Xiaomin Wu

List of Publications by Year
in descending order

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76 papers	2,613 citations	147566 31 h-index	214527 47 g-index
83 all docs	83 docs citations	83 times ranked	1308 citing authors

#	Article	IF	Citations
1	Fabrication and anti-frosting performance of super hydrophobic coating based on modified nano-sized calcium carbonate and ordinary polyacrylate. Applied Surface Science, 2007, 253, 8818-8824.	3.1	148
2	Impacting-freezing dynamics of a supercooled water droplet on a cold surface: Rebound and adhesion. International Journal of Heat and Mass Transfer, 2020, 158, 119997.	2.5	100
3	Fabrication and condensation characteristics of metallic superhydrophobic surface with hierarchical micro-nano structures. Applied Surface Science, 2016, 371, 322-328.	3.1	92
4	Mesoscale investigation of frost formation on a cold surface. Experimental Thermal and Fluid Science, 2007, 31, 1043-1048.	1.5	91
5	Self-propelled droplet behavior during condensation on superhydrophobic surfaces. Applied Physics Letters, 2016, 108, .	1.5	84
6	Simulation and experiment on supercooled sessile water droplet freezing with special attention to supercooling and volume expansion effects. International Journal of Heat and Mass Transfer, 2018, 127, 975-985.	2.5	81
7	Dynamic Melting of Freezing Droplets on Ultraslippery Superhydrophobic Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 8420-8425.	4.0	78
8	Carbon footprint model for evaluating the global warming impact ofÂfood transport refrigeration systems. Journal of Cleaner Production, 2013, 54, 115-124.	4.6	76
9	Investigation of the possibility of frost release from a cold surface. Experimental Thermal and Fluid Science, 2001, 24, 151-156.	1.5	69
10	Freezing and melting of a sessile water droplet on a horizontal cold plate. Experimental Thermal and Fluid Science, 2017, 88, 1-7.	1.5	68
11	Modelling of sessile water droplet shape evolution during freezing with consideration of supercooling effect. Applied Thermal Engineering, 2017, 125, 644-651.	3.0	67
12	Phase change mass transfer model for frost growth and densification. International Journal of Heat and Mass Transfer, 2016, 96, 11-19.	2.5	61
13	Frosting model based on phase change driving force. International Journal of Heat and Mass Transfer, 2017, 110, 760-767.	2.5	55
14	Shape variation and unique tip formation of a sessile water droplet during freezing. Applied Thermal Engineering, 2019, 147, 927-934.	3.0	50
15	Visual and Theoretical Analyses of the Early Stage of Frost Formation on Cold Surfaces. Journal of Enhanced Heat Transfer, 2007, 14, 257-268.	0.5	50
16	Experimental study of frost formation on cold surfaces with various fin layouts. Applied Thermal Engineering, 2016, 95, 95-105.	3.0	48
17	Frost Self-Removal Mechanism during Defrosting on Vertical Superhydrophobic Surfaces: Peeling Off or Jumping Off. Langmuir, 2018, 34, 14562-14569.	1.6	48
18	Directional Transportation of Impacting Droplets on Wettability-Controlled Surfaces. Langmuir, 2020, 36, 5855-5862.	1.6	46

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19	Relationship between condensed droplet coalescence and surface wettability. International Journal of Heat and Mass Transfer, 2017, 111, 836-841.	2.5	45
20	Energy analysis of droplet jumping induced by multi-droplet coalescence: The influences of droplet number and droplet location. International Journal of Heat and Mass Transfer, 2018, 121, 315-320.	2.5	44
21	Bubble formation in freezing droplets. Physical Review Fluids, 2019, 4, .	1.0	43
22	Off-centered droplet impact on single-ridge superhydrophobic surfaces. Experimental Thermal and Fluid Science, 2021, 120, 110245.	1.5	42
23	Airside heat transfer and pressure loss characteristics of bare and finned tube heat exchangers used for aero engine cooling considering variable air properties. International Journal of Heat and Mass Transfer, 2017, 108, 1839-1849.	2.5	40
24	Droplet re-icing characteristics on a superhydrophobic surface. Applied Physics Letters, 2019, 115, .	1.5	40
25	Thermal and hydraulic analysis of a brazed aluminum evaporator. Applied Thermal Engineering, 2002, 22, 1369-1390.	3.0	39
26	Meltwater Evolution during Defrosting on Superhydrophobic Surfaces. ACS Applied Materials & Interfaces, 2018, 10, 1415-1421.	4.0	39
27	Condensed droplet growth on surfaces with various wettability. Applied Thermal Engineering, 2017, 115, 1101-1108.	3.0	37
28	Aircraft icing model considering both rime ice property variability and runback water effect. International Journal of Heat and Mass Transfer, 2017, 104, 510-516.	2.5	36
29	Frost formation and frost meltwater drainage characteristics on aluminum surfaces with grooved structures. Applied Thermal Engineering, 2017, 118, 448-454.	3.0	34
30	Droplet breakup and rebound during impact on small cylindrical superhydrophobic targets. Physics of Fluids, 2020, 32, .	1.6	34
31	Quantitative relations between droplet jumping and anti-frosting effect on superhydrophobic surfaces. Energy and Buildings, 2020, 225, 110315.	3.1	33
32	Ultimate jumping of coalesced droplets on superhydrophobic surfaces. Journal of Colloid and Interface Science, 2021, 587, 429-436.	5.0	33
33	Double-peak characteristic of droplet impact force on superhydrophobic surfaces. Extreme Mechanics Letters, 2022, 52, 101665.	2.0	33
34	Experimental and numerical investigations of frost formation on wavy plates. Applied Thermal Engineering, 2018, 138, 627-632.	3.0	32
35	Droplet impact dynamics on single-pillar superhydrophobic surfaces. Physics of Fluids, 2021, 33, .	1.6	32
36	Enhanced and guided self-propelled jumping on the superhydrophobic surfaces with macrotexture. Applied Physics Letters, 2019, 115, .	1.5	31

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37	Experimental investigation and statistical analysis of icing nucleation characteristics of sessile water droplets. Experimental Thermal and Fluid Science, 2018, 99, 26-34.	1.5	29
38	Pool boiling heat transfer of R141b on surfaces covered copper foam with circular-shaped channels. Experimental Thermal and Fluid Science, 2019, 105, 136-143.	1.5	29
39	Numerical simulations of multi-hop jumping on superhydrophobic surfaces. International Journal of Heat and Mass Transfer, 2019, 135, 345-353.	2.5	29
40	Droplet boiling on heated surfaces with various wettabilities. Applied Thermal Engineering, 2020, 167, 114703.	3.0	29
41	Numerical Simulation of Frosting on Fin-and-Tube Heat Exchanger Surfaces. Journal of Thermal Science and Engineering Applications, 2017, 9, .	0.8	27
42	Axial spreading of droplet impact on ridged superhydrophobic surfaces. Journal of Colloid and Interface Science, 2021, 599, 130-139.	5.0	27
43	Contact Time of Droplet Impact on Inclined Ridged Superhydrophobic Surfaces. Langmuir, 2022, 38, 1540-1549.	1.6	27
44	Supercooled water droplet impacting-freezing behaviors on cold superhydrophobic spheres. International Journal of Multiphase Flow, 2021, 141, 103675.	1.6	26
45	Approximate equations for film condensation in the presence of non-condensable gases. International Communications in Heat and Mass Transfer, 2017, 85, 124-130.	2.9	25
46	Heat transfer characteristics and correlation for CO2/propane mixtures flow evaporation in a smooth mini tube. Applied Thermal Engineering, 2015, 81, 253-261.	3.0	23
47	Numerical simulations of guided self-propelled jumping of droplets on a wettability gradient surface. Applied Thermal Engineering, 2019, 156, 524-530.	3.0	23
48	Defrosting on horizontal hydrophobic surfaces and the shrink angle. International Journal of Refrigeration, 2016, 71, 1-7.	1.8	21
49	Effects of the surface tension gradient and viscosity on coalescence-induced droplet jumping on superamphiphobic surfaces. Physics of Fluids, 2021, 33, .	1.6	21
50	R32 flow boiling in horizontal mini channels: Part I. Two-phase flow patterns. International Journal of Heat and Mass Transfer, 2017, 115, 1223-1232.	2.5	20
51	Influence of 0Â° helix angle micro fins on flow and heat transfer of R32 evaporating in a horizontal mini multichannel flat tube. Experimental Thermal and Fluid Science, 2015, 68, 669-680.	1.5	19
52	The Effect of the Initial State of the Droplet Group on the Energy Conversion Efficiency of Self-Propelled Jumping. Langmuir, 2019, 35, 16037-16042.	1.6	19
53	New experimental data of CO2 flow boiling in mini tube with micro fins of zero helix angle. International Journal of Refrigeration, 2015, 59, 281-294.	1.8	18
54	Droplet impact on superheated surfaces with different wettabilities. International Journal of Heat and Mass Transfer, 2019, 141, 1181-1186.	2.5	18

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55	Maximum spreading and energy analysis of ellipsoidal impact droplets. Physics of Fluids, 2021, 33, .	1.6	18
56	Rotation of a rebounding-coalescing droplet on a superhydrophobic surface. Physics of Fluids, 2019, 31, 062109.	1.6	17
57	Design principle of ridge-textured superhydrophobic surfaces for inducing pancake bouncing. International Communications in Heat and Mass Transfer, 2022, 136, 106167.	2.9	17
58	Model for aircraft icing with consideration of property-variable rime ice. International Journal of Heat and Mass Transfer, 2016, 97, 185-190.	2.5	16
59	Hydrophilic treatment and performance evaluation of copper finned tube evaporators. Applied Thermal Engineering, 2011, 31, 2936-2942.	3.0	15
60	Flexible and efficient regulation of coalescence-induced droplet jumping on superhydrophobic surfaces with string. Applied Physics Letters, 2021, 118, .	1.5	15
61	Controlling the Jumping Angle of Coalescing Droplets Using Surface Structures. ACS Applied Materials & Interfaces, 2020, 12, 52221-52228.	4.0	14
62	R32 flow boiling in horizontal mini channels: Part II Flow-pattern based prediction methods for heat transfer and pressure drop. International Journal of Heat and Mass Transfer, 2017, 115, 1233-1244.	2.5	12
63	Vapor free convection film condensation heat transfer in the presence of non-condensable gases with smaller molecular weights than the vapor. Applied Thermal Engineering, 2018, 130, 1611-1618.	3.0	12
64	Event-driven Simulation of Multi-scale Dropwise Condensation. International Journal of Heat and Mass Transfer, 2021, 167, 120819.	2.5	11
65	Dynamic behavior and maximum width of impact droplets on single-pillar superhydrophobic surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 648, 129355.	2.3	11
66	Liquid metal slingshot. Physical Review Fluids, 2020, 5, .	1.0	9
67	Gyroscopic rotation of boiling droplets. Applied Physics Letters, 2021, 118, .	1.5	7
68	Evaporation and boiling of water-alcohol droplets: Dynamic characteristics of wetting and heat transfer. International Communications in Heat and Mass Transfer, 2022, 134, 106045.	2.9	7
69	Synthesis and properties of fluoropolyacrylate coatings. Polymers for Advanced Technologies, 2004, 15, 39-42.	1.6	6
70	Time and Frequency Characteristics of Pressure Fluctuations during Subcooled Nucleate Flow Boiling. Heat Transfer Engineering, 2018, 39, 642-653.	1.2	6
71	The prediction of energy conversion during the self-propelled jumping of multidroplets based on convolutional neural networks. Physics of Fluids, 2022, 34, .	1.6	6
72	Condensation Heat Transfer and Pressure Drop of R22 in 5-mm Diameter Microfin Tubes. Journal of Enhanced Heat Transfer, 2004, 11, 275-282.	0.5	4

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73	The effect of microstructure on self-propelled droplet jumping. E3S Web of Conferences, 2019, 128, 06006.	0.2	1
74	Behavior of condensed droplets growth and jumping on superhydrophobic surface. E3S Web of Conferences, 2019, 128, 07003.	0.2	0
75	10.1063/1.5100987.1. , 2019, , .		0
76	10.1063/1.5109283.1. , 2019, , .		0