William A Ducker

List of Publications by Year
in descending order

124 papers	10,471 citations	47006 47 h-index	31849 101 g-index
125 all docs	125 docs citations	125 times ranked	7664 citing authors

#	Article	IF	Citations
1	Transparent Anti-SARS-CoV-2 and Antibacterial Silver Oxide Coatings. ACS Applied Materials & Interfaces, 2022, 14, 8718-8727.	8.0	28
2	Molecular Diffusion of Ions in Nanoscale Confinement. Langmuir, 2022, 38, 5656-5662.	3.5	0
3	Effect of Surface Porosity on SARS-CoV-2 Fomite Infectivity. ACS Omega, 2022, 7, 18238-18246.	3.5	8
4	Cupric Oxide Coating That Rapidly Reduces Infection by SARS-CoV-2 via Solids. ACS Applied Materials & Interfaces, 2021, 13, 5919-5928.	8.0	94
5	The viability of SARS-CoV-2 on solid surfaces. Current Opinion in Colloid and Interface Science, 2021, 55, 101481.	7.4	46
6	Reduction of Infectivity of SARS-CoV-2 by Zinc Oxide Coatings. ACS Biomaterials Science and Engineering, 2021, 7, 5022-5027.	5.2	31
7	Transparent and Sprayable Surface Coatings that Kill Drug-Resistant Bacteria Within Minutes and Inactivate SARS-CoV-2 Virus. ACS Applied Materials & Interfaces, 2021, 13, 54706-54714.	8.0	28
8	SARS-CoV-2 virus transfers to skin through contact with contaminated solids. Scientific Reports, 2021, 11, 22868.	3.3	29
9	A Surface Coating that Rapidly Inactivates SARS-CoV-2. ACS Applied Materials & Interfaces, 2020, 12, 34723-34727.	8.0	168
10	Recent progress in surface forces: Application to complex systems, biology, and wetting. Current Opinion in Colloid and Interface Science, 2020, 47, A1-A2.	7.4	1
11	Effect of Topographical Steps on the Surface Motility of the Bacterium <i>Pseudomonas aeruginosa</i>. ACS Biomaterials Science and Engineering, 2019, 5, 6436-6445.	5.2	9
12	Removal of Bacteria from Solids by Bubbles: Effect of Solid Wettability, Interaction Geometry, and Liquidâ€“Vapor Interface Velocity. Langmuir, 2019, 35, 12817-12830.	3.5	8
13	Electrostatic Screening Length in Concentrated Salt Solutions. Langmuir, 2019, 35, 5719-5727.	3.5	53
14	Surface Topography Hinders Bacterial Surface Motility. ACS Applied Materials & Interfaces, 2018, 10, 9225-9234.	8.0	49
15	Effects of Colloidal Crystals, Antibiotics, and Surface-Bound Antimicrobials on <i>Pseudomonas aeruginosa</i> Surface Density. ACS Biomaterials Science and Engineering, 2018, 4, 257-265.	5.2	12
16	Impact of surface topography on biofilm formation by Candida albicans. PLoS ONE, 2018, 13, e0197925.	2.5	32
17	Adsorption at Confined Interfaces. Langmuir, 2018, 34, 10469-10479.	3.5	5
18	Fabrication of stabilized colloidal crystal monolayers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 514, 185-191.	4.7	7

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19	A liquid-state thermal diode. International Journal of Heat and Mass Transfer, 2017, 106, 741-744.	4.8	26
20	Dynamics of single-stranded DNA tethered to a solid. Nanotechnology, 2016, 27, 255701.	2.6	3
21	Colloidal Crystals Delay Formation of Early Stage Bacterial Biofilms. ACS Biomaterials Science and Engineering, 2016, 2, 1039-1048.	5.2	26
22	Forces between extended hydrophobic solids: Is there a long-range hydrophobic force?. Current Opinion in Colloid and Interface Science, 2016, 22, 51-58.	7.4	46
23	Phase State of Interfacial Nanobubbles. Journal of Physical Chemistry C, 2015, 119, 14262-14266.	3.1	37
24	Hydrodynamic interactions of two nearly touching Brownian spheres in a stiff potential: Effect of fluid inertia. Physics of Fluids, 2015, 27, .	4.0	7
25	The stochastic dynamics of tethered microcantilevers in a viscous fluid. Journal of Applied Physics, 2014, 116, 164905.	2.5	1
26	Antimicrobial Surfaces Using Covalently Bound Polyallylamine. Biomacromolecules, 2014, 15, 169-176.	5.4	50
27	Direct Measurement of Field-Induced Polarization Forces between Particles in Air. Langmuir, 2014, 30, 140-148.	3.5	3
28	Preventing bacterial colonization using colloidal crystals. Journal of Materials Chemistry B, 2014, 2, 5962-5971.	5.8	26
29	Control of Gas Flow in Narrow Channels Using an Electric Field To Modify the Flow Boundary Condition. Journal of Physical Chemistry C, 2014, 118, 7480-7488.	3.1	5
30	Effect of Gas Species on Gasâ€"Monolayer Interactions: Tangential Momentum Accommodation. Journal of Physical Chemistry C, 2014, 118, 20275-20282.	3.1	13
31	Flow of Water Adjacent to Smooth Hydrophobic Solids. Journal of Physical Chemistry C, 2013, 117, 14007-14013.	3.1	12
32	<i>InÂSitu</i>Control of Gas Flow by Modification of Gas-Solid Interactions. Physical Review Letters, 2013, 111, 174502.	7.8	23
33	Effect of Grafted Oligopeptides on Friction. Langmuir, 2013, 29, 5760-5769.	3.5	2
34	Gas Flows near Solids Coated with Thin Water Films. Journal of Physical Chemistry C, 2013, 117, 6235-6244.	3.1	8
35	A correlation force spectrometer for single molecule measurements under tensile load. Journal of Applied Physics, 2013, 113, .	2.5	9
36	The influence of interface bonding on thermal transport through solidâ€"liquid interfaces. Applied Physics Letters, 2013, 102, .	3.3	94

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37	Forces between Hydrophobic Solids in Concentrated Aqueous Salt Solution. Physical Review Letters, 2012, 108, 106101.	7.8	38
38	The mechanism for hydrothermal growth of zinc oxide. CrystEngComm, 2012, 14, 1232-1240.	2.6	94
39	Effects of Surfactants on the Formation and the Stability of Interfacial Nanobubbles. Langmuir, 2012, 28, 10471-10477.	3.5	77
40	Differential Etching of ZnO Native Planes under Basic Conditions. Langmuir, 2012, 28, 5633-5641.	3.5	15
41	Selective Adsorption to Particular Crystal Faces of ZnO. Langmuir, 2012, 28, 7189-7196.	3.5	59
42	A Deliberation on Nanobubbles at Surfaces and in Bulk. ChemPhysChem, 2012, 13, 2179-2187.	2.1	163
43	No-Slip Boundary Condition for Weak Solidâ˘'Liquid Interactions. Journal of Physical Chemistry C, 2011, 115, 8613-8621.	3.1	20
44	Gas flow near a smooth plate. Physical Review E, 2011, 83, 056328.	2.1	10
45	The formation of hydrophobic films on silica with alcohols. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 362, 65-70.	4.7	13
46	Lubrication forces in air and accommodation coefficient measured by a thermal damping method using an atomic force microscope. Physical Review E, 2010, 81, 056305.	2.1	22
47	Hindered Rotation of Water near C60. Journal of Physical Chemistry C, 2010, 114, 14986-14991.	3.1	8
48	Effect of Molecularly-Thin Films on Lubrication Forces and Accommodation Coefficients in Air. Journal of Physical Chemistry C, 2010, 114, 20114-20119.	3.1	20
49	Complexity in Nanoparticle Assembly and Function Obtained by Direct-Grafted Peptides. Langmuir, 2010, 26, 1013-1018.	3.5	2
50	Enantiospecific Wetting. Journal of the American Chemical Society, 2010, 132, 18051-18053.	13.7	7
51	Enantioselective Adsorption of Surfactants Monitored by ATR-FTIR. Langmuir, 2010, 26, 13944-13953.	3.5	8
52	Formation of Nanodents by Deposition of Nanodroplets at the Polymerâ˘'Liquid Interface. Langmuir, 2010, 26, 4776-4781.	3.5	17
53	Do Stable Nanobubbles Exist in Mixtures of Organic Solvents and Water?. Journal of Physical Chemistry B, 2010, 114, 6962-6967.	2.6	95
54	Nanoscale patterning of ionic self-assembled multilayers. Nanotechnology, 2009, 20, 155301.	2.6	7

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55	Peptides Grafted from Solids for the Control of Interfacial Properties. Langmuir, 2009, 25, 1488-1494.	3.5	18
56	Simple Method for Controlled Association of Colloidal-Particle Mixtures using pH-Dependent Hydrogen Bonding. Langmuir, 2009, 25, 2114-2120.	3.5	10
57	Shear-induced structure and mechanics of Î²-lactoglobulin amyloid fibrils. Soft Matter, 2009, 5, 5020.	2.7	59
58	Contact Angle and Stability of Interfacial Nanobubbles. Langmuir, 2009, 25, 8907-8910.	3.5	243
59	Approximate prediction of adhesion between two solids immersed in surfactant solution based on adsorption to an isolated solid. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 322, 256-260.	4.7	3
60	Influence of atomic force microscope cantilever tilt and induced torque on force measurements. Journal of Applied Physics, 2008, 103, .	2.5	47
61	Nanobubbles at the Interface between Water and a Hydrophobic Solid. Langmuir, 2008, 24, 4756-4764.	3.5	315
62	Squeeze Film Lubrication in Silicone Oil: Experimental Test of the No-Slip Boundary Condition at Solidâ˜'Liquid Interfaces. Journal of Physical Chemistry C, 2008, 112, 17324-17330.	3.1	35
63	How Does Shear Affect AÎ² Fibrillogenesis?. Journal of Physical Chemistry B, 2008, 112, 16249-16252.	2.6	44
64	Interfacial Oil Droplets. Langmuir, 2008, 24, 110-115.	3.5	51
65	Surface Chemistry and Rheology of Polysulfobetaine-Coated Silica. Langmuir, 2007, 23, 7587-7593.	3.5	19
66	Formation of Interfacial Nanodroplets through Changes in Solvent Quality. Langmuir, 2007, 23, 12478-12480.	3.5	66
67	No-Slip Hydrodynamic Boundary Condition for Hydrophilic Particles. Physical Review Letters, 2007, 98, 028305.	7.8	97
68	Thin Film Lubrication for Large Colloidal Particles:â€‰ Experimental Test of the No-Slip Boundary Condition. Journal of Physical Chemistry C, 2007, 111, 16300-16312.	3.1	42
69	A Nanoscale Gas State. Physical Review Letters, 2007, 98, 136101.	7.8	228
70	Flip-Flop in Adsorbed Bilayers. Journal of Physical Chemistry B, 2006, 110, 23365-23372.	2.6	9
71	An atomic force microscope tip as a light source. Review of Scientific Instruments, 2005, 76, 123704.	1.3	4
72	Effects of Degassing and Ionic Strength on AFM Force Measurements in Octadecyltrimethylammonium Chloride Solutions. Langmuir, 2005, 21, 5831-5841.	3.5	72

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73	Unnatural Proteins for the Control of Surface Forces. Langmuir, 2005, 21, 1497-1506.	3.5	18
74	Refractive Index of Thin, Aqueous Films between Hydrophobic Surfaces Studied Using Evanescent Wave Atomic Force Microscopy. Langmuir, 2005, 21, 12153-12159.	3.5	19
75	Relationship between Scattered Intensity and Separation for Particles in an Evanescent Field. Langmuir, 2005, 21, 5783-5789.	3.5	24
76	Cloning Strategy for Producing Brush-Forming Protein-Based Polymers. Biomacromolecules, 2005, 6, 1912-1920.	5.4	3
77	Scanning near-field optical microscopy utilizing silicon nitride probe photoluminescence. Applied Physics Letters, 2005, 87, 214107.	3.3	3
78	Proximal Adsorption at Glass Surfaces:â€‰ Ionic Strength, pH, Chain Length Effects. Langmuir, 2004, 20, 378-388.	3.5	36
79	Self-Consistent Field Analysis of Ionic Surfactant Adsorption Regulation in the Aqueous Film between Two Neutral Solids. Journal of Physical Chemistry B, 2004, 108, 3633-3643.	2.6	7
80	Confinement-Induced Phase Behavior and Adsorption Regulation of Ionic Surfactants in the Aqueous Film between Charged Solids. Journal of Physical Chemistry B, 2004, 108, 15033-15042.	2.6	19
81	Atomic Force Microscopy Colloidâ^'Probe Measurements with Explicit Measurement of Particleâ^'Solid Separation. Langmuir, 2004, 20, 7616-7622.	3.5	41
82	Is There a Thin Film of Air at the Interface between Water and Smooth Hydrophobic Solids?. Langmuir, 2004, 20, 1843-1849.	3.5	73
83	Surfactant Adsorption at Solidâ^'Aqueous Interfaces Containing Fixed Charges:â€‰ Experiments Revealing the Role of Surface Charge Density and Surface Charge Regulation. Journal of Physical Chemistry B, 2004, 108, 1667-1676.	2.6	65
84	Forces between Glass Surfaces in Mixed Cationicâ^'Zwitterionic Surfactant Systems. Langmuir, 2004, 20, 4553-4558.	3.5	22
85	A Strategy for the Sequential Patterning of Proteins:Â Catalytically Active Multiprotein Nanofabrication. Nano Letters, 2003, 3, 691-694.	9.1	34
86	Exchange Rates of Surfactant at the Solidâ^'Liquid Interface Obtained by ATR-FTIR. Journal of Physical Chemistry B, 2003, 107, 9011-9021.	2.6	43
87	Forces between Colloid Particles in Natural Waters. Environmental Science & Technology, 2003, 37, 3303-3308.	10.0	130
88	Proximal Adsorption of Dodecyltrimethylammonium Bromide to the Silicaâ^'Electrolyte Solution Interface. Langmuir, 2002, 18, 3167-3175.	3.5	33
89	Immobilized Enzymes as Catalytically-Active Tools for Nanofabrication. Journal of the American Chemical Society, 2002, 124, 12114-12115.	13.7	49
90	Celery (Apium graveolens) parenchyma cell walls: cell walls with minimal xyloglucan. Physiologia Plantarum, 2002, 116, 164-171.	5.2	52

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91	AFM Study of Adsorption of Cationic Surfactants and Cationic Polyelectrolytes at the Silicaâˆ'Water Interface. Langmuir, 2001, 17, 4895-4903.	3.5	100
92	Decay Lengths of Double-Layer Forces in Solutions of Partly Associated Ions. Langmuir, 2001, 17, 8451-8454.	3.5	24
93	Proximal Adsorption of Cationic Surfactant on Silica at Equilibrium. Journal of Physical Chemistry B, 2001, 105, 1389-1402.	2.6	53
94	Celery (Apium graveolens L.) parenchyma cell walls examined by atomic force microscopy: effect of dehydration on cellulose microfibrils. Planta, 2000, 212, 25-32.	3.2	90
95	Aggregation of Ï‰-Hydroxy Quaternary Ammonium Bolaform Surfactants. Langmuir, 2000, 16, 2430-2435.	3.5	67
96	Counterion Effects on Adsorbed Micellar Shape:Â Experimental Study of the Role of Polarizability and Charge. Langmuir, 2000, 16, 4447-4454.	3.5	125
97	Self-Assembled Supramolecular Structures of Charged Polymers at the Graphite/Liquid Interface. Langmuir, 2000, 16, 3467-3473.	3.5	30
98	Adsorption of Hexadecyltrimethylammonium Bromide to Mica:â€‰ Nanometer-Scale Study of Binding-Site Competition Effects. Langmuir, 1999, 15, 160-168.	3.5	192
99	Surface-Induced Phase Behavior of Alkyltrimethylammonium Bromide Surfactants Adsorbed to Mica, Silica, and Graphite. Journal of Physical Chemistry B, 1999, 103, 8558-8567.	2.6	155
100	Krafft Temperature Depression in Quaternary Ammonium Bromide Surfactants. Langmuir, 1998, 14, 3210-3213.	3.5	80
101	Nanometer-Scale Organization of Ethylene Oxide Surfactants on Graphite, Hydrophilic Silica, and Hydrophobic Silica. Journal of Physical Chemistry B, 1998, 102, 4288-4294.	2.6	190
102	Surface-Induced Transformations for Surfactant Aggregates. Journal of the American Chemical Society, 1998, 120, 7602-7607.	13.7	149
103	Effect of Substrate Hydrophobicity on Surfaceâˆ'Aggregate Geometry:Â Zwitterionic and Nonionic Surfactants. Journal of Physical Chemistry B, 1997, 101, 5337-5345.	2.6	72
104	Weak Influence of Divalent Ions on Anionic Surfactant Surface-Aggregation. Langmuir, 1997, 13, 1463-1474.	3.5	96
105	Surface Aggregate Phase Transition. Langmuir, 1997, 13, 4223-4228.	3.5	75
106	Effect of Zwitterionic Surfactants on Interparticle Forces, Rheology, and Particle Packing of Silicon Nitride Slurries. Journal of the American Ceramic Society, 1997, 80, 575-583.	3.8	30
107	Organized Structure of Lithium Perfluorooctanesulfonate at the Graphiteâ€“Solution Interface. Journal of Colloid and Interface Science, 1997, 191, 303-311.	9.4	17
108	Origin and Characterization of Different Stickâˆ'Slip Friction Mechanismsâ€. Langmuir, 1996, 12, 4559-4563.	3.5	203

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109	Effect of Substrate Hydrophobicity on Surfactant Surfaceâ^'Aggregate Geometry. The Journal of Physical Chemistry, 1996, 100, 11507-11511.	2.9	130
110	Forces between Crystalline Alumina (Sapphire) Surfaces in Aqueous Sodium Dodecyl Sulfate Surfactant Solutions. Langmuir, 1996, 12, 2263-2270.	3.5	36
111	Surface-Aggregate Shape Transformation. Langmuir, 1996, 12, 5915-5920.	3.5	114
112	Adsorption of Dipolar (Zwitterionic) Surfactants to Dipolar Surfaces. Langmuir, 1996, 12, 4111-4115.	3.5	25
113	Organization of Sodium Dodecyl Sulfate at the Graphiteâ^'Solution Interface. The Journal of Physical Chemistry, 1996, 100, 3207-3214.	2.9	321
114	Measuring surface forces in aqueous electrolyte solution with the atomic force microscope. Bioelectrochemistry, 1995, 38, 191-201.	1.0	235
115	Controlled modification of silicon nitride interactions in water via zwitterionic surfactant adsorption. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1994, 93, 275-292.	4.7	46
116	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
117	Lateral, normal, and longitudinal spring constants of atomic force microscopy cantilevers. Review of Scientific Instruments, 1994, 65, 2527-2531.	1.3	300
118	Experimental Determination of Spring Constants in Atomic Force Microscopy. Langmuir, 1994, 10, 1003-1004.	3.5	189
119	Measurements of Hydrophobic and DLVO Forces in Bubble-Surface Interactions in Aqueous Solutions. Langmuir, 1994, 10, 3279-3289.	3.5	445
120	Surface roughness of plasma-treated mica. Langmuir, 1992, 8, 733-735.	3.5	20
121	Measurement of forces in liquids using a force microscope. Langmuir, 1992, 8, 1831-1836.	3.5	1,040
122	Direct measurement of colloidal forces using an atomic force microscope. Nature, 1991, 353, 239-241.	27.8	1,912
123	Force measurement using an ac atomic force microscope. Journal of Applied Physics, 1990, 67, 4045-4052.	2.5	41
124	Rapid measurement of static and dynamic surface forces. Applied Physics Letters, 1990, 56, 2408-2410.	3.3	30