Pedro M Rodrigo

List of Publications by Year
in descending order

62 papers	1,441 citations	279487 23 h-index	329751 37 g-index
62 all docs	62 docs citations	62 times ranked	972 citing authors

#	Article	IF	Citations
1	Effect of non-uniformity on concentrator multi-junction solar cells equipped with refractive secondary optics under shading conditions. Energy, 2022, 238, 122044.	4.5	8
2	Global energy assessment of the potential of photovoltaics for greenhouse farming. Applied Energy, 2022, 309, 118474.	5.1	26
3	Fuel-cell power conversion system based on double dual topologies. International Journal of Hydrogen Energy, 2022, , .	3.8	0
4	Experimental characterisation of irradiance and spectral non-uniformity and its impact on multi-junction solar cells: Refractive vs. reflective optics. Solar Energy Materials and Solar Cells, 2021, 225, 111061.	3.0	15
5	Modelling and potential of hybrid micro-scaling multi-junction solar cell and thermoelectric generator. , 2021, , .		0
6	Fractional derivative-based performance analysis of hybrid thermoelectric generator-concentrator photovoltaic system. Applied Thermal Engineering, 2021, 193, 116984.	3.0	11
7	High-performance 4096Ã— ultra-high CPV module based on multiple concentrator units and optical guides. Optics Letters, 2021, 46, 4188.	1.7	3
8	Efficiency improvement of passively cooled micro-scale hybrid CPV-TEG systems at ultra-high concentration levels. Energy Conversion and Management, 2021, 244, 114521.	4.4	12
9	Optimum cleaning schedule of photovoltaic systems based on levelised cost of energy and case study in central Mexico. Solar Energy, 2020, 209, 11-20.	2.9	27
10	Control algorithms applied to active solar tracking systems: A review. Solar Energy, 2020, 212, 203-219.	2.9	49
11	Balancing the shading impact in utility-scale dual-axis tracking concentrator photovoltaic power plants. Energy, 2020, 210, 118490.	4.5	8
12	Development and Testing of a Single-Axis Photovoltaic Sun Tracker through the Internet of Things. Energies, 2020, 13, 2547.	1.6	9
13	Finite element analysis of cooling mechanism by flat heat-sinks in ultra-high CPV systems. AIP Conference Proceedings, 2019, , .	0.3	1
14	Optimum capacity of the inverters in concentrator photovoltaic power plants with emphasis on shading impact. Energy, 2019, 187, 115964.	4.5	10
15	Annual Energy Harvesting of Passively Cooled Hybrid Thermoelectric Generator-Concentrator Photovoltaic Modules. IEEE Journal of Photovoltaics, 2019, 9, 1652-1660.	1.5	17
16	Performance and economic limits of passively cooled hybrid thermoelectric generator-concentrator photovoltaic modules. Applied Energy, 2019, 238, 1150-1162.	5.1	83
17	Optimum Array Spacing in Grid-Connected Photovoltaic Systems considering Technical and Economic Factors. International Journal of Photoenergy, 2019, 2019, 1-14.	1.4	17
18	Feasibility of flat-plate heat-sinks using microscale solar cells up to 10,000 suns concentrations. Solar Energy, 2019, 181, 361-371.	2.9	44

#	Article	IF	Citations
19	Comparative assessment of simplified indexes for the spectral characterisation of photovoltaic systems. Measurement: Journal of the International Measurement Confederation, 2019, 133, 1-8.	2.5	8
20	CPV Systems. , 2018, , 931-985.		5
21	A method for the outdoor thermal characterisation of high-concentrator photovoltaic modules alternative to the IEC 62670-3 standard. Energy, 2018, 148, 159-168.	4.5	4
22	Feasibility of Flat-Plate Heat-Sinks for Ultra-High Concentrations (> 2000 Suns) Using Microscale Solar Cells. , 2018, , .		1
23	Influence of ground cover ratio on optimum inverter size in CPV plants. AIP Conference Proceedings, 2018, , .	0.3	0
24	Spectral-matching-ratio modelling based on ANNs and atmospheric parameters for the electrical characterization of multi-junction concentrator PV systems. Energy, 2018, 156, 409-417.	4.5	5
25	Optimum sizing of the inverter for maximizing the energy yield in state-of-the-art high-concentrator photovoltaic systems. Solar Energy, 2018, 171, 728-739.	2.9	15
26	An Outdoor Navigation System for Blind Pedestrians Using GPS and Tactile-Foot Feedback. Applied Sciences (Switzerland), 2018, 8, 578.	1.3	68
27	Quantification of the spectral coupling of atmosphere and photovoltaic system performance: Indexes, methods and impact on energy harvesting. Solar Energy Materials and Solar Cells, 2017, 163, 73-90.	3.0	56
28	Improving the profitability of grid-connected photovoltaic systems by sizing optimization. , 2017, , .		3
29	Energetic analysis of simplified 2-position and 3-position North-South horizontal single-axis sun tracking concepts. Solar Energy, 2017, 157, 244-250.	2.9	9
30	Characterization of the Spectral Matching Ratio and the Z-Parameter From Atmospheric Variables for CPV Spectral Evaluation. IEEE Journal of Photovoltaics, 2017, 7, 1802-1809.	1.5	8
31	Determination of the currentâ€“voltage characteristics of concentrator systems by using different adapted conventional techniques. Energy, 2016, 101, 146-160.	4.5	18
32	Analysis of electrical mismatches in high-concentrator photovoltaic power plants with distributed inverter configurations. Energy, 2016, 107, 374-387.	4.5	24
33	Comparative study of methods for the extraction of concentrator photovoltaic module parameters. Solar Energy, 2016, 137, 413-423.	2.9	23
34	Computer-Based System for Simulating Visual Impairments. IETE Journal of Research, 2016, 62, 833-841.	1.8	3
35	DC/AC conversion efficiency of grid-connected photovoltaic inverters in central Mexico. Solar Energy, 2016, 139, 650-665.	2.9	36
36	Model for estimating the energy yield of a high concentrator photovoltaic system. Energy, 2015, 87, 77-85.	4.5	28

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37	Design and Evaluation of an Eye Disease Simulator. IEEE Latin America Transactions, 2015, 13, 2734-2741.	1.2	4
38	Performance Analysis of Models for Calculating the Maximum Power of High Concentrator Photovoltaic Modules. IEEE Journal of Photovoltaics, 2015, 5, 947-955.	1.5	18
39	The High-Concentrator Photovoltaic Module. Green Energy and Technology, 2015, , 115-151.	0.4	14
40	Shading in High-Concentrator Photovoltaic Power Plants. Green Energy and Technology, 2015, , 177-208.	0.4	1
41	A methodology for the electrical characterization of shaded high concentrator photovoltaic modules. Energy, 2015, 89, 768-777.	4.5	12
42	Analysis of high concentrator photovoltaic modules in outdoor conditions: Influence of direct normal irradiance, air temperature, and air mass. Journal of Renewable and Sustainable Energy, 2014, 6, .	0.8	14
43	A model based on artificial neuronal network for the prediction of the maximum power of a low concentration photovoltaic module for building integration. Solar Energy, 2014, 100, 148-158.	2.9	42
44	Classification of methods for annual energy harvesting calculations of photovoltaic generators. Energy Conversion and Management, 2014, 78, 527-536.	4.4	78
45	Calculation of the cell temperature of a high concentrator photovoltaic (HCPV) module: A study and comparison of different methods. Solar Energy Materials and Solar Cells, 2014, 121, 144-151.	3.0	87
46	Review of methods for the calculation of cell temperature in high concentration photovoltaic modules for electrical characterization. Renewable and Sustainable Energy Reviews, 2014, 38, 478-488.	8.2	59
47	A method for estimating cell temperature at the maximum power point of a HCPV module under actual operating conditions. Solar Energy Materials and Solar Cells, 2014, 124, 159-165.	3.0	37
48	Models for the electrical characterization of high concentration photovoltaic cells and modules: A review. Renewable and Sustainable Energy Reviews, 2013, 26, 752-760.	8.2	80
49	Estimating the maximum power of a High Concentrator Photovoltaic (HCPV) module using an Artificial Neural Network. Energy, 2013, 53, 165-172.	4.5	63
50	Generation of ambient temperature hourly time series for some Spanish locations by artificial neural networks. Renewable Energy, 2013, 51, 285-291.	4.3	27
51	Model for the prediction of the maximum power of a high concentrator photovoltaic module. Solar Energy, 2013, 97, 12-18.	2.9	48
52	Outdoor measurement of high concentration photovoltaic receivers operating with partial shading on the primary optics. Energy, 2013, 61, 583-588.	4.5	21
53	A simple accurate model for the calculation of shading power losses in photovoltaic generators. Solar Energy, 2013, 93, 322-333.	2.9	40
54	Calculation of cell temperature in a HCPV module using V<inf>oc</inf>. , 2013, , .		4

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55	Videocasts applied to the teaching of power supplies. , 2012, , .		2
56	Pilot scheme of a tutorial action plan for industrial engineering students. , 2012, , .		0
57	Artificial neural networks for the generation of direct normal solar annual irradiance synthetic series. , 2012, , .		3
58	Quantifying the effect of air temperature in CPV modules under outdoor conditions. AIP Conference Proceedings, 2012, , .	0.3	17
59	Calculation of direct normal irradiation from global horizontal irradiation. , 2012, , .		3
60	Relation between the cell temperature of a HCPV module and atmospheric parameters. Solar Energy Materials and Solar Cells, 2012, 105, 322-327.	3.0	67
61	A simplified method for estimating direct normal solar irradiation from global horizontal irradiation useful for CPV applications. Renewable and Sustainable Energy Reviews, 2012, 16, 5529-5534.	8.2	29
62	A new method for estimating angular, spectral and low irradiance losses in photovoltaic systems using an artificial neural network model in combination with the Osterwald model. Solar Energy Materials and Solar Cells, 2012, 96, 186-194.	3.0	17