

Mohsen Nasr Esfahany

List of Publications by Year in descending order

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105
papers

5,221
citations

109137

35
h-index

88477

70
g-index

106
all docs

106
docs citations

106
times ranked

3702
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental investigation of oxide nanofluids laminar flow convective heat transfer. International Communications in Heat and Mass Transfer, 2006, 33, 529-535.	2.9	748
2	Experimental investigation of convective heat transfer of Al ₂ O ₃ /water nanofluid in circular tube. International Journal of Heat and Fluid Flow, 2007, 28, 203-210.	1.1	659
3	Experimental study of turbulent convective heat transfer and pressure drop of dilute CuO/water nanofluid inside a circular tube. International Communications in Heat and Mass Transfer, 2010, 37, 214-219.	2.9	263
4	Numerical study of convective heat transfer of nanofluids in a circular tube two-phase model versus single-phase model. International Communications in Heat and Mass Transfer, 2010, 37, 91-97.	2.9	239
5	Experimental investigation of turbulent convective heat transfer of dilute γ -Al ₂ O ₃ /water nanofluid inside a circular tube. International Journal of Heat and Fluid Flow, 2010, 31, 606-612.	1.1	208
6	Numerical Investigation of Nanofluid Laminar Convective Heat Transfer through a Circular Tube. Numerical Heat Transfer; Part A: Applications, 2007, 52, 1043-1058.	1.2	169
7	Single chamber microbial fuel cell with spiral anode for dairy wastewater treatment. Biosensors and Bioelectronics, 2012, 38, 264-269.	5.3	144
8	Mass transfer in nanofluids: A review. International Journal of Thermal Sciences, 2014, 82, 84-99.	2.6	140
9	Mass transfer between phases in microchannels: A review. Chemical Engineering and Processing: Process Intensification, 2018, 127, 213-237.	1.8	105
10	Convective Heat Transfer of a Cu/Water Nanofluid Flowing Through a Circular Tube. Experimental Heat Transfer, 2009, 22, 217-227.	2.3	98
11	Mechanisms of smart waterflooding in carbonate oil reservoirs - A review. Journal of Petroleum Science and Engineering, 2019, 179, 276-291.	2.1	94
12	Experimental investigation of pool boiling of Fe ₃ O ₄ /ethylene glycol-water nanofluid in electric field. International Journal of Thermal Sciences, 2012, 62, 149-153.	2.6	89
13	Pool boiling characteristics of nanofluid on flat plate based on heater surface analysis. International Communications in Heat and Mass Transfer, 2013, 47, 113-120.	2.9	87
14	Investigation of nanofluids heat transfer in a ribbed microchannel heat sink using single-phase and multiphase CFD models. International Communications in Heat and Mass Transfer, 2015, 68, 122-129.	2.9	82
15	CFD analysis of turbulence in a baffled stirred tank, a three-compartment model. Chemical Engineering Science, 2009, 64, 351-362.	1.9	81
16	Experimental investigation of the effect of nanoparticle size on thermal conductivity of in-situ prepared silica-ethanol nanofluid. International Communications in Heat and Mass Transfer, 2016, 77, 148-154.	2.9	71
17	CFD simulation of the structured packings: A review. Separation Science and Technology, 2019, 54, 2536-2554.	1.3	70
18	Investigation of different configurations of microbial fuel cells for the treatment of oilfield produced water. Applied Energy, 2017, 192, 457-465.	5.1	67

#	ARTICLE	IF	CITATIONS
19	Investigation of CuO/Water Nanofluid Laminar Convective Heat Transfer through a Circular Tube. <i>Journal of Enhanced Heat Transfer</i> , 2006, 13, 279-289.	0.5	64
20	Investigation of the effects of nanoparticle size on CO ₂ absorption by silica-water nanofluid. <i>Separation and Purification Technology</i> , 2018, 195, 208-215.	3.9	63
21	Influence of orientation and roughness of heater surface on critical heat flux and pool boiling heat transfer coefficient of nanofluid. <i>Applied Thermal Engineering</i> , 2017, 124, 353-361.	3.0	60
22	Absorption of Hydrogen Sulfide and Carbon Dioxide in Water Based Nanofluids. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4682-4690.	1.8	59
23	CFD studies of solids hold-up distribution and circulation patterns in gas-solid fluidized beds. <i>Powder Technology</i> , 2010, 200, 202-215.	2.1	58
24	Hydrodynamics and mass transfer in liquid-liquid non-circular microchannels: Comparison of two aspect ratios and three junction structures. <i>Chemical Engineering Journal</i> , 2017, 322, 328-338.	6.6	56
25	Laminar forced convective mass transfer of Al_2O_3 /electrolyte nanofluid in a circular tube. <i>International Journal of Thermal Sciences</i> , 2013, 64, 251-256.	2.6	52
26	Hydrogen Sulfide Bubble Absorption Enhancement in Water-Based Nanofluids. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 16851-16858.	1.8	51
27	Natural convective heat transfer of Fe_3O_4 /ethylene glycol nanofluid in electric field. <i>International Journal of Thermal Sciences</i> , 2012, 62, 114-119.	2.6	49
28	Turbulent mass transfer of Al_2O_3 and TiO_2 electrolyte nanofluids in circular tube. <i>Microfluidics and Nanofluidics</i> , 2013, 15, 501-508.	1.0	48
29	Thermal performance analysis of nanofluids in a thermosyphon heat pipe using CFD modeling. <i>Heat and Mass Transfer</i> , 2013, 49, 667-678.	1.2	46
30	Liquid turbulence structure at a sheared and wavy gas-liquid interface. <i>International Journal of Multiphase Flow</i> , 1997, 23, 205-226.	1.6	43
31	CFD Simulation of Mass Transfer Efficiency and Pressure Drop in a Structured Packed Distillation Column. <i>Chemical Engineering and Technology</i> , 2007, 30, 854-861.	0.9	43
32	Experimental investigation of mass transfer of active ions in silica nanofluids. <i>International Communications in Heat and Mass Transfer</i> , 2013, 46, 148-153.	2.9	43
33	The influence of silica nanoparticles on hydrodynamics and mass transfer in spray liquid-liquid extraction column. <i>Separation and Purification Technology</i> , 2015, 151, 74-81.	3.9	39
34	Experimental investigation of the effects of the hydrophilic silica nanoparticles on mass transfer and hydrodynamics of single drop extraction. <i>Separation and Purification Technology</i> , 2016, 170, 130-137.	3.9	39
35	Heat transfer enhancement by application of nano-powder. <i>Journal of Nanoparticle Research</i> , 2010, 12, 2611-2619.	0.8	38
36	Experimental and Numerical Simulation of Dry Pressure Drop in High-Capacity Structured Packings. <i>Chemical Engineering and Technology</i> , 2016, 39, 1161-1170.	0.9	36

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37	A comprehensive study on optimizing and thermoregulating properties of core-shell fibrous structures through coaxial electrospinning. <i>Journal of Materials Science</i> , 2018, 53, 4665-4682.	1.7	35
38	The effect of the size of square microchannels on hydrodynamics and mass transfer during liquid-liquid slug flow. <i>AIChE Journal</i> , 2017, 63, 5019-5028.	1.8	34
39	Experimental and numerical study of multiphase flow in new wire gauze with high capacity structured packing. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016, 108, 35-43.	1.8	33
40	Mass transfer into/from nanofluid drops in a spray liquid-liquid extraction column. <i>AIChE Journal</i> , 2016, 62, 852-860.	1.8	33
41	Parameter estimation and characterization of a single-chamber microbial fuel cell for dairy wastewater treatment. <i>Bioresource Technology</i> , 2013, 146, 247-253.	4.8	32
42	Influence of the uniform electric field on viscosity of magnetic nanofluid (Fe ₃ O ₄ -EG). <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	30
43	Impact of salinity and connate water on low salinity water injection in secondary and tertiary stages for enhanced oil recovery in carbonate oil reservoirs. <i>Journal of Geophysics and Engineering</i> , 2018, 15, 1242-1254.	0.7	28
44	Thermal performance of electrospun core-shell phase change fibrous layers at simulated body conditions. <i>Applied Thermal Engineering</i> , 2019, 161, 113924.	3.0	27
45	Experimental investigation of water self-diffusion coefficient and tracer diffusion coefficient of tert-butanol in water-based silica nanofluids. <i>International Journal of Thermal Sciences</i> , 2014, 86, 166-174.	2.6	26
46	S-PVC Grain Morphology: A Review. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 10953-10963.	1.8	24
47	The effect of small vibrations on Marangoni convection and the free surface of a liquid bridge. <i>Acta Astronautica</i> , 2006, 58, 622-632.	1.7	23
48	Enhancement of dimethyl ether production with application of hydrogen-permselective Pd-based membrane in fluidized bed reactor. <i>Journal of Industrial and Engineering Chemistry</i> , 2012, 18, 1157-1165.	2.9	21
49	Impacts of solid-phase wall boundary condition on CFD simulation of conical spouted beds containing heavy zirconia particles. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 64, 146-156.	2.7	20
50	Application of water based nanofluids in bioscrubber for improvement of biogas sweetening in a pilot scale. <i>Chemical Engineering and Processing: Process Intensification</i> , 2019, 143, 107603.	1.8	20
51	Optimization and heat integration of hybrid R-HiDiC and pervaporation by combining GA and PSO algorithm in TAME synthesis. <i>Separation and Purification Technology</i> , 2020, 236, 116288.	3.9	20
52	Effect of electrohydrodynamic (EHD) on condensation of R-134a in presence of non-condensable gas. <i>International Communications in Heat and Mass Transfer</i> , 2009, 36, 286-291.	2.9	19
53	CFD Simulation of the Bubbling and Slugging Gas-Solid Fluidized Beds. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	0.8	19
54	Experimental and numerical study of mass transfer efficiency in new wire gauze with high capacity structured packing. <i>Separation Science and Technology</i> , 2019, 54, 2706-2717.	1.3	19

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55	An experimental and numerical study of heat transfer in jacketed vessels by SiO ₂ nanofluid. Heat and Mass Transfer, 2017, 53, 2395-2405.	1.2	18
56	Mathematical modeling of rapid temperature swing adsorption; the role of influencing parameters. Separation and Purification Technology, 2017, 183, 181-193.	3.9	18
57	Effect of the phase ratio on the particle properties of poly(vinyl chloride) resins produced by suspension polymerization. Journal of Applied Polymer Science, 2008, 110, 2748-2755.	1.3	17
58	Characterization of New Wire Gauze High-Capacity Structured Packing with Varied Inclination Angle. Chemical Engineering and Technology, 2017, 40, 581-587.	0.9	17
59	Hexavalent chromium extraction from aqueous solutions in a liquid-liquid slug flow microreactor. Chemical Engineering and Processing: Process Intensification, 2020, 157, 108156.	1.8	17
60	Influence of silica nanoparticles on mass transfer in a membrane-based micro-contactor. RSC Advances, 2016, 6, 19089-19097.	1.7	16
61	Numerical study of slug flow heat transfer in microchannels. International Journal of Thermal Sciences, 2020, 147, 106118.	2.6	16
62	The effects of feed splitting and heat integration in classical arrangements on cost minimization in separation of ternary mixture. Chemical Engineering and Processing: Process Intensification, 2013, 63, 37-43.	1.8	14
63	Nonisothermal suspension polymerization of vinyl chloride for enhanced productivity. Journal of Vinyl and Additive Technology, 2016, 22, 470-478.	1.8	14
64	Experimental characterization of new wire gauze with high capacity structured packing. Canadian Journal of Chemical Engineering, 2017, 95, 535-542.	0.9	14
65	Optimization of a new combined approach to reduce energy consumption in the hybrid reactive distillation-pervaporation process. Chemical Engineering and Processing: Process Intensification, 2020, 151, 107910.	1.8	14
66	Oily wastewater treatment by a continuous flow microbial fuel cell and packages of cells with serial and parallel flow connections. Bioelectrochemistry, 2020, 134, 107535.	2.4	14
67	Experimental Study of the Effect of Reflux Rate during Suspension Polymerization on Particle Properties of PVC Resin. Industrial & Engineering Chemistry Research, 2010, 49, 1997-2002.	1.8	13
68	Improvement of CO_2 absorption by Fe_3O_4 /water nanofluid falling liquid film in presence of the magnetic field. Canadian Journal of Chemical Engineering, 2021, 99, 519-529.	0.9	13
69	Investigation of the effect of delayed reflux on PVC grain properties produced by suspension polymerization. Journal of Applied Polymer Science, 2010, 117, 2506-2514.	1.3	12
70	Velocity Measurement in Carotid Artery: Quantitative Comparison of Time-Resolved 3D Phase-Contrast MRI and Image-based Computational Fluid Dynamics. Iranian Journal of Radiology, 2015, 12, e18286.	0.1	12
71	CFD Simulation of Gas Distribution Performance of Gas Inlet Systems in Packed Columns. Chemical Engineering and Technology, 2007, 30, 1176-1180.	0.9	11
72	Vinyl chloride removal from an air stream by biotrickling filter. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2012, 47, 2263-2269.	0.9	11

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73	An experimental investigation of pool boiling characteristics of alumina-water nanofluid over micro-/nanostructured surfaces. <i>Heat Transfer Engineering</i> , 2019, 40, 1691-1708.	1.2	11
74	Bicarbonate flooding of homogeneous and heterogeneous cores from a carbonaceous petroleum reservoir. <i>Journal of Petroleum Science and Engineering</i> , 2019, 178, 251-261.	2.1	11
75	Effect of applied EHD on in-tube condensation of R-134a within an assembled experimental rig including a laboratory heat exchanger. <i>Experimental Thermal and Fluid Science</i> , 2014, 58, 112-120.	1.5	10
76	Three-dimensional CFD study of conical spouted beds containing heavy particles: Design parameters. <i>Korean Journal of Chemical Engineering</i> , 2017, 34, 1541-1553.	1.2	10
77	Comparison of the effect of nano ZnO and conventional grade ZnO on the cross-linking densities of NR/BR and NR/SBR blends. <i>Journal of Elastomers and Plastics</i> , 2012, 44, 443-451.	0.7	9
78	Modeling of the Acute Effects of Primary Hypertension and Hypotension on the Hemodynamics of Intracranial Aneurysms. <i>Annals of Biomedical Engineering</i> , 2015, 43, 207-221.	1.3	9
79	Investigation of the effects of nonisothermal suspension polymerization of vinyl chloride on resin properties. <i>Journal of Vinyl and Additive Technology</i> , 2017, 23, 267-274.	1.8	9
80	Investigation of the addition of nano-CaCO ₃ at dry mixing or onset of fusion on the dispersion, torque, and mechanical properties of compounded PVC. <i>Journal of Vinyl and Additive Technology</i> , 2012, 18, 153-160.	1.8	8
81	The effect of surface modification of (micro/nano)-calcium carbonate particles at various ratios on mechanical properties of poly(vinyl chloride) composites. <i>Journal of Thermoplastic Composite Materials</i> , 2015, 28, 479-495.	2.6	8
82	Continuous Dosing of a Fast Initiator during Suspension Polymerization of Vinyl Chloride for Enhanced Productivity: Mathematical Modeling and Experimental Study. <i>Chemical Engineering Communications</i> , 2016, 203, 1473-1483.	1.5	8
83	Investigation of the effects of nonisothermal suspension polymerization of vinyl chloride on the fusion and degradation behavior of poly(vinyl chloride). <i>Journal of Vinyl and Additive Technology</i> , 2017, 23, 259-266.	1.8	7
84	Experimental study on the reduction of loratadine particle size through confined liquid impinging jets. <i>International Journal of Pharmaceutics</i> , 2020, 587, 119668.	2.6	7
85	Optimization and heat integration of hybrid H ₂ O-PV process with the series-parallel arrangement of PV modules and recycle streams for TAME production. <i>Separation and Purification Technology</i> , 2020, 242, 116786.	3.9	7
86	Influences of initiator addition methods in suspension polymerization of vinyl chloride on poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.8	6
87	Preparation and characterization of a novel calcium-conducting polymer inclusion membrane: Part I. <i>Korean Journal of Chemical Engineering</i> , 2018, 35, 2052-2064.	1.2	6
88	Optimum process configuration for ETBE production based on TAC minimization. <i>Separation and Purification Technology</i> , 2021, 256, 117744.	3.9	6
89	Effects of Variations of Flow and Heart Rate on Intra-Aneurysmal Hemodynamics in a Ruptured Internal Carotid Artery Aneurysm During Exercise. <i>Iranian Journal of Radiology</i> , 2016, 13, e18217.	0.1	6
90	A liquid-liquid microreactor for the intensification of hexavalent chromium removal from wastewaters. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106543.	3.3	6

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91	Influence of SiO ₂ and graphene oxide nanoparticles on efficiency of biological removal process. Environmental Technology (United Kingdom), 2017, 38, 2763-2774.	1.2	5
92	Effect of cell structure and heat pretreating of the microorganisms on performance of a microbial fuel cell. Water Science and Technology, 2019, 79, 1746-1754.	1.2	5
93	Characterization of interfacial interactions and emulsification properties of bicarbonate solutions and crude oil and the effects of temperature and pressure. Journal of Molecular Liquids, 2020, 305, 112729.	2.3	5
94	INVESTIGATION OF THE EFFECT OF ELECTRIC FIELD ON CO ₂ ABSORPTION IN WATER/Fe ₃ O ₄ NANOFLUID. Brazilian Journal of Chemical Engineering, 2019, 36, 1333-1342.	0.7	5
95	Development of a Safe and Environmentally Friendly Sulfate Process for the Production of Titanium Oxide. Industrial & Engineering Chemistry Research, 2022, 61, 1786-1796.	1.8	5
96	Influence of the specific surface area and silver crystallite size of mesoporous Ag/SrTiO ₃ on the selectivity enhancement of ethylene oxide production. Journal of Chemical Technology and Biotechnology, 2019, 94, 3839-3849.	1.6	4
97	The hybrid RDWC pervaporation with series parallel arrangement and heat integration for ETBE production. Separation and Purification Technology, 2021, 268, 118695.	3.9	4
98	Pore network simulation for diffusion through a porous membrane: A comparison between Knudsen and Oscillator models. Canadian Journal of Chemical Engineering, 2014, 92, 1059-1069.	0.9	3
99	Development of pore network method in simulation of non-catalytic gas-solid reactions Study of sulfur dioxide chemisorption on copper oxide sorbents. Chemical Engineering Journal, 2015, 262, 295-312.	6.6	3
100	Numerical study on increasing PVC suspension polymerization productivity by using PSO optimization algorithm. International Journal of Plastics Technology, 2016, 20, 219-230.	2.9	3
101	Influence of Physical Properties of Phases on Hydrodynamics and Mass Transfer Characteristics of a Liquid-Liquid Circular Microchannel. , 2016, , .		3
102	Mechanistic investigation of nonisothermal suspension polymerization of vinyl chloride. Journal of Vinyl and Additive Technology, 2018, 24, 84-92.	1.8	3
103	Enhancement of poly(vinyl chloride) productivity by continuous initiator injection. Journal of Vinyl and Additive Technology, 2017, 23, 248-258.	1.8	2
104	Numerical Study on the Effect of Bend Angle on Turbulent Flow through Oscillating Bend. Chemical Product and Process Modeling, 2009, 4, .	0.5	0
105	Turbulent Convective Heat Transfer of Very Dilute Nanofluids Inside a Circular Tube. , 2009, , .		0