Yin-Bo Zhu

List of Publications by Year
in descending order

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78 papers	3,854 citations	159525 30 h-index	123376 61 g-index
78 all docs	78 docs citations	78 times ranked	4106 citing authors

#	Article	IF	Citations
1	Joule-heated graphene-wrapped sponge enables fast clean-up of viscous crude-oil spill. Nature Nanotechnology, 2017, 12, 434-440.	15.6	610
2	Super-elastic and fatigue resistant carbon material with lamellar multi-arch microstructure. Nature Communications, 2016, 7, 12920.	5.8	344
3	Bioinspired polymeric woods. Science Advances, 2018, 4, eaat7223.	4.7	219
4	Lightweight, tough, and sustainable cellulose nanofiber-derived bulk structural materials with low thermal expansion coefficient. Science Advances, 2020, 6, eaaz1114.	4.7	196
5	Superelastic Hard Carbon Nanofiber Aerogels. Advanced Materials, 2019, 31, e1900651.	11.1	147
6	Multiscale transport mechanism of shale gas in micro/nano-pores. International Journal of Heat and Mass Transfer, 2017, 111, 1172-1180.	2.5	123
7	Multiscale simulations of shale gas transport in micro/nano-porous shale matrix considering pore structure influence. Journal of Natural Gas Science and Engineering, 2019, 64, 28-40.	2.1	112
8	Modulation of Molecular Spatial Distribution and Chemisorption with Perforated Nanosheets for Ethanol Electroâ€oxidation. Advanced Materials, 2019, 31, e1900528.	11.1	111
9	Transport of Shale Gas in Microporous/Nanoporous Media: Molecular to Pore-Scale Simulations. Energy & Fuels, 2021, 35, 911-943.	2.5	101
10	Bio-Inspired Lotus-Fiber-like Spiral Hydrogel Bacterial Cellulose Fibers. Nano Letters, 2021, 21, 952-958.	4.5	97
11	Compression Limit of Two-Dimensional Water Constrained in Graphene Nanocapillaries. ACS Nano, 2015, 9, 12197-12204.	7.3	92
12	Strengthening and Toughening Hierarchical Nanocellulose via Humidity-Mediated Interface. ACS Nano, 2021, 15, 1310-1320.	7.3	85
13	Pressure-dependent transport characteristic of methane gas in slit nanopores. International Journal of Heat and Mass Transfer, 2018, 123, 657-667.	2.5	81
14	Superior Biomimetic Nacreous Bulk Nanocomposites by a Multiscale Soft-Rigid Dual-Network Interfacial Design Strategy. Matter, 2019, 1, 412-427.	5.0	81
15	Biomimetic twisted plywood structural materials. National Science Review, 2018, 5, 703-714.	4.6	79
16	Pushing detectability and sensitivity for subtle force to new limits with shrinkable nanochannel structured aerogel. Nature Communications, 2022, 13, 1119.	5.8	79
17	Unidirectional and Selective Proton Transport in Artificial Heterostructured Nanochannels with Nanoâ€toâ€Subnano Confined Water Clusters. Advanced Materials, 2020, 32, e2001777.	11.1	72
18	Bioinspired hierarchical helical nanocomposite macrofibers based on bacterial cellulose nanofibers. National Science Review, 2020, 7, 73-83.	4.6	60

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19	Shape-Controlled Deterministic Assembly of Nanowires. Nano Letters, 2016, 16, 2644-2650.	4.5	57
20	Doubleâ€Layer Nacreâ€Inspired Polyimideâ€Mica Nanocomposite Films with Excellent Mechanical Stability for LEO Environmental Conditions. Advanced Materials, 2022, 34, e2105299.	11.1	56
21	Two-Phase Transport Characteristic of Shale Gas and Water through Hydrophilic and Hydrophobic Nanopores. Energy & Fuels, 2020, 34, 4407-4420.	2.5	54
22	Mechanical properties of copper octet-truss nanolattices. Journal of the Mechanics and Physics of Solids, 2017, 101, 133-149.	2.3	52
23	A Highly Compressible and Stretchable Carbon Spring for Smart Vibration and Magnetism Sensors. Advanced Materials, 2021, 33, e2102724.	11.1	51
24	Multiscale modeling and theoretical prediction for the thermal conductivity of porous plain-woven carbonized silica/phenolic composites. Composite Structures, 2019, 215, 278-288.	3.1	48
25	Ultrafast water evaporation through graphene membranes with subnanometer pores for desalination. Journal of Membrane Science, 2021, 621, 118934.	4.1	45
26	Lattice Boltzmann method simulations about shale gas flow in contracting nano-channels. International Journal of Heat and Mass Transfer, 2018, 122, 1210-1221.	2.5	43
27	Dehydration impeding ionic conductance through two-dimensional angstrom-scale slits. Nanoscale, 2019, 11, 8449-8457.	2.8	40
28	Super-elasticity and deformation mechanism of three-dimensional pillared graphene network structures. Carbon, 2017, 118, 588-596.	5.4	36
29	Optimization design on simultaneously strengthening and toughening graphene-based nacre-like materials through noncovalent interaction. Journal of the Mechanics and Physics of Solids, 2019, 133, 103706.	2.3	36
30	Preparation of Twisted Bilayer Graphene via the Wetting Transfer Method. ACS Applied Materials & Interfaces, 2020, 12, 40958-40967.	4.0	35
31	Artificial Nacre with High Toughness Amplification Factor: Residual Stressâ€Engineering Sparks Enhanced Extrinsic Toughening Mechanisms. Advanced Materials, 2022, 34, e2108267.	11.1	34
32	Origin of Batch Hydrothermal Fluid Behavior and Its Influence on Nanomaterial Synthesis. Matter, 2020, 2, 1270-1282.	5.0	31
33	Molecular insights into the initial formation of pyrolytic carbon upon carbon fiber surface. Carbon, 2019, 148, 307-316.	5.4	30
34	Charge Asymmetry Effect in Ion Transport through Angstrom-Scale Channels. Journal of Physical Chemistry C, 2019, 123, 1462-1469.	1.5	29
35	Mechanical Properties of Penta-Graphene Nanotubes. Journal of Physical Chemistry C, 2017, 121, 9642-9647.	1.5	28
36	Water Confined in Nanocapillaries: Two-Dimensional Bilayer Squarelike Ice and Associated Solidâ€“Liquidâ€“Solid Transition. Journal of Physical Chemistry C, 2018, 122, 6704-6712.	1.5	27

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37	Biomimetic discontinuous Bouligand structural design enables high-performance nanocomposites. Matter, 2022, 5, 1563-1577.	5.0	27
38	Formation of Trilayer Ices in Graphene Nanocapillaries under High Lateral Pressure. Journal of Physical Chemistry C, 2016, 120, 8109-8115.	1.5	25
39	An auxetic cellular structure as a universal design for enhanced piezoresistive sensitivity. Matter, 2022, 5, 1547-1562.	5.0	23
40	Micromechanical properties of pyrolytic carbon with interlayer crosslink. Carbon, 2020, 159, 549-560.	5.4	22
41	AB-stacked square-like bilayer ice in graphene nanocapillaries. Physical Chemistry Chemical Physics, 2016, 18, 22039-22046.	1.3	20
42	Multiscale investigations into the fracture toughness of SiC/graphene composites: Atomistic simulations and crack-bridging model. Ceramics International, 2020, 46, 29101-29110.	2.3	20
43	Superheating of monolayer ice in graphene nanocapillaries. Journal of Chemical Physics, 2017, 146, 134703.	1.2	19
44	Superstrong Noncovalent Interface between Melamine and Graphene Oxide. ACS Applied Materials & Interfaces, 2019, 11, 17068-17078.	4.0	18
45	A universal mechanical framework for noncovalent interface in laminated nanocomposites. Journal of the Mechanics and Physics of Solids, 2022, 158, 104560.	2.3	18
46	Structural and dynamic characteristics in monolayer square ice. Journal of Chemical Physics, 2017, 147, 044706.	1.2	17
47	Micromechanical Landscape of Three-Dimensional Disordered Graphene Networks. Nano Letters, 2021, 21, 8401-8408.	4.5	17
48	Helium bubbles aggravated defects production in self-irradiated copper. Journal of Nuclear Materials, 2017, 496, 265-273.	1.3	16
49	Self-folding mechanics of graphene tearing and peeling from a substrate. Frontiers of Physics, 2018, 13, 1.	2.4	16
50	Formation and topological structure of three-dimensional disordered graphene networks. Physical Chemistry Chemical Physics, 2021, 23, 10290-10302.	1.3	15
51	Fast reaction of aluminum nanoparticles promoted by oxide shell. Journal of Applied Physics, 2019, 126, .	1.1	14
52	Anomalously low friction of confined monolayer water with a quadrilateral structure. Journal of Chemical Physics, 2021, 154, 224508.	1.2	14
53	Molecular dynamics simulations of ejecta production from sinusoidal tin surfaces under supported and unsupported shocks. AIP Advances, 2018, 8, .	0.6	13
54	Unsupported shock wave induced dynamic fragmentation of matrix in lead with surface grooves. Computational Materials Science, 2019, 156, 404-410.	1.4	13

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55	Peculiarities in breakup and transport process of shock-induced ejecta with surrounding gas. Journal of Applied Physics, 2019, 125, 185901.	1.1	12
56	Multi-parameter structural optimization to reconcile mechanical conflicts in nacre-like composites. Composite Structures, 2021, 259, 113225.	3.1	12
57	Buckling failure of square ice-nanotube arrays constrained in graphene nanocapillaries. Journal of Chemical Physics, 2016, 145, 054704.	1.2	10
58	Porous Characteristics of Three-Dimensional Disordered Graphene Networks. Crystals, 2021, 11, 127.	1.0	9
59	Defect production and segregation induced by collision cascades in U-10Zr alloy. Journal of Nuclear Materials, 2019, 526, 151769.	1.3	7
60	Edge effect on interlayer shear in multilayer two-dimensional material assemblies. International Journal of Solids and Structures, 2020, 204-205, 128-137.	1.3	7
61	Intrinsic kink deformation in nanocellulose. Carbohydrate Polymers, 2021, 273, 118578.	5.1	7
62	Structure and transport of confined liquid in nanochannels. Scientia Sinica: Physica, Mechanica Et Astronomica, 2018, 48, 094609.	0.2	7
63	Elasticâ€“plastic properties of graphene engineered by oxygen functional groups. Journal Physics D: Applied Physics, 2017, 50, 385305.	1.3	6
64	Theoretical analysis of high strength and anti-buckling of three-dimensional carbon honeycombs under shear loading. Composites Part B: Engineering, 2021, 219, 108967.	5.9	6
65	Multiscale mechanics of noncovalent interface in graphene oxide layered nanocomposites. Theoretical and Applied Mechanics Letters, 2021, , 100304.	1.3	6
66	Hard Carbon Aerogels: Superelastic Hard Carbon Nanofiber Aerogels (Adv. Mater. 23/2019). Advanced Materials, 2019, 31, 1970168.	11.1	5
67	Effect of grain boundaries on mechanical transverse wave propagations in graphene. Journal of Applied Physics, 2017, 121, .	1.1	4
68	Hyperbolicâ€Like Structure with Negative Poisson's Ratio: Deformation Mechanism and Structural Design. Physica Status Solidi (B): Basic Research, 2021, 258, 2100011.	0.7	4
69	Unravelling the bindings between organic molecule and reduced graphene oxide in aqueous environment. Carbon, 2020, 167, 345-350.	5.4	3
70	Biomimetic polydimethylsiloxane (PDMS)/carbon fiber lamellar adhesive composite in thermal vacuum environment. International Journal of Adhesion and Adhesives, 2021, 105, 102778.	1.4	1
71	Phase Behavior of Two-Dimensional Water Confined in Graphene Nanocapillaries. Springer Theses, 2020, , .	0.0	0
72	The Device Using a Polydimethylsiloxane Membrane and the Phase Transition of Water. Coatings, 2021, 11, 1102.	1.2	0

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73	A Highly Compressible and Stretchable Carbon Spring for Smart Vibration and Magnetism Sensors (Adv. Mater. 39/2021). Advanced Materials, 2021, 33, 2170308.	11.1	0
74	Superheating Behavior of Monolayer Ice in Graphene Nanocapillaries. Springer Theses, 2020, , 49-65.	0.0	0
75	AB-Stacked and AA-Stacked Bilayer Ices in Graphene Nanocapillaries. Springer Theses, 2020, , 67-87.	0.0	0
76	Monolayer Square-Like Ice Between Two Graphene Sheets. Springer Theses, 2020, , 35-47.	0.0	0
77	Trilayer Ice in Graphene Nanocapillaries. Springer Theses, 2020, , 89-99.	0.0	0
78	Stress analysis of double-walled pipes undergone mechanical drawing process. International Journal of Advanced Manufacturing Technology, 2022, 119, 2525-2535.	1.5	0