Lei Xie

List of Publications by Year
in descending order

61 papers	2,518 citations	159358 30 h-index	197535 49 g-index
61 all docs	61 docs citations	61 times ranked	1677 citing authors

#	Article	IF	Citations
1	Measuring Forces and Spatiotemporal Evolution of Thin Water Films between an Air Bubble and Solid Surfaces of Different Hydrophobicity. ACS Nano, 2015, 9, 95-104.	7.3	164
2	Interaction Mechanism of Oil-in-Water Emulsions with Asphaltenes Determined Using Droplet Probe AFM. Langmuir, 2016, 32, 2302-2310.	1.6	124
3	Surface Interaction of Water-in-Oil Emulsion Droplets with Interfacially Active Asphaltenes. Langmuir, 2017, 33, 1265-1274.	1.6	110
4	Longâ€Range Hydrophilic Attraction between Water and Polyelectrolyte Surfaces in Oil. Angewandte Chemie - International Edition, 2016, 55, 15017-15021.	7.2	103
5	Surface Forces and Interaction Mechanisms of Emulsion Drops and Gas Bubbles in Complex Fluids. Langmuir, 2017, 33, 3911-3925.	1.6	98
6	Probing the Interaction between Air Bubble and Sphalerite Mineral Surface Using Atomic Force Microscope. Langmuir, 2015, 31, 2438-2446.	1.6	90
7	Probing the interactions of hydroxamic acid and mineral surfaces: Molecular mechanism underlying the selective separation. Chemical Engineering Journal, 2019, 374, 123-132.	6.6	68
8	Interaction Mechanisms between Air Bubble and Molybdenite Surface: Impact of Solution Salinity and Polymer Adsorption. Langmuir, 2017, 33, 2353-2361.	1.6	67
9	Probing Anisotropic Surface Properties and Surface Forces of Fluorite Crystals. Langmuir, 2018, 34, 2511-2521.	1.6	67
10	Novel Fe3O4 based superhydrophilic core-shell microspheres for breaking asphaltenes-stabilized water-in-oil emulsion. Chemical Engineering Journal, 2019, 358, 869-877.	6.6	67
11	A two-step flocculation process on oil sands tailings treatment using oppositely charged polymer flocculants. Science of the Total Environment, 2016, 565, 369-375.	3.9	66
12	A wet adhesion strategy via synergistic cationâ€“Ï€ and hydrogen bonding interactions of antifouling zwitterions and mussel-inspired binding moieties. Journal of Materials Chemistry A, 2019, 7, 21944-21952.	5.2	66
13	Probing Interactions between Air Bubble and Hydrophobic Polymer Surface: Impact of Solution Salinity and Interfacial Nanobubbles. Langmuir, 2016, 32, 11236-11244.	1.6	63
14	Modulation of Hydrophobic Interaction by Mediating Surface Nanoscale Structure and Chemistry, not Monotonically by Hydrophobicity. Angewandte Chemie - International Edition, 2018, 57, 11903-11908.	7.2	62
15	Probing Anisotropic Surface Properties and Interaction Forces of Chrysotile Rods by Atomic Force Microscopy and Rheology. Langmuir, 2014, 30, 10809-10817.	1.6	60
16	Mapping the Nanoscale Heterogeneity of Surface Hydrophobicity on the Sphalerite Mineral. Journal of Physical Chemistry C, 2017, 121, 5620-5628.	1.5	55
17	Probing the interaction mechanism between oil droplets with asphaltenes and solid surfaces using AFM. Journal of Colloid and Interface Science, 2020, 558, 173-181.	5.0	51
18	Probing the intermolecular interaction mechanisms between humic acid and different substrates with implications for its adsorption and removal in water treatment. Water Research, 2020, 176, 115766.	5.3	50

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19	Probing the Interaction Mechanism between Air Bubbles and Bitumen Surfaces in Aqueous Media Using Bubble Probe Atomic Force Microscopy. Langmuir, 2018, 34, 729-738.	1.6	49
20	Probing Surface Interactions of Electrochemically Active Galena Mineral Surface Using Atomic Force Microscopy. Journal of Physical Chemistry C, 2016, 120, 22433-22442.	1.5	48
21	Interactions between elemental selenium and hydrophilic/hydrophobic surfaces: Direct force measurements using AFM. Chemical Engineering Journal, 2016, 303, 646-654.	6.6	47
22	Recent Advances in the Quantification and Modulation of Hydrophobic Interactions for Interfacial Applications. Langmuir, 2020, 36, 2985-3003.	1.6	47
23	Surface interaction mechanisms in mineral flotation: Fundamentals, measurements, and perspectives. Advances in Colloid and Interface Science, 2021, 295, 102491.	7.0	47
24	Selective flotation separation of molybdenite and talc by humic substances. Minerals Engineering, 2018, 117, 34-41.	1.8	46
25	In situ probing the self-assembly of 3-hexyl-4-amino-1,2,4-triazole-5-thione on chalcopyrite surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 511, 285-293.	2.3	42
26	Mechanistic Understanding of Asphaltene Surface Interactions in Aqueous Media. Energy & Fuels, 2017, 31, 3348-3357.	2.5	38
27	Effects of salinity on xanthate adsorption on sphalerite and bubbleâ€“sphalerite interactions. Minerals Engineering, 2015, 77, 34-41.	1.8	37
28	Role of molecular architecture in the modulation of hydrophobic interactions. Current Opinion in Colloid and Interface Science, 2020, 47, 58-69.	3.4	36
29	Nanomechanics of Ligninâ€“Cellulase Interactions in Aqueous Solutions. Biomacromolecules, 2021, 22, 2033-2042.	2.6	32
30	Interfacial behavior and interaction mechanism of pentol/water interface stabilized with asphaltenes. Journal of Colloid and Interface Science, 2019, 553, 341-349.	5.0	31
31	Hetero-difunctional Reagent with Superior Flotation Performance to Chalcopyrite and the Associated Surface Interaction Mechanism. Langmuir, 2019, 35, 4353-4363.	1.6	31
32	Intermolecular and surface forces at solid/oil/water/gas interfaces in petroleum production. Journal of Colloid and Interface Science, 2019, 537, 505-519.	5.0	31
33	Novel sodium alginate-assisted MXene nanosheets for ultrahigh rejection of multiple cations and dyes. Journal of Colloid and Interface Science, 2020, 568, 36-45.	5.0	31
34	Understanding the stabilization mechanism of bitumen-coated fine solids in organic media from non-aqueous extraction of oil sands. Fuel, 2019, 242, 255-264.	3.4	30
35	Anisotropic Polymer Adsorption on Molybdenite Basal and Edge Surfaces and Interaction Mechanism With Air Bubbles. Frontiers in Chemistry, 2018, 6, 361.	1.8	29
36	Probing effects of molecular-level heterogeneity of surface hydrophobicity on hydrophobic interactions in air/water/solid systems. Journal of Colloid and Interface Science, 2019, 557, 438-449.	5.0	29

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37	A Dual-Responsive, Freezing-Tolerant Hydrogel Sensor and Related Thermal- and Strain-Sensitive Mechanisms. ACS Applied Polymer Materials, 2021, 3, 1479-1487.	2.0	29
38	Facile preparation of novel and active 2D nanosheets from non-layered and traditionally non-exfoliable earth-abundant materials. Journal of Materials Chemistry A, 2019, 7, 15411-15419.	5.2	28
39	Probing the Effect of Salinity and pH on Surface Interactions between Air Bubbles and Hydrophobic Solids: Implications for Colloidal Assembly at Air/Water Interfaces. Chemistry - an Asian Journal, 2017, 12, 1568-1577.	1.7	26
40	Octadecyltrichlorosilane Deposition on Mica Surfaces: Insights into the Interface Interaction Mechanism. Journal of Physical Chemistry B, 2017, 121, 3151-3161.	1.2	25
41	A Nanomechanical Study on Deciphering the Stickiness of SARS-CoV-2 on Inanimate Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 58360-58368.	4.0	25
42	Probing the Interaction Mechanism between Benzohydroxamic Acid and Mineral Surface in the Presence of Pb²⁺ Ions by AFM Force Measurements and First-Principles Calculations. Langmuir, 2020, 36, 8199-8208.	1.6	24
43	Recent advances in bubble-based technologies: Underlying interaction mechanisms and applications. Applied Physics Reviews, 2021, 8, .	5.5	24
44	Nanomechanical Insights into Versatile Polydopamine Wet Adhesive Interacting with Liquid-Infused and Solid Slippery Surfaces. ACS Applied Materials & Interfaces, 2021, 13, 6941-6950.	4.0	23
45	Uncovering the hydrophobic mechanism of a novel dithiocarbamate-hydroxamate surfactant towards galena. Chemical Engineering Science, 2021, 245, 116765.	1.9	23
46	Electrochemical investigation of the interactions of organic and inorganic depressants on basal and edge planes of molybdenite. Journal of Colloid and Interface Science, 2020, 570, 350-361.	5.0	22
47	Probing interactions between sphalerite and hydrophobic/hydrophilic surfaces: Effect of water chemistry. Powder Technology, 2017, 320, 511-518.	2.1	21
48	Probing the Molecular Interactions and Lubrication Mechanisms of Purified Full-Length Recombinant Human Proteoglycan 4 (rhPRG4) and Hyaluronic Acid (HA). Biomacromolecules, 2019, 20, 1056-1067.	2.6	20
49	Robust polymer nanofilms with bioengineering and environmental applications via facile and highly efficient covalent layer-by-layer assembly. Journal of Materials Chemistry B, 2018, 6, 3742-3750.	2.9	18
50	Modulation of Hydrophobic Interaction by Mediating Surface Nanoscale Structure and Chemistry, not Monotonically by Hydrophobicity. Angewandte Chemie, 2018, 130, 12079-12084.	1.6	16
51	Interfacial ion specificity modulates hydrophobic interaction. Journal of Colloid and Interface Science, 2020, 578, 135-145.	5.0	16
52	In-situ probing of electrochemical dissolution and surface properties of chalcopyrite with implications for the dissolution kinetics and passivation mechanism. Journal of Colloid and Interface Science, 2021, 584, 103-113.	5.0	14
53	Understanding the hetero-aggregation mechanism among sulfide and oxide mineral particles driven by bifunctional surfactants: Intensification flotation of oxide minerals. Minerals Engineering, 2021, 169, 106928.	1.8	11
54	Novel multifunctional solid slippery surfaces with self-assembled fluorine-free small molecules. Chemical Engineering Journal, 2021, 404, 127064.	6.6	10

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55	Probing the Interactions between Pickering Emulsion Droplets Stabilized with pH-Responsive Nanoparticles. Journal of Physical Chemistry B, 2021, 125, 7320-7331.	1.2	8
56	Understanding the Interaction Mechanism between Elemental Selenium and Ferric Hydroxide in Wastewater Treatment. Industrial & Engineering Chemistry Research, 2020, 59, 6662-6671.	1.8	7
57	Longâ€Range Hydrophilic Attraction between Water and Polyelectrolyte Surfaces in Oil. Angewandte Chemie, 2016, 128, 15241-15245.	1.6	4
58	Probing the Self-Assembly and Nonlinear Friction Behavior of Confined Gold Nano-Particles. Langmuir, 2019, 35, 15701-15709.	1.6	4
59	Probing the In Situ Redox Behavior of Selenium on a Pyrite Surface by Scanning Electrochemical Microscopy. Journal of Physical Chemistry C, 2021, 125, 3018-3026.	1.5	4
60	Probing Hydrophobic Interactions between Polymer Surfaces and Air Bubbles or Oil Droplets: Effects of Molecular Weight and Surfactants. Langmuir, 2022, 38, 5257-5268.	1.6	4
61	Demystifying constructive strategies on designing functionalized lamellar Nb₂CT_x nanosheet membrane architectures under confined space. Journal of Materials Chemistry A, 2022, 10, 4200-4208.	5.2	0