## A thermal model for photovoltaic panels under varying

Applied Thermal Engineering 30, 1488-1495 DOI: 10.1016/j.applthermaleng.2010.03.012

Citation Report

#	Article	IF	CITATIONS
1	Model for Thermal Behavior of Shaded Photovoltaic Cells under Hot-Spot Condition. , 2011, , .		21
2	Response to comments by E. Sartori on "A thermal model for PV panels under varying atmospheric conditionsâ€, by S. Armstrong and W.G. Hurley, Applied Thermal Engineering 30, 1388–1395 (2010). Applied Thermal Engineering, 2011, 31, 402.	3.0	4
3	Sartori's reply on the Armstrong's response. Applied Thermal Engineering, 2011, 31, 403.	3.0	0
4	Comments on "A thermal model for PV panels under varying atmospheric conditionsâ€ <del>,</del> by S.ÂArmstrong and W.G. Hurley, Applied Thermal Engineering 30 (2010) 1388–1395. Applied Thermal Engineering, 2011, 31, 400-401.	3.0	4
5	Multi-layer thermal models of PV modules for monitoring applications. , 2012, , .		6
6	Enhancement of photovoltaic solar module performance for power generation in the Middle East. , 2012, , .		16
7	Enhancing the Performance of Photovoltaic Solar Modules by Active Thermal Management. , 2012, , .		1
8	A Finite-Element Approach to Analyze the Thermal Effect of Defects on Silicon-Based PV Cells. IEEE Transactions on Industrial Electronics, 2012, 59, 3860-3867.	5.2	43
9	Evaluating the IEC 61215 Ed.3 NMOT procedure against the existing NOCT procedure with PV modules in a side-by-side configuration. , 2012, , .		22
10	Siting PV plant focusing on the effect of local climate variables on electric energy production – Case study for Araripina and Recife. Renewable Energy, 2012, 48, 309-317.	4.3	15
11	Energy Yield of Back Contact Foil Based MWT Modules. Energy Procedia, 2012, 27, 680-684.	1.8	0
12	Experimental characterization of a thermoelectrical model of photovoltaic modules. , 2012, , .		0
13	Three-dimensional thermal modeling of a photovoltaic module under varying conditions. Solar Energy, 2012, 86, 2620-2631.	2.9	141
14	Photovoltaic fault detection using a parameter based model. Solar Energy, 2013, 96, 96-102.	2.9	78
15	Enhancing Smart Grid realisation with accurate prediction of photovoltaic performance based on weather forecast. International Journal of Environmental Studies, 2013, 70, 754-764.	0.7	5
16	Thermoelectrical Modeling of Wavelength Effects on Photovoltaic Module Performance—Part I: Model. IEEE Journal of Photovoltaics, 2013, 3, 1027-1033.	1.5	9
17	Thermoelectrical Modeling of Wavelength Effects on Photovoltaic Module Performance—Part II: Parameterization. IEEE Journal of Photovoltaics, 2013, 3, 1034-1037.	1.5	7
18	Impact of wind and shading on energy contribution by photovoltaic panels with axis tracking system. , 2013, , .		5

TION RE

#	Article	IF	CITATIONS
19	Experimental and numerical results from hybrid retrofitted photovoltaic panels. Energy Conversion and Management, 2013, 76, 634-644.	4.4	25
20	Outdoor performance of a low-concentrated photovoltaic–thermal hybrid system with crystalline silicon solar cells. Applied Energy, 2013, 112, 618-625.	5.1	57
21	Electrical, thermal and structural performance of a cooled PV module: Transient analysis using a multiphysics model. Applied Energy, 2013, 112, 300-312.	5.1	85
22	An experimental study on the annual surface temperature characteristics of amorphous silicon BIPV window. Energy and Buildings, 2013, 62, 166-175.	3.1	54
23	Wind Effect on PV Module Temperature: Analysis of Different Techniques for an Accurate Estimation. Energy Procedia, 2013, 40, 77-86.	1.8	205
24	Dynamic thermal model of solar PV systems under varying climatic conditions. Solar Energy, 2013, 93, 183-194.	2.9	86
25	Dynamical optimal positioning of a photovoltaic panel in all weather conditions. Applied Energy, 2013, 108, 429-438.	5.1	34
26	Operation of TUT Solar PV Power Station Research Plant under Partial Shading Caused by Snow and Buildings. International Journal of Photoenergy, 2013, 2013, 1-13.	1.4	41
27	Cuckoo search for determining Artificial Neural Network training parameters in modeling operating photovoltaic module temperature. , 2014, , .		7
28	Computational fluid dynamics analysis and experimental validation of improvement in overall energy efficiency of a solar photovoltaic panel by thermal energy recovery. Journal of Renewable and Sustainable Energy, 2014, 6, .	0.8	21
29	Finite Element Method Based Model to Solve Three Dimensional Heat Conduction Equations for Photovoltaic Modules. , 2014, , .		0
30	A novel circuit model of PV cell for electrothermal simulations. , 2014, , .		3
31	Temperature and wind speed impact on the efficiency of PV installations. Experience obtained from outdoor measurements in Greece. Renewable Energy, 2014, 66, 612-624.	4.3	220
32	Design concept and mathematical model of a bi-fluid photovoltaic/thermal (PV/T) solar collector. Renewable Energy, 2014, 67, 153-164.	4.3	84
33	Coupling optical and thermal models to accurately predict PV panel electricity production. Solar Energy Materials and Solar Cells, 2014, 125, 325-338.	3.0	33
34	Experimental studies on summer performance and feasibility of a BIPV/T ethylene tetrafluoroethylene (ETFE) cushion structure system. Energy and Buildings, 2014, 69, 394-406.	3.1	55
35	A simplified model for photovoltaic modules based on improved translation equations. Solar Energy, 2014, 101, 40-52.	2.9	57
36	Thermal modelling and experimental assessment of the dependence of PV module temperature on wind velocity and direction, module orientation and inclination. Solar Energy, 2014, 107, 443-460.	2.9	142

#	Article	IF	CITATIONS
37	Design of Membrane-Encapsulated Wireless Photoelectrochemical Cells for Hydrogen Production. Journal of the Electrochemical Society, 2014, 161, E3283-E3296.	1.3	19
38	Local Shunting in Multicrystalline Silicon Solar Cells: Distributed Electrical Simulations and Experiments. IEEE Journal of Photovoltaics, 2014, 4, 40-47.	1.5	17
39	Measuring and estimating the temperature of photovoltaic modules. Solar Energy, 2014, 110, 656-666.	2.9	26
40	Optimal topology of urban buildings for maximization of annual solar irradiation availability using a genetic algorithm. Applied Thermal Engineering, 2014, 73, 424-437.	3.0	26
41	A dynamic model for air-based photovoltaic thermal systems working under real operating conditions. Applied Energy, 2014, 132, 216-225.	5.1	63
42	ICREGA'14 - Renewable Energy: Generation and Applications. Springer Proceedings in Energy, 2014, , .	0.2	4
43	A PSO (particle swarm optimization)-based model for the optimal management of a small PV(Photovoltaic)-pump hydro energy storage in a rural dry area. Energy, 2014, 76, 168-174.	4.5	129
44	Life-cycle net energy assessment of large-scale hydrogen production via photoelectrochemical water splitting. Energy and Environmental Science, 2014, 7, 3264-3278.	15.6	195
45	Inclusive dynamic thermal and electric simulation model of solar PV systems under varying atmospheric conditions. Solar Energy, 2014, 105, 632-647.	2.9	34
46	Experimental study of the nonlinear distortion caused by domestic power plants. Applied Thermal Engineering, 2014, 70, 1288-1293.	3.0	3
47	Differentiation of multiple maximum power points of partially shaded photovoltaic power generators. Renewable Energy, 2014, 71, 89-99.	4.3	26
48	Clobal analysis of photovoltaic energy output enhanced by phase change material cooling. Applied Energy, 2014, 126, 21-28.	5.1	182
49	Prediction of silicon PV module temperature for hot spots and worst case partial shading situations using spatially resolved lock-in thermography. Solar Energy Materials and Solar Cells, 2014, 120, 259-269.	3.0	62
50	Mathematical Model of a Hybrid Solar Panel. , 2014, , .		3
51	Numerical Modeling of c-Si PV Modules by Coupling the Semiconductor with the Thermal Conduction, Convection and Radiation Equations. Energy Procedia, 2015, 77, 215-224.	1.8	35
53	Parametric Investigation of Concentrating PV/T System With Spectral Filtering Utilizing a 2-D Model. , $2015, , .$		1
55	Proof of Concept of an Irradiance Estimation System for Reconfigurable Photovoltaic Arrays. Energies, 2015, 8, 6641-6657.	1.6	30
56	Microinverter Thermal Performance in the Real-World: Measurements and Modeling. PLoS ONE, 2015, 10, e0131279.	1.1	10

ARTICLE IF CITATIONS # A thermal model for amorphous silicon photovoltaic integrated in ETFE cushion roofs. Energy 4.4 38 57 Conversion and Management, 2015, 100, 440-448. Thermal management of solar photovoltaics modules for enhanced power generation. Renewable 4.3 14 Energy, 2015, 82, 14-20. 59 Dynamic electrothermal simulation of photovoltaic plants., 2015,,. 6 Simulation and Experimental Study on Effect of Phase Change Material Thickness to Reduce Temperature of Photovoltaic Panel. IOP Conference Series: Materials Science and Engineering, 2015, 88, 012049. A physics-based compact model for CIGS and CdTe solar cells: From voltage-dependent carrier 61 9 collection to light-enhanced reverse breakdown., 2015,,. Spatial and temporal analysis of wind effects on PV module temperature and performance. Sustainable Energy Technologies and Assessments, 2015, 11, 36-41. 1.7 Effects of various parameters on PV-module power and efficiency. Energy Conversion and 63 4.4 286 Management, 2015, 103, 348-358. Flat plate solar photovoltaic–thermal (PV/T) systems: A reference guide. Renewable and Sustainable 64 8.2 230 Energy Reviews, 2015, 51, 62-88. A study to incorporate renewable energy technologies into the power portfolio of Karachi, Pakistan. 8.2 65 26 Renewable and Sustainable Energy Reviews, 2015, 47, 14-22. Detailed PVT-water model for transient analysis using RC networks. Solar Energy, 2015, 115, 680-693. Artificial bee colony based algorithm for maximum power point tracking (MPPT) for PV systems 67 261 4.1 operating under partial shaded conditions. Applied Soft Computing Journal, 2015, 32, 38-48. An Empirical Model for Rack-Mounted PV Module Temperatures for Southeast Asian Locations 1.5 68 Evaluated for Minute Time Scales. IEEE Journal of Photovoltaics, 2015, 5, 774-782. Temperature distribution of photovoltaic module based on finite element simulation. Solar Energy, 69 2.9 161 2015, 111, 97-103. Modeling and Detection of Hotspot in Shaded Photovoltaic Cells. IEEE Transactions on Very Large 2.1 Scale Integration (VLSI) Systems, 2015, 23, 1031-1039. Model order reduction applied to heat conduction in photovoltaic modules. Composite Structures, 71 3.1 16 2015, 119, 477-486. Thermal Monitoring of Photovoltaic module using Optical Fiber Sensors. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2016, 15, 333-348. Modelagem da temperatura do m $\tilde{A}^3$ dulo de c $\tilde{A}$ ©lulas fotovoltaicas em fun $\tilde{A}$ § $\tilde{A}$ £o da temperatura ambiente, 73 0.1 0 velocidade dos ventos e irradiância. Revista Brasileira De Energias RenovÃ;veis, 2016, 5, . 74 Performance index of photovoltaic fields for diagnostic purposes., 2016, , .

#	Article	IF	CITATIONS
75	Analysis and simulation of concentrating photovoltaic systems with a microchannel heat sink. Solar Energy, 2016, 136, 35-48.	2.9	73
76	A Hybrid Algorithm for Tracking of GMPP Based on P&O and PSO With Reduced Power Oscillation in String Inverters. IEEE Transactions on Industrial Electronics, 2016, 63, 6097-6106.	5.2	140
77	A Method to Detect Photovoltaic Array Faults and Partial Shading in PV Systems. IEEE Journal of Photovoltaics, 2016, 6, 1278-1285.	1.5	147
78	Estimation of the Surface Temperature of a Photovoltaic Panel Through a Radiation-Natural Convection Heat Transfer Model in Matlab Simulink. , 2016, , .		1
79	Photothermal performance of an amorphous silicon photovoltaic panel integrated in a membrane structure. Journal Physics D: Applied Physics, 2016, 49, 395601.	1.3	15
80	Thermal response of poly-crystalline silicon photovoltaic panels: Numerical simulation and experimental study. Solar Energy, 2016, 134, 147-155.	2.9	87
81	Effect of temperature on the PV cells and improving their performance by the use of thermo generators. Molecular Crystals and Liquid Crystals, 2016, 627, 23-28.	0.4	6
82	Impact of radiativeâ€heat transfer on photovoltaic module temperature. Progress in Photovoltaics: Research and Applications, 2016, 24, 12-27.	4.4	27
83	Energy performance of ETFE cushion roof integrated photovoltaic/thermal system on hot and cold days. Applied Energy, 2016, 173, 40-51.	5.1	60
84	A Computational Study of Optically Concentrating, Solar-Fuels Generators from Annual Thermal- and Fuel-Production Efficiency Perspectives. Journal of the Electrochemical Society, 2016, 163, H475-H484.	1.3	13
85	Reconfiguration of PV modules: A tool to get the best compromise between maximization of the extracted power and minimization of localized heating phenomena. Solar Energy, 2016, 138, 105-118.	2.9	50
86	An improved multi-layer thermal model for photovoltaic modules. , 2016, , .		8
87	Accurate prediction of electric power for photovoltaic modules using particle swarm optimzation. , 2016, , .		0
88	Improved heat dissipation in a crystalline silicon PV module for better performance by using a highly thermal conducting backsheet. Energy, 2016, 113, 515-520.	4.5	19
89	Influence of environmental temperature and device temperature difference on output parameters of c-Si solar cells. Solar Energy, 2016, 136, 333-341.	2.9	15
90	Heat flow in installations with photovoltaic tiles. , 2016, , .		1
91	Heat transfer studies of photovoltaic panel coupled with phase change material. Solar Energy, 2016, 140, 151-161.	2.9	151
92	Mitigating the effect of heat and dust to enhance solar panels efficiency. , 2016, , .		4

ARTICLE IF CITATIONS # Numerical simulation of photovoltaic panel thermal condition under wind convection., 2016,,. 93 1 Towards thermal fatigue modeling of photovoltaic panels under the gulf region harsh atmospheric 94 conditions., 2016,,. Detection and characterisation of delamination in PV modules by active infrared thermography. 95 1.1 25 Nondestructive Testing and Evaluation, 2016, 31, 1-16. Complementary performance enhancement of PV energy system through thermoelectric generation. 96 Renewable and Sustainable Energy Reviews, 2016, 58, 1017-1026. Parameter extraction for dynamic PV thermal model using particle swarm optimisation. Applied 97 3.0 24 Thermal Engineering, 2016, 100, 508-517. A computational analysis of coupled thermal and electrical behavior of PV panels. Solar Energy Materials and Solar Cells, 2016, 148, 73-86. 3.0 Renewable energy management in a remote area using Modified Gravitational Search Algorithm. Energy, 2016, 97, 391-399. 99 4.5 25 Efficiency Improvement of Photovoltaic Panels by Using Air Cooled Heat Sinks. Energy Procedia, 2016, 100 1.8 85, 425-432. A Parametric Investigation of a Concentrating Photovoltaic/Thermal System With Spectral Filtering 101 Utilizing a Two-Dimensional Heat Transfer Model. Journal of Solar Energy Engineering, Transactions 28 1.1 of the ASME, 2016, 138, . Dynamic coupled thermal-and-electrical modelling of sheet-and-tube hybrid photovoltaic/thermal 184 (PVT) collectors. Applied Thermal Engineering, 2016, 101, 778-795. Fabrication, experimental study and testing of a novel photovoltaic module for photovoltaic thermal 103 4.374 applications. Renewable Energy, 2016, 90, 95-104. Development of a thermal model for a hybrid photovoltaic module and phase change materials 100 storage integrated in buildings. Solar Energy, 2016, 124, 114-123. Bi-fluid photovoltaic/thermal (PV/T) solar collector: Experimental validation of a 2-D theoretical 105 4.3 113 model. Renewable Energy, 2016, 85, 1052-1067. Experimental investigation of a copper sheet-laminated solar photovoltaic thermal water collector. 1.3 Energy Efficiency, 2017, 10, 117-128. Assessment of implicit and explicit models for different photovoltaic modules technologies. Energy, 107 33 4.5 2017, 122, 128-143. A computational fluid dynamic study of PV cell temperatures in novel platform and standard arrangements. Solar Energy, 2017, 144, 203-214. Optics-Based Approach to Thermal Management of Photovoltaics: Selective-Spectral and Radiative 109 1.5102 Cooling. IEEE Journal of Photovoltaics, 2017, 7, 566-574. Development and experimental validation of a comprehensive thermoelectric dynamic model of photovoltaic modules. Solar Energy, 2017, 144, 489-501.

ARTICLE IF CITATIONS # Improving photovoltaics efficiency by water cooling: Modelling and experimental approach. Energy, 111 4.5 89 20'17, 137, 798-810. Performance study and analysis of an inclined concentrated photovoltaic-phase change material 114 system. Solar Energy, 2017, 150, 229-245. 113 Thermal Behavior of Photovoltaic Devices., 2017,,. 90 Thermal Issues in Photovoltaics and Existing Solutions., 2017, , 1-28. 114 Photovoltaic solar energy conversion for hydrogen production by alkaline water electrolysis: 115 4.4 112 Conceptual design and analysis. Energy Conversion and Management, 2017, 133, 1-13. Initial investigations of a combined photo-assisted water cleaner and thermal collector. Renewable Energy, 2017, 113, 235-247. 4.3 Performance analysis of tilted photovoltaic system integrated with phase change material under 117 4.5 127 varying operating conditions. Energy, 2017, 133, 887-899. Portfolio optimization of renewable energy assets: Hydro, wind, and photovoltaic energy in the 118 5.6 regulated market in Brazil. Energy Economics, 2017, 64, 238-250. Spatial and temporal analysis of wind effects on PV modules: Consequences for electrical power 119 2.9 33 evaluation. Solar Energy, 2017, 147, 292-299. Effects of different excitation waveforms on detection and characterisation of delamination in PV 1.1 modules by active infrared thermography. Nondestructive Testing and Evaluation, 2017, 32, 418-434. A Comprehensive Photonic Approach for Solar Cell Cooling. ACS Photonics, 2017, 4, 774-782. 121 3.2 262 Two-layer ETFE cushions integrated flexible photovoltaics: Prototype development and thermal 3.1 performance assessment. Energy and Buildings, 2017, 141, 238-246. Modeling of photovoltaic module temperature using Faiman model: Sensitivity analysis for different 123 2.9 36 climates. Solar Energy, 2017, 146, 401-416. Wide Input Voltage Range Photovoltaic Microconverter With Reconfigurable Buck–Boost Switching Stage. IEEE Transactions on Industrial Electronics, 2017, 64, 5974-5983. 124 5.2 Effects of operational conditions on the energy efficiency of photovoltaic modules operating in Malaysia. Journal of Cleaner Production, 2017, 143, 912-924. 125 102 4.6 Passive Thermal Management of Photovoltaic Modulesâ€"Mathematical Modeling and Simulation of 1.1 Photovoltaic Modules. Journal of Solar Energy Engineering, Transactions of the ASME, 2017, 139, . The influence of microchannel heat sink configurations on the performance of low concentrator 127 5.1107 photovoltaic systems. Applied Energy, 2017, 206, 594-611. Systematic cross-validation of photovoltaic energy yield models for dynamic environmental conditions. Solar Energy, 2017, 155, 698-705.

#	Article	IF	CITATIONS
129	Dust effect on the performance of the hybrid PV/Thermal collector. Thermal Science and Engineering Progress, 2017, 3, 114-122.	1.3	53
130	Behavior of temperature in photovoltaic panels installed on surfaces with different albedo indexes. , 2017, , .		1
131	Computational modeling of a BIPV/T ethylene tetrafluoroethylen (ETFE) cushion structure roof. Energy, 2017, 133, 998-1012.	4.5	14
132	Numerical and experimental study on temperature control of solar panels with form-stable paraffin/expanded graphite composite PCM. Energy Conversion and Management, 2017, 149, 416-423.	4.4	132
133	Mathematical modelling of a dual-fluid concentrating photovoltaic-thermal (PV-T) solar collector. Renewable Energy, 2017, 114, 1258-1271.	4.3	27
134	Thermal analysis of a BIPV system by various modelling approaches. Solar Energy, 2017, 155, 1289-1299.	2.9	50
135	Performance analysis of perovskite and dye-sensitized solar cells under varying operating conditions and comparison with monocrystalline silicon cell. Applied Thermal Engineering, 2017, 127, 559-565.	3.0	31
136	Performance evaluation of new modified low-concentrator polycrystalline silicon photovoltaic/thermal systems. Energy Conversion and Management, 2017, 149, 593-607.	4.4	57
137	Conceptual approach on harvesting PV dissipated heat for enhancing water evaporation. AlP Conference Proceedings, 2017, , .	0.3	0
138	Real-Time Thermoelectrical Model of PV Panels for Degradation Assessment. IEEE Journal of Photovoltaics, 2017, 7, 1362-1375.	1.5	17
139	A Quantitative and Computer-Aided Thermography-Based Diagnostics for PV Devices—Part II: Platform and Results. IEEE Journal of Photovoltaics, 2017, 7, 237-243.	1.5	29
140	Temperature distribution and back sheet role of polycrystalline silicon photovoltaic modules. Applied Thermal Engineering, 2017, 111, 1296-1303.	3.0	49
141	Optimization of thermoelectric cooling technology for an active cooling of photovoltaic panel. Renewable and Sustainable Energy Reviews, 2017, 75, 1295-1305.	8.2	75
142	Optical and thermal modeling of a photovoltaic module and experimental evaluation of the modeling performance. Environmental Progress and Sustainable Energy, 2017, 36, 277-293.	1.3	16
143	Reduced Module Operating Temperature and Increased Yield of Modules With PERC Instead of Al-BSF Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 44-50.	1.5	30
144	Fireworks Enriched P&O Algorithm for GMPPT and Detection of Partial Shading in PV Systems. IEEE Transactions on Power Electronics, 2017, 32, 4432-4443.	5.4	109
145	Outdoor Direct STC Performance Measurement of PV Modules Based on a Sun-Shading Technique. IEEE Journal of Photovoltaics, 2017, 7, 1725-1730.	1.5	9
146	Analysis of a New Hybrid Water-Phase Change Material Heat Sink for Low Concentrated Photovoltaic Systems. , 2017, , .		4

#	Article	IF	CITATIONS
147	In-situ fast thermal detection method for large-scale photovoltaic field under shading conditions. , 2017, , .		0
148	Thermal model of a solar hybrid module as the heat source for a CO <inf>2</inf> heat pump. , 2017, , .		1
149	Step-by-step evaluation of photovoltaic module performance related to outdoor parameters: evaluation of the uncertainty. , 2017, , .		2
150	Evaluation of Mismatch Losses due to Shunts in industrial Silicon Photovoltaic Modules. IOP Conference Series: Earth and Environmental Science, 2017, 67, 012013.	0.2	4
151	A Three-Dimensional Finite Element Based Dynamic Thermal Model of PV Modules with an Improved Thermal Network. , 2017, , .		5
152	Photovoltaic Temperature Estimation Model for Rapid Irradiance Change Conditions in Tropical Regions Using Heuristic Algorithms. , 2017, , .		0
153	The temperature distributions and output parameters of an industrial c-Si solar cell under different environmental conditions. Solar Energy, 2018, 163, 84-90.	2.9	10
154	Experimental and numerical investigation on suppression of thermal stratification in a water-pool: PIV measurements and CFD simulations. Applied Thermal Engineering, 2018, 138, 686-704.	3.0	21
155	Environmental Conditions and Its Effect on PV Performance. , 2018, , 83-129.		2
156	Influence of increased temperature on energy production of roof integrated PV panels. Energy and Buildings, 2018, 166, 418-425.	3.1	55
157	Experimental study of natural convection heat transfer from a nonuniformly heated flat plate simulating PV panel. Journal of Mechanical Science and Technology, 2018, 32, 423-432.	0.7	5
158	Cooling concentrator photovoltaic systems using various configurations of phase-change material heat sinks. Energy Conversion and Management, 2018, 158, 298-314.	4.4	129
159	A fully transient novel thermal model for in-field photovoltaic modules using developed explicit and implicit finite difference schemes. Journal of Computational Science, 2018, 27, 357-369.	1.5	13
160	A thermal model to investigate the power output of solar array for stratospheric balloons in real environment. Applied Thermal Engineering, 2018, 139, 113-120.	3.0	19
161	Generating Electricity Using Photovoltaic Solar Plants in Iraq. , 2018, , .		47
162	Modeling of photovoltaic cell temperature losses: A review and a practice case in South Spain. Renewable and Sustainable Energy Reviews, 2018, 90, 70-89.	8.2	55
163	BIPV: a real-time building performance study for a roof-integrated facility. International Journal of Sustainable Energy, 2018, 37, 249-267.	1.3	18
164	The feasibility of new design of hybrid photovoltaic-thermal system – a theoretical approach. International Journal of Ambient Energy, 2018, 39, 496-507.	1.4	5

#	Article	IF	CITATIONS
165	Two-dimensional finite difference-based model for coupled irradiation and heat transfer in photovoltaic modules. Solar Energy Materials and Solar Cells, 2018, 180, 289-302.	3.0	33
166	Experimental investigation and modeling of the thermal behavior of a solar PV module. Solar Energy Materials and Solar Cells, 2018, 180, 271-279.	3.0	55
167	Multi-physics modeling and simulation of heat and electrical yield generation in photovoltaics. Solar Energy Materials and Solar Cells, 2018, 180, 358-372.	3.0	13
168	Water and phase change material based photovoltaic thermal management systems: A review. Renewable and Sustainable Energy Reviews, 2018, 82, 791-807.	8.2	109
169	Temperature-Dependent Thermal Conductivity Study of MAPbI <sub>3</sub> : Using Mild Aging To Reach a Thermal Percolation Threshold for Greatly Improved Heat Transport. Journal of Physical Chemistry C, 2018, 122, 13243-13249.	1.5	6
170	Comparison of heat sink and water type PV/T collector for polycrystalline photovoltaic panel cooling. Renewable Energy, 2018, 116, 479-491.	4.3	50
171	Two-dimensional unsteady state performance analysis of a hybrid photovoltaic-thermoelectric generator. Renewable Energy, 2018, 119, 551-565.	4.3	60
172	Analysis of flow separation effect in the case of the free-standing photovoltaic panel exposed to various operating conditions. Journal of Cleaner Production, 2018, 174, 53-64.	4.6	45
173	Laboratory based Experimental Investigation of Photovoltaic (PV) Thermo-control with Water and its Proposed Real-time Implementation. Renewable Energy, 2018, 115, 128-138.	4.3	35
174	A PV installation framework concerning electricity variable rates. International Journal of Ambient Energy, 2018, 39, 802-812.	1.4	3
175	Numerical approach of Al <sub>2</sub> O <sub>3</sub> -water nanofluid in photovoltaic cooling system using mixture multiphase model. IOP Conference Series: Earth and Environmental Science, 2018, 168, 012003.	0.2	6
176	On the Link between the Operating Point and the Temperature Distribution in PV Arrays Working under Mismatching Conditions. International Journal of Photoenergy, 2018, 2018, 1-13.	1.4	4
177	Dynamic Coupled Electrical and Thermal Model for PV-T Solar Energy Collectors. , 2018, , .		4
178	On-Board Telemetry Monitoring via Support Vector Machine with Application to Philae Solar Generator. Aerotecnica Missili & Spazio, 2018, 97, 183-188.	0.5	1
179	Reducing Photovoltaic Module Temperature using Improved Backsheet Materials. , 2018, , .		1
180	Preliminary study of a water cooled PV system. , 2018, , .		1
181	Fluid flow and heat transfer analysis of a photovoltaic module under varying environmental conditions. Journal of Physics: Conference Series, 2018, 1101, 012009.	0.3	8
182	Electrical and Thermal Modelling to Evaluate Photovoltaic Module Performance in Varying Outdoor Condition. , 2018, , .		0

#	Article	IF	CITATIONS
183	Feasibility and Numerical Analysis of Hybrid Photovoltaic (PV) Panels with Thermoelectric Cooling (TEC) Systems. , 2018, , .		0
184	An experimentally validated, transient model for sheet and tube PVT collector. Solar Energy, 2018, 174, 709-718.	2.9	55
185	Numerical study of a photovoltaic/thermal hybrid system with nanofluid based spectral beam filters. Energy Conversion and Management, 2018, 174, 686-704.	4.4	44
186	â€ <sup>–</sup> Experimentally validated CFD simulations predicting wind effects on photovoltaic modules mounted on inclined surfaces. Sustainable Energy Technologies and Assessments, 2018, 30, 201-208.	1.7	19
187	Thermal Performance of Dwellings with Rooftop PV Panels and PV/Thermal Collectors. Energies, 2018, 11, 1879.	1.6	8
188	Measuring the commercial solar panel performance. IOP Conference Series: Materials Science and Engineering, 2018, 420, 012051.	0.3	3
189	Using energy balance method to study the thermal behavior of PV panels under time-varying field conditions. Energy Conversion and Management, 2018, 175, 246-262.	4.4	52
190	Modeling and Simulation of a Novel Combined Solar Photovoltaic-Thermal Panel and Heat Pump Hybrid System. Clean Technologies, 2018, 1, 89-113.	1.9	14
191	Modeling of Electrical and Thermal Behaviors of Photovoltaic Panels Using Cellular Automata Approach. Lecture Notes in Computer Science, 2018, , 57-67.	1.0	1
192	An experimental comparison between commercial hybrid PV-T and simple PV systems intended for BIPV. Renewable and Sustainable Energy Reviews, 2018, 93, 110-120.	8.2	51
193	3D study on the performance of cooling technique composed of heat spreader and microchannels for cooling the solar cells. Energy Conversion and Management, 2018, 170, 1-18.	4.4	54
194	Investigation on designed fins-enhanced phase change materials system for thermal management of a novel building integrated concentrating PV. Applied Energy, 2018, 225, 696-709.	5.1	60
195	Climate responsive cooling control using artificial neural networks. Journal of Building Engineering, 2018, 19, 191-204.	1.6	11
196	Influence of parametric variation in extraction of MPP from solar PV modules. , 2018, , .		3
197	Numerical investigation of the natural air-cooling of photovoltaic modules in a new concept of hybrid system PVT mounted in stairs form (S-PVT). , 2018, , .		1
198	Twoâ€Dimensional Hot Spot Temperature Simulation for c‣i Photovoltaic Modules. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800429.	0.8	4
199	DCA-TR-based MPP tracking scheme for photovoltaic power enhancement under dynamic weather conditions. Electrical Engineering, 2018, 100, 2383-2396.	1.2	13
201	Theoretical efficiency of hybrid solar thermoelectric-photovoltaic generators. Journal of Applied Physics, 2018, 124, .	1.1	26

#	Article	IF	CITATIONS
202	Hybrid Photovoltaic–Thermoelectric Generators: Theory of Operation. Springer Series in Materials Science, 2018, , 91-102.	0.4	1
203	Irradiance, thermal and electrical coupled modeling of photovoltaic panels with long-term simulation periods under service in harsh desert conditions. Journal of Computational Science, 2018, 27, 118-129.	1.5	9
204	Design & thermal modeling of solar panel module with embedded reconfigurable Air-Coil for micro-satellites. PLoS ONE, 2018, 13, e0199145.	1.1	8
205	Performance and heat transfer analysis of uncovered photovoltaic-thermal collectors with detachable compound. Solar Energy, 2018, 170, 406-418.	2.9	12
206	A Simulink Model of Photovoltaic Modules under Varying Environmental Conditions. IOP Conference Series: Earth and Environmental Science, 2018, 159, 012024.	0.2	1
207	Efficiency enhancement of silicon solar cells using highly porous thermal cooling layer. Energy and Environment, 2018, 29, 1495-1511.	2.7	13
208	Comparative Study of Active and Passive Cooling Techniques for Concentrated Photovoltaic Systems. , 2018, , 475-505.		12
209	Energy and economic analysis for the design of greenhouses with semi-transparent photovoltaic cladding. Renewable Energy, 2019, 131, 1274-1287.	4.3	39
210	Enhanced working efficiency of Si solar cell by water induced nano-porous thermal cooling layer. Materials Research Express, 2019, 6, 095053.	0.8	1
211	<i>In situ</i> contactless thermal characterisation and imaging of encapsulated photovoltaic devices using phosphor thermometry. Progress in Photovoltaics: Research and Applications, 2019, 27, 673-681.	4.4	6
212	An Improved Empirical Model for Estimation of Temperature Effect on Performance of Photovoltaic Modules. International Journal of Photoenergy, 2019, 2019, 1-16.	1.4	6
213	Methodology to predict annual yield losses and gains caused by solar module design and materials under field exposure. Solar Energy Materials and Solar Cells, 2019, 202, 110069.	3.0	9
214	An algorithm for designing a cooling system for photovoltaic panels. Solar Energy, 2019, 194, 450-460.	2.9	5
215	Efficiency Analysis of Photo-Voltaic Thermal Air Collectors. , 2019, , .		0
216	Compounds with Epoxy Resins and Phase Change Materials for Storage in Solar Applications. Materials, 2019, 12, 3522.	1.3	4
217	Experimental investigations of using MWCNTs and graphene nanoplatelets water-based nanofluids as coolants in PVT systems. Applied Thermal Engineering, 2019, 162, 114265.	3.0	98
218	Modeling and Simulation of the Influence of Interconnection Losses on Module Temperature in Moderate and Desert Regions. IEEE Journal of Photovoltaics, 2019, 9, 1449-1455.	1.5	11
219	Improved outdoor thermography and processing of infrared images for defect detection in PV modules. Solar Energy, 2019, 190, 549-560.	2.9	47

#	Article	IF	CITATIONS
220	Evaluation and comparison of solar trigeneration systems based on photovoltaic thermal collectors for subtropical climates. Energy Conversion and Management, 2019, 199, 111959.	4.4	22
221	Coupled electrical-thermal modelling of photovoltaic modules under dynamic conditions. Energy, 2019, 188, 116043.	4.5	40
222	Numerical simulation and experimental validation of a photovoltaic/thermal system based on a roll-bond aluminum collector. Energy, 2019, 187, 115990.	4.5	20
223	Novel methodology for detecting non-ideal operating conditions for grid-connected photovoltaic plants using Internet of Things architecture. Energy Conversion and Management, 2019, 200, 112078.	4.4	22
224	A review of crystalline silicon bifacial photovoltaic performance characterisation and simulation. Energy and Environmental Science, 2019, 12, 116-148.	15.6	155
225	Computational fluid dynamic (CFD) modelling of floating photovoltaic cooling system with loop thermosiphon. AIP Conference Proceedings, 2019, , .	0.3	12
226	From Sweden to Portugal: The effect of very distinct climate zones on energy efficiency of a concentrating photovoltaic/thermal system (CPV/T). Solar Energy, 2019, 188, 96-110.	2.9	26
227	Thermal Time Constant of PV Roof Tiles Working under Different Conditions. Applied Sciences (Switzerland), 2019, 9, 1626.	1.3	11
228	Transient simulation of a hybrid photovoltaic-thermoelectric system using a phase change material. Sustainable Energy Technologies and Assessments, 2019, 34, 200-213.	1.7	49
229	Effect of Ambient Parameters on the Temperature Distribution of Photovoltaic (PV) Modules. Resources, 2019, 8, 107.	1.6	15
230	Performance evaluation of a new design of concentrator photovoltaic and solar thermoelectric generator hybrid system. Energy Conversion and Management, 2019, 195, 1382-1401.	4.4	54
231	Effect of physical and environmental factors on the performance of a photovoltaic panel. Solar Energy Materials and Solar Cells, 2019, 200, 109948.	3.0	31
232	Energy Storage Sizing Strategy for Grid-Tied PV Plants under Power Clipping Limitations. Energies, 2019, 12, 1812.	1.6	18
233	Numerical study on photovoltaic/thermal systems with extended surfaces. International Journal of Energy Research, 2019, 43, 5213-5229.	2.2	25
234	Enhancement of photovoltaic system performance via passive cooling: Theory versus experiment. Renewable Energy, 2019, 140, 88-103.	4.3	48
235	Effect of heat spreader size, microchannel configuration and nanoparticles on the performance of PV-heat spreader-microchannels system. Solar Energy, 2019, 182, 286-297.	2.9	49
236	Generation and combination of the solar cells: A current model review. Energy Science and Engineering, 2019, 7, 305-322.	1.9	79
237	Electronic and Thermal Properties of Graphene and Recent Advances in Graphene Based Electronics Applications. Nanomaterials, 2019, 9, 374.	1.9	238

#	Article	IF	CITATIONS
238	Modelling and optimisation the efficiency of crystalline silicon PV/T solar panel. International Journal of Sustainable Energy, 2019, 38, 716-739.	1.3	2
239	Further progress in the research of finâ€based passive cooling technique for the freeâ€standing silicon photovoltaic panels. International Journal of Energy Research, 2019, 43, 3475-3495.	2.2	51
240	Fluid dynamics analysis for different photovoltaic panel locations in solar chimney. Energy Conversion and Management, 2019, 191, 71-79.	4.4	29
241	Development of a Hybrid PV-Thermoelectric System. , 2019, , .		0
242	Thermal Analysis of PV Module and the Effect on its Efficiency. , 2019, , .		2
243	Energy Yield Assessment Methodology for Photovoltaic Microinverters. , 2019, , .		1
244	Adaptive Boosting and Bootstrapped Aggregation based Ensemble Machine Learning Methods for Photovoltaic Systems Output Current Prediction. , 2019, , .		5
245	Photovoltaic Energy Yield Improvement in Two-Stage Solar Microinverters. Energies, 2019, 12, 3774.	1.6	10
246	Advances and challenges in commercializing radiative cooling. Materials Today Physics, 2019, 11, 100161.	2.9	68
247	PV module temperature distribution with a novel segmented solar cell absorbance model. Renewable Energy, 2019, 134, 1071-1080.	4.3	8
248	Thermal management of conventional photovoltaic module using phase change materials—An experimental investigation. Energy Exploration and Exploitation, 2019, 37, 1516-1540.	1.1	16
249	An adaptive modelling technique for parameters extraction of photovoltaic devices under varying sunlight and temperature conditions. Applied Energy, 2019, 236, 728-742.	5.1	41
250	Coupling of urban energy balance model with 3-D radiation model to derive human thermal (dis)comfort. International Journal of Biometeorology, 2019, 63, 711-722.	1.3	3
251	A New Dynamic Model to Predict Transient and Steady State PV Temperatures Taking into Account the Environmental Conditions. Energies, 2019, 12, 2.	1.6	26
252	Fin-cooled photovoltaic module modeling – Performances mapping and electric efficiency assessment under real operating conditions. Energy, 2019, 167, 159-167.	4.5	21
253	Dynamic electro-thermal modeling of solar cells and modules. Solar Energy, 2019, 179, 326-334.	2.9	21
254	A Global Maximum Power Point Tracking Technique of Partially Shaded Photovoltaic Systems for Constant Voltage Applications. IEEE Transactions on Sustainable Energy, 2019, 10, 1950-1959.	5.9	18
255	Performance of a hybrid photovoltaic/thermal system utilizing waterâ€Al <sub>2</sub> O <sub>3</sub> nanofluid and fins. International Journal of Energy Research, 2019, 43, 219-230.	2.2	44

ARTICLE IF CITATIONS # Improving photovoltaic panel performance via an autonomous air cooling system – experimental and 256 1.4 3 numerical simulations. International Journal of Ambient Energy, 2020, 41, 1387-1403. Development of dynamic thermal input models for simulation of photovoltaic generators. 1.4 International Journal of Ambient Energy, 2020, 41, 1454-1466. Study on phase change material and its appropriate thickness for controlling solar cell module 258 9 1.4 temperature. International Journal of Ambient Energy, 2020, 41, 64-73. A 3d model of the effect of using heat spreader on the performance of photovoltaic panel (PV). 2.4 Mathematics and Computers in Simulation, 2020, 167, 78-91. Optimum location and influence of tilt angle on performance of solar PV panels. Journal of Thermal 260 2.0 56 Analysis and Calorimetry, 2020, 141, 511-532. Influence of varying the Ethylene-Vinyl Acetate layer thicknesses on the performance of a polycrystalline silicon solar cell integrated with a microchannel heat sink. Solar Energy, 2020, 195, 592-609. Power improvement of finned solar photovoltaic phase change material system. Energy, 2020, 193, 262 4.5 16 116735. A coupled optical-electrical-thermal model of the bifacial photovoltaic module. Applied Energy, 2020, 5.1 84 258, 114075. A comparative analysis on performances of flat plate photovoltaic/thermal collectors in view of 264 operating media, structural designs, and climate conditions. Renewable and Sustainable Energy 8.2 50 Reviews, 2020, 119, 109599. Enhancing performance of photovoltaic panel by cold plate design with guided channels. IET 1.7 Renewable Power Generation, 2020, 14, 1606-1617 Dynamic Electro-Thermal PV Temperature and Power Output Prediction Model for Any PV Geometries in Free-Standing and BIPV System's Operating under Any Environmental Conditions. Energies, 2020, 13, 266 6 1.6 4743. A current based approach for hotspot detection in photovoltaic strings. International Transactions 1.2 on Electrical Energy Systems, 2020, 30, e12517. Model Predictive Controller Design of a Wavelength-Based Thermo-Electrical Model of a Photovoltaic (PV) Module for Optimal Output Power. International Journal of Engineering Research 268 0.7 14 in Africa, 0, 48, 133-148. Numerical analysis of the reliability of photovoltaic modules based on the fatigue life of the copper interconnects. Solar Energy, 2020, 212, 152-168. Bypass diode effect on temperature distribution in crystalline silicon photovoltaic module under 270 2.9 25 partial shading. Solar Energy, 2020, 208, 182-194. Dynamic thermal modelling for the prediction of the operating temperature of a PV panel with an 271 integrated cooling system. Renewable Energy, 2020, 152, 1041-1054. A Novel Method for Thermal Modelling of Photovoltaic Modules/Cells under Varying Environmental 272 1.6 8 Conditions. Energies, 2020, 13, 3318. Linking spectral, thermal and weather effects to predict location-specific deviation from the rated 273 power of a PV panel. Solar Energy, 2020, 208, 115-123.

#	Article	IF	CITATIONS
274	Performance enhancement of grid-tied PV system through proposed design cooling techniques: An experimental study and comparative analysis. Solar Energy, 2020, 211, 1110-1127.	2.9	48
275	Novel inverse heat transfer technique for estimation of properties and location-specific process parameters of roof-mounted solar PV plants. Thermal Science and Engineering Progress, 2020, 19, 100657.	1.3	5
276	Temperature Analysis of the Stand-Alone and Building Integrated Photovoltaic Systems Based on Simulation and Measurement Data. Energies, 2020, 13, 4274.	1.6	5
277	Dynamic thermal modelling of PV performance and effect of heat capacity on the module temperature. Case Studies in Thermal Engineering, 2020, 22, 100754.	2.8	13
278	Infinite photovoltaic solar arrays: Considering flux of momentum and heat transfer. Renewable Energy, 2020, 156, 791-803.	4.3	14
279	Study a novel hybrid system for cooling solar panels and generate power. Applied Thermal Engineering, 2020, 179, 115503.	3.0	12
280	Analysis of high frequency photovoltaic solar energy fluctuations. Solar Energy, 2020, 206, 381-389.	2.9	29
281	In-field characterization of key performance parameters for bifacial photovoltaic installation in a desert climate. Renewable Energy, 2020, 159, 50-63.	4.3	29
282	Experimental Approach of Photovoltaic System in Operation for Performance Prediction of Natural Convection. IEEE Latin America Transactions, 2020, 18, 652-658.	1.2	3
283	Sub-ambient radiative cooling with wind cover. Renewable and Sustainable Energy Reviews, 2020, 130, 109935.	8.2	42
284	Increase of power generation from solar cell module by controlling its module temperature with phase change material. Journal of Mechanical Science and Technology, 2020, 34, 2609-2618.	0.7	8
285	Numerical analysis of photovoltaic solar panel cooling by a flat plate closed-loop pulsating heat pipe. Solar Energy, 2020, 206, 455-463.	2.9	61
286	A novel numerical simulation model for the PVT water system in the GCC region. , 2020, , .		11
287	A hybrid solar chimney/photovoltaic thermal system for direct electric power production and water distillation. Sustainable Energy Technologies and Assessments, 2020, 38, 100680.	1.7	28
288	The effect of wind on the temperature distribution of photovoltaic modules. Solar Energy, 2020, 201, 259-267.	2.9	14
289	Virtual Sensing of Photovoltaic Module Operating Parameters. IEEE Journal of Photovoltaics, 2020, 10, 852-862.	1.5	15
290	Advances in Solar Power Generation and Energy Harvesting. Springer Proceedings in Energy, 2020, , .	0.2	2
291	Evaluation of the potential of solar photovoltaic panels installed on vehicle body including temperature effect on efficiency. ETransportation, 2020, 5, 100067.	6.8	27

#	Article	IF	CITATIONS
292	Assessing the Effects of Photovoltaic Powerplants on Surface Temperature Using Remote Sensing Techniques. Remote Sensing, 2020, 12, 1825.	1.8	16
293	A Multi-State Dynamic Thermal Model for Accurate Photovoltaic Cell Temperature Estimation. IEEE Journal of Photovoltaics, 2020, 10, 1465-1473.	1.5	28
294	Utility-scale solar PV performance enhancements through system-level modifications. Scientific Reports, 2020, 10, 10505.	1.6	28
295	Effect of multilayer selective radiative anti-reflective coating on crystalline silicon photovoltaics for operating temperature reduction. International Journal of Sustainable Energy, 2020, 39, 982-996.	1.3	5
296	Dependence of PV Module Temperature on Incident Time-Dependent Solar Spectrum. Applied Sciences (Switzerland), 2020, 10, 914.	1.3	16
297	Enhancement of wind speed using converging duct for cooling offâ€grid mastâ€mounted flat solar PV panels to improve its power generation. IET Renewable Power Generation, 2020, 14, 263-269.	1.7	7
298	Numerical and Experimental Investigation of Air Cooling for Photovoltaic Panels Using Aluminum Heat Sinks. International Journal of Photoenergy, 2020, 2020, 1-9.	1.4	72
299	Preliminary study of radiative cooling in cooling season of the humid coastal area. Solar Energy Materials and Solar Cells, 2020, 208, 110412.	3.0	40
300	Simulation study on photovoltaic panel temperature under different solar radiation using computational fluid dynamic method. Journal of Physics: Conference Series, 2020, 1432, 012052.	0.3	4
301	The mathematical and experimental analysis on the steady-state operating temperature of bifacial photovoltaic modules. Renewable Energy, 2020, 155, 658-668.	4.3	18
302	Southerly winds increase the electricity generated by solar photovoltaic systems. Solar Energy, 2020, 202, 123-135.	2.9	21
303	Field investigation and performance evaluation of sub-ambient radiative cooling in low latitude seaside. Renewable Energy, 2020, 155, 90-99.	4.3	33
304	Feasibility of Solar Tracking System for PV Panel in Sunbelt Region. Journal of Modern Power Systems and Clean Energy, 2021, 9, 395-403.	3.3	4
305	Three dimensional analysis of dye-sensitized, perovskite and monocrystalline silicon solar photovoltaic cells under non uniform solar flux. Applied Thermal Engineering, 2021, 182, 115613.	3.0	3
306	Performance of pole mounted flat photovoltaic panel under varying ambient parameters. International Journal of Ambient Energy, 2021, 42, 713-719.	1.4	1
307	A novel three-dimensional numerical model for PV/T water system in hot climate region. Renewable Energy, 2021, 164, 1320-1333.	4.3	65
308	Photovoltaic panels life span increase by control. , 2021, , 27-62.		4
309	An accurate thermal model for the PV electric generation prediction: long-term validation in different climatic conditions. Renewable Energy, 2021, 163, 1092-1112.	4.3	47

#	Article	IF	CITATIONS
310	Experimental investigation on thermal characteristics and output performance of PV panel under linear light source and windy conditions. Sustainable Energy Technologies and Assessments, 2021, 43, 100918.	1.7	2
311	Thermal performance of a discontinuous finned heatsink profile for PV passive cooling. Applied Thermal Engineering, 2021, 184, 116238.	3.0	38
312	Impacts of albedo and atmospheric conditions on the efficiency of solar energy: a case study in temperate climate of Choman, Iraq. Environment, Development and Sustainability, 2021, 23, 989-1018.	2.7	6
313	An Experimental and Numerical Investigation of Photovoltaic Module Temperature Under Varying Environmental Conditions. Heat Transfer Engineering, 2021, 42, 354-367.	1.2	31
314	Analyses of heat dissipation of direct-cooling backsheets of crystalline silicon photovoltaic modules at ambient temperatures. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 098802.	0.2	3
315	Theoretical and experimental research to development of waterâ€film cooling system for commercial photovoltaic modules. IET Renewable Power Generation, 2021, 15, 206-224.	1.7	6
316	Experimental study about utilization of MWCNTs and graphene nanoplatelets water-based nanofluids in flat non-concentrating PVT systems. Thermal Science, 2021, 25, 477-489.	0.5	2
317	Optical and Thermal Emission Benefits of Differently Textured Glass for Photovoltaic Modules. IEEE Journal of Photovoltaics, 2021, 11, 131-137.	1.5	11
318	Radiative sky cooling of solar cells: fundamental modelling and cooling potential of single-junction devices. Sustainable Energy and Fuels, 2021, 5, 2085-2096.	2.5	9
319	Car Cabin Cooling System Using Solar Energy. IOP Conference Series: Materials Science and Engineering, 2021, 1088, 012055.	0.3	0
320	Thermal and electrical performance evaluation of hybrid air PV/T collector – numerical analysis and experimental study. International Journal of Sustainable Energy, 2021, 40, 889-909.	1.3	8
321	Sensitivity Analysis of Photovoltaic System Design Parameters to Passively Mitigate Ramp Rates. IEEE Journal of Photovoltaics, 2021, 11, 545-551.	1.5	3
322	Combined electro-thermal model for PV panels. Pollack Periodica, 2021, 16, 7-13.	0.2	3
323	Using EMPHASIS for the Thermography-Based Fault Detection in Photovoltaic Plants. Energies, 2021, 14, 1559.	1.6	8
324	Hot-spot generation model using electrical and thermal equivalent circuits for a copper indium gallium selenide photovoltaic module. Solar Energy, 2021, 216, 377-385.	2.9	10
325	The Efficiency Estimate of PV Cell under various wind velocities. IOP Conference Series: Materials Science and Engineering, 2021, 1109, 012054.	0.3	0
326	Study on Creep Damage in Sn60Pb40 and Sn3.8Ag0.7Cu (Lead-Free) Solders in c-Si Solar PV Cell Interconnections under In-Situ Thermal Cycling in Ghana. Crystals, 2021, 11, 441.	1.0	2
327	Theoretical design and experimental evaluation of a PV+PCM system in the mediterranean climate. Energy, 2021, 220, 119690.	4.5	29

#	Article	IF	CITATIONS
328	Analysis of an innovative water-cooling solution for photovoltaic-thermal systems. IOP Conference Series: Earth and Environmental Science, 2021, 664, 012025.	0.2	2
329	Experimental and numerical study on performance enhancement of photovoltaic panel by controlling temperature with phase change material. International Journal of Energy Research, 2021, 45, 16062-16077.	2.2	3
330	Optimized Design of Embedded Air Coil for Small Satellites with Various Dimensions. Journal of Aerospace Information Systems, 2021, 18, 269-279.	1.0	2
331	Electrical and Thermal Performance Analysis of a Linear Fresnel Reflector- Photovoltaic/Thermal System. Academic Platform Journal of Engineering and Science, 2021, 9, 264-273.	0.5	1
332	Experimental Validation of a Thermo-Electric Model of the Photovoltaic Module under Outdoor Conditions. Applied Sciences (Switzerland), 2021, 11, 5287.	1.3	5
333	Potential benefit of photovoltaic pavement for mitigation of urban heat island effect. Applied Thermal Engineering, 2021, 191, 116883.	3.0	15
334	Sensitivity analysis of the state of the art silicon photovoltaic temperature estimation methods over different time resolution. , 2021, , .		1
335	Crystalline Silicon (c-Si) Solar Cell Interconnect Damage Prediction Function Based on Effect of Temperature Ramps and Dwells on Creep Damage under Field Thermal Cycling. Crystals, 2021, 11, 633.	1.0	1
336	Cover shields for sub-ambient radiative cooling: A literature review. Renewable and Sustainable Energy Reviews, 2021, 143, 110959.	8.2	47
337	Effect of cooling on power generated by photovoltaic panels. IOP Conference Series: Materials Science and Engineering, 2021, 1141, 012008.	0.3	5
338	Heat loss coefficients computed for floating PV modules. Progress in Photovoltaics: Research and Applications, 2021, 29, 1262-1273.	4.4	20
339	Proposed Models to Improve Predicting the Operating Temperature of Different Photovoltaic Module Technologies under Various Climatic Conditions. Applied Sciences (Switzerland), 2021, 11, 7064.	1.3	7
340	Annual performance evaluation of thermoelectric generator-assisted building-integrated photovoltaic system with phase change material. Renewable and Sustainable Energy Reviews, 2021, 145, 111085.	8.2	38
341	Thermal Model of Silicon Photovoltaic Module with Incorporation of CFD Analysis. Silicon, 2022, 14, 4493-4499.	1.8	4
342	Improvement of Stand-Alone Solar PV Systems in the Maputo Region by Adapting Necessary Parameters. Energies, 2021, 14, 4357.	1.6	2
343	Impact of the constitutive behaviour of the encapsulant on thermo-mechanical damage in (c-Si) solar PV modules under thermal cycling. Scientific African, 2021, 12, e00767.	0.7	0
344	A novel spectrally selective radiation shield for cooling a photovoltaic module. Sustainable Energy Technologies and Assessments, 2021, 46, 101269.	1.7	2
345	A detailed mathematical model and experimental validation for coupled thermal and electrical performance of a photovoltaic (PV) module. Applied Thermal Engineering, 2021, 195, 117224.	3.0	15

#	Article	IF	CITATIONS
346	Impact of cracks on crystalline silicon photovoltaic modules temperature distribution. Solar Energy, 2021, 225, 148-161.	2.9	25
347	Life cycle assessment of high-performance monocrystalline titanium dioxide nanorod-based perovskite solar cells. Solar Energy Materials and Solar Cells, 2021, 230, 111288.	3.0	10
348	Passive Cooling Configurations for Enhancing the Photovoltaic Efficiency in Hot Climatic Conditions. Journal of Solar Energy Engineering, Transactions of the ASME, 2022, 144, .	1.1	10
349	Numerical simulation and experimental characterization of the heat transfer in a PV/T air collector prototype. Case Studies in Thermal Engineering, 2021, 27, 101209.	2.8	11
350	Investigation of heat convection for photovoltaic panel towards efficient design of novel hybrid cooling approach with incorporated organic phase change material. Sustainable Energy Technologies and Assessments, 2021, 47, 101497.	1.7	12
351	PV temperature and performance prediction in free-standing, BIPV and BAPV incorporating the effect of temperature and inclination on the heat transfer coefficients and the impact of wind, efficiency and ageing. Renewable Energy, 2022, 181, 235-249.	4.3	31
353	Thermal Analysis of Solar Panels. , 2015, , 441-450.		1
354	Theoretical Analysis of Temperature-Dependent Electrical Parameters of Si Solar Cell Integrated with Carbon-Based Thermal Cooling Layer. Springer Proceedings in Energy, 2020, , 27-36.	0.2	6
355	Performance prediction of Building Integrated Photovoltaics under no-shading, shading and masking conditions using a multi-physics model. Energy, 2020, 213, 118795.	4.5	24
356	Roughness effects of gas diffusion layers on droplet dynamics in PEMFC flow channels. International Journal of Hydrogen Energy, 2020, 45, 17869-17881.	3.8	28
357	Reduction of PV Module Temperature Using Thermally Conductive Backsheets. IEEE Journal of Photovoltaics, 2018, 8, 1160-1167.	1.5	30
358	Transient Weighted Moving-Average Model of Photovoltaic Module Back-Surface Temperature. IEEE Journal of Photovoltaics, 2020, 10, 1053-1060.	1.5	21
359	Investigation of Solar Panel Performance Based on Different Wind Velocity Using ANSYS Software. Indonesian Journal of Electrical Engineering and Computer Science, 2016, 1, 456.	0.7	12
360	Optimization of PV/T Solar Water Collector based on Fuzzy Logic Control. International Journal of Renewable Energy Development, 2020, 9, 303-310.	1.2	10
361	Evaluation of Available Building Integrated Photovoltaic (BIPV) Systems and their Impact when Used in Commercial Buildings in the United Arab Emirates. International Journal of Sustainable Energy Development, 2019, 7, 344-356.	0.4	3
362	Two Variable Method for Fault Analysis in Grid Tied Solar Photovoltaic System. International Journal of Engineering and Technology, 2017, 9, 541-547.	0.1	1
363	Modeling the effect of the inclination angle on natural convection from a flat plate: The case of a photovoltaic module. Thermal Science, 2017, 21, 925-938.	0.5	2
364	Comparison of PV Cell Temperature Estimation by Different Thermal Power Exchange Calculation Methods. Renewable Energy and Power Quality Journal, 0, , 653-658.	0.2	13

#	Article	IF	CITATIONS
365	Impact of the cell temperature on the energy efficiency of a single glass PV module: thermal modeling in steady-state and validation by experimental data. Renewable Energy and Power Quality Journal, 0, , 291-294.	0.2	7
366	The Influence of Selected External Factors on Temperature of Photovoltaic Modules. Acta Technologica Agriculturae, 2019, 22, 122-127.	0.2	2
367	Effect of Evaporative Cooling Combined with Heat Sink on PV Module Performance. Journal of University of Babylon for Engineering Sciences, 2019, 27, 252-264.	0.2	6
368	Improving the Energy Management of a Solar Electric Vehicle. Advances in Electrical and Computer Engineering, 2015, 15, 53-62.	0.5	9
369	Utilization of Solar Energy in Agricultural Machinery Engineering: A Review. Journal of Biosystems Engineering, 2015, 40, 186-192.	1.2	12
370	Energetic and exergetic evaluation of a photovoltaic thermal module cooled by hybrid nanofluids in the microchannel. Solar Energy Advances, 2021, 1, 100005.	1.2	9
371	Heat Transfer Behaviour of Hybrid Solar Collector Module for Liquid-Based Type. Mechanisms and Machine Science, 2022, , 20-29.	0.3	0
372	Spectrum-Based 3D Thermal Modeling of the PV Module: Simulation and Experimental Study. Lecture Notes in Mechanical Engineering, 2022, , 493-502.	0.3	Ο
373	Radiation and energy budget dynamics associated with a floating photovoltaic system. Water Research, 2021, 206, 117745.	5.3	7
374	A Study on the Thermal Characteristics of BIPV Applied on Curtain Wall Spandrel. Journal of the Korean Solar Energy Society, 2012, 32, 120-126.	0.1	Ο
375	Thermal Management of Solar Photovoltaics Modules for Enhanced Power Generation. Springer Proceedings in Energy, 2014, , 479-490.	0.2	1
376	Modeling of Operating Photovoltaic Module Temperature Using Hybrid Cuckoo and Artificial Neural Network. Lecture Notes in Computer Science, 2014, , 29-37.	1.0	1
377	Prevention of Hotspot Effects in a Solar Photovoltaic Cell using Fuzzy Logic MPPT. International Journal of Engineering Research & Technology, 2016, V5, .	0.2	0
378	The Impact of Climatic Conditions on PV/PVT Outcomes. , 2019, , 173-222.		Ο
379	Temperature model of a photovoltaic module. Journal on Processing and Energy in Agriculture, 2019, 23, 124-127.	0.3	2
380	Experimental Study of PV Module on Different Climatic conditions. International Journal of Mechanical Engineering, 2019, 6, 1-7.	0.1	Ο
381	Investigation of the Thermal Gradient Impact on Non-Planar Photovoltaics. , 2020, , .		0
382	Research on hot spot risk of high wattage solar modules. Solar Energy, 2021, 230, 583-590.	2.9	6

#	Article	IF	CITATIONS
383	Thermal behavior analysis of different solar PV modules via thermographic imaging. Journal of Renewable and Sustainable Energy, 2020, 12, .	0.8	4
384	An Approach to the Cell-Level Diagnosis of Malfunctioning Events in PV Panels from Aerial Thermal Maps. Lecture Notes in Electrical Engineering, 2020, , 89-102.	0.3	1
385	Water-Cooled Photovoltaic Panel Efficiency. Springer Proceedings in Energy, 2020, , 61-67.	0.2	0
386	Impact of Photovoltaic Module Temperature on Size and Voltage Stability, a Case Study in Indian Climate. Applied Solar Energy (English Translation of Geliotekhnika), 2020, 56, 324-333.	0.2	3
387	Finding optimal operating point for advection-cooled concentrated photovoltaic system. Sustainable Energy Technologies and Assessments, 2022, 49, 101769.	1.7	3
388	Colored optic filters on c‣i IBC solar cells for building integrated photovoltaic applications. Progress in Photovoltaics: Research and Applications, 2022, 30, 401-435.	4.4	9
389	Deciphering the thermal behavior of floating photovoltaic installations. Solar Energy Advances, 2022, 2, 100007.	1.2	9
390	Experimental research on the convective heat transfer coefficient of photovoltaic panel. Renewable Energy, 2022, 185, 820-826.	4.3	10
391	Performance evaluation and parametric analysis of an integrated diurnal and nocturnal cooling system driven by photovoltaic-thermal collectors with switchable film insulation. Energy Conversion and Management, 2022, 254, 115197.	4.4	9
392	Enhanced Thermal Model for Accurate PV Module Junction Temperature Estimation. , 2020, , .		1
393	Analysis of Partial Shading Effect on the Crystalline Silicon Photovoltaic Module Temperature Distribution. , 2021, , .		2
394	Modelling Investigation of the Heat Transfer in a Polycrystalline Photovoltaic Module. E3S Web of Conferences, 2022, 336, 00038.	0.2	0
395	Roof-mounted photovoltaic generator temperatue modeling based on common brazil roofing materials. Renewable Energy and Environmental Sustainability, 2022, 7, 5.	0.7	3
396	Numerical modelling of wind flow for solar power generation in a case study of the tropical zones. Modeling Earth Systems and Environment, 2022, 8, 4123-4134.	1.9	3
397	Pathways toward high-efficiency solar photovoltaic thermal management for electrical, thermal and combined generation applications: A critical review. Energy Conversion and Management, 2022, 255, 115278.	4.4	39
398	Operating temperature prediction and comparison for rooftop PV arrays in coastal climates of India. Environmental Science and Pollution Research, 2022, , 1.	2.7	6
399	Passive PV module cooling under free convection through vortex generators. Renewable Energy, 2022, 190, 319-329.	4.3	14
400	Improving the accuracy of temperature coefficient measurement of a PV module by accounting for the transient temperature difference between cell and backsheet. Solar Energy, 2022, 237, 203-212.	2.9	4

#	Article	IF	CITATIONS
401	Theoretical and Numerical Analysis of a Passive Cooling System for a Commercial Photovoltaic Module. , 2021, , .		0
402	Workbench proposal for PV cell control test for research and educational purposes. , 2021, , .		0
403	Evaluation of different models for validating of photovoltaic cell temperature under semi-arid conditions. Heliyon, 2021, 7, e08534.	1.4	3
404	Efficiency and sustainability assessment of evaporative cooling of photovoltaics. Energy, 2022, 254, 124260.	4.5	11
405	Simulation Study to Predict Generation Power of a Vehicle Photovoltaic System. International Journal of Photoenergy, 2022, 2022, 1-13.	1.4	0
406	Thermal model of bifacial silicon photovoltaic modules with different backsheets under outdoor conditions. International Journal of Green Energy, 2023, 20, 691-700.	2.1	0
407	Experimental Validation of a Numerical Model to Predict the Performance of Solar PV Cells. Frontiers in Energy Research, 0, 10, .	1.2	2
408	Performance assessment of a novel integrated concentrator photovoltaic system with encapsulated phase change materials. Energy Conversion and Management, 2022, 266, 115854.	4.4	19
409	Enhancing the performance of floating photovoltaic system by using thermosiphon cooling method: Numerical and experimental analyses. International Journal of Thermal Sciences, 2022, 180, 107727.	2.6	20
410	Thermal Analysis and Design Optimization of Photovoltaic Module for Improved Heat Dissipation From Photovoltaic Module. IEEE Journal of Photovoltaics, 2022, 12, 1198-1204.	1.5	1
411	Measurement of the Convective Heat Transfer Coefficient and Temperature of Vehicle-Integrated Photovoltaic Modules. Energies, 2022, 15, 4818.	1.6	2
412	Impacts of a floating photovoltaic system on temperature and water quality in a shallow tropical reservoir. Limnology, 2022, 23, 441-454.	0.8	11
413	Progressive cooling techniques for photovoltaic module efficiency and reliability: Comparative evaluation and optimization. Energy Reports, 2022, 8, 8534-8545.	2.5	4
415	Design for energy flexibility in smart buildings through solar based and thermal storage systems: Modelling, simulation and control for the system optimization. Energy, 2022, 260, 125024.	4.5	18
416	Research on indirect cooling for photovoltaic panels based on radiative cooling. Renewable Energy, 2022, 198, 947-959.	4.3	8
417	Systematic review of the data acquisition and monitoring systems of photovoltaic panels and arrays. Solar Energy, 2022, 244, 47-64.	2.9	7
418	Thermal characterization of a photovoltaic panel under controlled conditions. Renewable Energy, 2022, 198, 28-40.	4.3	4
419	Photovoltaic System's MPPT Under Partial Shading Using T-S Fuzzy Robust Control. IFAC-PapersOnLine, 2022, 55, 214-221.	0.5	4

#	Article	IF	CITATIONS
420	Experimental and numerical investigation for PV cooling by forced convection. AEJ - Alexandria Engineering Journal, 2023, 64, 427-440.	3.4	23
421	Numerical and Experimental Study of a PVT Water System under Daily Weather Conditions. Energies, 2022, 15, 6538.	1.6	2
422	The Design Value for Recycling End-of-Life Photovoltaic Panels. Applied Sciences (Switzerland), 2022, 12, 9092.	1.3	11
423	Evaluation of thermal boundary conditions in floating photovoltaic systems. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	0
424	Influence of photovoltaic cell technologies and elevated temperature on photovoltaic system performance. Ain Shams Engineering Journal, 2023, 14, 101984.	3.5	12
425	Effects of a Combined Geothermal and Solar Heating System as a Renewable Energy Source in a Pig House and Estimation of Energy Consumption Using Artificial Intelligence-Based Prediction Model. Animals, 2022, 12, 2860.	1.0	4
426	The influence of wind and module tilt on the operating temperature of single-axis trackers. , 2022, , .		0
427	A thermal model for bifacial PV panels. , 2022, , .		2
428	A new predictive model for a photovoltaic module's surface temperature. Energy Reports, 2022, 8, 15206-15220.	2.5	4
429	Acceleration algorithms for long-wavelength radiation integral in the annual simulation of radiative cooling in buildings. Renewable Energy, 2023, 202, 255-269.	4.3	1
430	Coupled optical-electrical-thermal loss modelling and energy distributions of a photovoltaic module. Energy Conversion and Management, 2023, 276, 116476.	4.4	3
431	Transient thermal modeling and performance analysis of photovoltaic panels. Environmental Progress and Sustainable Energy, 0, , .	1.3	1
432	Three Dimensional Numerical Simulation of Effect of Inclination on the Performance of PV Module Integrated with PCM System. Lecture Notes in Mechanical Engineering, 2023, , 409-415.	0.3	0
433	Floating photovoltaic module temperature estimation: Modeling and comparison. Renewable Energy, 2023, 208, 162-180.	4.3	11
434	Study on the temperature control performance of photovoltaic module by a novel phase change material/heat pipe coupled thermal management system. Journal of Energy Storage, 2023, 64, 107200.	3.9	0
435	A dynamic thermal model for a photovoltaic module under varying atmospheric conditions. Energy Conversion and Management, 2023, 280, 116773.	4.4	8
436	Anti-reflective coating and cooling technique for innovative photovoltaic system in tropical region. Journal of Power Sources, 2023, 564, 232812.	4.0	1
437	Performance Analysis of Spectrum-Dependent Integrated Thermal–Electrical Model of a PV Module. IEEE Journal of Photovoltaics, 2023, 13, 467-475.	1.5	2

#	Article	IF	CITATIONS
438	A thermal framework for preliminary evaluation of the development of dye-sensitized solar cells in temperate and warm climates. Journal of Renewable and Sustainable Energy, 2023, 15, 023701.	0.8	0
445	Comparison of Efficiencies Using Thermal Characteristics of Different PV Materials Using ANSYS. , 2023, , .		0
454	Simulation Study of New Solar Photovoltaic-Thermal System. , 2023, , .		0
460	Output Estimation of the Solar PV Plant Using System Identification. , 2023, , .		0
463	Modeling and estimation of solar photovoltaics thermal panel system. AIP Conference Proceedings, 2023, , .	0.3	0
464	Mathematical modeling of dust particles deposition on solar panel. AIP Conference Proceedings, 2023,	0.3	0
474	The Effect of Ground Temperature on the Operating Temperature of Solar Photovoltaic Module Using FEM Analysis. Lecture Notes in Electrical Engineering, 2024, , 431-437.	0.3	0
476	Thermal stress of photovoltaic panels. AIP Conference Proceedings, 2024, , .	0.3	0