Pedro J Perez-Higueras

List of Publications by Year
in descending order

73 papers	2,667 citations	147566 31 h-index	182168 51 g-index
74 all docs	74 docs citations	74 times ranked	1919 citing authors

#	Article	IF	Citations
1	Knowledge-Based Sensors for Controlling A High-Concentration Photovoltaic Tracker. Sensors, 2020, 20, 1315.	2.1	5
2	Exploring ultra-high concentrator photovoltaic Cassegrain-Koehler-based designs up to 6000Ã—. Optics Express, 2020, 28, 6609.	1.7	17
3	Optimum capacity of the inverters in concentrator photovoltaic power plants with emphasis on shading impact. Energy, 2019, 187, 115964.	4.5	10
4	Complete Procedure for the Economic, Financial and Cost-Competitiveness of Photovoltaic Systems with Self-Consumption. Energies, 2019, 12, 345.	1.6	16
5	Assessment of cost-competitiveness and profitability of fixed and tracking photovoltaic systems: The case of five specific sites. Renewable Energy, 2019, 134, 902-913.	4.3	60
6	CPV Systems. , 2018, , 931-985.		5
7	Ray Tracing Comparison between Triple-Junction and Four-Junction Solar Cells in PMMA Fresnel-Based High-CPV Units. Energies, 2018, 11, 2455.	1.6	8
8	Impact of the Subcell Spectral Response of III-V Compound Semiconductors on the Optical Performance of High-CPV Systems. , 2018, , .		0
9	Influence of ground cover ratio on optimum inverter size in CPV plants. AIP Conference Proceedings, 2018, , .	0.3	0
10	Indoor characterization and comparison with optical modelling of four Fresnel-based High-CPV units equipped with secondary optics. AIP Conference Proceedings, 2018, , .	0.3	0
11	Efficiency and acceptance angle of High Concentrator Photovoltaic modules: Current status and indoor measurements. Renewable and Sustainable Energy Reviews, 2018, 94, 143-153.	8.2	51
12	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
13	Development, indoor characterisation and comparison to optical modelling of four Fresnel-based high-CPV units equipped with refractive secondary optics. Solar Energy Materials and Solar Cells, 2018, 186, 273-283.	3.0	28
14	A >3000 suns high concentrator photovoltaic design based on multiple Fresnel lens primaries focusing to one central solar cell. Solar Energy, 2018, 169, 457-467.	2.9	55
15	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
16	Current-voltage dynamics of multi-junction CPV modules under different irradiance levels. Solar Energy, 2017, 155, 39-50.	2.9	33
17	A worldwide assessment of economic feasibility of HCPV power plants: Profitability and competitiveness. Energy, 2017, 119, 408-424.	4.5	42
18	Design and characterization of refractive secondary optical elements for a point-focus Fresnel lens-based high CPV system. AIP Conference Proceedings, 2017, , .	0.3	2

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19	Optical modeling of four Fresnel-based high-CPV units. Solar Energy, 2017, 155, 805-815.	2.9	40
20	Spectral Corrections Based on Air Mass, Aerosol Optical Depth, and Precipitable Water for CPV Performance Modeling. IEEE Journal of Photovoltaics, 2016, 6, 1598-1604.	1.5	24
21	Investigating the optical performance of Cassegrainian systems at ultra-high concentrations. AIP Conference Proceedings, 2016, , .	0.3	0
22	Optical design of a 4-off-axis-unit Cassegrain ultra-high concentrator photovoltaics module with a central receiver. Optics Letters, 2016, 41, 1985.	1.7	23
23	Analysis of electrical mismatches in high-concentrator photovoltaic power plants with distributed inverter configurations. Energy, 2016, 107, 374-387.	4.5	24
24	A worldwide assessment of levelised cost of electricity of HCPV systems. Energy Conversion and Management, 2016, 127, 679-692.	4.4	45
25	Thin photovoltaic modules at ultra high concentration. AIP Conference Proceedings, 2015, , .	0.3	4
26	Analytical Modelling of High Concentrator Photovoltaic Modules Based on Atmospheric Parameters. International Journal of Photoenergy, 2015, 2015, 1-8.	1.4	17
27	Model for estimating the energy yield of a high concentrator photovoltaic system. Energy, 2015, 87, 77-85.	4.5	28
28	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
29	Levelised cost of electricity in high concentrated photovoltaic grid connected systems: Spatial analysis of Spain. Applied Energy, 2015, 151, 49-59.	5.1	82
30	High concentrator photovoltaic module simulation by neuronal networks using spectrally corrected direct normal irradiance and cell temperature. Energy, 2015, 84, 336-343.	4.5	19
31	High-Concentrator Photovoltaic Power Plants: Energy Balance and Case Studies. Green Energy and Technology, 2015, , 443-477.	0.4	2
32	A methodology for the electrical characterization of shaded high concentrator photovoltaic modules. Energy, 2015, 89, 768-777.	4.5	12
33	PROTOTIPO EXPERIMENTAL DE UNA MARQUESINA DE APARCAMIENTO DISEÃ'ADA PARA OPTIMIZAR LA RECARGA DE VEHÃCULOS ELÃ‰CTRICOS. Dyna (Spain), 2015, 90, 324-330.	0.1	0
34	Performance analysis of the lineal model for estimating the maximum power of a HCPV module in different climate conditions. , 2014, , .		4
35	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
36	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

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37	Classification of methods for annual energy harvesting calculations of photovoltaic generators. Energy Conversion and Management, 2014, 78, 527-536.	4.4	78
38	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
39	Tool for the design and energy harvesting of grid-connected photovoltaic power installations: PV Excel Jaen 3.0. , 2014, , .		3
40	Educational tools in order to promote the self-learning. Practical case of study: Dimex SFCR. , 2014, , .		0
41	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
42	A methodology based on dynamic artificial neural network for short-term forecasting of the power output of a PV generator. Energy Conversion and Management, 2014, 85, 389-398.	4.4	161
43	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
44	Outdoor evaluation of concentrator photovoltaic systems modules from different manufacturers: first results and steps. Progress in Photovoltaics: Research and Applications, 2013, 21, 693-701.	4.4	76
45	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
46	Estimating the maximum power of a High Concentrator Photovoltaic (HCPV) module using an Artificial Neural Network. Energy, 2013, 53, 165-172.	4.5	63
47	Generation of ambient temperature hourly time series for some Spanish locations by artificial neural networks. Renewable Energy, 2013, 51, 285-291.	4.3	27
48	Model for the prediction of the maximum power of a high concentrator photovoltaic module. Solar Energy, 2013, 97, 12-18.	2.9	48
49	A two subcell equivalent solar cell model for IIIâ€"V triple junction solar cells under spectrum and temperature variations. Solar Energy, 2013, 92, 221-229.	2.9	65
50	Outdoor measurement of high concentration photovoltaic receivers operating with partial shading on the primary optics. Energy, 2013, 61, 583-588.	4.5	21
51	A simple accurate model for the calculation of shading power losses in photovoltaic generators. Solar Energy, 2013, 93, 322-333.	2.9	40
52	Artificial neural networks for the generation of direct normal solar annual irradiance synthetic series. , 2012, , .		3
53	Temperature coefficients of monolithic III-V triple-junction solar cells under different spectra and irradiance levels. AIP Conference Proceedings, 2012, , .	0.3	38
54	Quantifying the effect of air temperature in CPV modules under outdoor conditions. AIP Conference Proceedings, 2012, , .	0.3	17

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55	Calculation of direct normal irradiation from global horizontal irradiation. , 2012, , .		3
56	A comprehensive method for estimating energy losses due to shading of GC-BIPV systems using monitoring data. Solar Energy, 2012, 86, 2397-2404.	2.9	34
57	A method for evaluating shading losses involved in a GC-BIPV using real data. , 2012, , .		1
58	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
59	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
60	Assessment of the renewable energies potential for intensive electricity production in the province of JaÃ©n, southern Spain. Renewable and Sustainable Energy Reviews, 2012, 16, 2994-3001.	8.2	57
61	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
62	Calculation of the energy provided by a PV generator. Comparative study: Conventional methods vs. artificial neural networks. Energy, 2011, 36, 375-384.	4.5	121
63	High Concentrator PhotoVoltaics efficiencies: Present status and forecast. Renewable and Sustainable Energy Reviews, 2011, 15, 1810-1815.	8.2	161
64	Analysis and Performance of a Two-Axis PV Tracker in Southern Spain. Journal of Solar Energy Engineering, Transactions of the ASME, 2011, 133, .	1.1	5
65	Two New Applications of Artificial Neural Networks: Estimation of Instantaneous Performance Ratio and of the Energy Produced by PV Generators. Studies in Fuzziness and Soft Computing, 2011, , 199-232.	0.6	1
66	Proposal Of A Spanish CPV Feed-in Tariff. , 2010, , .		1
67	CPV standardization: An overview. Renewable and Sustainable Energy Reviews, 2010, 14, 518-523.	8.2	29
68	Estimation of the energy of a PV generator using artificial neural network. Renewable Energy, 2009, 34, 2743-2750.	4.3	75
69	Proposal for a combined methodology for renewable energy planning. Application to a Spanish region. Renewable and Sustainable Energy Reviews, 2009, 13, 2022-2030.	8.2	119
70	A new estimation method of irradiance on a partially shaded PV generator in grid-connected photovoltaic systems. Renewable Energy, 2008, 33, 2048-2056.	4.3	115
71	RMS Current of a Photovoltaic Generator in Grid-Connectedcmd="newline"PV Systems: Definition and Application. International Journal of Photoenergy, 2008, 2008, 1-7.	1.4	13
72	Univer Project. A grid connected photovoltaic system of 200kWp at JaÃ©n University. Overview and performance analysis. Solar Energy Materials and Solar Cells, 2007, 91, 670-683.	3.0	101

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73	Measures used to protect people exposed to a PV generator: â€˜univer projectâ€™. Progress in Photovoltaics: Research and Applications, 2001, 9, 57-67.	4.4	13