

Feng-Chao Wang

List of Publications by Year in descending order

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109
papers

9,555
citations

71102

41
h-index

39675

94
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111
all docs

111
docs citations

111
times ranked

11195
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust Underwater Air Layer Retention and Restoration on <i>Salvinia</i> -Inspired Self-Grown Heterogeneous Architectures. <i>ACS Nano</i> , 2022, 16, 2730-2740.	14.6	18
2	Ultrafast rectifying counter-directional transport of proton and metal ions in metal-organic framework-based nanochannels. <i>Science Advances</i> , 2022, 8, eabl5070.	10.3	48
3	Molecular transport under extreme confinement. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022, 65, 1.	5.1	8
4	Competitive adsorption of asphaltene and n-heptane on quartz surfaces and its effect on crude oil transport through nanopores. <i>Journal of Molecular Liquids</i> , 2022, 359, 119312.	4.9	14
5	Transport of Shale Gas in Microporous/Nanoporous Media: Molecular to Pore-Scale Simulations. <i>Energy & Fuels</i> , 2021, 35, 911-943.	5.1	101
6	Enhanced Gas Recovery in Kerogen Pyrolytic Pore Network: Molecular Simulations and Theoretical Analysis. <i>Energy & Fuels</i> , 2021, 35, 2253-2267.	5.1	12
7	A generalized examination of capillary force balance at contact line: On rough surfaces or in two-liquid systems. <i>Journal of Colloid and Interface Science</i> , 2021, 585, 320-327.	9.4	12
8	Direct Current Electricity Generation from Dynamic Polarized Water-Semiconductor Interface. <i>Journal of Physical Chemistry C</i> , 2021, 125, 14180-14187.	3.1	20
9	Anomalously low friction of confined monolayer water with a quadrilateral structure. <i>Journal of Chemical Physics</i> , 2021, 154, 224508.	3.0	14
10	Hydrophilicity gradient in covalent organic frameworks for membrane distillation. <i>Nature Materials</i> , 2021, 20, 1551-1558.	27.5	195
11	Theoretical analysis of high strength and anti-buckling of three-dimensional carbon honeycombs under shear loading. <i>Composites Part B: Engineering</i> , 2021, 219, 108967.	12.0	6
12	Surface morphological effects on gas transport through nanochannels with atomically smooth walls. <i>Carbon</i> , 2021, 180, 85-91.	10.3	18
13	Anomalous ion transport through angstrom-scale pores: Effect of hydration shell exchange on ion mobility. <i>Applied Surface Science</i> , 2021, 560, 150022.	6.1	11
14	Exponentially selective molecular sieving through angstrom pores. <i>Nature Communications</i> , 2021, 12, 7170.	12.8	29
15	Nanoconfined Transport Characteristic of Methane in Organic Shale Nanopores: The Applicability of the Continuous Model. <i>Energy & Fuels</i> , 2020, 34, 9552-9562.	5.1	39
16	Capillary condensation under atomic-scale confinement. <i>Nature</i> , 2020, 588, 250-253.	27.8	168
17	Roughness Factor-Dependent Transport Characteristic of Shale Gas through Amorphous Kerogen Nanopores. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12752-12765.	3.1	45
18	Two-Phase Transport Characteristic of Shale Gas and Water through Hydrophilic and Hydrophobic Nanopores. <i>Energy & Fuels</i> , 2020, 34, 4407-4420.	5.1	54

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19	Limits on gas impermeability of graphene. <i>Nature</i> , 2020, 579, 229-232.	27.8	220
20	Microscopic Origin of Capillary Force Balance at Contact Line. <i>Physical Review Letters</i> , 2020, 124, 125502.	7.8	58
21	Evaporation-driven liquid flow through nanochannels. <i>Physics of Fluids</i> , 2020, 32, .	4.0	38
22	Superstrong Noncovalent Interface between Melamine and Graphene Oxide. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 17068-17078.	8.0	18
23	Dehydration impeding ionic conductance through two-dimensional angstrom-scale slits. <i>Nanoscale</i> , 2019, 11, 8449-8457.	5.6	40
24	Complete steric exclusion of ions and proton transport through confined monolayer water. <i>Science</i> , 2019, 363, 145-148.	12.6	207
25	Charge Asymmetry Effect in Ion Transport through Angstrom-Scale Channels. <i>Journal of Physical Chemistry C</i> , 2019, 123, 1462-1469.	3.1	29
26	Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1-38.		0
27	Shuttle Suppression by Polymer-Sealed Graphene-Coated Polypropylene Separator. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 5534-5542.	8.0	27
28	Graphene Thin Films by Noncovalent-Interaction-Driven Assembly of Graphene Monolayers for Flexible Supercapacitors. <i>CheM</i> , 2018, 4, 896-910.	11.7	48
29	Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1559-1595.		0
30	Ballistic molecular transport through two-dimensional channels. <i>Nature</i> , 2018, 558, 420-424.	27.8	139
31	Structure and transport of confined liquid in nanochannels. <i>Scientia Sinica: Physica, Mechanica Et Astronomica</i> , 2018, 48, 094609.	0.4	7
32	Hand-Held Femtogram Detection of Hazardous Picric Acid with Hydrophobic Ag Nanopillar SERS Substrates and Mechanism of Elasto-Capillarity. <i>ACS Sensors</i> , 2017, 2, 198-202.	7.8	81
33	Mechanical properties of copper octet-truss nanolattices. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 101, 133-149.	4.8	52
34	Design of Nano Screw Pump for Water Transport and its Mechanisms. <i>Scientific Reports</i> , 2017, 7, 41717.	3.3	16
35	Superheating of monolayer ice in graphene nanocapillaries. <i>Journal of Chemical Physics</i> , 2017, 146, 134703.	3.0	19
36	Channel-width dependent pressure-driven flow characteristics of shale gas in nanopores. <i>AIP Advances</i> , 2017, 7, .	1.3	33

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37	Water desalination using nano screw pumps with a considerable processing rate. RSC Advances, 2017, 7, 20360-20368.	3.6	5
38	Multiscale transport mechanism of shale gas in micro/nano-pores. International Journal of Heat and Mass Transfer, 2017, 111, 1172-1180.	4.8	123
39	Effect of grain boundaries on mechanical transverse wave propagations in graphene. Journal of Applied Physics, 2017, 121, .	2.5	4
40	Super-elasticity and deformation mechanism of three-dimensional pillared graphene network structures. Carbon, 2017, 118, 588-596.	10.3	36
41	Molecular mechanism of adsorption/desorption hysteresis: dynamics of shale gas in nanopores. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	5.1	46
42	Grapheneâ€Piezoelectric Material Heterostructure for Harvesting Energy from Water Flow. Advanced Functional Materials, 2017, 27, 1604226.	14.9	121
43	Size effect in ion transport through angstrom-scale slits. Science, 2017, 358, 511-513.	12.6	418
44	Structural and dynamic characteristics in monolayer square ice. Journal of Chemical Physics, 2017, 147, 044706.	3.0	17
45	Ultrathin graphene-based membrane with preciseâ€molecular sieving and ultrafast solventâ€permeation. Nature Materials, 2017, 16, 1198-1202.	27.5	549
46	Buckling failure of square ice-nanotube arrays constrained in graphene nanocapillaries. Journal of Chemical Physics, 2016, 145, 054704.	3.0	10
47	Formation of Trilayer Ices in Graphene Nanocapillaries under High Lateral Pressure. Journal of Physical Chemistry C, 2016, 120, 8109-8115.	3.1	25
48	Molecular transport through capillaries made with atomic-scale precision. Nature, 2016, 538, 222-225.	27.8	483
49	Interfacial strengthening and self-healing effect in graphene-copper nanolayered composites under shear deformation. Carbon, 2016, 107, 680-688.	10.3	83
50	AB-stacked square-like bilayer ice in graphene nanocapillaries. Physical Chemistry Chemical Physics, 2016, 18, 22039-22046.	2.8	20
51	Super-elastic and fatigue resistant carbon material with lamellar multi-arch microstructure. Nature Communications, 2016, 7, 12920.	12.8	344
52	Effect of a Single Nanoparticle on the Contact Line Motion. Langmuir, 2016, 32, 12676-12685.	3.5	23
53	Transformation between divacancy defects induced by an energy pulse in graphene. Nanotechnology, 2016, 27, 274004.	2.6	6
54	Stagnation of a droplet on a conical substrate determined by the critical curvature ratio. Journal Physics D: Applied Physics, 2016, 49, 085304.	2.8	15

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55	Efficient transport of droplet sandwiched between saw-tooth plates. <i>Journal of Colloid and Interface Science</i> , 2016, 462, 280-287.	9.4	17
56	Surface Tension Effects of Nanostructures. , 2016, , 3976-3989.		0
57	Energy Storage: Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage (Adv. Funct. Mater. 12/2015). <i>Advanced Functional Materials</i> , 2015, 25, 1766-1766.	14.9	0
58	Molecular origin of contact line stick-slip motion during droplet evaporation. <i>Scientific Reports</i> , 2015, 5, 17521.	3.3	53
59	Wang et al. reply. <i>Nature</i> , 2015, 528, E3-E3.	27.8	13
60	Anomalous twisting strength of tilt grain boundaries in armchair graphene nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 31911-31916.	2.8	17
61	Anisotropic growth of buckling-driven wrinkles in graphene monolayer. <i>Nanotechnology</i> , 2015, 26, 065701.	2.6	23
62	Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage. <i>Advanced Functional Materials</i> , 2015, 25, 1773-1779.	14.9	54
63	Quasi-Two-Dimensional SiC and SiC ₂ : Interaction of Silicon and Carbon at Atomic Thin Lattice Plane. <i>Journal of Physical Chemistry C</i> , 2015, 119, 19772-19779.	3.1	87
64	Structural evolution of the silicon nanowire via molecular dynamics simulations: the double-strand atomic chain and the monatomic chain. <i>Archive of Applied Mechanics</i> , 2015, 85, 323-329.	2.2	18
65	Square ice in graphene nanocapillaries. <i>Nature</i> , 2015, 519, 443-445.	27.8	602
66	Compression Limit of Two-Dimensional Water Constrained in Graphene Nanocapillaries. <i>ACS Nano</i> , 2015, 9, 12197-12204.	14.6	92
67	Nanoparticle-tuned spreading behavior of nanofluid droplets on the solid substrate. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 111-120.	2.2	33
68	How to identify dislocations in molecular dynamics simulations?. <i>Science China: Physics, Mechanics and Astronomy</i> , 2014, 57, 2177-2187.	5.1	66
69	Strengthening metal nanolaminates under shock compression through dual effect of strong and weak graphene interface. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	65
70	Proton transport through one-atom-thick crystals. <i>Nature</i> , 2014, 516, 227-230.	27.8	668
71	Precise and Ultrafast Molecular Sieving Through Graphene Oxide Membranes. <i>Science</i> , 2014, 343, 752-754.	12.6	2,060
72	Self-adaptive strain-relaxation optimization for high-energy lithium storage material through crumpling of graphene. <i>Nature Communications</i> , 2014, 5, 4565.	12.8	139

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73	Molecular kinetic theory of boundary slip on textured surfaces by molecular dynamics simulations. <i>Science China: Physics, Mechanics and Astronomy</i> , 2014, 57, 2152-2160.	5.1	11
74	Enhanced oil droplet detachment from solid surfaces in charged nanoparticle suspensions. <i>Soft Matter</i> , 2013, 9, 7974.	2.7	66
75	Pinning and depinning mechanism of the contact line during evaporation of nano-droplets sessile on textured surfaces. <i>Soft Matter</i> , 2013, 9, 5703.	2.7	116
76	Contact angle hysteresis at the nanoscale: a molecular dynamics simulation study. <i>Colloid and Polymer Science</i> , 2013, 291, 307-315.	2.1	55
77	Anisotropic propagation and upper frequency limitation of terahertz waves in graphene. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	15
78	Nanowire Templated Semihollow Bicontinuous Graphene Scrolls: Designed Construction, Mechanism, and Enhanced Energy Storage Performance. <i>Journal of the American Chemical Society</i> , 2013, 135, 18176-18182.	13.7	187
79	Defecting controllability of bombarding graphene with different energetic atoms via reactive force field model. <i>Journal of Applied Physics</i> , 2013, 114, 054313.	2.5	25
80	Molecular dynamics studies on spreading of nanofluids promoted by nanoparticle adsorption on solid surface. <i>Theoretical and Applied Mechanics Letters</i> , 2013, 3, 054006.	2.8	8
81	<i>Solar Cells.</i> , 2012, , 2459-2459.		0
82	Tap dance of a water droplet. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 2485-2495.	2.1	41
83	<i>siRNA Delivery.</i> , 2012, , 2429-2429.		0
84	Negative differential resistance behavior of silicon monatomic chain encapsulated in carbon nanotubes. <i>Computational Materials Science</i> , 2012, 62, 87-92.	3.0	25
85	<i>Small-Angle Scattering.</i> , 2012, , 2437-2437.		0
86	<i>Silver (Ag).</i> , 2012, , 2420-2420.		0
87	<i>Synthesis of Subnanometric Metal Nanoparticles.</i> , 2012, , 2639-2648.		0
88	<i>Surface Plasmon Enhanced Optical Bistability and Optical Switching.</i> , 2012, , 2583-2591.		0
89	<i>Solid Lipid Nanoparticles - SLN.</i> , 2012, , 2471-2487.		3
90	<i>Smart Carbon Nanotube-Polymer Composites.</i> , 2012, , 2451-2451.		0

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91	Understanding formation mechanism of ZnO diatomic chain and multi-shell structure using physical mechanics: Molecular dynamics and first-principle simulations?. Science China: Physics, Mechanics and Astronomy, 2012, 55, 1138-1146.	5.1	14
92	Slip boundary conditions based on molecular kinetic theory: The critical shear stress and the energy dissipation at the liquid–solid interface. Soft Matter, 2011, 7, 8628.	2.7	90
93	Molecular Dynamics Simulation and Molecular Orbital Method. , 2011, , 1349-1384.		1
94	The unique properties of the solid-like confined liquid films: A large scale molecular dynamics simulation approach. Acta Mechanica Solida Sinica, 2011, 24, 101-116.	1.9	21
95	Size effect on the coalescence-induced self-propelled droplet. Applied Physics Letters, 2011, 98, .	3.3	210
96	Angular distribution of emitted electrons due to intense p-polarized laser foil interaction. Physics of Plasmas, 2010, 17, 033101.	1.9	7
97	Effects of pulse duration and areal density on ultrathin foil acceleration. Physics of Plasmas, 2010, 17, .	1.9	8
98	Ultrahigh energy proton generation in sequential radiation pressure and bubble regime. Physics of Plasmas, 2010, 17, .	1.9	25
99	Ion acceleration with mixed solid targets interacting with circularly polarized lasers. Physical Review Special Topics: Accelerators and Beams, 2009, 12, .	1.8	21
100	High-energy monoenergetic proton bunch from laser interaction with a complex target. Physics of Plasmas, 2009, 16, .	1.9	18
101	Electrowetting on a lotus leaf. Biomicrofluidics, 2009, 3, 22406.	2.4	29
102	Generation of plasma intrinsic oscillation at the front surface of a target irradiated by a circularly polarized laser pulse. Physics of Plasmas, 2009, 16, .	1.9	14
103	A comparative study of Young's modulus of single-walled carbon nanotube by CPMD, MD and first principle simulations. Computational Materials Science, 2009, 46, 621-625.	3.0	84
104	The head-on colliding process of binary liquid droplets at low velocity: High-speed photography experiments and modeling. Journal of Colloid and Interface Science, 2008, 326, 196-200.	9.4	61
105	Experimental and Theoretical Study of Binary Droplet Head-On Collisions in MEMS. , 2008, , .		0
106	The Diagnostics of Density Distribution for Dense Hot DT Plasmas Using Fast Protons. The Review of Laser Engineering, 2008, 36, 1150-1152.	0.0	0
107	Efficient GeV ion generation by ultraintense circularly polarized laser pulse. Physics of Plasmas, 2007, 14, .	1.9	118
108	Multistaged acceleration of ions by circularly polarized laser pulse: Monoenergetic ion beam generation. Physics of Plasmas, 2007, 14, .	1.9	95

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109	Electron acceleration by a propagating laser pulse in vacuum. <i>Physics of Plasmas</i> , 2007, 14, 083102.	1.9	8