Fathollah Pourfayaz

List of Publications by Year in descending order

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128 papers

6,547 citations

50170 46 h-index 71532 76 g-index

128 all docs

128 docs citations

times ranked

128

5304 citing authors

#	Article	IF	CITATIONS
1	Proposal and investigation of a novel hybrid hydrogen production and liquefaction process using solid oxide electrolyzer, solar energy, and thermoelectric generator. Journal of Cleaner Production, 2022, 331, 130001.	4.6	36
2	A comprehensive review of nanoâ€phase change materials with a focus on the effects of influential factors. Environmental Progress and Sustainable Energy, 2022, 41, e13808.	1.3	4
3	A natural gas-based eco-friendly polygeneration system including gas turbine, sorption-enhanced steam methane reforming, absorption chiller and flue gas CO2 capture unit. Sustainable Energy Technologies and Assessments, 2022, 52, 101984.	1.7	3
4	Low global warming potential (GWP) working fluids (WFs) for Organic Rankine Cycle (ORC) applications. Energy Reports, 2022, 8, 2976-2988.	2.5	64
5	A Global Dynamic Harmony Search for Optimization of a Hybrid Photovoltaic-Battery Scheme: Impact of Type of Solar Panels. Sustainability, 2022, 14, 109.	1.6	7
6	A comparison of using organic Rankine and Kalina cycles as bottom cycles in a solarâ€powered steam Rankine cycle. Energy Science and Engineering, 2022, 10, 2714-2731.	1.9	9
7	The 3E Optimal Location Assessment of Flat-Plate Solar Collectors for Domestic Applications in Iran. Energies, 2022, 15, 3589.	1.6	9
8	Optimal sizing of an integrated CHP and desalination system as a polygeneration plant for supplying rural demands. Energy, 2022, 258, 124820.	4.5	14
9	Thermodynamic analysis of a wood chips-based cycle integrated with solid oxide fuel cell. Renewable Energy, 2022, 195, 1174-1193.	4.3	6
10	High-temperature hydrogen production by solar thermochemical reactors, metal interfaces, and nanofluid cooling. Journal of Thermal Analysis and Calorimetry, 2021, 145, 2547-2569.	2.0	9
11	Energy and exergy analyses of solid oxide fuel cell-gas turbine hybrid systems fed by different renewable biofuels: A comparative study. Journal of Cleaner Production, 2021, 280, 124383.	4.6	67
12	Thermodynamic and thermoeconomic analyses and energetic and exergetic optimization of a turbojet engine. Journal of Thermal Analysis and Calorimetry, 2021, 145, 909-923.	2.0	15
13	Exergy analysis of multiple heat exchanger networks: An approach based on the irreversibility distribution ratio. Energy Reports, 2021, 7, 174-193.	2.5	15
14	Nitrogenâ€doped graphene prepared by lowâ€temperature thermal treatment as an electrocatalyst support for methanol oxidation. Fuel Cells, 2021, 21, 172-181.	1.5	4
15	Optimal design and analysis of a district energy system including heat and power production for domestic applications and fuel for vehicles. Journal of Thermal Analysis and Calorimetry, 2021, 144, 2009-2025.	2.0	5
16	A novel hybrid liquefied natural gas process with absorption refrigeration integrated with molten carbonate fuel cell. International Journal of Low-Carbon Technologies, 2021, 16, 956-976.	1.2	24
17	Cold thermal energy storage by encapsulated phase change materials system using hybrid nanofluids as the heat transfer fluid. International Journal of Energy Research, 2021, 45, 15265-15283.	2.2	9
18	Dynamic thermal simulation based on building information modeling: A review. International Journal of Energy Research, 2021, 45, 14221-14244.	2.2	5

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19	An artificial intelligence approach to optimization of an off-grid hybrid wind/hydrogen system. International Journal of Hydrogen Energy, 2021, 46, 12725-12738.	3.8	66
20	Multi-objective optimization of tubular solid oxide fuel cells fed by natural gas: an energetic and exergetic simultaneous optimization. Journal of Thermal Analysis and Calorimetry, 2021, 145, 1575-1583.	2.0	11
21	Status of direct and indirect solar desalination methods: comprehensive review. European Physical Journal Plus, 2021, 136, 1.	1.2	17
22	Technoâ€economic assessment and sensitivity analysis of biodiesel production intensified through hydrodynamic cavitation. Energy Science and Engineering, 2021, 9, 1997-2018.	1.9	11
23	Systematic analysis and multi-objective optimization of integrated power generation cycle for a thermal power plant using Genetic algorithm. Energy Conversion and Management, 2021, 241, 114309.	4.4	25
24	Techno-economic assessment of biodiesel production from canola oil through ultrasonic cavitation. Energy Reports, 2021, 7, 266-277.	2.5	30
25	Assessment of a biomass-based polygeneration plant for combined power, heat, bioethanol and biogas. Applied Thermal Engineering, 2021, 198, 117425.	3.0	19
26	Transient optimization of annual performance of a photovoltaic thermal system based on accurate estimation of coolant water temperature: A comparison with conventional methods. Case Studies in Thermal Engineering, 2021, 28, 101395.	2.8	9
27	Annual transient analysis of energetic, exergetic, and economic performances of solar cascade organic Rankine cycles integrated with PCM-based thermal energy storage systems. Case Studies in Thermal Engineering, 2021, 28, 101388.	2.8	26
28	Effects of Reliability Index on Optimal Configuration of Hybrid Solar/Battery Energy System by Optimization Approach: A Case Study. International Journal of Photoenergy, 2021, 2021, 1-11.	1.4	3
29	Investigating the effect of using <scp>PCM</scp> in building materials for energy saving: Case study of Sharif Energy Research Institute. Energy Science and Engineering, 2020, 8, 959-972.	1.9	31
30	Deployment of a standâ€alone hybrid renewable energy system in coastal areas as a reliable energy source. Environmental Progress and Sustainable Energy, 2020, 39, e13354.	1.3	19
31	Investigating the effect of using nanofluids on the performance of a double-effect absorption refrigeration cycle combined with a solar collector. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2020, 234, 981-993.	0.8	29
32	Modeling and improvement of solid oxide fuel cell-single effect absorption chiller hybrid system by using nanofluids as heat transporters. Applied Thermal Engineering, 2020, 166, 114707.	3.0	34
33	Recent Advances of Biodiesel Production Using Ionic Liquids Supported on Nanoporous Materials as Catalysts: A Review. Frontiers in Energy Research, 2020, 8, .	1.2	37
34	Techno-economic assessment of a hybrid system for energy supply in the affected areas by natural disasters: A case study. Energy Conversion and Management, 2020, 221, 113170.	4.4	21
35	Application of N-doped carbon nanotube-supported Pt-Ru as electrocatalyst layer in passive direct methanol fuel cell. International Journal of Hydrogen Energy, 2020, 45, 25307-25316.	3.8	51
36	Nitrogen and sulfur doped ZnAl layered double hydroxide/reduced graphene oxide as an efficient nanoelectrocatalyst for oxygen reduction reactions. International Journal of Hydrogen Energy, 2020, 45, 27129-27144.	3.8	26

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37	Simulation, equipment performance evaluation and sensitivity analysis as a comprehensive parametric study of sulfur recovery unit. Asia-Pacific Journal of Chemical Engineering, 2020, 15, e2427.	0.8	4
38	Improvement of solar flatâ€plate collector performance by optimum tilt angle and minimizing top heat loss coefficient using particle swarm optimization. Energy Science and Engineering, 2020, 8, 2771-2783.	1.9	10
39	Harmony search optimization for optimum sizing of hybrid solar schemes based on battery storage unit. Energy Reports, 2020, 6, 102-111.	2.5	106
40	Optimal sizing and location based on economic parameters for an off-grid application of a hybrid system with photovoltaic, battery and diesel technology. Energy, 2020, 201, 117480.	4.5	144
41	Geothermal energy use in hydrogen production: A review. International Journal of Energy Research, 2019, 43, 7823.	2.2	45
42	Thermoelectric cooler and thermoelectric generator devices: A review of present and potential applications, modeling and materials. Energy, 2019, 186, 115849.	4.5	344
43	Thermodynamic Assessment and Multi-Objective Optimization of Performance of Irreversible Dual-Miller Cycle. Energies, 2019, 12, 4000.	1.6	14
44	Biodiesel production from Norouzak (Salvia leriifolia) oil using choline hydroxide catalyst in a microchannel reactor. Renewable Energy, 2019, 136, 993-1001.	4.3	28
45	Towards experimental and modeling study of heat transfer performance of water-SiO ₂ nanofluid in quadrangular cross-section channels. Engineering Applications of Computational Fluid Mechanics, 2019, 13, 453-469.	1.5	31
46	Fluid dynamics analysis for different photovoltaic panel locations in solar chimney. Energy Conversion and Management, 2019, 191, 71-79.	4.4	29
47	Energy, exergy, exergoeconomic and sensitivity analyses of modified Claus process in a gas refinery sulfur recovery unit. Journal of Cleaner Production, 2019, 220, 1071-1087.	4.6	54
48	Stand-alone hybrid energy systems for remote area power generation. Energy Reports, 2019, 5, 231-241.	2.5	96
49	Evaluation of MWCNT/ethylene glycol nanofluid flow in a parabolic trough collector with glass-glass absorber tube. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 30, 176-205.	1.6	12
50	Thermodynamic and economic analysis of performance evaluation of all the thermal power plants: A review. Energy Science and Engineering, 2019, 7, 30-65.	1.9	87
51	Renewable energy harvesting with the application of nanotechnology: A review. International Journal of Energy Research, 2019, 43, 1387-1410.	2.2	125
52	Investigating the Effect of Soil Type and Moisture on the Performance of a Ground Source Heat Pump System Used for a Greenhouse in Iran. Journal of Thermal Science and Engineering Applications, 2019, 11, .	0.8	6
53	Advanced exergy analysis of heat exchanger network in a complex natural gas refinery. Journal of Cleaner Production, 2019, 206, 670-687.	4.6	44
54	A Detailed Investigation of the Walls Shading Effect on the Performance of Solar Ponds. Environmental Progress and Sustainable Energy, 2019, 38, e13014.	1.3	4

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55	Process development and exergy analysis of a novel hybrid fuel cell-absorption refrigeration system utilizing nanofluid as the absorbent liquid. International Journal of Refrigeration, 2019, 97, 31-41.	1.8	35
56	Exergetic sustainability evaluation and optimization of an irreversible Brayton cycle performance. Frontiers in Energy, 2019, 13, 399-410.	1.2	12
57	Process development and thermodynamic analysis of a novel power generation plant driven by geothermal energy with liquefied natural gas as its heat sink. Applied Thermal Engineering, 2018, 133, 645-658.	3.0	37
58	A numerical study into effects of intermittent pump operation on thermal storage in unsaturated porous media. Applied Thermal Engineering, 2018, 138, 110-121.	3.0	15
59	Optimal design of stand-alone reverse osmosis desalination driven by a photovoltaic and diesel generator hybrid system. Solar Energy, 2018, 163, 91-103.	2.9	137
60	A simple method for estimating the irreversibly in heat exchanger networks. Energy, 2018, 144, 633-646.	4.5	20
61	Multi-objective performance optimization of irreversible molten carbonate fuel cell–Braysson heat engine and thermodynamic analysis with ecological objective approach. Energy, 2018, 144, 707-722.	4.5	52
62	Connectionist intelligent model estimates of convective heat transfer coefficient of nanofluids in circular cross-sectional channels. Journal of Thermal Analysis and Calorimetry, 2018, 132, 1213-1239.	2.0	45
63	A simplified model for estimating heat transfer coefficient in a chamber with electrohydrodynamic effect (corona wind). Journal of Electrostatics, 2018, 93, 125-136.	1.0	12
64	Numerical investigation into mutual effects of soil thermal and isothermal properties on heat and moisture transfer in unsaturated soil applied as thermal storage system. Numerical Heat Transfer; Part A: Applications, 2018, 73, 466-481.	1.2	24
65	Improving energy efficiency in a complex natural gas refinery using combined pinch and advanced exergy analyses. Applied Thermal Engineering, 2018, 137, 341-355.	3.0	38
66	Numerical simulation of solar-driven Kalina cycle performance for centralized residential buildings in Iran. Intelligent Buildings International, 2018, 10, 197-219.	1.3	7
67	An experimental comparison of SiO2/water nanofluid heat transfer in square and circular cross-sectional channels. Journal of Thermal Analysis and Calorimetry, 2018, 131, 1577-1586.	2.0	26
68	Multiâ€objective performance optimization of irreversible molten carbonate fuel cell–Stirling heat engine–reverse osmosis and thermodynamic assessment with ecological objective approach. Energy Science and Engineering, 2018, 6, 783-796.	1.9	14
69	A review on solarâ€assisted gas turbines. Energy Science and Engineering, 2018, 6, 658-674.	1.9	49
70	The effect of hydrodynamic and ultrasonic cavitation on biodiesel production: An exergy analysis approach. Energy, 2018, 160, 478-489.	4.5	41
71	Novel ZnO-Ag/MWCNT nanocomposite for the photocatalytic degradation of phenol. Materials Science in Semiconductor Processing, 2018, 83, 175-185.	1.9	73
72	Energy and Exergy Analyses of a Solid Oxide Fuel Cell-Gas Turbine-Organic Rankine Cycle Power Plant with Liquefied Natural Gas as Heat Sink. Entropy, 2018, 20, 484.	1.1	51

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73	Prediction of solubility of solid compounds in supercritical CO2 using a connectionist smart technique. Journal of Supercritical Fluids, 2017, 120, 181-190.	1.6	21
74	Evaluating the environmental parameters affecting the performance of photovoltaic thermal system using nanofluid. Applied Thermal Engineering, 2017, 115, 178-187.	3.0	105
75	Energy analysis and shadow modeling of a rectangular type salt gradient solar pond. Solar Energy, 2017, 146, 161-171.	2.9	25
76	A practical approach to heat exchanger network design in a complex natural gas refinery. Journal of Natural Gas Science and Engineering, 2017, 40, 141-158.	2.1	25
77	Experimental investigation on the thermal behavior of nanofluid direct absorption in a trough collector. Journal of Cleaner Production, 2017, 158, 276-284.	4.6	85
78	Exergetic sustainability evaluation and multi-objective optimization of performance of an irreversible nanoscale Stirling refrigeration cycle operating with Maxwell–Boltzmann gas. Renewable and Sustainable Energy Reviews, 2017, 78, 80-92.	8.2	45
79	Investigation and optimization of performance of nano-scale Stirling refrigerator using working fluid as Maxwell–Boltzmann gases. Physica A: Statistical Mechanics and Its Applications, 2017, 483, 337-350.	1.2	21
80	An assessment of Iran's natural gas potential for transition toward low-carbon economy. Renewable and Sustainable Energy Reviews, 2017, 79, 71-81.	8.2	56
81	Optimization of a grid-connected hybrid solar-wind-hydrogen CHP system for residential applications by efficient metaheuristic approaches. Applied Thermal Engineering, 2017, 123, 1263-1277.	3.0	99
82	Comparative study of different nanofluids applied in a trough collector with glass-glass absorber tube. Journal of Molecular Liquids, 2017, 234, 315-323.	2.3	64
83	Performance comparison between the geometry models of multi-channel absorbers in solar volumetric receivers. Renewable Energy, 2017, 105, 1-12.	4.3	21
84	Modeling and multi-optimization of thermal section of Claus process based on kinetic model. Journal of Natural Gas Science and Engineering, 2017, 38, 235-244.	2.1	43
85	Thermo-economic analysis and multi-objective optimization of a transcritical CO2 power cycle driven by solar energy and LNG cold recovery. Thermal Science and Engineering Progress, 2017, 4, 185-196.	1.3	64
86	A novel framework for optimal photovoltaic size and location in remote areas using a hybrid method: A case study of eastern Iran. Energy Conversion and Management, 2017, 153, 129-143.	4.4	96
87	Thermodynamic evaluation and multi-objective optimization of molten carbonate fuel cell-supercritical CO 2 Brayton cycle hybrid system. Energy Conversion and Management, 2017, 153, 538-556.	4.4	76
88	Experimental studies on the applications of PCMs and nano-PCMs in buildings: A critical review. Energy and Buildings, 2017, 154, 96-112.	3.1	222
89	Numerical investigation of the nanofluid effects on the heat extraction process of solar ponds in the transient step. Solar Energy, 2017, 157, 869-879.	2.9	54
90	A Simplificative Approachâ€based Modeling of SOFC Power Systems Fed by Natural Gas. Fuel Cells, 2017, 17, 843-853.	1.5	16

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91	Thermodynamic analysis of a combined gas turbine, ORC cycle and absorption refrigeration for a CCHP system. Applied Thermal Engineering, 2017, 111, 397-406.	3.0	135
92	Thermal models for analysis of performance of Stirling engine: A review. Renewable and Sustainable Energy Reviews, 2017, 68, 168-184.	8.2	131
93	Transient heat extraction modeling method for a rectangular type salt gradient solar pond. Energy Conversion and Management, 2017, 132, 316-326.	4.4	31
94	Thermodynamic analysis and optimization of an irreversible nano scale dual cycle operating with Maxwell-Boltzmann gas. Mechanics and Industry, 2017, 18, 212.	0.5	6
95	Optimal Operation of a Grid-Connected Hybrid Renewable Energy System for Residential Applications. Sustainability, 2017, 9, 1314.	1.6	80
96	Entransy analysis and optimization of irreversible Carnot-like heat engine. Mechanics and Industry, 2017, 18, 204.	0.5	6
97	Entransy analysis and optimization of performance of nano-scale irreversible Otto cycle operating with Maxwell-Boltzmann ideal gas. Chemical Physics Letters, 2016, 658, 293-302.	1.2	19
98	Numerical modeling and economic analysis of a ground source heat pump for supplying energy for a greenhouse in Alborz province, Iran. Journal of Cleaner Production, 2016, 131, 145-154.	4.6	50
99	Exergoeconomic analysis and multi objective optimization of performance of a Carbon dioxide power cycle driven by geothermal energy with liquefied natural gas as its heat sink. Energy Conversion and Management, 2016, 119, 422-434.	4.4	129
100	Designing a powered combined Otto and Stirling cycle power plant through multi-objective optimization approach. Renewable and Sustainable Energy Reviews, 2016, 62, 585-595.	8.2	46
101	Thermodynamic and exergy analysis and optimization of a transcritical CO2 power cycle driven by geothermal energy with liquefied natural gas as its heat sink. Applied Thermal Engineering, 2016, 109, 640-652.	3.0	106
102	Introducing an integrated chemical looping hydrogen production, inherent carbon capture and solid oxide fuel cell biomass fueled power plant process configuration. Energy Conversion and Management, 2016, 124, 141-154.	4.4	110
103	Thermodynamic analysis and optimization of a waste heat recovery system for proton exchange membrane fuel cell using transcritical carbon dioxide cycle and cold energy of liquefied natural gas. Journal of Natural Gas Science and Engineering, 2016, 34, 428-438.	2.1	85
104	Design of a cost-effective wind/photovoltaic/hydrogen energy system for supplying a desalination unit by a heuristic approach. Solar Energy, 2016, 139, 666-675.	2.9	179
105	Introducing and analysis of a hybrid molten carbonate fuel cell-supercritical carbon dioxide Brayton cycle system. Sustainable Energy Technologies and Assessments, 2016, 18, 100-106.	1.7	57
106	Numerical investigation on using of nanofluid in a water-cooled photovoltaic thermal system. Energy Conversion and Management, 2016, 122, 263-278.	4.4	301
107	Multi-objective optimization and exergetic-sustainability of an irreversible nano scale Braysson cycle operating with Maxwell–Boltzmann gas. AEJ - Alexandria Engineering Journal, 2016, 55, 1785-1798.	3.4	23
108	Thermodynamic analysis and evolutionary algorithm based on multi-objective optimization performance of actual power generating thermal cycles. Applied Thermal Engineering, 2016, 99, 996-1005.	3.0	62

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109	A novel framework for optimal design of hybrid renewable energy-based autonomous energy systems: A case study for Namin, Iran. Energy, 2016, 98, 168-180.	4.5	112
110	Thermodynamic analysis and multi objective optimization of performance of solar dish Stirling engine by the centrality of entransy and entropy generation. International Journal of Electrical Power and Energy Systems, 2016, 78, 88-95.	3.3	115
111	Thermodynamic analysis and optimization for an irreversible heat pump working on reversed Brayton cycle. Energy Conversion and Management, 2016, 110, 260-267.	4.4	79
112	Optimization of powered Stirling heat engine with finite speed thermodynamics. Energy Conversion and Management, 2016, 108, 96-105.	4.4	59
113	Optimization of grid independent diesel-based hybrid system for power generation using improved particle swarm optimization algorithm. , $2015, , .$		5
114	Sizing of stand-alone photovoltaic/wind/diesel system with battery and fuel cell storage devices by harmony search algorithm. Journal of Energy Storage, 2015, 2, 30-42.	3.9	137
115	Optimal sizing of autonomous hybrid photovoltaic/wind/battery power system with LPSP technology by using evolutionary algorithms. Solar Energy, 2015, 115, 471-483.	2.9	223
116	Combination of Plasma Functionalization and Phase Inversion Process Techniques for Efficient Dispersion of MWCNTs in Polyamide 6: Assessment through Morphological, Electrical, Rheological and Thermal Properties. Polymer-Plastics Technology and Engineering, 2015, 54, 632-638.	1.9	6
117	Performance assessment and optimization of an irreversible nano-scale Stirling engine cycle operating with Maxwell-Boltzmann gas. European Physical Journal Plus, 2015, 130, 1.	1.2	46
118	Ultra-low Electrical and Rheological Percolation Thresholds in PMMA/Plasma-Functionalized CNTs Nanocomposites. Polymer-Plastics Technology and Engineering, 2014, 53, 1450-1455.	1.9	12
119	A comparison of effects of plasma and acid functionalizations on structure and electrical property of multi-wall carbon nanotubes. Applied Surface Science, 2014, 295, 66-70.	3.1	24
120	On the dispersion of CNTs in polyamide 6 matrix via solution methods: assessment through electrical, rheological, thermal and morphological analyses. Polymer Bulletin, 2013, 70, 2387-2398.	1.7	11
121	Rapid and enhanced functionalization of MWCNTs in a dielectric barrier discharge plasma in presence of diluted CO2. Applied Physics A: Materials Science and Processing, 2012, 106, 829-836.	1.1	11
122	Fast and clean functionalization of carbon nanotubes by dielectric barrier discharge plasma in air compared to acid treatment. Carbon, 2010, 48, 1369-1379.	5.4	133
123	Plasma Functionalization of MWCNTs in He Followed by NH ₃ Treatment and its Application in PMMA Based Nanocomposites. Plasma Processes and Polymers, 2010, 7, 1001-1009.	1.6	24
124	Ceria-doped SnO2 sensor highly selective to ethanol in humid air. Sensors and Actuators B: Chemical, 2008, 130, 625-629.	4.0	60
125	Highly selective sensor to CH4 in presence of CO and ethanol using LaCoO3 perovskite filter with Pt/SnO2. Sensors and Actuators B: Chemical, 2006, 117, 420-425.	4.0	24
126	CeO2 doped SnO2 sensor selective to ethanol in presence of CO, LPG and CH4. Sensors and Actuators B: Chemical, 2005, 108, 172-176.	4.0	125

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127	Highly selectivte sensor to CH/sub 4/ in presence of CO and ethanol using LaCoO/sub 3/ perovskite filter with Pt/SnO/sub 2/. , 0, , .		1
128	An improved particle swarm optimization for optimal configuration of standalone photovoltaic scheme components. Energy Science and Engineering, 0, , .	1.9	5