

Huihe Qiu

List of Publications by Year in descending order

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106
papers

2,336
citations

257450

24
h-index

233421

45
g-index

111
all docs

111
docs citations

111
times ranked

1902
citing authors

#	ARTICLE	IF	CITATIONS
1	Do surfaces with mixed hydrophilic and hydrophobic areas enhance pool boiling?. Applied Physics Letters, 2010, 97, .	3.3	352
2	Experimental investigation of droplet dynamics and heat transfer in spray cooling. Experimental Thermal and Fluid Science, 2003, 27, 829-838.	2.7	182
3	Detailed measurements in a swirling particulate two-phase flow by a phase-Doppler anemometer. International Journal of Heat and Fluid Flow, 1991, 12, 20-28.	2.4	135
4	Field investigation of a photonic multi-layered TiO ₂ passive radiative cooler in sub-tropical climate. Renewable Energy, 2020, 146, 44-55.	8.9	97
5	Experimental studies of spray evaporation in turbulent flow. International Journal of Heat and Fluid Flow, 1998, 19, 10-22.	2.4	92
6	Characterization of particle-laden, confined swirling flows by phase-doppler anemometry and numerical calculation. International Journal of Multiphase Flow, 1993, 19, 1093-1127.	3.4	89
7	A reliable method for determining the measurement volume size and particle mass fluxes using phase-Doppler anemometry. Experiments in Fluids, 1992, 13, 393-404.	2.4	87
8	Heat transfer characteristics of plug-in oscillating heat pipe with binary-fluid mixtures for electric vehicle battery thermal management. International Journal of Heat and Mass Transfer, 2019, 135, 746-760.	4.8	82
9	Particle concentration measurements by phase-doppler anemometry in complex dispersed two-phase flows. Experiments in Fluids, 1995, 18, 187-198.	2.4	53
10	Droplet impingement on nano-textured superhydrophobic surface: Experimental and numerical study. Applied Surface Science, 2019, 491, 160-170.	6.1	46
11	Internal flow patterns of an evaporating multicomponent droplet on a flat surface. International Journal of Thermal Sciences, 2016, 100, 10-19.	4.9	40
12	High-resolution data processing for phase-Doppler measurements in a complex two-phase flow. Measurement Science and Technology, 1991, 2, 455-463.	2.6	38
13	Microstructured wettability pattern for enhancing thermal performance in an ultrathin vapor chamber. Case Studies in Thermal Engineering, 2021, 25, 100906.	5.7	37
14	An asymmetrical vapor chamber with multiscale micro/nanostructured surfaces. International Communications in Heat and Mass Transfer, 2014, 58, 40-44.	5.6	36
15	Bubble dynamics and heat transfer on a wettability patterned surface. International Journal of Heat and Mass Transfer, 2015, 88, 544-551.	4.8	36
16	Effects of flexibility and aspect ratio on the aerodynamic performance of flapping wings. Bioinspiration and Biomimetics, 2018, 13, 036001.	2.9	34
17	Multicomponent Droplet Evaporation on Chemical Micro-Patterned Surfaces. Scientific Reports, 2017, 7, 41897.	3.3	33
18	Experimental investigation of a novel asymmetric heat spreader with nanostructure surfaces. Experimental Thermal and Fluid Science, 2014, 52, 197-204.	2.7	32

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19	Automated feedback control of body temperature for small animal studies with MR microscopy. IEEE Transactions on Biomedical Engineering, 1997, 44, 1107-1113.	4.2	31
20	Evaporation and wetting behavior of silver-graphene hybrid nanofluid droplet on its porous residue surface for various mixing ratios. International Journal of Heat and Mass Transfer, 2020, 153, 119618.	4.8	31
21	Subcooled flow boiling heat transfer in a microchannel with chemically patterned surfaces. International Journal of Heat and Mass Transfer, 2019, 140, 587-597.	4.8	29
22	Effects of aspect ratio on flapping wing aerodynamics in animal flight. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 776-786.	3.4	27
23	Microfluidic production of nanoscale perfluorocarbon droplets as liquid contrast agents for ultrasound imaging. Lab on A Chip, 2017, 17, 3504-3513.	6.0	27
24	Coalescence and Breakup of Oppositely Charged Droplets. Scientific Reports, 2014, 4, 7123.	3.3	26
25	Experimental and theoretical study of a water-vapor chamber thermal diode. International Journal of Heat and Mass Transfer, 2019, 138, 173-183.	4.8	26
26	High-performance icephobic droplet rebound surface with nanoscale doubly reentrant structure. International Journal of Heat and Mass Transfer, 2019, 133, 341-351.	4.8	26
27	New Generation of Phase-Doppler Instruments for particle velocity, size and concentration measurements. Particle and Particle Systems Characterization, 1994, 11, 43-54.	2.3	24
28	Experiments on Vertical Turbulent Plane Jets in Water of Finite Depth. Journal of Engineering Mechanics - ASCE, 2001, 127, 18-26.	2.9	24
29	Interfacial thermal conductance in rapid contact solidification process. International Journal of Heat and Mass Transfer, 2002, 45, 2043-2053.	4.8	24
30	Integrating micromachined fast response temperature sensor array in a glass microchannel. Sensors and Actuators A: Physical, 2005, 122, 189-195.	4.1	23
31	Aerodynamic performance of a free-flying dragonfly—A span-resolved investigation. Physics of Fluids, 2020, 32, 041903.	4.0	22
32	Two novel Doppler signal detection methods for laser Doppler and phase Doppler anemometry. Measurement Science and Technology, 1994, 5, 769-778.	2.6	20
33	Characterization of acoustic droplet formation in a microfluidic flow-focusing device. Physical Review E, 2011, 84, 066310.	2.1	19
34	Method of phase-Doppler anemometry free from the measurement-volume effect. Applied Optics, 1999, 38, 2737.	2.1	18
35	Aggregation-Induced Emission Luminogen-Based Direct Visualization of Concentration Gradient Inside an Evaporating Binary Sessile Droplet. ACS Applied Materials & Interfaces, 2017, 9, 29157-29166.	8.0	18
36	Hybrid nanofluid spray cooling performance and its residue surface effects: Toward thermal management of high heat flux devices. Applied Thermal Engineering, 2022, 211, 118454.	6.0	18

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37	Fringe probing of liquid film thickness of a plug bubble in a micropipe. <i>Measurement Science and Technology</i> , 2005, 16, 594-600.	2.6	17
38	Aerodynamic characteristics along the wing span of a dragonfly<i>Pantala Flavescens</i>. <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	17
39	Continuous-Flow Electrokinetic-Assisted Plasmapheresis by Using Three-Dimensional Microelectrodes Featuring Sidewall Undercuts. <i>Analytical Chemistry</i> , 2016, 88, 5197-5204.	6.5	16
40	Measurements of multicomponent microdroplet evaporation by using Rainbow Refractometer and PDA. <i>Experiments in Fluids</i> , 2006, 40, 60-69.	2.4	15
41	Bubble Dynamics and Heat Transfer During Pool Boiling on Wettability Patterned Surfaces. <i>Heat Transfer Engineering</i> , 2018, 39, 663-671.	1.9	15
42	Noncontact rebound and fission of oppositely charged droplets. <i>Experiments in Fluids</i> , 2015, 56, 1.	2.4	14
43	Energy consumption modelling of a passive hybrid system for office buildings in different climates. <i>Energy</i> , 2022, 239, 121914.	8.8	14
44	Development of ultrathin thermal ground plane with multiscale micro/nanostructured wicks. <i>Case Studies in Thermal Engineering</i> , 2020, 22, 100738.	5.7	13
45	Effects of non-wetting fraction and pitch distance in flow boiling heat transfer in a wettability-patterned microchannel. <i>International Journal of Heat and Mass Transfer</i> , 2022, 190, 122753.	4.8	13
46	Effects of Aspect Ratio on Vortex Dynamics of a Rotating Wing. <i>AIAA Journal</i> , 2017, 55, 4074-4082.	2.6	12
47	Modeling of Substrate Remelting, Flow, and Resolidification in Microcasting. <i>Numerical Heat Transfer; Part A: Applications</i> , 2005, 48, 987-1008.	2.1	11
48	Acoustic microstreaming for droplet breakup in a microflow-focusing device. <i>Applied Physics Letters</i> , 2010, 97, 133111.	3.3	11
49	The Importance of Flapping Kinematic Parameters in the Facilitation of the Different Flight Modes of Dragonflies. <i>Journal of Bionic Engineering</i> , 2021, 18, 419-427.	5.0	11
50	Eliminating background noise effect in micro-resolution particle image velocimetry. <i>Applied Optics</i> , 2002, 41, 6849.	2.1	10
51	Implications of wing pitching and wing shape on the aerodynamics of a dragonfly. <i>Journal of Fluids and Structures</i> , 2021, 101, 103208.	3.4	10
52	High accuracy optical particle sizing in phase-Doppler anemometry. <i>Measurement Science and Technology</i> , 2000, 11, 142-151.	2.6	9
53	Measurements of interfacial film thickness for immiscible liquid-liquid slug/droplet flows. <i>Measurement Science and Technology</i> , 2005, 16, 1374-1380.	2.6	9
54	Droplet pinch-off in acoustically actuated flow-focusing devices. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 125003.	2.6	9

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55	Minimum deviation of spatial frequency in large-particle sizing. <i>Applied Optics</i> , 1998, 37, 6787.	2.1	8
56	The Impact of Thermal Contact Conductance on the Spreading and Solidification of a Droplet on a Substrate. <i>Heat Transfer Engineering</i> , 2006, 27, 68-80.	1.9	8
57	Investigation of the patterned surface modification on 3D vortex flow generation in a micropipe. <i>Journal of Micromechanics and Microengineering</i> , 2008, 18, 115030.	2.6	8
58	Spray Evaporation in Turbulent Flow: Numerical Calculations and Detailed Experiments by Phase-Doppler Anemometry. <i>Oil & Gas Science & Technology</i> , 1993, 48, 677-695.	0.2	8
59	Droplet Evaporation Dynamics on Hydrophobic Network Surfaces. <i>Langmuir</i> , 2022, 38, 6395-6403.	3.5	8
60	Optimization of optical parameters for particle sizing in multiphase flows. <i>Optics and Lasers in Engineering</i> , 1998, 30, 3-15.	3.8	7
61	Fringe probing of an evaporating microdroplet on a hot surface. <i>International Journal of Heat and Mass Transfer</i> , 2002, 45, 4141-4150.	4.8	7
62	The impact of high order refraction on optical microbubble sizing in multiphase flows. <i>Experiments in Fluids</i> , 2004, 36, 100-107.	2.4	7
63	Experimental study on rapid solidification process using a novel ultrasound technique. <i>Experimental Thermal and Fluid Science</i> , 2005, 30, 17-26.	2.7	7
64	Prediction of Solder Bump Formation in Solder Jet Packaging Process. <i>IEEE Transactions on Components and Packaging Technologies</i> , 2006, 29, 486-493.	1.3	7
65	Droplet impact dynamics and heat transfer on nanostructured doubly reentrant cavity under freezing temperature. <i>Physics of Fluids</i> , 2021, 33, .	4.0	7
66	Eliminating high-order scattering effects in optical microbubble sizing. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2003, 20, 690.	1.5	6
67	Acoustically driven micro-thermal-bubble dynamics in a microspace. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 095012.	2.6	6
68	Thermal Bubble Dynamics Under the Effects of an Acoustic Field. <i>Heat Transfer Engineering</i> , 2011, 32, 636-647.	1.9	6
69	Bubble dynamics under a horizontal micro heater array. <i>Journal of Micromechanics and Microengineering</i> , 2009, 19, 095008.	2.6	5
70	Effects of acoustic vibration on microheater-induced vapor bubble incipience in a microchannel. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 105015.	2.6	5
71	Effects of gradual flexibility and trailing edge shape on propulsive performance of pitching fins. <i>Physics of Fluids</i> , 2021, 33, .	4.0	5
72	2D fringe probing of liquid film dynamics of a plug bubble in a micropipe. <i>Measurement Science and Technology</i> , 2009, 20, 025402.	2.6	4

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73	Measurements of interfacial dynamics of gas-liquid displacement in a capillary. Measurement Science and Technology, 2016, 27, 065204.	2.6	4
74	Bubble Dynamics and Flow Boiling Characteristics in a Chemically Patterned Microchannel. , 0, , .		4
75	A fourier optics method for the simulation of measurement-volume-effect by the slit constraint. Particle and Particle Systems Characterization, 1997, 14, 295-303.	2.3	3
76	Measuring the progression of foreign-body reaction to silicone implants using in vivo MR microscopy. IEEE Transactions on Biomedical Engineering, 1998, 45, 921-927.	4.2	3
77	High-resolution optical particle sizing in an optimized orientation. Optical Engineering, 1999, 38, 2104.	1.0	3
78	Effect of refractive index in optical particle sizing by using spatial frequency method. Optics Communications, 2000, 178, 199-210.	2.1	3
79	A novel optical method in micro drop deformation measurements. Optics and Lasers in Engineering, 2001, 35, 187-198.	3.8	3
80	Characterization of Variable Thermal Contact Resistance in Rapid Contact Solidification Utilizing Novel Ultrasound Technique. Journal of Heat Transfer, 2007, 129, 1036-1045.	2.1	3
81	Implications of dragonfly's muscle control on flapping kinematics and aerodynamics. Physics of Fluids, 2022, 34, .	4.0	3
82	The effect of second order refraction on optical bubble sizing in multiphase flows. Journal of Mechanical Science and Technology, 2001, 15, 1801-1807.	0.4	2
83	Fringe probing of gas-liquid interfacial film in a microcapillary tube. Applied Optics, 2005, 44, 4648.	2.1	2
84	Flow boiling heat transfer in wettability patterned microchannels. , 2017, , .		2
85	Bio-inspired patterned surface for submicron particle deposition in a fully developed turbulent duct. Building Simulation, 2020, 13, 1111-1123.	5.6	2
86	Optimization of optical particle sizing in multiphase flows. Optical Engineering, 2001, 40, 2586.	1.0	1
87	3D Flow Dynamics in a Patterned Round Microchannel. , 2009, , .		1
88	A nanostructure patterned heat spreader for on-chip thermal management of high-power LEDs. , 2012, , .		1
89	Unsteady Vortex Interactions for Performance Enhancement of a Free Flying Dragonfly. , 2017, , .		1
90	Flow Over the Tip Region of a Flexible Cantilever Wing With the Effect of Angle of Attack. Journal of Fluids Engineering, Transactions of the ASME, 2019, 141, .	1.5	1

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91	Effect of gas ionization on interphase interaction of adjacent oppositely charged droplets. Experiments in Fluids, 2020, 61, 1.	2.4	1
92	Thermal Rectification Enhancement of Coalescence“Jumping Phase Transition Thermal Diodes using Cu“Al ₂ O ₃ Hybrid Nanofluids. Advanced Engineering Materials, 0, , 2100958.	3.5	1
93	Experimental Investigation on Silver-Graphene Hybrid Nanofluid Droplet Evaporation and Wetting Characteristics of its Nanostructured Droplet Residue. , 2019, , .		1
94	Multiscale Micro/Nanostructured Heat Spreaders for Thermal Management of Power Electronics. , 0, , .		1
95	The 9th Asian Symposium on Visualization. Journal of Visualization, 2007, 10, 405-410.	1.8	0
96	Acoustic Driven Micro Thermal Bubble Dynamics in a Microchannel. , 2009, , .		0
97	Thermal Bubble Dynamics Under the Effect of Acoustic Vibration. , 2009, , .		0
98	Two-dimensional fringe probing of transient liquid temperatures in a mini space. Review of Scientific Instruments, 2011, 82, 055104.	1.3	0
99	Editorial for The 10th International Symposium on Measurement Techniques for Multiphase Flows (ISMTMF 2017). Measurement Science and Technology, 2019, 30, 020101.	2.6	0
100	Experimental and numerical investigation of submicron particle deposition enhancement by patterned surface. IOP Conference Series: Materials Science and Engineering, 2019, 609, 042018.	0.6	0
101	Droplet Dynamics and Heat Transfer on Wettability Patterned Surfaces. , 0, , .		0
102	Aerodynamic Analysis of a Bioinspired Multilayer Flexible Wing. , 0, , .		0
103	Interfacial Flows of Contact Line Dynamics and Liquid Displacement in a Circular Microchannel. , 0, , .		0
104	Droplet Dynamics on Nanostructured Doubly Reentrant Surfaces. , 0, , .		0
105	10.1063/1.5145199.1. , 2020, , .		0
106	Copper-alumina hybrid nanofluid droplet phase change dynamics over heated plain copper and porous residue surfaces. International Journal of Thermal Sciences, 2022, 182, 107795.	4.9	0