

Fahad

List of Publications by Year in descending order

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129
papers

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36203

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times ranked

6372
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on current status and challenges of inorganic phase change materials for thermal energy storage systems. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 70, 1072-1089.	8.2	483
2	Heat transfer enhancement of phase change materials for thermal energy storage applications: A critical review. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 74, 26-50.	8.2	418
3	Performance comparison of different supercritical carbon dioxide Brayton cycles integrated with a solar power tower. <i>Energy</i> , 2015, 82, 61-71.	4.5	252
4	Grid Integration Challenges of Wind Energy: A Review. <i>IEEE Access</i> , 2020, 8, 10857-10878.	2.6	234
5	Exergy modeling of a new solar driven trigeneration system. <i>Solar Energy</i> , 2011, 85, 2228-2243.	2.9	211
6	Carbon nanotube nanofluid in enhancing the efficiency of evacuated tube solar collector. <i>Renewable Energy</i> , 2018, 121, 36-44.	4.3	204
7	Performance assessment of a novel system using parabolic trough solar collectors for combined cooling, heating, and power production. <i>Renewable Energy</i> , 2012, 48, 161-172.	4.3	200
8	Supercooling of phase-change materials and the techniques used to mitigate the phenomenon. <i>Applied Energy</i> , 2019, 240, 793-817.	5.1	199
9	Exergy analysis of parabolic trough solar collectors integrated with combined steam and organic Rankine cycles. <i>Energy Conversion and Management</i> , 2014, 77, 441-449.	4.4	198
10	Evaluation of solar collector designs with integrated latent heat thermal energy storage: A review. <i>Solar Energy</i> , 2018, 166, 334-350.	2.9	196
11	Energy analysis of a trigeneration plant based on solid oxide fuel cell and organic Rankine cycle. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 5104-5113.	3.8	179
12	Diatomite/CNTs/PEG composite PCMs with shape-stabilized and improved thermal conductivity: Preparation and thermal energy storage properties. <i>Energy and Buildings</i> , 2018, 164, 166-175.	3.1	173
13	Exergy analysis of an integrated solid oxide fuel cell and organic Rankine cycle for cooling, heating and power production. <i>Journal of Power Sources</i> , 2010, 195, 2346-2354.	4.0	172
14	A review for phase change materials (PCMs) in solar absorption refrigeration systems. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 76, 105-137.	8.2	157
15	Energy and exergy analyses of a biomass trigeneration system using an organic Rankine cycle. <i>Energy</i> , 2012, 45, 975-985.	4.5	156
16	Vibration analysis of drillstrings with self-excited stick-slip oscillations. <i>Journal of Sound and Vibration</i> , 2007, 299, 540-558.	2.1	154
17	Experimental and numerical performance analysis of a converging channel heat exchanger for PV cooling. <i>Energy Conversion and Management</i> , 2015, 103, 14-27.	4.4	152
18	A hybrid renewable energy system as a potential energy source for water desalination using reverse osmosis: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 97, 456-477.	8.2	145

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19	Trigeneration: A comprehensive review based on prime movers. International Journal of Energy Research, 2011, 35, 233-258.	2.2	141
20	A review on recent development for the design and packaging of hybrid photovoltaic/thermal (PV/T) solar systems. Renewable and Sustainable Energy Reviews, 2018, 95, 110-129.	8.2	127
21	State-of-the-art heat transfer fluids for parabolic trough collector. International Journal of Heat and Mass Transfer, 2020, 152, 119541.	2.5	124
22	Superhydrophobic surfaces with antireflection properties for solar applications: A critical review. Solar Energy Materials and Solar Cells, 2016, 157, 604-623.	3.0	118
23	Silica fume/capric acid-palmitic acid composite phase change material doped with CNTs for thermal energy storage. Solar Energy Materials and Solar Cells, 2018, 179, 353-361.	3.0	113
24	Performance and cost assessment of solar driven humidification dehumidification desalination system. Energy Conversion and Management, 2017, 132, 28-39.	4.4	110
25	Performance optimization of a hybrid PV/T solar system using Soybean oil/MXene nanofluids as A new class of heat transfer fluids. Solar Energy, 2020, 208, 124-138.	2.9	107
26	Development of a thermal model for a hybrid photovoltaic module and phase change materials storage integrated in buildings. Solar Energy, 2016, 124, 114-123.	2.9	100
27	Humidification dehumidification desalination system using parabolic trough solar air collector. Applied Thermal Engineering, 2015, 75, 809-816.	3.0	99
28	Greenhouse gas emission and exergy assessments of an integrated organic Rankine cycle with a biomass combustor for combined cooling, heating and power production. Applied Thermal Engineering, 2011, 31, 439-446.	3.0	97
29	Optical properties of various nanofluids used in solar collector: A review. Renewable and Sustainable Energy Reviews, 2017, 73, 1014-1030.	8.2	96
30	Energy and exergy analyses of solar tower power plant driven supercritical carbon dioxide recompression cycles for six different locations. Renewable and Sustainable Energy Reviews, 2017, 68, 153-167.	8.2	96
31	Review of recent developments and persistent challenges in stability of perovskite solar cells. Renewable and Sustainable Energy Reviews, 2018, 90, 210-222.	8.2	96
32	Grid Integration Challenges and Solution Strategies for Solar PV Systems: A Review. IEEE Access, 2022, 10, 52233-52257.	2.6	96
33	Preparation, characterization and thermal regulation performance of cement based-composite phase change material. Solar Energy Materials and Solar Cells, 2018, 174, 523-529.	3.0	94
34	Thermoeconomic optimization of three trigeneration systems using organic Rankine cycles: Part I "Formulations. Energy Conversion and Management, 2013, 69, 199-208.	4.4	90
35	Techno-economic performance analysis of parabolic trough collector in Dhahran, Saudi Arabia. Energy Conversion and Management, 2014, 86, 622-633.	4.4	89
36	Energy, exergy, economic and environmental (4E) analysis of a parabolic trough solar collector using MXene based silicone oil nanofluids. Solar Energy Materials and Solar Cells, 2022, 239, 111633.	3.0	85

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37	Optical, stability and energy performance of water-based MXene nanofluids in hybrid PV/thermal solar systems. <i>Solar Energy</i> , 2020, 204, 32-47.	2.9	81
38	Numerical investigation of the effects of the nano-enhanced phase change materials on the thermal and electrical performance of hybrid PV/thermal systems. <i>Energy Conversion and Management</i> , 2020, 205, 112449.	4.4	80
39	Feasibility study of the grid connected 10 MW installed capacity PV power plants in Saudi Arabia. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 80, 319-329.	8.2	79
40	Performance comparison of three trigeneration systems using organic rankine cycles. <i>Energy</i> , 2011, 36, 5741-5754.	4.5	76
41	Improved Thermophysical Properties and Energy Efficiency of Aqueous Ionic Liquid/MXene Nanofluid in a Hybrid PV/T Solar System. <i>Nanomaterials</i> , 2020, 10, 1372.	1.9	74
42	Solar absorption systems with integrated absorption energy storage—A review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 82, 1602-1610.	8.2	72
43	Energy and sizing analyses of parabolic trough solar collector integrated with steam and binary vapor cycles. <i>Energy</i> , 2013, 58, 561-570.	4.5	70
44	Effect of temperature on the photovoltaic performance and stability of solid-state dye-sensitized solar cells: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 79, 946-959.	8.2	69
45	Optimization of heliostat field layout in solar central receiver systems on annual basis using differential evolution algorithm. <i>Energy Conversion and Management</i> , 2015, 95, 1-9.	4.4	68
46	Thermoeconomic optimization of three trigeneration systems using organic Rankine cycles: Part II – Applications. <i>Energy Conversion and Management</i> , 2013, 69, 209-216.	4.4	67
47	Effects of carbon-based fillers on thermal properties of fatty acids and their eutectics as phase change materials used for thermal energy storage: A Review. <i>Journal of Energy Storage</i> , 2021, 35, 102329.	3.9	63
48	Entropy, exergy, and cost analyses of solar driven cogeneration systems using supercritical CO ₂ Brayton cycles and MEE-TVC desalination system. <i>Energy Conversion and Management</i> , 2016, 115, 253-264.	4.4	62
49	Characterization of dust collected from PV modules in the area of Dhahran, Kingdom of Saudi Arabia, and its impact on protective transparent covers for photovoltaic applications. <i>Solar Energy</i> , 2017, 141, 203-209.	2.9	58
50	The potential of energy savings and the prospects of cleaner energy production by solar energy integration in the residential buildings of Saudi Arabia. <i>Journal of Cleaner Production</i> , 2018, 183, 1122-1130.	4.6	55
51	CO ₂ laser cutting of a carbon/carbon multi-lamelled plain-weave structure. <i>Journal of Materials Processing Technology</i> , 2006, 173, 345-351.	3.1	51
52	Exergy analysis of a high-temperature-steam-driven, varied-pressure, humidification–dehumidification system coupled with reverse osmosis. <i>Applied Energy</i> , 2013, 103, 552-561.	5.1	50
53	Recent progress and remaining challenges in organometallic halides based perovskite solar cells. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 78, 1-14.	8.2	49
54	Energy analysis of a solar driven cogeneration system using supercritical CO ₂ power cycle and MEE-TVC desalination system. <i>Energy</i> , 2017, 119, 996-1009.	4.5	49

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55	Performance characteristics of a solar driven lithium bromide-water absorption chiller integrated with absorption energy storage. <i>Energy Conversion and Management</i> , 2017, 150, 188-200.	4.4	47
56	Optimum selection of solar water heating (SWH) systems based on their comparative techno-economic feasibility study for the domestic sector of Saudi Arabia. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 62, 336-349.	8.2	45
57	Performance assessment of a solar powered ammonia-water absorption refrigeration system with storage units. <i>Energy Conversion and Management</i> , 2016, 126, 316-328.	4.4	43
58	Experimental testing of the performance of a solar absorption cooling system assisted with ice-storage for an office space. <i>Energy Conversion and Management</i> , 2017, 148, 1399-1408.	4.4	43
59	Optical behavior of a water/silver nanofluid and their influence on the performance of a photovoltaic-thermal collector. <i>Solar Energy Materials and Solar Cells</i> , 2019, 201, 110054.	3.0	41
60	State-of-the-art ionic liquid & ionanofluids incorporated with advanced nanomaterials for solar energy applications. <i>Journal of Molecular Liquids</i> , 2021, 336, 116563.	2.3	41
61	Comparative studies of encapsulation and glass surface modification impacts on PV performance in a desert climate. <i>Solar Energy</i> , 2017, 142, 288-298.	2.9	40
62	Thermal regulation and performance assessment of a hybrid photovoltaic/thermal system using different combinations of nano-enhanced phase change materials. <i>Solar Energy Materials and Solar Cells</i> , 2020, 215, 110645.	3.0	40
63	Synthesis of zinc oxide/titanium dioxide (ZnO/TiO ₂) nanocomposites by wet incipient wetness impregnation method and preparation of ZnO/TiO ₂ paste using poly(vinylpyrrolidone) for efficient dye-sensitized solar cells. <i>Electrochimica Acta</i> , 2016, 222, 473-480.	2.6	38
64	Optical and conductivity studies of polyvinyl alcohol-MXene (PVA-MXene) nanocomposite thin films for electronic applications. <i>Optics and Laser Technology</i> , 2021, 136, 106772.	2.2	38
65	Investigation of thermal properties and enhanced energy storage/release performance of silica fume/myristic acid composite doped with carbon nanotubes. <i>Renewable Energy</i> , 2019, 140, 779-788.	4.3	37
66	Thermal energy storage and thermal conductivity properties of fatty acid/fatty acid-grafted-CNTs and fatty acid/CNTs as novel composite phase change materials. <i>Scientific Reports</i> , 2020, 10, 15388.	1.6	37
67	State-of-the-art review on water-based nanofluids for low temperature solar thermal collector application. <i>Solar Energy Materials and Solar Cells</i> , 2021, 230, 111220.	3.0	35
68	A novel design of a multistage stepped bubble column humidifier for the humidification of air. <i>Applied Thermal Engineering</i> , 2017, 120, 530-536.	3.0	34
69	Performance enhancement of dye-sensitized solar cells via cosensitization of ruthenizer Z907 and organic sensitizer SQ2. <i>International Journal of Energy Research</i> , 2018, 42, 3957-3965.	2.2	34
70	Investigation of the performance of a hybrid PV/thermal system using water/silver nanofluid-based optical filter. <i>Energy</i> , 2021, 215, 119172.	4.5	34
71	Exploring the potential of MXene-based advanced solar-absorber in improving the performance and efficiency of a solar-desalination unit for brackish water purification. <i>Desalination</i> , 2022, 526, 115521.	4.0	33
72	Evaluation of the effects of optical filtration and nanoPCM on the performance of a hybrid photovoltaic-thermal solar collector. <i>Energy Conversion and Management</i> , 2019, 195, 139-156.	4.4	32

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73	Form-stabilized Polyethylene Glycol/Palygorskite Composite Phase Change Material: Thermal Energy Storage Properties, Cycling Stability, and Thermal Durability. <i>Polymer Engineering and Science</i> , 2020, 60, 909-916.	1.5	32
74	Development and assessment of integrating parabolic trough collectors with steam generation side of gas turbine cogeneration systems in Saudi Arabia. <i>Applied Energy</i> , 2015, 141, 131-142.	5.1	31
75	Development of a mathematical model for optimizing a heliostat field layout using differential evolution method. <i>International Journal of Energy Research</i> , 2015, 39, 1241-1255.	2.2	30
76	Thermal energy storage and thermal conductivity properties of Octadecanol-MWCNT composite PCMs as promising organic heat storage materials. <i>Scientific Reports</i> , 2020, 10, 9168.	1.6	29
77	Performance assessment of water production from solar cooling system in humid climate. <i>Energy Conversion and Management</i> , 2016, 127, 647-655.	4.4	28
78	Optical properties and stability of water-based nanofluids mixed with reduced graphene oxide decorated with silver and energy performance investigation in hybrid photovoltaic/thermal solar systems. <i>International Journal of Energy Research</i> , 2020, 44, 11487-11508.	2.2	28
79	Segmented thermoelectric generator: Influence of pin shape configuration on the device performance. <i>Energy</i> , 2016, 111, 439-452.	4.5	27
80	Performance and exergoeconomic assessment of a novel combined ejector cooling with humidification-dehumidification (HDH) desalination system. <i>Desalination</i> , 2021, 500, 114843.	4.0	24
81	Electrochemical Impedance Spectroscopy and Photovoltaic Analyses of Dye-Sensitized Solar Cells Based on Carbon/TiO ₂ Composite Counter Electrode. <i>Journal of the Electrochemical Society</i> , 2016, 163, H339-H342.	1.3	22
82	Efficiency enhancement of a solar dish collector operating with a novel soybean oil-based-MXene nanofluid and different cavity receivers. <i>Journal of Cleaner Production</i> , 2021, 317, 128430.	4.6	22
83	On the auxiliary boiler sizing assessment for solar driven supercritical CO ₂ double recompression Brayton cycles. <i>Applied Energy</i> , 2016, 183, 408-418.	5.1	21
84	A detailed parametric study of a solar driven double-effect absorption chiller under various solar radiation data. <i>Journal of Cleaner Production</i> , 2020, 251, 119750.	4.6	21
85	Renewable Portfolio Standard Development Assessment in the Kingdom of Saudi Arabia from the Perspective of Policy Networks Theory. <i>Processes</i> , 2021, 9, 1123.	1.3	21
86	Economic analysis of a novel solar-assisted air conditioning system with integral absorption energy storage. <i>Journal of Cleaner Production</i> , 2021, 291, 125918.	4.6	20
87	Thermoeconomic analysis of shrouded wind turbines. <i>Energy Conversion and Management</i> , 2015, 96, 599-604.	4.4	18
88	An experimental investigation of a novel design air humidifier using direct solar thermal heating. <i>Energy Conversion and Management</i> , 2016, 127, 667-678.	4.4	18
89	Impact resistance of composite laminate flat plates – A parametric sensitivity analysis approach. <i>Composite Structures</i> , 2013, 102, 138-147.	3.1	17
90	Performance analysis of a solar chimney power plant design aided with reflectors. <i>Energy Conversion and Management</i> , 2018, 177, 30-42.	4.4	17

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91	Investigation of Electrical Conductivity, Optical Property, and Stability of 2D MXene Nanofluid Containing Ionic Liquids. Applied Sciences (Switzerland), 2020, 10, 8943.	1.3	17
92	A Comparative Study of Cytotoxicity of PPG and PEG Surface-Modified 2-D Ti3C2 MXene Flakes on Human Cancer Cells and Their Photothermal Response. Materials, 2021, 14, 4370.	1.3	17
93	A survey of energy consumption and failure patterns of residential air-conditioning units in Eastern Saudi Arabia. Energy, 1996, 21, 967-975.	4.5	16
94	Energy and Exergy Analyses of Recompression Brayton Cycles Integrated with a Solar Power Tower through a Two-Tank Thermal Storage System. Journal of Energy Engineering - ASCE, 2018, 144, .	1.0	16
95	Perovskite-based tandem solar cells: Device architecture, stability, and economic perspectives. Renewable and Sustainable Energy Reviews, 2022, 165, 112553.	8.2	16
96	Estimation of monthly average daily and hourly solar radiation impinging on a sloped surface using the isotropic sky model for Dhahran, Saudi Arabia. Renewable Energy, 1997, 11, 257-262.	4.3	15
97	Critical analysis of the limitations and validity of the assumptions with the analytical methods commonly used to determine the photovoltaic cell parameters. Renewable and Sustainable Energy Reviews, 2021, 140, 110753.	8.2	15
98	Thermodynamic performance evaluation of a hybrid ejector cooling and humidification-dehumidification desalination system. Energy Conversion and Management, 2020, 225, 113450.	4.4	14
99	Charging and discharging characteristics of absorption energy storage integrated with a solar driven double-effect absorption chiller for air conditioning applications. Journal of Energy Storage, 2020, 29, 101374.	3.9	14
100	Analysis of environmental dust and mud adhesion on aluminum surface in relation to solar energy harvesting. Solar Energy, 2017, 153, 590-599.	2.9	13
101	Thermal performance of nanomaterial in solar collector: State-of-play for graphene. Journal of Energy Storage, 2021, 42, 103022.	3.9	13
102	Feasibility study for the integration of optical filtration and nano-enhanced phase change materials to the conventional PV-based solar systems. Renewable Energy, 2022, 187, 463-483.	4.3	13
103	Applications of wind power on the East coast of Saudi Arabia. Renewable Energy, 1992, 2, 47-55.	4.3	10
104	Extreme learning machine for real-time damping of LFO in power system networks. Electrical Engineering, 2021, 103, 279-292.	1.2	10
105	Transparent Conductive Oxide Films for High-Performance Dye-Sensitized Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 518-524.	1.5	9
106	Exergoeconomic analysis of ejector-augmented shrouded wind turbines. Energy, 2017, 128, 264-270.	4.5	8
107	Effect of Accumulation of Environmental Dust and Subsequent Mud Formation on Textural, Chemical, and Optical Properties of Silicon Wafers for Photovoltaic Cells. IEEE Journal of Photovoltaics, 2018, 8, 1274-1280.	1.5	6
108	Assessment of thermo-hydraulic performance of MXene-based nanofluid as coolant in a dimpled channel: a numerical approach. Journal of Thermal Analysis and Calorimetry, 2022, 147, 12669-12692.	2.0	6

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109	Performance analysis of supercritical CO ₂ Brayton cycles integrated with solar central receiver system. , 2014, , .		5
110	Assessment of next generation refrigerants for air conditioning systems integrated with air-membrane heat and mass exchangers. Energy Conversion and Management, 2017, 154, 344-353.	4.4	5
111	Enhancement of the Photovoltaic Performance of Dye-Sensitized Solar Cells by Cosensitizing TiO ₂ Photoanode With Uncapped PbS Nanocrystals and Ruthenizer. IEEE Journal of Photovoltaics, 2018, 8, 512-516.	1.5	5
112	Experimental investigation of a bubble column humidifier heated through solar energy. , 0, 60, 58-69.		5
113	Energy and Exergy Analyses of an Air Membrane Heat and Mass Exchanger for Air Conditioning Applications. Journal of Energy Engineering - ASCE, 2017, 143, 04017028.	1.0	4
114	Techno-economic study on grid-connected PV system for major cities in Saudi Arabia. E3S Web of Conferences, 2020, 173, 02005.	0.2	4
115	Techno-economic evaluation of different types of solar collectors for water heating application in domestic sector of Saudi Arabia. , 2014, , .		3
116	Performance and cost assessment of a solar HDH desalination system integrated with thermal storage: a case study. , 0, 173, 86-104.		3
117	Multiwalled CNT and graphene nanoplatelets based nano-enhanced PCMs: Evaluation for the thermal performance and its implications on the performance of hybrid PV/thermal systems. Materials Today Communications, 2022, 31, 103618.	0.9	3
118	Time Instant Optimization of a Heliostat Field Using a Heuristic Algorithm. , 2014, , .		2
119	Evaluation of solar thermal driven cooling system in office buildings in Saudi Arabia. E3S Web of Conferences, 2017, 23, 05001.	0.2	2
120	Comparative Energy and Exergy Analyses of Air Conditioning Systems Integrated with an Air Enthalpy Exchanger for Different Refrigerants. Journal of Energy Engineering - ASCE, 2018, 144, 04018025.	1.0	2
121	Analytical Study on the Effect of Optical Filtration and NANOPCM on the Performance of PV/T Solar Collectors. , 2017, , .		2
122	Instrumentation Selection and Uncertainty Analysis for Performance Test of Small Centrifugal Compressors. , 2004, , 701.		1
123	Energy and Exergy Assessments of a New Trigeneration System Based on Organic Rankine Cycle and Biomass Combustor. , 2010, , .		1
124	Exergy Analysis of Solar Chimney for Saudi Arabian Weather Conditions. , 2016, , .		1
125	Comparison of physical properties enhancement in various heat transfer nanofluids by MXene. , 2022, , 131-150.		1
126	Design of Small Centrifugal Compressors Performance Test Facility. , 2004, , 227.		0

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127	Experimental Analysis of Solar Driven Multi-Stage Stepped Bubbler Humidifier for Humidification-Dehumidification (HDH) Water Desalination System. , 2016, , .		0
128	Energetic Performance Optimization of a H ₂ O-LiBr Absorption Chiller Powered by Evacuated Tube Solar Collector. Innovative Renewable Energy, 2020, , 363-377.	0.2	0
129	MXene as Emerging Low Dimensional Material in Modern Energy and Bio Application: A Review. Journal of Nano Research, 0, 74, 109-154.	0.8	0