Masoud Afrand

List of Publications by Year in Descending Order

433 papers	22,736 citations	91 h-index	125 g-index
439 ext. papers	26,528 ext. citations	4.6 avg, IF	8.28 L-index

#	Paper	IF	Citations
433	Experimental Study of Rheological Behavior of MWCNT-AlO/SAE50 Hybrid Nanofluid to Provide the Best Nano-lubrication Conditions.. *Nanoscale Research Letters*, **2022**, 17, 4	5	1
432	Comparison of hybrid nano-lubricants containing MWCNT nanoparticles with different base oils and the same composition ratio to determine the optimal behavior of nano-lubricants based on experimental studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 128446	5.1	1
431	Laboratory and Statistical Evaluations of Rheological Behaviour of MWCNT-Al2O3 (20:80)/Oil SAE50 Non-Newtonian Nano-lubricants. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 641, 128503	5.1	1
430	Comparative rheological study of hybrid nanofluids with different base fluids and the same composition ratio to select the best performance of nano-lubricants using response surface modeling. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 641, 128543	5.1	2
429	Experimental study and modeling the SiO2-MWCNT (30:70)/SAE40 hybrid nano-lubricant flow based on the response surface method to identify the optimal lubrication conditions. *International Communications in Heat and Mass Transfer*, **2022**, 130, 105771	5.8	1
428	Experimental and numerical investigation of traveling wave tube radial heat sink connector thermal stress and deformation with a focus on energy cost management. *International Communications in Heat and Mass Transfer*, **2022**, 131, 105770	5.8	6
427	A critical analysis on the energy and exergy performance of photovoltaic/thermal (PV/T) system: The role of nanofluids stability and synthesizing method. *Sustainable Energy Technologies and Assessments*, **2022**, 51, 101887	4.7	7
426	Engineered nanocomposites in asphalt binders. *Nanotechnology Reviews*, **2022**, 11, 1047-1067	6.3	2
425	Investigation of Effective Parameters on Relative Thermal Conductivity of SWCNT (15%)-Fe3O4 (85%)/Water Hybrid Ferro-Nanofluid and Presenting a New Correlation with Response Surface Methodology. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 128625	5.1	0
424	Natural convection in F-shaped cavity filled with Ag-water non-Newtonian nanofluid saturated with a porous medium and subjected to a horizontal periodic magnetic field. *Korean Journal of Chemical Engineering*, **2022**, 39, 887-901	2.8	0
423	A Comprehensive Correlation to Predict the Rheological Behavior of different Hybrid Nano-Lubricants: A Novel Statistical Analysis. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 128886	5.1	
422	Statistical review of studies on the estimation of thermophysical properties of nanofluids using artificial neural network (ANN). *Powder Technology*, **2022**, 400, 117210	5.2	2
421	Heat transfer characteristics of thermal energy storage system using single and multi-phase cooled heat sinks: A review. *Journal of Energy Storage*, **2022**, 49, 104097	7.8	2
420	A comparative study of rheological behavior in hybrid nano-lubricants (HNLs) with the same composition/nanoparticle ratio characteristics and different base oils to select the most suitable lubricant in industrial applications. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 643, 128658	5.1	1
419	Investigation the effects of different nanoparticles on density and specific heat: Prediction using MLP artificial neural network and response surface methodology. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 645, 128808	5.1	1
418	Selecting efficient side of thermoelectric in pyramid-shape solar desalination units incorporated phase change material (PCM), nanoparticle, turbulator with battery storage powered by photovoltaic. *Journal of Energy Storage*, **2022**, 51, 104448	7.8	5
417	Energy-saving owing to using PCM into buildings: Considering of hot and cold climate region. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102112	4.7	0

416	Numerical study of the cooling effect of a PVT on its thermal and electrical efficiency using a Cu tube of different diameters and lengths. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102044	4.7	2
415	Shape effects of TEG mounted ventilated cavities with alumina-water nanofluids on the performance features by using artificial neural networks. *Engineering Analysis With Boundary Elements*, **2022**, 140, 79-97	2.6	2
414	Investigation of thermophysical properties of MWCNT-MgO (50,50)/10 W40 hybrid nanofluid by focusing on the rheological behavior: Sensitivity analysis and price-performance investigation. *Powder Technology*, **2022**, 117472	5.2	0
413	The entropy generation analysis of the influence of using fins with tip clearance on the thermal management of the batteries with phase change material: Application a new gradient-based ensemble machine learning approach. *Engineering Analysis With Boundary Elements*, **2022**, 140, 432-446	2.6	3
412	Application of artificial intelligence and using optimal ANN to predict the dynamic viscosity of Hybrid nano-lubricant containing Zinc Oxide in Commercial oil. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 647, 129115	5.1	0
411	Measurement of thermal conductivity of triple hybrid water based nanofluid containing MWCNT (10%) - Al2O3 (60%) - ZnO (30%) nanoparticles. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2022**, 647, 129083	5.1	0
410	Comparison of the effect of using helical strips and fines on the efficiency and thermal hydraulic performance of parabolic solar collectors. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102254	4.7	1
409	Phase change materials: Agents towards energy performance improvement in inclined, vertical, and horizontal walls of residential buildings. *Journal of Building Engineering*, **2022**, 104656	5.2	0
408	Numerical analysis of heating aerosol carbon nanofluid flow in a power plant recupesrator with considering ash fouling: a deep learning approach. *Engineering Analysis With Boundary Elements*, **2022**, 141, 75-90	2.6	0
407	Applications of nanofluids in solar energy collectors focusing on solar stills **2022**, 341-373		
406	Application of nanofluids in combustion engines with focusing on improving heat transfer process **2022**, 303-339		0
405	The effect of different parameters on ability of the proposed correlations for the rheological behavior of SiO -MWCNT (90:10)/SAE40 oil-based hybrid nano-lubricant and presenting five new correlations. *ISA Transactions*, **2021**,	5.5	3
404	Feasibility study of using MWCNT-TiO2 (25:75) in 5W50 as an optimizer for engine oils with the aim of reduce the cold start damages. *International Communications in Heat and Mass Transfer*, **2021**, 129, 105678	5.8	
403	Thermal-hydraulic analysis and irreversibility of the MWCNTs-SiO2/EG-H2O non-Newtonian hybrid nanofluids inside a zigzag micro-channels heat sink. *International Communications in Heat and Mass Transfer*, **2021**, 122, 105158	5.8	20
402	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	
401	Thermophysical optimization of ND/PG-water nanofluids by NSGA-II coupled with RSM and ANN. *European Physical Journal Plus*, **2021**, 136, 1	3.1	2
400	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
399	Comparative thermal analysis of an EG-based nanofluid containing DWCNTs. *European Physical Journal Plus*, **2021**, 136, 1	3.1	

398	Experimental investigation of thermo-physical properties of MgO-MWCNT (75–25%)/10W40 as a new nano-lubricant. *European Physical Journal Plus*, **2021**, 136, 1	3.1	0
397	Preparation of stable TiO2-Graphene/Water hybrid nanofluids and development of a new correlation for thermal conductivity. *Powder Technology*, **2021**, 385, 466-477	5.2	38
396	Thermal–hydraulic efficiency management of spiral heat exchanger filled with Cu–ZnO/water hybrid nanofluid. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1569-1582	4.1	5
395	Improving the thermal conductivity of paraffin by incorporating MWCNTs nanoparticles. *Journal of Thermal Analysis and Calorimetry*, **2021**, 145, 2809-2816	4.1	29
394	An experimental report and new correlation for estimating the dynamic viscosity of MWCNT(50)-ZnO(50)/SAE 50 as nano-lubricant. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1107-1117	4.1	5
393	Numerical simulation of transient mixed convection of water–Cu nanofluid in a square cavity with multiple rotating cylinders having harmonic motion. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 4229-4248	4.1	7
392	A new correlation for predicting the thermal conductivity of liquid refrigerants. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 795-800	4.1	6
391	Experimental investigation of the hydrothermal aspects of water–Fe3O4 nanofluid inside a twisted tube. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 801-810	4.1	8
390	An investigation on the influence of the shape of the vortex generator on fluid flow and turbulent heat transfer of hybrid nanofluid in a channel. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1425-1438	4.1	18
389	Heat transfer of hybrid nanofluid in a shell and tube heat exchanger equipped with blade-shape turbulators. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1689-1700	4.1	10
388	Influence of magnetic field on boiling heat transfer coefficient of a magnetic nanofluid consisting of cobalt oxide and deionized water in nucleate regime: An experimental study. *International Journal of Heat and Mass Transfer*, **2021**, 165, 120669	4.9	9
387	Optimization of Viscosity in MWCNT-MgO (35–65%)/5W50 Nanofluid and Comparison of Experimental Results with the Designed ANN. *Arabian Journal for Science and Engineering*, **2021**, 46, 827-840	2.5	3
386	Modeling and Precise Prediction of Thermophysical Attributes of Water/EG Blend-Based CNT Nanofluids by NSGA-II Using ANN and RSM. *Arabian Journal for Science and Engineering*, **2021**, 46, 6423-6437	2.5	4
385	Molecular dynamics simulation concerning nanofluid boiling phenomenon affected by the external electric field: Effects of number of nanoparticles through Pt, Fe, and Au microchannels. *Journal of Molecular Liquids*, **2021**, 324, 114775	6	6
384	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
383	Viscosity Analysis of MWCNT(25%)–ZnO(75%)/10W40 Hybrid Nanofluid; Toward a New Look at Finding Efficient Nanofluid for Heat Transfer Goals. *Arabian Journal for Science and Engineering*, **2021**, 46, 5957-5968	2.5	1
382	Optimization and modeling of thermal conductivity and viscosity of Cu/engine oil nanofluids by NSGA-II using RSM. *Mathematical Methods in the Applied Sciences*, **2021**, 44, 7799-7810	2.3	4
381	Numerical study of the possibility of improving the hydrothermal performance of an elliptical double-pipe heat exchanger through the simultaneous use of twisted tubes and non-Newtonian nanofluid. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 2825-2840	4.1	16

380	Optimization, modeling, and prediction of relative viscosity and relative thermal conductivity of AlN nano-powders suspended in EG. *European Physical Journal Plus*, **2021**, 136, 1	3.1	2
379	Nanotechnology for drilling operations **2021**, 135-148		3
378	Heat transfer and fluid flow analysis using nanofluids in diamond-shaped cavities with novel obstacles. *Engineering Applications of Computational Fluid Mechanics*, **2021**, 15, 1034-1056	4.5	5
377	Application of Artificial Intelligence Techniques in Prediction of Energetic Performance of a Hybrid System Consisting of an Earth-Air Heat Exchanger and a Building-Integrated Photovoltaic/Thermal System. *Journal of Solar Energy Engineering, Transactions of the ASME*, **2021**, 143,	2.3	5
376	Magnetic field effects on O2/Ar liquid flow through a platinum micro-channel via dissipative particle molecular dynamics approach. *Journal of Molecular Liquids*, **2021**, 326, 115286	6	1
375	Introducing two scenarios to enhance the vacuum U-tube solar collector efficiency by considering economic criterion. *Journal of the Taiwan Institute of Chemical Engineers*, **2021**, 124, 228-237	5.3	10
374	A well-trained artificial neural network for predicting the rheological behavior of MWCNT-AlO (30-70%)/oil SAE40 hybrid nanofluid. *Scientific Reports*, **2021**, 11, 17696	4.9	3
373	Effect of Ag, Au, TiO2 metallic/metal oxide nanoparticles in double-slope solar stills via thermodynamic and environmental analysis. *Journal of Cleaner Production*, **2021**, 311, 127689	10.3	29
372	An optimal feed-forward artificial neural network model and a new empirical correlation for prediction of the relative viscosity of AlO-engine oil nanofluid. *Scientific Reports*, **2021**, 11, 17072	4.9	1
371	Cascade forward Artificial Neural Network to estimate thermal conductivity of functionalized graphene-water nanofluids. *Case Studies in Thermal Engineering*, **2021**, 26, 101194	5.6	2
370	Simulation of the impact of solar radiation intensity on the performance of economical solar water desalination still in Semnan province. *Case Studies in Thermal Engineering*, **2021**, 101471	5.6	3
369	Thermal conductivity of ethylene glycol based nanofluids containing hybrid nanoparticles of SWCNT and Fe3O4 and its price-performance analysis for energy management. *Journal of Materials Research and Technology*, **2021**, 14, 1754-1760	5.5	5
368	An experimental study on dynamic viscosity and thermal conductivity of water-Cu-SiO2-MWCNT ternary hybrid nanofluid and the development of practical correlations. *Powder Technology*, **2021**, 389, 215-234	5.2	18
367	Numerical simulation of water production from humid air: Investigation of the Peltier effect (thermoelectric cooling system) on water production rate. *Case Studies in Thermal Engineering*, **2021**, 28, 101473	5.6	0
366	Thermodynamic, economic, and sensitivity analysis of salt gradient solar pond (SGSP) integrated with a low-temperature multi effect desalination (MED): Case study, Iran. *Sustainable Energy Technologies and Assessments*, **2021**, 47, 101478	4.7	6
365	Nanofluids: Physical phenomena, applications in thermal systems and the environment effects- a critical review. *Journal of Cleaner Production*, **2021**, 320, 128573	10.3	88
364	Effectiveness of solar water disinfection in the era of COVID-19 (SARS-CoV-2) pandemic for contaminated water/wastewater treatment considering UV effect and temperature.. *Journal of Water Process Engineering*, **2021**, 43, 102224	6.7	7
363	Thermo-hydraulic performance of nanofluids in a bionic heat sink. *International Communications in Heat and Mass Transfer*, **2021**, 127, 105492	5.8	17

362	Analysis of rheological behavior of MWCNT-Al2O3 (10:90)/5W50 hybrid non-Newtonian nanofluid with considering viscosity as a three-variable function. *Journal of Molecular Liquids*, **2021**, 341, 117375	6	7
361	Optimization of influential geometrical parameters of single slope solar still equipped with thermoelectric system to achieve maximum desalinated water. *Energy Reports*, **2021**, 7, 5257-5268	4.6	9
360	Modeling and estimation of thermal performance factor of MgO-water nanofluids flow by artificial neural network based on experimental data. *Case Studies in Thermal Engineering*, **2021**, 28, 101437	5.6	2
359	The use of nanofluids in thermosyphon heat pipe: A comprehensive review. *Powder Technology*, **2021**, 394, 250-269	5.2	16
358	On evaluation of magnetic field effect on the formation of nanoparticles clusters inside aqueous magnetite nanofluid: An experimental study and comprehensive modeling. *Journal of Molecular Liquids*, **2020**, 312, 113378	6	11
357	A new generation of hybrid-nanofluid: thermal properties enriched lubricant fluids with controlled viscosity amount. *SN Applied Sciences*, **2020**, 2, 1	1.8	10
356	Three-dimensional simulation of wind tunnel diffuser to study the effects of different divergence angles on speed uniform distribution, pressure in outlet, and eddy flows formation in the corners. *Physics of Fluids*, **2020**, 32, 052006	4.4	5
355	Development, evaluation, and multi-objective optimization of a multi-effect desalination unit integrated with a gas turbine plant. *Applied Thermal Engineering*, **2020**, 176, 115414	5.8	20
354	Multivariate optimization and sensitivity analyses of relevant parameters on efficiency of scraped surface heat exchanger. *Applied Thermal Engineering*, **2020**, 178, 115445	5.8	20
353	Effect of U-shaped absorber tube on thermal-hydraulic performance and efficiency of two-fluid parabolic solar collector containing two-phase hybrid non-Newtonian nanofluids. *International Journal of Mechanical Sciences*, **2020**, 185, 105832	5.5	35
352	Using of Artificial Neural Networks (ANNs) to predict the thermal conductivity of Zinc Oxide–Silver (50%–50%)/Water hybrid Newtonian nanofluid. *International Communications in Heat and Mass Transfer*, **2020**, 116, 104645	5.8	40
351	Thermo-hydraulic characteristics investigation of nanofluid heat transfer in a microchannel with super hydrophobic surfaces under non-uniform magnetic field using Incompressible Preconditioned Lattice Boltzmann Method (IPLBM). *Physica A: Statistical Mechanics and Its Applications*, **2020**, 553, 124669	3.3	8
350	History and introduction **2020**, 1-48		2
349	Hybrid nanofluids preparation method **2020**, 49-99		1
348	The rheological behavior of MWCNTs–ZnO/Water–Ethylene glycol hybrid non-Newtonian nanofluid by using of an experimental investigation. *Journal of Materials Research and Technology*, **2020**, 9, 8401-8406	5.5	43
347	Energy usage reduction in an air handling unit by incorporating two heat recovery units. *Journal of Building Engineering*, **2020**, 32, 101545	5.2	42
346	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
345	Natural convection and entropy generation of a nanofluid around a circular baffle inside an inclined square cavity under thermal radiation and magnetic field effects. *International Communications in Heat and Mass Transfer*, **2020**, 116, 104650	5.8	40

344	Carbon Nanomaterial-Based Nanofluids for Direct Thermal Solar Absorption. *Nanomaterials*, **2020**, 10,	5.4	24
343	Experimental investigation of heat and moisture transfer performance of CaCl2/H2O-SiO2 nanofluid in a gas□liquid microporous hollow fiber membrane contactor. *International Communications in Heat and Mass Transfer*, **2020**, 113, 104533	5.8	21
342	Energy-matrices, exergy, economic, environmental, exergoeconomic, enviroeconomic, and heat transfer (6E/HT) analysis of two passive/active solar still water desalination nearly 4000m: Altitude concept. *Journal of Cleaner Production*, **2020**, 261, 121243	10.3	87
341	Sonication time efficacy on FeO-liquid paraffin magnetic nanofluid thermal conductivity: An experimental evaluation. *Ultrasonics Sonochemistry*, **2020**, 64, 105004	8.9	16
340	Improving the thermal conductivity of water by adding mono & hybrid nano-additives containing graphene and silica: A comparative experimental study. *International Communications in Heat and Mass Transfer*, **2020**, 116, 104648	5.8	25
339	First approach on nanofluid-based solar still in high altitude for water desalination and solar water disinfection (SODIS). *Desalination*, **2020**, 491, 114592	10.3	79
338	Numerical simulation of magnetic nanoparticle-based drug delivery in presence of atherosclerotic plaques and under the effects of magnetic field. *Powder Technology*, **2020**, 366, 164-174	5.2	13
337	Analysis and manegement of laminar blood flow inside a cerebral blood vessel using a finite volume software program for biomedical engineering. *Computer Methods and Programs in Biomedicine*, **2020**, 190, 105384	6.9	29
336	Experimental thermal analysis of a turbulent nano enriched water flow in a circular tube. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 124010	3.3	1
335	Solutions for enhancement of energy and exergy efficiencies in air handling units. *Journal of Cleaner Production*, **2020**, 257, 120565	10.3	60
334	Proposal of a novel integrated ocean thermal energy conversion system with flat plate solar collectors and thermoelectric generators: Energy, exergy and environmental analyses. *Journal of Cleaner Production*, **2020**, 256, 120600	10.3	26
333	Free convection and entropy generation of a nanofluid in a tilted triangular cavity exposed to a magnetic field with sinusoidal wall temperature distribution considering radiation effects. *International Communications in Heat and Mass Transfer*, **2020**, 112, 104507	5.8	57
332	Application of nanofluids and fluids in photovoltaic thermal system: An updated review. *Solar Energy*, **2020**, 199, 796-818	6.8	58
331	Effect of MgO nanoparticles suspension on rheological behavior and a new correlation. *Journal of Molecular Liquids*, **2020**, 309, 112632	6	3
330	Numerical investigation of nanofluid laminar forced convection heat transfer between two horizontal concentric cylinders in the presence of porous medium. *Journal of Thermal Analysis and Calorimetry*, **2020**, 141, 2095-2108	4.1	27
329	A novel comparative experimental study on rheological behavior of mono & hybrid nanofluids concerned graphene and silica nano-powders: Characterization, stability and viscosity measurements. *Powder Technology*, **2020**, 366, 216-229	5.2	72
328	Numerical simulation of critical heat flux in forced boiling of a flow in an inclined tube with different angles. *Journal of Thermal Analysis and Calorimetry*, **2020**, 139, 2859-2880	4.1	3
327	Potential of thermoelectric waste heat recovery in a combined geothermal, fuel cell and organic Rankine flash cycle (thermodynamic and economic evaluation). *International Journal of Hydrogen Energy*, **2020**, 45, 6934-6948	6.7	31

326	Natural convective heat transfer and entropy generation of alumina/water nanofluid in a tilted enclosure with an elliptic constant temperature: Applying magnetic field and radiation effects. *International Journal of Mechanical Sciences*, **2020**, 174, 105470	5.5	102
325	Numerical simulation of blood flow inside an artery under applying constant heat flux using Newtonian and non-Newtonian approaches for biomedical engineering. *Computer Methods and Programs in Biomedicine*, **2020**, 190, 105375	6.9	23
324	Energy and exergy analyses of dual refrigerant system for liquefaction of natural gas. *International Journal of Exergy*, **2020**, 31, 87	1.2	5
323	A renewable energy-driven thermoelectric-utilized solar still with external condenser loaded by silver/nanofluid for simultaneously water disinfection and desalination. *Desalination*, **2020**, 480, 114354	10.3	102
322	Effects of sonication duration and nanoparticles concentration on thermal conductivity of silica-ethylene glycol nanofluid under different temperatures: An experimental study. *Powder Technology*, **2020**, 367, 464-473	5.2	54
321	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
320	Forecasting and Optimization of the Viscosity of Nano-oil Containing Zinc Oxide Nanoparticles Using the Response Surface Method and Sensitivity Analysis. *Journal of Energy Resources Technology, Transactions of the ASME*, **2020**, 142,	2.6	3
319	Investigation of the entropy generation during natural convection of Newtonian and non-Newtonian fluids inside the L-shaped cavity subjected to magnetic field: application of lattice Boltzmann method. *European Physical Journal Plus*, **2020**, 135, 1	3.1	24
318	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
317	Managment of natural convection of nanofluids inside a square enclosure by different nano powder shapes in presence of Fins with different shapes and magnetic field effect. *Advanced Powder Technology*, **2020**, 31, 2759-2777	4.6	43
316	Multi-objective optimization of a photovoltaic thermal-compound sensible rotary heat exchanger system using exergo-economic and enviro-economic approaches. *Journal of Environmental Management*, **2020**, 254, 109767	7.9	10
315	A review on fuel cell types and the application of nanofluid in their cooling. *Journal of Thermal Analysis and Calorimetry*, **2020**, 140, 1633-1654	4.1	27
314	Heat transfer enhancement of Water-Al2O3 nanofluid in an oval channel equipped with two rows of twisted conical strip inserts in various directions: A two-phase approach. *Computers and Mathematics With Applications*, **2020**, 79, 2203-2215	2.7	25
313	Investigation of the effects of various parameters on the natural convection of nanofluids in various cavities exposed to magnetic fields: a comprehensive review. *Journal of Thermal Analysis and Calorimetry*, **2020**, 140, 2055-2075	4.1	10
312	Flooding numerical simulation of heterogeneous oil reservoir using different nanoscale colloidal solutions. *Journal of Molecular Liquids*, **2020**, 302, 111972	6	18
311	The statistical investigation of multi-grade oil based nanofluids: Enriched by MWCNT and ZnO nanoparticles. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 554, 122159	3.3	9
310	Rheological behavior characteristics of MWCNT-TiO2/EG (40%–60%) hybrid nanofluid affected by temperature, concentration, and shear rate: An experimental and statistical study and a neural network simulating. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 553, 124061	3.3	10
309	Prediction of rheological behavior of a new hybrid nanofluid consists of copper oxide and multi wall carbon nanotubes suspended in a mixture of water and ethylene glycol using curve-fitting on experimental data. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 549, 124101	3.3	28

308	3-E analysis and optimization of an organic rankine flash cycle integrated with a PEM fuel cell and geothermal energy. *International Journal of Hydrogen Energy*, **2020**, 45, 2168-2185	6.7	44
307	Improving the efficiency of vacuum tube collectors using new absorbent tubes arrangement: Introducing helical coil and spiral tube adsorbent tubes. *Renewable Energy*, **2020**, 151, 772-781	8.1	50
306	Reducing AHU energy consumption by a new layout of using heat recovery units. *Journal of Thermal Analysis and Calorimetry*, **2020**, 139, 2811-2820	4.1	36
305	Effect of twisted-tape inserts and nanofluid on flow field and heat transfer characteristics in a tube. *International Communications in Heat and Mass Transfer*, **2020**, 110, 104440	5.8	82
304	Generation expansion planning by considering wind resource in a competitive environment. *Journal of Thermal Analysis and Calorimetry*, **2020**, 139, 2847-2857	4.1	5
303	On evaluation of thermophysical properties of transformer oil-based nanofluids: A comprehensive modeling and experimental study. *Journal of Molecular Liquids*, **2020**, 300, 112249	6	44
302	Mathematical and artificial brain structure-based modeling of heat conductivity of water based nanofluid enriched by double wall carbon nanotubes. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 540, 120766	3.3	8
301	The impact of sonication and stirring durations on the thermal conductivity of alumina-liquid paraffin nanofluid: An experimental assessment. *Powder Technology*, **2020**, 360, 1134-1142	5.2	44
300	Incorporating novel heat recovery units into an AHU for energy demand reduction-exergy analysis. *Journal of Thermal Analysis and Calorimetry*, **2020**, 139, 2821-2830	4.1	50
299	Effect of an inclined partition with constant thermal conductivity on natural convection and entropy generation of a nanofluid under magnetic field inside an inclined enclosure: Applicable for electronic cooling. *Advanced Powder Technology*, **2020**, 31, 645-657	4.6	12
298	Numerical investigation on the effect of four constant temperature pipes on natural cooling of electronic heat sink by nanofluids: A multifunctional optimization. *Advanced Powder Technology*, **2020**, 31, 416-432	4.6	32
297	3D numerical simulation of the enhanced oil recovery process using nanoscale colloidal solution flooding. *Journal of Molecular Liquids*, **2020**, 301, 112094	6	21
296	A review of melting and freezing processes of PCM/nano-PCM and their application in energy storage. *Energy*, **2020**, 211, 118698	7.9	124
295	Experimental evaluation of MWCNT–Al2O3 (40–60%)/5W50 hybrid nanofluid and comparison with MWCNT–Al2O3 (35–65%)/5W50 hybrid nanofluid with focus on thermophysical properties and cost performance index. *European Physical Journal Plus*, **2020**, 135, 1	3.1	4
294	Nanofluid flooding in a randomized heterogeneous porous media and investigating the effect of capillary pressure and diffusion on oil recovery factor. *Journal of Molecular Liquids*, **2020**, 320, 113646	6	19
293	Melting characteristics of paraffin wax in a rectangular cavity under steady rotations. *Journal of the Taiwan Institute of Chemical Engineers*, **2020**, 113, 135-141	5.3	7
292	The effect of tungsten trioxide nanoparticles on the thermal conductivity of ethylene glycol under different sonication durations: An experimental examination. *Powder Technology*, **2020**, 374, 462-469	5.2	40
291	Mathematical monitoring of agglomeration effects on thermophysical properties of water-based nanofluids using MLP and RSM. *Journal of Thermal Analysis and Calorimetry*, **2020**, 146, 739	4.1	1

290	Exergy and exergoeconimic analysis and multi-criteria optimisation of 1 MW installed CCHP system (a case study in Kashan University). *International Journal of Exergy*, **2020**, 32, 45	1.2	5
289	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
288	Nanofluid flooding for enhanced oil recovery in a heterogeneous two-dimensional anticline geometry. *International Communications in Heat and Mass Transfer*, **2020**, 118, 104810	5.8	18
287	Multi-objective particle swarm optimization of thermal conductivity and dynamic viscosity of magnetic nanodiamond-cobalt oxide dispersed in ethylene glycolusing RSM. *International Communications in Heat and Mass Transfer*, **2020**, 117, 104760	5.8	4
286	Using a two-phase method for numerical natural convection simulation in a cavity containing multiwalled carbon nanotube/water. *Journal of Thermal Analysis and Calorimetry*, **2020**, 146, 757	4.1	2
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