Ignacio AntÃ³n

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5693464/publications.pdf

Version: 2024-02-01

131	1,749	331670 21	330143 37
papers	citations	h-index	g-index

134	134	134	975
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of soiling in CPV systems. Solar Energy, 2010, 84, 1327-1335.	6.1	157
2	Comparative analysis of different secondary optical elements for aspheric primary lenses. Optics Express, 2009, 17, 6487.	3.4	140
3	Solar simulator for concentrator photovoltaic systems. Optics Express, 2008, 16, 14894.	3.4	127
4	Currentâ€matching estimation for multijunction cells within a CPV module by means of component cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 1478-1488.	8.1	106
5	Challenges in the design of concentrator photovoltaic (CPV) modules to achieve highest efficiencies. Applied Physics Reviews, 2018, 5, .	11.3	75
6	Characterization of the spatial distribution of irradiance and spectrum in concentrating photovoltaic systems and their effect on multiâ€junction solar cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 308-318.	8.1	74
7	Concentration photovoltaic optical system irradiance distribution measurements and its effect on multiâ€junction solar cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 423-430.	8.1	65
8	A review of the promises and challenges of micro-concentrator photovoltaics. AIP Conference Proceedings, 2017, , .	0.4	55
9	Antireflective coatings for multijunction solar cells under wide-angle ray bundles. Optics Express, 2012, 20, 8136.	3.4	39
10	Design and modeling of a cost-effective achromatic Fresnel lens for concentrating photovoltaics. Optics Express, 2016, 24, A1245.	3.4	35
11	Assessment of the optical efficiency of a primary lens to be used in a CPV system. Solar Energy, 2016, 134, 406-415.	6.1	33
12	Characterization of optical collectors for concentration photovoltaic applications. Progress in Photovoltaics: Research and Applications, 2003, 11, 387-405.	8.1	32
13	Effects of Temperature on Hybrid Lens Performance. AIP Conference Proceedings, 2011, , .	0.4	31
14	Conversion of commercial si solar cells to keep their efficient performance at 15 suns. Progress in Photovoltaics: Research and Applications, 2004, 12, 323-331.	8.1	29
15	Power rating of CPV systems based on spectrally corrected DNI. , 2012, , .		29
16	Pilot production of concentrator silicon solar cells: Approaching industrialization. Solar Energy Materials and Solar Cells, 2008, 92, 1697-1705.	6.2	28
17	Losses caused by dispersion of optical parameters and misalignments in PV concentrators. Progress in Photovoltaics: Research and Applications, 2005, 13, 341-352.	8.1	26
18	Multijunction solar cell model for translating Iâ€“V characteristics as a function of irradiance, spectrum, and cell temperature. Progress in Photovoltaics: Research and Applications, 2010, 18, 272-284.	8.1	23

#	Article	IF	Citations
19	Triple-junction solar cell performance under Fresnel-based concentrators taking into account chromatic aberration and off-axis operation. AIP Conference Proceedings, 2012, , .	0.4	23
20	Determination of spectral variations by means of component cells useful for CPV rating and design. Progress in Photovoltaics: Research and Applications, 2016, 24, 663-679.	8.1	23
21	Laser grooved buried contact cells optimised for linear concentration systems. Solar Energy Materials and Solar Cells, 2010, 94, 187-193.	6.2	21
22	Luminescence inverse method For CPV optical characterization. Optics Express, 2013, 21, A1028.	3.4	21
23	Two-dimensional angular transmission characterization of CPV modules. Optics Express, 2010, 18, A499.	3.4	20
24	Durability of dielectric fluids for concentrating photovoltaic systems. Solar Energy Materials and Solar Cells, 2013, 113, 31-36.	6.2	17
25	Industrialization of hybrid Si/IIIâ€“V and translucent planar microâ€tracking modules. Progress in Photovoltaics: Research and Applications, 2021, 29, 819-834.	8.1	17
26	Tuning the current ratio of a CPV system to maximize the energy harvesting in a particular location. , 2013, , .		15
27	Spectral study and classification of worldwide locations considering several multijunction solar cell technologies. Progress in Photovoltaics: Research and Applications, 2016, 24, 1214-1228.	8.1	15
28	Performance of Hybrid Micro-Concentrator Module with Integrated Planar Tracking and Diffuse Light Collection. , 2019, , .		15
29	The PV-FIBRE concentrator: a system for indoor operation of 1000X MJ solar cells. Progress in Photovoltaics: Research and Applications, 2007, 15, 431-447.	8.1	14
30	Characterization of five CPV module technologies with the Helios 3198 solar simulator. , 2009, , .		14
31	Understanding causes and effects of non-uniform light distributions on multi-junction solar cells: Procedures for estimating efficiency losses. AIP Conference Proceedings, 2015, , .	0.4	14
32	1-D and 2-D Monte Carlo simulations for analysis of CPV module characteristics including the acceptance angle impacted by assembly errors. Solar Energy, 2017, 147, 448-454.	6.1	14
33	Performance prediction of concentrator solar cells and modules from darkI-Vcharacteristics. Progress in Photovoltaics: Research and Applications, 2003, 11, 165-178.	8.1	13
34	Characterization of CPV arrays based on differences on their thermal resistances. AIP Conference Proceedings, 2014, , .	0.4	13
35	Off-Axis Characteristics of CPV Modules Result From Lens-Cell Misalignmentâ€”Measurement and Monte Carlo Simulation. IEEE Journal of Photovoltaics, 2016, 6, 1353-1359.	2.5	13
36	Module optical analyzer: Identification of defects on the production line. AIP Conference Proceedings, 2014, , .	0.4	12

#	Article	IF	Citations
37	An end of service life assessment of PMMA lenses from veteran concentrator photovoltaic systems. Solar Energy Materials and Solar Cells, 2017, 167, 7-21.	6.2	12
38	Experimental analysis and simulation of a production line for <scp>CPV</scp> modules: impact of defects, misalignments, and binning of receivers. Energy Science and Engineering, 2017, 5, 257-269.	4.0	12
39	Radial CPV receiver. Progress in Photovoltaics: Research and Applications, 2010, 18, 353-362.	8.1	11
40	Detailed effects of wind on the field performance of a 50 kW CPV demonstration plant. , 2013, , .		11
41	Spectral classification of worldwide locations using SMR indexes. AIP Conference Proceedings, 2016, , .	0.4	11
42	Roll-to-roll nanoimprint lithography of high efficiency Fresnel lenses for micro-concentrator photovoltaics. Optics Express, 2021, 29, 34135.	3.4	10
43	Performance of front contact silicon solar cells under concentration. Progress in Photovoltaics: Research and Applications, 2004, 12, 517-528.	8.1	9
44	Thirdâ€generation EUCLIDES concentrator results. Progress in Photovoltaics: Research and Applications, 2012, 20, 356-371.	8.1	9
45	Hybrid lighting-CPV, a new efficient concept mixing illumination with CPV. Optics Express, 2013, 21, 4864.	3.4	9
46	Experimental characterization of achromatic doublet on glass (ADG) Fresnel lenses. AIP Conference Proceedings, 2017, , .	0.4	9
47	Experimental analysis of a photovoltaic concentrator based on a single reflective stage immersed in an optical fluid. Progress in Photovoltaics: Research and Applications, 2014, 22, 1213-1225.	8.1	8
48	Evaluation of misalignments within a concentrator photovoltaic module by the module optical analyzer: A case of study concerning temperature effects on the module performance. Japanese Journal of Applied Physics, 2015, 54, 08KE08.	1.5	8
49	Spectral Impact on Multijunction Solar Cells Obtained by Means of Component Cells of a Different Technology. IEEE Journal of Photovoltaics, 2018, 8, 646-653.	2.5	8
50	Indoor Characterization of Multi-Junction Solar Cells Under Non Uniform Light Patterns. , 2010, , .		7
51	The effect of concentration on the performance of quantum dot intermediate-band solar cells. , 2012, , .		7
52	Optimization of the silicon subcell for III-V on silicon multijunction solar cells: Key differences with conventional silicon technology. AIP Conference Proceedings, 2012, , .	0.4	7
53	Evaluation of the reliability of commercial concentrator triple-junction solar cells by means of accelerated life tests (ALT). AIP Conference Proceedings, 2013, , .	0.4	7
54	A novel achromatic Fresnel lens for high concentrating photovoltaic systems. AIP Conference Proceedings, 2016, , .	0.4	7

#	Article	IF	Citations
55	Outdoor Performance of PV Technologies in Simulated Automotive Environments. , 2019, , .		7
56	Two-dimensional modeling of front contact silicon solar cells. Progress in Photovoltaics: Research and Applications, 2004, 12, 503-516.	8.1	6
57	Methodology of quantifying curvature of Fresnel lenses and its effect on CPV module performance. Optics Express, 2015, 23, A1030.	3.4	6
58	Characterization Capabilities of Solar Simulators for Concentrator Photovoltaic Modules. Japanese Journal of Applied Physics, 2012, 51, 10ND12.	1.5	6
59	Interaction between Sun tracking deviations and inverter MPP strategy in concentrators connected to grid. , 0, , .		5
60	Hybrid dome with total internal reflector as a secondary optical element for CPV. AIP Conference Proceedings, 2016, , .	0.4	5
61	On the effect of cell interconnection in Vehicle Integrated Photovoltaics: modelling energy under different scenarios. , 2021, , .		5
62	Misalignments measurement of CPV optical components through image acquisition. Optics Express, 2020, 28, 15652.	3.4	5
63	Optimal Strategy for the Improvement of the Overall Performance of Dual-Axis Solar Tracking Systems. Energies, 2021, 14, 7795.	3.1	5
64	Solar simulator for indoor characterization of large area high-concentration PV modules. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	4
65	Characterization Capabilities of Solar Simulators for Concentrator Photovoltaic Modules. Japanese Journal of Applied Physics, 2012, 51, 10ND12.	1.5	4
66	The dome-shaped Fresnel-Koì^hler concentrator. , 2012, , .		4
67	Rating of CPV modules: Results of module round robins. AIP Conference Proceedings, 2016, , .	0.4	4
68	Measuring primary lens efficiency: A proposal for standardization. AIP Conference Proceedings, 2016, , .	0.4	4
69	Towards industrialization of planar microtracking photovoltaic panels. AIP Conference Proceedings, 2019, , .	0.4	4
70	Modeling and Standardization Researches and Discussions of the Car-roof PV through International Web Meetings. , 2019, , .		4
71	Determining the Operating Temperature of Solar Panels on Vehicles. , 2019, , .		4
72	Misalignments characterization for micro-CPV modules. AIP Conference Proceedings, 2020, , .	0.4	4

#	Article	IF	Citations
73	Spectral Characterization of Mini Concentrator Optics for its Use With MJ Cells. , 2006, , .		3
74	Angular Transmission Characterization of CPV Modules Based On CCD Measurements. , 2010, , .		3
75	Indoor Performance Rating Of CPV Modules at Multiple Temperatures and Irradiance Levels. AIP Conference Proceedings, 2010, , .	0.4	3
76	Probing the effects of non-uniform light beams and chromatic aberration on the performance of concentrators using multijunction cells. , 2012, , .		3
77	A novel scanning lens instrument for evaluating Fresnel lens performance: Equipment development and initial results. , 2013, , .		3
78	Spectral network based on component cells under the SOPHIA European project. AIP Conference Proceedings, 2015, , .	0.4	3
79	Indoor Experimental Assessment of the Efficiency and Irradiance Spot of the Achromatic Doublet on Glass (ADG) Fresnel Lens for Concentrating Photovoltaics. Journal of Visualized Experiments, 2017, , .	0.3	3
80	Improvements in the manufacturing process of achromatic doublet on glass (ADG) Fresnel lens. AIP Conference Proceedings, 2018, , .	0.4	3
81	Comparison of achromatic doublet on glass Fresnel lenses for concentrator photovoltaics. Optics Express, 2021, 29, 20601.	3.4	3
82	Molded glass arrays for micro-CPV applications with very good performance. AIP Conference Proceedings, 2020, , .	0.4	3
83	Characterization method and analysis of misalignments in micro-concentrator photovoltaic modules. Optics Express, 2022, 30, 17886.	3.4	3
84	Demonstration of molded glass primary optics for high-efficiency micro-concentrator photovoltaics. Solar Energy Materials and Solar Cells, 2022, 245, 111882.	6.2	3
85	Photovoltaic Concentrator Systems Facing the Problems of Commercialization. , 2006, , .		2
86	Characterizing FluidReflex Optical Transfer Function. Japanese Journal of Applied Physics, 2012, 51, 10ND06.	1.5	2
87	Hybrid lighting-CPV, a new efficient concept combining illumination with CPV. , 2012, , .		2
88	Experimental confirmation of FK concentrator insensitivity to chromatic aberrations. , 2013, , .		2
89	Temperature effects on two-stage optics made of silicone. AIP Conference Proceedings, 2014, , .	0.4	2
90	Induced thermo-mechanical stress in CPV receivers with cycled high intensity light. AIP Conference Proceedings, 2014, , .	0.4	2

#	Article	IF	Citations
91	Atmospheric parameters, spectral indexes and their relation to CPV spectral performance. AIP Conference Proceedings, 2014, , .	0.4	2
92	Helios 3198 solar simulator adaptation for the characterization of LCPV prototypes. AIP Conference Proceedings, 2016, , .	0.4	2
93	Monte Carlo simulation to analyze the performance of CPV modules. AIP Conference Proceedings, 2017, , .	0.4	2
94	Proof-of-concept of a building-integrated hybrid concentrator photovoltaics-lighting system. Lighting Research and Technology, 2018, 50, 1082-1090.	2.7	2
95	Computer vision algorithm for relative misalignments estimation in CPV modules. AIP Conference Proceedings, 2018, , .	0.4	2
96	Impact of the temperature dependence of CPV optics transmittance on the current mismatch of multi-junction solar cells. AIP Conference Proceedings, 2018, , .	0.4	2
97	Novel optical approach for concentrating light in micro-CPV. , 2019, , .		2
98	How did the knowledge of CPV contribute to the standardization activity of VIPV?. AIP Conference Proceedings, 2020, , .	0.4	2
99	Characterizing FluidReflex Optical Transfer Function. Japanese Journal of Applied Physics, 2012, 51, 10ND06.	1.5	2
100	Array of micro multijunction solar cells interconnected by conductive inks. Solar Energy Materials and Solar Cells, 2022, 240, 111693.	6.2	2
101	Rating and modelling of concentrator systems. , 0, , .		1
102	Prediction of PV Concentrators Energy Production. , 2006, , .		1
103	Large-Area Si-Cell Encapsulation for Concentrator Systems: Review of Critical Points and New Proposal for the Third Generation of Euclides. , 2006, , .		1
104	Qualification Testing of TPV Systems and Components: First Steps. AIP Conference Proceedings, 2007, , .	0.4	1
105	Quantifying the Solar Simulator Requirements for Indoor Testing of CPV Modules. , 2011, , .		1
106	FluidReflex Concentrator: From Elementary Unit to Module. , 2011, , .		1
107	Equipment for Static Characterization of Angular Transmission and Misalignments of CPV. , 2011, , .		1
108	Spatial and spectral non-uniform irradiance distribution effects on multijunction solar cells. , 2011, , .		1

#	Article	IF	Citations
109	Outdoor performance of fluid dielectric CPV modules. AIP Conference Proceedings, 2012, , .	0.4	1
110	A simplified finite element model for uncoupled thermal analysis in CPV heat sink design to reduce time-to-market. , 2013, , .		1
111	Tuning the assembling process of modules by the use of proper equipment. AIP Conference Proceedings, 2016, , .	0.4	1
112	From component to multi-junction solar cells for spectral monitoring. AIP Conference Proceedings, 2018, , .	0.4	1
113	Design strategy for low-power consumption in solar trackers. AIP Conference Proceedings, 2018, , .	0.4	1
114	Low-cost solar-encapsulant-on-glass Fresnel lenses for CPV applications. AIP Conference Proceedings, 2019, , .	0.4	1
115	Relative misalignments estimation in on-tracker CPV modules through image processing. AIP Conference Proceedings, 2019, , .	0.4	1
116	Outdoor experimental characterization of novel high-efficiency high-concentrator photovoltaic (HCPV) modules using achromatic doublet on glass (ADG) Fresnel lenses as primary optics. AIP Conference Proceedings, 2019, , .	0.4	1
117	Optical Characterization of FluidReflex Concentrator. , 2010, , .		0
118	Preface: 8th International Conference on Concentrating Photovoltaic Systems. , 2012, , .		0
119	Preface for the 9th International Conference on Concentrating Photovoltaic Systems (CPV-9). , 2013, , .		0
120	Development and operation of a hybrid lighting-CPV prototype. , 2013, , .		0
121	9-Fold Fresnel Koì^hler concentrator for increased uniform irradiance on high concentrations. , 2013, , .		0
122	Development of a full hybrid lighting-CPV prototype and savings in a real case operation. , 2014, , .		0
123	Laboratory practice “advanced analog electronics”. , 2014, , .		0
124	Power rating based on two different spectroheliometers with lattice-matched (LM) and upright metamorphic (UMM) component solar cells. AIP Conference Proceedings, 2016, , .	0.4	0
125	A manufacturable achromatic fresnel lens for CPV. , 2016, , .		0
126	Using a multi-junction cell receiver as self-detector for spectrally-resolved optical efficiency measurement of concentrators. , 2016, , .		0

#	Article	IF	Citations
127	Spectrally-resolved optical efficiency using a multi-junction cell as light sensor: Application cases. AIP Conference Proceedings, 2017, , .	0.4	0
128	Assessing the suitability of metal-wrap-through solar cells for low-concentration PV systems. AIP Conference Proceedings, 2018, , .	0.4	0
129	A strategy to ensure the correct thickness of optical couplers in concentrating photovoltaic systems. AIP Conference Proceedings, 2018, , .	0.4	0
130	Novel Interconnection Method for Micro-CPV Solar Cells. , 2021, , .		0
131	Advanced Aspects of Indoor Characterization of CPV Modules. , 2010, , .		0