Xiang-Dong Liu

List of Publications by Year
in descending order

83	2,037	236833	276775
papers	citations	25 h-index	41 g-index

86	86	86	1132
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic performance analysis on start-up of closed-loop pulsating heat pipes (CLPHPs). International Journal of Thermal Sciences, 2013, 65, 224-233.	2.6	154
2	Hydrodynamics of double emulsion droplet in shear flow. Applied Physics Letters, 2013, 102, .	1.5	115
3	Melting behaviors of PCM in porous metal foam characterized by fractal geometry. International Journal of Heat and Mass Transfer, 2017, 113, 1031-1042.	2.5	102
4	Recent active thermal management technologies for the development of energy-optimized aerospace vehicles in China. Chinese Journal of Aeronautics, 2021, 34, 1-27.	2.8	85
5	Charging and discharging enhancement of a vertical latent heat storage unit by fractal tree-shaped fins. Renewable Energy, 2021, 174, 199-217.	4.3	80
6	Experimental study on thermal performance of an anti-gravity pulsating heat pipe and its application on heat recovery utilization. Applied Thermal Engineering, 2017, 125, 1368-1378.	3.0	63
7	Role of local geometry on droplet formation in axisymmetric microfluidics. Chemical Engineering Science, 2017, 163, 56-67.	1.9	60
8	Investigation on charging enhancement of a latent thermal energy storage device with uneven tree-like fins. Applied Thermal Engineering, 2020, 179, 115749.	3.0	60
9	Enhancing and suppressing effects of an inner droplet on deformation of a double emulsion droplet under shear. Lab on A Chip, 2015, 15, 1255-1261.	3.1	58
10	Deformation dynamics of double emulsion droplet under shear. Applied Physics Letters, 2015, 106, .	1.5	56
11	Droplet generation hydrodynamics in the microfluidic cross-junction with different junction angles. Chemical Engineering Science, 2019, 203, 259-284.	1.9	54
12	Numerical analysis and improvement of the thermal performance in a latent heat thermal energy storage device with spiderweb-like fins. Journal of Energy Storage, 2020, 32, 101768.	3.9	53
13	Charging performance optimization of a latent heat storage unit with fractal tree-like fins. Journal of Energy Storage, 2020, 30, 101498.	3.9	53
14	Stretchable and Freezeâ€Tolerant Organohydrogel Thermocells with Enhanced Thermoelectric Performance Continually Working at Subzero Temperatures. Advanced Functional Materials, 2021, 31, 2104071.	7.8	53
15	Bubble breakup in a microfluidic T-junction. Science Bulletin, 2016, 61, 811-824.	4.3	52
16	Virus transmission from urinals. Physics of Fluids, 2020, 32, 081703.	1.6	52
17	Experimental and numerical studies on the heat transfer improvement of a latent heat storage unit using gradient tree-shaped fins. International Journal of Heat and Mass Transfer, 2022, 182, 121920.	2.5	50
18	Numerical study of virus transmission through droplets from sneezing in a cafeteria. Physics of Fluids, 2021, 33, 023311.	1.6	43

#	ARTICLE	IF	CITATIONS
19	Application of an anti-gravity oscillating heat pipe on enhancement of waste heat recovery. Energy Conversion and Management, 2020, 205, 112404.	4.4	35
20	Transient thermal performance analysis of micro heat pipes. Applied Thermal Engineering, 2013, 58, 585-593.	3.0	32
21	Study of compound drop formation in axisymmetric microfluidic devices with different geometries. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 533, 87-98.	2.3	30
22	Investigation on the thermal performance of a multi-tube finned latent heat thermal storage pool. Applied Thermal Engineering, 2022, 200, 117658.	3.0	29
23	Fluid flow and heat transfer in flat-plate oscillating heat pipe. Energy and Buildings, 2014, 75, 29-42.	3.1	28
24	Experimental investigation on the melting and solidification performance enhancement of a fractal latent heat storage unit. International Journal of Heat and Mass Transfer, 2021, 179, 121640.	2.5	28
25	Role of metal foam on ice storage performance for a cold thermal energy storage (CTES) system. Journal of Energy Storage, 2020, 28, 101201.	3.9	26
26	Numerical study on the thermal enhancement of horizontal latent heat storage units with hierarchical fins. Renewable Energy, 2021, 180, 383-397.	4.3	24
27	High-Speed Visual Analysis of Fluid Flow and Heat Transfer in Oscillating Heat Pipes with Different Diameters. Applied Sciences (Switzerland), 2016, 6, 321.	1.3	23
28	Heat Conduction in Porous Media Characterized by Fractal Geometry. Energies, 2017, 10, 1230.	1.6	23
29	Shear-driven two colliding motions of binary double emulsion droplets. International Journal of Heat and Mass Transfer, 2018, 121, 377-389.	2.5	23
30	Formation mechanisms of solid in water in oil compound droplets in a horizontal T-junction device. Chemical Engineering Science, 2018, 176, 254-263.	1.9	23
31	Thermal performance of a novel dual-serpentine-channel flat-plate oscillating heat pipe used for multiple heat sources and sinks. International Journal of Heat and Mass Transfer, 2020, 161, 120293.	2.5	22
32	Experimental study on thermo-hydrodynamic characteristics in a micro oscillating heat pipe. Experimental Thermal and Fluid Science, 2019, 109, 109871.	1.5	19
33	Heat transfer investigation of a flat-plate oscillating heat pipe with tandem dual channels under nonuniform heating. International Journal of Heat and Mass Transfer, 2021, 180, 121830.	2.5	19
34	Passing-over motion during binary collision between double emulsion droplets under shear. Chemical Engineering Science, 2018, 183, 215-222.	1.9	18
35	Thermal performance of a tandem-dual-channel flat-plate pulsating heat pipe applicable to hypergravity. International Journal of Heat and Mass Transfer, 2022, 189, 122656.	2.5	18
36	Controlled microfluidic encapsulation of phase change material for thermo-regulation. International Journal of Heat and Mass Transfer, 2022, 190, 122738.	2.5	18

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37	Hydrodynamics of triple emulsion droplet generation in a flow-focusing microfluidic device. Chemical Engineering Science, 2021, 243, 116648.	1.9	17
38	Experimental study on the electrohydrodynamic deformation of droplets in a combined DC electric field and shear flow field. Fundamental Research, 2023, 3, 274-287.	1.6	17
39	Influence of gravity on gasâ€“liquid two-phase flow in horizontal pipes. International Journal of Multiphase Flow, 2012, 41, 23-35.	1.6	16
40	Experiment and prediction of droplet formation in microfluidic cross-junctions with different bifurcation angles. International Journal of Multiphase Flow, 2022, 149, 103973.	1.6	16
41	Physics-based statistical learning perspectives on droplet formation characteristics in microfluidic cross-junctions. Applied Physics Letters, 2022, 120, .	1.5	16
42	NUMERICAL STUDY ON THE SOLIDIFICATION PERFORMANCE OF A LATENT HEAT STORAGE UNIT WITH KOCH-FRACTAL FIN. Fractals, 2019, 27, 1950108.	1.8	15
43	Analysis of gas-particle flow characteristics in impinging streams. Chemical Engineering and Processing: Process Intensification, 2014, 79, 14-22.	1.8	14
44	Numerical study on the thermal performance of photovoltaic thermal (PV/T) collector with different parallel cooling channels. Sustainable Energy Technologies and Assessments, 2021, 45, 101101.	1.7	13
45	Experimental analysis on the evaporator startup behaviors in a trapezoidally grooved heat pipe. Applied Thermal Engineering, 2021, 199, 117558.	3.0	13
46	Experimental study on thermo-hydrodynamic behaviors in miniaturized two-phase thermosyphons. International Journal of Heat and Mass Transfer, 2016, 100, 550-558.	2.5	12
47	Role of condensation on boiling heat transfer in a confined chamber. Applied Thermal Engineering, 2021, 185, 116309.	3.0	12
48	Droplet-based mixing characteristics in bumpy serpentine microchannel. Chemical Engineering and Processing: Process Intensification, 2021, 159, 108246.	1.8	12
49	Coating of solid particles with liquid layer by microfluidics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 553, 652-659.	2.3	11
50	Pool boiling heat transfer enhancement by bi-conductive surfaces. International Journal of Thermal Sciences, 2021, 167, 107041.	2.6	11
51	The effect of opening window position on aerosol transmission in an enclosed bus under windless environment. Physics of Fluids, 2021, 33, 123301.	1.6	11
52	Visualization study on the condensation heat transfer on vertical surfaces with a wettability gradient. International Journal of Heat and Mass Transfer, 2022, 184, 122331.	2.5	10
53	Numerical Simulation of Vapor-Liquid Two-Phase Flow in a Closed Loop Oscillating Heat Pipe. , 2009, , .		9
54	Electric field mediated droplet spheroidizing in an extensional flow. Physics of Fluids, 2021, 33, .	1.6	9

#	Article	IF	Citations
55	Investigation of the thermal performance enhancement of a photovoltaic thermal (PV/T) collector with periodically grooved channels. Journal of Energy Storage, 2021, 40, 102792.	3.9	9
56	Dewetting regimes of condensation droplets in a microgroove. Physics of Fluids, 2022, 34, .	1.6	9
57	Controlled fabrication of solid-shelled capsules with designed geometry sphericity. Chemical Engineering Science, 2019, 208, 115153.	1.9	8
58	Numerical Study on the Liquid-Liquid Interface Evolution during Droplet Coalescence. Microgravity Science and Technology, 2020, 32, 737-748.	0.7	8
59	Visualization Study of Oil-in-Water-in-Oil (O/W/O) Double Emulsion Formation in a Simple and Robust Co-Flowing Microfluidic Device. Micromachines, 2017, 8, 268.	1.4	7
60	Experimental Study on Thermal Performance of a Bent Copper-Water Heat Pipe. International Journal of Aerospace Engineering, 2020, 2020, 1-10.	0.5	7
61	Experimental study of droplet formation in the cross-junction. Journal of Dispersion Science and Technology, 2021, 42, 1233-1240.	1.3	7
62	Dynamic Liquid Gating Artificially Spinning System for Self-Evolving Topographies and Microstructures. Langmuir, 2021, 37, 1438-1445.	1.6	7
63	Performance investigation and optimization of latent heat storage exchangers with sandwiched tree-channels. International Journal of Heat and Mass Transfer, 2022, 183, 122161.	2.5	7
64	NUMERICAL STUDY ON THE THERMAL PERFORMANCE OF A PHASE CHANGE HEAT EXCHANGER (PCHE) WITH INNOVATIVE FRACTAL TREE-SHAPED FINS. Fractals, 2020, 28, 2050083.	1.8	6
65	Hydrodynamics of passing-over motion during binary droplet collision in shear flow. Chinese Physics B, 2016, 25, 108202.	0.7	5
66	Visualization study on coalescence of droplets with different sizes in external liquid. Canadian Journal of Chemical Engineering, 2018, 96, 1228-1235.	0.9	5
67	Experimental study on Rayleigh-BÃ©nard-Marangoni convection characteristics in a droplet during mass transfer. International Journal of Heat and Mass Transfer, 2021, 172, 121214.	2.5	5
68	Roles of aqueous additives in the mass transfer process of water molecules in water/oil/water double emulsion droplets. Chemical Engineering Science, 2022, 248, 117175.	1.9	4
69	Temperature Dynamic Characteristics of Power-Generation Cabin in Antarctic: Case Study for Dome A. Journal of Energy Engineering - ASCE, 2018, 144, 05017004.	1.0	3
70	Enhancing discharging performance of a phase change thermal storage unit with a fractal space-filling matrix. Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	3
71	Calculation Methods of Solution Chemical Potential and Application in Emulsion Microencapsulation. Molecules, 2021, 26, 2991.	1.7	3
72	Lattice Boltzmann model for interface capturing of multiphase flows based on Allenâ€“Cahn equation. Chinese Physics B, 2022, 31, 024701.	0.7	3

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73	Controlled preparation of PAMS hollow core microcapsules with high uniformity and its application in the production of GDP fuel capsules for ICF engineering. Fundamental Research, 2023, 3, 602-610.	1.6	3
74	An Improved Lattice Boltzmann Model for Convection Melting in the Existence of an Inhomogeneous Magnetic Field. Microgravity Science and Technology, 2021, 33, 1.	0.7	2
75	Stretchable and Freezeâ€Tolerant Organohydrogel Thermocells with Enhanced Thermoelectric Performance Continually Working at Subzero Temperatures (Adv. Funct. Mater. 43/2021). Advanced Functional Materials, 2021, 31, 2170322.	7.8	2
76	Experimental Study on Sessile Droplet Freezing on a Cold Surface in Low Atmospheric Pressure. Microgravity Science and Technology, 2022, 34, 1.	0.7	2
77	Influence of oil-phase alkane additives on the evaporation rate of double emulsion curing process. Chemical Engineering Science, 2022, 253, 117561.	1.9	2
78	Lattice Boltzmann investigation of flow boiling in a microchannel. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 0, , 095440622210891.	1.1	2
79	Hydrodynamic binary coalescence of droplets under air flow in a hydrophobic microchannel. Chinese Physics B, 2019, 28, 024702.	0.7	1
80	Lattice Boltzmann simulation on the thermal performance of composite phase change material based on Voronoi models. Chinese Physics B, 0, , .	0.7	1
81	Dynamic thermal analysis of startup process for minichannel evaporator. Applied Thermal Engineering, 2022, 214, 118780.	3.0	1
82	Study of droplet asymmetrical splitting behaviors with a tunnel in a Microfluidic T-junciton. Wuli Xuebao/Acta Physica Sinica, 2021, .	0.2	0
83	10.1063/5.0021450.1. , 2020, , .		0