

# Ping Cheng

## List of Publications by Year in descending order

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69  
papers

3,198  
citations

136885

32  
h-index

155592

55  
g-index

70  
all docs

70  
docs citations

70  
times ranked

1965  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of inlet/outlet configurations on flow boiling instability in parallel microchannels. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 2267-2281.	2.5	302
2	An experimental investigation of enhanced pool boiling heat transfer from surfaces with micro/nano-structures. <i>International Journal of Heat and Mass Transfer</i> , 2014, 71, 189-196.	2.5	240
3	Unstable and stable flow boiling in parallel microchannels and in a single microchannel. <i>International Journal of Heat and Mass Transfer</i> , 2007, 50, 4297-4310.	2.5	168
4	Lattice Boltzmann simulations of water transport in gas diffusion layer of a polymer electrolyte membrane fuel cell. <i>Journal of Power Sources</i> , 2010, 195, 3870-3881.	4.0	148
5	Lattice Boltzmann simulations for self-propelled jumping of droplets after coalescence on a superhydrophobic surface. <i>International Journal of Heat and Mass Transfer</i> , 2014, 73, 195-200.	2.5	115
6	Lattice Boltzmann simulations of liquid droplet dynamic behavior on a hydrophobic surface of a gas flow channel. <i>Journal of Power Sources</i> , 2009, 190, 435-446.	4.0	101
7	Direct numerical simulations of pool boiling curves including heater's thermal responses and the effect of vapor phase's thermal conductivity. <i>International Communications in Heat and Mass Transfer</i> , 2017, 87, 61-71.	2.9	100
8	An experimental study of flow boiling instability in a single microchannel. <i>International Communications in Heat and Mass Transfer</i> , 2008, 35, 1229-1234.	2.9	85
9	Subcooled flow boiling and microbubble emission boiling phenomena in a partially heated microchannel. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 79-91.	2.5	83
10	An investigation of microlayer beneath nucleation bubble by laser interferometric method. <i>International Journal of Heat and Mass Transfer</i> , 2013, 57, 183-189.	2.5	82
11	Transition from annular flow to plug/slug flow in condensation of steam in microchannels. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 707-716.	2.5	76
12	Lattice Boltzmann simulation for dropwise condensation of vapor along vertical hydrophobic flat plates. <i>International Journal of Heat and Mass Transfer</i> , 2013, 64, 1041-1052.	2.5	76
13	A perfect absorber design using a natural hyperbolic material for harvesting solar energy. <i>Solar Energy</i> , 2018, 159, 329-336.	2.9	71
14	Mesoscale simulations of boiling curves and boiling hysteresis under constant wall temperature and constant heat flux conditions. <i>International Journal of Heat and Mass Transfer</i> , 2017, 110, 319-329.	2.5	67
15	3D multiphase lattice Boltzmann simulations for morphological effects on self-propelled jumping of droplets on textured superhydrophobic surfaces. <i>International Communications in Heat and Mass Transfer</i> , 2015, 64, 7-13.	2.9	66
16	3D-Printed Bioinspired Cassie's Wettability for Controllable Microdroplet Manipulation. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 1979-1987.	4.0	61
17	A CHF model for saturated pool boiling on a heated surface with micro/nano-scale structures. <i>International Journal of Heat and Mass Transfer</i> , 2014, 76, 452-458.	2.5	60
18	An experimental investigation on wettability effects of nanoparticles in pool boiling of a nanofluid. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 32-40.	2.5	60

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19	Lattice Boltzmann simulation of steady laminar film condensation on a vertical hydrophilic subcooled flat plate. <i>International Journal of Heat and Mass Transfer</i> , 2013, 62, 507-514.	2.5	59
20	Dropwise condensation theory revisited: Part I. Droplet nucleation radius. <i>International Journal of Heat and Mass Transfer</i> , 2015, 83, 833-841.	2.5	58
21	A numerical analysis of forces imposed on particles in conventional dielectrophoresis in microchannels with interdigitated electrodes. <i>Journal of Electrostatics</i> , 2008, 66, 620-626.	1.0	57
22	An experimental investigation on effects of an electric field on bubble growth on a small heater in pool boiling. <i>International Journal of Heat and Mass Transfer</i> , 2013, 67, 984-991.	2.5	56
23	3D simulations of pool boiling above smooth horizontal heated surfaces by a phase-change lattice Boltzmann method. <i>International Journal of Heat and Mass Transfer</i> , 2019, 131, 1095-1108.	2.5	54
24	An experimental and numerical study of forced convection in a microchannel with negligible axial heat conduction. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 1070-1074.	2.5	51
25	Numerical investigation of air entrapment in a molten droplet impacting and solidifying on a cold smooth substrate by 3D lattice Boltzmann method. <i>International Journal of Heat and Mass Transfer</i> , 2018, 124, 1262-1274.	2.5	50
26	Lattice Boltzmann simulations for transition from dropwise to filmwise condensation on hydrophobic surfaces with hydrophilic spots. <i>International Journal of Heat and Mass Transfer</i> , 2017, 110, 710-722.	2.5	44
27	Numerical Investigation of Saturated Flow Boiling in Microchannels by the Lattice Boltzmann Method. <i>Numerical Heat Transfer; Part A: Applications</i> , 2014, 65, 644-661.	1.2	42
28	A thermodynamic analysis for heterogeneous boiling nucleation on a superheated wall. <i>International Journal of Heat and Mass Transfer</i> , 2011, 54, 4762-4769.	2.5	41
29	A numerical study on effects of surrounding medium, material, and geometry of nanoparticles on solar absorption efficiencies. <i>International Journal of Heat and Mass Transfer</i> , 2018, 116, 825-832.	2.5	37
30	3D printed super-anti-freezing self-adhesive human-machine interface. <i>Materials Today Physics</i> , 2021, 19, 100404.	2.9	37
31	Mesoscale simulation of heater size and subcooling effects on pool boiling under controlled wall heat flux conditions. <i>International Journal of Heat and Mass Transfer</i> , 2016, 101, 1331-1342.	2.5	36
32	3D Printed Ultrastretchable, Hyper-Antifreezing Conductive Hydrogel for Sensitive Motion and Electrophysiological Signal Monitoring. <i>Research</i> , 2020, 2020, 1426078.	2.8	34
33	An analytical model for micro-droplet steady movement on the hydrophobic wall of a micro-channel. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 1243-1246.	2.5	32
34	A four-zone model for saturated flow boiling in a microchannel of rectangular cross-section. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 3439-3448.	2.5	32
35	Lattice Boltzmann simulation of a droplet impact and freezing on cold surfaces. <i>International Communications in Heat and Mass Transfer</i> , 2017, 87, 175-182.	2.9	31
36	Mesoscale simulations of saturated pool boiling heat transfer under microgravity conditions. <i>International Journal of Heat and Mass Transfer</i> , 2017, 114, 453-457.	2.5	30

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37	3D printed hydrogel for soft thermo-responsive smart window. International Journal of Extreme Manufacturing, 2022, 4, 025302.	6.3	30
38	Non-linear analyses of flow boiling in microchannels. International Journal of Heat and Mass Transfer, 2005, 48, 4667-4683.	2.5	27
39	Mesoscale simulation of a molten droplet impacting and solidifying on a cold rough substrate. International Communications in Heat and Mass Transfer, 2018, 98, 248-257.	2.9	25
40	Applications of electrohydrodynamics and Joule heating effects in microfluidic chips: A review. Science in China Series D: Earth Sciences, 2009, 52, 3477-3490.	0.9	23
41	Boiling crisis due to bubble interactions. International Journal of Heat and Mass Transfer, 2022, 182, 121904.	2.5	22
42	A lattice Boltzmann model for condensation and freezing of dry saturated vapor about a cryogenic spot on an inclined hydrophobic surface. International Journal of Heat and Mass Transfer, 2017, 114, 628-639.	2.5	20
43	Understanding triggering mechanisms for critical heat flux in pool boiling based on direct numerical simulations. International Journal of Heat and Mass Transfer, 2020, 163, 120546.	2.5	20
44	An experimental study of a nearly perfect absorber made from a natural hyperbolic material for harvesting solar energy. Journal of Applied Physics, 2020, 127, .	1.1	20
45	Enhanced dropwise condensation by oil infused nano-grass coatings on outer surface of a horizontal copper tube. International Communications in Heat and Mass Transfer, 2018, 91, 11-16.	2.9	19
46	A unified relationship between bubble departure frequency and diameter during saturated nucleate pool boiling. International Journal of Heat and Mass Transfer, 2021, 165, 120640.	2.5	16
47	Nucleate and film boiling on a microheater under pulse heating in a microchannel. International Communications in Heat and Mass Transfer, 2009, 36, 391-396.	2.9	15
48	Droplet impact on a layer of solid particles placed above a substrate: A 3D lattice Boltzmann study. Computers and Fluids, 2019, 188, 18-30.	1.3	15
49	Effects of electric field on microbubble growth in a microchannel under pulse heating. International Journal of Heat and Mass Transfer, 2011, 54, 2110-2115.	2.5	14
50	A solid-liquid local thermal non-equilibrium lattice Boltzmann model for heat transfer in nanofluids. Part II: Natural convection of nanofluids in a square enclosure. International Journal of Heat and Mass Transfer, 2019, 130, 1358-1365.	2.5	14
51	Underwater Unidirectional Cellular Fluidics. ACS Applied Materials & Interfaces, 2022, 14, 9891-9898.	4.0	14
52	An investigation on vapor condensation on nanopillar array surfaces by molecular dynamics simulation. International Communications in Heat and Mass Transfer, 2018, 98, 232-238.	2.9	13
53	Nucleation Site Distribution Probed by Phase-Enhanced Environmental Scanning Electron Microscopy. Cell Reports Physical Science, 2020, 1, 100262.	2.8	13
54	Three-Dimensional Open Water Microchannel Transpiration Mimetics. ACS Applied Materials & Interfaces, 2022, 14, 30435-30442.	4.0	13

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55	Natural anisotropic nanoparticles with a broad absorption spectrum for solar energy harvesting. International Communications in Heat and Mass Transfer, 2018, 96, 109-113.	2.9	12
56	Numerical Simulation of Complete Pool Boiling Curves: From Nucleation to Critical Heat Flux Through Transition Boiling to Film Boiling. Nuclear Science and Engineering, 2019, 193, 1-13.	0.5	12
57	A solid-liquid local thermal non-equilibrium lattice Boltzmann model for heat transfer in nanofluids. Part I: Model development, shear flow and heat conduction in a nanofluid. International Journal of Heat and Mass Transfer, 2019, 130, 1288-1298.	2.5	12
58	Wetting States and Departure Diameters of Bubbles on Micro-/Nanostructured Surfaces. Langmuir, 2022, 38, 3180-3188.	1.6	12
59	Numerical studies on absorption characteristics of plasmonic metamaterials with an array of nanoshells. International Communications in Heat and Mass Transfer, 2015, 68, 172-177.	2.9	10
60	Plasma resonance effects on bubble nucleation in flow boiling of a nanofluid irradiated by a pulsed laser beam. International Communications in Heat and Mass Transfer, 2016, 72, 90-94.	2.9	10
61	Effects of nanoparticles' wettability on vapor bubble coalescence in saturated pool boiling of nanofluids: A lattice Boltzmann simulation. International Journal of Heat and Mass Transfer, 2020, 154, 119669.	2.5	10
62	Photothermal nanobubble nucleation on a plasmonic nanoparticle: A 3D lattice Boltzmann simulation. International Journal of Heat and Mass Transfer, 2019, 140, 786-797.	2.5	9
63	A 3D numerical study of a molten solder droplet's wetting and solidifying on a pillar with application to electronic packaging. International Journal of Heat and Mass Transfer, 2020, 153, 119585.	2.5	9
64	Numerical study of radial temperature gradient effect on separation efficiency in capillary electrophoresis. International Communications in Heat and Mass Transfer, 2007, 34, 1048-1055.	2.9	7
65	Mesoscopic approach for nanoscale liquid-vapor interfacial statics and dynamics. International Journal of Heat and Mass Transfer, 2022, 194, 123104.	2.5	6
66	Effects of surfactant additive on flow boiling over a microheater under pulse heating. International Journal of Heat and Mass Transfer, 2010, 53, 1586-1590.	2.5	5
67	An experimental investigation on EHD effects in the thin-film region of an evaporating meniscus. International Communications in Heat and Mass Transfer, 2014, 56, 159-164.	2.9	4
68	Effects of electric fields on onset of dropwise condensation based on Gibbs free energy and availability analyses. International Communications in Heat and Mass Transfer, 2014, 58, 105-110.	2.9	3
69	Lattice Boltzmann Simulations of Saturated Pool Boiling from Smooth and Rough Horizontal Surfaces. , 2018, , 209-237.		0