Kripa K Varanasi

List of Publications by Year
in descending order

91 papers	9,986 citations	61945 43 h-index	53190 85 g-index
95 all docs	95 docs citations	95 times ranked	7890 citing authors

#	Article	IF	Citations
1	Reducing the contact time of a bouncing drop. Nature, 2013, 503, 385-388.	13.7	824
2	Droplet mobility on lubricant-impregnated surfaces. Soft Matter, 2013, 9, 1772-1780.	1.2	810
3	Relationships between Water Wettability and Ice Adhesion. ACS Applied Materials & Interfaces, 2010, 2, 3100-3110.	4.0	655
4	Frost formation and ice adhesion on superhydrophobic surfaces. Applied Physics Letters, 2010, 97, .	1.5	616
5	Hydrophobicity of rare-earth oxide ceramics. Nature Materials, 2013, 12, 315-320.	13.3	576
6	Enhanced Condensation on Lubricant-Impregnated Nanotextured Surfaces. ACS Nano, 2012, 6, 10122-10129.	7.3	531
7	Spatial control in the heterogeneous nucleation of water. Applied Physics Letters, 2009, 95, .	1.5	415
8	Nonwetting of impinging droplets on textured surfaces. Applied Physics Letters, 2009, 94, .	1.5	356
9	Mechanism of Frost Formation on Lubricant-Impregnated Surfaces. Langmuir, 2013, 29, 5230-5238.	1.6	322
10	Critical heat flux maxima during boiling crisis on textured surfaces. Nature Communications, 2015, 6, 8247.	5.8	305
11	Ice Adhesion on Lubricant-Impregnated Textured Surfaces. Langmuir, 2013, 29, 13414-13418.	1.6	298
12	Drag Reduction using Lubricant-Impregnated Surfaces in Viscous Laminar Flow. Langmuir, 2014, 30, 10970-10976.	1.6	242
13	Stable Dropwise Condensation for Enhancing Heat Transfer via the Initiated Chemical Vapor Deposition (iCVD) of Grafted Polymer Films. Advanced Materials, 2014, 26, 418-423.	11.1	223
14	Multimode Multidrop Serial Coalescence Effects during Condensation on Hierarchical Superhydrophobic Surfaces. Langmuir, 2013, 29, 881-891.	1.6	204
15	Self-similarity of contact line depinning from textured surfaces. Nature Communications, 2013, 4, 1492.	5.8	181
16	Low Ice Adhesion on Nano-Textured Superhydrophobic Surfaces under Supersaturated Conditions. ACS Applied Materials & Interfaces, 2016, 8, 12583-12587.	4.0	179
17	Dropwise Condensation of Low Surface Tension Fluids on Omniphobic Surfaces. Scientific Reports, 2014, 4, 4158.	1.6	173
18	Enhancing droplet deposition through in-situ precipitation. Nature Communications, 2016, 7, 12560.	5.8	153

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19	Rapid Deceleration-Driven Wetting Transition during Pendant Drop Deposition on Superhydrophobic Surfaces. Physical Review Letters, 2011, 106, 036102.	2.9	150
20	Increasing Leidenfrost point using micro-nano hierarchical surface structures. Applied Physics Letters, 2013, 103, .	1.5	147
21	How droplets nucleate and grow on liquids and liquid impregnated surfaces. Soft Matter, 2015, 11, 69-80.	1.2	127
22	The Dynamics of Lead-Screw Drives: Low-Order Modeling and Experiments. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 388-396.	0.9	115
23	Electrostatically driven fog collection using space charge injection. Science Advances, 2018, 4, eaao5323.	4.7	111
24	Role of surface oxygen-to-metal ratio on the wettability of rare-earth oxides. Applied Physics Letters, 2015, 106, .	1.5	109
25	Photothermal trap utilizing solar illumination for ice mitigation. Science Advances, 2018, 4, eaat0127.	4.7	107
26	Active surfaces: Ferrofluid-impregnated surfaces for active manipulation of droplets. Applied Physics Letters, 2014, 105, .	1.5	103
27	Lowâ€Dimensional Conduction Mechanisms in Highly Conductive and Transparent Conjugated Polymers. Advanced Materials, 2015, 27, 4604-4610.	11.1	103
28	Thermocapillary motion on lubricant-impregnated surfaces. Physical Review Fluids, 2016, 1, .	1.0	101
29	Influence of dust and mud on the optical, chemical and mechanical properties of a pv protective glass. Scientific Reports, 2015, 5, 15833.	1.6	94
30	Visible light guided manipulation of liquid wettability on photoresponsive surfaces. Nature Communications, 2017, 8, 14968.	5.8	89
31	Reactivity of Perovskites with Water: Role of Hydroxylation in Wetting and Implications for Oxygen Electrocatalysis. Journal of Physical Chemistry C, 2015, 119, 18504-18512.	1.5	88
32	Designing Lubricantâ€Impregnated Textured Surfaces to Resist Scale Formation. Advanced Materials Interfaces, 2014, 1, 1300068.	1.9	85
33	Separating Oil-Water Nanoemulsions using Flux-Enhanced Hierarchical Membranes. Scientific Reports, 2014, 4, 5504.	1.6	84
34	Shortâ€Fluorinated iCVD Coatings for Nonwetting Fabrics. Advanced Functional Materials, 2018, 28, 1707355.	7.8	77
35	Scale-resistant surfaces: Fundamental studies of the effect of surface energy on reducing scale formation. Applied Surface Science, 2014, 313, 591-599.	3.1	64
36	Self-peeling of impacting droplets. Nature Physics, 2018, 14, 35-39.	6.5	58

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37	Sustaining dry surfaces under water. Scientific Reports, 2015, 5, 12311.	1.6	56
38	Droplet fragmentation using a mesh. Physical Review Fluids, 2018, 3, .	1.0	55
39	Hierarchical polymeric textures via solvent-induced phase transformation: A single-step production of large-area superhydrophobic surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 394, 8-13.	2.3	54
40	Characterization of Environmental Dust in the Dammam Area and Mud After-Effects on Bisphenol-A Polycarbonate Sheets. Scientific Reports, 2016, 6, 24308.	1.6	49
41	Creating nanoscale emulsions using condensation. Nature Communications, 2017, 8, 1371.	5.8	49
42	Plastron Regeneration on Submerged Superhydrophobic Surfaces Using In Situ Gas Generation by Chemical Reaction. ACS Applied Materials & Interfaces, 2018, 10, 33684-33692.	4.0	47
43	Design of a spaceflight biofilm experiment. Acta Astronautica, 2018, 148, 294-300.	1.7	46
44	Grafted Nanofilms Promote Dropwise Condensation of Low-Surface-Tension Fluids for High-Performance Heat Exchangers. Joule, 2019, 3, 1377-1388.	11.7	44
45	Evaporative Crystallization in Drops on Superhydrophobic and Liquid-Impregnated Surfaces. Langmuir, 2018, 34, 12350-12358.	1.6	43
46	Synthetic Butterfly Scale Surfaces with Complianceâ€Tailored Anisotropic Drop Adhesion. Advanced Materials, 2019, 31, e1807686.	11.1	42
47	Decreasing the Hydroxylation Affinity of La_{1â€“x}Sr_xMnO₃ Perovskites To Promote Oxygen Reduction Electrocatalysis. Chemistry of Materials, 2017, 29, 9990-9997.	3.2	37
48	Superhydrophobic surfaces by laser ablation of rare-earth oxide ceramics. MRS Communications, 2014, 4, 95-99.	0.8	32
49	Expansion and retraction dynamics in drop-on-drop impacts on nonwetting surfaces. Physical Review Fluids, 2018, 3, .	1.0	32
50	Separating nanoscale emulsions: Progress and challenges to date. Current Opinion in Colloid and Interface Science, 2018, 36, 110-117.	3.4	31
51	Crystal critters: Self-ejection of crystals from heated, superhydrophobic surfaces. Science Advances, 2021, 7, .	4.7	31
52	Electrostatic dust removal using adsorbed moistureâ€“assisted charge induction for sustainable operation of solar panels. Science Advances, 2022, 8, eabm0078.	4.7	31
53	Size-dependent thermal oxidation of copper: single-step synthesis of hierarchical nanostructures. Nanoscale, 2011, 3, 4972.	2.8	30
54	Designing Ultra-Low Hydrate Adhesion Surfaces by Interfacial Spreading of Water-Immiscible Barrier Films. ACS Applied Materials & Interfaces, 2017, 9, 21496-21502.	4.0	30

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55	Crystallization-Induced Fouling during Boiling: Formation Mechanisms to Mitigation Approaches. Langmuir, 2018, 34, 782-788.	1.6	27
56	Waterbowls: Reducing Impacting Droplet Interactions by Momentum Redirection. ACS Nano, 2019, 13, 7729-7735.	7.3	25
57	CHAPTER 10. Lubricant-Impregnated Surfaces. RSC Soft Matter, 2016, , 285-318.	0.2	23
58	Microstructured Ceramic-Coated Carbon Nanotube Surfaces for High Heat Flux Pool Boiling. ACS Applied Nano Materials, 2019, 2, 5538-5545.	2.4	21
59	Catalyst-proximal plastrons enhance activity and selectivity of carbon dioxide electroreduction. Cell Reports Physical Science, 2021, 2, 100318.	2.8	18
60	Dynamics of an impacting emulsion droplet. Science Advances, 2022, 8, eabl7160.	4.7	18
61	Kinetics of Photoinduced Wettability Switching on Nanoporous Titania Surfaces under Oil. Advanced Materials Interfaces, 2017, 4, 1700462.	1.9	16
62	Impact of Bubbles on Electrochemically Active Surface Area of Microtextured Gas-Evolving Electrodes. Langmuir, 2022, 38, 3276-3283.	1.6	16
63	Differences between Colloidal and Crystalline Evaporative Deposits. Langmuir, 2020, 36, 11732-11741.	1.6	15
64	Evaporative Crystallization of Spirals. Langmuir, 2019, 35, 10484-10490.	1.6	14
65	Asphaltene Adsorption on Functionalized Solids. Langmuir, 2020, 36, 3894-3902.	1.6	12
66	Dynamic wetting on superhydrophobic surfaces: Droplet impact and wetting hysteresis. , 2010, , .		11
67	Visualization of contact line motion on hydrophobic textures. Surface Innovations, 2013, 1, 84-91.	1.4	11
68	Inverted Leidenfrost-like Effect during Condensation. Langmuir, 2015, 31, 5353-5363.	1.6	11
69	Mobility of Yield Stress Fluids on Lubricant-Impregnated Surfaces. ACS Applied Materials & Interfaces, 2019, 11, 16123-16129.	4.0	11
70	Levitation of fizzy drops. Science Advances, 2021, 7, .	4.7	11
71	Controlling nucleation and growth of water using hybrid hydrophobic-hydrophilic surfaces. , 2010, , .		10
72	Surface and wetting characteristics of textured bisphenolâ€A based polycarbonate surfaces: Acetoneâ€induced crystallization texturing methods. Journal of Applied Polymer Science, 2016, 133, .	1.3	10

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73	Self-Propulsion of Boiling Droplets on Thin Heated Oil Films. Physical Review Letters, 2021, 127, 074502.	2.9	10
74	Multilevel robustness. Nature Materials, 2018, 17, 298-300.	13.3	9
75	Low-Voltage Surface Electrocoalescence Enabled by High-K Dielectrics and Surfactant Bilayers for Oilâ€“Water Separation. ACS Applied Materials & Interfaces, 2019, 11, 34812-34818.	4.0	9
76	Enhancing the Injectability of High Concentration Drug Formulations Using Core Annular Flows. Advanced Healthcare Materials, 2020, 9, 2001022.	3.9	9
77	Reduced adhesion of sparkling water droplets. Physical Review Fluids, 2019, 4, .	1.0	9
78	Transient Effects Caused by Gas Depletion during Carbon Dioxide Electroreduction. Langmuir, 2022, 38, 1020-1033.	1.6	9
79	Enhancing the Performance of Viscous Electrode-Based Flow Batteries Using Lubricant-Impregnated Surfaces. ACS Applied Energy Materials, 2018, 1, 3614-3621.	2.5	8
80	Preparation for and performance of a Pseudomonas aeruginosa biofilm experiment on board the International Space Station. Acta Astronautica, 2022, 199, 386-400.	1.7	6
81	Study of the relationship between the crystal structure and micro-nano morphology of anodized stainless steels. Electrochemistry Communications, 2019, 101, 109-114.	2.3	5
82	Lubricant-Impregnated Surfaces for Mitigating Asphaltene Deposition. ACS Applied Materials & Interfaces, 2020, 12, 28750-28758.	4.0	5
83	Capturing Bubbles and Preventing Foam Using Aerophilic Surfaces. Advanced Materials Interfaces, 2020, 7, 1901599.	1.9	5
84	Electrostatic precursor films. Soft Matter, 2013, 9, 9918.	1.2	3
85	Bubble Capturing: Capturing Bubbles and Preventing Foam Using Aerophilic Surfaces (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlo	1.9	2
86	Crystal critters. Physical Review Fluids, 2020, 5, .	1.0	2
87	Conjugated Polymers: Low-Dimensional Conduction Mechanisms in Highly Conductive and Transparent Conjugated Polymers (Adv. Mater. 31/2015). Advanced Materials, 2015, 27, 4664-4664.	11.1	1
88	Scalable manufacturing of hierarchical nanostructures for thermal management. , 2012, , .		0
89	Innovative membrane technology separates finely mixed oil and water. Membrane Technology, 2014, 2014, 8-9.	0.5	0
90	Designing Lubricant-Impregnated Surfaces for Corrosion Protection. Corrosion, 2020, 76, .	0.5	0

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91	Phase Change Dispersion Made by Condensationâ€“Emulsification. ACS Omega, 2021, 6, 34580-34595.	1.6	0