Abraham Marmur

List of Publications by Year
in descending order

149 papers	11,470 citations	31949 53 h-index	28275 105 g-index
150 all docs	150 docs citations	150 times ranked	10653 citing authors

#	Article	IF	Citations
1	Wetting on Hydrophobic Rough Surfaces:Â To Be Heterogeneous or Not To Be?. Langmuir, 2003, 19, 8343-8348.	1.6	1,249
2	The Lotus Effect:Â Superhydrophobicity and Metastability. Langmuir, 2004, 20, 3517-3519.	1.6	973
3	Soft contact: measurement and interpretation of contact angles. Soft Matter, 2006, 2, 12-17.	1.2	440
4	A review on the wettability of dental implant surfaces I: Theoretical and experimental aspects. Acta Biomaterialia, 2014, 10, 2894-2906.	4.1	356
5	Contact angles and wettability: towards common and accurate terminology. Surface Innovations, 2017, 5, 3-8.	1.4	328
6	Contact angle measurement on rough surfaces. Journal of Colloid and Interface Science, 2004, 274, 637-644.	5.0	318
7	Apparent contact angles on rough surfaces: the Wenzel equation revisited. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1999, 156, 381-388.	2.3	313
8	From Hygrophilic to Superhygrophobic: Theoretical Conditions for Making High-Contact-Angle Surfaces from Low-Contact-Angle Materials. Langmuir, 2008, 24, 7573-7579.	1.6	313
9	Superhydrophobic and Superoleophobic Nanocellulose Aerogel Membranes as Bioinspired Cargo Carriers on Water and Oil. Langmuir, 2011, 27, 1930-1934.	1.6	286
10	Shape-Dependent Localization of Carbon Nanotubes and Carbon Black in an Immiscible Polymer Blend during Melt Mixing. Macromolecules, 2011, 44, 6094-6102.	2.2	263
11	When Wenzel and Cassie Are Right: Reconciling Local and Global Considerations. Langmuir, 2009, 25, 1277-1281.	1.6	252
12	Drops Down the Hill:Â Theoretical Study of Limiting Contact Angles and the Hysteresis Range on a Tilted Plate. Langmuir, 2005, 21, 3881-3885.	1.6	221
13	Superhydrophobic Tracks for Lowâ€Friction, Guided Transport of Water Droplets. Advanced Materials, 2011, 23, 2911-2914.	11.1	201
14	Super-hydrophobicity fundamentals: implications to biofouling prevention. Biofouling, 2006, 22, 107-115.	0.8	199
15	Solid-Surface Characterization by Wetting. Annual Review of Materials Research, 2009, 39, 473-489.	4.3	197
16	Equilibrium and spreading of liquids on solid surfaces. Advances in Colloid and Interface Science, 1983, 19, 75-102.	7.0	189
17	Hydro- hygro- oleo- omni-phobic? Terminology of wettability classification. Soft Matter, 2012, 8, 6867.	1.2	174
18	Partial wetting of chemically patterned surfaces: The effect of drop size. Journal of Colloid and Interface Science, 2003, 263, 237-243.	5.0	173

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19	Detection of Alzheimerâ€™s and Parkinsonâ€™s disease from exhaled breath using nanomaterial-based sensors. Nanomedicine, 2013, 8, 43-56.	1.7	172
20	Line Tension and the Intrinsic Contact Angle in Solidâ€"Liquidâ€"Fluid Systems. Journal of Colloid and Interface Science, 1997, 186, 462-466.	5.0	169
21	Contact angles: history of over 200 years of open questions. Surface Innovations, 2020, 8, 3-27.	1.4	168
22	Underwater Superhydrophobicity:Â Theoretical Feasibility. Langmuir, 2006, 22, 1400-1402.	1.6	155
23	Contact Angle Hysteresis on Heterogeneous Smooth Surfaces. Journal of Colloid and Interface Science, 1994, 168, 40-46.	5.0	146
24	Biological and Synthetic Self-Cleaning Surfaces. MRS Bulletin, 2008, 33, 742-746.	1.7	144
25	Thermodynamic aspects of contact angle hysteresis. Advances in Colloid and Interface Science, 1994, 50, 121-141.	7.0	143
26	Equilibrium contact angles: theory and measurement. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1996, 116, 55-61.	2.3	140
27	Characterization of Porous Media by the Kinetics of Liquid Penetration: The Vertical Capillaries Model. Journal of Colloid and Interface Science, 1997, 189, 299-304.	5.0	137
28	The Actual Contact Angle on a Heterogeneous Rough Surface in Three Dimensions. Langmuir, 1998, 14, 5292-5297.	1.6	136
29	Physics and applications of superhydrophobic and superhydrophilic surfaces and coatings. Surface Innovations, 2014, 2, 211-227.	1.4	130
30	Nature plays with dice â€" terrorists do not: Allocating resources to counter strategic versus probabilistic risks. European Journal of Operational Research, 2009, 192, 198-208.	3.5	124
31	The Role of Multiscale Roughness in the Lotus Effect: Is It Essential for Super-Hydrophobicity?. Langmuir, 2012, 28, 13933-13942.	1.6	123
32	Marangoni effects in the spreading of liquid mixtures on a solid. Langmuir, 1987, 3, 519-524.	1.6	109
33	A theoretical model for bubble formation at an orifice submerged in an inviscid liquid. Chemical Engineering Science, 1976, 31, 453-463.	1.9	100
34	Penetration of a small drop into a capillary. Journal of Colloid and Interface Science, 1988, 122, 209-219.	5.0	98
35	Comparing Contact Angle Measurements and Surface Tension Assessments of Solid Surfaces. Langmuir, 2010, 26, 15289-15294.	1.6	97
36	A kinetic theory approach to primary and secondary minimum coagulations and their combination. Journal of Colloid and Interface Science, 1979, 72, 41-48.	5.0	95

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37	Spreading kinetics of drops on glass. Journal of Colloid and Interface Science, 1981, 82, 518-525.	5.0	90
38	The radial capillary. Journal of Colloid and Interface Science, 1988, 124, 301-308.	5.0	87
39	THE SPREADING OF AQUEOUS SURFACTANT SOLUTIONS ON GLASS. Chemical Engineering Communications, 1981, 13, 133-143.	1.5	86
40	Radial Capillary Penetration into Paper: Limited and Unlimited Liquid Reservoirs. Journal of Colloid and Interface Science, 1994, 166, 245-250.	5.0	85
41	Tip-surface capillary interactions. Langmuir, 1993, 9, 1922-1926.	1.6	81
42	Superhydrophobic and superhygrophobic surfaces: from understanding non-wettability to design considerations. Soft Matter, 2013, 9, 7900.	1.2	81
43	Kinetics of Penetration into Uniform Porous Media:Â Testing the Equivalent-Capillary Concept. Langmuir, 2003, 19, 5956-5959.	1.6	79
44	Vapour-driven Marangoni propulsion: continuous, prolonged and tunable motion. Chemical Science, 2012, 3, 2526.	3.7	76
45	Penetration and displacement in capillary systems of limited size. Advances in Colloid and Interface Science, 1992, 39, 13-33.	7.0	73
46	Validity and accuracy in evaluating surface tension of solids by additive approaches. Journal of Colloid and Interface Science, 2003, 262, 489-499.	5.0	73
47	Simulation of Contact Angle Hysteresis on Chemically Heterogeneous Surfaces. Journal of Colloid and Interface Science, 1996, 183, 351-355.	5.0	68
48	Contact-angle hysteresis on heterogeneous smooth surfaces: theoretical comparison of the captive bubble and drop methods. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 136, 209-215.	2.3	68
49	The exponential power law: partial wetting kinetics and dynamic contact angles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 250, 409-414.	2.3	67
50	Line Tension on Curved Surfaces:â€‰ Liquid Drops on Solid Micro- and Nanospheres. Langmuir, 2002, 18, 8919-8923.	1.6	65
51	The Mechanism of Hemolysis by Surfactants: Effect of Solution Composition. Journal of Colloid and Interface Science, 2002, 252, 66-76.	5.0	62
52	Porous Media Characterization by the Two-Liquid Method:â€‰ Effect of Dynamic Contact Angle and Inertia. Langmuir, 2008, 24, 1918-1923.	1.6	62
53	Line tension effect on contact angles: Axisymmetric and cylindrical systems with rough or heterogeneous solid surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 136, 81-88.	2.3	55
54	Dissolution and Self-Assembly:Â The Solvophobic/Hydrophobic Effect. Journal of the American Chemical Society, 2000, 122, 2120-2121.	6.6	53

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55	Simulated Contact Angle Hysteresis of a Three-Dimensional Drop on a Chemically Heterogeneous Surface: A Numerical Example. Journal of Colloid and Interface Science, 1997, 191, 110-116.	5.0	49
56	Spreading of liquids on rough surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1999, 146, 273-279.	2.3	45
57	Profiling Single Cancer Cells with Volatolomics Approach. IScience, 2019, 11, 178-188.	1.9	45
58	Optimizing Super-Hydrophobic Surfaces: Criteria for Comparison of Surface Topographies. Journal of Adhesion Science and Technology, 2009, 23, 401-411.	1.4	41
59	Particle Adhesion to Drops. Journal of Adhesion, 2005, 81, 869-880.	1.8	36
60	Groovy Drops:â€‰ Effect of Groove Curvature on Spontaneous Capillary Flow. Langmuir, 2007, 23, 8406-8410.	1.6	36
61	Correlating Interfacial Tensions with Surface Tensions: A Gibbsian Approach. Langmuir, 2010, 26, 5568-5575.	1.6	35
62	Equilibrium shapes and quasi-static formation of bubbles at submerged orifice. Chemical Engineering Science, 1973, 28, 1455-1464.	1.9	33
63	The dependence of drop spreading on the size of the solid surface. Journal of Colloid and Interface Science, 1980, 78, 262-265.	5.0	33
64	Characterization of particle wettability by the measurement of floatability. Journal of Colloid and Interface Science, 1986, 113, 114-120.	5.0	31
65	Wetting autophobicity. Journal of Colloid and Interface Science, 1991, 145, 355-361.	5.0	31
66	Contact Angles in Constrained Wetting. Langmuir, 1996, 12, 5704-5708.	1.6	31
67	Wettability and Surface Tension of Amphiphilic Polymer Films: Timeâ€Dependent Measurements of the Most Stable Contact Angle. Macromolecular Chemistry and Physics, 2012, 213, 1448-1456.	1.1	30
68	Direct determination of contact angles of model soils in comparison with wettability characterization by capillary rise. Journal of Hydrology, 2010, 382, 10-19.	2.3	29
69	Capillary rise and hysteresis in periodic porous media. Journal of Colloid and Interface Science, 1989, 129, 278-285.	5.0	28
70	Drop penetration into a thin porous medium. Journal of Colloid and Interface Science, 1988, 123, 161-169.	5.0	26
71	Cadmium removal from aqueous solutions by an emulsion liquid membrane. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1999, 151, 77-83.	2.3	26
72	Adhesion of Standard Explosive Particles to Model Surfaces. Journal of Physical Chemistry C, 2012, 116, 22815-22822.	1.5	26

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73	Adsorption Isotherms for Concentrated Aqueous-Organic Solutions (CAOS). Journal of Colloid and Interface Science, 2000, 230, 107-113.	5.0	25
74	Rate of Bubble Coalescence Following Dynamic Approach: Collectivity-Induced Specificity of Ionic Effect. Langmuir, 2014, 30, 13823-13830.	1.6	25
75	Super-hydrophobic surfaces: Methodological considerations for physical design. Journal of Colloid and Interface Science, 2020, 568, 148-154.	5.0	25
76	Adhesion and Wetting in an Aqueous Environment:â€‰ Theoretical Assessment of Sensitivity to the Solid Surface Energy. Langmuir, 2004, 20, 1317-1320.	1.6	24
77	Optical Control of Thermocapillary Effects in Complex Nanofluids. Physical Review Letters, 2009, 103, 264503.	2.9	24
78	Coverage dependent rate of cell deposition. Journal of Theoretical Biology, 1976, 58, 439-454.	0.8	22
79	Rate of Bubble Coalescence following Quasi-Static Approach: Screening and Neutralization of the Electric Double Layer. Scientific Reports, 2014, 4, 4266.	1.6	22
80	Contact angle and thin-film equilibrium. Journal of Colloid and Interface Science, 1992, 148, 541-550.	5.0	21
81	Vaporâ€“liquid nucleation: the solid touch. Advances in Colloid and Interface Science, 2015, 222, 743-754.	7.0	21
82	Gravity and cell adhesion. Journal of Colloid and Interface Science, 1986, 114, 261-266.	5.0	19
83	Contact angle equilibrium: the intrinsic contact angle. Journal of Adhesion Science and Technology, 1992, 6, 689-701.	1.4	19
84	Gibbs Elasticity of a Soap Bubble. Journal of Colloid and Interface Science, 1993, 158, 295-302.	5.0	19
85	The dependence of the surface tension of surfactant solutions on drop size. Journal of Colloid and Interface Science, 1992, 151, 517-522.	5.0	18
86	Stabilization of Boiling Nuclei by Insoluble Gas: Can a Nanobubble Cloud Exist?. Langmuir, 2015, 31, 7792-7798.	1.6	17
87	A biophysical vascular bubble model for devising decompression procedures. Physiological Reports, 2017, 5, e13191.	0.7	17
88	Contact angle measurement on rough surfaces: the missing link. Surface Innovations, 2017, 5, 190-193.	1.4	16
89	Monitoring Surfactant-Induced Hemolysis by Surface Tension Measurement. Journal of Colloid and Interface Science, 2002, 255, 265-269.	5.0	15
90	The porous nano-fibers raft: analysis of load-carrying mechanism and capacity. Soft Matter, 2011, 7, 7382.	1.2	15

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91	Interfaces at equilibrium: A guide to fundamentals. Advances in Colloid and Interface Science, 2017, 244, 164-173.	7.0	15
92	Penetration and Displacement in Capillary Systems. , 1992, , 327-358.		14
93	The capillary race: Optimal surface tensions for fastest penetration. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2006, 282-283, 263-271.	2.3	14
94	Chemical Nano-Heterogeneities Detection by Contact Angle Hysteresis: Theoretical Feasibility. Langmuir, 2010, 26, 15933-15937.	1.6	14
95	Condensation Enhancement by Surface Porosity: Three-Stage Mechanism. Langmuir, 2015, 31, 8852-8855.	1.6	14
96	Bubble size on detachment from the luminal aspect of ovine large blood vessels after decompression: The effect of mechanical disturbance. Respiratory Physiology and Neurobiology, 2015, 216, 1-8.	0.7	13
97	Surface Tension and Adsorption without a Dividing Surface. Langmuir, 2015, 31, 12653-12657.	1.6	13
98	Fabrication of superhydrophobic 3D objects by Digital Light Processing. Additive Manufacturing, 2020, 36, 101669.	1.7	13
99	A model of deposition and embolization of proteins and platelets on biomaterial surfaces. Annals of Biomedical Engineering, 1986, 14, 383-400.	1.3	12
100	Kinetics of displacement of a liquid from a capillary: the effect of limited reservoirs. Chemical Engineering Science, 1989, 44, 1511-1517.	1.9	10
101	Filled Nanoporous Surfaces: Controlled Formation and Wettability. Langmuir, 2009, 25, 12374-12379.	1.6	10
102	The role of thin films in wetting. Revue De Physique AppliquÃ©e, 1988, 23, 1039-1045.	0.4	10
103	A model for the deposition and detachment of proteins and platelets on biomaterials. Journal of Colloid and Interface Science, 1982, 89, 458-465.	5.0	9
104	Equilibrium criteria for thin fluid films. Implications to wetting, emulsions, and soap films. Journal of Colloid and Interface Science, 1983, 93, 18-24.	5.0	9
105	The use of hemolysis kinetics to evaluate erythrocyte-bound surfactant. Colloids and Surfaces B: Biointerfaces, 2003, 27, 215-222.	2.5	9
106	Bubble the wave or waive the bubble: Why seawater waves foam and freshwater waves do not?. Colloids and Interface Science Communications, 2015, 6, 9-12.	2.0	9
107	Expansion of bubbles under a pulsatile flow regime in decompressed ovine blood vessels. Respiratory Physiology and Neurobiology, 2016, 222, 1-5.	0.7	8
108	A mechanism for complete spontaneous displacement of a liquid from a capillary. Journal of Colloid and Interface Science, 1989, 130, 288-289.	5.0	7

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109	Drop formation and detachment from rotating capillaries. Journal of Colloid and Interface Science, 1990, 140, 507-524.	5.0	7
110	Modeling surfactant-induced hemolysis by Weibull survival analysis. Colloids and Surfaces B: Biointerfaces, 2003, 27, 223-229.	2.5	7
111	Multi-scale roughness and the Lotus effect: Discontinuous liquid-air interfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 521, 78-85.	2.3	7
112	Meaningful Contact Angles in Flotation Systems: Critical Analysis and Recommendations. Surface Innovations, 2017, , 1-45.	1.4	7
113	The Contact Angle Hysteresis Puzzle. Colloids and Interfaces, 2022, 6, 39.	0.9	7
114	On approximate solutions to the P-B equation for an asymmetric electrolyte. Journal of Colloid and Interface Science, 1979, 71, 610-612.	5.0	6
115	Thermal energy storage in columns packed with crosslinked polyethylene tubes. Polymer Engineering and Science, 1984, 24, 1227-1231.	1.5	6
116	Kinetics of particle deposition from a stagnant suspension: Application to blood platelets. Journal of Colloid and Interface Science, 1985, 106, 360-366.	5.0	6
117	Laser cleaning of glass surfaces: The effect of thermal diffusion. Journal of Colloid and Interface Science, 1987, 119, 362-370.	5.0	6
118	Capillary rise in thin porous media. The Journal of Physical Chemistry, 1989, 93, 4873-4877.	2.9	6
119	Capillary penetration of liquids between periodically corrugated plates. Journal of Colloid and Interface Science, 1991, 146, 425-433.	5.0	6
120	Material Properties: Measurement and Data. , 2007, , 85-177.		6
121	Negative Pressure within a Liquidâ€"Fluid Interface Determines Its Thickness. Langmuir, 2020, 36, 7943-7947.	1.6	6
122	Calculation of Permeability of Periodical Porous Beds. Industrial & Engineering Chemistry Fundamentals, 1972, 11, 497-502.	0.7	5
123	Mathematical properties of equations of state. Chemical Engineering Science, 1985, 40, 1881-1884.	1.9	5
124	Capillary Condensation with a Grain of Salt. Langmuir, 2017, 33, 13444-13450.	1.6	5
125	Characterization of treated polyolefin surfaces by a liquid mixture spreading technique. Journal of Applied Polymer Science, 1980, 25, 1253-1256.	1.3	4
126	Surface tension of an ideal solid: What does it mean?. Current Opinion in Colloid and Interface Science, 2021, 51, 101388.	3.4	4

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127	Viscous effect on stagnation depth of bubbles in a vertically oscillating liquid column. Canadian Journal of Chemical Engineering, 1976, 54, 509-514.	0.9	3
128	The effect of gravity on thin fluid films. Journal of Colloid and Interface Science, 1984, 100, 407-413.	5.0	3
129	Sedimentation and adhesion of blood platelets under a centrifugal force. Journal of Colloid and Interface Science, 1985, 104, 390-397.	5.0	3
130	THERMODYNAMIC EQUILIBRIUM OF NONHOMOGENEOUS AND NONISOTROPIC CHEMICALLY REACTIVE SYSTEMS. Chemical Engineering Communications, 1985, 39, 381-388.	1.5	3
131	The Effect of Contamination on Adhesive Strength: Wettability Characterization by the CSC Method. Journal of Adhesion, 1987, 24, 139-153.	1.8	3
132	ASSESSMENT OF RED BLOOD CELL DEFORMABILITY BY CENTRIFUGAL SEDIMENTATION. Chemical Engineering Communications, 1996, 152-153, 5-15.	1.5	3
133	An Upper Bound on the Theoretical Activity Coefficient of Non-Electrolytes. ChemPhysChem, 2002, 3, 952-956.	1.0	3
134	The validity of the analytical approximations to the equation of bubble oscillations. Canadian Journal of Chemical Engineering, 1975, 53, 560-562.	0.9	2
135	Viscous effect on stagnation depth of bubbles in a vertically oscillating liquid column. Canadian Journal of Chemical Engineering, 1976, 54, 509-514.	0.9	2
136	EQUATIONS OF STATE AS CONSERVATION EQUATIONS. Chemical Engineering Communications, 1983, 22, 299-302.	1.5	2
137	HIGH-FREQUENCY SINGLE DROP FORMATION: PHENOMENOLOGY AND THE EFFECT OF SURFACTANTS. Chemical Engineering Communications, 1987, 55, 165-175.	1.5	2
138	Equilibrium of a liquid in a rotating groove. Chemical Engineering Science, 1992, 47, 4287-4294.	1.9	2
139	The sedimentation coefficient of red blood cell suspensions as a measure of deformability: continuous monitoring of centrifugal sedimentation. Chemical Engineering Science, 1997, 52, 1059-1064.	1.9	2
140	Internal Combustion Engine Response to Presence of Combustion Inhibitors in Ambient Air. SAE International Journal of Engines, 0, 6, 1138-1144.	0.4	2
141	Platelet adhesion determination in whole blood using a simple stagnation flow method. Annals of Biomedical Engineering, 1984, 12, 335-346.	1.3	1
142	On the definition of the stability ratio. Journal of Colloid and Interface Science, 1984, 97, 300.	5.0	1
143	Comparison of methods of prediction of vapor-liquid equilibria and enthalpy in a distillation simulation program. Computers and Chemical Engineering, 1986, 10, 169-180.	2.0	1
144	Equations of state: Demonstration of a mathematical development methodology. Chemical Engineering Research and Design, 2022, 178, 164-167.	2.7	1

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145	Minimal surface area as an equilibrium condition. Journal of Colloid and Interface Science, 1984, 97, 587-590.	5.0	0
146	Enhanced sedimentation of suspensions in porous media. Physics of Fluids, 1994, 6, 3180-3182.	1.6	0
147	Generic approach to homeland security technologies. , 2005, , .		0
148	Bubble clicking: Oscillations induced by the lung surfactant. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 304, 18-24.	2.3	0
149	Equilibrium Wetting Fundamentals. , 2009, , 43-54.		0