Ya-Pu Zhao

List of Publications by Year in descending order

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Version: 2024-02-01

121 papers	4,121 citations	108046 37 h-index	145109 60 g-index
124 all docs	124 docs citations	124 times ranked	4763 citing authors

#	Article	IF	Citations
1	Defining kerogen maturity from orbital hybridization by machine learning. Fuel, 2022, 310, 122250.	3.4	9
2	Fluctuation of fracturing curves indicates in-situ brittleness and reservoir fracturing characteristics in unconventional energy exploitation. Energy, 2022, 252, 124043.	4.5	10
3	The pull-in instability and eigenfrequency variations of a graphene resonator under electrostatic loading. Mathematics and Mechanics of Solids, 2022, 27, 1592-1609.	1.5	3
4	Thermo-mechanically coupled constitutive equations for soft elastomers with arbitrary initial states. International Journal of Engineering Science, 2022, 178, 103730.	2.7	9
5	Realization of Selfâ€Rotating Droplets Based on Liquid Metal. Advanced Materials Interfaces, 2021, 8, 2001756.	1.9	4
6	Mode Localization and Eigenfrequency Curve Veerings of Two Overhanged Beams. Micromachines, 2021, 12, 324.	1.4	3
7	Spontaneous Motion and Rotation of Acid Droplets on the Surface of a Liquid Metal. Langmuir, 2021, 37, 4370-4379.	1.6	7
8	Predicting the components and types of kerogen in shale by combining machine learning with NMR spectra. Fuel, 2021, 290, 120006.	3.4	28
9	Entropy and enthalpy changes during adsorption and displacement of shale gas. Energy, 2021, 221, 119854.	4.5	37
10	The Influence of Background Ultrasonic Field on the Strength of Adhesive Zones under Dynamic Impact Loads. Materials, 2021, 14, 3188.	1.3	4
11	Mechanical response of kerogen at high strain rates. International Journal of Impact Engineering, 2021, 155, 103905.	2.4	8
12	Unstable crack growth in hydraulic fracturing: The combined effects of pressure and shear stress for a power-law fluid. Engineering Fracture Mechanics, 2020, 225, 106245.	2.0	21
13	Combining Image Recognition and Simulation To Reproduce the Adsorption/Desorption Behaviors of Shale Gas. Energy & Fuels, 2020, 34, 258-269.	2.5	56
14	The time-temperature-maturity relationship: A chemical kinetic model of kerogen evolution based on a developed molecule-maturity index. Fuel, 2020, 278, 118264.	3.4	26
15	Geomaterials Evaluation: A New Application of Ashby Plots. Materials, 2020, 13, 2517.	1.3	5
16	Shape evolution and scaling analysis of soluble cylinders in dissolutive flow. Physics of Fluids, 2020, 32, 102103.	1.6	7
17	Deflected trajectory of a single fluid-driven crack under anisotropic in-situ stress. Extreme Mechanics Letters, 2019, 29, 100483.	2.0	7
18	The effect of sharp solid edges on the droplet wettability. Journal of Colloid and Interface Science, 2019, 552, 563-571.	5.0	41

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19	The Constructions and Pyrolysis of 3D Kerogen Macromolecular Models: Experiments and Simulations. Global Challenges, 2019, 3, 1900006.	1.8	31
20	Modeling of Fracture Width and Conductivity in Channel Fracturing With Nonlinear Proppant-Pillar Deformation. SPE Journal, 2019, 24, 1288-1308.	1.7	16
21	Adsorption-induced pore blocking and its mechanisms in nanoporous shale due to interactions with supercritical CO2. Journal of Petroleum Science and Engineering, 2019, 178, 74-81.	2.1	38
22	Probing Micro-Newton Forces on Solid/Liquid/Gas Interfaces Using Transmission Phase Shift. Langmuir, 2019, 35, 5442-5447.	1.6	11
23	Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1-38.		0
24	Combined Effect of Pressure and Shear Stress on Penny-Shaped Fluid-Driven Cracks. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	1.1	22
25	Evolution of the interfacial shape in dissolutive wetting: Coupling of wetting and dissolution. International Journal of Heat and Mass Transfer, 2018, 118, 201-207.	2.5	14
26	Dissolutive flow in nanochannels: transition between plug-like and Poiseuille-like. Microfluidics and Nanofluidics, 2018, 22, 1.	1.0	14
27	Topography-induced symmetry transition of droplets on quasi-periodically patterned surfaces. Soft Matter, 2018, 14, 6198-6205.	1.2	11
28	Molecular Dynamics Simulation and Molecular Orbital Method. , 2018, , 1559-1595.		0
29	Dynamics of Dissolutive Wetting: A Molecular Dynamics Study. Langmuir, 2017, 33, 6464-6470.	1.6	21
30	Wetting and electrowetting on corrugated substrates. Physics of Fluids, 2017, 29, .	1.6	33
31	Quasi-Static Crack Growth Under Symmetrical Loads in Hydraulic Fracturing. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	1.1	18
32	Using graphene to simplify the adsorption of methane on shale in MD simulations. Computational Materials Science, 2017, 133, 99-107.	1.4	97
33	Characterization of pore structure, gas adsorption, and spontaneous imbibition in shale gas reservoirs. Journal of Petroleum Science and Engineering, 2017, 159, 197-204.	2.1	84
34	Dynamic polygonal spreading of a droplet on a lyophilic pillar-arrayed surface. Journal of Adhesion Science and Technology, 2016, 30, 2265-2276.	1.4	8
35	Which is the most efficient candidate for the recovery of confined methane: Water, carbon dioxide or nitrogen?. Extreme Mechanics Letters, 2016, 9, 127-138.	2.0	50
36	Microcrack connectivity in rocks: a real-space renormalization group approach for 3D anisotropic bond percolation. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 013205.	0.9	6

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37	The effect of a capillary bridge on the crack opening of a penny crack. Soft Matter, 2016, 12, 1586-1592.	1.2	11
38	Phase field modeling of lithium diffusion, finite deformation, stress evolution and crack propagation in lithium ion battery. Extreme Mechanics Letters, 2016, 9, 467-479.	2.0	50
39	Surface Tension Effects of Nanostructures. , 2016, , 3976-3989.		0
40	Mass and Force Sensing of an Adsorbate on a Beam Resonator Sensor. Sensors, 2015, 15, 14871-14886.	2.1	14
41	Molecular dynamics simulations of the enhanced recovery of confined methane with carbon dioxide. Physical Chemistry Chemical Physics, 2015, 17, 31887-31893.	1.3	123
42	Structural evolution of the silicon nanowire via molecular dynamics simulations: the double-strand atomic chain and the monatomic chain. Archive of Applied Mechanics, 2015, 85, 323-329.	1.2	18
43	A phase field model coupling lithium diffusion and stress evolution with crack propagation and application in lithium ion batteries. Physical Chemistry Chemical Physics, 2015, 17, 287-297.	1.3	91
44	Statics and dynamics of electrowetting on pillar-arrayed surfaces at the nanoscale. Nanoscale, 2015, 7, 2561-2567.	2.8	51
45	Determining both adhesion energy and residual stress by measuring the stiction shape of a microbeam. Microsystem Technologies, 2015, 21, 919-929.	1.2	8
46	Dynamic spreading on pillar-arrayed surfaces: Viscous resistance versus molecular friction. Physics of Fluids, 2014, 26, .	1.6	60
47	Phase transitions of a water overlayer on charged graphene: from electromelting to electrofreezing. Nanoscale, 2014, 6, 5432.	2.8	35
48	Atomic Mechanisms and Equation of State of Methane Adsorption in Carbon Nanopores. Journal of Physical Chemistry C, 2014, 118, 17737-17744.	1.5	73
49	Kinetic behaviour of the cells touching substrate: the interfacial stiffness guides cell spreading. Scientific Reports, 2014, 4, 3910.	1.6	75
50	Contact angle hysteresis at the nanoscale: a molecular dynamics simulation study. Colloid and Polymer Science, 2013, 291, 307-315.	1.0	55
51	Experimental study of evaporation of sessile water droplet on PDMS surfaces. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 799-805.	1.5	33
52	Multiscale dynamic wetting of a droplet on a lyophilic pillar-arrayed surface. Journal of Fluid Mechanics, 2013, 716, 171-188.	1.4	101
53	Solar Cells. , 2012, , 2459-2459.		0
54	Topology-dominated dynamic wetting of the precursor chain in a hydrophilic interior corner. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 310-322.	1.0	39

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55	In Situ Observation of Thermal Marangoni Convection on the Surface of a Sessile Droplet by Infrared Thermal Imaging. Journal of Adhesion Science and Technology, 2012, 26, 2177-2188.	1.4	13
56	Fabrication and Mechanical Properties of a Micro/Nanoscale Hybrid Composite. International Journal of Nonlinear Sciences and Numerical Simulation, 2012, 13, .	0.4	0
57	siRNA Delivery. , 2012, , 2429-2429.		0
58	Negative differential resistance behavior of silicon monatomic chain encapsulated in carbon nanotubes. Computational Materials Science, 2012, 62, 87-92.	1.4	25
59	Small-Angle Scattering. , 2012, , 2437-2437.		0
60	A diffusion and curvature dependent surface elastic model with application to stress analysis of anode in lithium ion battery. International Journal of Engineering Science, 2012, 61, 156-170.	2.7	43
61	Electrowetting on curved surfaces. Soft Matter, 2012, 8, 2599.	1.2	51
62	Silver (Ag). , 2012, , 2420-2420.		0
63	Synthesis of Subnanometric Metal Nanoparticles. , 2012, , 2639-2648.		0
64	Surface Plasmon Enhanced Optical Bistability and Optical Switching. , 2012, , 2583-2591.		0
65	Solid Lipid Nanoparticles - SLN. , 2012, , 2471-2487.		3
66	Capillary wave propagation during the delamination of graphene by the precursor films in electro-elasto-capillarity. Scientific Reports, 2012, 2, 927.	1.6	19
67	Smart Carbon Nanotube-Polymer Composites. , 2012, , 2451-2451.		0
68	Fabrication and Mechanical Properties of a Micro/Nanoscale Hybrid Composite. International Journal of Nonlinear Sciences and Numerical Simulation, 2012, 13, 153-157.	0.4	3
69	Silicon nanowire reinforced by single-walled carbon nanotube and its applications to anti-pulverization electrode in lithium ion battery. Composites Part B: Engineering, 2012, 43, 76-82.	5.9	50
70	Experimental and theoretical investigations of evaporation of sessile water droplet on hydrophobic surfaces. Journal of Colloid and Interface Science, 2012, 365, 254-259.	5.0	87
71	Fabrication and Mechanical Properties of a Micro/Nanoscale Hybrid Composite. International Journal of Nonlinear Sciences and Numerical Simulation, 2012, 13, 153-157.	0.4	8
72	Fabrication of Novel Superhydrophobic Surfaces and Droplet Bouncing Behavior â€" Part 2: Water Droplet Impact Experiment on Superhydrophobic Surfaces Constructed Using ZnO Nanoparticles. Journal of Adhesion Science and Technology, 2011, 25, 93-108.	1.4	54

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73	Slip boundary conditions based on molecular kinetic theory: The critical shear stress and the energy dissipation at the liquidâ€“solid interface. Soft Matter, 2011, 7, 8628.	1.2	90
74	Molecular Dynamics Simulation and Molecular Orbital Method. , 2011, , 1349-1384.		1
75	Size effect on the coalescence-induced self-propelled droplet. Applied Physics Letters, 2011, 98, .	1.5	210
76	Adhesive Contact of Nanowire in Three-Point Bending Test. Journal of Adhesion Science and Technology, 2011, 25, 1107-1129.	1.4	20
77	Generating artificial homologous proteins according to the representative family character in molecular mechanics properties â€“ an attempt in validating an underlying rule of protein evolution. FEBS Letters, 2010, 584, 1059-1065.	1.3	4
78	Simulated pathogenic conformational switch regions matched well with the biochemical findings. Journal of Biomedical Informatics, 2010, 43, 365-375.	2.5	4
79	Switch Region for Pathogenic Structural Change in Conformational Disease and Its Prediction. PLoS ONE, 2010, 5, e8441.	1.1	8
80	Precursor Film in Dynamic Wetting, Electrowetting, and Electro-Elasto-Capillarity. Physical Review Letters, 2010, 104, 246101.	2.9	191
81	The Effects of Roughness on Adhesion Hysteresis. Journal of Adhesion Science and Technology, 2010, 24, 1045-1054.	1.4	29
82	Fabrication of Novel Superhydrophobic Surfaces and Water Droplet Bouncing Behavior â€” Part 1: Stable ZnOâ€“PDMS Superhydrophobic Surface with Low Hysteresis Constructed Using ZnO Nanoparticles. Journal of Adhesion Science and Technology, 2010, 24, 2693-2705.	1.4	43
83	Electrowetting on a lotus leaf. Biomicrofluidics, 2009, 3, 22406.	1.2	29
84	Donut-shaped fingerprint in homologous polypeptide relationshipsâ€”A topological feature related to pathogenic structural changes in conformational disease. Journal of Theoretical Biology, 2009, 258, 294-301.	0.8	9
85	Hybrid QM/MM simulation of the hydration phenomena of dipalmitoylphosphatidylcholine headgroup. Journal of Colloid and Interface Science, 2009, 329, 410-415.	5.0	20
86	Deformation of PDMS membrane and microcantilever by a water droplet: Comparison between Mooneyâ€“Rivlin and linear elastic constitutive models. Journal of Colloid and Interface Science, 2009, 332, 467-476.	5.0	95
87	Elastic deformation of soft membrane with finite thickness induced by a sessile liquid droplet. Journal of Colloid and Interface Science, 2009, 339, 489-494.	5.0	71
88	A scheme for multiple sequence alignment optimizationâ€”an improvement based on family representative mechanics features. Journal of Theoretical Biology, 2009, 261, 593-597.	0.8	4
89	Hydroelectric Voltage Generation Based on Water-Filled Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2009, 131, 6374-6376.	6.6	150
90	Atomistic simulation on size-dependent yield strength and defects evolution of metal nanowires. Computational Materials Science, 2009, 46, 142-150.	1.4	73

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91	A comparative study of Youngâ€™s modulus of single-walled carbon nanotube by CPMD, MD and first principle simulations. Computational Materials Science, 2009, 46, 621-625.	1.4	84
92	Shape effects on the yield stress and deformation of silicon nanowires: A molecular dynamics simulation. Journal of Applied Physics, 2009, 106, .	1.1	47
93	Influence of different amount of Au on the wetting behavior of PDMS membrane. Biomedical Microdevices, 2008, 10, 65-72.	1.4	37
94	CLEMAPS: Multiple alignment of protein structures based on conformational letters. Proteins: Structure, Function and Bioinformatics, 2008, 71, 728-736.	1.5	12
95	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.	5.0	61
96	Tensile tests of micro anchors anodically bonded between Pyrex glass and aluminum thin film coated on silicon wafer. Microelectronics Reliability, 2008, 48, 1720-1723.	0.9	16
97	Formation of dendritic nanostructures in Pyrex glass anodically bonded to silicon coated with an aluminum thin film. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 483-484, 611-616.	2.6	13
98	An Electrowetting Model for Rough Surfaces Under Low Voltage. Journal of Adhesion Science and Technology, 2008, 22, 217-229.	1.4	26
99	Experimental observation of electrical instability of droplets on dielectric layer. Journal Physics D: Applied Physics, 2008, 41, 052004.	1.3	22
100	SIZE-DEPENDENT ELASTIC MODULUS AND FRACTURE TOUGHNESS OF THE NANOFILM WITH SURFACE EFFECTS. Surface Review and Letters, 2008, 15, 599-603.	0.5	20
101	THE SURFACE- AND SIZE-DEPENDENT ELASTIC MODULI OF NANOSTRUCTURES. Surface Review and Letters, 2007, 14, 667-670.	0.5	8
102	Piezoelectricity of ZnO Films Prepared by Sol-Gel Method. Chinese Journal of Chemical Physics, 2007, 20, 721-726.	0.6	30
103	SIZE-DEPENDENT ELASTIC PROPERTIES OF Ni NANOFILMS BY MOLECULAR DYNAMICS SIMULATION. Surface Review and Letters, 2007, 14, 661-665.	0.5	19
104	Stability and bifurcation behaviour of electrostatic torsional NEMS varactor influenced by dispersion forces. Journal Physics D: Applied Physics, 2007, 40, 1649-1654.	1.3	54
105	Influence of Damping on the Dynamical Behavior of the Electrostatic Parallel-plate and Torsional Actuators with Intermolecular Forces. Sensors, 2007, 7, 3012-3026.	2.1	28
106	Squeeze-film effects in MEMS devices with perforated plates for small amplitude vibration. Microsystem Technologies, 2007, 13, 625-633.	1.2	25
107	A study of the tribological behavior of carbon-nanotube-reinforced ultrahigh molecular weight polyethylene composites. Surface and Interface Analysis, 2006, 38, 883-886.	0.8	52
108	QM/MM and classical molecular dynamics simulation of histidine-tagged peptide immobilization on nickel surface. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 423, 84-91.	2.6	19

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109	An effective method of determining the residual stress gradients in a micro-cantilever. Microsystem Technologies, 2006, 12, 357-364.	1.2	36
110	The size-dependent elastic properties of nanofilms with surface effects. Journal of Applied Physics, 2005, 98, 074306.	1.1	139
111	Modelling analysis of surface stress on a rectangular cantilever beam. Journal Physics D: Applied Physics, 2004, 37, 2140-2145.	1.3	109
112	Influence of van der Waals and Casimir Forces on Electrostatic Torsional Actuators. Journal of Microelectromechanical Systems, 2004, 13, 1027-1035.	1.7	129
113	Structural Failure Analysis and Numerical Simulation of Microaccelerometers under Impulsive Loading. International Journal of Nonlinear Sciences and Numerical Simulation, 2002, 3, .	0.4	2
114	Morphological stability of epitaxial thin elastic films by van der Waals force. Archive of Applied Mechanics, 2002, 72, 77-84.	1.2	17
115	Some Basic Problems of Microdynamics of Solids. , 2001, , .		0
116	Two Critical Crack Propagating Velocities for PMMA Fracture Surface. International Journal of Fracture, 1999, 98, 9-14.	1.1	10
117	Suggestion of a new dimensionless number for dynamic plastic response of beams and plates. Archive of Applied Mechanics, 1998, 68, 524-538.	1.2	81
118	Prediction of structural dynamic plastic shear failure by Johnsonâ€™s damage number. Forschung Im Ingenieurwesen/Engineering Research, 1998, 63, 349-352.	1.0	9
119	On the similarity methods in fracture mechanics. Forschung Im Ingenieurwesen/Engineering Research, 1998, 64, 257-268.	1.0	3
120	Irwin number and ductile-brittle fracture transition. International Journal of Fracture, 1996, 75, R17-R21.	1.1	2
121	Predicting the Molecular Models, Types, and Maturity of Kerogen in Shale Using Machine Learning and Multi-NMR Spectra. Energy & Fuels, 0, , .	2.5	4