

Feng-Chao Wang

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5245687/publications.pdf>

Version: 2024-02-01

109
papers

9,555
citations

71102

41
h-index

39675

94
g-index

111
all docs

111
docs citations

111
times ranked

11195
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Precise and Ultrafast Molecular Sieving Through Graphene Oxide Membranes. <i>Science</i> , 2014, 343, 752-754. | 12.6 | 2,060 |
| 2 | Proton transport through one-atom-thick crystals. <i>Nature</i> , 2014, 516, 227-230. | 27.8 | 668 |
| 3 | Square ice in graphene nanocapillaries. <i>Nature</i> , 2015, 519, 443-445. | 27.8 | 602 |
| 4 | Ultrathin graphene-based membrane with precise molecular sieving and ultrafast solvent permeation. <i>Nature Materials</i> , 2017, 16, 1198-1202. | 27.5 | 549 |
| 5 | Molecular transport through capillaries made with atomic-scale precision. <i>Nature</i> , 2016, 538, 222-225. | 27.8 | 483 |
| 6 | Size effect in ion transport through angstrom-scale slits. <i>Science</i> , 2017, 358, 511-513. | 12.6 | 418 |
| 7 | Super-elastic and fatigue resistant carbon material with lamellar multi-arch microstructure. <i>Nature Communications</i> , 2016, 7, 12920. | 12.8 | 344 |
| 8 | Limits on gas impermeability of graphene. <i>Nature</i> , 2020, 579, 229-232. | 27.8 | 220 |
| 9 | Size effect on the coalescence-induced self-propelled droplet. <i>Applied Physics Letters</i> , 2011, 98, . | 3.3 | 210 |
| 10 | Complete steric exclusion of ions and proton transport through confined monolayer water. <i>Science</i> , 2019, 363, 145-148. | 12.6 | 207 |
| 11 | Hydrophilicity gradient in covalent organic frameworks for membrane distillation. <i>Nature Materials</i> , 2021, 20, 1551-1558. | 27.5 | 195 |
| 12 | 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 |
| 13 | Capillary condensation under atomic-scale confinement. <i>Nature</i> , 2020, 588, 250-253. | 27.8 | 168 |
| 14 | 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 |
| 15 | Ballistic molecular transport through two-dimensional channels. <i>Nature</i> , 2018, 558, 420-424. | 27.8 | 139 |
| 16 | Multiscale transport mechanism of shale gas in micro/nano-pores. <i>International Journal of Heat and Mass Transfer</i> , 2017, 111, 1172-1180. | 4.8 | 123 |
| 17 | Graphene Piezoelectric Material Heterostructure for Harvesting Energy from Water Flow. <i>Advanced Functional Materials</i> , 2017, 27, 1604226. | 14.9 | 121 |
| 18 | Efficient GeV ion generation by ultraintense circularly polarized laser pulse. <i>Physics of Plasmas</i> , 2007, 14, . | 1.9 | 118 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | 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 |
| 20 | Transport of Shale Gas in Microporous/Nanoporous Media: Molecular to Pore-Scale Simulations. <i>Energy & Fuels</i> , 2021, 35, 911-943. | 5.1 | 101 |
| 21 | Multistaged acceleration of ions by circularly polarized laser pulse: Monoenergetic ion beam generation. <i>Physics of Plasmas</i> , 2007, 14, . | 1.9 | 95 |
| 22 | Compression Limit of Two-Dimensional Water Constrained in Graphene Nanocapillaries. <i>ACS Nano</i> , 2015, 9, 12197-12204. | 14.6 | 92 |
| 23 | Slip boundary conditions based on molecular kinetic theory: The critical shear stress and the energy dissipation at the liquid–solid interface. <i>Soft Matter</i> , 2011, 7, 8628. | 2.7 | 90 |
| 24 | 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 |
| 25 | A comparative study of Young's modulus of single-walled carbon nanotube by CPMD, MD and first principle simulations. <i>Computational Materials Science</i> , 2009, 46, 621-625. | 3.0 | 84 |
| 26 | Interfacial strengthening and self-healing effect in graphene-copper nanolayered composites under shear deformation. <i>Carbon</i> , 2016, 107, 680-688. | 10.3 | 83 |
| 27 | 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 |
| 28 | Enhanced oil droplet detachment from solid surfaces in charged nanoparticle suspensions. <i>Soft Matter</i> , 2013, 9, 7974. | 2.7 | 66 |
| 29 | How to identify dislocations in molecular dynamics simulations?. <i>Science China: Physics, Mechanics and Astronomy</i> , 2014, 57, 2177-2187. | 5.1 | 66 |
| 30 | 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 |
| 31 | The head-on colliding process of binary liquid droplets at low velocity: High-speed photography experiments and modeling. <i>Journal of Colloid and Interface Science</i> , 2008, 326, 196-200. | 9.4 | 61 |
| 32 | Microscopic Origin of Capillary Force Balance at Contact Line. <i>Physical Review Letters</i> , 2020, 124, 125502. | 7.8 | 58 |
| 33 | Contact angle hysteresis at the nanoscale: a molecular dynamics simulation study. <i>Colloid and Polymer Science</i> , 2013, 291, 307-315. | 2.1 | 55 |
| 34 | Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage. <i>Advanced Functional Materials</i> , 2015, 25, 1773-1779. | 14.9 | 54 |
| 35 | 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 |
| 36 | Molecular origin of contact line stick-slip motion during droplet evaporation. <i>Scientific Reports</i> , 2015, 5, 17521. | 3.3 | 53 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 37 | Mechanical properties of copper octet-truss nanolattices. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 101, 133-149. | 4.8 | 52 |
| 38 | Graphene Thin Films by Noncovalent-Interaction-Driven Assembly of Graphene Monolayers for Flexible Supercapacitors. <i>CheM</i> , 2018, 4, 896-910. | 11.7 | 48 |
| 39 | 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 |
| 40 | Molecular mechanism of adsorption/desorption hysteresis: dynamics of shale gas in nanopores. <i>Science China: Physics, Mechanics and Astronomy</i> , 2017, 60, 1. | 5.1 | 46 |
| 41 | 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 |
| 42 | 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 |
| 43 | Dehydration impeding ionic conductance through two-dimensional angstrom-scale slits. <i>Nanoscale</i> , 2019, 11, 8449-8457. | 5.6 | 40 |
| 44 | 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 |
| 45 | Evaporation-driven liquid flow through nanochannels. <i>Physics of Fluids</i> , 2020, 32, . | 4.0 | 38 |
| 46 | Super-elasticity and deformation mechanism of three-dimensional pillared graphene network structures. <i>Carbon</i> , 2017, 118, 588-596. | 10.3 | 36 |
| 47 | Nanoparticle-tuned spreading behavior of nanofluid droplets on the solid substrate. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 111-120. | 2.2 | 33 |
| 48 | Channel-width dependent pressure-driven flow characteristics of shale gas in nanopores. <i>AIP Advances</i> , 2017, 7, . | 1.3 | 33 |
| 49 | Electrowetting on a lotus leaf. <i>Biomicrofluidics</i> , 2009, 3, 22406. | 2.4 | 29 |
| 50 | Charge Asymmetry Effect in Ion Transport through Angstrom-Scale Channels. <i>Journal of Physical Chemistry C</i> , 2019, 123, 1462-1469. | 3.1 | 29 |
| 51 | Exponentially selective molecular sieving through angstrom pores. <i>Nature Communications</i> , 2021, 12, 7170. | 12.8 | 29 |
| 52 | Shuttle Suppression by Polymer-Sealed Graphene-Coated Polypropylene Separator. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 5534-5542. | 8.0 | 27 |
| 53 | Ultrahigh energy proton generation in sequential radiation pressure and bubble regime. <i>Physics of Plasmas</i> , 2010, 17, . | 1.9 | 25 |
| 54 | Negative differential resistance behavior of silicon monatomic chain encapsulated in carbon nanotubes. <i>Computational Materials Science</i> , 2012, 62, 87-92. | 3.0 | 25 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 55 | 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 |
| 56 | Formation of Trilayer Ices in Graphene Nanocapillaries under High Lateral Pressure. <i>Journal of Physical Chemistry C</i> , 2016, 120, 8109-8115. | 3.1 | 25 |
| 57 | Anisotropic growth of buckling-driven wrinkles in graphene monolayer. <i>Nanotechnology</i> , 2015, 26, 065701. | 2.6 | 23 |
| 58 | Effect of a Single Nanoparticle on the Contact Line Motion. <i>Langmuir</i> , 2016, 32, 12676-12685. | 3.5 | 23 |
| 59 | Ion acceleration with mixed solid targets interacting with circularly polarized lasers. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2009, 12, . | 1.8 | 21 |
| 60 | The unique properties of the solid-like confined liquid films: A large scale molecular dynamics simulation approach. <i>Acta Mechanica Solida Sinica</i> , 2011, 24, 101-116. | 1.9 | 21 |
| 61 | AB-stacked square-like bilayer ice in graphene nanocapillaries. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 22039-22046. | 2.8 | 20 |
| 62 | Direct Current Electricity Generation from Dynamic Polarized Water–Semiconductor Interface. <i>Journal of Physical Chemistry C</i> , 2021, 125, 14180-14187. | 3.1 | 20 |
| 63 | Superheating of monolayer ice in graphene nanocapillaries. <i>Journal of Chemical Physics</i> , 2017, 146, 134703. | 3.0 | 19 |
| 64 | High-energy monoenergetic proton bunch from laser interaction with a complex target. <i>Physics of Plasmas</i> , 2009, 16, . | 1.9 | 18 |
| 65 | 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 |
| 66 | Superstrong Noncovalent Interface between Melamine and Graphene Oxide. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 17068-17078. | 8.0 | 18 |
| 67 | Surface morphological effects on gas transport through nanochannels with atomically smooth walls. <i>Carbon</i> , 2021, 180, 85-91. | 10.3 | 18 |
| 68 | 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 |
| 69 | Anomalous twisting strength of tilt grain boundaries in armchair graphene nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 31911-31916. | 2.8 | 17 |
| 70 | Efficient transport of droplet sandwiched between saw-tooth plates. <i>Journal of Colloid and Interface Science</i> , 2016, 462, 280-287. | 9.4 | 17 |
| 71 | Structural and dynamic characteristics in monolayer square ice. <i>Journal of Chemical Physics</i> , 2017, 147, 044706. | 3.0 | 17 |
| 72 | Design of Nano Screw Pump for Water Transport and its Mechanisms. <i>Scientific Reports</i> , 2017, 7, 41717. | 3.3 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 73 | Anisotropic propagation and upper frequency limitation of terahertz waves in graphene. Applied Physics Letters, 2013, 103, . | 3.3 | 15 |
| 74 | 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 |
| 75 | 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 |
| 76 | 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 |
| 77 | Anomalously low friction of confined monolayer water with a quadrilateral structure. Journal of Chemical Physics, 2021, 154, 224508. | 3.0 | 14 |
| 78 | 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. | 4.9 | 14 |
| 79 | Wang et al. reply. Nature, 2015, 528, E3-E3. | 27.8 | 13 |
| 80 | Enhanced Gas Recovery in Kerogen Pyrolytic Pore Network: Molecular Simulations and Theoretical Analysis. Energy & Fuels, 2021, 35, 2253-2267. | 5.1 | 12 |
| 81 | 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. | 9.4 | 12 |
| 82 | Molecular kinetic theory of boundary slip on textured surfaces by molecular dynamics simulations. Science China: Physics, Mechanics and Astronomy, 2014, 57, 2152-2160. | 5.1 | 11 |
| 83 | Anomalous ion transport through angstrom-scale pores: Effect of hydration shell exchange on ion mobility. Applied Surface Science, 2021, 560, 150022. | 6.1 | 11 |
| 84 | Buckling failure of square ice-nanotube arrays constrained in graphene nanocapillaries. Journal of Chemical Physics, 2016, 145, 054704. | 3.0 | 10 |
| 85 | Electron acceleration by a propagating laser pulse in vacuum. Physics of Plasmas, 2007, 14, 083102. | 1.9 | 8 |
| 86 | Effects of pulse duration and areal density on ultrathin foil acceleration. Physics of Plasmas, 2010, 17, . | 1.9 | 8 |
| 87 | Molecular dynamics studies on spreading of nanofluids promoted by nanoparticle adsorption on solid surface. Theoretical and Applied Mechanics Letters, 2013, 3, 054006. | 2.8 | 8 |
| 88 | Molecular transport under extreme confinement. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1. | 5.1 | 8 |
| 89 | Angular distribution of emitted electrons due to intense p-polarized laser foil interaction. Physics of Plasmas, 2010, 17, 033101. | 1.9 | 7 |
| 90 | Structure and transport of confined liquid in nanochannels. Scientia Sinica: Physica, Mechanica Et Astronomica, 2018, 48, 094609. | 0.4 | 7 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 91 | Transformation between divacancy defects induced by an energy pulse in graphene. <i>Nanotechnology</i> , 2016, 27, 274004. | 2.6 | 6 |
| 92 | 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 |
| 93 | Water desalination using nano screw pumps with a considerable processing rate. <i>RSC Advances</i> , 2017, 7, 20360-20368. | 3.6 | 5 |
| 94 | Effect of grain boundaries on mechanical transverse wave propagations in graphene. <i>Journal of Applied Physics</i> , 2017, 121, . | 2.5 | 4 |
| 95 | Solid Lipid Nanoparticles - SLN. , 2012, , 2471-2487. | | 3 |
| 96 | Molecular Dynamics Simulation and Molecular Orbital Method. , 2011, , 1349-1384. | | 1 |
| 97 | Experimental and Theoretical Study of Binary Droplet Head-On Collisions in MEMS. , 2008, , . | | 0 |
| 98 | The Diagnostics of Density Distribution for Dense Hot DT Plasmas Using Fast Protons. <i>The Review of Laser Engineering</i> , 2008, 36, 1150-1152. | 0.0 | 0 |
| 99 | Solar Cells. , 2012, , 2459-2459. | | 0 |
| 100 | siRNA Delivery. , 2012, , 2429-2429. | | 0 |
| 101 | Small-Angle Scattering. , 2012, , 2437-2437. | | 0 |
| 102 | Silver (Ag). , 2012, , 2420-2420. | | 0 |
| 103 | Synthesis of Subnanometric Metal Nanoparticles. , 2012, , 2639-2648. | | 0 |
| 104 | Surface Plasmon Enhanced Optical Bistability and Optical Switching. , 2012, , 2583-2591. | | 0 |
| 105 | Smart Carbon Nanotube-Polymer Composites. , 2012, , 2451-2451. | | 0 |
| 106 | Energy Storage: Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage (<i>Adv. Funct. Mater.</i> 12/2015). <i>Advanced Functional Materials</i> , 2015, 25, 1766-1766. | 14.9 | 0 |
| 107 | Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1-38. | | 0 |
| 108 | Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1559-1595. | | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|----|-----------|
| 109 | Surface Tension Effects of Nanostructures. , 2016, , 3976-3989. | | 0 |