

Anthony M Jacobi

List of Publications by Year in descending order

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105
papers

3,010
citations

159358

30
h-index

168136

53
g-index

105
all docs

105
docs citations

105
times ranked

2411
citing authors

#	ARTICLE	IF	CITATIONS
1	Falling-film evaporation on horizontal tubes—a critical review. <i>International Journal of Refrigeration</i> , 2005, 28, 635-653.	1.8	286
2	A Review of Metal Foam and Metal Matrix Composites for Heat Exchangers and Heat Sinks. <i>Heat Transfer Engineering</i> , 2012, 33, 991-1009.	1.2	199
3	Flow-boiling heat transfer of R-134a-based nanofluids in a horizontal tube. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 944-951.	2.5	179
4	Heat Transfer Model for Evaporation of Elongated Bubble Flows in Microchannels. <i>Journal of Heat Transfer</i> , 2002, 124, 1131-1136.	1.2	176
5	Ultrasonication effects on thermal and rheological properties of carbon nanotube suspensions. <i>Nanoscale Research Letters</i> , 2012, 7, 127.	3.1	157
6	Creating micro-scale surface topology to achieve anisotropic wettability on an aluminum surface. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 1571-1578.	1.5	128
7	Correcting and extending the Boomsma—Poulikakos effective thermal conductivity model for three-dimensional, fluid-saturated metal foams. <i>International Communications in Heat and Mass Transfer</i> , 2010, 37, 575-580.	2.9	113
8	Optimization of shell-and-tube heat exchangers conforming to TEMA standards with designs motivated by constructal theory. <i>Energy Conversion and Management</i> , 2014, 78, 468-476.	4.4	85
9	Summary and evaluation on single-phase heat transfer enhancement techniques of liquid laminar and turbulent pipe flow. <i>International Journal of Heat and Mass Transfer</i> , 2015, 88, 735-754.	2.5	85
10	A comparison of four numerical modeling approaches for enhanced shell-and-tube heat exchangers with experimental validation. <i>Applied Thermal Engineering</i> , 2014, 65, 369-383.	3.0	68
11	Geometric classification of open-cell metal foams using X-ray micro-computed tomography. <i>Materials Characterization</i> , 2013, 75, 35-43.	1.9	62
12	Drainage of frost melt water from vertical brass surfaces with parallel microgrooves. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 1596-1605.	2.5	57
13	Air-Side Flow and Heat Transfer in Compact Heat Exchangers: A Discussion of Enhancement Mechanisms. <i>Heat Transfer Engineering</i> , 1998, 19, 29-41.	1.2	56
14	A mathematical model for frost growth and densification on flat surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2014, 77, 604-611.	2.5	52
15	Wetting Behavior and Drainage of Water Droplets on Microgrooved Brass Surfaces. <i>Langmuir</i> , 2012, 28, 13441-13451.	1.6	51
16	Air-side data interpretation and performance analysis for heat exchangers with simultaneous heat and mass transfer: Wet and frosted surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2005, 48, 5089-5102.	2.5	49
17	Heat transfer correlations for single-phase flow in plate heat exchangers based on experimental data. <i>Applied Thermal Engineering</i> , 2017, 113, 1547-1557.	3.0	49
18	Equilibrium Contact Angles of Liquid Droplets on Ideal Rough Solids. <i>Langmuir</i> , 2011, 27, 14910-14918.	1.6	46

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19	Hydrophobic and oleophobic re-entrant steel microstructures fabricated using micro electrical discharge machining. <i>Journal of Micromechanics and Microengineering</i> , 2014, 24, 095020.	1.5	46
20	Fouling of enhanced tubes for condensers used in cooling tower systems: A literature review. <i>Applied Thermal Engineering</i> , 2015, 79, 74-87.	3.0	43
21	Air-Side Heat Transfer and Friction Correlations for Flat-Tube Louver-Fin Heat Exchangers. <i>Journal of Heat Transfer</i> , 2009, 131, .	1.2	42
22	Effects of a countercurrent gas flow on falling-film mode transitions between horizontal tubes. <i>Experimental Thermal and Fluid Science</i> , 2009, 33, 1216-1225.	1.5	41
23	Experimental study on frosting/defrosting characteristics of microgrooved metal surfaces. <i>International Journal of Refrigeration</i> , 2015, 50, 44-56.	1.8	41
24	A surface embossing technique to create micro-grooves on an aluminum fin stock for drainage enhancement. <i>Journal of Micromechanics and Microengineering</i> , 2009, 19, 035026.	1.5	39
25	Heat transfer characteristics of multiwall carbon nanotube suspensions (MWCNT nanofluids) in intertube falling-film flow. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 3186-3195.	2.5	39
26	Study of frost properties and frost melt water drainage on microgrooved brass surfaces in multiple frost/defrost/refrost cycles. <i>Applied Thermal Engineering</i> , 2014, 64, 453-461.	3.0	38
27	Thermal-hydraulic performance of metal foam heat exchangers under dry operating conditions. <i>Applied Thermal Engineering</i> , 2017, 119, 222-232.	3.0	38
28	The Air-Side Thermal-Hydraulic Performance of Flat-Tube Heat Exchangers With Louvered, Wavy, and Plain Fins Under Dry and Wet Conditions. <i>Journal of Heat Transfer</i> , 2009, 131, .	1.2	35
29	Effects of surface chemistry and groove geometry on wetting characteristics and droplet motion of water condensate on surfaces with rectangular microgrooves. <i>International Journal of Heat and Mass Transfer</i> , 2013, 57, 629-641.	2.5	33
30	Effects of microgroove geometry on the early stages of frost formation and frost properties. <i>Applied Thermal Engineering</i> , 2013, 56, 91-100.	3.0	33
31	Summary and evaluation on the heat transfer enhancement techniques of gas laminar and turbulent pipe flow. <i>International Journal of Heat and Mass Transfer</i> , 2017, 111, 467-483.	2.5	32
32	Dynamic dip testing as a method to assess the condensate drainage behavior from the air-side surface of compact heat exchangers. <i>Experimental Thermal and Fluid Science</i> , 2005, 29, 957-970.	1.5	30
33	Aluminum surface wettability changes by pool boiling of nanofluids. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2016, 506, 438-444.	2.3	29
34	A thermodynamic basis for predicting falling-film mode transitions. <i>International Journal of Refrigeration</i> , 2014, 43, 123-132.	1.8	27
35	Application of temperature-sensitive paint for surface temperature measurement in heat transfer enhancement applications. <i>Journal of Mechanical Science and Technology</i> , 2007, 21, 1253-1262.	0.7	26
36	Condensation, Frost Formation, and Frost Melt-Water Retention Characteristics on Microgrooved Brass Surfaces Under Natural Convection. <i>Heat Transfer Engineering</i> , 2013, 34, 1147-1155.	1.2	24

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37	Issues affecting the reliability of dynamic dip testing as a method to assess the condensate drainage behavior from the air-side surface of dehumidifying heat exchangers. <i>Experimental Thermal and Fluid Science</i> , 2008, 32, 1512-1522.	1.5	23
38	Rational approaches for combining redundant, independent measurements to minimize combined experimental uncertainty. <i>Experimental Thermal and Fluid Science</i> , 2010, 34, 720-724.	1.5	23
39	Effect of inclination on pressure drop and flow regimes in large flattened-tube steam condensers. <i>Applied Thermal Engineering</i> , 2017, 123, 498-513.	3.0	23
40	Scalable and Resilient Etched Metallic Micro- and Nanostructured Surfaces for Enhanced Flow Boiling. <i>ACS Applied Nano Materials</i> , 2021, 4, 6648-6658.	2.4	23
41	Temperature measurements in convective heat transfer flows using dual-broadband, pure-rotational coherent anti-Stokes Raman spectroscopy (CARS). <i>Experimental Thermal and Fluid Science</i> , 1999, 19, 13-26.	1.5	22
42	Time-Resolved Thermal Boundary-Layer Structure in a Pulsatile Reversing Channel Flow. <i>Journal of Heat Transfer</i> , 2001, 123, 655-664.	1.2	19
43	Simultaneous heat and mass transfer to air from a compact heat exchanger with water spray precooling and surface deluge cooling. <i>Applied Thermal Engineering</i> , 2014, 63, 528-540.	3.0	17
44	The Potential Impact of Nanofluid Enhancements on the Performance of Heat Exchangers. <i>Heat Transfer Engineering</i> , 2012, 33, 31-41.	1.2	16
45	Effects of Liquid Supply Method on Falling-Film Mode Transitions on Horizontal Tubes. <i>Heat Transfer Engineering</i> , 2013, 34, 562-579.	1.2	16
46	Effect of catalyst and substrate on the moisture diffusivity of silica-aerogel-coated metal foams. <i>International Journal of Heat and Mass Transfer</i> , 2014, 73, 634-644.	2.5	16
47	Effect of catalyst used in the sol-gel process on the microstructure and adsorption/desorption performance of silica aerogels. <i>International Journal of Heat and Mass Transfer</i> , 2014, 74, 25-34.	2.5	15
48	Falling-film heat exchangers used in desalination systems: A review. <i>International Journal of Heat and Mass Transfer</i> , 2022, 185, 122407.	2.5	15
49	Filmwise condensation from a flowing vapor onto isothermal, axisymmetric bodies. <i>Journal of Thermophysics and Heat Transfer</i> , 1992, 6, 321-325.	0.9	13
50	Low-Cost Launch of Payloads to Low Earth Orbit. <i>Journal of Spacecraft and Rockets</i> , 2006, 43, 696-698.	1.3	13
51	An Experimental Study of the Friction Factor and Mass Transfer Performance of an Offset-Strip Fin Array at Very High Reynolds Numbers. <i>Journal of Heat Transfer</i> , 2007, 129, 1134-1140.	1.2	13
52	Experimental Investigation of Wetting Anisotropy on Microgrooved Brass Surfaces. <i>Procedia Engineering</i> , 2014, 90, 611-617.	1.2	12
53	Impact of air and water vapor environments on the hydrophobicity of surfaces. <i>Journal of Colloid and Interface Science</i> , 2015, 453, 177-185.	5.0	12
54	Investigation on Intertube Falling-Film Heat Transfer and Mode Transitions of Aqueous-Alumina Nanofluids. <i>Journal of Heat Transfer</i> , 2011, 133, .	1.2	11

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55	Transmission loss analysis of single-inlet/double-outlet (SIDO) and double-inlet/single-outlet (DISO) circular chamber mufflers by using Green’s function method. Applied Acoustics, 2013, 74, 1499-1510.	1.7	11
56	Method for evaluating the effect of inclination on the performance of large flattened-tube steam condensers with visualization of flow regimes. Applied Thermal Engineering, 2018, 138, 934-941.	3.0	11
57	Effect of inclination on heat transfer and flow regimes in large flattened-tube steam condensers. Applied Thermal Engineering, 2019, 148, 999-1006.	3.0	11
58	Using Thermodynamic Availability to Predict the Transitional Film Reynolds Number between the Droplet and Jet Modes in Falling Liquid between Horizontal Tubes. International Journal of Heat and Mass Transfer, 2021, 164, 120557.	2.5	11
59	Dynamic Wetting Behavior and Water Drops on Microgrooved Surfaces. Heat Transfer Engineering, 2013, 34, 1088-1098.	1.2	10
60	A generalized coefficient of performance for conditioning moist air. International Journal of Refrigeration, 2005, 28, 784-790.	1.8	9
61	A Simple Air-Side Data Analysis Method for Partially Wet Flat-Tube Heat Exchangers. Heat Transfer Engineering, 2011, 32, 133-140.	1.2	9
62	Applied CFD and Experiment for Automotive Compact Heat Exchanger Development. , 0, , .		7
63	Using Thermodynamic Availability to Predict the Transitional Film Reynolds Number between the Jet and Sheet Modes in Falling Liquid between Horizontal Tubes. International Journal of Heat and Mass Transfer, 2020, 161, 120246.	2.5	7
64	Vapor shear and pressure gradient effects during filmwise condensation from a flowing vapor onto a sphere. Experimental Thermal and Fluid Science, 1992, 5, 548-555.	1.5	6
65	Freezing Front Propagation on Microgrooved Substrates. Journal of Thermophysics and Heat Transfer, 2010, 24, 199-207.	0.9	6
66	Conjugate Thermal Analysis of Air-Cooled Discrete Flush-Mounted Heat Sources in a Horizontal Channel. Journal of Electronic Packaging, Transactions of the ASME, 2011, 133, .	1.2	6
67	Air-Side Heat Transfer Performance of Louver Fin and Multitube Heat Exchanger for Direct Methanol Fuel Cell Cooling Application. Journal of Fuel Cell Science and Technology, 2014, 11, .	0.8	6
68	PowerFlow: A Toolbox for Modeling and Simulation of Aircraft Systems. , 2015, , .		6
69	Convective Boiling of R-134a Near the Micro-Macroscale Transition Inside a Vertical Brazed Plate Heat Exchanger. Journal of Heat Transfer, 2018, 140, .	1.2	6
70	Heat transfer and flow regimes in large flattened-tube steam condensers. Applied Thermal Engineering, 2019, 148, 722-733.	3.0	6
71	Analytical Prediction of Transmission Loss in Distorted Circular Chamber Mufflers With Extended Inlet/Outlet Ports by Using a Regular Perturbation Method. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.0	5
72	Flow visualization of two-phase R-245fa at low mass flux in a plate heat exchanger near the micro-macroscale transition. Science and Technology for the Built Environment, 2019, 25, 1292-1301.	0.8	5

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73	A run-around heat exchanger system to improve the energy efficiency of a home appliance using hot water. Applied Thermal Engineering, 2009, 29, 3110-3117.	3.0	4
74	Determination of Transmission Loss in Slightly Distorted Circular Mufflers Using a Regular Perturbation Method. Journal of Vibration and Acoustics, Transactions of the ASME, 2014, 136, .	1.0	4
75	A parametric study on mass diffusion coefficient of desiccants for dehumidification applications: Silica aerogels and silica aerogel coatings on metal foams. Science and Technology for the Built Environment, 2015, 21, 637-647.	0.8	4
76	Enhancing Heavy Lift Booster Performance by Exploiting Zeotropic Condensation of Air. , 2004, , .		2
77	Compact Heat Exchangers for Air Liquefaction in Propulsion Applications. , 2005, , .		2
78	Analysis of Sound Attenuation in Elliptical Chamber Mufflers by Using Greenâ€™s Functions. , 2011, , .		2
79	Numerical and Experimental Investigation of Laminar Channel Flow With a Transparent Wall. Journal of Heat Transfer, 2011, 133, .	1.2	2
80	Transient pressure drop cross-correlation during flow boiling of R134a in parallel minichannels. Science and Technology for the Built Environment, 2015, 21, 545-554.	0.8	2
81	Metal Surface Wettability Manipulation by Nanoparticle Deposition During Nanofluid Boiling. , 2015, , .		2
82	Thermal-Hydraulic Performance of R-134a Boiling at Low Mass Fluxes in a Small Vertical Brazed Plate Heat Exchanger. , 2017, , .		2
83	Water Condensate Retention and â€™Wetâ€™ Performance in Automotive Evaporators. , 2001, , .		1
84	Minimum-Mass Heat Exchanger Design for Hypersonic Vehicles. , 2003, , .		1
85	The Case for Horizontal Launch of Large Exploration Payloads. , 2005, , .		1
86	Numerical Modeling of Liquid Drop Spreading Behavior on Inclined Surfaces. , 2009, , .		1
87	Heat Transfer of Falling Film Flowing Around a Horizontal Tube With Nanofluids. , 2009, , .		1
88	Professor John Richard Thome on his 60th birthday. International Journal of Heat and Mass Transfer, 2013, 58, 1-2.	2.5	1
89	Effect of Catalyst Used in the Sol-Gel Process on the Microstructure and Adsorption/Desorption Performance of Silica Aerogels. , 2013, , .		1
90	Interactions Between Parallel Minichannels During Flow Boiling of R134A. , 2014, , .		1

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91	Interactions Between Parallel Unevenly Heated Minichannels During Flow Boiling of R134A. Heat Transfer Engineering, 2016, 37, 921-937.	1.2	1
92	The Impact of Base Metal on the Thermal-Hydraulic Performance of Metal Foam Heat Exchanger for Cooling and Dehumidification Applications. , 2017, , .		1
93	A Mesoscale World. HVAC and R Research, 2002, 8, 133-134.	0.9	0
94	Air-Side Heat Transfer Enhancement by a Novel Winglet-Type Vortex Generator Array in a Round-Tube Plain-Fin Heat Exchanger. , 2009, , .		0
95	Conjugate Mixed Convection With Surface Radiation and Substrate Conduction in Laminar Channel Flow With Discrete Flush-Mounted Heat Sources. , 2010, , .		0
96	An Experimental Study of Condensate Retention on the Air Side of Flat-Tube Heat Exchangers. , 2010, , .		0
97	Conjugate Mixed Convection With Surface Radiation and Substrate Conduction in Laminar Channel Flow With Discrete Flush-Mounted Heat Sources. , 2010, , .		0
98	Investigation of Surface Convection Enhancement by a V-Formation Winglet Array Using Infrared Thermography. Journal of Heat Transfer, 2011, 133, .	1.2	0
99	Thermo-Responsive Polymer Grafted Aluminum Surface to Actively Modulate Water Wettability. , 2015, , .		0
100	Water-Repellent Slippery Surfaces for HVAC&R Systems. , 2015, , .		0
101	Thermodynamic Analysis of the Transition Between Slug and Annular Flow in Minichannels. , 2015, , .		0
102	Dehumidification Performance of Mass Exchangers Consisting of Silica Aerogel Coated Metal Foams. , 2016, , .		0
103	Effect of Inclination on Heat Transfer in Large Flattened-Tube Steam Condensers. , 2017, , .		0
104	Maximum Likelihood Method for Energy Balance Error Correction in Heat Exchanger Data. , 2017, , .		0
105	Wetting on Anisotropic Surfaces. , 2018, , 265-291.		0