Heng-An Wu

List of Publications by Year
in descending order

205 papers	14,859 citations	34076 52 h-index	20343 116 g-index
206 all docs	206 docs citations	206 times ranked	15299 citing authors

#	Article	IF	Citations
1	Unimpeded Permeation of Water Through Helium-Leakâ€“Tight Graphene-Based Membranes. Science, 2012, 335, 442-444.	6.0	2,552
2	Precise and Ultrafast Molecular Sieving Through Graphene Oxide Membranes. Science, 2014, 343, 752-754.	6.0	2,060
3	Proton transport through one-atom-thick crystals. Nature, 2014, 516, 227-230.	13.7	668
4	Joule-heated graphene-wrapped sponge enables fast clean-up of viscous crude-oil spill. Nature Nanotechnology, 2017, 12, 434-440.	15.6	610
5	Square ice in graphene nanocapillaries. Nature, 2015, 519, 443-445.	13.7	602
6	Molecular transport through capillaries made with atomic-scale precision. Nature, 2016, 538, 222-225.	13.7	483
7	Super-elastic and fatigue resistant carbon material with lamellar multi-arch microstructure. Nature Communications, 2016, 7, 12920.	5.8	344
8	Bioinspired polymeric woods. Science Advances, 2018, 4, eaat7223.	4.7	219
9	Lightweight, tough, and sustainable cellulose nanofiber-derived bulk structural materials with low thermal expansion coefficient. Science Advances, 2020, 6, eaaz1114.	4.7	196
10	Hydrophilicity gradient in covalent organic frameworks for membrane distillation. Nature Materials, 2021, 20, 1551-1558.	13.3	195
11	Nanowire Templated Semihollow Bicontinuous Graphene Scrolls: Designed Construction, Mechanism, and Enhanced Energy Storage Performance. Journal of the American Chemical Society, 2013, 135, 18176-18182.	6.6	187
12	Superelastic Hard Carbon Nanofiber Aerogels. Advanced Materials, 2019, 31, e1900651.	11.1	147
13	Molecular Dynamics Simulations about Adsorption and Displacement of Methane in Carbon Nanochannels. Journal of Physical Chemistry C, 2015, 119, 13652-13657.	1.5	142
14	Self-adaptive strain-relaxation optimization for high-energy lithium storage material through crumpling of graphene. Nature Communications, 2014, 5, 4565.	5.8	139
15	Molecular dynamics study of the mechanics of metal nanowires at finite temperature. European Journal of Mechanics, A/Solids, 2006, 25, 370-377.	2.1	135
16	Multiscale transport mechanism of shale gas in micro/nano-pores. International Journal of Heat and Mass Transfer, 2017, 111, 1172-1180.	2.5	123
17	Grapheneâ€Piezoelectric Material Heterostructure for Harvesting Energy from Water Flow. Advanced Functional Materials, 2017, 27, 1604226.	7.8	121
18	Pinning and depinning mechanism of the contact line during evaporation of nano-droplets sessile on textured surfaces. Soft Matter, 2013, 9, 5703.	1.2	116

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19	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
20	Three-dimensional finite element simulation and parametric study for horizontal well hydraulic fracture. Journal of Petroleum Science and Engineering, 2010, 72, 310-317.	2.1	111
21	Modulation of Molecular Spatial Distribution and Chemisorption with Perforated Nanosheets for Ethanol Electroâ€oxidation. Advanced Materials, 2019, 31, e1900528.	11.1	111
22	Simulation of the elastic response and the buckling modes of single-walled carbon nanotubes. Computational Materials Science, 2005, 32, 141-146.	1.4	106
23	Molecular dynamics study on mechanics of metal nanowire. Mechanics Research Communications, 2006, 33, 9-16.	1.0	103
24	Transport of Shale Gas in Microporous/Nanoporous Media: Molecular to Pore-Scale Simulations. Energy & Fuels, 2021, 35, 911-943.	2.5	101
25	An XFEM-based method with reduction technique for modeling hydraulic fracture propagation in formations containing frictional natural fractures. Engineering Fracture Mechanics, 2017, 173, 64-90.	2.0	99
26	Bio-Inspired Lotus-Fiber-like Spiral Hydrogel Bacterial Cellulose Fibers. Nano Letters, 2021, 21, 952-958.	4.5	97
27	Interlayer shear effect on multilayer graphene subjected to bending. Applied Physics Letters, 2012, 100, 101909.	1.5	92
28	Compression Limit of Two-Dimensional Water Constrained in Graphene Nanocapillaries. ACS Nano, 2015, 9, 12197-12204.	7.3	92
29	Opening the band gap of graphene through silicon doping for the improved performance of graphene/GaAs heterojunction solar cells. Nanoscale, 2016, 8, 226-232.	2.8	92
30	Solidâ€“liquid phase transition induced electrocatalytic switching from hydrogen evolution to highly selective CO2 reduction. Nature Catalysis, 2021, 4, 202-211.	16.1	89
31	Quasi-Two-Dimensional SiC and SiC₂: Interaction of Silicon and Carbon at Atomic Thin Lattice Plane. Journal of Physical Chemistry C, 2015, 119, 19772-19779.	1.5	87
32	Subsize Pt-based intermetallic compound enables long-term cyclic mass activity for fuel-cell oxygen reduction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	86
33	Strengthening and Toughening Hierarchical Nanocellulose via Humidity-Mediated Interface. ACS Nano, 2021, 15, 1310-1320.	7.3	85
34	Interfacial strengthening and self-healing effect in graphene-copper nanolayered composites under shear deformation. Carbon, 2016, 107, 680-688.	5.4	83
35	Hand-Held Femtogram Detection of Hazardous Picric Acid with Hydrophobic Ag Nanopillar SERS Substrates and Mechanism of Elasto-Capillarity. ACS Sensors, 2017, 2, 198-202.	4.0	81
36	Pressure-dependent transport characteristic of methane gas in slit nanopores. International Journal of Heat and Mass Transfer, 2018, 123, 657-667.	2.5	81

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37	Superior Biomimetic Nacreous Bulk Nanocomposites by a Multiscale Soft-Rigid Dual-Network Interfacial Design Strategy. Matter, 2019, 1, 412-427.	5.0	81
38	Biomimetic twisted plywood structural materials. National Science Review, 2018, 5, 703-714.	4.6	79
39	Pushing detectability and sensitivity for subtle force to new limits with shrinkable nanochannel structured aerogel. Nature Communications, 2022, 13, 1119.	5.8	79
40	Extended finite element simulation of fracture network propagation in formation containing frictional and cemented natural fractures. Journal of Natural Gas Science and Engineering, 2018, 50, 309-324.	2.1	72
41	Unidirectional and Selective Proton Transport in Artificial Heterostructured Nanochannels with Nanoâ€toâ€Subnano Confined Water Clusters. Advanced Materials, 2020, 32, e2001777.	11.1	72
42	Multiscale gas transport behavior in heterogeneous shale matrix consisting of organic and inorganic nanopores. Journal of Natural Gas Science and Engineering, 2020, 75, 103139.	2.1	67
43	Enhanced oil droplet detachment from solid surfaces in charged nanoparticle suspensions. Soft Matter, 2013, 9, 7974.	1.2	66
44	Strengthening metal nanolaminates under shock compression through dual effect of strong and weak graphene interface. Applied Physics Letters, 2014, 104, .	1.5	65
45	Numerical simulation of hydraulic fracturing in orthotropic formation based on the extended finite element method. Journal of Natural Gas Science and Engineering, 2016, 33, 56-69.	2.1	60
46	Bioinspired hierarchical helical nanocomposite macrofibers based on bacterial cellulose nanofibers. National Science Review, 2020, 7, 73-83.	4.6	60
47	Microscopic Origin of Capillary Force Balance at Contact Line. Physical Review Letters, 2020, 124, 125502.	2.9	58
48	Shape-Controlled Deterministic Assembly of Nanowires. Nano Letters, 2016, 16, 2644-2650.	4.5	57
49	Doubleâ€Layer Nacreâ€Inspired Polyimideâ€Mica Nanocomposite Films with Excellent Mechanical Stability for LEO Environmental Conditions. Advanced Materials, 2022, 34, e2105299.	11.1	56
50	Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage. Advanced Functional Materials, 2015, 25, 1773-1779.	7.8	54
51	Comparison of consecutive and alternate hydraulic fracturing in horizontal wells using XFEM-based cohesive zone method. Journal of Petroleum Science and Engineering, 2016, 143, 14-25.	2.1	54
52	Two-Phase Transport Characteristic of Shale Gas and Water through Hydrophilic and Hydrophobic Nanopores. Energy & Fuels, 2020, 34, 4407-4420.	2.5	54
53	Molecular dynamics simulation of loading rate and surface effects on the elastic bending behavior of metal nanorod. Computational Materials Science, 2004, 31, 287-291.	1.4	53
54	Molecular origin of contact line stick-slip motion during droplet evaporation. Scientific Reports, 2015, 5, 17521.	1.6	53

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55	Mechanical properties of copper octet-truss nanolattices. Journal of the Mechanics and Physics of Solids, 2017, 101, 133-149.	2.3	52
56	A Highly Compressible and Stretchable Carbon Spring for Smart Vibration and Magnetism Sensors. Advanced Materials, 2021, 33, e2102724.	11.1	51
57	Optimal spacing of staged fracturing in horizontal shale-gas well. Journal of Petroleum Science and Engineering, 2015, 132, 86-93.	2.1	50
58	Graphene Thin Films by Noncovalent-Interaction-Driven Assembly of Graphene Monolayers for Flexible Supercapacitors. CheM, 2018, 4, 896-910.	5.8	48
59	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
60	Ultrafast rectifying counter-directional transport of proton and metal ions in metal-organic frameworkâ€“based nanochannels. Science Advances, 2022, 8, eabl5070.	4.7	48
61	Molecular mechanism of adsorption/desorption hysteresis: dynamics of shale gas in nanopores. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	2.0	46
62	Poreâ€Scale 3D Dynamic Modeling and Characterization of Shale Samples: Considering the Effects of Thermal Maturation. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018309.	1.4	45
63	Roughness Factor-Dependent Transport Characteristic of Shale Gas through Amorphous Kerogen Nanopores. Journal of Physical Chemistry C, 2020, 124, 12752-12765.	1.5	45
64	Ultrafast water evaporation through graphene membranes with subnanometer pores for desalination. Journal of Membrane Science, 2021, 621, 118934.	4.1	45
65	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
66	Optimal spacing of sequential and simultaneous fracturing in horizontal well. Journal of Natural Gas Science and Engineering, 2016, 29, 329-336.	2.1	40
67	Dehydration impeding ionic conductance through two-dimensional angstrom-scale slits. Nanoscale, 2019, 11, 8449-8457.	2.8	40
68	Rapid Fabrication of Malleable Fiber Reinforced Composites with Vitrimer Powder. ACS Applied Polymer Materials, 2019, 1, 2535-2542.	2.0	39
69	Nanoconfined Transport Characteristic of Methane in Organic Shale Nanopores: The Applicability of the Continuous Model. Energy & Fuels, 2020, 34, 9552-9562.	2.5	39
70	A hybrid numerical approach for hydraulic fracturing in a naturally fractured formation combining the XFEM and phase-field model. Engineering Fracture Mechanics, 2022, 271, 108621.	2.0	39
71	Evaporation-driven liquid flow through nanochannels. Physics of Fluids, 2020, 32, .	1.6	38
72	A coupled extended finite element approach for modeling hydraulic fracturing in consideration of proppant. Journal of Natural Gas Science and Engineering, 2016, 33, 885-897.	2.1	37

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73	Crystallization in supercooled liquid Cu: Homogeneous nucleation and growth. Journal of Chemical Physics, 2015, 142, 064704.	1.2	36
74	Super-elasticity and deformation mechanism of three-dimensional pillared graphene network structures. Carbon, 2017, 118, 588-596.	5.4	36
75	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
76	Unraveling the origin of extra strengthening in gradient nanotwinned metals. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	36
77	A 3D numerical model for studying the effect of interface shear failure on hydraulic fracture height containment. Journal of Petroleum Science and Engineering, 2015, 133, 280-284.	2.1	35
78	Bending of nanoscale structures: Inconsistency between atomistic simulation and strain gradient elasticity solution. Computational Materials Science, 2007, 40, 108-113.	1.4	34
79	Shock response of a model structured nanofoam of Cu. Journal of Applied Physics, 2013, 113, .	1.1	34
80	Shock response of single crystal and nanocrystalline pentaerythritol tetranitrate: Implications to hotspot formation in energetic materials. Journal of Chemical Physics, 2013, 139, 164704.	1.2	34
81	Artificial Nacre with High Toughness Amplification Factor: Residual Stressâ€Engineering Sparks Enhanced Extrinsic Toughening Mechanisms. Advanced Materials, 2022, 34, e2108267.	11.1	34
82	Nanoparticle-tuned spreading behavior of nanofluid droplets on the solid substrate. Microfluidics and Nanofluidics, 2015, 18, 111-120.	1.0	33
83	Channel-width dependent pressure-driven flow characteristics of shale gas in nanopores. AIP Advances, 2017, 7, .	0.6	33
84	Characterization of cytoplasmic viscosity of hundreds of single tumour cells based on micropipette aspiration. Royal Society Open Science, 2019, 6, 181707.	1.1	33
85	Bimetallic plasmonic Au@Ag nanocuboids for rapid and sensitive detection of phthalate plasticizers with label-free surface-enhanced Raman spectroscopy. Analyst, The, 2019, 144, 3861-3869.	1.7	31
86	Origin of Batch Hydrothermal Fluid Behavior and Its Influence on Nanomaterial Synthesis. Matter, 2020, 2, 1270-1282.	5.0	31
87	Molecular insights into the initial formation of pyrolytic carbon upon carbon fiber surface. Carbon, 2019, 148, 307-316.	5.4	30
88	Microstructure effects on shock-induced surface jetting. Journal of Applied Physics, 2014, 115, 073504.	1.1	29
89	Charge Asymmetry Effect in Ion Transport through Angstrom-Scale Channels. Journal of Physical Chemistry C, 2019, 123, 1462-1469.	1.5	29
90	On stress calculations in atomistic simulations. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 423-431.	0.8	28

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91	Microstructure effects on shock response of Cu nanofoams. Journal of Applied Physics, 2013, 114, .	1.1	28
92	Cavitation in a metallic liquid: Homogeneous nucleation and growth of nanovoids. Journal of Chemical Physics, 2014, 140, 214317.	1.2	28
93	Mechanical Properties of Penta-Graphene Nanotubes. Journal of Physical Chemistry C, 2017, 121, 9642-9647.	1.5	28
94	Ultrafast Water Permeation in Graphene Nanostructures Anomalously Enhances Twoâ€Phase Heat Transfer. Advanced Materials Interfaces, 2018, 5, 1800286.	1.9	28
95	Molecular mechanism of viscoelastic polymer enhanced oil recovery in nanopores. Royal Society Open Science, 2018, 5, 180076.	1.1	28
96	Spall strength of liquid copper and accuracy of the acoustic method. Journal of Applied Physics, 2017, 121, .	1.1	27
97	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
98	Shuttle Suppression by Polymer-Sealed Graphene-Coated Polypropylene Separator. ACS Applied Materials & Interfaces, 2018, 10, 5534-5542.	4.0	27
99	Delamination of a rigid punch from an elastic substrate under normal and shear forces. Journal of the Mechanics and Physics of Solids, 2019, 122, 141-160.	2.3	27
100	Multi-scale modelling of gas transport and production evaluation in shale reservoir considering crisscrossing fractures. Journal of Natural Gas Science and Engineering, 2021, 95, 104156.	2.1	27
101	Biomimetic discontinuous Bouligand structural design enables high-performance nanocomposites. Matter, 2022, 5, 1563-1577.	5.0	27
102	Atomistic and continuum simulation on extension behaviour of single crystal with nano-holes. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 225-233.	0.8	26
103	Light-Stimulated Permanent Shape Reconfiguration in Cross-Linked Polymer Microparticles. ACS Applied Materials & Interfaces, 2017, 9, 14422-14428.	4.0	26
104	A molecular simulation analysis of producing monatomic carbon chains by stretching ultranarrow graphene nanoribbons. Nanotechnology, 2010, 21, 265702.	1.3	25
105	Defecting controllability of bombarding graphene with different energetic atoms via reactive force field model. Journal of Applied Physics, 2013, 114, 054313.	1.1	25
106	Formation of Trilayer Ices in Graphene Nanocapillaries under High Lateral Pressure. Journal of Physical Chemistry C, 2016, 120, 8109-8115.	1.5	25
107	Numerical prediction on volumetric efficiency of progressive cavity pump with fluidâ€“solid interaction model. Journal of Petroleum Science and Engineering, 2013, 109, 12-17.	2.1	24
108	Anisotropic growth of buckling-driven wrinkles in graphene monolayer. Nanotechnology, 2015, 26, 065701.	1.3	23

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109	Effect of a Single Nanoparticle on the Contact Line Motion. Langmuir, 2016, 32, 12676-12685.	1.6	23
110	A multi-scale stochastic fracture model for characterizing the tensile behavior of 2D woven composites. Composite Structures, 2018, 204, 536-547.	3.1	23
111	Tunable Plasmon-Induced Charge Transport and Photon Absorption of Bimetallic Auâ€“Ag Nanoparticles on ZnO Photoanode for Photoelectrochemical Enhancement under Visible Light. Journal of Physical Chemistry C, 2020, 124, 14105-14117.	1.5	23
112	An auxetic cellular structure as a universal design for enhanced piezoresistive sensitivity. Matter, 2022, 5, 1547-1562.	5.0	23
113	Micromechanical properties of pyrolytic carbon with interlayer crosslink. Carbon, 2020, 159, 549-560.	5.4	22
114	Production analysis in shale gas reservoirs based on fracturing-enhanced permeability areas. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	21
115	AB-stacked square-like bilayer ice in graphene nanocapillaries. Physical Chemistry Chemical Physics, 2016, 18, 22039-22046.	1.3	20
116	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
117	Permeability prediction of low-resolution porous media images using autoencoder-based convolutional neural network. Journal of Petroleum Science and Engineering, 2022, 208, 109589.	2.1	20
118	Superheating of monolayer ice in graphene nanocapillaries. Journal of Chemical Physics, 2017, 146, 134703.	1.2	19
119	Numerical investigation on the critical factors in successfully creating fracture network in heterogeneous shale reservoirs. Journal of Natural Gas Science and Engineering, 2018, 59, 427-439.	2.1	19
120	An XFEM-based numerical model to calculate conductivity of propped fracture considering proppant transport, embedment and crushing. Journal of Petroleum Science and Engineering, 2018, 167, 615-626.	2.1	19
121	Hydraulic fracture propagation at weak interfaces between contrasting layers in shale using XFEM with energy-based criterion. Journal of Natural Gas Science and Engineering, 2022, 101, 104502.	2.1	19
122	Fast prediction of methane adsorption in shale nanopores using kinetic theory and machine learning algorithm. Chemical Engineering Journal, 2022, 446, 137221.	6.6	19
123	High injection rate stimulation for improving the fracture complexity in tight-oil sandstone reservoirs. Journal of Natural Gas Science and Engineering, 2017, 42, 133-141.	2.1	18
124	Superstrong Noncovalent Interface between Melamine and Graphene Oxide. ACS Applied Materials & Interfaces, 2019, 11, 17068-17078.	4.0	18
125	Double-shock-induced spall and recompression processes in copper. Journal of Applied Physics, 2020, 127, .	1.1	18
126	New insights of natural fractures growth and stimulation optimization based on a three-dimensional cohesive zone model. Journal of Natural Gas Science and Engineering, 2020, 76, 103165.	2.1	18

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127	Surface morphological effects on gas transport through nanochannels with atomically smooth walls. Carbon, 2021, 180, 85-91.	5.4	18
128	A universal mechanical framework for noncovalent interface in laminated nanocomposites. Journal of the Mechanics and Physics of Solids, 2022, 158, 104560.	2.3	18
129	Anomalous twisting strength of tilt grain boundaries in armchair graphene nanoribbons. Physical Chemistry Chemical Physics, 2015, 17, 31911-31916.	1.3	17
130	Tensile Strength of Liquids: Equivalence of Temporal and Spatial Scales in Cavitation. Journal of Physical Chemistry Letters, 2016, 7, 806-810.	2.1	17
131	Efficient transport of droplet sandwiched between saw-tooth plates. Journal of Colloid and Interface Science, 2016, 462, 280-287.	5.0	17
132	Structural and dynamic characteristics in monolayer square ice. Journal of Chemical Physics, 2017, 147, 044706.	1.2	17
133	Micromechanical Landscape of Three-Dimensional Disordered Graphene Networks. Nano Letters, 2021, 21, 8401-8408.	4.5	17
134	Homogeneous crystal nucleation in liquid copper under quasi-isentropic compression. Physical Review B, 2015, 92, .	1.1	16
135	Thermomechanics of a temperature sensitive covalent adaptable polymer with bond exchange reactions. Soft Matter, 2016, 12, 8847-8860.	1.2	16
136	Design of Nano Screw Pump for Water Transport and its Mechanisms. Scientific Reports, 2017, 7, 41717.	1.6	16
137	Helium bubbles aggravated defects production in self-irradiated copper. Journal of Nuclear Materials, 2017, 496, 265-273.	1.3	16
138	Self-folding mechanics of graphene tearing and peeling from a substrate. Frontiers of Physics, 2018, 13, 1.	2.4	16
139	Formation mechanism and structural characteristic of pore-networks in shale kerogen during in-situ conversion process. Energy, 2022, 242, 122992.	4.5	16
140	Anisotropic propagation and upper frequency limitation of terahertz waves in graphene. Applied Physics Letters, 2013, 103, .	1.5	15
141	Stagnation of a droplet on a conical substrate determined by the critical curvature ratio. Journal Physics D: Applied Physics, 2016, 49, 085304.	1.3	15
142	Formation and topological structure of three-dimensional disordered graphene networks. Physical Chemistry Chemical Physics, 2021, 23, 10290-10302.	1.3	15
143	A 3D Nonlinear Fluid-solid Coupling Model of Hydraulic Fracturing for Multilayered Reservoirs. Petroleum Science and Technology, 2012, 30, 2273-2283.	0.7	14
144	Three dimensional dynamics simulation of progressive cavity pump with stator of even thickness. Journal of Petroleum Science and Engineering, 2013, 106, 71-76.	2.1	14

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145	Fast reaction of aluminum nanoparticles promoted by oxide shell. Journal of Applied Physics, 2019, 126, .	1.1	14
146	Anomalously low friction of confined monolayer water with a quadrilateral structure. Journal of Chemical Physics, 2021, 154, 224508.	1.2	14
147	A multi-scale quadruple-continuum model for production evaluation of shale gas reservoirs considering complex gas transfer mechanisms and geomechanics. Journal of Petroleum Science and Engineering, 2022, 213, 110419.	2.1	14
148	Competitive adsorption of asphaltene and n-heptane on quartz surfaces and its effect on crude oil transport through nanopores. Journal of Molecular Liquids, 2022, 359, 119312.	2.3	14
149	Finite element analysis for adhesive failure of progressive cavity pump with stator of even thickness. Journal of Petroleum Science and Engineering, 2015, 125, 146-153.	2.1	13
150	Numerical simulation of simultaneous multiple fractures initiation in unconventional reservoirs through injection control of horizontal well. Journal of Petroleum Science and Engineering, 2017, 159, 603-613.	2.1	13
151	Molecular dynamics simulations of ejecta production from sinusoidal tin surfaces under supported and unsupported shocks. AIP Advances, 2018, 8, .	0.6	13
152	Unsupported shock wave induced dynamic fragmentation of matrix in lead with surface grooves. Computational Materials Science, 2019, 156, 404-410.	1.4	13
153	A loading-dependent model of critical resolved shear stress. International Journal of Plasticity, 2018, 109, 1-17.	4.1	12
154	Peculiarities in breakup and transport process of shock-induced ejecta with surrounding gas. Journal of Applied Physics, 2019, 125, 185901.	1.1	12
155	Multi-parameter structural optimization to reconcile mechanical conflicts in nacre-like composites. Composite Structures, 2021, 259, 113225.	3.1	12
156	Enhanced Gas Recovery in Kerogen Pyrolytic Pore Network: Molecular Simulations and Theoretical Analysis. Energy & Fuels, 2021, 35, 2253-2267.	2.5	12
157	A generalized examination of capillary force balance at contact line: On rough surfaces or in two-liquid systems. Journal of Colloid and Interface Science, 2021, 585, 320-327.	5.0	12
158	Molecular kinetic theory of boundary slip on textured surfaces by molecular dynamics simulations. Science China: Physics, Mechanics and Astronomy, 2014, 57, 2152-2160.	2.0	11
159	Radiation damage in gallium-stabilized Î´-plutonium with helium bubbles. Journal of Nuclear Materials, 2017, 484, 7-15.	1.3	11
160	Microfluidic Cytometry for Highâ€Throughput Characterization of Single Cell Cytoplasmic Viscosity Using Crossing Constriction Channels. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2020, 97, 630-637.	1.1	11
161	Influence of substrate on ultrafast water transport property of multilayer graphene coatings. Nanotechnology, 2020, 31, 375704.	1.3	11
162	Anomalous ion transport through angstrom-scale pores: Effect of hydration shell exchange on ion mobility. Applied Surface Science, 2021, 560, 150022.	3.1	11

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163	Buckling failure of square ice-nanotube arrays constrained in graphene nanocapillaries. Journal of Chemical Physics, 2016, 145, 054704.	1.2	10
164	Tuning electromechanics of dynamic ripple pattern in graphene monolayer. Carbon, 2016, 98, 510-518.	5.4	10
165	Influence of laser parameters and Ti content on the surface morphology of L-PBF fabricated Titania. Rapid Prototyping Journal, 2021, 27, 71-80.	1.6	10
166	Ignition and Combustion of Hydrocarbon Fuels Enhanced by Aluminum Nanoparticle Additives: Insights from Reactive Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2021, 125, 11359-11368.	1.5	10
167	An atomistic simulation method combining molecular dynamics with finite element technique. Chaos, Solitons and Fractals, 2006, 30, 791-796.	2.5	9
168	Porous Characteristics of Three-Dimensional Disordered Graphene Networks. Crystals, 2021, 11, 127.	1.0	9
169	Distinctive evaporation characteristics of water and ethanol on graphene nanostructured surfaces. International Journal of Heat and Mass Transfer, 2022, 183, 122174.	2.5	9
170	Spall and recompression processes with double shock loading of polycrystalline copper. Mechanics of Materials, 2022, 165, 104194.	1.7	9
171	Atomistic simulations of shock waves in cubic silicon carbide. Computational Materials Science, 2009, 45, 419-422.	1.4	8
172	Molecular dynamics studies on spreading of nanofluids promoted by nanoparticle adsorption on solid surface. Theoretical and Applied Mechanics Letters, 2013, 3, 054006.	1.3	8
173	Adhesion of elastic wavy surfaces: Interface strengthening/weakening and mode transition mechanisms. Journal of the Mechanics and Physics of Solids, 2021, 151, 104402.	2.3	8
174	Spalling modes and mechanisms of shocked nanocrystalline NiTi at different loadings and temperatures. Mechanics of Materials, 2021, 161, 104004.	1.7	8
175	Molecular transport under extreme confinement. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	2.0	8
176	An atomistic-continuum inhomogeneous material model for the elastic bending of metal nanocantilevers. Advances in Engineering Software, 2008, 39, 764-769.	1.8	7
177	Surface relaxation effect on the distributions of energy and bulk stresses in the vicinity of Cu surface: An embedded-atom method study. Journal of Applied Physics, 2008, 104, 033501.	1.1	7
178	Wellbore instability induced by alternating water injection and well washing with an elasto-plastic erosion model. Journal of Natural Gas Science and Engineering, 2015, 27, 1863-1870.	2.1	7
179	Defect production and segregation induced by collision cascades in U-10Zr alloy. Journal of Nuclear Materials, 2019, 526, 151769.	1.3	7
180	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

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181	Intrinsic kink deformation in nanocellulose. Carbohydrate Polymers, 2021, 273, 118578.	5.1	7
182	Structure and transport of confined liquid in nanochannels. Scientia Sinica: Physica, Mechanica Et Astronomica, 2018, 48, 094609.	0.2	7
183	Transformation between divacancy defects induced by an energy pulse in graphene. Nanotechnology, 2016, 27, 274004.	1.3	6
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