Zhengmao Lu

List of Publications by Year
in descending order

40 papers	1,770 citations	236833 25 h-index	289141 40 g-index
40 all docs	40 docs citations	40 times ranked	1911 citing authors

#	Article	IF	Citations
1	Nanoporous membrane device for ultra high heat flux thermal management. Microsystems and Nanoengineering, 2018, 4, 1.	3.4	154
2	Design of Lubricant Infused Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 42383-42392.	4.0	131
3	Efficient Infrared Electroluminescent Devices Using Solution-Processed Colloidal Quantum Dots. Advanced Functional Materials, 2005, 15, 1865-1869.	7.8	112
4	Heat Transfer Enhancement During Water and Hydrocarbon Condensation on Lubricant Infused Surfaces. Scientific Reports, 2018, 8, 540.	1.6	111
5	Laser-sculptured ultrathin transition metal carbide layers for energy storage and energy harvesting applications. Nature Communications, 2019, 10, 3112.	5.8	91
6	Modeling of Evaporation from Nanopores with Nonequilibrium and Nonlocal Effects. Langmuir, 2015, 31, 9817-9824.	1.6	78
7	A unified relationship for evaporation kinetics at low Mach numbers. Nature Communications, 2019, 10, 2368.	5.8	73
8	Kinetics of Sorption in Hygroscopic Hydrogels. Nano Letters, 2022, 22, 1100-1107.	4.5	65
9	Prediction and Characterization of Dry-out Heat Flux in Micropillar Wick Structures. Langmuir, 2016, 32, 1920-1927.	1.6	62
10	Toward Condensation-Resistant Omniphobic Surfaces. ACS Nano, 2018, 12, 11013-11021.	7.3	62
11	An Ultrathin Nanoporous Membrane Evaporator. Nano Letters, 2017, 17, 6217-6220.	4.5	60
12	Effects of millimetric geometric features on dropwise condensation under different vapor conditions. International Journal of Heat and Mass Transfer, 2018, 119, 931-938.	2.5	55
13	Design and Modeling of Membrane-Based Evaporative Cooling Devices for Thermal Management of High Heat Fluxes. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 1056-1065.	1.4	54
14	Thermal Expansion Coefficient of Monolayer Molybdenum Disulfide Using Micro-Raman Spectroscopy. Nano Letters, 2019, 19, 4745-4751.	4.5	54
15	Parametric study of thin film evaporation from nanoporous membranes. Applied Physics Letters, 2017, 111, .	1.5	53
16	Capillary-fed, thin film evaporation devices. Journal of Applied Physics, 2020, 128, .	1.1	51
17	Passive Sub-Ambient Cooling from a Transparent Evaporation-Insulation Bilayer. Joule, 2020, 4, 2693-2701.	11.7	44
18	Gravitationally Driven Wicking for Enhanced Condensation Heat Transfer. Langmuir, 2018, 34, 4658-4664.	1.6	42

#	Article	IF	Citations
19	Thermal transport in suspended silicon membranes measured by laser-induced transient gratings. AIP Advances, 2016, 6, .	0.6	40
20	Laser-engineered heavy hydrocarbons: Old materials with new opportunities. Science Advances, 2020, 6, eaaz5231.	4.7	40
21	High Heat Flux Evaporation of Low Surface Tension Liquids from Nanoporous Membranes. ACS Applied Materials & Interfaces, 2020, 12, 7232-7238.	4.0	36
22	Epitaxial LiNbO₃ thin films on sapphire substrates grown by solid source MOCVD. Journal of Materials Research, 1994, 9, 2258-2263.	1.2	35
23	Conductive carbonaceous membranes: recent progress and future opportunities. Journal of Materials Chemistry A, 2021, 9, 3270-3289.	5.2	28
24	Size distribution theory for jumping-droplet condensation. Applied Physics Letters, 2019, 114, .	1.5	27
25	Simultaneous prediction of dryout heat flux and local temperature for thin film evaporation in micropillar wicks. International Journal of Heat and Mass Transfer, 2019, 136, 170-177.	2.5	25
26	Coexistence of Pinning and Moving on a Contact Line. Langmuir, 2017, 33, 8970-8975.	1.6	24
27	Boiling crisis due to bubble interactions. International Journal of Heat and Mass Transfer, 2022, 182, 121904.	2.5	22
28	The contributions of skin structural properties to the friction of human finger-pads. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2015, 229, 294-311.	1.0	19
29	Transport-Based Modeling of Bubble Nucleation on Gas Evolving Electrodes. Langmuir, 2020, 36, 15112-15118.	1.6	15
30	Heat and mass transfer in hygroscopic hydrogels. International Journal of Heat and Mass Transfer, 2022, 195, 123103.	2.5	14
31	Electro-Optic Materials by Solid Source MOCVD. Materials Research Society Symposia Proceedings, 1993, 335, 299.	0.1	13
32	Nucleation Site Distribution Probed by Phase-Enhanced Environmental Scanning Electron Microscopy. Cell Reports Physical Science, 2020, 1, 100262.	2.8	13
33	How Coalescing Bubbles Depart from a Wall. Langmuir, 2022, 38, 4371-4377.	1.6	13
34	Characterization of thin film evaporation in micropillar wicks using micro-Raman spectroscopy. Applied Physics Letters, 2018, 113, .	1.5	12
35	Revisiting the Schrage Equation for Kinetically Limited Evaporation and Condensation. Journal of Heat Transfer, 2022, 144, .	1.2	12
36	Enhanced Environmental Scanning Electron Microscopy Using Phase Reconstruction and Its Application in Condensation. ACS Nano, 2019, 13, 1953-1960.	7.3	11

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37	Turning traditionally nonwetting surfaces wetting for even ultra-high surface energy liquids. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	10
38	Processing of Bi_{2.1}Sr_{1.8}Ca_{1.1}Cu₂O₈ source material for float-zone fiber growth. Journal of Materials Research, 1991, 6, 2280-2286.	1.2	4
39	Numerical validation of the dusty-gas model for binary diffusion in low aspect ratio capillaries. Physics of Fluids, 2021, 33, .	1.6	4
40	Corrections to â€œDesign and Modeling of Membrane-Based Evaporative Cooling Devices for Thermal Management of High Heat Fluxesâ€•[Jul 16 1056-1065]. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 1663-1663.	1.4	1