

Barbosa Jr Jr

List of Publications by Year in descending order

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133
papers

2,720
citations

218677

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docs citations

145
times ranked

1398
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental data and Cubic-Equation-Of-State calculations of CO ₂ /R-161 Vapor-Liquid equilibrium. Journal of Chemical Thermodynamics, 2022, 165, 106635.	2.0	4
2	Predicting thermal expansion pressure buildup in a deepwater oil well with an annulus partially filled with nitrogen. Journal of Petroleum Science and Engineering, 2022, 208, 109275.	4.2	12
3	A lumped-element magnetic refrigerator model. Applied Thermal Engineering, 2022, 204, 117918.	6.0	11
4	Influence of Heat Exchanger Design on the Thermal Performance of a Domestic Wine Cooler Driven by a Magnetic Refrigeration System. Anais Da Academia Brasileira De Ciencias, 2022, 94, e20200563.	0.8	7
5	Magnetocaloric properties of spheroidal La(Fe,Mn,Si) ₁₃ H. $\frac{1}{y} = \frac{1}{x} + \frac{1}{z}$ granules and their performance in epoxy-bonded active magnetic regenerators. Applied Thermal Engineering, 2021, 183, 116185.	6.0	31
6	A magnetic wine cooler prototype. International Journal of Refrigeration, 2021, 122, 110-121.	3.4	25
7	A comparison of parallel and colliding jet arrays in a compact vapour compression heat sink for electronics cooling. Applied Thermal Engineering, 2021, 195, 117217.	6.0	9
8	An internally consistent procedure to characterize single carbon number fractions for phase equilibrium of petroleum mixtures: Application to Brazilian pre-salt reservoir fluids. Journal of Petroleum Science and Engineering, 2021, , 109723.	4.2	1
9	Analysis and optimization of air coolers using multiple-stage thermoelectric modules arranged in counter-current flow. International Journal of Refrigeration, 2020, 110, 19-27.	3.4	14
10	Design trade-offs for an active magnetic regenerator device. Applied Thermal Engineering, 2020, 165, 114467.	6.0	22
11	Numerical investigation of refrigerant outgassing in the screw pump of a hermetic reciprocating compressor oil supply system. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2020, , 095440892095260.	2.5	3
12	Overview on Magnetic Refrigeration. , 2020, , .		1
13	Performance Assessment and Layer Fraction Optimization of Gd-Y Multilayer Regenerators for Near Room-Temperature Magnetic Cooling. International Journal of Air-Conditioning and Refrigeration, 2020, 28, 2050027.	0.7	4
14	Quantifying interfacial parameters of upward and downward annular flow condensation from high-speed visualization. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	1.6	2
15	Numerical analysis of the influence of magnetic field waveforms on the performance of active magnetic regenerators. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	1.6	6
16	Phase equilibrium and liquid viscosity data for R-290/POE ISO 22 mixtures between 283 and 353 K. International Journal of Refrigeration, 2020, 114, 79-87.	3.4	10
17	Dielectric Constant of Mixtures of Carbon Dioxide and n-Dodecane Between 283 K and 343 K. International Journal of Thermophysics, 2020, 41, 1.	2.1	5
18	Addendum to Dielectric Constant of Mixtures of Carbon dioxide and n-Dodecane Between 283 K and 343 K, Int. J. Thermophysics 41, 26, 2020. Complementary Results for Mixtures of Carbon dioxide and Squalane Between 283 K and 343 K. International Journal of Thermophysics, 2020, 41, 1.	2.1	1

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19	Time scaling of frost accretion and the square-root-of-time rule. <i>International Communications in Heat and Mass Transfer</i> , 2019, 108, 104281.	5.6	7
20	Phase Equilibrium and Liquid Viscosity of CO ₂ + n-Dodecane Mixtures between 283 and 353 K. <i>Journal of Chemical & Engineering Data</i> , 2019, 64, 3375-3384.	1.9	15
21	Use of peripheral fins for R-290 charge reduction in split-type residential air-conditioners. <i>International Journal of Refrigeration</i> , 2019, 106, 1-6.	3.4	7
22	Numerical analysis of R-290/POE ISO 22 condensers based on the second law and SEER rating. <i>International Journal of Refrigeration</i> , 2018, 88, 441-450.	3.4	3
23	Influence of inlet flow maldistribution and carryover losses on the performance of thermal regenerators. <i>Applied Thermal Engineering</i> , 2018, 133, 472-482.	6.0	23
24	Experimental investigation of different fluid flow profiles in a rotary multi-bed active magnetic regenerator device. <i>International Journal of Refrigeration</i> , 2018, 91, 46-54.	3.4	36
25	Intermittent flow initiation in a horizontal tube: quantitative visualization and CFD analysis. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2018, 40, 1.	1.6	9
26	A compact refrigeration system based on multijet sprays for electronics thermal management. <i>Experimental Thermal and Fluid Science</i> , 2018, 97, 180-191.	2.7	12
27	Thermal performance of peripheral-finned tube evaporators under frosting. <i>International Journal of Heat and Mass Transfer</i> , 2018, 116, 194-207.	4.8	8
28	Influence of the flow rate waveform and mass imbalance on the performance of active magnetic regenerators. Part II: Numerical simulation. <i>International Journal of Refrigeration</i> , 2018, 93, 159-168.	3.4	20
29	Influence of the flow rate waveform and mass imbalance on the performance of active magnetic regenerators. Part I: Experimental analysis. <i>International Journal of Refrigeration</i> , 2018, 93, 236-248.	3.4	26
30	Effect of jet length and ambient temperature on the performance of a two-phase jet impingement heat sink refrigeration system. <i>International Journal of Refrigeration</i> , 2017, 75, 331-342.	3.4	9
31	Thermal-hydraulic behavior and influence of carryover losses in oscillating-flow regenerators. <i>International Journal of Thermal Sciences</i> , 2017, 113, 89-99.	4.9	16
32	Modeling transient churn-annular flows in a long vertical tube. <i>International Journal of Multiphase Flow</i> , 2017, 89, 399-412.	3.4	18
33	Performance Assessment of Single and Multiple Jet Impingement Configurations in a Refrigeration-Based Compact Heat Sink for Electronics Cooling. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2017, 139, .	1.8	10
34	Performance assessment of different porous matrix geometries for active magnetic regenerators. <i>Applied Energy</i> , 2017, 187, 847-861.	10.1	71
35	Fabrication and thermal analysis of epoxy resin-carbon fiber fabric composite plate-coil heat exchangers. <i>Applied Thermal Engineering</i> , 2017, 127, 1451-1460.	6.0	11
36	Analytical solution of concentric two-pole Halbach cylinders as a preliminary design tool for magnetic refrigeration systems. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 444, 87-97.	2.3	14

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37	A Numerical Study on the Thermal Behavior of Wellbores. SPE Production and Operations, 2017, 32, 564-574.	0.6	12
38	Novel two-phase jet impingement heat sink for active cooling of electronic devices. Applied Thermal Engineering, 2017, 112, 952-964.	6.0	24
39	Entropy Generation Minimization Analysis of Active Magnetic Regenerators. Anais Da Academia Brasileira De Ciencias, 2017, 89, 717-743.	0.8	7
40	Using electrovalves as a flow distribution system for an active magnetic regenerator. , 2017, , .		2
41	Magnetic heat pumps: An overview of design principles and challenges. Science and Technology for the Built Environment, 2016, 22, 507-519.	1.7	54
42	Onset of flow reversal in upflow condensation in an inclinable tube. Experimental Thermal and Fluid Science, 2016, 77, 55-70.	2.7	13
43	Thermal hydraulic evaluation of oscillating-flow regenerators using water: Experimental analysis of packed beds of spheres. International Journal of Heat and Mass Transfer, 2016, 99, 918-930.	4.8	24
44	Development of a novel rotary magnetic refrigerator. International Journal of Refrigeration, 2016, 68, 187-197.	3.4	75
45	Performance evaluation of an active magnetic regenerator for cooling applications part II: Mathematical modeling and thermal losses. International Journal of Refrigeration, 2016, 72, 206-217.	3.4	48
46	Analysis of a variable speed air conditioner considering the R-290/POE ISO 22 mixture effect. Applied Thermal Engineering, 2016, 108, 650-659.	6.0	13
47	A Numerical Study on the Thermal Behavior of Wellbores. , 2016, , .		1
48	Performance evaluation of an active magnetic regenerator for cooling applications part I: Experimental analysis and thermodynamic performance. International Journal of Refrigeration, 2016, 72, 192-205.	3.4	57
49	Two-phase jet impingement heat sink integrated with a compact vapor compression system for electronics cooling. , 2016, , .		1
50	Performance evaluation of a magnetic refrigeration system. Science and Technology for the Built Environment, 2016, 22, 534-543.	1.7	18
51	The effect of the lubricating oil on heat transfer in a hermetic reciprocating compressor. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2016, 38, 189-208.	1.6	4
52	TRANSIENT MODEL AND ENERGY ASSESSMENT OF A DIGITAL SOLENOID VALVE SYSTEM FOR A MAGNETIC REFRIGERATOR. , 2016, , .		2
53	Influence of refrigerant solubility and surface geometry on the wetting properties of lubricating oil. International Journal of Refrigeration, 2015, 59, 157-167.	3.4	1
54	Experimental investigation on the prediction of liquid loading initiation in gas wells using a long vertical tube. Journal of Natural Gas Science and Engineering, 2015, 26, 1515-1529.	4.4	22

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55	Experimental investigation of two-phase flashing flows of a binary mixture of infinite relative volatility in a Venturi tube. <i>Experimental Thermal and Fluid Science</i> , 2015, 64, 152-163.	2.7	22
56	Design of nested Halbach cylinder arrays for magnetic refrigeration applications. <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 395, 109-122.	2.3	52
57	Thermal Design of a Spray-Based Heat Sink Integrated With a Compact Vapor Compression Cooling System for Removal of High Heat Fluxes. <i>Heat Transfer Engineering</i> , 2015, 36, 1203-1217.	1.9	3
58	Magnetocaloric effect and H gradient in bulk La(Fe,Si) ₁₃ Hy magnetic refrigerants obtained by HDSH. <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 386, 125-128.	2.3	13
59	Refrigerant desorption and foaming in mixtures of HFC-134a and HFO-1234yf and a polyol ester lubricating oil. <i>International Journal of Refrigeration</i> , 2015, 53, 69-79.	3.4	8
60	Entropy Generation Minimization analysis of oscillating-flow regenerators. <i>International Journal of Heat and Mass Transfer</i> , 2015, 87, 347-358.	4.8	30
61	Liquid transport during gas flow transients applied to liquid loading in long vertical pipes. <i>Experimental Thermal and Fluid Science</i> , 2015, 68, 652-662.	2.7	18
62	Relative permittivity of mixtures of R-134a and R-1234yf and a polyol ester lubricating oil. <i>International Journal of Refrigeration</i> , 2015, 49, 141-150.	3.4	14
63	Infrared thermal imaging analysis of a 1-kW variable capacity compressor frequency inverter. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2015, 37, 275-284.	1.6	3
64	Modeling of Thermomagnetic Phenomena in Active Magnetocaloric Regenerators. <i>Journal of Thermal Science and Engineering Applications</i> , 2014, 6, .	1.5	30
65	Experimental assessment of the thermal-hydraulic performance of packed-sphere oscillating-flow regenerators using water. <i>Experimental Thermal and Fluid Science</i> , 2014, 57, 324-334.	2.7	27
66	Experimental and numerical results of a high frequency rotating active magnetic refrigerator. <i>International Journal of Refrigeration</i> , 2014, 37, 92-98.	3.4	58
67	Prediction of refrigerant-lubricant viscosity using the general PC-SAFT friction theory. <i>International Journal of Refrigeration</i> , 2014, 45, 92-99.	3.4	11
68	Developing air-water flow downstream of a vertical 180° return bend. <i>International Journal of Multiphase Flow</i> , 2014, 67, 32-41.	3.4	14
69	Convection-driven absorption of R-1234yf in lubricating oil. <i>International Journal of Refrigeration</i> , 2014, 44, 151-160.	3.4	23
70	Pressure drop and gas holdup in air-water flow in 180° return bends. <i>International Journal of Multiphase Flow</i> , 2014, 61, 83-93.	3.4	13
71	Entropy Generation Minimization Analysis of Passive and Active Magnetocaloric Regenerators. , 2014, , .		1
72	Axial development of annular, churn and slug flows in a long vertical tube. <i>International Journal of Multiphase Flow</i> , 2013, 57, 38-48.	3.4	56

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73	Analytical and CFD modeling of the fluid flow in an eccentric-tube centrifugal oil pump for hermetic compressors. <i>International Journal of Refrigeration</i> , 2013, 36, 1905-1915.	3.4	12
74	Performance analysis of a rotary active magnetic refrigerator. <i>Applied Energy</i> , 2013, 111, 669-680.	10.1	72
75	Synthesis of Room-Temperature Magnetic Refrigerants Based on La-Fe-Si by a Novel Process. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 4626-4629.	2.1	6
76	Comparison of metal foam and louvered fins as air-side heat transfer enhancement media for miniaturized condensers. <i>Applied Thermal Engineering</i> , 2013, 51, 334-337.	6.0	12
77	Experimental evaluation of spray cooling of R-134a on plain and enhanced surfaces. <i>International Journal of Refrigeration</i> , 2013, 36, 527-533.	3.4	19
78	Modeling the stiction effect in automatic compressor valves. <i>International Journal of Refrigeration</i> , 2013, 36, 1916-1924.	3.4	15
79	A departure-function approach to calculate thermodynamic properties of refrigerant-oil mixtures. <i>International Journal of Refrigeration</i> , 2013, 36, 972-979.	3.4	11
80	Modeling Transient Churn-Annular Flows in a Long Vertical Pipe. , 2013, , .		0
81	Modeling of Thermo-Magnetic Phenomena in Active Magnetic Regenerators. , 2013, , .		1
82	A State-of-the-Art Review of Compact Vapor Compression Refrigeration Systems and Their Applications. <i>Heat Transfer Engineering</i> , 2012, 33, 356-374.	1.9	57
83	Experimental and Theoretical Analysis of CO ₂ Absorption in Polyolester Oil Using the PC-SAFT Equation of State to Account for Nonideal Effects. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 1027-1035.	3.7	4
84	Optimization of peripheral finned-tube evaporators using entropy generation minimization. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 7838-7846.	4.8	31
85	Dynamics of gas bubble growth in oil-refrigerant mixtures under isothermal depressurization. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2012, 34, 155-166.	1.6	6
86	Spray cooling of plain and copper-foam enhanced surfaces. <i>Experimental Thermal and Fluid Science</i> , 2012, 39, 198-206.	2.7	20
87	Heat transfer and pressure drop characteristics of peripheral-finned tube heat exchangers. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 2835-2843.	4.8	10
88	Thermodynamic comparison of Peltier, Stirling, and vapor compression portable coolers. <i>Applied Energy</i> , 2012, 91, 51-58.	10.1	82
89	Performance of microchannel condensers with metal foams on the air-side: Application in small-scale refrigeration systems. <i>Applied Thermal Engineering</i> , 2012, 36, 152-160.	6.0	35
90	A 2D hybrid model of the fluid flow and heat transfer in a reciprocating active magnetic regenerator. <i>International Journal of Refrigeration</i> , 2012, 35, 98-114.	3.4	34

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91	Assessment of demagnetization phenomena in the performance of an active magnetic regenerator. International Journal of Refrigeration, 2012, 35, 1043-1054.	3.4	25
92	Air-side heat transfer and pressure drop in spiral wire-on-tube condensers. International Journal of Refrigeration, 2012, 35, 939-951.	3.4	18
93	Experimental mapping of the thermodynamic losses in vapor compression refrigeration systems. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2011, 33, 159-165.	1.6	17
94	Performance of Vertical Transient Two-Phase Flow Models Applied to Liquid Loading in Gas Wells. , 2011, , .		5
95	Fluid flow in a screw pump oil supply system for reciprocating compressors. International Journal of Refrigeration, 2011, 34, 74-83.	3.4	23
96	Air-side heat transfer and pressure drop characteristics of accelerated flow evaporators. International Journal of Refrigeration, 2011, 34, 484-497.	3.4	16
97	Absorption of isobutane (R-600a) in lubricant oil. Chemical Engineering Science, 2011, 66, 1906-1915.	3.8	10
98	COP-based optimization of accelerated flow evaporators for household refrigeration applications. Applied Thermal Engineering, 2011, 31, 129-135.	6.0	15
99	Experimental evaluation of a Gd-based linear reciprocating active magnetic regenerator test apparatus. International Journal of Refrigeration, 2011, 34, 1518-1526.	3.4	52
100	Recent Developments in Vapor Compression Technologies for Small Scale Refrigeration Applications. , 2011, , .		1
101	Air-Side Heat Transfer and Pressure Drop Characteristics of Peripheral Fin Heat Exchangers. , 2010, , .		2
102	Mini-channel evaporator/heat pipe assembly for a chip cooling vapor compression refrigeration system. International Journal of Refrigeration, 2010, 33, 1402-1412.	3.4	21
103	Solubility, density and viscosity of mixtures of isobutane (R-600a) and a linear alkylbenzene lubricant oil. Fluid Phase Equilibria, 2010, 292, 7-12.	2.5	21
104	Viscosity behavior of mixtures of CO ₂ and lubricant oil. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2010, 32, 454-459.	1.6	4
105	Modeling of state and thermodynamic cycle properties of HFO-1234yf using a cubic equation of state. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2010, 32, 461-467.	1.6	6
106	Analytical solution of single screw extrusion applicable to intermediate values of screw channel aspect ratio. Journal of Food Engineering, 2009, 92, 152-156.	5.2	21
107	A study of frost growth and densification on flat surfaces. Experimental Thermal and Fluid Science, 2009, 33, 371-379.	2.7	189
108	Phase and volumetric behaviour of mixtures of carbon dioxide (R-744) and synthetic lubricant oils. Journal of Supercritical Fluids, 2009, 50, 6-12.	3.2	9

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109	A study of the air-side heat transfer and pressure drop characteristics of tube-fin "no-frost"™ evaporators. Applied Energy, 2009, 86, 1484-1491.	10.1	37
110	Analysis of oil pumping in a reciprocating compressor. Applied Thermal Engineering, 2009, 29, 3118-3123.	6.0	29
111	Role of the Thermodynamics, Heat Transfer, and Fluid Mechanics of Lubricant Oil in Hermetic Reciprocating Compressors. Heat Transfer Engineering, 2009, 30, 533-548.	1.9	22
112	A study of frost nucleation on flat surfaces. Experimental Thermal and Fluid Science, 2008, 32, 1710-1715.	2.7	106
113	Prediction of refrigerant absorption and onset of natural convection in lubricant oil. International Journal of Refrigeration, 2008, 31, 1231-1240.	3.4	9
114	Solubility, density and viscosity of a mixture of R-600a and polyol ester oil. International Journal of Refrigeration, 2008, 31, 34-44.	3.4	29
115	Experimental and Theoretical Analysis of Refrigerant Absorption in Lubricant Oil. HVAC and R Research, 2008, 14, 141-158.	0.6	11
116	Flow boiling of water in a vertical tube at sub-atmospheric pressures. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2007, 29, .	1.6	3
117	Modeling absorption of pure refrigerants and refrigerant mixtures in lubricant oil. International Journal of Refrigeration, 2006, 29, 773-780.	3.4	17
118	A THERMODYNAMIC NON-EQUILIBRIUM SLUG FLOW MODEL EXPLAINS ENHANCEMENT OF BOILING HEAT TRANSFER IN WATER AT LOW PRESSURES. , 2006, , .		0
119	Measurements of the air flow field in the freezer compartment of a top-mount no-frost refrigerator: the effect of temperature. International Journal of Refrigeration, 2005, 28, 774-783.	3.4	22
120	Angiotensin I converting enzyme genotype affects ventricular remodelling in children with aortic coarctation. Heart, 2005, 91, 367-368.	2.9	5
121	A Thermodynamic Nonequilibrium Slug Flow Model. Journal of Heat Transfer, 2005, 127, 323-331.	2.1	12
122	Prediction of pressure drop in refrigerant"lubricant oil flows with high contents of oil and refrigerant outgassing in small diameter tubes. International Journal of Refrigeration, 2004, 27, 129-139.	3.4	19
123	A note on the influence of droplet interchange on evaporation and condensation of multicomponent mixtures in annular flow. International Journal of Heat and Mass Transfer, 2003, 46, 2505-2509.	4.8	8
124	High-speed visualisation of nucleate boiling in vertical annular flow. International Journal of Heat and Mass Transfer, 2003, 46, 5153-5160.	4.8	24
125	Forced convective boiling of steam"water in a vertical annulus at high qualities. Experimental Thermal and Fluid Science, 2002, 26, 65-75.	2.7	11
126	Liquid entrainment, droplet concentration and pressure gradient at the onset of annular flow in a vertical pipe. International Journal of Multiphase Flow, 2002, 28, 943-961.	3.4	83

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127	Forced convective boiling of ternary mixtures at high qualities. International Journal of Heat and Mass Transfer, 2002, 45, 2655-2665.	4.8	13
128	Improved Annular Flow Modelling of Pure Fluids and Multicomponent Mixtures. Chemical Engineering Research and Design, 2002, 80, 261-266.	5.6	2
129	Visualisation and modelling studies of churn flow in a vertical pipe. International Journal of Multiphase Flow, 2001, 27, 2105-2127.	3.4	61
130	Forced convective boiling of binary mixtures in annular flow. Part I: liquid phase mass transport. International Journal of Heat and Mass Transfer, 2001, 44, 1465-1474.	4.8	19
131	Forced convective boiling of binary mixtures in annular flow. Part II: heat and mass transfer. International Journal of Heat and Mass Transfer, 2001, 44, 1475-1484.	4.8	25
132	A STUDY OF DRYOUT IN ANNULAR FLOW OF SINGLE COMPONENT HYDROCARBONS AND THEIR MIXTURES. Multiphase Science and Technology, 2000, 12, 19.	0.5	4
133	An experimental study of a nanoparticle-assisted dielectric fluid in natural convection for subsea cooling applications. Journal of Thermal Analysis and Calorimetry, 0, , 1.	3.6	1