Raymond R Dagastine

List of Publications by Year
in descending order

98 papers	5,251 citations	71102 41 h-index	88630 70 g-index
100 all docs	100 docs citations	100 times ranked	4967 citing authors

#	Article	IF	Citations
1	Anisotropic Particle Fabrication Using Thermal Scanning Probe Lithography. ACS Applied Materials & Interfaces, 2022, 14, 19878-19888.	8.0	7
2	Viscoelastic characterization of the crosslinking of Î²-lactoglobulin on emulsion drops via microcapsule compression and interfacial dilational and shear rheology. Journal of Colloid and Interface Science, 2021, 583, 404-413.	9.4	16
3	OpenDrop: Open-source software for pendant drop tensiometry contact angle measurements. Journal of Open Source Software, 2021, 6, 2604.	4.6	32
4	Assembling Native Elementary Cellulose Nanofibrils via a Reversible and Regioselective Surface Functionalization. Journal of the American Chemical Society, 2021, 143, 17040-17046.	13.7	41
5	Effect of Orientation and Wetting Properties on the Behavior of Janus Particles at the Airâ€“Water Interface. ACS Applied Materials & Interfaces, 2020, 12, 5128-5135.	8.0	6
6	Interfacial Properties of Chitosan in Interfacial Shear and Capsule Compression. ACS Applied Materials & Interfaces, 2020, 12, 48084-48092.	8.0	6
7	Poroelastic properties of hydrogel microparticles. Soft Matter, 2020, 16, 5314-5324.	2.7	14
8	Mass transfer between microbubbles. Journal of Colloid and Interface Science, 2020, 571, 253-259.	9.4	7
9	Use of microaspiration to study the mechanical properties of polymer gel microparticles. Soft Matter, 2019, 15, 7286-7294.	2.7	8
10	Solvent Impregnated Polymers for Carbon Capture. Industrial & Engineering Chemistry Research, 2019, 58, 6626-6634.	3.7	11
11	Forces between oil drops in polymer-surfactant systems: Linking direct force measurements to microfluidic observations. Journal of Colloid and Interface Science, 2019, 544, 130-143.	9.4	22
12	Determining how polymer-bubble interactions impact algal separation using the novel â€œPosiâ€•dissolved air flotation process. Separation and Purification Technology, 2018, 201, 139-147.	7.9	20
13	Dynamic forces between emulsified water drops coated with Poly-Glycerol-Poly-Ricinoleate (PGPR) in canola oil. Journal of Colloid and Interface Science, 2018, 517, 166-175.	9.4	19
14	Ultrasonically synthesized organic liquid-filled chitosan microcapsules: part 2: characterization using AFM (atomic force microscopy) and combined AFMâ€“confocal laser scanning fluorescence microscopy. Soft Matter, 2018, 14, 3192-3201.	2.7	12
15	Ultrasonically synthesized organic liquid-filled chitosan microcapsules: part 1: tuning physical & functional properties. Soft Matter, 2018, 14, 3202-3208.	2.7	4
16	Ion Tuned Water Can Greatly Enhance Alteration of Carbonate Surface to Water-wet. , 2018, , .		2
17	Structure and Nanomechanics of Dry and Hydrated Intermediate Filament Films and Fibers Produced from Hagfish Slime Fibers. ACS Applied Materials & Interfaces, 2018, 10, 40460-40473.	8.0	9
18	Precise measurements of capsule mechanical properties using indentation. Soft Matter, 2017, 13, 1943-1947.	2.7	35

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19	Charge and Film Drainage of Colliding Oil Drops Coated with the Nonionic Surfactant C₁₂E₅. Langmuir, 2017, 33, 4913-4923.	3.5	22
20	Insights into Free Volume Variations across Ion-Exchange Membranes upon Mixed Solvents Uptake by Small and Ultrasmall Angle Neutron Scattering. ACS Applied Materials & Interfaces, 2017, 9, 8704-8713.	8.0	7
21	Charge tunable thin-film composite membranes by gamma-ray triggered surface polymerization. Scientific Reports, 2017, 7, 4426.	3.3	9
22	Micromechanical characterization of shales through nanoindentation and energy dispersive x-ray spectrometry. Geomechanics for Energy and the Environment, 2017, 9, 21-35.	2.5	74
23	Mapping coalescence of micron-sized drops and bubbles. Journal of Colloid and Interface Science, 2017, 487, 513-522.	9.4	24
24	Modular assembly of superstructures from polyphenol-functionalized building blocks. Nature Nanotechnology, 2016, 11, 1105-1111.	31.5	337
25	Ultrasonic synthesis of stable oil filled microcapsules using thiolated chitosan and their characterization by AFM and numerical simulations. Soft Matter, 2016, 12, 7212-7222.	2.7	13
26	Nitrogen deprivation of microalgae: effect on cell size, cell wall thickness, cell strength, and resistance to mechanical disruption. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 1671-1680.	3.0	93
27	Modification of pea protein isolate for ultrasonic encapsulation of functional liquids. RSC Advances, 2016, 6, 106130-106140.	3.6	22
28	Towards Enhanced Performance Thin-film Composite Membranes via Surface Plasma Modification. Scientific Reports, 2016, 6, 29206.	3.3	50
29	Temperature dependent mechanical properties of air, oil and water filled microcapsules studied by atomic force microscopy. Polymer, 2016, 102, 333-341.	3.8	18
30	Measurement of surface and interfacial tension using pendant drop tensiometry. Journal of Colloid and Interface Science, 2015, 454, 226-237.	9.4	704
31	Sphere to rod transitions in self assembled systems probed using direct force measurement. Soft Matter, 2015, 11, 1303-1314.	2.7	5
32	Direct AFM force measurements between air bubbles in aqueous polydisperse sodium poly(styrene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Journal of Colloid and Interface Science, 2015, 449, 236-245.	9.4	21
33	Direct AFM force measurements between air bubbles in aqueous monodisperse sodium poly(styrene) Tj ETQq1 1 0.784314 rgBT /Ove	9.4	17
34	The hydrophobic force: measurements and methods. Physical Chemistry Chemical Physics, 2014, 16, 18065-18075.	2.8	79
35	Evaporation of a capillary bridge between a particle and a surface. Soft Matter, 2014, 10, 8489-8499.	2.7	15
36	Phase Behavior, Small-Angle Neutron Scattering and Rheology of Ternary Nonionic Surfactantâ€“Oilâ€“Water Systems: A Comparison of Oils. Langmuir, 2013, 29, 3575-3582.	3.5	18

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37	Non-linear and cyclical collisions between drops and bubbles: using AFM to understand droplet interactions in micro-scale flows. Soft Matter, 2013, 9, 2426.	2.7	10
38	The effect of calcium chloride addition on the microstructure and composition of Cheddar cheese. International Dairy Journal, 2013, 33, 135-141.	3.0	38
39	Study of Fluid and Transport Properties of Porous Anodic Aluminum Membranes by Dynamic Atomic Force Microscopy. Langmuir, 2013, 29, 8969-8977.	3.5	6
40	Measurement of the Hydrophobic Force in a Soft Matter System. Journal of Physical Chemistry Letters, 2013, 4, 3872-3877.	4.6	92
41	Microstructure and Composition of Full Fat Cheddar Cheese Made with Ultrafiltered Milk Retentate. Foods, 2013, 2, 310-331.	4.3	42
42	Changes in morphological and nano-mechanical properties of the milk fat globule membrane during processing. RSC Advances, 2012, 2, 2384.	3.6	19
43	Nano-mechanical properties of clay-armoured emulsion droplets. Soft Matter, 2012, 8, 3112.	2.7	30
44	Compound sessile drops. Soft Matter, 2012, 8, 11042.	2.7	83
45	Polymeric Stabilized Emulsions: Steric Effects and Deformation in Soft Systems. Langmuir, 2012, 28, 4599-4604.	3.5	41
46	Interaction Forces between Bubbles in the Presence of Novel Responsive Peptide Surfactants. Langmuir, 2012, 28, 17230-17237.	3.5	21
47	Anomalous Pull-Off Forces between Surfactant-Free Emulsion Drops in Different Aqueous Electrolytes. Langmuir, 2012, 28, 4259-4266.	3.5	15
48	The effect of pH at renneting on the microstructure, composition and texture of Cheddar cheese. Food Research International, 2012, 48, 119-130.	6.2	82
49	Measurement and analysis of forces in bubble and droplet systems using AFM. Journal of Colloid and Interface Science, 2012, 371, 1-14.	9.4	138
50	Structural forces in soft matter systems: unique flocculation pathways between deformable droplets. Soft Matter, 2011, 7, 11334.	2.7	35
51	Effect of Gold Oxide in Measurements of Colloidal Force. Langmuir, 2011, 27, 6026-6030.	3.5	39
52	Bubble Coalescence during Acoustic Cavitation in Aqueous Electrolyte Solutions. Langmuir, 2011, 27, 12025-12032.	3.5	66
53	Hindered Diffusion of an Oil Drop Under Confinement and Surface Forces. Journal of Physical Chemistry Letters, 2011, 2, 2472-2477.	4.6	9
54	Structural Forces in Soft Matter Systems. Journal of Physical Chemistry Letters, 2011, 2, 434-437.	4.6	43

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55	Novel Characterization of Microdrops and Microbubbles in Emulsions and Foams Using Atomic Force Microscopy. Langmuir, 2011, 27, 2536-2544.	3.5	20
56	Precision AFM Measurements of Dynamic Interactions between Deformable Drops in Aqueous Surfactant and Surfactant-Free Solutions. Langmuir, 2011, 27, 2676-2685.	3.5	53
57	Combined AFMâ˜Confocal Microscopy of Oil Droplets: Absolute Separations and Forces in Nanofilms. Journal of Physical Chemistry Letters, 2011, 2, 961-965.	4.6	40
58	Homo- and hetero-interactions between air bubbles and oil droplets measured by atomic force microscopy. Soft Matter, 2011, 7, 8977.	2.7	46
59	Microstructure of milk gel and cheese curd observed using cryo scanning electron microscopy and confocal microscopy. LWT - Food Science and Technology, 2011, 44, 1291-1302.	5.2	109
60	Coagulation temperature affects the microstructure and composition of full fat Cheddar cheese. Dairy Science and Technology, 2011, 91, 739-758.	2.2	36
61	Anomalous Stability of Carbon Dioxide in pHâ€Controlled Bubble Coalescence. Angewandte Chemie - International Edition, 2011, 50, 3454-3456.	13.8	58
62	Repulsive van der Waals Forces in Soft Matter: Why Bubbles Do Not Stick to Walls. Physical Review Letters, 2011, 106, 064501.	7.8	101
63	The Effect of Milk Processing on the Microstructure of the Milk Fat Globule and Rennet Induced Gel Observed Using Confocal Laser Scanning Microscopy. Journal of Food Science, 2010, 75, E135-45.	3.1	72
64	Dynamic interactions between microbubbles in water. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11177-11182.	7.1	179
65	Lateral Hydrodynamic Interactions between an Emulsion Droplet and a Flat Surface Evaluated by Frictional Force Microscopy. Langmuir, 2010, 26, 8002-8007.	3.5	9
66	Viscosity Effects on Hydrodynamic Drainage Force Measurements Involving Deformable Bodies. Langmuir, 2010, 26, 11921-11927.	3.5	33
67	Silica nano-particle super-hydrophobic surfaces: the effects of surface morphology and trapped air pockets on hydrodynamic drainage forces. Faraday Discussions, 2009, 143, 151.	3.2	13
68	Divalent cations stabilize the aggregation of sulfated glycoproteins in the adhesive nanofibers of the biofouling diatom Toxarium undulatum. Soft Matter, 2008, 4, 811.	2.7	34
69	Hydrodynamic Boundary Conditions and Dynamic Forces between Bubbles and Surfaces. Physical Review Letters, 2008, 101, 024501.	7.8	98
70	Dynamic Forces between Bubbles and Surfaces and Hydrodynamic Boundary Conditions. Langmuir, 2008, 24, 11533-11543.	3.5	94
71	Measurements of dynamic forces between drops with the AFM: novel considerations in comparisons between experiment and theory. Soft Matter, 2008, 4, 1270.	2.7	46
72	Dynamic Forces between a Moving Particle and a Deformable Drop. Journal of Physical Chemistry C, 2008, 112, 567-574.	3.1	37

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73	Bubble Colloidal AFM Probes Formed from Ultrasonically Generated Bubbles. Langmuir, 2008, 24, 603-605.	3.5	61
74	Hydrodynamic forces involving deformable interfaces at nanometer separations. Physics of Fluids, 2008, 20, 032101.	4.0	71
75	Variations in properties of atomic force microscope cantilevers fashioned from the same wafer. Nanotechnology, 2008, 19, 105709.	2.6	13
76	Atomic force microscopy: Loading position dependence of cantilever spring constants and detector sensitivity. Review of Scientific Instruments, 2007, 78, 116102.	1.3	17
77	Anomalous pH Dependent Stability Behavior of Surfactant-Free Nonpolar Oil Drops in Aqueous Electrolyte Solutions. Langmuir, 2007, 23, 9335-9340.	3.5	44
78	Diatom Adhesive Mucilage Contains Distinct Supramolecular Assemblies of a Single Modular Protein. Biophysical Journal, 2006, 90, 2987-2993.	0.5	49
79	Dynamic Forces Between Two Deformable Oil Droplets in Water. Science, 2006, 313, 210-213.	12.6	234
80	van der Waals interactions between the air-bearing surface and a lubricated glass disk: A comparative study. Applied Physics Letters, 2006, 88, 022509.	3.3	4
81	Effect of media overcoat on van der Waals interaction at the headâ€“disk interface. Journal of Applied Physics, 2005, 97, 126106.	2.5	8
82	Single Adhesive Nanofibers from a Live Diatom Have the Signature Fingerprint of Modular Proteins. Biophysical Journal, 2005, 89, 4252-4260.	0.5	72
83	Effect of van der Waals forces on molecularly thin lubricant in the magnetic storage head-disk interface. Journal of Applied Physics, 2005, 98, 124906.	2.5	11
84	van der Waals force calculation between laminated media, pertinent to the magnetic storage head-disk interface. Journal of Applied Physics, 2005, 97, 104503.	2.5	15
85	Interaction forces between oilâ€“water particle interfacesâ€”Non-DLVO forces. Faraday Discussions, 2005, 129, 111-124.	3.2	43
86	Direct Comparison of Atomic Force Microscopic and Total Internal Reflection Microscopic Measurements in the Presence of Nonadsorbing Polyelectrolytes. Langmuir, 2005, 21, 5421-5428.	3.5	62
87	Measurement of Dynamical Forces between Deformable Drops Using the Atomic Force Microscope. I. Theory. Langmuir, 2005, 21, 2912-2922.	3.5	97
88	Direct Force Measurement at Liquid/Liquid Interfaces. , 2005, , 77-95.		0
89	CALCULATION OF VAN DER WAALS FORCES WITH DIFFUSE COATINGS: APPLICATIONS TO ROUGHNESS AND ADSORBED POLYMERS. Journal of Adhesion, 2004, 80, 365-394.	3.0	36
90	Forces between a rigid probe particle and a liquid interface. Journal of Colloid and Interface Science, 2004, 269, 84-96.	9.4	49

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91	Forces between two oil drops in aqueous solution measured by AFM. Journal of Colloid and Interface Science, 2004, 273, 339-342.	9.4	112
92	Dynamics of the Interaction Forces at the Silver/Solution Interface during Amine Adsorption. Langmuir, 2004, 20, 6742-6747.	3.5	20
93	Oscillatory Packing and Depletion of Polyelectrolyte Molecules at an Oxideâ^'Water Interface. Journal of Physical Chemistry B, 2002, 106, 11557-11564.	2.6	53
94	Direct measurements of the adhesion between a glass particle and a glass surface in a humid atmosphere. Journal of Adhesion Science and Technology, 2002, 16, 869-885.	2.6	48
95	Forces between a Rigid Probe Particle and a Liquid Interface. Journal of Colloid and Interface Science, 2002, 247, 310-320.	9.4	142
96	Calculations of van der Waals Forces in 2-Dimensionally Anisotropic Materials and Its Application to Carbon Black. Journal of Colloid and Interface Science, 2002, 249, 78-83.	9.4	49
97	Forces between a Rigid Probe Particle and a Liquid Interface. Journal of Colloid and Interface Science, 2001, 236, 141-154.	9.4	139
98	The Dielectric Function for Water and Its Application to van der Waals Forces. Journal of Colloid and Interface Science, 2000, 231, 351-358.	9.4	96