Manoj K Chaudhury

List of Publications by Year
in descending order

86	10,299	57758 44	51608 86
papers	citations	h-index	g-index

87	87	87	8812
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Interfacial Lifshitz-van der Waals and polar interactions in macroscopic systems. Chemical Reviews, 1988, 88, 927-941.	47.7	2,161
2	Fast Drop Movements Resulting from the Phase Change on a Gradient Surface. Science, 2001, 291, 633-636.	12.6	863
3	Direct measurement of interfacial interactions between semispherical lenses and flat sheets of poly(dimethylsiloxane) and their chemical derivatives. Langmuir, 1991, 7, 1013-1025.	3.5	607
4	Long range interactions in nanoscale science. Reviews of Modern Physics, 2010, 82, 1887-1944.	45.6	359
5	Rectified Motion of Liquid Drops on Gradient Surfaces Induced by Vibration. Langmuir, 2002, 18, 3404-3407.	3.5	271
6	Directional transport of high-temperature Janus droplets mediated by structural topography. Nature Physics, 2016, 12, 606-612.	16.7	263
7	Vibration-Actuated Drop Motion on Surfaces for Batch Microfluidic Processes. Langmuir, 2005, 21, 4240-4248.	3.5	249
8	Topological liquid diode. Science Advances, 2017, 3, eaao3530.	10.3	249
9	Biologically inspired crack trapping for enhanced adhesion. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10786-10791.	7.1	234
10	Interfacial interaction between low-energy surfaces. Materials Science and Engineering Reports, 1996, 16, 97-159.	31.8	201
11	Ratcheting Motion of Liquid Drops on Gradient Surfacesâ€. Langmuir, 2004, 20, 4085-4092.	3.5	199
12	Contact Angle Hysteresis, Adhesion, and Marine Biofouling. Langmuir, 2004, 20, 2830-2836.	3.5	196
13	Adhesive contact of cylindrical lens and a flat sheet. Journal of Applied Physics, 1996, 80, 30-37.	2.5	195
14	The influence of elastic modulus and thickness on the release of the soft-fouling green algaUlva linza(syn.Enteromorpha linza) from poly(dimethylsiloxane) (PDMS) model networks. Biofouling, 2005, 21, 41-48.	2.2	192
15	Hydrophobic Recovery of Polydimethylsiloxane Elastomer Exposed to Partial Electrical Discharge. Journal of Colloid and Interface Science, 2000, 226, 231-236.	9.4	190
16	Meniscus Instability in a Thin Elastic Film. Physical Review Letters, 2000, 85, 4329-4332.	7.8	185
17	Roles of discontinuities in bio-inspired adhesive pads. Journal of the Royal Society Interface, 2005, 2, 55-61.	3.4	179
18	Peeling from a biomimetically patterned thin elastic film. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 2725-2735.	2.1	178

#	Article	IF	Citations
19	Interfacial Rate Processes in Adhesion and Friction. Journal of Physical Chemistry B, 2000, 104, 4018-4030.	2.6	162
20	Monolayers on disordered substrates: self-assembly of alkyltrichlorosilanes on surface-modified polyethylene and poly(dimethylsiloxane). Macromolecules, 1993, 26, 5870-5875.	4.8	154
21	The Mechanisms of Hydrophobic Recovery of Polydimethylsiloxane Elastomers Exposed to Partial Electrical Discharges. Journal of Colloid and Interface Science, 2001, 244, 200-207.	9.4	145
22	Adhesion-Induced Instability Patterns in Thin Confined Elastic Film. Langmuir, 2003, 19, 2621-2631.	3.5	143
23	Synthesis and Surface Properties of Environmentally Responsive Segmented Polyurethanes. Journal of Colloid and Interface Science, 2002, 249, 235-245.	9.4	135
24	Study of the Self-Adhesion Hysteresis of a Siloxane Elastomer Using the JKR Method. Langmuir, 1994, 10, 2466-2470.	3.5	133
25	The Effects of Molecular Weight and Temperature on the Kinetic Friction of Silicone Rubbers. Langmuir, 2003, 19, 6778-6787.	3.5	129
26	Effect of Interfacial Slippage on Viscoelastic Adhesion. Langmuir, 1997, 13, 1805-1809.	3.5	118
27	The Orientation of Semifluorinated Alkanes Attached to Polymers at the Surface of Polymer Films. Macromolecules, 2000, 33, 1882-1887.	4.8	115
28	Rate-Dependent Fracture at Adhesive Interface. Journal of Physical Chemistry B, 1999, 103, 6562-6566.	2.6	103
29	Surface Modification of Silicone Elastomer Using Perfluorinated Ether. Langmuir, 2000, 16, 1256-1260.	3.5	98
30	Motion of Drops on a Surface Induced by Thermal Gradient and Vibration. Langmuir, 2008, 24, 10833-10837.	3.5	96
31	Soft and Hard Adhesion. Journal of Adhesion, 2005, 81, 1119-1145.	3.0	94
32	Adhesion hysteresis and friction. Langmuir, 1993, 9, 29-31.	3.5	87
33	Surface properties and hemocompatibility of alkyl-siloxane monolayers supported on silicone rubber: effect of alkyl chain length and ionic functionality. Biomaterials, 1999, 20, 1533-1543.	11.4	84
34	Spread the word about nanofluids. Nature, 2003, 423, 131-132.	27.8	82
35	Estimation of Adhesion Hysteresis at Polymer/Oxide Interfaces Using Rolling Contact Mechanics. Langmuir, 1998, 14, 3090-3100.	3.5	81
36	Direct Measurement of the Surface Tension of a Soft Elastic Hydrogel: Exploration of Elastocapillary Instability in Adhesion. Langmuir, 2013, 29, 6926-6935.	3.5	80

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37	Wetting and phase separation in soft adhesion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14490-14494.	7.1	73
38	Measuring the Work of Adhesion between a Soft Confined Film and a Flexible Plate. Langmuir, 2005, 21, 1277-1281.	3.5	71
39	Motion of Liquid Drops on Surfaces Induced by Asymmetric Vibration: Role of Contact Angle Hysteresis. Langmuir, 2011, 27, 10327-10333.	3.5	71
40	Friction in Adhesion. Langmuir, 1998, 14, 4865-4872.	3.5	69
41	Surface free energies of alkylsiloxane monolayers supported on elastomeric polydimethylsiloxanes. Journal of Adhesion Science and Technology, 1993, 7, 669-675.	2.6	68
42	Investigation of Capillary Forces Using Atomic Force Microscopy. Langmuir, 2001, 17, 7823-7829.	3.5	62
43	Generation of Motion of Drops with Interfacial Contact. Langmuir, 2015, 31, 9266-9281.	3.5	57
44	Modeling hydrophobic recovery of electrically discharged polydimethylsiloxane elastomers. Journal of Colloid and Interface Science, 2006, 293, 364-375.	9.4	50
45	Effect of Surface Morphology on Crack Growth at a Sol-Gel Reinforced Epoxy/Aluminum Interface. Journal of Adhesion, 2006, 82, 487-516.	3.0	45
46	Self-assembled monolayers on polymer surfaces. Biosensors and Bioelectronics, 1995, 10, 785-788.	10.1	44
47	Stochastic Relaxation of the Contact Line of a Water Drop on a Solid Substrate Subjected to White Noise Vibration: Roles of Hysteresis. Langmuir, 2010, 26, 8131-8140.	3.5	44
48	Order/disorder gradients of n-alkanethiols on gold. Colloids and Surfaces B: Biointerfaces, 1999, 15, 57-70.	5.0	40
49	Adhesion-induced instabilities and pattern formation in thin films of elastomers and gels. European Physical Journal E, 2015, 38, 82.	1.6	38
50	Fracture behavior of an epoxy/aluminum interface reinforced by solâ€“gel coatings. Journal of Adhesion Science and Technology, 2006, 20, 277-305.	2.6	36
51	Surface and blood-contacting properties of alkylsiloxane monolayers supported on silicone rubber. Journal of Biomedical Materials Research Part B, 1995, 29, 535-548.	3.1	35
52	Failure of Elastomeric Polymers Due to Rate Dependent Bond Rupture. Langmuir, 2004, 20, 6052-6064.	3.5	31
53	Diffusive motion with nonlinear friction: apparently Brownian. Journal of Chemical Physics, 2010, 133, 024702.	3.0	31
54	Adhesion and friction of self-assembled organic monolayers. Current Opinion in Colloid and Interface Science, 1997, 2, 65-69.	7.4	30

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55	Thermal Fluctuations Limit the Adhesive Strength of Compliant Solids. Journal of Adhesion, 2006, 82, 671-696.	3.0	28
56	New Drop Fluidics Enabled by Magnetic-Field-Mediated Elastocapillary Transduction. Langmuir, 2016, 32, 6860-6870.	3.5	27
57	Estimation of Adhesion Hysteresis Using Rolling Contact Mechanics. Langmuir, 2000, 16, 622-625.	3.5	26
58	Critical Confinement and Elastic Instability in Thin Solid Films. Journal of Adhesion, 2007, 83, 679-704.	3.0	24
59	Coalescence of drops near a hydrophilic boundary leads to long range directed motion. Extreme Mechanics Letters, 2014, 1, 104-113.	4.1	22
60	Activated drops: Self-excited oscillation, critical speeding and noisy transport. European Physical Journal E, 2013, 36, 15.	1.6	21
61	Drop Motion Induced by Repeated Stretching and Relaxation on a Gradient Surface with Hysteresis. Langmuir, 2012, 28, 13912-13918.	3.5	20
62	Elastocapillary Interaction of Particles on the Surfaces of Ultrasoft Gels: A Novel Route To Study Self-Assembly and Soft Lubrication. Langmuir, 2014, 30, 4684-4693.	3.5	18
63	Settlement behavior of swimming algal spores on gradient surfaces. Biointerphases, 2006, 1, 18-21.	1.6	17
64	Surface Folding-Induced Attraction and Motion of Particles in a Soft Elastic Gel: Cooperative Effects of Surface Tension, Elasticity, and Gravity. Langmuir, 2013, 29, 15543-15550.	3.5	17
65	Super spreading of oil by condensed water drops. Soft Matter, 2005, 1, 431.	2.7	16
66	Brownian Motion of a Drop with Hysteresis Dissipation. Langmuir, 2008, 24, 6128-6132.	3.5	16
67	Using Electrocapillarity to Measure the Zeta Potential of a Planar Hydrophobic Surface in Contact with Water and Nonionic Surfactant Solutions. Langmuir, 2008, 24, 14276-14281.	3.5	15
68	Elastowetting of Soft Hydrogel Spheres. Langmuir, 2018, 34, 3894-3900.	3.5	14
69	A quantitative theory of negative adsorption of nonelectrolytes caused by repulsive van der Waals forces. Langmuir, 1985, 1, 673-678.	3.5	11
70	Elastic Cheerios effect: Self-assembly of cylinders on a soft solid. Europhysics Letters, 2015, 112, 54001.	2.0	11
71	Soft Lithography Using Nectar Droplets. Langmuir, 2015, 31, 13155-13164.	3.5	11
72	Determination of the Modulus of Thin Solâ^'Gel films Using Buckling Instability. Macromolecules, 2010, 43, 6800-6810.	4.8	10

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73	The hamaker constant and the dispersion force component of the surface tension of liquid mercury. Journal of Colloid and Interface Science, 1987, 119, 174-180.	9.4	9
74	Studying Friction and Shear Fracture in Thin Confined Films Using a Rotational Shear Apparatus. Langmuir, 2007, 23, 8061-8066.	3.5	8
75	Attraction of Mesoscale Objects on the Surface of a Thin Elastic Film Supported on a Liquid. Langmuir, 2015, 31, 1911-1920.	3.5	8
76	Electrokinetics of Polar Liquids in Contact with Nonpolar Surfaces. Langmuir, 2013, 29, 7793-7801.	3.5	7
77	Further Reflections on the Geometric Mean Combining Rule for Interfacial Tension. Langmuir, 2015, 31, 11296-11304.	3.5	7
78	Effect of Processing Conditions on Adhesion Performance of a Solâ€“Gel Reinforced Epoxy/Aluminum Interface. Journal of Adhesion Science and Technology, 2008, 22, 1159-1180.	2.6	6
79	Vibrations of sessile drops of soft hydrogels. Extreme Mechanics Letters, 2014, 1, 47-53.	4.1	5
80	Extraction of Organic-Free Water from Detergent Stabilized Emulsion. Industrial & Engineering Chemistry Research, 2019, 58, 21089-21104.	3.7	5
81	How a blister heals. Europhysics Letters, 2013, 104, 46002.	2.0	4
82	Thermodynamic and Kinetic Pathways to Agitated and Spontaneous Emulsification. Langmuir, 2020, 36, 10218-10237.	3.5	4
83	Elastobuoyant Heavy Spheres: A Unique Way to Study Nonlinear Elasticity. Physical Review X, 2016, 6, .	8.9	3
84	Synthesis of surface-active quaternary amino polyfluorosiloxanes. Journal of Applied Polymer Science, 2000, 77, 1700-1708.	2.6	2
85	FRICTION AT SOFT POLYMER SURFACE. Series in Sof Condensed Matter, 2008, , 195-219.	0.1	1
86	Extraction of Oil from an Aqueous Emulsion by Coupling Thermal Swing with a Capillary Pump. Langmuir, 2016, 32, 10213-10225.	3.5	1