Nader Karimi

List of Publications by Year in descending order

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130	4,934	42	63
papers	citations	h-index	g-index
131	131	131	1990 citing authors
all docs	docs citations	times ranked	

#	Article	IF	CITATIONS
1	Nanofluids: Physical phenomena, applications in thermal systems and the environment effects- a critical review. Journal of Cleaner Production, 2021, 320, 128573.	9.3	183
2	Porous materials in building energy technologiesâ€"A review of the applications, modelling and experiments. Renewable and Sustainable Energy Reviews, 2018, 91, 229-247.	16.4	131
3	Techno-economic assessment and optimization of a hybrid renewable earth - air heat exchanger coupled with electric boiler, hydrogen, wind and PV configurations. Renewable Energy, 2020, 148, 839-851.	8.9	126
4	A machine learning approach to the prediction of transport and thermodynamic processes in multiphysics systems - heat transfer in a hybrid nanofluid flow in porous media. Journal of the Taiwan Institute of Chemical Engineers, 2021, 124, 290-306.	5.3	126
5	A concise review on the role of nanoparticles upon the productivity of solar desalination systems. Journal of Thermal Analysis and Calorimetry, 2019, 135, 1145-1159.	3.6	125
6	Numerical investigation of heat transfer enhancement in a pipe partially filled with a porous material under local thermal non-equilibrium condition. International Journal of Heat and Mass Transfer, 2014, 68, 161-173.	4.8	121
7	Numerical simulation of hydrothermal features of Cu–H2O nanofluid natural convection within a porous annulus considering diverse configurations of heater. Journal of Thermal Analysis and Calorimetry, 2020, 141, 2109-2125.	3.6	121
8	Convection of heat and thermodynamic irreversibilities in two-phase, turbulent nanofluid flows in solar heaters by corrugated absorber plates. Advanced Powder Technology, 2018, 29, 2243-2254.	4.1	115
9	Thermo-economic and entropy generation analyses of magnetic natural convective flow in a nanofluid-filled annular enclosure fitted with fins. Sustainable Energy Technologies and Assessments, 2021, 46, 101274.	2.7	112
10	Progress and challenges on the thermal management of electrochemical energy conversion and storage technologies: Fuel cells, electrolysers, and supercapacitors. Progress in Energy and Combustion Science, 2022, 88, 100966.	31.2	108
11	A pore-scale assessment of the dynamic response of forced convection in porous media to inlet flow modulations. International Journal of Heat and Mass Transfer, 2020, 153, 119657.	4.8	100
12	Analysis of the unsteady thermal response of a Li-ion battery pack to dynamic loads. Energy, 2021, 231, 120947.	8.8	95
13	On the influences of surface heat release and thermal radiation upon transport in catalytic porous microreactors—A novel porous-solid interface model. Chemical Engineering and Processing: Process Intensification, 2019, 143, 107602.	3.6	91
14	Effects of nanofluid and radiative heat transfer on the double-diffusive forced convection in microreactors. Journal of Thermal Analysis and Calorimetry, 2019, 135, 45-59.	3.6	91
15	Combined effects of nanofluid and transverse twisted-baffles on the flow structures, heat transfer and irreversibilities inside a square duct – A numerical study. Applied Thermal Engineering, 2018, 130, 135-148.	6.0	87
16	First and second laws of thermodynamics analysis of nanofluid flow inside a heat exchanger duct with wavy walls and a porous insert. Journal of Thermal Analysis and Calorimetry, 2019, 135, 177-194.	3.6	87
17	Generation of entropy in micro thermofluidic and thermochemical energy systems-A critical review. International Journal of Heat and Mass Transfer, 2020, 163, 120471.	4.8	85
18	Challenges and progress on the modelling of entropy generation in porous media: A review. International Journal of Heat and Mass Transfer, 2017, 114, 31-46.	4.8	84

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19	Linear and non-linear forced response of a conical, ducted, laminar premixed flame. Combustion and Flame, 2009, 156, 2201-2212.	5.2	83
20	Analytical investigation of heat transfer enhancement in a channel partially filled with a porous material under local thermal non-equilibrium condition: Effects of different thermal boundary conditions at the porous-fluid interface. International Journal of Heat and Mass Transfer, 2014, 70, 875-891.	4.8	77
21	Dissection of entropy production for the free convection of NEPCMs-filled porous wavy enclosure subject to volumetric heat source/sink. Journal of the Taiwan Institute of Chemical Engineers, 2021, 128, 98-113.	5. 3	76
22	First and second law analyses of nanofluid forced convection in a partially-filled porous channel – The effects of local thermal non-equilibrium and internal heat sources. Applied Thermal Engineering, 2016, 103, 459-480.	6.0	74
23	On the unsteady forced convection in porous media subject to inlet flow disturbances-A pore-scale analysis. International Communications in Heat and Mass Transfer, 2020, 116, 104639.	5.6	73
24	Analysis of transport processes in a reacting flow of hybrid nanofluid around a bluff-body embedded in porous media using artificial neural network and particle swarm optimization. Journal of Molecular Liquids, 2020, 313, 113492.	4.9	67
25	Entropy generation in thermal systems with solid structures – A concise review. International Journal of Heat and Mass Transfer, 2016, 97, 917-931.	4.8	62
26	A Machine Learning Approach to Predicting the Heat Convection and Thermodynamics of an External Flow of Hybrid Nanofluid. Journal of Energy Resources Technology, Transactions of the ASME, 2021, 143, .	2.3	61
27	Chaos in an imperfectly premixed model combustor. Chaos, 2015, 25, 023101.	2.5	59
28	Heat transfer and second law analyses of forced convection in a channel partially filled by porous media and featuring internal heat sources. Energy, 2015, 93, 106-127.	8.8	58
29	Prediction of the spread of Corona-virus carrying droplets in a bus - A computational based artificial intelligence approach. Journal of Hazardous Materials, 2021, 413, 125358.	12.4	57
30	The effects of exothermic catalytic reactions upon combined transport of heat and mass in porous microreactors. International Journal of Heat and Mass Transfer, 2019, 134, 1227-1249.	4.8	55
31	Energetic and entropic analyses of double-diffusive, forced convection heat and mass transfer in microreactors assisted with nanofluid. Journal of Thermal Analysis and Calorimetry, 2019, 137, 637-658.	3.6	55
32	Analysis of unsteady mixed convection of Cu–water nanofluid in an oscillatory, lid-driven enclosure using lattice Boltzmann method. Journal of Thermal Analysis and Calorimetry, 2021, 145, 2045-2061.	3.6	55
33	Analytical investigation of heat transfer and classical entropy generation in microreactors – The influences of exothermicity and asymmetry. Applied Thermal Engineering, 2017, 119, 403-424.	6.0	54
34	Acoustic and disturbance energy analysis of a flow with heat communication. Journal of Fluid Mechanics, 2008, 597, 67-89.	3.4	53
35	Theoretical investigation of entropy generation and heat transfer by forced convection of copperâ \in water nanofluid in a porous channel â \in Local thermal non-equilibrium and partial filling effects. Powder Technology, 2016, 301, 234-254.	4.2	53
36	Two-dimensional heat and mass transfer and thermodynamic analyses of porous microreactors with Soret and thermal radiation effects—An analytical approach. Chemical Engineering and Processing: Process Intensification, 2018, 126, 190-205.	3.6	53

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37	On the effects of internal heat sources upon forced convection in porous channels with asymmetric thick walls. International Communications in Heat and Mass Transfer, 2016, 73, 100-110.	5.6	52
38	Mixed convection and thermodynamic irreversibilities in MHD nanofluid stagnation-point flows over a cylinder embedded in porous media. Journal of Thermal Analysis and Calorimetry, 2019, 135, 489-506.	3.6	52
39	Two-dimensional analytical investigation of coupled heat and mass transfer and entropy generation in a porous, catalytic microreactor. International Journal of Heat and Mass Transfer, 2018, 119, 372-391.	4.8	51
40	On the effects of exothermicity and endothermicity upon theÂtemperature fields in a partially-filled porous channel. International Journal of Thermal Sciences, 2015, 96, 128-148.	4.9	50
41	Generation of entropy and forced convection of heat in a conduit partially filled with porous media $\hat{a} \in$ Local thermal non-equilibrium and exothermicity effects. Applied Thermal Engineering, 2016, 106, 518-536.	6.0	50
42	Combined heat and mass transfer analyses in catalytic microreactors partially filled with porous material - The influences of nanofluid and different porous-fluid interface models. International Journal of Thermal Sciences, 2019, 140, 96-113.	4.9	48
43	A thermodynamic analysis of forced convection through porous media using pore scale modeling. International Journal of Heat and Mass Transfer, 2016, 99, 303-316.	4.8	46
44	Analysis of transport from cylindrical surfaces subject to catalytic reactions and non-uniform impinging flows in porous media. Journal of Thermal Analysis and Calorimetry, 2019, 138, 659-678.	3.6	44
45	Application of Machine Learning to Investigation of Heat and Mass Transfer Over a Cylinder Surrounded by Porous Media—The Radial Basic Function Network. Journal of Energy Resources Technology, Transactions of the ASME, 2020, 142, .	2.3	42
46	Temperature fields in a channel partially filled with a porous material under local thermal non-equilibrium condition $\hat{a} \in An$ exact solution. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2014, 228, 2778-2789.	2.1	41
47	Using machine learning in photovoltaics to create smarter and cleaner energy generation systems: A comprehensive review. Journal of Cleaner Production, 2022, 364, 132701.	9.3	41
48	Hydrodynamic Instabilities in Gaseous Detonations: Comparison of Euler, Navier–Stokes, and Large-Eddy Simulation. Journal of Propulsion and Power, 2014, 30, 384-396.	2.2	40
49	Effects of radiation and magnetic field on mixed convection stagnation-point flow over a cylinder in a porous medium under local thermal non-equilibrium. Journal of Thermal Analysis and Calorimetry, 2020, 140, 1371-1391.	3.6	40
50	Predicting the effects of environmental parameters on the spatio-temporal distribution of the droplets carrying coronavirus in public transport – A machine learning approach. Chemical Engineering Journal, 2022, 430, 132761.	12.7	40
51	Dynamic multi-objective optimization applied to a solar-geothermal multi-generation system for hydrogen production, desalination, and energy storage. International Journal of Hydrogen Energy, 2022, 47, 31730-31741.	7.1	40
52	Thermodynamics Analyses of Porous Microchannels With Asymmetric Thick Walls and Exothermicity: An Entropic Model of Microreactors. Journal of Thermal Science and Engineering Applications, 2017, 9,	1.5	38
53	State prediction of an entropy wave advecting through a turbulent channel flow. Journal of Fluid Mechanics, 2020, 882, .	3.4	36
54	Response of a conical, laminar premixed flame to low amplitude acoustic forcing – A comparison between experiment and kinematic theories. Energy, 2014, 78, 490-500.	8.8	35

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55	Generation of entropy during forced convection of heat in nanofluid stagnation-point flows over a cylinder embedded in porous media. Numerical Heat Transfer; Part A: Applications, 2019, 75, 647-673.	2.1	34
56	Investigation of coal particle gasification processes with application leading to underground coal gasification. Fuel, 2019, 237, 1186-1202.	6.4	32
57	Unsteady ultra-lean combustion of methane and biogas in a porous burner – An experimental study. Applied Thermal Engineering, 2021, 182, 116099.	6.0	32
58	Intensification of ultra-lean catalytic combustion of methane in microreactors by boundary layer interruptions – A computational study. Chemical Engineering Science, 2021, 242, 116730.	3.8	31
59	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.	8.1	31
60	On the dissipation and dispersion of entropy waves in heat transferring channel flows. Physics of Fluids, 2017, 29, .	4.0	29
61	Three-dimensional numerical simulations of free convection in a layered porous enclosure. International Journal of Heat and Mass Transfer, 2017, 106, 1005-1013.	4.8	28
62	A comprehensive investigation of acoustic power level in a moderate or intense low oxygen dilution in a jet-in-hot-coflow under various working conditions. Aerospace Science and Technology, 2019, 93, 105339.	4.8	28
63	Phase change dynamics in a cylinder containing hybrid nanofluid and phase change material subjected to a rotating inner disk. Journal of Energy Storage, 2021, 42, 103007.	8.1	28
64	Optimizing thermal performance and exergy efficiency in hydrogen-fueled meso-combustors by applying a bluff-body. Journal of Cleaner Production, 2021, 311, 127573.	9.3	27
65	Large eddy simulation of pseudo shock structure in a convergent–long divergent duct. Computers and Mathematics With Applications, 2021, 81, 823-837.	2.7	26
66	Combined heat and mass transfer and thermodynamic irreversibilities in the stagnation-point flow of Casson rheological fluid over a cylinder with catalytic reactions and inside a porous medium under local thermal nonequilibrium. Computers and Mathematics With Applications, 2021, 81, 786-810.	2.7	26
67	Understanding droplet collision with superhydrophobic-hydrophobic–hydrophilic hybrid surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 614, 126140.	4.7	26
68	Magnetohydrodynamics, Natural Convection, and Entropy Generation of CuO–Water Nanofluid in an I-Shape Enclosure—A Numerical Study. Journal of Thermal Science and Engineering Applications, 2018, 10, .	1.5	25
69	Characterizing the signature of flame flashback precursor through recurrence analysis. Chaos, 2016, 26, 013110.	2.5	24
70	On the effects of NH3 addition to a reacting mixture of H2/CH4 under MILD combustion regime: Numerical modeling with a modified EDC combustion model. Fuel, 2022, 326, 125096.	6.4	22
71	Effects of Near Wall Modeling in the Improved-Delayed-Detached-Eddy-Simulation (IDDES) Methodology. Entropy, 2018, 20, 771.	2.2	21
72	Thermohydraulic analysis of a microchannel with varying superhydrophobic roughness. Applied Thermal Engineering, 2020, 172, 115147.	6.0	20

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73	A dynamic multi-objective optimization procedure for water cooling of a photovoltaic module. Sustainable Energy Technologies and Assessments, 2021, 45, 101111.	2.7	20
74	On the interaction of sound with steady heat communicating flows. Journal of Sound and Vibration, 2010, 329, 4705-4718.	3.9	19
75	On the Hydrodynamics and Heat Convection of an Impinging External Flow Upon a Cylinder with Transpiration and Embedded in a Porous Medium. Transport in Porous Media, 2017, 120, 579-604.	2.6	19
76	On the response of a lean-premixed hydrogen combustor to acoustic and dissipative-dispersive entropy waves. Energy, 2019, 180, 272-291.	8.8	19
77	Numerical study of nonlinear mixed convection inside stagnation-point flow over surface-reactive cylinder embedded in porous media. Journal of Thermal Analysis and Calorimetry, 2020, 141, 1889-1903.	3.6	19
78	Numerical Investigation of the Effects of Swirling Hot Co-Flow on MILD Combustion of a Hydrogen–Methane Blend. Journal of Energy Resources Technology, Transactions of the ASME, 2020, 142, .	2.3	19
79	Numerical modeling of multiple steady-state convective modes in a tilted porous medium heated from below. International Communications in Heat and Mass Transfer, 2018, 92, 64-72.	5.6	18
80	Double-diffusive transport and thermodynamic analysis of a magnetic microreactor with non-Newtonian biofuel flow. Journal of Thermal Analysis and Calorimetry, 2020, 140, 917-941.	3.6	18
81	Price inflation effects on a solar-geothermal system for combined production of hydrogen, power, freshwater and heat. International Journal of Hydrogen Energy, 2024, 52, 861-872.	7.1	18
82	Three-dimensional numerical modeling of free convection in sloping porous enclosures. International Journal of Heat and Mass Transfer, 2016, 98, 257-267.	4.8	17
83	Combustion Characteristics and Pollutant Emissions in Transient Oxy-Combustion of a Single Biomass Particle: A Numerical Study. Energy & E	5.1	17
84	A numerical investigation of CO2 gasification of biomass particles- analysis of energy, exergy and entropy generation. Energy, 2021, 228, 120615.	8.8	17
85	Numerical Investigation of the Plasma-Assisted MILD Combustion of a CH4/H2 Fuel Blend Under Various Working Conditions. Journal of Energy Resources Technology, Transactions of the ASME, 2021, 143, .	2.3	17
86	Simulation of conjugate radiation–forced convection heat transfer in a porous medium using the lattice Boltzmann method. Meccanica, 2019, 54, 505-524.	2.0	16
87	Intensification of MILD combustion of methane and hydrogen blend by the application of a magnetic field- a numerical study. Acta Astronautica, 2021, 184, 259-268.	3.2	16
88	Experimental investigation of entropy waves' evolution for understanding of indirect combustion noise in gas turbine combustors. Energy, 2020, 195, 116978.	8.8	15
89	Experimental and Theoretical Investigation of the Flashback of a Swirling, Bluff-Body Stabilised, Premixed Flame. Zeitschrift Fur Physikalische Chemie, 2015, 229, 663-689.	2.8	14
90	Generation of Adverse Pressure Gradient in the Circumferential Flashback of a Premixed Flame. Flow, Turbulence and Combustion, 2016, 97, 663-687.	2.6	14

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91	Dynamics of entropy wave generation in a simplified model of gas turbine combustor: A theoretical investigation. Physics of Fluids, 2020, 32, .	4.0	14
92	Numerical modelling of unsteady transport and entropy generation in oxy-combustion of single coal particles with varying flow velocities and oxygen concentrations. Applied Thermal Engineering, 2018, 144, 147-164.	6.0	13
93	On the Response of Ultralean Combustion of CH ₄ /H ₂ Blends in a Porous Burner to Fluctuations in Fuel Flowâ€"an Experimental Investigation. Energy & Ener	5.1	13
94	Targeting a channel coating by using magnetic field and magnetic nanofluids. Journal of Thermal Analysis and Calorimetry, 2019, 137, 381-388.	3.6	12
95	Machine-Learning Enhanced Analysis of Mixed Biothermal Convection of Single Particle and Hybrid Nanofluids within a Complex Configuration. Industrial & Engineering Chemistry Research, 2022, 61, 8478-8494.	3.7	12
96	Heat and mass transfer and thermodynamic analysis of power-law fluid flow in a porous microchannel. Journal of Thermal Analysis and Calorimetry, 2020, 141, 2145-2164.	3.6	11
97	Numerical simulation of the effects of superhydrophobic coating in an oval cross-sectional solar collector with a wavy absorber filled with water-based Al2O3-ZnO-Fe3O4 ternary hybrid nanofluid. Sustainable Energy Technologies and Assessments, 2022, 50, 101881.	2.7	11
98	Investigation of the transmitted noise of a combustor exit nozzle caused by burned hydrogen-hydrocarbon gases. International Journal of Hydrogen Energy, 2016, 41, 2075-2086.	7.1	10
99	On the effects of convecting entropy waves on the combustor hydrodynamics. Applied Thermal Engineering, 2017, 110, 901-909.	6.0	10
100	Non-Equilibrium Thermodynamic Analysis of Double Diffusive, Nanofluid Forced Convection in Catalytic Microreactors with Radiation Effects. Entropy, 2017, 19, 690.	2.2	10
101	Gas-phase transport and entropy generation during transient combustion of single biomass particle in varying oxygen and nitrogen atmospheres. International Journal of Hydrogen Energy, 2018, 43, 8506-8523.	7.1	10
102	Geometrical inlet effects on the behavior of a non-premixed fully turbulent syngas combustion; a numerical study. Acta Astronautica, 2021 , 189 , $1-9$.	3.2	10
103	Passive techniques to enhance heat transfer in various thermal systems. Journal of Thermal Analysis and Calorimetry, 2020, 140, 875-878.	3.6	9
104	Transient Analysis of the Interactions Between a Heat Transferring, Radial Stagnation Flow, and a Rotating Cylinder-Magnetohydrodynamic and Nonuniform Transpiration Effects. Journal of Thermal Science and Engineering Applications, 2018, 10, .	1.5	8
105	A Pore-Scale Investigation of the Transient Response of Forced Convection in Porous Media to Inlet Ramp Inputs. Journal of Energy Resources Technology, Transactions of the ASME, 2020, 142, .	2.3	8
106	A simplified mathematical study of thermochemical preparation of particle oxide under counterflow configuration for use in biomedical applications. Journal of Thermal Analysis and Calorimetry, 2020, 139, 2769-2779.	3.6	7
107	Entropy Generation Assessment for Wall-Bounded Turbulent Shear Flows Based on Reynolds Analogy Assumptions. Entropy, 2019, 21, 1157.	2.2	6
108	Numerical Modeling of Subcooled Flow Boiling and Heat Transfer Enhancement: Validation and Applicability to Fusion Reactor Target Design. Journal of Energy Resources Technology, Transactions of the ASME, 2020, 142, .	2.3	6

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109	Proper Orthogonal Decomposition Analysis of a Turbulent Swirling Self-Excited Premixed Flame. , 2015, , .		5
110	Analytical investigation of non-adiabatic effects on the dynamics of sound reflection and transmission in a combustor. Applied Thermal Engineering, 2016, 98, 553-567.	6.0	5
111	Utilization of H2O and CO2 in Coal Particle Gasification with an Impact of Temperature and Particle Size. Energy & Energ	5.1	5
112	Numerical Study of the Effects of CO 2 Addition in Single Coal Particle Gasification. Energy Procedia, 2017, 142, 1306-1311.	1.8	4
113	Transient thermo-solutal convection in a tilted porous enclosure heated from below and salted from above. International Communications in Heat and Mass Transfer, 2020, 118, 104875.	5.6	4
114	A comparative analysis of the evolution of compositional and entropy waves in turbulent channel flows. Physics of Fluids, 2022, 34, .	4.0	4
115	Enhancement of heat transfer in solar collectors by vortex generation. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2022, 44, 1731-1750.	2.3	4
116	Numerical simulation of the heterogeneous combustion of dust clouds containing polydisperse porous iron particles. Energy, 2020, 212, 118759.	8.8	3
117	Investigation of thermochemical process of coal particle packed bed reactions for the development of UCG. International Journal of Coal Science and Technology, 2020, 7, 476-492.	6.0	3
118	Applications of nanofluids in thermal energy transport. , 2021, , 345-368.		3
119	The effect of sinusoidal fins' amplitude on the thermo-hydraulic performance of a solar air heater. Chemical Engineering Communications, 0, , 1-15.	2.6	3
120	Experimental investigation of the hydrodynamic effects upon convecting entropy waves in nozzle flows. Aerospace Science and Technology, 2020, 107, 106301.	4.8	2
121	Lift characteristics of two tandem airfoils in the globally unstable wake of a heated cylinder. Journal of Thermal Analysis and Calorimetry, 2021, 145, 2081-2093.	3.6	2
122	Assessment of predictive capability of hybrid URANS/LES methods in residence time calculation. Chemical Engineering Science, 2018, 183, 47-59.	3.8	1
123	Non-Equilibrium Thermodynamics of Micro Technologies. Entropy, 2019, 21, 501.	2.2	1
124	Large eddy simulation of the destruction of convecting hot fluid pockets through a cold channel flow. International Journal of Thermal Sciences, 2020, 156, 106475.	4.9	1
125	Numerical simulations of ultra-low-Re flow around two tandem airfoils in ground effect: isothermal and heated conditions. Journal of Thermal Analysis and Calorimetry, 2021, 145, 2063-2079.	3.6	1
126	Towards identification of a reliable framework to predict the thermal field in turbulent wall-bounded shear flows. International Journal of Heat and Mass Transfer, 2021, 180, 121752.	4.8	1

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127	Mathematical Methods for Heat Transfer and Thermodynamic Analysis of Conductive, Convective, and Radiative Media. Mathematical Problems in Engineering, 2016, 2016, 1-1.	1.1	0
128	Recurrence Plots for the Analysis of Combustion Dynamics. Springer Proceedings in Physics, 2016, , 321-339.	0.2	0
129	Modeling Validation of Tubing Compaction for Rigless Well Plug and Abandonment. SPE Drilling and Completion, 2021, 36, 101-117.	1.6	O
130	Numerical Investigation of Thermal Dynamic Response in Porous Mediaâ€"A Pore-Scale Study. , 2021, , 385-389.		0