

Majid Siavashi

List of Publications by Year in descending order

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80
papers

4,557
citations

76294

40
h-index

106281

65
g-index

82
all docs

82
docs citations

82
times ranked

2240
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent advances in modeling and simulation of nanofluid flows-Part I: Fundamentals and theory. <i>Physics Reports</i> , 2019, 790, 1-48.	10.3	670
2	Battery thermal management with thermal energy storage composites of PCM, metal foam, fin and nanoparticle. <i>Journal of Energy Storage</i> , 2020, 28, 101235.	3.9	272
3	Numerical investigation of flow characteristics, heat transfer and entropy generation of nanofluid flow inside an annular pipe partially or completely filled with porous media using two-phase mixture model. <i>Energy</i> , 2015, 93, 2451-2466.	4.5	141
4	Nanofluid and porous fins effect on natural convection and entropy generation of flow inside a cavity. <i>Advanced Powder Technology</i> , 2018, 29, 142-156.	2.0	138
5	MHD nanofluid free convection and entropy generation in porous enclosures with different conductivity ratios. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 442, 474-490.	1.0	129
6	Numerical analysis of mixed convection of two-phase non-Newtonian nanofluid flow inside a partially porous square enclosure with a rotating cylinder. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 137, 267-287.	2.0	124
7	Optimization of heat transfer enhancement and pumping power of a heat exchanger tube using nanofluid with gradient and multi-layered porous foams. <i>Applied Thermal Engineering</i> , 2018, 138, 465-474.	3.0	119
8	MHD enhanced nanofluid mediated heat transfer in porous metal for CPU cooling. <i>Applied Thermal Engineering</i> , 2020, 168, 114843.	3.0	110
9	Two-phase mixture numerical simulation of natural convection of nanofluid flow in a cavity partially filled with porous media to enhance heat transfer. <i>Journal of Molecular Liquids</i> , 2017, 238, 553-569.	2.3	103
10	A new design for hybrid cooling of Li-ion battery pack utilizing PCM and mini channel cold plates. <i>Applied Thermal Engineering</i> , 2021, 197, 117398.	3.0	95
11	Impingement jet hydrogen, air and Cu H ₂ O nanofluid cooling of a hot surface covered by porous media with non-uniform input jet velocity. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 15933-15948.	3.8	93
12	Numerical melting performance analysis of a cylindrical thermal energy storage unit using nano-enhanced PCM and multiple horizontal fins. <i>Numerical Heat Transfer; Part A: Applications</i> , 2019, 75, 560-577.	1.2	91
13	Two-phase simulation of non-Newtonian nanofluid natural convection in a circular annulus partially or completely filled with porous media. <i>International Journal of Mechanical Sciences</i> , 2017, 133, 689-703.	3.6	87
14	Lattice Boltzmann numerical simulation and entropy generation analysis of natural convection of nanofluid in a porous cavity with different linear temperature distributions on side walls. <i>Journal of Molecular Liquids</i> , 2017, 233, 415-430.	2.3	86
15	Efficiency enhancement of the parabolic trough solar collector using the rotating absorber tube and nanoparticles. <i>Renewable Energy</i> , 2020, 145, 569-584.	4.3	85
16	The effect of inclination angle and hot wall configuration on Cu-water nanofluid natural convection inside a porous square cavity. <i>Advanced Powder Technology</i> , 2018, 29, 519-536.	2.0	81
17	Two-phase mixed convection heat transfer and entropy generation analysis of a non-Newtonian nanofluid inside a cavity with internal rotating heater and cooler. <i>International Journal of Mechanical Sciences</i> , 2019, 151, 842-857.	3.6	76
18	MHD transverse mixed convection and entropy generation study of electromagnetic pump including a nanofluid using 3D LBM simulation. <i>International Journal of Mechanical Sciences</i> , 2017, 133, 73-90.	3.6	73

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19	Eccentricity effects of heat source inside a porous annulus on the natural convection heat transfer and entropy generation of Cu-water nanofluid. <i>International Communications in Heat and Mass Transfer</i> , 2019, 109, 104367.	2.9	73
20	Similarity solution of air and nanofluid impingement cooling of a cylindrical porous heat sink. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 135, 1399-1415.	2.0	72
21	Computational analysis of SWCNH nanofluid-based direct absorption solar collector with a metal sheet. <i>Solar Energy</i> , 2018, 170, 252-262.	2.9	70
22	Numerical performance analysis of a counter-flow double-pipe heat exchanger with using nanofluid and both sides partly filled with porous media. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 135, 1595-1610.	2.0	70
23	Application of nanofluid and optimization of pore size arrangement of heterogeneous porous media to enhance mixed convection inside a two-sided lid-driven cavity. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 135, 947-961.	2.0	68
24	Numerical investigation of porous rib arrangement on heat transfer and entropy generation of nanofluid flow in an annulus using a two-phase mixture model. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017, 71, 1251-1273.	1.2	66
25	Heat transfer and entropy generation analysis of turbulent flow of TiO ₂ -water nanofluid inside annuli with different radius ratios using two-phase mixture model. <i>Applied Thermal Engineering</i> , 2016, 100, 1149-1160.	3.0	64
26	Design optimization and thermal management of the PEMFC using artificial neural networks. <i>Energy</i> , 2019, 182, 443-459.	4.5	64
27	Sensitivity analysis and performance evaluation of the PEMFC using wave-like porous ribs. <i>Applied Thermal Engineering</i> , 2019, 150, 433-444.	3.0	61
28	Heat transfer and entropy generation study of non-Darcy double-diffusive natural convection in inclined porous enclosures with different source configurations. <i>Applied Thermal Engineering</i> , 2017, 110, 1462-1475.	3.0	60
29	Experimental study of a parabolic trough solar collector with rotating absorber tube. <i>Renewable Energy</i> , 2021, 168, 734-749.	4.3	59
30	The effect of temperature dependent relative permeability on heavy oil recovery during hot water injection process using streamline-based simulation. <i>Applied Thermal Engineering</i> , 2018, 129, 106-116.	3.0	55
31	Thermal management in PEMFCs: The respective effects of porous media in the gas flow channel. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 3121-3137.	3.8	55
32	Multi-layered Porous Foam Effects on Heat Transfer and Entropy Generation of Nanofluid Mixed Convection Inside a Two-Sided Lid-Driven Enclosure with Internal Heating. <i>Transport in Porous Media</i> , 2019, 126, 223-247.	1.2	55
33	Three-dimensional analysis of magnetohydrodynamic transverse mixed convection of nanofluid inside a lid-driven enclosure using MRT-LBM. <i>International Journal of Mechanical Sciences</i> , 2020, 165, 105199.	3.6	55
34	Thermal and electrical efficiencies enhancement of a solar photovoltaic-thermal/air system (PVT/air) using metal foams. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2021, 124, 276-289.	2.7	55
35	Applications of porous materials in combustion systems: A comprehensive and state-of-the-art review. <i>Fuel</i> , 2021, 304, 121411.	3.4	55
36	Particle swarm optimization of thermal enhanced oil recovery from oilfields with temperature control. <i>Applied Thermal Engineering</i> , 2017, 123, 658-669.	3.0	52

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37	Optimal selection of annulus radius ratio to enhance heat transfer with minimum entropy generation in developing laminar forced convection of water-Al ₂ O ₃ nanofluid flow. <i>Journal of Central South University</i> , 2017, 24, 1850-1865.	1.2	51
38	Application of SiO ₂ -water nanofluid to enhance oil recovery. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 135, 565-580.	2.0	47
39	Mixed convection enhancement by using optimized porous media and nanofluid in a cavity with two rotating cylinders. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 141, 1829-1846.	2.0	44
40	Three-dimensional streamline-based simulation of non-isothermal two-phase flow in heterogeneous porous media. <i>Computers and Fluids</i> , 2014, 103, 116-131.	1.3	42
41	Pore-scale convection-conduction heat transfer and fluid flow in open-cell metal foams: A three-dimensional multiple-relaxation time lattice Boltzmann (MRT-LBM) solution. <i>International Communications in Heat and Mass Transfer</i> , 2021, 126, 105465.	2.9	42
42	Efficient Particle Swarm Optimization of Well Placement to Enhance Oil Recovery Using a Novel Streamline-Based Objective Function. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2016, 138, .	1.4	41
43	Numerical simulation and optimization of steam-assisted gravity drainage with temperature, rate, and well distance control using an efficient hybrid optimization technique. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017, 72, 721-744.	1.2	36
44	Entropy Generation Analysis of Nanofluid Flow in Turbulent and Laminar Regimes. <i>Journal of Computational and Theoretical Nanoscience</i> , 2012, 9, 1586-1595.	0.4	35
45	Optimal scenario design of steam-assisted gravity drainage to enhance oil recovery with temperature and rate control. <i>Energy</i> , 2019, 166, 610-623.	4.5	33
46	Effect of Reynolds asymmetry and use of porous media in the counterflow double-pipe heat exchanger for passive heat transfer enhancement. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 140, 1079-1093.	2.0	32
47	Numerical analysis on forced convection enhancement in an annulus using porous ribs and nanoparticle addition to base fluid. <i>Journal of Central South University</i> , 2019, 26, 1089-1098.	1.2	31
48	Numerical simulation of two-phase flow in fractured porous media using streamline simulation and IMPES methods and comparing results with a commercial software. <i>Journal of Central South University</i> , 2016, 23, 2630-2637.	1.2	30
49	Optimal design and sensitivity analysis of energy storage for concentrated solar power plants using phase change material by gradient metal foams. <i>Journal of Energy Storage</i> , 2021, 35, 102233.	3.9	30
50	Improved design of heat sink including porous pin fins with different arrangements: A numerical turbulent flow and heat transfer study. <i>Applied Thermal Engineering</i> , 2021, 198, 117519.	3.0	30
51	A new design with preheating and layered porous ceramic for hydrogen production through methane steam reforming process. <i>Energy</i> , 2021, 231, 120952.	4.5	28
52	Using sharp wedge-shaped porous media in front and wake regions of external nanofluid flow over a bundle of cylinders. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019, 29, 3730-3755.	1.6	25
53	Parallel processing of numerical simulation of two-phase flow in fractured reservoirs considering the effect of natural flow barriers using the streamline simulation method. <i>International Journal of Heat and Mass Transfer</i> , 2019, 131, 574-583.	2.5	23
54	Optimization of SMR process for syngas production through a solar-assisted thermo-chemical reactor with a multi-layered porous core. <i>Solar Energy</i> , 2021, 230, 208-221.	2.9	21

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55	A numerical analysis of the effects of nanofluid and porous media utilization on the performance of parabolic trough solar collectors. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 45, 101179.	1.7	18
56	Euler-Lagrange numerical simulation of improved magnetic drug delivery in a three-dimensional CT-based carotid artery bifurcation. <i>Computer Methods and Programs in Biomedicine</i> , 2022, 219, 106778.	2.6	18
57	A Review on the Long-Term Performance of Proton Exchange Membrane Fuel Cells: From Degradation Modeling to the Effects of Bipolar Plates, Sealings, and Contaminants. <i>Energies</i> , 2022, 15, 5081.	1.6	18
58	Semi-analytical study of impingement cooling of metal foam heat sinks of CPUs with air and hydrogen jets under LTNE condition. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 145, 1801-1816.	2.0	17
59	Analysis of the effects of porous media parameters and inclination angle on the thermal storage and efficiency improvement of a photovoltaic-phase change material system. <i>Journal of Energy Storage</i> , 2022, 50, 104690.	3.9	17
60	Improved thermal energy storage with metal foam enhanced phase change materials considering various pore arrangements: A pore-scale parallel lattice Boltzmann solution. <i>Journal of Energy Storage</i> , 2022, 52, 104744.	3.9	16
61	A Comparative Study of Genetic and Particle Swarm Optimization Algorithms and Their Hybrid Method in Water Flooding Optimization. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2018, 140, .	1.4	14
62	Application of space-time conservation element and solution element method in streamline simulation. <i>Journal of Petroleum Science and Engineering</i> , 2012, 96-97, 58-67.	2.1	13
63	Sensitivity and colour intensity enhancement in lateral flow immunoassay tests by adjustment of test line position. <i>Clinica Chimica Acta</i> , 2018, 487, 210-215.	0.5	12
64	Experimental investigation of effects of grain size, inlet pressure and flow rate of air and argon on pressure drop through a packed bed of granular activated carbon. <i>International Communications in Heat and Mass Transfer</i> , 2018, 96, 20-26.	2.9	11
65	Pore-scale simulation of nanoparticle transport and deposition in a microchannel using a Lagrangian approach. <i>Journal of Molecular Liquids</i> , 2022, 355, 118948.	2.3	11
66	Numerical simulation of two-phase mass transport in three-dimensional naturally fractured reservoirs using discrete streamlines. <i>Numerical Heat Transfer; Part A: Applications</i> , 2018, 73, 482-500.	1.2	10
67	Simple geometrical modifications for substantial color intensity and detection limit enhancements in lateral-flow immunochromatographic assays. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2019, 1110-1111, 1-8.	1.2	9
68	Detection of flaws in a two-dimensional body through measurement of surface temperatures and use of conjugate gradient method. <i>Computational Mechanics</i> , 2010, 46, 597-607.	2.2	7
69	Streamline simulation of water-oil displacement in a heterogeneous fractured reservoir using different transfer functions. <i>Oil and Gas Science and Technology</i> , 2018, 73, 14.	1.4	7
70	A numerical study on the effect of static magnetic field on the hemodynamics of magnetic fluid in biological porous media. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 141, 1543-1558.	2.0	7
71	Recent developments of advanced numerical heat transfer in porous media. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 141, 1489-1491.	2.0	6
72	A Novel Streamline-Based Objective Function for Well Placement Optimization in Waterfloods. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2021, 143, .	1.4	6

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73	Whole-time scenario optimization of steam-assisted gravity drainage (SAGD) with temperature, pressure, and rate control using an efficient hybrid optimization technique. <i>Energy</i> , 2022, 239, 122149.	4.5	6
74	Surface topography effects on dynamic behavior of water droplet over a micro-structured surface using an improved-VOF based lattice Boltzmann method. <i>Journal of Molecular Liquids</i> , 2022, 350, 118509.	2.3	5
75	Pore-scale computational analyses of non-Darcy flow through highly porous structures with various degrees of geometrical complexity. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102048.	1.7	5
76	Experimental estimation of axial vertical flow permeability through a packed bed of granular activated carbon. <i>Journal of Thermal Analysis and Calorimetry</i> , 2020, 141, 1493-1508.	2.0	3
77	Heat transfer augmentation of a PTC with rotating absorber, utilizing nanofluid and porous lines. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102229.	1.7	3
78	Prediction of Internal Flow Parameters in a Two-dimensional Body Using Steady-state Surface Temperature Data and IHCP Methods. , 2008, , .		2
79	A numerical study on the effect of osmotic pressure on stress and strain in intercellular structures of tumor tissue in the poro-elastic model. <i>Meccanica</i> , 2021, 56, 2471-2486.	1.2	2
80	Second Law Analysis of Nanofluid Flow Through Circular Pipe. , 2010, , .		0