

William A Ducker

List of Publications by Year in descending order

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124
papers

10,471
citations

47006

47
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31849

101
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125
all docs

125
docs citations

125
times ranked

7664
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct measurement of colloidal forces using an atomic force microscope. <i>Nature</i> , 1991, 353, 239-241.	27.8	1,912
2	Measurement of forces in liquids using a force microscope. <i>Langmuir</i> , 1992, 8, 1831-1836.	3.5	1,040
3	Measurements of Hydrophobic and DLVO Forces in Bubble-Surface Interactions in Aqueous Solutions. <i>Langmuir</i> , 1994, 10, 3279-3289.	3.5	445
4	Organization of Sodium Dodecyl Sulfate at the Graphite/Solution Interface. <i>The Journal of Physical Chemistry</i> , 1996, 100, 3207-3214.	2.9	321
5	Nanobubbles at the Interface between Water and a Hydrophobic Solid. <i>Langmuir</i> , 2008, 24, 4756-4764.	3.5	315
6	Lateral, normal, and longitudinal spring constants of atomic force microscopy cantilevers. <i>Review of Scientific Instruments</i> , 1994, 65, 2527-2531.	1.3	300
7	Contact Angle and Stability of Interfacial Nanobubbles. <i>Langmuir</i> , 2009, 25, 8907-8910.	3.5	243
8	Measuring surface forces in aqueous electrolyte solution with the atomic force microscope. <i>Bioelectrochemistry</i> , 1995, 38, 191-201.	1.0	235
9	A Nanoscale Gas State. <i>Physical Review Letters</i> , 2007, 98, 136101.	7.8	228
10	Origin and Characterization of Different Stick-Slip Friction Mechanisms. <i>Langmuir</i> , 1996, 12, 4559-4563.	3.5	203
11	Adsorption of Hexadecyltrimethylammonium Bromide to Mica: A Nanometer-Scale Study of Binding-Site Competition Effects. <i>Langmuir</i> , 1999, 15, 160-168.	3.5	192
12	Nanometer-Scale Organization of Ethylene Oxide Surfactants on Graphite, Hydrophilic Silica, and Hydrophobic Silica. <i>Journal of Physical Chemistry B</i> , 1998, 102, 4288-4294.	2.6	190
13	Experimental Determination of Spring Constants in Atomic Force Microscopy. <i>Langmuir</i> , 1994, 10, 1003-1004.	3.5	189
14	A Surface Coating that Rapidly Inactivates SARS-CoV-2. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 34723-34727.	8.0	168
15	A Deliberation on Nanobubbles at Surfaces and in Bulk. <i>ChemPhysChem</i> , 2012, 13, 2179-2187.	2.1	163
16	Surface-Induced Phase Behavior of Alkyltrimethylammonium Bromide Surfactants Adsorbed to Mica, Silica, and Graphite. <i>Journal of Physical Chemistry B</i> , 1999, 103, 8558-8567.	2.6	155
17	Surface-Induced Transformations for Surfactant Aggregates. <i>Journal of the American Chemical Society</i> , 1998, 120, 7602-7607.	13.7	149
18	Effect of Substrate Hydrophobicity on Surfactant Surface Aggregate Geometry. <i>The Journal of Physical Chemistry</i> , 1996, 100, 11507-11511.	2.9	130

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19	Forces between Colloid Particles in Natural Waters. <i>Environmental Science & Technology</i> , 2003, 37, 3303-3308.	10.0	130
20	Forces between Alumina Surfaces in Salt Solutions: Non-DLVO Forces and the Implications for Colloidal Processing. <i>Journal of the American Ceramic Society</i> , 1994, 77, 437-443.	3.8	127
21	Counterion Effects on Adsorbed Micellar Shape: An Experimental Study of the Role of Polarizability and Charge. <i>Langmuir</i> , 2000, 16, 4447-4454.	3.5	125
22	Surface-Aggregate Shape Transformation. <i>Langmuir</i> , 1996, 12, 5915-5920.	3.5	114
23	AFM Study of Adsorption of Cationic Surfactants and Cationic Polyelectrolytes at the Silica-Water Interface. <i>Langmuir</i> , 2001, 17, 4895-4903.	3.5	100
24	No-Slip Hydrodynamic Boundary Condition for Hydrophilic Particles. <i>Physical Review Letters</i> , 2007, 98, 028305.	7.8	97
25	Weak Influence of Divalent Ions on Anionic Surfactant Surface-Aggregation. <i>Langmuir</i> , 1997, 13, 1463-1474.	3.5	96
26	Do Stable Nanobubbles Exist in Mixtures of Organic Solvents and Water?. <i>Journal of Physical Chemistry B</i> , 2010, 114, 6962-6967.	2.6	95
27	The mechanism for hydrothermal growth of zinc oxide. <i>CrystEngComm</i> , 2012, 14, 1232-1240.	2.6	94
28	The influence of interface bonding on thermal transport through solid-liquid interfaces. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	94
29	Cupric Oxide Coating That Rapidly Reduces Infection by SARS-CoV-2 via Solids. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 5919-5928.	8.0	94
30	Celery (<i>Apium graveolens</i> L.) parenchyma cell walls examined by atomic force microscopy: effect of dehydration on cellulose microfibrils. <i>Planta</i> , 2000, 212, 25-32.	3.2	90
31	Krafft Temperature Depression in Quaternary Ammonium Bromide Surfactants. <i>Langmuir</i> , 1998, 14, 3210-3213.	3.5	80
32	Effects of Surfactants on the Formation and the Stability of Interfacial Nanobubbles. <i>Langmuir</i> , 2012, 28, 10471-10477.	3.5	77
33	Surface Aggregate Phase Transition. <i>Langmuir</i> , 1997, 13, 4223-4228.	3.5	75
34	Is There a Thin Film of Air at the Interface between Water and Smooth Hydrophobic Solids?. <i>Langmuir</i> , 2004, 20, 1843-1849.	3.5	73
35	Effect of Substrate Hydrophobicity on Surface Aggregate Geometry: A Zwitterionic and Nonionic Surfactants. <i>Journal of Physical Chemistry B</i> , 1997, 101, 5337-5345.	2.6	72
36	Effects of Degassing and Ionic Strength on AFM Force Measurements in Octadecyltrimethylammonium Chloride Solutions. <i>Langmuir</i> , 2005, 21, 5831-5841.	3.5	72

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37	Aggregation of 100-Hydroxy Quaternary Ammonium Bolaform Surfactants. <i>Langmuir</i> , 2000, 16, 2430-2435.	3.5	67
38	Formation of Interfacial Nanodroplets through Changes in Solvent Quality. <i>Langmuir</i> , 2007, 23, 12478-12480.	3.5	66
39	Surfactant Adsorption at Solid-Aqueous Interfaces Containing Fixed Charges: Experiments Revealing the Role of Surface Charge Density and Surface Charge Regulation. <i>Journal of Physical Chemistry B</i> , 2004, 108, 1667-1676.	2.6	65
40	Shear-induced structure and mechanics of β^2 -lactoglobulin amyloid fibrils. <i>Soft Matter</i> , 2009, 5, 5020.	2.7	59
41	Selective Adsorption to Particular Crystal Faces of ZnO. <i>Langmuir</i> , 2012, 28, 7189-7196.	3.5	59
42	Proximal Adsorption of Cationic Surfactant on Silica at Equilibrium. <i>Journal of Physical Chemistry B</i> , 2001, 105, 1389-1402.	2.6	53
43	Electrostatic Screening Length in Concentrated Salt Solutions. <i>Langmuir</i> , 2019, 35, 5719-5727.	3.5	53
44	Celery (<i>Apium graveolens</i>) parenchyma cell walls: cell walls with minimal xyloglucan. <i>Physiologia Plantarum</i> , 2002, 116, 164-171.	5.2	52
45	Interfacial Oil Droplets. <i>Langmuir</i> , 2008, 24, 110-115.	3.5	51
46	Antimicrobial Surfaces Using Covalently Bound Polyallylamine. <i>Biomacromolecules</i> , 2014, 15, 169-176.	5.4	50
47	Immobilized Enzymes as Catalytically-Active Tools for Nanofabrication. <i>Journal of the American Chemical Society</i> , 2002, 124, 12114-12115.	13.7	49
48	Surface Topography Hinders Bacterial Surface Motility. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 9225-9234.	8.0	49
49	Influence of atomic force microscope cantilever tilt and induced torque on force measurements. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	47
50	Controlled modification of silicon nitride interactions in water via zwitterionic surfactant adsorption. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1994, 93, 275-292.	4.7	46
51	Forces between extended hydrophobic solids: Is there a long-range hydrophobic force?. <i>Current Opinion in Colloid and Interface Science</i> , 2016, 22, 51-58.	7.4	46
52	The viability of SARS-CoV-2 on solid surfaces. <i>Current Opinion in Colloid and Interface Science</i> , 2021, 55, 101481.	7.4	46
53	How Does Shear Affect $\text{A}\beta^2$ Fibrillogenesis?. <i>Journal of Physical Chemistry B</i> , 2008, 112, 16249-16252.	2.6	44
54	Exchange Rates of Surfactant at the Solid-Liquid Interface Obtained by ATR-FTIR. <i>Journal of Physical Chemistry B</i> , 2003, 107, 9011-9021.	2.6	43

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55	Thin Film Lubrication for Large Colloidal Particles: Experimental Test of the No-Slip Boundary Condition. <i>Journal of Physical Chemistry C</i> , 2007, 111, 16300-16312.	3.1	42
56	Force measurement using an ac atomic force microscope. <i>Journal of Applied Physics</i> , 1990, 67, 4045-4052.	2.5	41
57	Atomic Force Microscopy Colloid Probe Measurements with Explicit Measurement of Particle-Solid Separation. <i>Langmuir</i> , 2004, 20, 7616-7622.	3.5	41
58	Forces between Hydrophobic Solids in Concentrated Aqueous Salt Solution. <i>Physical Review Letters</i> , 2012, 108, 106101.	7.8	38
59	Phase State of Interfacial Nanobubbles. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14262-14266.	3.1	37
60	Forces between Crystalline Alumina (Sapphire) Surfaces in Aqueous Sodium Dodecyl Sulfate Surfactant Solutions. <i>Langmuir</i> , 1996, 12, 2263-2270.	3.5	36
61	Proximal Adsorption at Glass Surfaces: Ionic Strength, pH, Chain Length Effects. <i>Langmuir</i> , 2004, 20, 378-388.	3.5	36
62	Squeeze Film Lubrication in Silicone Oil: Experimental Test of the No-Slip Boundary Condition at Solid-Liquid Interfaces. <i>Journal of Physical Chemistry C</i> , 2008, 112, 17324-17330.	3.1	35
63	A Strategy for the Sequential Patterning of Proteins: Catalytically Active Multiprotein Nanofabrication. <i>Nano Letters</i> , 2003, 3, 691-694.	9.1	34
64	Proximal Adsorption of Dodecyltrimethylammonium Bromide to the Silica-Electrolyte Solution Interface. <i>Langmuir</i> , 2002, 18, 3167-3175.	3.5	33
65	Impact of surface topography on biofilm formation by <i>Candida albicans</i> . <i>PLoS ONE</i> , 2018, 13, e0197925.	2.5	32
66	Reduction of Infectivity of SARS-CoV-2 by Zinc Oxide Coatings. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 5022-5027.	5.2	31
67	Rapid measurement of static and dynamic surface forces. <i>Applied Physics Letters</i> , 1990, 56, 2408-2410.	3.3	30
68	Effect of Zwitterionic Surfactants on Interparticle Forces, Rheology, and Particle Packing of Silicon Nitride Slurries. <i>Journal of the American Ceramic Society</i> , 1997, 80, 575-583.	3.8	30
69	Self-Assembled Supramolecular Structures of Charged Polymers at the Graphite/Liquid Interface. <i>Langmuir</i> , 2000, 16, 3467-3473.	3.5	30
70	SARS-CoV-2 virus transfers to skin through contact with contaminated solids. <i>Scientific Reports</i> , 2021, 11, 22868.	3.3	29
71	Transparent and Sprayable Surface Coatings that Kill Drug-Resistant Bacteria Within Minutes and Inactivate SARS-CoV-2 Virus. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 54706-54714.	8.0	28
72	Transparent Anti-SARS-CoV-2 and Antibacterial Silver Oxide Coatings. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 8718-8727.	8.0	28

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73	Preventing bacterial colonization using colloidal crystals. <i>Journal of Materials Chemistry B</i> , 2014, 2, 5962-5971.	5.8	26
74	Colloidal Crystals Delay Formation of Early Stage Bacterial Biofilms. <i>ACS Biomaterials Science and Engineering</i> , 2016, 2, 1039-1048.	5.2	26
75	A liquid-state thermal diode. <i>International Journal of Heat and Mass Transfer</i> , 2017, 106, 741-744.	4.8	26
76	Adsorption of Dipolar (Zwitterionic) Surfactants to Dipolar Surfaces. <i>Langmuir</i> , 1996, 12, 4111-4115.	3.5	25
77	Decay Lengths of Double-Layer Forces in Solutions of Partly Associated Ions. <i>Langmuir</i> , 2001, 17, 8451-8454.	3.5	24
78	Relationship between Scattered Intensity and Separation for Particles in an Evanescent Field. <i>Langmuir</i> , 2005, 21, 5783-5789.	3.5	24
79	<i>In Situ</i> Control of Gas Flow by Modification of Gas-Solid Interactions. <i>Physical Review Letters</i> , 2013, 111, 174502.	7.8	23
80	Forces between Glass Surfaces in Mixed Cationic/Zwitterionic Surfactant Systems. <i>Langmuir</i> , 2004, 20, 4553-4558.	3.5	22
81	Lubrication forces in air and accommodation coefficient measured by a thermal damping method using an atomic force microscope. <i>Physical Review E</i> , 2010, 81, 056305.	2.1	22
82	Surface roughness of plasma-treated mica. <i>Langmuir</i> , 1992, 8, 733-735.	3.5	20
83	Effect of Molecularly-Thin Films on Lubrication Forces and Accommodation Coefficients in Air. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20114-20119.	3.1	20
84	No-Slip Boundary Condition for Weak Solid-Liquid Interactions. <i>Journal of Physical Chemistry C</i> , 2011, 115, 8613-8621.	3.1	20
85	Confinement-Induced Phase Behavior and Adsorption Regulation of Ionic Surfactants in the Aqueous Film between Charged Solids. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15033-15042.	2.6	19
86	Refractive Index of Thin, Aqueous Films between Hydrophobic Surfaces Studied Using Evanescent Wave Atomic Force Microscopy. <i>Langmuir</i> , 2005, 21, 12153-12159.	3.5	19
87	Surface Chemistry and Rheology of Polysulfobetaine-Coated Silica. <i>Langmuir</i> , 2007, 23, 7587-7593.	3.5	19
88	Unnatural Proteins for the Control of Surface Forces. <i>Langmuir</i> , 2005, 21, 1497-1506.	3.5	18
89	Peptides Grafted from Solids for the Control of Interfacial Properties. <i>Langmuir</i> , 2009, 25, 1488-1494.	3.5	18
90	Organized Structure of Lithium Perfluorooctanesulfonate at the Graphite-Solution Interface. <i>Journal of Colloid and Interface Science</i> , 1997, 191, 303-311.	9.4	17

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91	Formation of Nanodents by Deposition of Nanodroplets at the Polymer-Liquid Interface. <i>Langmuir</i> , 2010, 26, 4776-4781.	3.5	17
92	Differential Etching of ZnO Native Planes under Basic Conditions. <i>Langmuir</i> , 2012, 28, 5633-5641.	3.5	15
93	The formation of hydrophobic films on silica with alcohols. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010, 362, 65-70.	4.7	13
94	Effect of Gas Species on Gas-Monolayer Interactions: Tangential Momentum Accommodation. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20275-20282.	3.1	13
95	Flow of Water Adjacent to Smooth Hydrophobic Solids. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14007-14013.	3.1	12
96	Effects of Colloidal Crystals, Antibiotics, and Surface-Bound Antimicrobials on <i>Pseudomonas aeruginosa</i> Surface Density. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 257-265.	5.2	12
97	Simple Method for Controlled Association of Colloidal-Particle Mixtures using pH-Dependent Hydrogen Bonding. <i>Langmuir</i> , 2009, 25, 2114-2120.	3.5	10
98	Gas flow near a smooth plate. <i>Physical Review E</i> , 2011, 83, 056328.	2.1	10
99	Flip-Flop in Adsorbed Bilayers. <i>Journal of Physical Chemistry B</i> , 2006, 110, 23365-23372.	2.6	9
100	A correlation force spectrometer for single molecule measurements under tensile load. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	9
101	Effect of Topographical Steps on the Surface Motility of the Bacterium <i>Pseudomonas aeruginosa</i> . <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 6436-6445.	5.2	9
102	Hindered Rotation of Water near C60. <i>Journal of Physical Chemistry C</i> , 2010, 114, 14986-14991.	3.1	8
103	Enantioselective Adsorption of Surfactants Monitored by ATR-FTIR. <i>Langmuir</i> , 2010, 26, 13944-13953.	3.5	8
104	Gas Flows near Solids Coated with Thin Water Films. <i>Journal of Physical Chemistry C</i> , 2013, 117, 6235-6244.	3.1	8
105	Removal of Bacteria from Solids by Bubbles: Effect of Solid Wettability, Interaction Geometry, and Liquid-Vapor Interface Velocity. <i>Langmuir</i> , 2019, 35, 12817-12830.	3.5	8
106	Effect of Surface Porosity on SARS-CoV-2 Fomite Infectivity. <i>ACS Omega</i> , 2022, 7, 18238-18246.	3.5	8
107	Self-Consistent Field Analysis of Ionic Surfactant Adsorption Regulation in the Aqueous Film between Two Neutral Solids. <i>Journal of Physical Chemistry B</i> , 2004, 108, 3633-3643.	2.6	7
108	Nanoscale patterning of ionic self-assembled multilayers. <i>Nanotechnology</i> , 2009, 20, 155301.	2.6	7

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109	Enantiospecific Wetting. <i>Journal of the American Chemical Society</i> , 2010, 132, 18051-18053.	13.7	7
110	Hydrodynamic interactions of two nearly touching Brownian spheres in a stiff potential: Effect of fluid inertia. <i>Physics of Fluids</i> , 2015, 27, .	4.0	7
111	Fabrication of stabilized colloidal crystal monolayers. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017, 514, 185-191.	4.7	7
112	Control of Gas Flow in Narrow Channels Using an Electric Field To Modify the Flow Boundary Condition. <i>Journal of Physical Chemistry C</i> , 2014, 118, 7480-7488.	3.1	5
113	Adsorption at Confined Interfaces. <i>Langmuir</i> , 2018, 34, 10469-10479.	3.5	5
114	An atomic force microscope tip as a light source. <i>Review of Scientific Instruments</i> , 2005, 76, 123704.	1.3	4
115	Cloning Strategy for Producing Brush-Forming Protein-Based Polymers. <i>Biomacromolecules</i> , 2005, 6, 1912-1920.	5.4	3
116	Scanning near-field optical microscopy utilizing silicon nitride probe photoluminescence. <i>Applied Physics Letters</i> , 2005, 87, 214107.	3.3	3
117	Approximate prediction of adhesion between two solids immersed in surfactant solution based on adsorption to an isolated solid. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008, 322, 256-260.	4.7	3
118	Direct Measurement of Field-Induced Polarization Forces between Particles in Air. <i>Langmuir</i> , 2014, 30, 140-148.	3.5	3
119	Dynamics of single-stranded DNA tethered to a solid. <i>Nanotechnology</i> , 2016, 27, 255701.	2.6	3
120	Complexity in Nanoparticle Assembly and Function Obtained by Direct-Grafted Peptides. <i>Langmuir</i> , 2010, 26, 1013-1018.	3.5	2
121	Effect of Grafted Oligopeptides on Friction. <i>Langmuir</i> , 2013, 29, 5760-5769.	3.5	2
122	The stochastic dynamics of tethered microcantilevers in a viscous fluid. <i>Journal of Applied Physics</i> , 2014, 116, 164905.	2.5	1
123	Recent progress in surface forces: Application to complex systems, biology, and wetting. <i>Current Opinion in Colloid and Interface Science</i> , 2020, 47, A1-A2.	7.4	1
124	Molecular Diffusion of Ions in Nanoscale Confinement. <i>Langmuir</i> , 2022, 38, 5656-5662.	3.5	0