

# Zan Wu

## List of Publications by Year in descending order

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112  
papers

3,371  
citations

126907

33  
h-index

155660

55  
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118  
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118  
docs citations

118  
times ranked

2135  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of hybrid nanofluid mixture in plate heat exchangers. <i>Experimental Thermal and Fluid Science</i> , 2016, 72, 190-196.	2.7	222
2	A brief review on convection heat transfer of fluids at supercritical pressures in tubes and the recent progress. <i>Applied Energy</i> , 2016, 162, 494-505.	10.1	213
3	A general correlation for evaporative heat transfer in micro/mini-channels. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 1778-1787.	4.8	191
4	A general correlation for adiabatic two-phase pressure drop in micro/mini-channels. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 2732-2739.	4.8	167
5	Pressure drop and convective heat transfer of water and nanofluids in a double-pipe helical heat exchanger. <i>Applied Thermal Engineering</i> , 2013, 60, 266-274.	6.0	145
6	Pressure drop and convective heat transfer of Al <sub>2</sub> O <sub>3</sub> /water and MWCNT/water nanofluids in a chevron plate heat exchanger. <i>International Journal of Heat and Mass Transfer</i> , 2015, 89, 620-626.	4.8	127
7	Application of ultrasound technology in the drying of food products. <i>Ultrasonics Sonochemistry</i> , 2020, 63, 104950.	8.2	110
8	On further enhancement of single-phase and flow boiling heat transfer in micro/minichannels. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 40, 11-27.	16.4	109
9	Mass transfer between phases in microchannels: A review. <i>Chemical Engineering and Processing: Process Intensification</i> , 2018, 127, 213-237.	3.6	105
10	A general criterion for evaporative heat transfer in micro/mini-channels. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 1967-1976.	4.8	102
11	Convective vaporization in micro-fin tubes of different geometries. <i>Experimental Thermal and Fluid Science</i> , 2013, 44, 398-408.	2.7	89
12	Condensation and evaporation heat transfer characteristics in horizontal smooth, herringbone and enhanced surface EHT tubes. <i>International Journal of Heat and Mass Transfer</i> , 2015, 85, 281-291.	4.8	88
13	Dimensionless analysis on liquid-liquid flow patterns and scaling law on slug hydrodynamics in cross-junction microchannels. <i>Chemical Engineering Journal</i> , 2018, 344, 604-615.	12.7	73
14	Pool boiling heat transfer of FC-72 on pin-fin silicon surfaces with nanoparticle deposition. <i>International Journal of Heat and Mass Transfer</i> , 2018, 126, 1019-1033.	4.8	68
15	Experimental comparative evaluation of a graphene nanofluid coolant in miniature plate heat exchanger. <i>International Journal of Thermal Sciences</i> , 2018, 130, 148-156.	4.9	65
16	Hydrodynamics and mass transfer in liquid-liquid non-circular microchannels: Comparison of two aspect ratios and three junction structures. <i>Chemical Engineering Journal</i> , 2017, 322, 328-338.	12.7	56
17	Experimental investigation of condensation in micro-fin tubes of different geometries. <i>Experimental Thermal and Fluid Science</i> , 2012, 37, 19-28.	2.7	55
18	A review on molten-salt-based and ionic-liquid-based nanofluids for medium-to-high temperature heat transfer. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 136, 1037-1051.	3.6	54

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19	Correlations for saturated critical heat flux in microchannels. International Journal of Heat and Mass Transfer, 2011, 54, 379-389.	4.8	52
20	Saturated pool boiling heat transfer of acetone and HFE-7200 on modified surfaces by electrophoretic and electrochemical deposition. Applied Energy, 2019, 249, 286-299.	10.1	52
21	Liquid-liquid flow patterns and slug hydrodynamics in square microchannels of cross-shaped junctions. Chemical Engineering Science, 2017, 174, 56-66.	3.8	51
22	A comprehensive review on liquid-liquid two-phase flow in microchannel: flow pattern and mass transfer. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	49
23	Flow patterns and slug scaling of liquid-liquid flow in square microchannels. International Journal of Multiphase Flow, 2019, 112, 27-39.	3.4	48
24	Generalized adiabatic pressure drop correlations in evaporative micro/mini-channels. Experimental Thermal and Fluid Science, 2011, 35, 866-872.	2.7	45
25	Pool boiling of HFE-7200 on nanoparticle-coating surfaces: Experiments and heat transfer analysis. International Journal of Heat and Mass Transfer, 2019, 133, 548-560.	4.8	45
26	Heat Transfer Correlations for Elongated Bubbly Flow in Flow Boiling Micro/Minichannels. Heat Transfer Engineering, 2016, 37, 985-993.	1.9	41
27	Convective Condensation Inside Horizontal Smooth and Microfin Tubes. Journal of Heat Transfer, 2014, 136, .	2.1	40
28	Aqueous carbon nanotube nanofluids and their thermal performance in a helical heat exchanger. Applied Thermal Engineering, 2016, 96, 364-371.	6.0	39
29	Heat transfer prediction and critical heat flux mechanism for pool boiling of NOVEC-649 on microporous copper surfaces. International Journal of Heat and Mass Transfer, 2019, 141, 818-834.	4.8	38
30	On Icing and Icing Mitigation of Wind Turbine Blades in Cold Climate. Journal of Energy Resources Technology, Transactions of the ASME, 2015, 137, .	2.3	36
31	Heat transfer to aviation kerosene flowing upward in smooth tubes at supercritical pressures. International Journal of Heat and Mass Transfer, 2015, 85, 1084-1094.	4.8	36
32	A Parametric Study of Hydrodynamic Cavitation Inside Globe Valves. Journal of Fluids Engineering, Transactions of the ASME, 2018, 140, .	1.5	35
33	Pool boiling heat transfer of N-pentane on micro/nanostructured surfaces. International Journal of Thermal Sciences, 2018, 130, 386-394.	4.9	35
34	The effect of the size of square microchannels on hydrodynamics and mass transfer during liquid-liquid slug flow. AIChE Journal, 2017, 63, 5019-5028.	3.6	34
35	A new predictive tool for saturated critical heat flux in micro/mini-channels: Effect of the heated length-to-diameter ratio. International Journal of Heat and Mass Transfer, 2011, 54, 2880-2889.	4.8	33
36	Correlations for prediction of the bubble departure radius on smooth flat surface during nucleate pool boiling. International Journal of Heat and Mass Transfer, 2019, 132, 699-714.	4.8	31

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37	Magnetic Field Effect on Thermal, Dielectric, and Viscous Properties of a Transformer Oil-Based Magnetic Nanofluid. <i>Energies</i> , 2019, 12, 4532.	3.1	30
38	Modified graphite filled natural rubber composites with good thermal conductivity. <i>Chinese Journal of Chemical Engineering</i> , 2015, 23, 853-859.	3.5	28
39	Heat Transfer Correlations for Single-Phase Flow, Condensation, and Boiling in Microfin Tubes. <i>Heat Transfer Engineering</i> , 2015, 36, 582-595.	1.9	28
40	Entropy generation analysis of fully-developed turbulent heat transfer flow in inward helically corrugated tubes. <i>Numerical Heat Transfer; Part A: Applications</i> , 2018, 73, 788-805.	2.1	27
41	Liquid-liquid two-phase flow patterns in ultra-shallow straight and serpentine microchannels. <i>Heat and Mass Transfer</i> , 2019, 55, 1095-1108.	2.1	25
42	Local heat transfer in subcooled flow boiling in a vertical mini-gap channel. <i>International Journal of Heat and Mass Transfer</i> , 2017, 110, 796-804.	4.8	23
43	Heat transfer correlations for jet impingement boiling over micro-pin-finned surface. <i>International Journal of Heat and Mass Transfer</i> , 2018, 126, 401-413.	4.8	22
44	Electrophoretic deposition surfaces to enhance HFE-7200 pool boiling heat transfer and critical heat flux. <i>International Journal of Thermal Sciences</i> , 2019, 146, 106107.	4.9	20
45	Slug Formation Analysis of Liquid-Liquid Two-Phase Flow in T-Junction Microchannels. <i>Journal of Thermal Science and Engineering Applications</i> , 2019, 11, .	1.5	20
46	Nanoparticle-Assisted Pool Boiling Heat Transfer on Micro-Pin-Fin Surfaces. <i>Langmuir</i> , 2021, 37, 1089-1101.	3.5	20
47	Comparison of heat transfer characteristics of aviation kerosene flowing in smooth and enhanced mini tubes at supercritical pressures. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2016, 26, 1289-1308.	2.8	19
48	Studies of gas-liquid two-phase flows in horizontal mini tubes using 3D reconstruction and numerical methods. <i>International Journal of Multiphase Flow</i> , 2020, 133, 103456.	3.4	19
49	Theoretical study of solvent effects on the decomposition of formic acid over a Co(111) surface. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 24726-24736.	7.1	16
50	Enhancement of loop heat pipe performance with the application of micro/nano hybrid structures. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 1248-1263.	4.8	14
51	Modeling natural convection heat transfer from perforated plates. <i>Journal of Zhejiang University: Science A</i> , 2012, 13, 353-360.	2.4	13
52	Breakup dynamics of low-density gas and liquid interface during Taylor bubble formation in a microchannel flow-focusing device. <i>Chemical Engineering Science</i> , 2020, 215, 115473.	3.8	13
53	Evaporative Annular Flow in Micro/Minichannels: A Simple Heat Transfer Model. <i>Journal of Thermal Science and Engineering Applications</i> , 2013, 5, .	1.5	12
54	A geometric study on shell side heat transfer and flow resistance of a six-start spirally corrugated tube. <i>Numerical Heat Transfer; Part A: Applications</i> , 2018, 73, 565-582.	2.1	11

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55	Convective heat transfer performance of aggregate-laden nanofluids. <i>International Journal of Heat and Mass Transfer</i> , 2016, 93, 1107-1115.	4.8	10
56	Thermophysical properties and convection heat transfer behavior of ionic liquid [C4mim][NTf2] at medium temperature in helically corrugated tubes. <i>Applied Thermal Engineering</i> , 2018, 142, 457-465.	6.0	10
57	Effects of a Dynamic Injection Flow Rate on Slug Generation in a Cross-Junction Square Microchannel. <i>Processes</i> , 2019, 7, 765.	2.8	10
58	Pool Boiling of NOVEC-649 on Microparticle-Coated and Nanoparticle-Coated Surfaces. <i>Heat Transfer Engineering</i> , 2021, 42, 1732-1747.	1.9	10
59	Toward computationally effective modeling and simulation of droplet formation in microchannel junctions. <i>Chemical Engineering Research and Design</i> , 2021, 166, 135-147.	5.6	10
60	Frictional Pressure Drop Correlations for Single-Phase Flow, Condensation, and Evaporation in Microfin Tubes. <i>Journal of Heat Transfer</i> , 2016, 138, .	2.1	9
61	Effects of Surfactant on Flow Boiling Heat Transfer of Ethylene Glycol/Water Mixtures in a Minichannel. <i>Heat Transfer Engineering</i> , 2016, 37, 1126-1135.	1.9	9
62	Numerical study on heat transfer enhancement for laminar flow in a tube with mesh conical frustum inserts. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017, 72, 21-39.	2.1	9
63	Numerical studies of gas-liquid Taylor flows in vertical capillaries using CuO/water nanofluids. <i>International Communications in Heat and Mass Transfer</i> , 2020, 116, 104665.	5.6	9
64	Heat Transfer Study of a Hybrid Smooth and Spirally Corrugated Tube. <i>Heat Transfer Engineering</i> , 2021, 42, 242-250.	1.9	9
65	An analysis of pool boiling heat transfer on nanoparticle-coated surfaces. <i>Energy Procedia</i> , 2019, 158, 5880-5887.	1.8	8
66	Heat transfer analysis on dimple geometries and arrangements in dimple jacketed heat exchanger. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019, 29, 2775-2791.	2.8	8
67	Flow-Pattern Based Heat Transfer Correlations for Stable Flow Boiling in Micro/Minichannels. <i>Journal of Heat Transfer</i> , 2016, 138, .	2.1	7
68	Effects of Graphene Ethylene Glycol/Water Nanofluids on the Performance of a Brazen Plate Heat Exchanger. <i>Journal of Nanofluids</i> , 2018, 7, 1069-1074.	2.7	7
69	Experimental study on heat transfer of nanofluids in a vertical tube at supercritical pressures. <i>International Communications in Heat and Mass Transfer</i> , 2015, 63, 54-61.	5.6	6
70	On Heat Transfer Issues for Wind Energy Systems. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2017, 139, .	2.3	6
71	An improved method to visualize two regions of interest synchronously in microfluidics. <i>Flow Measurement and Instrumentation</i> , 2020, 72, 101715.	2.0	6
72	Thermal Conductivity of Ionic Liquid-Based Nanofluids Containing Magnesium Oxide and Aluminum Oxide Nanoparticles. <i>Heat Transfer Engineering</i> , 2022, 43, 1806-1819.	1.9	6

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73	Pool Boiling Heat Transfer of Water on Copper Surfaces With Nanoparticles Coating. , 2017, , .		5
74	Thermal Characteristics of a Stratospheric Airship with Natural Convection and External Forced Convection. International Journal of Aerospace Engineering, 2019, 2019, 1-11.	0.9	5
75	Breakup dynamics of gas-liquid interface during Taylor bubble formation in a microchannel flow-focusing device. Experimental Thermal and Fluid Science, 2020, 113, 110043.	2.7	5
76	Dryout-type critical heat flux in vertical upward annular flow: effects of entrainment rate, initial entrained fraction and diameter. Heat and Mass Transfer, 2018, 54, 81-90.	2.1	4
77	Analysis of Fouling in Six-Start Spirally Corrugated Tubes. Heat Transfer Engineering, 2020, 41, 1885-1900.	1.9	4
78	Analysis on breakup dynamics of hydrogen taylor bubble formation in a cross-junction microchannel. International Journal of Hydrogen Energy, 2021, 46, 33438-33452.	7.1	4
79	High conversion hydrogen peroxide microchannel reactors: Design and two-phase flow instability investigation. Chemical Engineering Journal, 2021, 422, 130080.	12.7	4
80	CONVECTIVE CONDENSATION OF R410A IN MICRO-FIN TUBES. Journal of Enhanced Heat Transfer, 2012, 19, 515-525.	1.1	4
81	On Ice Accretion for Wind Turbines and Influence of Some Parameters. WIT Transactions on State-of-the-art in Science and Engineering, 2014, , 129-159.	0.0	4
82	A COMPARATIVE STUDY ON THERMAL CONDUCTIVITY AND RHEOLOGY PROPERTIES OF ALUMINA AND MULTI-WALLED CARBON NANOTUBE NANOFLUIDS. Frontiers in Heat and Mass Transfer, 0, 5, .	0.2	4
83	ANALYSIS OF NATURAL CONVECTION OF Cu AND TiO <sub>2</sub> NANOFLUIDS INSIDE NONCONVENTIONAL ENCLOSURES. Journal of Enhanced Heat Transfer, 2018, 25, 315-332.	1.1	4
84	Spiral Coil Inserts for Heat Transfer Enhancement in a Parallel-Plate Channel. Numerical Heat Transfer; Part A: Applications, 2014, 66, 756-772.	2.1	3
85	Influence of Physical Properties of Phases on Hydrodynamics and Mass Transfer Characteristics of a Liquid-Liquid Circular Microchannel. , 2016, , .		3
86	Liquid-Liquid Flow Patterns in Microchannels. , 2017, , .		3
87	Effects of Engineered Micro/Nanostructures on Nucleate Pool Boiling Heat Transfer. Nanoscience and Nanotechnology - Asia, 2017, 7, .	0.7	3
88	Pool Boiling Heat Transfer of N-Pentane and Acetone on Nanostructured Surfaces by Electrophoretic Deposition. , 2018, , .		2
89	Investigation of Mixed Convection in an Enclosure Filled with Nanofluids of Al <sub>2</sub> O <sub>3</sub> –Water and Graphene-Ethylene Glycol. Journal of Nanofluids, 2019, 8, 337-348.	2.7	2
90	Coating engineering for boiling heat transfer toward immersion cooling. Advances in Heat Transfer, 2021, 53, 97-158.	0.9	2

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91	Simple Flow-Pattern Based Heat Transfer Correlations for Flow Boiling in Micro/Minichannels. , 2014, , .		1
92	Two-Phase Flow Patterns in Microfluidic Cross-Shaped Junctions and Slug Hydrodynamics in the Dripping Regime. , 2017, , .		1
93	Investigation of Bubble Departure Radius in Subcooled Pool Boiling Under Microgravity Condition. , 2018, , .		1
94	The Hydraulic Cavitation Affected by Nanoparticles in Nanofluids. Computation, 2018, 6, 44.	2.0	1
95	Water-Silicone Oil Two-Phase Flow Hydrodynamics in a Square Glass Microchannel. , 2018, , .		1
96	Nucleate pool boiling heat transfer of acetone and HFE7200 on copper surfaces with nanoparticle coatings. Energy Procedia, 2019, 158, 5872-5879.	1.8	1
97	ENDWALL HEAT TRANSFER AT THE TURN SECTION IN A TWO-PASS SQUARE CHANNEL WITH AND WITHOUT RIBS. Journal of Enhanced Heat Transfer, 2013, 20, 321-332.	1.1	1
98	Generalized Adiabatic Two-Phase Pressure Drop Correlation in Evaporative Micro/Mini-Channels. , 2009, , .		0
99	Correlations for Saturated Critical Heat Flux in Microchannels. , 2010, , .		0
100	An Analysis of Saturated Critical Heat Flux in Micro/Mini-Channels. , 2010, , .		0
101	Condensation Pressure Drop and Heat Transfer in 5-mm-OD Micro-Fin Tubes. , 2012, , .		0
102	Frictional Pressure Drop Correlations for Single-Phase Flow, Condensation and Evaporation in Microfin Tubes. , 2014, , .		0
103	Effect of Entrainment on Liquid Film Dryout in Vertical Upward Annular Flow. , 2016, , .		0
104	Additional Remarks. , 2016, , 119-121.		0
105	Effects of Inlet Arrangements on Liquid-Liquid Flow Patterns in Cross-Junction Square Microchannels. , 2017, , .		0
106	Heat transfer study on a hybrid smooth and spirally corrugated tube. MATEC Web of Conferences, 2018, 240, 01038.	0.2	0
107	Effects of nanoparticles on hydraulic cavitation. MATEC Web of Conferences, 2018, 240, 03004.	0.2	0
108	Water-Oil Flow in Square Microchannels With a Crossed Junction. , 2018, , .		0

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109	Theoretical Model of Droplets Motions on Solid Surface With Radial Wettability and Evaporation Rate Gradients. , 2018, , .		0
110	NUMERICAL STUDY ON FLOW AND CONVECTIVE HEAT TRANSFER OF AVIATION KEROSENE IN A VERTICAL MINITUBE AT SUPERCRITICAL PRESSURES. Computational Thermal Sciences, 2015, 7, 375-384.	0.9	0
111	Passive Techniques. , 2016, , 81-109.		0
112	Bubble dynamics and mechanistic boiling heat transfer prediction on a scored copper surface. Journal of Physics: Conference Series, 2021, 2116, 012009.	0.4	0