic Simulations of the Permeability and Dynamic Transportation Characteristics of Diamond Nanochannels. <i>Nanomaterials</i> , 2022, 12, 1785.	1.9	2
96	Influence of pre-existing surface defects on the vibrational properties of Ag nanowires. , 2012, , .		1
97	A new type of high-order elements based on the mesh-free interpolations. <i>Engineering Analysis With Boundary Elements</i> , 2016, 65, 63-71.	2.0	1
98	Numerical study on the perforation of steel plates by multiple projectiles. <i>Engineering Computations</i> , 2018, 35, 2629-2651.	0.7	1
99	Atomic Investigation on the Facet-Dependent Melting of Ceramic Nanostructures via In Situ Electron Irradiation. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000288.	1.9	1
100	Effect of Fe-doping on bending elastic properties of single-crystalline rutile TiO ₂ nanowires. <i>Nanoscale Advances</i> , 2020, 2, 2800-2807.	2.2	1
101	Revealing the Mechanical Bending Mechanisms of Single-Crystalline Rutile TiO ₂ Nanowires Near Room Temperature: Implications for Nanostructured Semiconductors. <i>ACS Applied Nano Materials</i> , 2021, 4, 10354-10359.	2.4	1
102	Deformation of Copper Nanowire under Coupled Tension-Torsion Loading. <i>Nanomaterials</i> , 2022, 12, 2203.	1.9	1
103	Impact of the Piston Secondary Motion on its Slap Force. <i>Applied Mechanics and Materials</i> , 2014, 553, 582-587.	0.2	0
104	Atomistic Investigations of Single-Crystal Silicon with Pre-Existing Defects. <i>Advanced Science Letters</i> , 2012, 14, 165-170.	0.2	0
105	Numerical Characterization of Nanowires. , 2013, , .		0