Jacob N Israelachvili

List of Publications by Year
in descending order

242 papers	35,145 citations	4146 87 h-index	3407 183 g-index
245 all docs	245 docs citations	245 times ranked	24413 citing authors

#	Article	IF	Citations
1	Measurement of forces between two mica surfaces in aqueous electrolyte solutions in the range 0â€“100 nm. Journal of the Chemical Society Faraday Transactions I, 1978, 74, 975.	1.0	1,655
2	Evidence for van der Waals adhesion in gecko setae. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 12252-12256.	7.1	1,617
3	Nanotribology: friction, wear and lubrication at the atomic scale. Nature, 1995, 374, 607-616.	27.8	1,514
4	Role of hydration and water structure in biological and colloidal interactions. Nature, 1996, 379, 219-225.	27.8	1,250
5	The role of interparticle and external forces in nanoparticle assembly. Nature Materials, 2008, 7, 527-538.	27.5	1,049
6	The hydrophobic interaction is long range, decaying exponentially with distance. Nature, 1982, 300, 341-342.	27.8	1,045
7	Direct measurement of structural forces between two surfaces in a nonpolar liquid. Journal of Chemical Physics, 1981, 75, 1400-1411.	3.0	733
8	Liquid to solidlike transitions of molecularly thin films under shear. Journal of Chemical Physics, 1990, 93, 1895-1906.	3.0	697
9	Molecular layering of water at surfaces and origin of repulsive hydration forces. Nature, 1983, 306, 249-250.	27.8	650
10	Direct measurements of forces between phosphatidylcholine and phosphatidylethanolamine bilayers in aqueous electrolyte solutions. Biochemistry, 1985, 24, 4608-4618.	2.5	645
11	The nonlinear nature of friction. Nature, 2004, 430, 525-528.	27.8	610
12	Intermolecular forces in biology. Quarterly Reviews of Biophysics, 2001, 34, 105-267.	5.7	584
13	Fundamental mechanisms of interfacial friction. 1. Relation between adhesion and friction. The Journal of Physical Chemistry, 1993, 97, 4128-4140.	2.9	566
14	Adaptive synergy between catechol and lysine promotes wet adhesion by surface salt displacement. Science, 2015, 349, 628-632.	12.6	557
15	Adhesion and friction in gecko toe attachment and detachment. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19320-19325.	7.1	546
16	Interactions of Silica Surfaces. Journal of Colloid and Interface Science, 1994, 165, 367-385.	9.4	538
17	Polyethylene glycol-coated biocompatible surfaces. Journal of Biomedical Materials Research Part B, 2000, 51, 343-351.	3.1	535
18	Toughening elastomers using mussel-inspired iron-catechol complexes. Science, 2017, 358, 502-505.	12.6	505

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19	Adhesion mechanisms of the mussel foot proteins mfp-1 and mfp-3. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3782-3786.	7.1	471
20	Entropic forces between amphiphilic surfaces in liquids. The Journal of Physical Chemistry, 1992, 96, 520-531.	2.9	461
21	Surface-initiated self-healing of polymers in aqueous media. Nature Materials, 2014, 13, 867-872.	27.5	414
22	Measurement of the viscosity of liquids in very thin films. Journal of Colloid and Interface Science, 1986, 110, 263-271.	9.4	410
23	Mussel protein adhesion depends on interprotein thiol-mediated redox modulation. Nature Chemical Biology, 2011, 7, 588-590.	8.0	378
24	Molecular layering of water in thin films between mica surfaces and its relation to hydration forces. Journal of Colloid and Interface Science, 1984, 101, 511-523.	9.4	375
25	Thin Film Rheology and Tribology of Confined Polymer Melts:Â Contrasts with Bulk Properties. Macromolecules, 1997, 30, 2482-2494.	4.8	360
26	Ionic liquids behave as dilute electrolyte solutions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9674-9679.	7.1	345
27	Fundamental mechanisms of interfacial friction. 2. Stick-slip friction of spherical and chain molecules. The Journal of Physical Chemistry, 1993, 97, 11300-11313.	2.9	327
28	Fundamental experimental studies in tribology: The transition from â€œinterfacialâ€• friction of undamaged molecularly smooth surfaces to â€œnormalâ€• friction with wear. Wear, 1990, 136, 65-83.	3.1	320
29	The Contribution of DOPA to Substrateâ€"Peptide Adhesion and Internal Cohesion of Musselâ€Inspired Synthetic Peptide Films. Advanced Functional Materials, 2010, 20, 4196-4205.	14.9	314
30	Long range electrostatic forces in ionic liquids. Chemical Communications, 2017, 53, 1214-1224.	4.1	285
31	Adhesion and Friction Mechanisms of Polymer-on-Polymer Surfaces. Science, 2002, 297, 379-382.	12.6	278
32	Adsorption, Lubrication, and Wear of Lubricin on Model Surfaces: Polymer Brush-Like Behavior of a Glycoprotein. Biophysical Journal, 2007, 92, 1693-1708.	0.5	273
33	Hydration or steric forces between amphiphilic surfaces?. Langmuir, 1990, 6, 873-876.	3.5	261
34	Adhesion of mussel foot proteins to different substrate surfaces. Journal of the Royal Society Interface, 2013, 10, 20120759.	3.4	258
35	Direct Measurement of a Tethered Ligand-Receptor Interaction Potential. Science, 1997, 275, 820-822.	12.6	246
36	High-performance mussel-inspired adhesives of reduced complexity. Nature Communications, 2015, 6, 8663.	12.8	245

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37	Contact angles on chemically heterogeneous surfaces. Langmuir, 1989, 5, 288-289.	3.5	244
38	Adaptive hydrophobic and hydrophilic interactions of mussel foot proteins with organic thin films. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15680-15685.	7.1	242
39	Tuning underwater adhesion with cationâ€"Ï€ interactions. Nature Chemistry, 2017, 9, 473-479.	13.6	239
40	Adhesion and short-range forces between surfaces. Part I: New apparatus for surface force measurements. Journal of Materials Research, 1990, 5, 2223-2231.	2.6	235
41	Hydrophobic Enhancement of Dopa-Mediated Adhesion in a Mussel Foot Protein. Journal of the American Chemical Society, 2013, 135, 377-383.	13.7	218
42	Long-range electrostatic screening in ionic liquids. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7432-7437.	7.1	214
43	Adhesion of Mussel Foot Protein-3 to TiO₂ Surfaces: the Effect of pH. Biomacromolecules, 2013, 14, 1072-1077.	5.4	213
44	Viscosity and interfacial properties in a mussel-inspired adhesive coacervate. Soft Matter, 2010, 6, 3232.	2.7	212
45	Formation of Supported Bilayers on Silica Substrates. Langmuir, 2009, 25, 6997-7005.	3.5	204
46	Origin and Characterization of Different Stickâˆ'Slip Friction Mechanismsâ€. Langmuir, 1996, 12, 4559-4563.	3.5	203
47	Adhesion and Surface Interactions of a Selfâ€Healing Polymer with Multiple Hydrogenâ€Bonding Groups. Advanced Functional Materials, 2014, 24, 2322-2333.	14.9	202
48	Adaptive mechanically controlled lubrication mechanism found in articular joints. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5255-5259.	7.1	200
49	Adhesion of Mussel Foot Protein Mefp-5 to Mica: An Underwater Superglue. Biochemistry, 2012, 51, 6511-6518.	2.5	194
50	Direct measurement of the effect of meniscus forces on adhesion: A study of the applicability of macroscopic thermodynamics to microscopic liquid interfaces. Colloids and Surfaces, 1981, 3, 303-319.	0.9	189
51	Developing a General Interaction Potential for Hydrophobic and Hydrophilic Interactions. Langmuir, 2015, 31, 2051-2064.	3.5	188
52	Direct Measurement of Polyethylene Glycol Induced Depletion Attraction between Lipid Bilayers. Langmuir, 1996, 12, 3003-3014.	3.5	187
53	A mussel-derived one component adhesive coacervate. Acta Biomaterialia, 2014, 10, 1663-1670.	8.3	182
54	Generalized effects in confined fluids: new friction map for boundary lubrication. Wear, 1996, 200, 328-335.	3.1	176

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55	Molecular mechanisms and kinetics during the self-assembly of surfactant layers. Journal of Colloid and Interface Science, 1992, 153, 244-265.	9.4	175
56	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.	14.6	164
57	An Underwater Surfaceâ€Drying Peptide Inspired by a Mussel Adhesive Protein. Advanced Functional Materials, 2016, 26, 3496-3507.	14.9	163
58	Peel-Zone Model of Tape Peeling Based on the Gecko Adhesive System. Journal of Adhesion, 2007, 83, 383-401.	3.0	159
59	Defining the Catecholâ€“Cation Synergy for Enhanced Wet Adhesion to Mineral Surfaces. Journal of the American Chemical Society, 2016, 138, 9013-9016.	13.7	157
60	Effect of pH and salt on the adsorption and interactions of an amphoteric polyelectrolyte. Macromolecules, 1992, 25, 5081-5088.	4.8	149
61	Fundamental studies of crude oilâ€“surface water interactions and its relationship to reservoir wettability. Journal of Petroleum Science and Engineering, 2004, 45, 61-81.	4.2	147
62	Effects of Interfacial Redox in Mussel Adhesive Protein Films on Mica. Advanced Materials, 2011, 23, 2362-2366.	21.0	145
63	Forces and ionic transport between mica surfaces: implications for pressure solution. Geochimica Et Cosmochimica Acta, 2003, 67, 1289-1304.	3.9	137
64	Recent advances in gecko adhesion and friction mechanisms and development of gecko-inspired dry adhesive surfaces. Friction, 2013, 1, 114-129.	6.4	137
65	Interaction forces and adhesion of supported myelin lipid bilayers modulated by myelin basic protein. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3154-3159.	7.1	135
66	Surface forces and wettability. Journal of Petroleum Science and Engineering, 2002, 33, 123-133.	4.2	133
67	Synergistic Interactions between Grafted Hyaluronic Acid and Lubricin Provide Enhanced Wear Protection and Lubrication. Biomacromolecules, 2013, 14, 1669-1677.	5.4	133
68	Forces between Alumina Surfaces in Salt Solutions: Non-DLVO Forces and the Implications for Colloidal Processing. Journal of the American Ceramic Society, 1994, 77, 437-443.	3.8	127
69	Geckoâ€Inspired Dry Adhesive for Robotic Applications. Advanced Functional Materials, 2011, 21, 3010-3018.	14.9	127
70	Lubrication and wear properties of grafted polyelectrolytes, hyaluronan and hylan, measured in the surface forces apparatus. Journal of Biomedical Materials Research Part B, 2004, 71A, 6-15.	3.1	126
71	Microphase Behavior and Enhanced Wet-Cohesion of Synthetic Copolyampholytes Inspired by a Mussel Foot Protein. Journal of the American Chemical Society, 2015, 137, 9214-9217.	13.7	125
72	The Deformation and Adhesion of Randomly Rough and Patterned Surfaces. Journal of Physical Chemistry B, 2006, 110, 11884-11893.	2.6	124

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73	Adhesion and short-range forces between surfaces. Part II: Effects of surface lattice mismatch. Journal of Materials Research, 1990, 5, 2232-2243.	2.6	123
74	Friction and Adhesion Hysteresis of Fluorocarbon Surfactant Monolayer-Coated Surfaces Measured with the Surface Forces Apparatus. Journal of Physical Chemistry B, 1998, 102, 234-244.	2.6	123
75	Molecular Aspects of Boundary Lubrication by Human Lubricin:â€‰ Effect of Disulfide Bonds and Enzymatic Digestion. Langmuir, 2008, 24, 1495-1508.	3.5	120
76	Adhesion mechanism in a DOPA-deficient foot protein from green mussels. Soft Matter, 2012, 8, 5640.	2.7	116
77	Liquid structuring at solid interfaces as probed by direct force measurements: The transition from simple to complex liquids and polymer fluids. Journal of Chemical Physics, 1988, 88, 7162-7166.	3.0	113
78	Interfacial pH during mussel adhesive plaque formation. Biofouling, 2015, 31, 221-227.	2.2	112
79	The Electrochemical Surface Forces Apparatus: The Effect of Surface Roughness, Electrostatic Surface Potentials, and Anodic Oxide Growth on Interaction Forces, and Friction between Dissimilar Surfaces in Aqueous Solutions. Langmuir, 2012, 28, 13080-13093.	3.5	108
80	Relationship between adhesion and friction forces. Journal of Adhesion Science and Technology, 1994, 8, 1231-1249.	2.6	107
81	Adhesion and Friction of Polymer Surfaces:Â The Effect of Chain Ends. Macromolecules, 2005, 38, 3491-3503.	4.8	107
82	Adhesion and Friction Force Coupling of Gecko Setal Arrays:â€‰ Implications for Structured Adhesive Surfaces. Langmuir, 2008, 24, 1517-1524.	3.5	106
83	Duplicating Dynamic Strain-Stiffening Behavior and Nanomechanics of Biological Tissues in a Synthetic Self-Healing Flexible Network Hydrogel. ACS Nano, 2017, 11, 11074-11081.	14.6	105
84	Surface chemical heterogeneity modulates silica surface hydration. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2890-2895.	7.1	105
85	Very low viscosity at the solidâ€“liquid interface induced by adsorbed C60 monolayers. Nature, 1996, 382, 520-522.	27.8	97
86	Dynamic Behavior of Confined Branched Hydrocarbon Lubricant Fluids under Shear. Macromolecules, 2000, 33, 4910-4920.	4.8	95
87	Dynamic phase transitions in confined lubricant fluids under shear. Physical Review E, 2001, 63, 041506.	2.1	94
88	Debye Length and Double-Layer Forces in Polyelectrolyte Solutions. Macromolecules, 2002, 35, 2380-2388.	4.8	93
89	Thin film rheology and lubricity of hyaluronic acid solutions at a normal physiological concentration. Journal of Biomedical Materials Research Part B, 2002, 61, 514-523.	3.1	90
90	Effects of Confinement and Shear on the Properties of Thin Films of Thermotropic Liquid Crystal. Langmuir, 1996, 12, 6637-6650.	3.5	86

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91	Biomimetic Bidirectional Switchable Adhesive Inspired by the Gecko. Advanced Functional Materials, 2014, 24, 574-579.	14.9	86
92	Thin Film Morphology and Tribology Study of Mayonnaise. Journal of Food Science, 1997, 62, 640-652.	3.1	85
93	Stick-slip friction and wear of articular joints. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E567-74.	7.1	84
94	Microtribology and Direct Force Measurement of WS2 Nested Fullerene-Like Nanostructures. Advanced Materials, 1999, 11, 934-937.	21.0	83
95	Temperature and Time Effects on the â€œAdhesion Dynamicsâ€•of Poly(butyl methacrylate) (PBMA) Surfaces. Langmuir, 1998, 14, 3873-3881.	3.5	80
96	Role of nanometer roughness on the adhesion and friction of a rough polymer surface and a molecularly smooth mica surface. Tribology Letters, 2007, 26, 191-201.	2.6	79
97	Bridging Adhesion of Mussel-Inspired Peptides: Role of Charge, Chain Length, and Surface Type. Langmuir, 2015, 31, 1105-1112.	3.5	78
98	Surface force measurements and simulations of mussel-derived peptide adhesives on wet organic surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4332-4337.	7.1	77
99	Adhesion and Friction of Polystyrene Surfaces aroundTg. Macromolecules, 2006, 39, 2350-2363.	4.8	75
100	Frictional Adhesion of Patterned Surfaces and Implications for Gecko and Biomimetic Systems. Langmuir, 2009, 25, 7486-7495.	3.5	75
101	Pressure solution â€“ The importance of the electrochemical surface potentials. Geochimica Et Cosmochimica Acta, 2011, 75, 6882-6892.	3.9	75
102	The Boundary Lubrication of Chemically Grafted and Cross-Linked Hyaluronic Acid in Phosphate Buffered Saline and Lipid Solutions Measured by the Surface Forces Apparatus. Langmuir, 2012, 28, 2244-2250.	3.5	75
103	Gecko adhesion pad: a smart surface?. Journal of Physics Condensed Matter, 2009, 21, 464132.	1.8	72
104	Part 1. Direct Measurement of Depletion Attraction and Thin Film Viscosity between Lipid Bilayers in Aqueous Polyethylene Glycol Solutions. Macromolecules, 1998, 31, 8250-8257.	4.8	70
105	Role of Tilted Adhesion Fibrils (Setae) in the Adhesion and Locomotion of Gecko-like Systems. Journal of Physical Chemistry B, 2009, 113, 3615-3621.	2.6	70
106	Peeling of a tape with large deformations and frictional sliding. Journal of the Mechanics and Physics of Solids, 2013, 61, 1265-1279.	4.8	69
107	Effects of Salinity on Oil Recovery (the â€œDilution Effectâ€): Experimental and Theoretical Studies of Crude Oil/Brine/Carbonate Surface Restructuring and Associated Physicochemical Interactions. Energy & Fuels, 2017, 31, 8925-8941.	5.1	69
108	Correlation of AFM and SFA Measurements Concerning the Stability of Supported Lipid Bilayers. Biophysical Journal, 2004, 86, 870-879.	0.5	68

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109	Origin of the Contact Angle Hysteresis of Water on Chemisorbed and Physisorbed Self-Assembled Monolayers. Langmuir, 2012, 28, 14609-14617.	3.5	68
110	Friction and Adhesion of Gecko-Inspired PDMS Flaps on Rough Surfaces. Langmuir, 2012, 28, 11527-11534.	3.5	68
111	Time-Dependent Wetting Behavior of PDMS Surfaces with Bioinspired, Hierarchical Structures. ACS Applied Materials & Interfaces, 2016, 8, 8168-8174.	8.0	67
112	Estimating the metal-ceramic van der Waals adhesion energy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 76, 715-728.	0.6	66
113	Preparing Contamination-free Mica Substrates for Surface Characterization, Force Measurements, and Imaging. Langmuir, 2004, 20, 3616-3622.	3.5	66
114	Thin Film Rheology and Tribology of Chocolate. Journal of Food Science, 1997, 62, 767-812.	3.1	65
115	Asymmetric Electrostatic and Hydrophobicâ€“Hydrophilic Interaction Forces between Mica Surfaces and Silicone Polymer Thin Films. ACS Nano, 2013, 7, 10094-10104.	14.6	65
116	Simple-to-Apply Wetting Model to Predict Thermodynamically Stable and Metastable Contact Angles on Textured/Rough/Patterned Surfaces. Journal of Physical Chemistry C, 2017, 121, 5642-5656.	3.1	64
117	Role of electrochemical reactions in pressure solution. Geochimica Et Cosmochimica Acta, 2009, 73, 2862-2874.	3.9	63
118	Significant Performance Enhancement of Polymer Resins by Bioinspired Dynamic Bonding. Advanced Materials, 2017, 29, 1703026.	21.0	63
119	Controlled microtribology of a metal oxide surface. Tribology Letters, 1998, 4, 43-48.	2.6	62
120	Modulation of Hydrophobic Interaction by Mediating Surface Nanoscale Structure and Chemistry, not Monotonically by Hydrophobicity. Angewandte Chemie - International Edition, 2018, 57, 11903-11908.	13.8	62
121	Effect of Surface Roughness and Electrostatic Surface Potentials on Forces Between Dissimilar Surfaces in Aqueous Solution. Advanced Materials, 2011, 23, 2294-2299.	21.0	61
122	Measurements of dynamic interactions in thin films of polymer melts: The transition from simple to complex behavior. Journal of Polymer Science, Part B: Polymer Physics, 1989, 27, 489-502.	2.1	56
123	Structure in a Confined Smectic Liquid Crystal with Competing Surface and Sample Elasticities. Physical Review Letters, 1996, 76, 1477-1480.	7.8	56
124	Adhesion and coalescence of ductile metal surfaces and nanoparticles. Acta Materialia, 2003, 51, 31-47.	7.9	56
125	Normal and Shear Forces between Mica and Model Membrane Surfaces with Adsorbed Hyaluronan. Macromolecules, 2003, 36, 9519-9526.	4.8	54
126	Adhesion and Detachment Mechanisms between Polymer and Solid Substrate Surfaces: Using Polystyreneâ€“Mica as a Model System. Macromolecules, 2016, 49, 5223-5231.	4.8	54

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127	Interfacial forces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1992, 10, 2961-2971.	2.1	53
128	Effects of Sub-Ã¥ngstrom (pico-scale) Structure of Surfaces on Adhesion, Friction, and Bulk Mechanical Properties. Journal of Materials Research, 2005, 20, 1952-1972.	2.6	52
129	Lipid domains control myelin basic protein adsorption and membrane interactions between model myelin lipid bilayers. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E768-75.	7.1	52
130	Boronate Complex Formation with Dopa Containing Mussel Adhesive Protein Retards pH-Induced Oxidation and Enables Adhesion to Mica. PLoS ONE, 2014, 9, e108869.	2.5	51
131	Part 2. Crossover from Depletion Attraction to Adsorption:Â Polyethylene Glycol Induced Electrostatic Repulsion between Lipid Bilayers. Macromolecules, 1998, 31, 8258-8263.	4.8	49
132	New SFA Techniques for Studying Surface Forces and Thin Film Patterns Induced by Electric Fields. Langmuir, 2008, 24, 1173-1182.	3.5	48
133	Forces between Surfaces across Nanoparticle Solutions:Â Role of Size, Shape, and Concentration. Langmuir, 2007, 23, 3961-3969.	3.5	47
134	Hydrophobic Forces, Electrostatic Steering, and Acidâ€"Base Bridging between Atomically Smooth Self-Assembled Monolayers and End-Functionalized PEGolated Lipid Bilayers. Journal of the American Chemical Society, 2012, 134, 1746-1753.	13.7	47
135	Irreversibility, Energy Dissipation, and Time Effects in Intermolecular and Surface Interactions. Israel Journal of Chemistry, 1995, 35, 85-91.	2.3	45
136	Changes in pore morphology and fluid transport in compressed articular cartilage and the implications for joint lubrication. Biomaterials, 2008, 29, 4455-4462.	11.4	44
137	Shearâ€Induced Aggregation of Mammalian Synovial Fluid Components under Boundary Lubrication Conditions. Advanced Functional Materials, 2014, 24, 3152-3161.	14.9	43
138	Growth of ionic crystallites on exposed surfaces. Journal of Colloid and Interface Science, 1987, 117, 576-577.	9.4	42
139	Direct Observation of Shear-Induced Orientational Phase Coexistence in a Lyotropic System Using a Modified X-Ray Surface Forces Apparatus. Physical Review Letters, 2001, 86, 1263-1266.	7.8	42
140	Surface-Induced Patterns from Evaporating Droplets of Aqueous Carbon Nanotube Dispersions. Langmuir, 2011, 27, 7163-7167.	3.5	42
141	Shear alignment of confined hydrocarbon liquid films. Physical Review E, 2002, 66, 011705.	2.1	41
142	Large Deformations during the Coalescence of Fluid Interfaces. Physical Review Letters, 2004, 92, 024501.	7.8	41
143	Communication: Contrasting effects of glycerol and DMSO on lipid membrane surface hydration dynamics and forces. Journal of Chemical Physics, 2016, 145, 041101.	3.0	40
144	Impact of Molecular Architecture and Adsorption Density on Adhesion of Mussel-Inspired Surface Primers with Catechol-Cation Synergy. Journal of the American Chemical Society, 2019, 141, 18673-18681.	13.7	40

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145	Nanoscale Mechanisms of Evaporation, Condensation and Nucleation in Confined Geometries. Journal of Physical Chemistry B, 2002, 106, 3534-3537.	2.6	39
146	Direct measurements of interactions and viscosity of crude oils in thin films between model clay surfaces. Journal of Colloid and Interface Science, 1987, 119, 194-202.	9.4	38
147	Mussel adhesive protein provides cohesive matrix for collagen type-1Î±. Biomaterials, 2015, 51, 51-57.	11.4	38
148	Tribology of Shearing Polymer Surfaces. 2. Polymer (PnBMA) Sliding On Mica. Journal of Physical Chemistry B, 2000, 104, 7944-7950.	2.6	36
149	3D Force and Displacement Sensor for SFA and AFM Measurements. Langmuir, 2008, 24, 1541-1549.	3.5	36
150	A multi-axis confocal rheoscope for studying shear flow of structured fluids. Review of Scientific Instruments, 2014, 85, 033905.	1.3	36
151	Stickâ€"slip friction of gecko-mimetic flaps on smooth and rough surfaces. Journal of the Royal Society Interface, 2015, 12, 20141346.	3.4	35
152	Î±,Î²-Dehydro-Dopa: A Hidden Participant in Mussel Adhesion. Biochemistry, 2016, 55, 743-750.	2.5	35
153	LIQUIDS: Putting Liquids Under Molecular-Scale Confinement. Science, 2001, 292, 867-868.	12.6	35
154	Transient Surface Patterns and Instabilities at Adhesive Junctions of Viscoelastic Films. Macromolecules, 2007, 40, 8409-8422.	4.8	34
155	Microtribology of Aqueous Carbon Nanotube Dispersions. Advanced Functional Materials, 2011, 21, 4555-4564.	14.9	34
156	Effects of molecular weight of grafted hyaluronic acid on wear initiation. Acta Biomaterialia, 2014, 10, 1817-1823.	8.3	34
157	Peptide Length and Dopa Determine Ironâ€Mediated Cohesion of Mussel Foot Proteins. Advanced Functional Materials, 2015, 25, 5840-5847.	14.9	34
158	Influence of Humidity on Grip and Release Adhesion Mechanisms for Gecko-Inspired Microfibrillar Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 14497-14505.	8.0	34
159	Thickness and refractive index measurements using multiple beam interference fringes (FECO). Journal of Colloid and Interface Science, 2003, 264, 548-553.	9.4	33
160	Static Forces, Structure and Flow Properties of Complex Fluids in Highly Confined Geometries. Annals of Biomedical Engineering, 2005, 33, 39-51.	2.5	33
161	Experimental investigation of the dissolution of quartz by a muscovite mica surface: Implications for pressure solution. Journal of Geophysical Research, 2006, 111, .	3.3	33
162	Confined fluids and their role in pressure solution. Chemical Geology, 2006, 230, 220-231.	3.3	33

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163	Mussel Coating Protein-Derived Complex Coacervates Mitigate Frictional Surface Damage. ACS Biomaterials Science and Engineering, 2015, 1, 1121-1128.	5.2	33
164	Temperature dependence of solvation forces. Journal of Chemical Physics, 1984, 80, 4566-4567.	3.0	32
165	Correlating steric hydration forces with water dynamics through surface force and diffusion NMR measurements in a lipidâ€“DMSOâ€“H ₂ O system. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10708-10713.	7.1	32
166	Limit Cycles in Dynamic Adhesion and Friction Processes: A Discussion. Journal of Adhesion, 2006, 82, 933-943.	3.0	31
167	Triple Function Lubricant Additives Based on Organicâ€“Inorganic Hybrid Star Polymers: Friction Reduction, Wear Protection, and Viscosity Modification. ACS Applied Materials & Interfaces, 2019, 11, 1363-1375.	8.0	31
168	Friction at the Liquid/Liquid Interface of Two Immiscible Polymer Films. Langmuir, 2009, 25, 4954-4964.	3.5	30
169	[26] Direct methods for measuring conformational water forces (hydration forces) between membrane and other surfaces. Methods in Enzymology, 1986, 127, 353-360.	1.0	29
170	Measurements of the Effect of Angular Lattice Mismatch on the Adhesion Energy Between two Mica Surfaces in Water. Materials Research Society Symposia Proceedings, 1988, 138, 349.	0.1	29
171	Simple peptide coacervates adapted for rapid pressure-sensitive wet adhesion. Soft Matter, 2017, 13, 9122-9131.	2.7	29
172	Effects of Time and Compression on the Interactions of Adsorbed Polystyrene Layers in a Near-Ïˁ Solvent. Macromolecules, 1997, 30, 3329-3339.	4.8	28
173	Differences between non-specific and bio-specific, and between equilibrium and non-equilibrium, interactions in biological systems. Quarterly Reviews of Biophysics, 2005, 38, 331-337.	5.7	28
174	Adhesion and hemifusion of cytoplasmic myelin lipid membranes are highly dependent on the lipid composition. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 402-410.	2.6	28
175	Antioxidant efficacy and adhesion rescue by a recombinant mussel foot proteinâ€6. Biotechnology Progress, 2013, 29, 1587-1593.	2.6	28
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