

# Peng Zhang

## List of Publications by Year in descending order

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113  
papers

5,072  
citations

125106

35  
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111975

67  
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113  
docs citations

113  
times ranked

4402  
citing authors

#	ARTICLE	IF	CITATIONS
1	Liquid wicking flow characteristics in metallic screens with various weave densities. <i>Heat and Mass Transfer</i> , 2022, 58, 719-734.	1.2	2
2	Cryogenic wicking of liquid nitrogen in the metallic screens with different weave densities. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122208.	2.5	6
3	Performance prediction, optimal design and operational control of thermal energy storage using artificial intelligence methods. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 156, 111977.	8.2	32
4	Condensation heat transfer on phase change slippery liquid-infused porous surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2022, 185, 122384.	2.5	17
5	Optimization of the solar space heating system with thermal energy storage using data-driven approach. <i>Renewable Energy</i> , 2022, 190, 764-776.	4.3	27
6	Freezing dynamics of supercooled micro-sized water droplets. <i>International Journal of Heat and Mass Transfer</i> , 2022, 193, 122955.	2.5	10
7	Fundamentals, materials and strategies for personal thermal management by next-generation textiles. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 142, 106249.	3.8	68
8	A comprehensive investigation of the mathematical models for a packed bed latent heat thermal energy storage system. <i>International Journal of Energy Research</i> , 2021, 45, 15005-15021.	2.2	13
9	Temperature non-uniformity in the radiative cooler and its effect on performance under various humidity conditions. <i>Solar Energy</i> , 2021, 220, 498-508.	2.9	13
10	Promoted Disappearance of CO <sub>2</sub> Hydrate Self-Preservation Effect by Surfactant SDS. <i>Energies</i> , 2021, 14, 3909.	1.6	5
11	Thermal rectification of solid-liquid phase change thermal diode under the effect of supercooling. <i>International Journal of Thermal Sciences</i> , 2021, 164, 106856.	2.6	6
12	Emerging radiative materials and prospective applications of radiative sky cooling - A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 144, 110910.	8.2	42
13	Experimental investigation of cryogenic flow quenching of horizontal stainless steel tubes. <i>Cryogenics</i> , 2021, 117, 103327.	0.9	7
14	Fabrication and characterization of fluffy mono-coated copper meshes and their applications for oil/water separation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 625, 126883.	2.3	11
15	Cooling performance of porous polymer radiative coating under different environmental conditions throughout all-year. <i>Solar Energy</i> , 2021, 228, 474-485.	2.9	25
16	Numerical and experimental study of the thermal rectification of a solid-liquid phase change thermal diode. <i>International Journal of Heat and Mass Transfer</i> , 2020, 147, 118915.	2.5	15
17	Non-uniform melting of a spherical ice particle in free ascending. <i>International Journal of Heat and Mass Transfer</i> , 2020, 148, 119097.	2.5	11
18	A review of thermo-fluidic performance and application of shellless phase change slurry: Part 2 "Flow and heat transfer characteristics. <i>Energy</i> , 2020, 192, 116602.	4.5	12

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19	Bubble formation in viscous fluids by a microfluidic flow-focusing junction: a computational study. <i>Microfluidics and Nanofluidics</i> , 2020, 24, 1.	1.0	9
20	CO <sub>2</sub> Heat of Absorption in Aqueous Solutions of MDEA and MDEA/Piperazine. <i>Journal of Chemical &amp; Engineering Data</i> , 2020, 65, 3784-3793.	1.0	18
21	Highly Solar-Reflective Structures for Daytime Radiative Cooling under High Humidity. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 51409-51417.	4.0	88
22	Phase-Change Slippery Liquid-Infused Porous Surfaces with Thermo-Responsive Wetting and Shedding States. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 34306-34316.	4.0	42
23	Dynamic propagation of ice-water phase front in a supercooled water droplet. <i>International Journal of Heat and Mass Transfer</i> , 2020, 152, 119468.	2.5	40
24	Condensate droplet size distribution and heat transfer on hierarchical slippery lubricant infused porous surfaces. <i>Applied Thermal Engineering</i> , 2020, 176, 115386.	3.0	36
25	Cryogenic quenching of a stainless steel rodlet with various coatings. <i>International Journal of Heat and Mass Transfer</i> , 2020, 154, 119642.	2.5	17
26	Performance investigation of the direct absorption solar collector based on phase change slurry. <i>Applied Thermal Engineering</i> , 2019, 162, 114244.	3.0	22
27	Advanced thermal systems driven by paraffin-based phase change materials – A review. <i>Applied Energy</i> , 2019, 238, 582-611.	5.1	214
28	Power generation and longevity improvement of renewable energy systems via slippery surfaces – A review. <i>Renewable Energy</i> , 2019, 143, 922-938.	4.3	15
29	Cryogenic quenching enhancement of a nanoporous surface. <i>International Journal of Heat and Mass Transfer</i> , 2019, 134, 1061-1072.	2.5	21
30	A review of thermo-fluidic performance and application of shellless phase change slurry: Part 1 – Preparations, properties and applications. <i>Energy</i> , 2019, 189, 116246.	4.5	16
31	Semiclathrate based CO <sub>2</sub> capture from fuel gas mixture at ambient temperature: Effect of concentrations of tetra-n-butylammonium fluoride (TBAF) and kinetic additives. <i>Applied Energy</i> , 2018, 217, 377-389.	5.1	58
32	Heat Transfer Characteristics of a Volumetric Absorption Solar Collector using Nano-Encapsulated Phase Change Slurry. <i>Heat Transfer Engineering</i> , 2018, 39, 1487-1497.	1.2	13
33	Investigation of thermo-fluidic performance of phase change material slurry and energy transport characteristics. <i>Applied Energy</i> , 2018, 227, 643-654.	5.1	30
34	Effect of Microstructures on Superhydrophobic and Slippery Lubricant-Infused Porous Surfaces During Condensation Phase-Change. , 2018, , .		1
35	Water droplet impacting on overheated random Si nanowires. <i>International Journal of Heat and Mass Transfer</i> , 2018, 124, 307-318.	2.5	22
36	Nucleation Mechanisms of CO <sub>2</sub> Hydrate Reflected by Gas Solubility. <i>Scientific Reports</i> , 2018, 8, 10441.	1.6	17

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37	Melting heat transfer characteristics of a composite phase change material fabricated by paraffin and metal foam. <i>Applied Energy</i> , 2017, 185, 1971-1983.	5.1	346
38	Experimental and numerical investigation of a tube-in-tank latent thermal energy storage unit using composite PCM. <i>Applied Energy</i> , 2017, 190, 524-539.	5.1	150
39	Role of impregnated lubricant in enhancing thermosyphon performance. <i>International Journal of Heat and Mass Transfer</i> , 2017, 109, 1229-1238.	2.5	29
40	Hydraulic and heat transfer characteristics of slush hydrogen in a circular pipe under terrestrial and microgravity conditions. <i>International Journal of Heat and Mass Transfer</i> , 2017, 110, 482-495.	2.5	9
41	Mass transfer of a rising spherical bubble in the contaminated solution with chemical reaction and volume change. <i>International Journal of Heat and Mass Transfer</i> , 2017, 110, 43-57.	2.5	22
42	Enhanced Coalescence-Induced Droplet-Jumping on Nanostructured Superhydrophobic Surfaces in the Absence of Microstructures. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 35391-35403.	4.0	71
43	Heat transfer performance of a lubricant-infused thermosyphon at various filling ratios. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 725-736.	2.5	28
44	The Leidenfrost Phenomenon on Sub-Micron Tapered Pillars. , 2017, , .		3
45	Semiclathrate hydrate process for pre-combustion capture of CO <sub>2</sub> at near ambient temperatures. <i>Applied Energy</i> , 2017, 194, 267-278.	5.1	94
46	Systematic evaluation of semiclathrate-based pre-combustion CO <sub>2</sub> capture in presence of tetra-n-butylammonium fluoride (TBAF): effect of TBAF concentration and kinetic additives. <i>Energy Procedia</i> , 2017, 143, 506-511.	1.8	6
47	The Leidenfrost Phenomenon on Silicon Nanowires. , 2016, , .		3
48	Rheological and energy transport characteristics of a phase change material slurry. <i>Energy</i> , 2016, 106, 63-72.	4.5	40
49	Thermomechanical effects in supercritical binary fluids. <i>International Journal of Heat and Mass Transfer</i> , 2016, 99, 470-484.	2.5	6
50	Evolution of flow patterns and the associated heat and mass transfer characteristics during flow boiling in mini-/micro-channels. <i>Chemical Engineering Journal</i> , 2016, 306, 978-991.	6.6	26
51	Thermophysical properties and thermal characteristics of phase change emulsion for thermal energy storage media. <i>Energy</i> , 2016, 117, 562-568.	4.5	54
52	Impact of fixed bed reactor orientation, liquid saturation, bed volume and temperature on the clathrate hydrate process for pre-combustion carbon capture. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 35, 1499-1510.	2.1	29
53	Review of fundamental properties of CO <sub>2</sub> hydrates and CO <sub>2</sub> capture and separation using hydration method. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 53, 1273-1302.	8.2	189
54	Drag reduction and heat transfer characteristics of water flow through the tubes with superhydrophobic surfaces. <i>Energy Conversion and Management</i> , 2016, 113, 165-176.	4.4	41

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55	Conjugated heat and mass transfer during flow melting of a phase change material slurry in pipes. Energy, 2016, 99, 58-68.	4.5	18
56	Two-phase flow and heat transfer characteristics of tetra-n-butyl ammonium bromide clathrate hydrate slurry in horizontal 90° elbow pipe and U-pipe. International Journal of Heat and Mass Transfer, 2016, 97, 364-378.	2.5	23
57	Measurement of Latent Heat of Tetra-n-Butyl Ammonium Bromide Hydrate and Specific Enthalpy of Its Slurry. International Journal of Air-Conditioning and Refrigeration, 2015, 23, 1550025.	0.8	8
58	Study on the Optical Properties of Triangular Cavity Absorber for Parabolic Trough Solar Concentrator. International Journal of Photoenergy, 2015, 2015, 1-9.	1.4	13
59	Distribution of Energy Density and Optimization on the Surface of the Receiver for Parabolic Trough Solar Concentrator. International Journal of Photoenergy, 2015, 2015, 1-10.	1.4	3
60	How to enhance the effective thermal conductivity of composite material based on optimization method?. Energy, 2015, 87, 400-411.	4.5	10
61	Thermal Conductivity of Eutectic Nitrates and Nitrates/Expanded Graphite Composite as Phase Change Materials. Journal of Nanoscience and Nanotechnology, 2015, 15, 3135-3142.	0.9	11
62	Thermal Characterization of Lauricâ€“Stearic Acid/Expanded Graphite Eutectic Mixture as Phase Change Materials. Journal of Nanoscience and Nanotechnology, 2015, 15, 3288-3294.	0.9	17
63	Numerical and experimental study of heat transfer characteristics of a shell-tube latent heat storage system: Part II â€“ Discharging process. Energy, 2015, 80, 177-189.	4.5	36
64	A new study on the end loss effect for parabolic trough solar collectors. Energy, 2015, 82, 382-394.	4.5	28
65	A review of the recent advances in superhydrophobic surfaces and the emerging energy-related applications. Energy, 2015, 82, 1068-1087.	4.5	340
66	A numerical investigation of nucleate boiling at a constant surface temperature. Applied Thermal Engineering, 2015, 88, 248-257.	3.0	32
67	Experimental investigation of natural convection in a supercritical binary fluid. International Journal of Heat and Mass Transfer, 2015, 90, 922-930.	2.5	11
68	Experimental and numerical study of heat transfer performance of nitrate/expanded graphite composite PCM for solar energy storage. Energy Conversion and Management, 2015, 105, 272-284.	4.4	99
69	Experimental and Numerical Study of Heat Transfer Characteristics of a Paraffin/Metal Foam Composite PCM. Energy Procedia, 2015, 75, 3091-3097.	1.8	58
70	Experimental Investigation of Flow and Heat Transfer Characteristics in the Generation of Clathrate Hydrate Slurry. Heat Transfer Engineering, 2014, 35, 693-702.	1.2	7
71	Natural convection heat transfer of supercritical helium in a closed vertical cylinder. Cryogenics, 2014, 61, 120-126.	0.9	10
72	Structure optimization and performance experiments of a solar-powered finned-tube adsorption refrigeration system. Applied Energy, 2014, 113, 1293-1300.	5.1	46

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73	Research on the compensation of the end loss effect for parabolic trough solar collectors. Applied Energy, 2014, 115, 128-139.	5.1	50
74	Experimental Investigation on Heat Storage/Retrieval Characteristics of a Latent Heat Storage System. Heat Transfer Engineering, 2014, 35, 1084-1097.	1.2	15
75	Thermal conductivity measurements of a phase change material slurry under the influence of phase change. International Journal of Thermal Sciences, 2014, 78, 56-64.	2.6	23
76	Cold storage by tetra-n-butyl ammonium bromide clathrate hydrate slurry generated with different storage approaches at 40Åwt% initial aqueous solution concentration. International Journal of Refrigeration, 2014, 42, 77-89.	1.8	16
77	Phase equilibrium and morphology characteristics of hydrates formed by tetra-n-butyl ammonium chloride and tetra-n-butyl phosphonium chloride with and without CO <sub>2</sub> . Fluid Phase Equilibria, 2014, 361, 208-214.	1.4	42
78	Experimental and Numerical Investigations of Phase Change Heat Transfer Characteristics in Open-Cell Metal Foam Infiltrated with Eutectic Salt for Solar Energy Storage. , 2014, , .		1
79	Thermal characterization of nitrates and nitrates/expanded graphite mixture phase change materials for solar energy storage. Energy Conversion and Management, 2013, 73, 86-94.	4.4	114
80	Preparation and thermal characterization of paraffin/metal foam composite phase change material. Applied Energy, 2013, 112, 1357-1366.	5.1	488
81	Pressure drop and flow pattern of slush nitrogen in a horizontal pipe. AIChE Journal, 2013, 59, 1762-1773.	1.8	19
82	Experimental investigation of the heat transfer characteristics of a helium cryogenic thermosyphon. Cryogenics, 2013, 57, 95-103.	0.9	13
83	An overview of heat transfer near the liquid-gas critical point under the influence of the piston effect: Phenomena and theory. International Journal of Thermal Sciences, 2013, 71, 1-19.	2.6	32
84	Modeling the heat transfer characteristics of flow melting of phase change material slurries in the circular tubes. International Journal of Heat and Mass Transfer, 2013, 64, 874-881.	2.5	43
85	Heat transfer characteristics of thermosyphon with N <sub>2</sub> -Ar binary mixture working fluid. International Journal of Heat and Mass Transfer, 2013, 63, 204-215.	2.5	22
86	Pressure drop and heat transfer characteristics of tetra-n-butyl ammonium bromide clathrate hydrate slurry during flow melting and generating in a double-tube heat exchanger. Experimental Thermal and Fluid Science, 2013, 44, 227-234.	1.5	12
87	Solid fraction determination in cold storage by tetra-n-butyl ammonium bromide clathrate hydrate slurry. International Journal of Refrigeration, 2013, 36, 809-819.	1.8	22
88	Flow and Heat Transfer Characteristics of Liquid Nitrogen in Mini-/Microchannels. Heat Transfer Engineering, 2013, 34, 204-212.	1.2	10
89	An overview of fundamental studies and applications of phase change material slurries to secondary loop refrigeration and air conditioning systems. Renewable and Sustainable Energy Reviews, 2012, 16, 5021-5058.	8.2	109
90	Rayleigh-Bénard convection in a supercritical fluid along its critical isochore in a shallow cavity. International Journal of Heat and Mass Transfer, 2012, 55, 7151-7165.	2.5	20

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91	Numerical investigation of slush nitrogen flow in a horizontal pipe. <i>Chemical Engineering Science</i> , 2012, 73, 169-180.	1.9	34
92	Impact of cooling condition and filling ratio on heat transfer limit of cryogenic thermosyphon. <i>Cryogenics</i> , 2012, 52, 66-76.	0.9	21
93	Thermal conductivity measurement of the epoxies and composite material for low temperature superconducting magnet design. <i>Cryogenics</i> , 2011, 51, 534-540.	0.9	12
94	Thermal property measurement and heat transfer analysis of acetamide and acetamide/expanded graphite composite phase change material for solar heat storage. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 2246-2254.	3.0	106
95	Pressure drop and heat transfer characteristics of clathrate hydrate slurry in a plate heat exchanger. <i>International Journal of Refrigeration</i> , 2011, 34, 796-806.	1.8	22
96	Visual Study of Flow Pattern Evolution of Flow Boiling in a Microtube. <i>Heat Transfer Engineering</i> , 2011, 32, 1009-1018.	1.2	4
97	Forced flow and convective melting heat transfer of clathrate hydrate slurry in tubes. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 3745-3757.	2.5	104
98	On the transition from thermoacoustic convection to diffusion in a near-critical fluid. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 4832-4843.	2.5	19
99	Bubble growth, departure and the following flow pattern evolution during flow boiling in a mini-tube. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 4819-4831.	2.5	39
100	Preparation and thermal characterization of expanded graphite/paraffin composite phase change material. <i>Carbon</i> , 2010, 48, 2538-2548.	5.4	318
101	Thermoacoustic wave propagation and reflection near the liquid-gas critical point. <i>Physical Review E</i> , 2009, 79, 060103.	0.8	18
102	Two-phase flow characteristics of liquid nitrogen in vertically upward 0.5 and 1.0mm micro-tubes: Visualization studies. <i>Cryogenics</i> , 2009, 49, 565-575.	0.9	45
103	Investigation of solid-gas reaction heat transformer system with the consideration of multistep reactions. <i>AIChE Journal</i> , 2008, 54, 2464-2478.	1.8	16
104	Energy upgrading by solid-gas reaction heat transformer: A critical review. <i>Renewable and Sustainable Energy Reviews</i> , 2008, 12, 1302-1324.	8.2	45
105	Visualization of flow boiling of liquid nitrogen in a vertical mini-tube. <i>International Journal of Multiphase Flow</i> , 2008, 34, 333-351.	1.6	86
106	Composite Reactive Block for Heat Transformer System and Improvement of System Performance. <i>Journal of Chemical Engineering of Japan</i> , 2007, 40, 1275-1280.	0.3	16
107	Single-phase pressure drop and heat transfer characteristics of turbulent liquid nitrogen flow in micro-tubes. <i>International Journal of Heat and Mass Transfer</i> , 2007, 50, 1993-2001.	2.5	55
108	Flow boiling of liquid nitrogen in micro-tubes: Part I – The onset of nucleate boiling, two-phase flow instability and two-phase flow pressure drop. <i>International Journal of Heat and Mass Transfer</i> , 2007, 50, 4999-5016.	2.5	105

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109	Development and performance test of a cryoprobe with heat transfer enhancement configuration. <i>Cryogenics</i> , 2006, 46, 881-887.	0.9	6
110	Study of the transient thermal wave heat transfer in a channel immersed in a bath of superfluid helium. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 1384-1394.	2.5	24
111	Experimental Study of Boiling Phenomena of Liquid Nitrogen Around a Thin Wire Heater in Open Bath and Inside Capillary Tubes. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2006, 10, 359-378.	1.4	0
112	Transient measurement of temperature oscillation during noisy film boiling in superfluid helium II. <i>Science in China Series D: Earth Sciences</i> , 2001, 44, 27-32.	0.9	5
113	Non-planar and Non-linear Second Sound Waves in He II. <i>Chinese Physics Letters</i> , 2000, 17, 43-45.	1.3	4