Jahar Sarkar

List of Publications by Year in descending order

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71532 66234 6,568 135 42 76 citations h-index g-index papers 135 135 135 3530 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	A review on hybrid nanofluids: Recent research, development and applications. Renewable and Sustainable Energy Reviews, 2015, 43, 164-177.	8.2	916
2	A critical review on convective heat transfer correlations of nanofluids. Renewable and Sustainable Energy Reviews, 2011, 15, 3271-3277.	8.2	278
3	Optimization of a transcritical CO2 heat pump cycle for simultaneous cooling and heating applications. International Journal of Refrigeration, 2004, 27, 830-838.	1.8	274
4	Second law analysis of supercritical CO2 recompression Brayton cycle. Energy, 2009, 34, 1172-1178.	4.5	219
5	Ejector enhanced vapor compression refrigeration and heat pump systems—A review. Renewable and Sustainable Energy Reviews, 2012, 16, 6647-6659.	8.2	198
6	Review and future trends of supercritical CO2 Rankine cycle for low-grade heat conversion. Renewable and Sustainable Energy Reviews, 2015, 48, 434-451.	8.2	198
7	Optimization of recompression S-CO2 power cycle with reheating. Energy Conversion and Management, 2009, 50, 1939-1945.	4.4	184
8	Operating characteristics of transcritical CO2 heat pump for simultaneous water cooling and heating. Archives of Thermodynamics, 2011, 33, 23-40.	1.0	163
9	Performance comparison of the plate heat exchanger using different nanofluids. Experimental Thermal and Fluid Science, 2013, 49, 141-151.	1.5	151
10	Heat transfer and pressure drop characteristics of CeO2/water nanofluid in plate heat exchanger. Applied Thermal Engineering, 2013, 57, 24-32.	3.0	128
11	Optimization of ejector-expansion transcritical CO2 heat pump cycle. Energy, 2008, 33, 1399-1406.	4.5	119
12	Discrete phase numerical model and experimental study of hybrid nanofluid heat transfer and pressure drop in plate heat exchanger. International Communications in Heat and Mass Transfer, 2018, 91, 262-273.	2.9	119
13	Improving the performance of refrigeration systems by using nanofluids: A comprehensive review. Renewable and Sustainable Energy Reviews, 2018, 82, 3656-3669.	8.2	119
14	Simulation of a transcritical CO2 heat pump cycle for simultaneous cooling and heating applications. International Journal of Refrigeration, 2006, 29, 735-743.	1.8	112
15	Numerical investigation of heat transfer and fluid flow in plate heat exchanger using nanofluids. International Journal of Thermal Sciences, 2014, 85, 93-103.	2.6	107
16	Optimization of a CO2–C3H8 cascade system for refrigeration and heating. International Journal of Refrigeration, 2005, 28, 1284-1292.	1.8	101
17	Numerical and experimental investigations on heat transfer and pressure drop characteristics of Al2O3-TiO2 hybrid nanofluid in minichannel heat sink with different mixture ratio. Powder Technology, 2019, 345, 717-727.	2.1	99
18	Particle concentration levels of various nanofluids in plate heat exchanger for best performance. International Journal of Heat and Mass Transfer, 2015, 89, 1110-1118.	2.5	97

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19	Optimization of two-stage transcritical carbon dioxide heat pump cycles. International Journal of Thermal Sciences, 2007, 46, 180-187.	2.6	92
20	Review on passive daytime radiative cooling: Fundamentals, recent researches, challenges and opportunities. Renewable and Sustainable Energy Reviews, 2020, 133, 110263.	8.2	84
21	Particle ratio optimization of Al2O3-MWCNT hybrid nanofluid in minichannel heat sink for best hydrothermal performance. Applied Thermal Engineering, 2020, 165, 114546.	3.0	81
22	Performance optimization of transcritical CO2 cycle with parallel compression economization. International Journal of Thermal Sciences, 2010, 49, 838-843.	2.6	77
23	Two-phase numerical simulation of hybrid nanofluid heat transfer in minichannel heat sink and experimental validation. International Communications in Heat and Mass Transfer, 2018, 91, 239-247.	2.9	76
24	Experimentation on effect of particle ratio on hydrothermal performance of plate heat exchanger using hybrid nanofluid. Applied Thermal Engineering, 2019, 162, 114309.	3.0	75
25	Transcritical CO2 heat pump systems: exergy analysis including heat transfer and fluid flow effects. Energy Conversion and Management, 2005, 46, 2053-2067.	4.4	72
26	Thermodynamic analysis and optimization of a novel N2O–CO2 cascade system for refrigeration and heating. International Journal of Refrigeration, 2009, 32, 1077-1084.	1.8	71
27	Assessment of blends of CO2 with butane and isobutane as working fluids for heat pump applications. International Journal of Thermal Sciences, 2009, 48, 1460-1465.	2.6	70
28	Steady-State Energetic and Exergetic Performances of Single-Phase Natural Circulation Loop With Hybrid Nanofluids. Journal of Heat Transfer, 2019, 141, .	1.2	68
29	Geometric parameter optimization of ejector-expansion refrigeration cycle with natural refrigerants. International Journal of Energy Research, 2010, 34, 84-94.	2.2	63
30	Performance optimization of transcritical CO ₂ refrigeration cycle with thermoelectric subcooler. International Journal of Energy Research, 2013, 37, 121-128.	2.2	63
31	Experimental energy, exergy, economic and exergoeconomic analyses of batch-type solar-assisted heat pump dryer. Renewable Energy, 2020, 156, 1107-1116.	4.3	62
32	Improving hydrothermal performance of hybrid nanofluid in double tube heat exchanger using tapered wire coil turbulator. Advanced Powder Technology, 2020, 31, 2092-2100.	2.0	61
33	Experimental performance analysis of novel indirect-expansion solar-infrared assisted heat pump dryer for agricultural products. Solar Energy, 2020, 206, 907-917.	2.9	58
34	Energy, exergy and economic assessments of shell and tube condenser using hybrid nanofluid as coolant. International Communications in Heat and Mass Transfer, 2018, 98, 41-48.	2.9	56
35	Experimental hydrothermal behavior of hybrid nanofluid for various particle ratios and comparison with other fluids in minichannel heat sink. International Communications in Heat and Mass Transfer, 2020, 110, 104397.	2.9	56
36	Performance analyses of novel two-phase ejector enhanced multi-evaporator refrigeration systems. Applied Thermal Engineering, 2017, 110, 1635-1642.	3.0	50

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37	Cycle parameter optimization of vortex tube expansion transcritical CO2 system. International Journal of Thermal Sciences, 2009, 48, 1823-1828.	2.6	49
38	Potential of organic Rankine cycle technology in India: Working fluid selection and feasibility study. Energy, 2015, 90, 1618-1625.	4.5	49
39	Experimentation on solar-assisted heat pump dryer: Thermodynamic, economic and exergoeconomic assessments. Solar Energy, 2020, 208, 150-159.	2.9	48
40	Generalized pinch point design method of subcritical-supercritical organic Rankine cycle for maximum heat recovery. Energy, 2018, 143, 141-150.	4.5	47
41	Hydrothermal performance of different alumina hybrid nanofluid types in plate heat exchanger. Journal of Thermal Analysis and Calorimetry, 2020, 139, 3777-3787.	2.0	47
42	Natural refrigerant-based subcritical and transcritical cycles for high temperature heating. International Journal of Refrigeration, 2007, 30, 3-10.	1.8	46
43	Heat transfer performance characteristics of hybrid nanofluids as coolant in louvered fin automotive radiator. Heat and Mass Transfer, 2017, 53, 1923-1931.	1.2	44
44	Performance characteristics of natural-refrigerants- based ejector expansion refrigeration cycles. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2009, 223, 543-550.	0.8	43
45	A transcritical CO ₂ heat pump for simultaneous water cooling and heating: Test results and model validation. International Journal of Energy Research, 2009, 33, 100-109.	2.2	43
46	Exergy maximization of cascade refrigeration cycles and its numerical verification for a transcritical CO2–C3H8 system. International Journal of Refrigeration, 2007, 30, 624-632.	1.8	42
47	Improving hydrothermal performance of double-tube heat exchanger with modified twisted tape inserts using hybrid nanofluid. Journal of Thermal Analysis and Calorimetry, 2021, 143, 4287-4298.	2.0	41
48	Experimental hydrothermal characteristics of minichannel heat sink using various types of hybrid nanofluids. Advanced Powder Technology, 2020, 31, 621-631.	2.0	39
49	Environmental effect on the performance of passive daytime photonic radiative cooling and building energy-saving potential. Journal of Cleaner Production, 2020, 274, 123119.	4.6	36
50	Hydrothermal performance comparison of modified twisted tapes and wire coils in tubular heat exchanger using hybrid nanofluid. International Journal of Thermal Sciences, 2021, 166, 106990.	2.6	34
51	Performance analysis of louvered fin tube automotive radiator using nanofluids as coolants. International Journal of Nanomanufacturing, 2013, 9, 51.	0.3	32
52	Performance enhancement of regenerative evaporative cooler by surface alterations and using ternary hybrid nanofluids. Energy, 2021, 225, 120199.	4.5	32
53	Performance of nanofluid-cooled shell and tube gas cooler in transcritical CO2 refrigeration systems. Applied Thermal Engineering, 2011, 31, 2541-2548.	3.0	31
54	Energetic and Exergetic Performances of Plate Heat Exchanger Using Brine-Based Hybrid Nanofluid for Milk Chilling Application. Heat Transfer Engineering, 2020, 41, 522-535.	1.2	31

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55	Effects of nanoparticle shape and size on the thermohydraulic performance of plate evaporator using hybrid nanofluids. Journal of Thermal Analysis and Calorimetry, 2021, 143, 767-779.	2.0	30
56	Experimental hydrothermal characteristics of concentric tube heat exchanger with V-cut twisted tape turbulator using PCM dispersed mono/hybrid nanofluids. Experimental Heat Transfer, 0, , 1-22.	2.3	29
57	Proposal and design of a new biomass based syngas production system integrated with combined heat and power generation. Energy, 2017, 133, 986-997.	4.5	28
58	Transcritical CO2Heat Pump Dryer: Part 1. Mathematical Model and Simulation. Drying Technology, 2006, 24, 1583-1591.	1.7	26
59	Energy and exergy comparisons of water based optimum brines as coolants for rectangular fin automotive radiator. International Journal of Heat and Mass Transfer, 2017, 105, 690-696.	2.5	26
60	TRANSCRITICAL CO₂ REFRIGERATION SYSTEMS: COMPARISON WITH CONVENTIONAL SOLUTIONS AND APPLICATIONS. International Journal of Air-Conditioning and Refrigeration, 2012, 20, 1250017.	0.8	25
61	Thermodynamic, economic and environmental analyses of a novel solar energy driven small-scale combined cooling, heating and power system. Energy Conversion and Management, 2020, 226, 113542.	4.4	25
62	A Novel Pinch Point Design Methodology Based Energy and Economic Analyses of Organic Rankine Cycle. Journal of Energy Resources Technology, Transactions of the ASME, 2018, 140, .	1.4	24
63	Comparative analyses on a batch-type heat pump dryer using low GWP refrigerants. Food and Bioproducts Processing, 2019, 117, 1-13.	1.8	24
64	Steadyâ€state and transient hydrothermal analyses of singleâ€phase natural circulation loop using waterâ€based triâ€hybrid nanofluids. AICHE Journal, 2021, 67, e17179.	1.8	23
65	Proposal and performance comparison of various solar-driven novel combined cooling, heating and power system topologies. Energy Conversion and Management, 2020, 205, 112342.	4.4	22
66	Overall conductance and heat transfer area minimization of refrigerators and heat pumps with finite heat reservoirs. Energy Conversion and Management, 2007, 48, 803-808.	4.4	21
67	Exergetic analysis of plate evaporator using hybrid nanofluids as secondary refrigerant for low-temperature applications. International Journal of Exergy, 2017, 24, 1.	0.2	21
68	Comparative performance analysis of different novel regenerative evaporative cooling device topologies. Applied Thermal Engineering, 2020, 176, 115474.	3.0	21
69	Exergy, economic, environmental and sustainability analyses of possible regenerative evaporative cooling device topologies. Building and Environment, 2020, 180, 107033.	3.0	21
70	Thermohydraulic behavior of concentric tube heat exchanger inserted with conical wire coil using mono/hybrid nanofluids. International Communications in Heat and Mass Transfer, 2021, 122, 105134.	2.9	21
71	Transcritical CO2Heat Pump Dryer: Part 2. Validation and Simulation Results. Drying Technology, 2006, 24, 1593-1600.	1.7	20
72	CO2–C3H8 cascade refrigeration–heat pump system: Heat exchanger inventory optimization and its numerical verification. International Journal of Refrigeration, 2008, 31, 1207-1213.	1.8	20

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73	Thermodynamic analyses and optimization of a recompression N2O Brayton power cycle. Energy, 2010, 35, 3422-3428.	4.5	20
74	Experimental energyâ€exergy performance and kinetics analyses of compact dualâ€mode heat pump drying of food chips. Journal of Food Process Engineering, 2020, 43, e13404.	1.5	20
75	Thermodynamic analyses and optimization of a transcritical N2O refrigeration cycle. International Journal of Refrigeration, 2010, 33, 33-40.	1.8	19
76	Performance of a flat-plate solar thermal collector using supercritical carbon dioxide as heat transfer fluid. International Journal of Sustainable Energy, 2013, 32, 531-543.	1.3	19
77	Effect of surface modifications and using hybrid nanofluids on energy-exergy performance of regenerative evaporative cooler. Building and Environment, 2021, 189, 107507.	3.0	19
78	Thermodynamic, economic and environmental analyses of novel solar-powered ejector refrigeration systems. Energy Conversion and Management, 2022, 264, 115730.	4.4	19
79	Property-based selection criteria of low GWP working fluids for organic Rankine cycle. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2017, 39, 1419-1428.	0.8	18
80	Energy-Economic Analysis of Plate Evaporator using Brine-based Hybrid Nanofluids as Secondary Refrigerant. International Journal of Air-Conditioning and Refrigeration, 2018, 26, 1850003.	0.8	18
81	Performance Analysis of a Louvered Fin Automotive Radiator Using Hybrid Nanofluid as Coolant. Heat Transfer - Asian Research, 2017, 46, 978-995.	2.8	17
82	Hydrothermal performance of plate heat exchanger with an alumina–graphene hybrid nanofluid: experimental study. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	0.8	17
83	Thermal-hydraulic behavior of lotus like structured rGO-ZnO composite dispersed hybrid nanofluid in mini channel heat sink. International Journal of Thermal Sciences, 2021, 164, 106886.	2.6	17
84	Performance assessment of novel biomass gasification based CCHP systems integrated with syngas production. Energy, 2019, 167, 379-390.	4.5	16
85	Energetic and exergetic performance simulation of open-type heat pump dryer with next-generation refrigerants. Drying Technology, 2020, 38, 1011-1023.	1.7	16
86	Research and development on composite nanofluids as next-generation heat transfer medium. Journal of Thermal Analysis and Calorimetry, 2019, 137, 1133-1154.	2.0	15
87	Experiment on waste heat recoveryâ€assisted heat pump drying of food chips: Performance, economic, and exergoeconomic analyses. Journal of Food Processing and Preservation, 2020, 44, e14699.	0.9	15
88	Heat transfer characteristics of plate heat exchanger using hybrid nanofluids: effect of nanoparticle mixture ratio. Heat and Mass Transfer, 2020, 56, 2457-2472.	1.2	15
89	A generalized Nusselt number correlation for nanofluids, and look-up diagrams to select a heat transfer fluid for medium temperature solar thermal applications. Applied Thermal Engineering, 2021, 190, 116469.	3.0	15
90	Performance comparison of various coolants for louvered fin tube automotive radiator. Thermal Science, 2017, 21, 2871-2881.	0.5	15

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91	Climate change effect on the cooling performance and assessment of passive daytime photonic radiative cooler in India. Renewable and Sustainable Energy Reviews, 2020, 134, 110303.	8.2	14
92	Performance characteristics of multi-evaporator transcritical CO2 refrigeration cycles with hybrid compression/ejection. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2010, 224, 773-780.	0.8	13
93	Selection of suitable natural refrigerants pairs for cascade refrigeration system. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2013, 227, 612-622.	0.8	13
94	Transient thermo-hydraulics and performance characteristics of single-phase natural circulation loop using hybrid nanofluids. International Communications in Heat and Mass Transfer, 2020, 110, 104433.	2.9	13
95	Thermodynamic analysis and optimization of a novel two-stage transcritical N2O cycle. International Journal of Refrigeration, 2011, 34, 991-999.	1.8	12
96	Combined energy and exergy analysis of a corrugated plate heat exchanger and experimental investigation. International Journal of Exergy, 2014, 15, 395.	0.2	12
97	Performance simulation of polymer-based nanoparticle and void dispersed photonic structures for radiative cooling. Scientific Reports, 2021 , 11 , 893 .	1.6	12
98	Novel combined desalination, heating and power system: Energy, exergy, economic and environmental assessments. Renewable and Sustainable Energy Reviews, 2021, 151, 111612.	8.2	12
99	Improving thermal performance of micro-channel electronic heat sink using supercritical CO2 as coolant. Thermal Science, 2019, 23, 243-253.	0.5	11
100	Performance comparison of natural refrigerants based cascade systems for ultra-low-temperature applications. International Journal of Sustainable Energy, 2013, 32, 406-420.	1.3	10
101	Analyses and optimization of a supercritical N2O Rankine cycle for low-grade heat conversion. Energy, 2015, 81, 344-351.	4.5	10
102	Proposal and month-wise performance evaluation of a novel dual-mode evaporative cooler. Heat and Mass Transfer, 2019, 55, 3523-3536.	1.2	10
103	Experimental investigation of transcritical CO2 heat pump for simultaneous water cooling and heating. Thermal Science, 2010, 14, 57-64.	0.5	10
104	Irreversibility minimization of heat exchangers for transcritical CO2 systems. International Journal of Thermal Sciences, 2009, 48, 146-153.	2.6	9
105	Exergy analysis of vortex tube expansion vapour compression refrigeration system. International Journal of Exergy, 2013, 13, 431.	0.2	9
106	Effect of different nanoparticle-dispersed nanofluids on hydrothermal-economic performance of minichannel heat sink. Journal of Thermal Analysis and Calorimetry, 2020, 141, 1477-1488.	2.0	9
107	Thermodynamic, economic, and environmental analyses of various novel ejector refrigeration subcooled transcritical <scp> CO ₂ </scp> systems. International Journal of Energy Research, 2021, 45, 16115-16133.	2.2	9
108	Advanced exergy analysis of transcritical CO2 heat pump system based on experimental data. Sadhana - Academy Proceedings in Engineering Sciences, 2016, 41, 1349-1356.	0.8	8

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109	Energy, exergy, economic and ecological analyses of a diurnal radiative water cooler. Renewable and Sustainable Energy Reviews, 2021, 152, 111676.	8.2	8
110	Improvement in Energy Performance of Tubular Heat Exchangers Using Nanofluids: A Review. Current Nanoscience, 2020, 16, 136-156.	0.7	8
111	Experimental exergy, economic and sustainability analyses of the dual-mode evaporative cooler. International Journal of Refrigeration, 2022, 135, 121-130.	1.8	8
112	Performance improvement of double-tube gas cooler in CO2 refrigeration system using nanofluids. Thermal Science, 2015, 19, 109-118.	0.5	6
113	Extended Exergy Analysis Based Comparison of Subcritical and Transcritical Refrigeration Systems. International Journal of Air-Conditioning and Refrigeration, 2016, 24, 1650009.	0.8	6
114	Numerical Analysis on Hydrothermal Behavior of Various Ribbed Minichannel Heat Sinks with Different Hybrid Nanofluids. Arabian Journal for Science and Engineering, 2022, 47, 6209-6221.	1.7	5
115	Effects of various modeling assumptions on steady-state and transient performances of single-phase natural circulation loop. International Communications in Heat and Mass Transfer, 2021, 124, 105247.	2.9	4
116	Performance assessment of dual-mode evaporative cooler for futuristic climatic scenarios considering climate change effect. Journal of Building Engineering, 2021, 42, 103043.	1.6	4
117	Machine learning model of regenerative evaporative cooler for performance prediction based on experimental investigation. International Journal of Refrigeration, 2022, 137, 178-187.	1.8	4
118	Performance characteristics of low global warming potential R134a alternative refrigerants in ejector-expansion refrigeration system. Archives of Thermodynamics, 2016, 37, 55-72.	1.0	3
119	Development and experimental analysis of a novel dual-mode counter-flow evaporative cooling device. Building and Environment, 2021, 205, 108176.	3.0	3
120	PERFORMANCE EVALUATION OF USING WATER-BASED NANOFLUIDS AS COOLANTS IN THE GAS COOLER OF A TRANSCRITICAL CO2 REFRIGERANT SYSTEM. Journal of Enhanced Heat Transfer, 2013, 20, 389-397.	0.5	3
121	Performance improvement of CO2 air conditioner by integrating photonic radiative cooler as sub-cooler or/and roof envelope. Energy Conversion and Management, 2021, 251, 115019.	4.4	3
122	Analytical minimization of overall conductance and heat transfer area in refrigeration and heat pump systems and its numerical confirmation. Energy Conversion and Management, 2007, 48, 1245-1250.	4.4	2
123	Single-Phase Natural Circulation Loop Using Oils and Ternary Hybrid Nanofluids: Steady-State and Transient Thermo-Hydraulics. Journal of Thermal Science and Engineering Applications, 2021, 13, .	0.8	2
124	Experimentation and Performance Analysis of Solar-Assisted Heat Pump Dryer for Intermittent Drying of Food Chips. Journal of Solar Energy Engineering, Transactions of the ASME, 2022, 144, .	1.1	2
125	Energy, exergy and economic assessments of the dual-mode evaporative cooler for various international climate zones. Building Services Engineering Research and Technology, 2022, 43, 179-196.	0.9	2
126	Comprehensive study on the role of eco-friendly working fluid properties on ORC performances. International Journal of Thermodynamics, 2016, 19, 198-204.	0.4	2

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127	Experimental investigation on novel heat pump system for combined drying and air conditioning for arid climate. Drying Technology, 0, , 1-12.	1.7	2
128	Analysis and Optimization of an Ammonia Based Transcritical Rankine Cycle for Power Generation. , 2008, , .		1
129	Performance characteristics of refrigeration cycle with parallel compression economization. International Journal of Energy Research, 2010, 34, 1205-1214.	2.2	1
130	Performance Enhancement for Wavy Fin Automotive Radiator Using Optimum PG Brine Based Nanofluids. Heat Transfer - Asian Research, 2017, 46, 585-597.	2.8	1
131	Novel pinch point method based exergetic optimisation of subcritical organic Rankine cycle for waste heat recovery. International Journal of Exergy, 2018, 25, 281.	0.2	1
132	A review on thermodynamic optimization of irreversible refrigerator and verification with transcritical CO2 system. International Journal of Thermodynamics, 2014, 17, .	0.4	1
133	Exergetic analysis of plate evaporator using hybrid nanofluids as secondary refrigerant for low-temperature applications. International Journal of Exergy, 2017, 24, 1.	0.2	1
134	Generalized Nusselt Number Correlation for Binary Hybrid Nano-Oils as Heat Transfer Fluid in Solar Thermal Systems. Journal of Heat Transfer, 2022, 144, .	1.2	1
135	Novel pinch point method based exergetic optimisation of subcritical organic Rankine cycle for waste heat recovery. International Journal of Exergy, 2018, 25, 281.	0.2	O