

# Mohammad Mohsen Sarafraz

## List of Publications by Year in descending order

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118  
papers

6,306  
citations

28190

55  
h-index

74018

75  
g-index

119  
all docs

119  
docs citations

119  
times ranked

2997  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling of mass transport and distribution of aptamer in blood-brain barrier for tumour therapy and cancer treatment. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2022, 173, 121-131.	2.0	5
2	Visible light-driven photothermal Au/Ag/TiO <sub>2</sub> trihybrid plasmonic nanomaterial for synthetic fuel production. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 25130-25144.	3.8	3
3	Potentials of boiling heat transfer in advanced thermal energy systems. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 143, 1833-1854.	2.0	11
4	Fundamental and subphenomena of boiling heat transfer. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 143, 1815-1832.	2.0	13
5	Thermodynamic potential of a high-concentration hybrid photovoltaic/thermal plant for co-production of steam and electricity. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 143, 1389-1398.	2.0	26
6	Sustainable three-stage chemical looping ammonia production (3CLAP) process. <i>Energy Conversion and Management</i> , 2021, 229, 113735.	4.4	20
7	Simulation study of a pulsed DBD with an electrode containing charge injector parts. <i>Physics of Plasmas</i> , 2021, 28, .	0.7	10
8	Fluid-structure interaction computational analysis and experiments of tsunami bore forces on coastal bridges. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021, 31, 1373-1395.	1.6	6
9	Effect of swirling flow and particle-release pattern on drug delivery to human tracheobronchial airways. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 2451-2469.	1.4	14
10	Life Cycle Assessment of an Enzymatic Ibuprofen Production Process with Automatic Recycling and Purification. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 13135-13150.	3.2	4
11	Phase change heat transfer induced by plasmon heat generation in liquid micro-layer inside a micro-reactor. <i>Journal of Energy Storage</i> , 2021, 42, 103033.	3.9	6
12	Thermal and flow characteristics of liquid flow in a 3D-printed micro-reactor: A numerical and experimental study. <i>Applied Thermal Engineering</i> , 2021, 199, 117531.	3.0	9
13	Enzymatic pretreatment of recycled grease trap waste in batch and continuous-flow reactors for biodiesel production. <i>Chemical Engineering Journal</i> , 2021, 426, 131703.	6.6	9
14	Thermal Performance Characteristics of a Microchannel Gas Heater for Solar Heating Applications. <i>Energies</i> , 2021, 14, 7625.	1.6	1
15	Effects of magnetic field on micro cross jet injection of dispersed nanoparticles in a microchannel. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2020, 30, 2683-2704.	1.6	94
16	Thermal analysis and thermo-hydraulic characteristics of zirconia-water nanofluid under a convective boiling regime. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 139, 2413-2422.	2.0	37
17	Thermal evaluation of a heat pipe working with n-pentane-acetone and n-pentane-methanol binary mixtures. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 139, 2435-2445.	2.0	70
18	Numerical study on mixed convection of a non-Newtonian nanofluid with porous media in a two lid-driven square cavity. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 140, 1121-1145.	2.0	153

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19	Pool boiling heat transfer characteristics of iron oxide nano-suspension under constant magnetic field. <i>International Journal of Thermal Sciences</i> , 2020, 147, 106131.	2.6	116
20	Enhancement of heat transfer in peristaltic flow in a permeable channel under induced magnetic field using different CNTs. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 140, 1277-1291.	2.0	73
21	Numerical investigation of mixed convection heat transfer behavior of nanofluid in a cavity with different heat transfer areas. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 140, 2779-2803.	2.0	60
22	Heat transfer evaluation of a micro heat exchanger cooling with spherical carbon-acetone nanofluid. <i>International Journal of Heat and Mass Transfer</i> , 2020, 149, 119124.	2.5	108
23	Performance index improvement of a double-pipe cooler with MgO/water-ethylene glycol (50:50) nano-suspension. <i>Propulsion and Power Research</i> , 2020, 9, 75-86.	2.0	7
24	Thermodynamic assessment and techno-economic analysis of a liquid indium-based chemical looping system for biomass gasification. <i>Energy Conversion and Management</i> , 2020, 225, 113428.	4.4	29
25	Operation analysis, response and performance evaluation of a pulsating heat pipe for low temperature heat recovery. <i>Energy Conversion and Management</i> , 2020, 222, 113230.	4.4	76
26	Transient pool boiling and particulate deposition of copper oxide nano-suspensions. <i>International Journal of Heat and Mass Transfer</i> , 2020, 155, 119743.	2.5	80
27	Pool boiling heat transfer to CuO-H <sub>2</sub> O nanofluid on finned surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2020, 156, 119780.	2.5	101
28	Potential application of Response Surface Methodology (RSM) for the prediction and optimization of thermal conductivity of aqueous CuO (II) nanofluid: A statistical approach and experimental validation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 554, 124353.	1.2	57
29	Development of human respiratory airway models: A review. <i>European Journal of Pharmaceutical Sciences</i> , 2020, 145, 105233.	1.9	50
30	Study of Two-Phase Newtonian Nanofluid Flow Hybrid with Hafnium Particles under the Effects of Slip. <i>Inventions</i> , 2020, 5, 6.	1.3	91
31	Thermodynamic potential of a novel plasma-assisted sustainable process for co-production of ammonia and hydrogen with liquid metals. <i>Energy Conversion and Management</i> , 2020, 210, 112709.	4.4	20
32	The resource gateway: Microfluidics and requirements engineering for sustainable space systems. <i>Chemical Engineering Science</i> , 2020, 225, 115774.	1.9	14
33	Pool boiling under the magnetic environment: experimental study on the role of magnetism in particulate fouling and bubbling of iron oxide/ethylene glycol nano-suspension. <i>Heat and Mass Transfer</i> , 2019, 55, 119-132.	1.2	14
34	Convective Bubbly Flow of Water in an Annular Pipe: Role of Total Dissolved Solids on Heat Transfer Characteristics and Bubble Formation. <i>Water (Switzerland)</i> , 2019, 11, 1566.	1.2	21
35	Smart optimization of a thermosyphon heat pipe for an evacuated tube solar collector using response surface methodology (RSM). <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 534, 122146.	1.2	112
36	High Quality Syngas Production with Supercritical Biomass Gasification Integrated with a Water-Gas Shift Reactor. <i>Energies</i> , 2019, 12, 2591.	1.6	24

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37	Experimental Investigation on Thermal Performance of a PV/T-PCM (Photovoltaic/Thermal) System Cooling with a PCM and Nanofluid. <i>Energies</i> , 2019, 12, 2572.	1.6	126
38	Marangoni effect on the thermal performance of glycerol/water mixture in microchannel. <i>Applied Thermal Engineering</i> , 2019, 161, 114142.	3.0	16
39	Statistical and experimental investigation on flow boiling heat transfer to carbon nanotube-therminol nanofluid. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 536, 122505.	1.2	9
40	Experimental investigation and performance optimisation of a catalytic reforming micro-reactor using response surface methodology. <i>Energy Conversion and Management</i> , 2019, 199, 111983.	4.4	38
41	Nanofluids as secondary fluid in the refrigeration system: Experimental data, regression, ANFIS, and NN modeling. <i>International Journal of Heat and Mass Transfer</i> , 2019, 144, 118635.	2.5	57
42	Assessment of the thermal performance of a thermosyphon heat pipe using zirconia-acetone nanofluids. <i>Renewable Energy</i> , 2019, 136, 884-895.	4.3	104
43	Thermal Assessment of Nano-Particulate Graphene-Water/Ethylene Glycol (WEG 60:40) Nano-Suspension in a Compact Heat Exchanger. <i>Energies</i> , 2019, 12, 1929.	1.6	99
44	Thermal Evaluation of Graphene Nanoplatelets Nanofluid in a Fast-Responding HP with the Potential Use in Solar Systems in Smart Cities. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 2101.	1.3	63
45	Numerical Simulation of Natural Convection Heat Transfer of Nanofluid With Cu, MWCNT, and Al <sub>2</sub> O <sub>3</sub> Nanoparticles in a Cavity With Different Aspect Ratios. <i>Journal of Thermal Science and Engineering Applications</i> , 2019, 11, .	0.8	73
46	Reforming of methanol with steam in a micro-reactor with Cu@SiO <sub>2</sub> porous catalyst. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 19628-19639.	3.8	49
47	Heat transfer analysis of Ga-In-Sn in a compact heat exchanger equipped with straight micro-passages. <i>International Journal of Heat and Mass Transfer</i> , 2019, 139, 675-684.	2.5	62
48	Fluid and heat transfer characteristics of aqueous graphene nanoplatelet (GNP) nanofluid in a microchannel. <i>International Communications in Heat and Mass Transfer</i> , 2019, 107, 24-33.	2.9	87
49	Heat Transfer of Oil/MWCNT Nanofluid Jet Injection Inside a Rectangular Microchannel. <i>Symmetry</i> , 2019, 11, 757.	1.1	46
50	Thermal and hydraulic performance of a heat exchanger working with carbon-water nanofluid. <i>Heat and Mass Transfer</i> , 2019, 55, 3443-3453.	1.2	8
51	Potential of Solar Collectors for Clean Thermal Energy Production in Smart Cities using Nanofluids: Experimental Assessment and Efficiency Improvement. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1877.	1.3	66
52	Diurnal thermal evaluation of an evacuated tube solar collector (ETSC) charged with graphene nanoplatelets-methanol nano-suspension. <i>Renewable Energy</i> , 2019, 142, 364-372.	4.3	128
53	Filtration of per- and poly-fluoroalkyl from water and recycling of fluorine: a thermochemical equilibrium analysis. <i>Chemical Papers</i> , 2019, 73, 1853-1862.	1.0	0
54	Experimental investigation of the reduction of liquid bismuth oxide with graphite. <i>Fuel Processing Technology</i> , 2019, 188, 110-117.	3.7	18

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55	The thermo-chemical potential liquid chemical looping gasification with bismuth oxide. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 8038-8050.	3.8	17
56	Assessment of Iron Oxide (III)–Therminol 66 Nanofluid as a Novel Working Fluid in a Convective Radiator Heating System for Buildings. <i>Energies</i> , 2019, 12, 4327.	1.6	16
57	Radiation Heat Transfer in a Complex Geometry Containing Anisotropically-Scattering Mie Particles. <i>Energies</i> , 2019, 12, 3986.	1.6	4
58	Energetic Analysis of Different Configurations of Power Plants Connected to Liquid Chemical Looping Gasification. <i>Processes</i> , 2019, 7, 763.	1.3	14
59	Contact angle and heat transfer characteristics of a gravity-driven film flow of a particulate liquid metal on smooth and rough surfaces. <i>Applied Thermal Engineering</i> , 2019, 149, 602-612.	3.0	14
60	Experimental thermal energy assessment of a liquid metal eutectic in a microchannel heat exchanger equipped with a (10–50 Hz) resonator. <i>Applied Thermal Engineering</i> , 2019, 148, 578-590.	3.0	41
61	Heat transfer and pressure drop characteristics of MgO nanofluid in a double pipe heat exchanger. <i>Heat and Mass Transfer</i> , 2019, 55, 1769-1781.	1.2	31
62	Potential of molten lead oxide for liquid chemical looping gasification (LCLG): A thermochemical analysis. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 4195-4210.	3.8	27
63	Thermal performance analysis of a microchannel heat sink cooling with copper oxide-indium (CuO/In) nano-suspensions at high-temperatures. <i>Applied Thermal Engineering</i> , 2018, 137, 700-709.	3.0	102
64	Demonstration of plausible application of gallium nano-suspension in microchannel solar thermal receiver: Experimental assessment of thermo-hydraulic performance of microchannel. <i>International Communications in Heat and Mass Transfer</i> , 2018, 94, 39-46.	2.9	87
65	Flow boiling heat transfer to MgO-therminol 66 heat transfer fluid: Experimental assessment and correlation development. <i>Applied Thermal Engineering</i> , 2018, 138, 552-562.	3.0	64
66	Rheological behaviour of various metal-based nano-fluids between rotating discs: a new insight. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2018, 88, 37-48.	2.7	62
67	Thermal performance analysis of a flat heat pipe working with carbon nanotube-water nanofluid for cooling of a high heat flux heater. <i>Heat and Mass Transfer</i> , 2018, 54, 985-997.	1.2	94
68	Thermal performance of a heat sink microchannel working with biologically produced silver-water nanofluid: Experimental assessment. <i>Experimental Thermal and Fluid Science</i> , 2018, 91, 509-519.	1.5	114
69	Pool boiling heat transfer to zinc oxide-ethylene glycol nano-suspension near the critical heat flux. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 2309-2315.	0.7	7
70	Thermal and hydraulic analysis of a rectangular microchannel with gallium-copper oxide nano-suspension. <i>Journal of Molecular Liquids</i> , 2018, 263, 382-389.	2.3	69
71	Heat transfer and fluid flow of MgO/ethylene glycol in a corrugated heat exchanger. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 3975-3982.	0.7	15
72	Thermal behavior of aqueous iron oxide nano-fluid as a coolant on a flat disc heater under the pool boiling condition. <i>Heat and Mass Transfer</i> , 2017, 53, 265-275.	1.2	85

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73	Low-frequency vibration for fouling mitigation and intensification of thermal performance of a plate heat exchanger working with CuO/water nanofluid. Applied Thermal Engineering, 2017, 121, 388-399.	3.0	124
74	The relative performance of alternative oxygen carriers for liquid chemical looping combustion and gasification. International Journal of Hydrogen Energy, 2017, 42, 16396-16407.	3.8	40
75	Fouling formation and thermal performance of aqueous carbon nanotube nanofluid in a heat sink with rectangular parallel microchannel. Applied Thermal Engineering, 2017, 123, 29-39.	3.0	89
76	Potential use of liquid metal oxides for chemical looping gasification: A thermodynamic assessment. Applied Energy, 2017, 195, 702-712.	5.1	63
77	Green synthesis of silver nanoparticles using green tea leaves: Experimental study on the morphological, rheological and antibacterial behaviour. Heat and Mass Transfer, 2017, 53, 3201-3209.	1.2	117
78	On the convective thermal performance of a CPU cooler working with liquid gallium and CuO/water nanofluid: A comparative study. Applied Thermal Engineering, 2017, 112, 1373-1381.	3.0	114
79	Thermal Performance and Viscosity of Biologically Produced Silver/Coconut Oil Nanofluids. Chemical and Biochemical Engineering Quarterly, 2017, 30, 489-500.	0.5	73
80	Boiling Heat Transfer of Alumina Nano-Fluids: Role of Nanoparticle Deposition on the Boiling Heat Transfer Coefficient. Periodica Polytechnica: Chemical Engineering, 2016, 60, 252-258.	0.5	68
81	Thermal performance of a counter-current double pipe heat exchanger working with COOH-CNT/water nanofluids. Experimental Thermal and Fluid Science, 2016, 78, 41-49.	1.5	92
82	Heat transfer, pressure drop and fouling studies of multi-walled carbon nanotube nano-fluids inside a plate heat exchanger. Experimental Thermal and Fluid Science, 2016, 72, 1-11.	1.5	105
83	Critical heat flux and pool boiling heat transfer analysis of synthesized zirconia aqueous nano-fluids. International Communications in Heat and Mass Transfer, 2016, 70, 75-83.	2.9	107
84	On the fouling formation of functionalized and non-functionalized carbon nanotube nano-fluids under pool boiling condition. Applied Thermal Engineering, 2016, 95, 433-444.	3.0	80
85	Pool boiling heat transfer to aqueous alumina nano-fluids on the plain and concentric circular micro-structured (CCM) surfaces. Experimental Thermal and Fluid Science, 2016, 72, 125-139.	1.5	72
86	Experimental investigation on the pool boiling heat transfer to aqueous multi-walled carbon nanotube nanofluids on the micro-finned surfaces. International Journal of Thermal Sciences, 2016, 100, 255-266.	2.6	74
87	Comparatively experimental study on the boiling thermal performance of metal oxide and multi-walled carbon nanotube nanofluids. Powder Technology, 2016, 287, 412-430.	2.1	79
88	Experimental studies on the stability of CuO nanoparticles dispersed in different base fluids: influence of stirring, sonication and surface active agents. Heat and Mass Transfer, 2016, 52, 55-62.	1.2	82
89	Mathematical modeling and simulation of supercritical CO <sub>2</sub> extraction of Ziziphora Tenuior essential oil. Anadolu University Journal of Sciences & Technology, 2016, 17, .	0.2	0
90	Boiling Thermal Performance of TiO <sub>2</sub> Aqueous NanoFluids as a Coolant on a Disc Copper Block. Periodica Polytechnica: Chemical Engineering, 2015, , .	0.5	9

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91	Pool boiling heat transfer to dilute copper oxide aqueous nanofluids. International Journal of Thermal Sciences, 2015, 90, 224-237.	2.6	89
92	Intensification of forced convection heat transfer using biological nanofluid in a double-pipe heat exchanger. Experimental Thermal and Fluid Science, 2015, 66, 279-289.	1.5	119
93	Role of nanofluid fouling on thermal performance of a thermosyphon: Are nanofluids reliable working fluid?. Applied Thermal Engineering, 2015, 82, 212-224.	3.0	86
94	Particulate fouling of CuO-water nanofluid at isothermal diffusive condition inside the conventional heat exchanger-experimental and modeling. Experimental Thermal and Fluid Science, 2015, 60, 83-95.	1.5	96
95	Upward Flow Boiling to DI-Water and CuO Nanofluids Inside the Concentric Annuli. Journal of Applied Fluid Mechanics, 2015, 8, 651-659.	0.4	48
96	Forced Convective and Nucleate Flow Boiling Heat Transfer to Alumina Nanofluids. Periodica Polytechnica: Chemical Engineering, 2014, 58, 37.	0.5	53
97	Application of thermodynamic models to estimating the convective flow boiling heat transfer coefficient of mixtures. Experimental Thermal and Fluid Science, 2014, 53, 70-85.	1.5	31
98	Convective boiling and particulate fouling of stabilized CuO-ethylene glycol nanofluids inside the annular heat exchanger. International Communications in Heat and Mass Transfer, 2014, 53, 116-123.	2.9	91
99	Experimental studies on the effect of water contaminants in convective boiling heat transfer. Ain Shams Engineering Journal, 2014, 5, 553-568.	3.5	8
100	Scale formation and subcooled flow boiling heat transfer of CuO-water nanofluid inside the vertical annulus. Experimental Thermal and Fluid Science, 2014, 52, 205-214.	1.5	102
101	Thermal performance and efficiency of a thermosyphon heat pipe working with a biologically ecofriendly nanofluid. International Communications in Heat and Mass Transfer, 2014, 57, 297-303.	2.9	94
102	Nucleate pool boiling heat transfer characteristics of dilute Al <sub>2</sub> O <sub>3</sub> -ethylene glycol nanofluids. International Communications in Heat and Mass Transfer, 2014, 58, 96-104.	2.9	72
103	Experimental study on the influence of SO <sub>2</sub> gas injection to pure liquids on pool boiling heat transfer coefficients. Heat and Mass Transfer, 2014, 50, 747-757.	1.2	2
104	Sedimentation and convective boiling heat transfer of CuO-water/ethylene glycol nanofluids. Heat and Mass Transfer, 2014, 50, 1237-1249.	1.2	75
105	Experimental study on the thermal performance and efficiency of a copper made thermosyphon heat pipe charged with alumina-glycol based nanofluids. Powder Technology, 2014, 266, 378-387.	2.1	77
106	Experimental study on subcooled flow boiling heat transfer to water-diethylene glycol mixtures as a coolant inside a vertical annulus. Experimental Thermal and Fluid Science, 2013, 50, 154-162.	1.5	72
107	Forced convective and subcooled flow boiling heat transfer to pure water and n-heptane in an annular heat exchanger. Annals of Nuclear Energy, 2013, 53, 401-410.	0.9	72
108	Nucleate pool boiling heat transfer of binary nano mixtures under atmospheric pressure around a smooth horizontal cylinder. Periodica Polytechnica: Chemical Engineering, 2013, 57, 71.	0.5	39

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109	Development of a new correlation for estimating pool boiling heat transfer coefficient of MEG/DEG/water ternary mixture. Chemical Industry and Chemical Engineering Quarterly, 2012, 18, 11-18.	0.4	16
110	Experimental studies on nucleate pool boiling heat transfer to ethanol/MEG/DEG ternary mixture as a new coolant. Chemical Industry and Chemical Engineering Quarterly, 2012, 18, 577-586.	0.4	21
111	Subcooled flow boiling heat transfer of ethanol aqueous solutions in vertical annulus space. Chemical Industry and Chemical Engineering Quarterly, 2012, 18, 315-327.	0.4	50
112	Enhancement of the pool boiling heat transfer coefficient using the gas injection into the water. Polish Journal of Chemical Technology, 2012, 14, 100-109.	0.3	6
113	Enhancement of nucleate pool boiling heat transfer to dilute binary mixtures using endothermic chemical reactions around the smoothed horizontal cylinder. Heat and Mass Transfer, 2012, 48, 1755-1765.	1.2	50
114	Influence of thermodynamic models on the prediction of pool boiling heat transfer coefficient of dilute binary mixtures. International Communications in Heat and Mass Transfer, 2012, 39, 1303-1310.	2.9	41
115	Nucleate pool boiling of aqueous solution of citric acid on a smoothed horizontal cylinder. Heat and Mass Transfer, 2012, 48, 611-619.	1.2	41
116	Artificial boiling heat transfer in the free convection to carbonic acid solution. Experimental Thermal and Fluid Science, 2011, 35, 645-652.	1.5	11
117	Accurate improvement of a mathematical correlation for estimating diffusion coefficient in gaseous hydrocarbons. European Journal of Chemistry, 2011, 2, 485-488.	0.3	0
118	Green and Sustainable Chemical Looping Plasma Process for Ammonia and Hydrogen Production. , 0, , .		0