Mehdi Bahiraei

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

167 papers	5,656 citations	41 h-index	66 g-index
170 ext. papers	6,801 ext. citations	5.4 avg, IF	7.26 L-index

#	Paper	IF	Citations
167	Irreversibility characteristics of a mini shell and tube heat exchanger operating with a nanofluid considering effects of fins and nanoparticle shape. *Powder Technology*, **2022**, 398, 117117	5.2	5
166	Second law performance of a novel four-layer microchannel heat exchanger operating with nanofluid through a two-phase simulation. *Powder Technology*, **2022**, 396, 673-688	5.2	2
165	Thermohydraulic assessment of a novel hybrid nanofluid containing cobalt oxide-decorated reduced graphene oxide nanocomposite in a microchannel heat sink with sinusoidal cavities and rectangular ribs. *International Communications in Heat and Mass Transfer*, **2022**, 131, 105769	5.8	3
164	Employing a novel crimped-spiral rib inside a triple-tube heat exchanger working with a nanofluid for solar thermal applications: Irreversibility characteristics. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102080	4.7	0
163	Two-phase simulation of the generated entropy for the nanofluid flow inside a ribbed passage for cooling of a PV cell. *Thermal Science and Engineering Progress*, **2022**, 101353	3.6	0
162	Thermohydraulic performance and effectiveness of a mini shell and tube heat exchanger working with a nanofluid regarding effects of fins and nanoparticle shape. *Advanced Powder Technology*, **2021**,	4.6	4
161	Hydrothermal performance of single and hybrid nanofluids in Left-Right and Up-Down wavy microchannels using two-phase mixture approach. *International Communications in Heat and Mass Transfer*, **2021**, 129, 105752	5.8	3
160	Preliminary feasibility study on using a nano-composition in enhanced oil recovery process: neural network modeling. *Neural Computing and Applications*, **2021**, 33, 10111-10127	4.8	
159	Performance enhancement of a triple-tube heat exchanger through heat transfer intensification using novel crimped-spiral ribs and nanofluid: A two-phase analysis. *Chemical Engineering and Processing: Process Intensification*, **2021**, 160, 108289	3.7	9
158	Employing response surface methodology and neural network to accurately model thermal conductivity of TiO2□water nanofluid using experimental data. *Chinese Journal of Physics*, **2021**, 70, 14-25	3.5	9
157	Neural network combined with nature-inspired algorithms to estimate overall heat transfer coefficient of a ribbed triple-tube heat exchanger operating with a hybrid nanofluid. *Measurement: Journal of the International Measurement Confederation*, **2021**, 174, 108967	4.6	8
156	A CFD study on thermohydraulic characteristics of a nanofluid in a shell-and-tube heat exchanger fitted with new unilateral ladder type helical baffles. *International Communications in Heat and Mass Transfer*, **2021**, 124, 105248	5.8	9
155	Efficacy of a novel graphene quantum dots nanofluid in a microchannel heat exchanger. *Applied Thermal Engineering*, **2021**, 189, 116673	5.8	6
154	Using spiral channels for intensification of cooling process in an innovative liquid block operated with a biologically produced nanofluid: First and second law analyses. *Chemical Engineering and Processing: Process Intensification*, **2021**, 162, 108326	3.7	1
153	Two-phase analysis of nanofluid flow within an innovative four-layer microchannel heat exchanger: Focusing on energy efficiency principle. *Powder Technology*, **2021**, 383, 484-497	5.2	12
152	Modeling of energy efficiency for a solar still fitted with thermoelectric modules by ANFIS and PSO-enhanced neural network: A nanofluid application. *Powder Technology*, **2021**, 385, 185-198	5.2	21
151	Irreversibility features of a shell-and-tube heat exchanger fitted with novel trapezoidal oblique baffles: Application of a nanofluid with different particle shapes. *International Communications in Heat and Mass Transfer*, **2021**, 126, 105352	5.8	4

150	A combined multi-criterion optimization to determine optimum geometrical parameters for flow of an ecofriendly graphene-based nanofluid inside tube enhanced with twisted conical strip inserts. *Powder Technology*, **2021**, 377, 336-349	5.2	7
149	Employing elliptical pin-fins and nanofluid within a heat sink for cooling of electronic chips regarding energy efficiency perspective. *Applied Thermal Engineering*, **2021**, 183, 116159	5.8	9
148	Application of an ecofriendly nanofluid containing graphene nanoplatelets inside a novel spiral liquid block for cooling of electronic processors. *Energy*, **2021**, 218, 119395	7.9	14
147	Predicting heat transfer rate of a ribbed triple-tube heat exchanger working with nanofluid using neural network enhanced by advanced optimization algorithms. *Powder Technology*, **2021**, 381, 459-476	5.2	6
146	A critical review on pulsating flow in conventional fluids and nanofluids: Thermo-hydraulic characteristics. *International Communications in Heat and Mass Transfer*, **2021**, 120, 104859	5.8	12
145	Effect of water nano-droplet injection on steam ejector performance based on non-equilibrium spontaneous condensation: A droplet number study. *Applied Thermal Engineering*, **2021**, 184, 116236	5.8	5
144	A computational model for predicting filtration performance of 3D-magnetic filters under different channel geometries, particle sizes and flow conditions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2021**, 611, 125844	5.1	4
143	Thermohydraulic performance of a nanofluid in a microchannel heat sink: Use of different microchannels for change in process intensity. *Journal of the Taiwan Institute of Chemical Engineers*, **2021**, 125, 1-14	5.3	9
142	Latest developments in nanofluid flow and heat transfer between parallel surfaces: A critical review. *Advances in Colloid and Interface Science*, **2021**, 294, 102450	14.3	10
141	Thermohydraulic performance optimization of cooling system of an electric arc furnace operated with nanofluid: A CFD study. *Journal of Cleaner Production*, **2021**, 310, 127451	10.3	3
140	Energy, exergy, and hydrodynamic performance of a spiral heat exchanger: Process intensification by a nanofluid containing different particle shapes. *Chemical Engineering and Processing: Process Intensification*, **2021**, 166, 108481	3.7	2
139	Thermal-hydraulic performance of a nanofluid in a shell-and-tube heat exchanger equipped with new trapezoidal inclined baffles: Nanoparticle shape effect. *Powder Technology*, **2021**, 395, 348-348	5.2	12
138	Experimental study of an absorber coil in spherical solar collector with practical dimensions at different flow rates. *Renewable Energy*, **2021**, 180, 1248-1259	8.1	0
137	A second law analysis on flow of a nanofluid in a shell-and-tube heat exchanger equipped with new unilateral ladder type helical baffles. *Powder Technology*, **2021**, 394, 234-249	5.2	6
136	A CFD Study of [C2mim][CH3SO3]/Al2O3 Ionanofluid Flow and Heat Transfer in Grooved Tubes. *International Journal of Thermophysics*, **2021**, 42, 1	2.1	5
135	A comprehensive analysis for second law attributes of spiral heat exchanger operating with nanofluid using two-phase mixture model: Exergy destruction minimization attitude. *Advanced Powder Technology*, **2021**, 32, 211-224	4.6	9
134	Evaluation of tree-base data mining algorithms in land used/land cover mapping in a semi-arid environment through Landsat 8 OLI image; Shiraz, Iran. *Geomatics, Natural Hazards and Risk*, **2020**, 11, 724-741	3.6	11
133	Second law analysis of hybrid nanofluid flow in a microchannel heat sink integrated with ribs and secondary channels for utilization in miniature thermal devices. *Chemical Engineering and Processing: Process Intensification*, **2020**, 153, 107963	3.7	16

132	Neural network modeling of thermo-hydraulic attributes and entropy generation of an ecofriendly nanofluid flow inside tubes equipped with novel rotary coaxial double-twisted tape. *Powder Technology*, **2020**, 369, 162-175	5.2	17
131	CFD analysis of second law characteristics for flow of a hybrid biological nanofluid under rotary motion of a twisted tape: Exergy destruction and entropy generation analyses. *Powder Technology*, **2020**, 372, 351-361	5.2	13
130	Application of conventional and hybrid nanofluids in different machining processes: A critical review. *Advances in Colloid and Interface Science*, **2020**, 282, 102199	14.3	29
129	Thermohydraulic characteristics of a micro plate heat exchanger operated with nanofluid considering different nanoparticle shapes. *Applied Thermal Engineering*, **2020**, 179, 115621	5.8	22
128	Using neural network optimized by imperialist competition method and genetic algorithm to predict water productivity of a nanofluid-based solar still equipped with thermoelectric modules. *Powder Technology*, **2020**, 366, 571-586	5.2	34
127	Optimal modification of heating, ventilation, and air conditioning system performances in residential buildings using the integration of metaheuristic optimization and neural computing. *Energy and Buildings*, **2020**, 214, 109866	7	17
126	Spatial assessment of landslide risk using two novel integrations of neuro-fuzzy system and metaheuristic approaches; Ardabil Province, Iran. *Geomatics, Natural Hazards and Risk*, **2020**, 11, 230-258	3.6	7
125	Heat transfer characteristics of impinging jet on a hot surface with constant heat flux using Cu2O water nanofluid: An experimental study. *International Communications in Heat and Mass Transfer*, **2020**, 112, 104509	5.8	18
124	Employing V-shaped ribs and nanofluid as two passive methods to improve second law characteristics of flow within a square channel: A two-phase approach. *International Journal of Heat and Mass Transfer*, **2020**, 151, 119419	4.9	22
123	Irreversibility characteristics of a modified microchannel heat sink operated with nanofluid considering different shapes of nanoparticles. *International Journal of Heat and Mass Transfer*, **2020**, 151, 119359	4.9	29
122	Employing artificial bee colony and particle swarm techniques for optimizing a neural network in prediction of heating and cooling loads of residential buildings. *Journal of Cleaner Production*, **2020**, 254, 120082	10.3	84
121	A 3D numerical study on natural convection flow of nanofluid inside a cubical cavity equipped with porous fins using two-phase mixture model. *Advanced Powder Technology*, **2020**, 31, 2480-2492	4.6	11
120	A comprehensive review on convective heat transfer of nanofluids in porous media: Energy-related and thermohydraulic characteristics. *Applied Thermal Engineering*, **2020**, 178, 115487	5.8	26
119	Second law assessment of nanofluid flow in a channel fitted with conical ribs for utilization in solar thermal applications: Effect of nanoparticle shape. *International Journal of Heat and Mass Transfer*, **2020**, 151, 119387	4.9	21
118	Experimental study on effect of employing twisted conical strip inserts on thermohydraulic performance considering geometrical parameters. *International Journal of Thermal Sciences*, **2020**, 149, 106178	4.1	8
117	Experimental investigation of hydrothermal characteristics for flow within a circular tube equipped with twisted conical strip inserts under different alignments. *Journal of the Taiwan Institute of Chemical Engineers*, **2020**, 114, 24-35	5.3	3
116	A two-phase simulation for investigating natural convection characteristics of nanofluid inside a perturbed enclosure filled with porous medium. *Engineering With Computers*, **2020**, 1	4.5	1
115	A comprehensive assessment of low-temperature preheating process in natural gas pressure reduction stations to better benefit from solar energy. *Energy*, **2020**, 209, 118430	7.9	6

114	A proper model to predict energy efficiency, exergy efficiency, and water productivity of a solar still via optimized neural network. *Journal of Cleaner Production*, **2020**, 277, 123232	10.3	21
113	A novel technique based on artificial intelligence for modeling the required temperature of a solar bread cooker equipped with concentrator through experimental data. *Food and Bioproducts Processing*, **2020**, 123, 437-449	4.9	12
112	Numerical study and optimization of thermohydraulic characteristics of a graphene–platinum nanofluid in finned annulus using genetic algorithm combined with decision-making technique. *Engineering With Computers*, **2020**, 37, 2473	4.5	3
111	Thermal and hydraulic characteristics of a hybrid nanofluid containing graphene sheets decorated with platinum through a new wavy cylindrical microchannel. *Applied Thermal Engineering*, **2020**, 181, 115981	5.8	13
110	Thermal analysis and electromagnetic characteristics of three single-sided flux pads for wireless power transfer. *Journal of Cleaner Production*, **2020**, 243, 118561	10.3	7
109	Entropy generation and exergy destruction for flow of a biologically functionalized graphene nanoplatelets nanofluid within tube enhanced with a novel rotary coaxial cross double-twisted tape. *International Communications in Heat and Mass Transfer*, **2020**, 113, 104546	5.8	16
108	A two-phase simulation for analyzing thermohydraulic performance of Cu–water nanofluid within a square channel enhanced with 90° V-shaped ribs. *International Journal of Heat and Mass Transfer*, **2019**, 145, 118612	4.9	25
107	CFD simulation of combined electroosmotic-pressure driven micro-mixing in a microchannel equipped with triangular hurdle and zeta-potential heterogeneity. *Chemical Engineering Science*, **2019**, 199, 463-477	4.4	17
106	Second law analysis of a hybrid nanofluid in tubes equipped with double twisted tape inserts. *Powder Technology*, **2019**, 345, 692-703	5.2	61
105	Performance Enhancement of Internal Combustion Engines through Vibration Control: State of the Art and Challenges. *Applied Sciences (Switzerland)*, **2019**, 9, 406	2.6	29
104	Application of Nanofluids in Thermal Performance Enhancement of Parabolic Trough Solar Collector: State-of-the-Art. *Applied Sciences (Switzerland)*, **2019**, 9, 463	2.6	134
103	Analyzing performance of a ribbed triple-tube heat exchanger operated with graphene nanoplatelets nanofluid based on entropy generation and exergy destruction. *International Communications in Heat and Mass Transfer*, **2019**, 107, 55-67	5.8	38
102	Artificial intelligence in the field of nanofluids: A review on applications and potential future directions. *Powder Technology*, **2019**, 353, 276-301	5.2	52
101	A novel modification on preheating process of natural gas in pressure reduction stations to improve energy consumption, exergy destruction and CO2 emission: Preheating based on real demand. *Energy*, **2019**, 173, 598-609	7.9	13
100	CFD analysis of employing a novel ecofriendly nanofluid in a miniature pin fin heat sink for cooling of electronic components: Effect of different configurations. *Advanced Powder Technology*, **2019**, 30, 2503-2516	4.6	39
99	Optimizing thermophysical properties of nanofluids using response surface methodology and particle swarm optimization in a non-dominated sorting genetic algorithm. *Journal of the Taiwan Institute of Chemical Engineers*, **2019**, 103, 7-19	5.3	20
98	Thermo-hydraulic performance of a biological nanofluid containing graphene nanoplatelets within a tube enhanced with rotating twisted tape. *Powder Technology*, **2019**, 355, 278-288	5.2	24
97	Graphene family nanofluids: A critical review and future research directions. *Energy Conversion and Management*, **2019**, 196, 1222-1256	10.6	104

96	Thermal performance of a new nanofluid containing biologically functionalized graphene nanoplatelets inside tubes equipped with rotating coaxial double-twisted tapes. *International Communications in Heat and Mass Transfer*, **2019**, 108, 104305	5.8	9
95	Predicting entropy generation of a hybrid nanofluid containing graphene–platinum nanoparticles through a microchannel liquid block using neural networks. *International Communications in Heat and Mass Transfer*, **2019**, 109, 104351	5.8	23
94	A two-phase simulation for ferrofluid flow between two parallel plates under localized magnetic field by applying Lagrangian approach for nanoparticles. *European Journal of Mechanics, B/Fluids*, **2019**, 74, 252-259	2.4	7
93	Effects of cobalt ferrite coated with silica nanocomposite on the thermal conductivity of an antifreeze: New nanofluid for refrigeration condensers. *International Journal of Refrigeration*, **2019**, 102, 86-95	3.8	39
92	Application of a hybrid nanofluid containing graphene nanoplatelet–platinum composite powder in a triple-tube heat exchanger equipped with inserted ribs. *Applied Thermal Engineering*, **2019**, 149, 588-601	5.8	69
91	Experimental and analytical investigations of productivity, energy and exergy efficiency of a single slope solar still enhanced with thermoelectric channel and nanofluid. *Renewable Energy*, **2019**, 135, 729-744	8.1	75
90	Comparative study of air and argon gases between cover and absorber coil in a cylindrical solar water heater: An experimental study. *Renewable Energy*, **2019**, 135, 426-436	8.1	17
89	Optimal arrangements of a heat sink partially filled with multilayered porous media employing hybrid nanofluid. *Journal of Thermal Analysis and Calorimetry*, **2019**, 137, 1045-1058	4.1	78
88	A two-phase simulation of convective heat transfer characteristics of water–Fe3O4 ferrofluid in a square channel under the effect of permanent magnet. *Applied Thermal Engineering*, **2019**, 147, 991-997	5.8	39
87	Effect of employing a new biological nanofluid containing functionalized graphene nanoplatelets on thermal and hydraulic characteristics of a spiral heat exchanger. *Energy Conversion and Management*, **2019**, 180, 72-82	10.6	78
86	Efficacy of a new graphene–platinum nanofluid in tubes fitted with single and twin twisted tapes regarding counter and co-swirling flows for efficient use of energy. *International Journal of Mechanical Sciences*, **2019**, 150, 290-303	5.5	41
85	Performance improvement of a single slope solar still by employing thermoelectric cooling channel and copper oxide nanofluid: An experimental study. *Journal of Cleaner Production*, **2019**, 208, 1041-1052	10.3	108
84	Modeling of irreversibility factors for nanofluid flow in different channels regarding nanoparticle arrangement. *Journal of Thermal Analysis and Calorimetry*, **2019**, 137, 607-622	4.1	4
83	Multi-criterion optimization of thermohydraulic performance of a mini pin fin heat sink operated with ecofriendly graphene nanoplatelets nanofluid considering geometrical characteristics. *Journal of Molecular Liquids*, **2019**, 276, 653-666	6	21
82	Efficacy of a hybrid nanofluid in a new microchannel heat sink equipped with both secondary channels and ribs. *Journal of Molecular Liquids*, **2019**, 273, 88-98	6	159
81	A decision-making based method to optimize energy efficiency of ecofriendly nanofluid flow inside a new heat sink enhanced with flow distributor. *Powder Technology*, **2019**, 342, 85-98	5.2	22
80	Numerical evaluation on thermal–hydraulic characteristics of dilute heat-dissipating nanofluids flow in microchannels. *Journal of Thermal Analysis and Calorimetry*, **2019**, 135, 671-683	4.1	29
79	Prediction of hydrothermal behavior of a non-Newtonian nanofluid in a square channel by modeling of thermophysical properties using neural network. *Journal of Thermal Analysis and Calorimetry*, **2019**, 135, 901-910	4.1	17

78	Design of an innovative distributor to improve flow uniformity using cylindrical obstacles in header of a fuel cell. *Energy*, **2018**, 152, 719-731	7.9	20
77	Irreversibility characteristics of nanofluid flow under chaotic advection in a minichannel for different nanoparticle types. *Journal of the Taiwan Institute of Chemical Engineers*, **2018**, 88, 25-36	5.3	18
76	Thermal and hydraulic characteristics of a minichannel heat exchanger operated with a non-Newtonian hybrid nanofluid. *Journal of the Taiwan Institute of Chemical Engineers*, **2018**, 84, 149-161	5.3	39
75	Application of a novel hybrid nanofluid containing graphene–platinum nanoparticles in a chaotic twisted geometry for utilization in miniature devices: Thermal and energy efficiency considerations. *International Journal of Mechanical Sciences*, **2018**, 138-139, 337-349	5.5	47
74	Heat transfer and entropy generation optimization for flow of a non-Newtonian hybrid nanofluid containing coated CNT/Fe3O4 nanoparticles in a concentric annulus. *Journal of the Taiwan Institute of Chemical Engineers*, **2018**, 84, 28-40	5.3	43
73	Recent research contributions concerning use of nanofluids in heat exchangers: A critical review. *Applied Thermal Engineering*, **2018**, 133, 137-159	5.8	149
72	CFD simulation of nanofluid forced convection inside a three-dimensional annulus by two-phase mixture approach: Heat transfer and entropy generation analyses. *International Journal of Mechanical Sciences*, **2018**, 146-147, 396-404	5.5	22
71	Experimental study for developing an accurate model to predict viscosity of CuO–ethylene glycol nanofluid using genetic algorithm based neural network. *Powder Technology*, **2018**, 338, 383-390	5.2	76
70	Multi-attribute optimization of a novel micro liquid block working with green graphene nanofluid regarding preferences of decision maker. *Applied Thermal Engineering*, **2018**, 143, 11-21	5.8	33
69	Electronics cooling with nanofluids: A critical review. *Energy Conversion and Management*, **2018**, 172, 438-456	10.6	149
68	Thermal performance and second law characteristics of two new microchannel heat sinks operated with hybrid nanofluid containing graphene–silver nanoparticles. *Energy Conversion and Management*, **2018**, 168, 357-370	10.6	89
67	A comprehensive analysis of energy and exergy characteristics for a natural gas city gate station considering seasonal variations. *Energy*, **2018**, 155, 721-733	7.9	31
66	Thermo-economic analysis and multi-objective optimization of absorption cooling system driven by various solar collectors. *Energy Conversion and Management*, **2018**, 173, 715-727	10.6	49
65	CFD analysis of thermal and hydrodynamic characteristics of hybrid nanofluid in a new designed sinusoidal double-layered microchannel heat sink. *Journal of Thermal Analysis and Calorimetry*, **2018**, 134, 2305-2315	4.1	57
64	Investigating exergy destruction and entropy generation for flow of a new nanofluid containing graphene–silver nanocomposite in a micro heat exchanger considering viscous dissipation. *Powder Technology*, **2018**, 336, 298-310	5.2	56
63	Forced convection of a temperature-sensitive ferrofluid in presence of magnetic field of electrical current-carrying wire: A two-phase approach. *Advanced Powder Technology*, **2018**, 29, 2168-2175	4.6	22
62	A review of numerical studies on solar collectors integrated with latent heat storage systems employing fins or nanoparticles. *Renewable Energy*, **2018**, 118, 761-778	8.1	71
61	Numerical study of flow and heat transfer of water-Al2O3 nanofluid inside a channel with an inner cylinder using Eulerian–Lagrangian approach. *Journal of Thermal Analysis and Calorimetry*, **2018**, 132, 651-665	4.1	39

60	Effects of Geometry and Hydraulic Characteristics of Shallow Reservoirs on Sediment Entrapment. *Water (Switzerland)*, **2018**, 10, 1725	3	33
59	Effect of line dipole magnetic field on entropy generation of Mn-Zn ferrite ferrofluid flowing through a minichannel using two-phase mixture model. *Powder Technology*, **2018**, 340, 370-379	5.2	33
58	Synthesized CuFe2O4/SiO2 nanocomposites added to water/EG: Evaluation of the thermophysical properties beside sensitivity analysis & EANN. *International Journal of Heat and Mass Transfer*, **2018**, 127, 1169-1179	4.9	117
57	Thermohydraulic performance analysis of a spiral heat exchanger operated with water–alumina nanofluid: Effects of geometry and adding nanoparticles. *Energy Conversion and Management*, **2018**, 170, 62-72	10.6	28
56	Second law analysis for flow of a nanofluid containing graphene–platinum nanoparticles in a minichannel enhanced with chaotic twisted perturbations. *Chemical Engineering Research and Design*, **2018**, 136, 230-241	5.5	30
55	Thermal performance of Ag–water nanofluid in tube equipped with novel conical strip inserts using two-phase method: Geometry effects and particle migration considerations. *Powder Technology*, **2018**, 338, 87-100	5.2	38
54	Impact of thermophoresis on nanoparticle distribution in nanofluids. *Results in Physics*, **2017**, 7, 136-138	3.7	12
53	CFD simulation of irreversibilities for laminar flow of a power-law nanofluid within a minichannel with chaotic perturbations: An innovative energy-efficient approach. *Energy Conversion and Management*, **2017**, 144, 374-387	10.6	64
52	Efficacy of an eco-friendly nanofluid in a miniature heat exchanger regarding to arrangement of silver nanoparticles. *Energy Conversion and Management*, **2017**, 144, 224-234	10.6	38
51	Experimental investigation and modeling of thermal conductivity and viscosity for non-Newtonian hybrid nanofluid containing coated CNT/Fe 3 O 4 nanoparticles. *Powder Technology*, **2017**, 318, 441-450	5.2	73
50	Numerical investigation of entropy generation to predict irreversibilities in nanofluid flow within a microchannel: Effects of Brownian diffusion, shear rate and viscosity gradient. *Chemical Engineering Science*, **2017**, 172, 52-65	4.4	47
49	Assessment and optimization of hydrothermal characteristics for a non-Newtonian nanofluid flow within miniaturized concentric-tube heat exchanger considering designer's viewpoint. *Applied Thermal Engineering*, **2017**, 123, 266-276	5.8	61
48	Development of chaotic advection in laminar flow of a non-Newtonian nanofluid: A novel application for efficient use of energy. *Applied Thermal Engineering*, **2017**, 124, 1213-1223	5.8	36
47	Investigating heat transfer and entropy generation for mixed convection of CuO–water nanofluid in an inclined annulus. *Journal of Molecular Liquids*, **2017**, 248, 36-47	6	24
46	Efficacy of a novel liquid block working with a nanofluid containing graphene nanoplatelets decorated with silver nanoparticles compared with conventional CPU coolers. *Applied Thermal Engineering*, **2017**, 127, 1233-1245	5.8	71
45	Application of a novel conical strip insert to improve the efficacy of water–Ag nanofluid for utilization in thermal systems: A two-phase simulation. *Energy Conversion and Management*, **2017**, 151, 573-586	10.6	108
44	Irreversibility analysis for flow of a non-Newtonian hybrid nanofluid containing coated CNT/Fe3O4 nanoparticles in a minichannel heat exchanger. *Applied Thermal Engineering*, **2017**, 125, 1083-1093	5.8	42
43	Application of a novel biological nanofluid in a liquid block heat sink for cooling of an electronic processor: Thermal performance and irreversibility considerations. *Energy Conversion and Management*, **2017**, 149, 155-167	10.6	95

42	Optimization of irreversibility and thermal characteristics of a mini heat exchanger operated with a new hybrid nanofluid containing carbon nanotubes decorated with magnetic nanoparticles. *Energy Conversion and Management*, **2017**, 150, 37-47	10.6	32
41	Optimizing energy efficiency of a specific liquid block operated with nanofluids for utilization in electronics cooling: A decision-making based approach. *Energy Conversion and Management*, **2017**, 154, 180-190	10.6	52
40	Entropy generation in a heat exchanger working with a biological nanofluid considering heterogeneous particle distribution. *Advanced Powder Technology*, **2017**, 28, 2380-2392	4.6	42
39	Rheological characteristics of MgO/oil nanolubricants: Experimental study and neural network modeling. *International Communications in Heat and Mass Transfer*, **2017**, 86, 245-252	5.8	84
38	Assessment of hydrothermal characteristics of Mn-Zn ferrite nanofluid as a functional material under quadrupole magnetic field. *Powder Technology*, **2017**, 305, 174-182	5.2	11
37	Automatic cooling by means of thermomagnetic phenomenon of magnetic nanofluid in a toroidal loop. *Applied Thermal Engineering*, **2016**, 107, 700-708	5.8	27
36	Investigating the Effect of Line Dipole Magnetic Field on Hydrothermal Characteristics of a Temperature-Sensitive Magnetic Nanofluid Using Two-Phase Simulation. *Nanoscale Research Letters*, **2016**, 11, 443	5	3
35	Particle migration in nanofluids: A critical review. *International Journal of Thermal Sciences*, **2016**, 109, 90-113	4.1	129
34	Investigating non-Newtonian nanofluid flow in a narrow annulus based on second law of thermodynamics. *Journal of Molecular Liquids*, **2016**, 219, 117-127	6	47
33	Numerical investigation and optimization of flow and thermal characteristics of nanofluid within a chaotic geometry. *Advanced Powder Technology*, **2016**, 27, 184-192	4.6	10
32	Prediction of entropy generation for nanofluid flow through a triangular minichannel using neural network. *Advanced Powder Technology*, **2016**, 27, 673-683	4.6	32
31	A numerical study of heat transfer characteristics of CuO water nanofluid by Euler agrange approach. *Journal of Thermal Analysis and Calorimetry*, **2016**, 123, 1591-1599	4.1	31
30	Second Law Analysis of Nanofluid Flow within a Circular Minichannel Considering Nanoparticle Migration. *Entropy*, **2016**, 18, 378	2.8	2
29	An empirical study to develop temperature-dependent models for thermal conductivity and viscosity of water-Fe 3 O 4 magnetic nanofluid. *Materials Chemistry and Physics*, **2016**, 181, 333-343	4.4	31
28	Development of a model for entropy generation of water-TiO2 nanofluid flow considering nanoparticle migration within a minichannel. *Chemometrics and Intelligent Laboratory Systems*, **2016** , 157, 16-28	3.8	15
27	Using nanofluid as a smart suspension in cooling channels with discrete heat sources. *Journal of Thermal Analysis and Calorimetry*, **2015**, 119, 2079-2091	4.1	22
26	Effect of particle migration on flow and heat transfer characteristics of magnetic nanoparticle suspensions. *Journal of Molecular Liquids*, **2015**, 209, 531-538	6	40
25	A novel application for energy efficiency improvement using nanofluid in shell and tube heat exchanger equipped with helical baffles. *Energy*, **2015**, 93, 2229-2240	7.9	75

24	Prediction of Nusselt Number and Friction Factor of Water-Al2O3 Nanofluid Flow in Shell-and-Tube Heat Exchanger with Helical Baffles. *Chemical Engineering Communications*, **2015**, 202, 260-268	2.2	25
23	Flow and heat transfer characteristics of magnetic nanofluids: A review. *Journal of Magnetism and Magnetic Materials*, **2015**, 374, 125-138	2.8	206
22	Effects of geometrical parameters on hydrothermal characteristics of shell-and-tube heat exchanger with helical baffles: Numerical investigation, modeling and optimization. *Chemical Engineering Research and Design*, **2015**, 96, 43-53	5.5	35
21	Studying nanoparticle distribution in nanofluids considering the effective factors on particle migration and determination of phenomenological constants by Eulerian□agrangian simulation. *Advanced Powder Technology*, **2015**, 26, 802-810	4.6	36
20	A novel thermal dispersion model to improve prediction of nanofluid convective heat transfer. *Advanced Powder Technology*, **2014**, 25, 1772-1779	4.6	12
19	A Comprehensive Review on Different Numerical Approaches for Simulation in Nanofluids: Traditional and Novel Techniques. *Journal of Dispersion Science and Technology*, **2014**, 35, 984-996	1.5	68
18	Effects of Various Forces on Particle Distribution and Thermal Features of Suspensions Containing Alumina Nanoparticles. *Journal of Dispersion Science and Technology*, **2014**, 35, 859-867	1.5	9
17	Numerical simulation of nanofluid application in a C-shaped chaotic channel: A potential approach for energy efficiency improvement. *Energy*, **2014**, 74, 863-870	7.9	22
16	Heat transfer and flow characteristics of nanofluid in a narrow annulus: Numerical study, modelling and optimisation. *Canadian Journal of Chemical Engineering*, **2014**, 92, 747-757	2.3	13
15	Prediction of convective heat transfer of Al2O3-water nanofluid considering particle migration using neural network. *Engineering Computations*, **2014**, 31, 843-863	1.4	18
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