Jesus Polo

List of Publications by Year
in descending order

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117 papers	2,554 citations	201385 27 h-index	233125 45 g-index
120 all docs	120 docs citations	120 times ranked	1998 citing authors

#	Article	IF	Citations
1	Soiling forecasting of solar plants: A combined heuristic approach and autoregressive model. Energy, 2022, 239, 122442.	4.5	8
2	Interannual variation of measured atmospheric solar radiation extinction levels. Sustainable Energy Technologies and Assessments, 2022, 51, 101991.	1.7	2
3	Assessment of PV Module Temperature Models for Building-Integrated Photovoltaics (BIPV). Sustainability, 2022, 14, 1500.	1.6	13
4	Soiling loss characterization for Photovoltaics in buildings: A systematic analysis for the Madrid region. Journal of Cleaner Production, 2022, 332, 130041.	4.6	4
5	Nowcasting System Based on Sky Camera Images to Predict the Solar Flux on the Receiver of a Concentrated Solar Plant. Remote Sensing, 2022, 14, 1602.	1.8	4
6	Building-Integrated Photovoltaic (BIPV) products and systems: A review of energy-related behavior. Energy and Buildings, 2022, 262, 111998.	3.1	67
7	BIPV Modeling with Artificial Neural Networks: Towards a BIPV Digital Twin. Energies, 2022, 15, 4173.	1.6	3
8	Experimental investigation and modeling of photovoltaic soiling loss as a function of environmental variables: A case study of semi-arid climate. Solar Energy Materials and Solar Cells, 2021, 221, 110874.	3.0	26
9	The use of ANN and conventional solar-plant meteorological variables to estimate atmospheric horizontal extinction. Journal of Cleaner Production, 2021, 285, 125395.	4.6	10
10	Incidence angle and diffuse radiation adaptation of soiling ratio measurements of indirect optical soiling sensors. Journal of Renewable and Sustainable Energy, 2021, 13, .	0.8	7
11	Advances in aerosol optical depth evaluation from broadband direct normal irradiance measurements. Solar Energy, 2021, 221, 206-217.	2.9	5
12	Solar extinction map in Chile for applications in solar power tower plants, comparison with other places from sunbelt and impact on LCOE. Renewable Energy, 2021, 170, 197-211.	4.3	16
13	Design of a Low-Cost Multiplexer for the Study of the Impact of Soiling on PV Panel Performance. Energies, 2021, 14, 4186.	1.6	2
14	Photovoltaic generation on vertical faÃ§ades in urban context from open satellite-derived solar resource data. Solar Energy, 2021, 224, 1396-1405.	2.9	9
15	Microstructural analysis of the PV module cementation process at the Solar Platform of the Atacama Desert. Solar Energy Materials and Solar Cells, 2021, 227, 111109.	3.0	19
16	Field Quality Control of Spectral Solar Irradiance Measurements by Comparison with Broadband Measurements. Sustainability, 2021, 13, 10585.	1.6	1
17	Comparison and analysis of two measurement systems of horizontal atmospheric extinction of solar radiation. Atmospheric Environment, 2021, 261, 118608.	1.9	2
18	Modeling soiling losses for rooftop PV systems in suburban areas with nearby forest in Madrid. Renewable Energy, 2021, 178, 420-428.	4.3	16

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19	Atmospheric extinction levels of solar radiation using aerosol optical thickness satellite data. Validation methodology with measurement system. Renewable Energy, 2020, 149, 1120-1132.	4.3	13
20	Temporal and spatial variability analysis of the solar radiation in a region affected by the intertropical convergence zone. Meteorological Applications, 2020, 27, e1824.	0.9	3
21	Comparison between MRM simulations, CAMS and PVGIS databases with measured solar radiation components at the Methoni station, Greece. Renewable Energy, 2020, 146, 1372-1391.	4.3	42
22	The influence of location on solar photo-Fenton: Process performance, photoreactor scaling-up and treatment cost. Renewable Energy, 2020, 145, 1890-1900.	4.3	32
23	Typical Meteorological Year methodologies applied to solar spectral irradiance for PV applications. Energy, 2020, 190, 116453.	4.5	15
24	Influence of Pollen on Solar Photovoltaic Energy: Literature Review and Experimental Testing with Pollen. Applied Sciences (Switzerland), 2020, 10, 4733.	1.3	12
25	Assessment and improvement of modeling the atmospheric attenuation based on aerosol optical depth information with applicability to solar tower plants. Energy, 2020, 208, 118399.	4.5	6
26	Economic Effect of Dust Particles on Photovoltaic Plant Production. Energies, 2020, 13, 6376.	1.6	22
27	Site-Adaptation of Modeled Solar Radiation Data: The SiteAdapt Procedure. Remote Sensing, 2020, 12, 2127.	1.8	18
28	Modeling solar extinction using artificial neural networks. Application to solar tower plants. Energy, 2020, 199, 117432.	4.5	13
29	Benchmarking on improvement and site-adaptation techniques for modeled solar radiation datasets. Solar Energy, 2020, 201, 469-479.	2.9	42
30	Intra-hour energy potential forecasting in a central solar power plant receiver combining Meteosat images and atmospheric extinction. Energy, 2019, 188, 116034.	4.5	14
31	One year of solar extinction measurements at Plataforma Solar de AlmerÃa. Application to solar tower plants. Renewable Energy, 2019, 136, 1002-1011.	4.3	15
32	Fundamentals: Quantities, Definitions, and Units. Green Energy and Technology, 2019, , 1-14.	0.4	1
33	Quality Assurance of Solar Radiation Measurements. Green Energy and Technology, 2019, , 99-135.	0.4	3
34	Solar Radiation Modeling from Satellite Imagery. Green Energy and Technology, 2019, , 183-197.	0.4	7
35	Basics on Mapping Solar Radiation Gridded Data. Green Energy and Technology, 2019, , 243-252.	0.4	0
36	Impact of DNI forecasting on CSP tower plant power production. Renewable Energy, 2019, 138, 368-377.	4.3	21

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37	Solar Power Plant Performance. Green Energy and Technology, 2019, , 283-300.	0.4	2
38	Solar Resources Mapping. Green Energy and Technology, 2019, , .	0.4	8
39	Editorial for the Special Issue â€œSolar Radiation, Modeling, and Remote Sensingâ€• Remote Sensing, 2019, 11, 1198.	1.8	4
40	Modeling I-V curves of photovoltaic modules at indoor and outdoor conditions by using the Lambert function. Energy Conversion and Management, 2019, 195, 1004-1011.	4.4	12
41	Physicochemical characterization of soiling from photovoltaic facilities in arid locations in the Atacama Desert. Solar Energy, 2019, 187, 47-56.	2.9	23
42	Clear sky solar irradiance models: A review of seventy models. Renewable and Sustainable Energy Reviews, 2019, 107, 374-387.	8.2	110
43	Analysis of satellite derived solar irradiance in islands with site adaptation techniques for improving the uncertainty. Renewable Energy, 2019, 135, 98-107.	4.3	29
44	Sampling Design Optimization of Ground Radiometric Stations. Green Energy and Technology, 2019, , 253-281.	0.4	1
45	Characterization of PV Soiling Losses in Urban Mediterranean Environment. , 2019, , .		2
46	Analysis of the Local Factors that Influence the Cementation of Soil and Effects on PV Generation at the Plataforma Solar Del Desierto De Atacama, Chile. , 2019, , .		4
47	AnÃ¡lisis de Largo Plazo de la GeneraciÃ³n ElÃ©ctrica en Plantas Solares TÃ©rmicas de ConcentraciÃ³n. Revista TÃ©cnica EnergÃa, 2019, 12, .	0.2	0
48	IEA PVPS Task 16 â€“ Solar Resource for High Penetration and Large Scale Applications. , 2019, , .		0
49	Method and System for Accessing PV Resource Data from the NSRDB. , 2019, , .		0
50	Relevance Analysis of Atmospheric Variables in the Production of an Experimental PV Power Plant Considering Dust Deposition in the Mediterranean Coast. , 2019, , .		0
51	Effect of Cloudiness on Solar Radiation Forecasting. , 2019, , .		0
52	Solar extinction measurement system based on digital cameras. Application to solar tower plants. Renewable Energy, 2018, 125, 648-654.	4.3	19
53	Modeling water vapor impacts on the solar irradiance reaching the receiver of a solar tower plant by means of artificial neural networks. Solar Energy, 2018, 169, 34-39.	2.9	27
54	Proposal and evaluation of subordinate standard solar irradiance spectra for applications in solar energy systems. Solar Energy, 2018, 168, 30-43.	2.9	38

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55	Diagnosis of a Lambertian target in solar context. Measurement: Journal of the International Measurement Confederation, 2018, 119, 265-269.	2.5	14
56	Atmospheric extinction levels of solar radiation at Plataforma Solar de AlmerÃa. Application to solar thermal electric plants. Energy, 2018, 145, 400-407.	4.5	16
57	Estimation of visibility from spectral irradiance using artificial neural networks. AIP Conference Proceedings, 2018, , .	0.3	2
58	Measurement and Experimental Testing of Models for the Estimation of HourlySolar Radiation on Vertical Surfaces at Mexico City. International Journal of Engineering and Technology(UAE), 2018, 7, 129.	0.2	0
59	Evolution of the aerosol extinction coefficient at 100â€...m above ground during an episode of Saharan dust intrusion as derived from data registered by a ceilometer in AlmerÃa (SE Spain). AIP Conference Proceedings, 2018, , .	0.3	4
60	Modelling atmospheric attenuation at different AOD time-scales in yield performance of solar tower plants. AIP Conference Proceedings, 2018, , .	0.3	3
61	Sunbelt spectra comparison with standard ASTM G173: The Chilean case. AIP Conference Proceedings, 2018, , .	0.3	5
62	Acquisition and Analysis of Meteorological Data. Green Energy and Technology, 2018, , 3-39.	0.4	0
63	On the use of reference modules as irradiance sensor for monitoring and modelling rooftop PV systems. Renewable Energy, 2017, 106, 186-191.	4.3	26
64	Analysis of the long-term solar potential for electricity generation in Qatar. Renewable and Sustainable Energy Reviews, 2017, 73, 1231-1246.	8.2	58
65	Potential for photogenerated current for silicon based photovoltaic modules in the Atacama Desert. Solar Energy, 2017, 144, 580-593.	2.9	14
66	A through analysis of solar irradiation measurements in the region of Arica Parinacota, Chile. Renewable Energy, 2017, 112, 197-208.	4.3	17
67	Worldwide analysis of spectral factors for seven photovoltaic technologies. Solar Energy, 2017, 142, 194-203.	2.9	57
68	Analysis of solar tower plant performance influenced by atmospheric attenuation at different temporal resolutions related to aerosol optical depth. Solar Energy, 2017, 157, 803-810.	2.9	15
69	Impact of a Saharan dust intrusion over southern Spain on DNI estimation with sky cameras. Atmospheric Environment, 2017, 170, 279-289.	1.9	9
70	Analysis on the long-term relationship between DNI and CSP yield production for different technologies. Solar Energy, 2017, 155, 1121-1129.	2.9	13
71	Proposal and Evaluation of Subordinate Standard Solar Irradiance Spectra with a Focus on Air Mass Effects. , 2017, , .		4
72	Modelling the performance of rooftop photovoltaic systems under urban Mediterranean outdoor conditions. Journal of Renewable and Sustainable Energy, 2016, 8, .	0.8	4

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73	A comparative study of the impact of horizontal-to-tilted solar irradiance conversion in modelling small PV array performance. Journal of Renewable and Sustainable Energy, 2016, 8, 053501.	0.8	10
74	Review and validation of Solar Thermal Electricity potential methodologies. Energy Conversion and Management, 2016, 126, 42-50.	4.4	11
75	Sensitivity study for modelling atmospheric attenuation of solar radiation with radiative transfer models and the impact in solar tower plant production. Solar Energy, 2016, 134, 219-227.	2.9	42
76	Preliminary survey on site-adaptation techniques for satellite-derived and reanalysis solar radiation datasets. Solar Energy, 2016, 132, 25-37.	2.9	136
77	Comparative analysis of long-term solar resource and CSP production for bankability. Renewable Energy, 2016, 90, 38-45.	4.3	27
78	Modelling Clear SKY DNI Under Extreme Aerosol Loading: the Case of a Saharan Outbreak in South-East Spain. , 2016, , .		1
79	Validation of GHI and DHI Predictions from GFS and MACC Model in the Middle East. , 2016, , .		0
80	The Influence of Sahara Dust Particles in the Direct Normal Irradiance Estimation Through a Total SKY Camera. , 2016, , .		1
81	Assessment of Daily Atmospheric Turbidity Databases Using Aerosol Optical Depth and Direct Normal Irradiance Measurements. , 2016, , .		1
82	Atmospheric extinction in solar tower plants: absorption and broadband correction for MOR measurements. Atmospheric Measurement Techniques, 2015, 8, 3467-3480.	1.2	35
83	Solar global horizontal and direct normal irradiation maps in Spain derived from geostationary satellites. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 130-131, 81-88.	0.6	26
84	Correcting satellite derived DNI with systematic and seasonal deviations: Application to India. Renewable Energy, 2015, 80, 238-243.	4.3	38
85	Modeling monthly mean variation of the solar global irradiation. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 122, 108-118.	0.6	14
86	Solar resources and power potential mapping in Vietnam using satellite-derived and GIS-based information. Energy Conversion and Management, 2015, 98, 348-358.	4.4	99
87	Impact of atmospheric aerosol loads on Concentrating Solar Power production in arid-desert sites. Solar Energy, 2015, 115, 621-631.	2.9	24
88	Spatial variability and clustering of global solar irradiation in Vietnam from sunshine duration measurements. Renewable and Sustainable Energy Reviews, 2015, 42, 1326-1334.	8.2	28
89	Stochastic model to describe atmospheric attenuation from yearly global solar irradiation. Atmospheric Research, 2015, 153, 209-216.	1.8	3
90	Towards downscaling of aerosol gridded dataset for improving solar resource assessment, an application to Spain. Renewable Energy, 2014, 71, 534-544.	4.3	10

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91	Intermittency and variability of daily solar irradiation. Atmospheric Research, 2014, 143, 313-327.	1.8	33
92	Sensitivity of satellite-based methods for deriving solar radiation to different choice of aerosol input and models. Renewable Energy, 2014, 68, 785-792.	4.3	62
93	Markov processes and Zipf's law in daily solar irradiation at earth's surface. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 107, 42-47.	0.6	11
94	Angular dependence of the albedo estimated in models for solar radiation derived from geostationary satellites. Solar Energy, 2013, 93, 256-266.	2.9	18
95	Improving daily output of global to direct solar irradiance models with ground measurements. Journal of Renewable and Sustainable Energy, 2013, 5, .	0.8	18
96	Revision of ground albedo estimation in Heliosat scheme for deriving solar radiation from SEVIRI HRV channel of Meteosat satellite. Solar Energy, 2012, 86, 275-282.	2.9	17
97	A simple approach to the synthetic generation of solar irradiance time series with high temporal resolution. Solar Energy, 2011, 85, 1164-1170.	2.9	40
98	Solar radiation estimations over India using Meteosat satellite images. Solar Energy, 2011, 85, 2395-2406.	2.9	50
99	Prediction of global solar irradiance based on time series analysis: Application to solar thermal power plants energy production planning. Solar Energy, 2010, 84, 1772-1781.	2.9	261
100	Management and Exploitation of Solar Resource Knowledge. , 2010, , .		13
101	Estimation of global daily irradiation in complex topography zones using digital elevation models and meteosat images: Comparison of the results. Energy Conversion and Management, 2009, 50, 2233-2238.	4.4	31
102	Angstrom turbidity and ozone column estimations from spectral solar irradiance in a semi-desertic environment in Spain. Solar Energy, 2009, 83, 257-263.	2.9	21
103	Analysis of different comparison parameters applied to solar radiation data from satellite and German radiometric stations. Solar Energy, 2009, 83, 118-125.	2.9	111
104	A new statistical approach for deriving global solar radiation from satellite images. Solar Energy, 2009, 83, 480-484.	2.9	65
105	Estimation of daily Linke turbidity factor by using global irradiance measurements at solar noon. Solar Energy, 2009, 83, 1177-1185.	2.9	34
106	Analysis of the influences of uncertainties in input variables on the outcomes of the Heliosat-2 method. Solar Energy, 2009, 83, 1731-1741.	2.9	21
107	Iterative filtering of ground data for qualifying statistical models for solar irradiance estimation from satellite data. Solar Energy, 2006, 80, 240-247.	2.9	18
108	Steam generator tube rupture (SGTR) scenarios. Nuclear Engineering and Design, 2005, 235, 457-472.	0.8	44

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109	Artificial intelligence techniques applied to hourly global irradiance estimation from satellite-derived cloud index. Energy, 2005, 30, 1685-1697.	4.5	69
110	Fuzzy inference systems applied to the daily ultraviolet radiation evaluation (295â€“385 nm) from daily global radiation. Solar Energy, 2003, 75, 447-454.	2.9	10
111	Hydrogen removal from LWR containments by catalytic-coated thermal insulation elements (THINCAT). Nuclear Engineering and Design, 2003, 221, 137-149.	0.8	16
112	Experimental and Analytical Study on Pool Scrubbing Under JET Injection Regime. Nuclear Technology, 1997, 120, 95-109.	0.7	28
113	On the modelling capabilities to simulate aerosol behaviour in the PHEBUS-FP containment: Lessons learned from FPT0 test. Journal of Aerosol Science, 1996, 27, S459-S460.	1.8	3
114	Aerosol behaviour in small vessels: An interpretation of FAL-ISP-1 test by using contain code. Journal of Aerosol Science, 1995, 26, S705-S706.	1.8	0
115	Analysis of the Chemical Behavior of Iodine in the Suppression Tank of the LOFT Facility During Experiment LP-FP-2 with IODE and IMPAIR-2/M. Nuclear Technology, 1994, 106, 168-176.	0.7	0
116	Solar Radiation Derived from Satellite Images. , 0, , 449-462.		13
117	Solar Radiation Gridded Satellite data comparison in Gran Canaria Island. Renewable Energy and Power Quality Journal, 0, 1, 793-796.	0.2	0