

Ignacio AntÃ³n

List of Publications by Year in descending order

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131
papers

1,749
citations

331670

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134
all docs

134
docs citations

134
times ranked

975
citing authors

#	ARTICLE	IF	CITATIONS
1	Array of micro multijunction solar cells interconnected by conductive inks. Solar Energy Materials and Solar Cells, 2022, 240, 111693.	6.2	2
2	Characterization method and analysis of misalignments in micro-concentrator photovoltaic modules. Optics Express, 2022, 30, 17886.	3.4	3
3	Demonstration of molded glass primary optics for high-efficiency micro-concentrator photovoltaics. Solar Energy Materials and Solar Cells, 2022, 245, 111882.	6.2	3
4	Novel Interconnection Method for Micro-CPV Solar Cells. , 2021, , .		0
5	Comparison of achromatic doublet on glass Fresnel lenses for concentrator photovoltaics. Optics Express, 2021, 29, 20601.	3.4	3
6	On the effect of cell interconnection in Vehicle Integrated Photovoltaics: modelling energy under different scenarios. , 2021, , .		5
7	Roll-to-roll nanoimprint lithography of high efficiency Fresnel lenses for micro-concentrator photovoltaics. Optics Express, 2021, 29, 34135.	3.4	10
8	Industrialization of hybrid Si/III-V and translucent planar micro-tracking modules. Progress in Photovoltaics: Research and Applications, 2021, 29, 819-834.	8.1	17
9	Optimal Strategy for the Improvement of the Overall Performance of Dual-Axis Solar Tracking Systems. Energies, 2021, 14, 7795.	3.1	5
10	How did the knowledge of CPV contribute to the standardization activity of VIPV?. AIP Conference Proceedings, 2020, , .	0.4	2
11	Misalignments measurement of CPV optical components through image acquisition. Optics Express, 2020, 28, 15652.	3.4	5
12	Molded glass arrays for micro-CPV applications with very good performance. AIP Conference Proceedings, 2020, , .	0.4	3
13	Misalignments characterization for micro-CPV modules. AIP Conference Proceedings, 2020, , .	0.4	4
14	Towards industrialization of planar microtracking photovoltaic panels. AIP Conference Proceedings, 2019, , .	0.4	4
15	Low-cost solar-encapsulant-on-glass Fresnel lenses for CPV applications. AIP Conference Proceedings, 2019, , .	0.4	1
16	Relative misalignments estimation in on-tracker CPV modules through image processing. AIP Conference Proceedings, 2019, , .	0.4	1
17	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
18	Outdoor Performance of PV Technologies in Simulated Automotive Environments. , 2019, , .		7

#	ARTICLE	IF	CITATIONS
19	Performance of Hybrid Micro-Concentrator Module with Integrated Planar Tracking and Diffuse Light Collection. , 2019, , .		15
20	Modeling and Standardization Researches and Discussions of the Car-roof PV through International Web Meetings. , 2019, , .		4
21	Novel optical approach for concentrating light in micro-CPV. , 2019, , .		2
22	Determining the Operating Temperature of Solar Panels on Vehicles. , 2019, , .		4
23	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
24	Proof-of-concept of a building-integrated hybrid concentrator photovoltaics-lighting system. Lighting Research and Technology, 2018, 50, 1082-1090.	2.7	2
25	Assessing the suitability of metal-wrap-through solar cells for low-concentration PV systems. AIP Conference Proceedings, 2018, , .	0.4	0
26	A strategy to ensure the correct thickness of optical couplers in concentrating photovoltaic systems. AIP Conference Proceedings, 2018, , .	0.4	0
27	Computer vision algorithm for relative misalignments estimation in CPV modules. AIP Conference Proceedings, 2018, , .	0.4	2
28	Challenges in the design of concentrator photovoltaic (CPV) modules to achieve highest efficiencies. Applied Physics Reviews, 2018, 5, .	11.3	75
29	From component to multi-junction solar cells for spectral monitoring. AIP Conference Proceedings, 2018, , .	0.4	1
30	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
31	Improvements in the manufacturing process of achromatic doublet on glass (ADG) Fresnel lens. AIP Conference Proceedings, 2018, , .	0.4	3
32	Design strategy for low-power consumption in solar trackers. AIP Conference Proceedings, 2018, , .	0.4	1
33	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
34	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
35	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
36	Monte Carlo simulation to analyze the performance of CPV modules. AIP Conference Proceedings, 2017, , .	0.4	2

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37	A review of the promises and challenges of micro-concentrator photovoltaics. AIP Conference Proceedings, 2017, , .	0.4	55
38	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
39	Spectrally-resolved optical efficiency using a multi-junction cell as light sensor: Application cases. AIP Conference Proceedings, 2017, , .	0.4	0
40	Experimental characterization of achromatic doublet on glass (ADG) Fresnel lenses. AIP Conference Proceedings, 2017, , .	0.4	9
41	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
42	Rating of CPV modules: Results of module round robins. AIP Conference Proceedings, 2016, , .	0.4	4
43	Hybrid dome with total internal reflector as a secondary optical element for CPV. AIP Conference Proceedings, 2016, , .	0.4	5
44	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
45	Measuring primary lens efficiency: A proposal for standardization. AIP Conference Proceedings, 2016, , .	0.4	4
46	Spectral classification of worldwide locations using SMR indexes. AIP Conference Proceedings, 2016, , .	0.4	11
47	A novel achromatic Fresnel lens for high concentrating photovoltaic systems. AIP Conference Proceedings, 2016, , .	0.4	7
48	A manufacturable achromatic fresnel lens for CPV. , 2016, , .		0
49	Using a multi-junction cell receiver as self-detector for spectrally-resolved optical efficiency measurement of concentrators. , 2016, , .		0
50	Helios 3198 solar simulator adaptation for the characterization of LCPV prototypes. AIP Conference Proceedings, 2016, , .	0.4	2
51	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
52	Design and modeling of a cost-effective achromatic Fresnel lens for concentrating photovoltaics. Optics Express, 2016, 24, A1245.	3.4	35
53	Off-Axis Characteristics of CPV Modules Result From Lens-Cell Misalignment Measurement and Monte Carlo Simulation. IEEE Journal of Photovoltaics, 2016, 6, 1353-1359.	2.5	13
54	Tuning the assembling process of modules by the use of proper equipment. AIP Conference Proceedings, 2016, , .	0.4	1

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55	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
56	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
57	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
58	Spectral network based on component cells under the SOPHIA European project. AIP Conference Proceedings, 2015, , .	0.4	3
59	Methodology of quantifying curvature of Fresnel lenses and its effect on CPV module performance. Optics Express, 2015, 23, A1030.	3.4	6
60	Temperature effects on two-stage optics made of silicone. AIP Conference Proceedings, 2014, , .	0.4	2
61	Development of a full hybrid lighting-CPV prototype and savings in a real case operation. , 2014, , .		0
62	Induced thermo-mechanical stress in CPV receivers with cycled high intensity light. AIP Conference Proceedings, 2014, , .	0.4	2
63	Atmospheric parameters, spectral indexes and their relation to CPV spectral performance. AIP Conference Proceedings, 2014, , .	0.4	2
64	Characterization of CPV arrays based on differences on their thermal resistances. AIP Conference Proceedings, 2014, , .	0.4	13
65	Module optical analyzer: Identification of defects on the production line. AIP Conference Proceedings, 2014, , .	0.4	12
66	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
67	Laboratory practice “advanced analog electronics”; , 2014, , .		0
68	Characterization of the spatial distribution of irradiance and spectrum in concentrating photovoltaic systems and their effect on multi-junction solar cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 308-318.	8.1	74
69	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
70	Durability of dielectric fluids for concentrating photovoltaic systems. Solar Energy Materials and Solar Cells, 2013, 113, 31-36.	6.2	17
71	Hybrid lighting-CPV, a new efficient concept mixing illumination with CPV. Optics Express, 2013, 21, 4864.	3.4	9
72	Luminescence inverse method For CPV optical characterization. Optics Express, 2013, 21, A1028.	3.4	21

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73	Preface for the 9th International Conference on Concentrating Photovoltaic Systems (CPV-9). , 2013, , .		0
74	A novel scanning lens instrument for evaluating Fresnel lens performance: Equipment development and initial results. , 2013, , .		3
75	Development and operation of a hybrid lighting-CPV prototype. , 2013, , .		0
76	9-Fold Fresnel Köhler concentrator for increased uniform irradiance on high concentrations. , 2013, , .		0
77	Experimental confirmation of FK concentrator insensitivity to chromatic aberrations. , 2013, , .		2
78	Tuning the current ratio of a CPV system to maximize the energy harvesting in a particular location. , 2013, , .		15
79	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
80	Detailed effects of wind on the field performance of a 50 kW CPV demonstration plant. , 2013, , .		11
81	A simplified finite element model for uncoupled thermal analysis in CPV heat sink design to reduce time-to-market. , 2013, , .		1
82	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
83	Characterizing FluidReflex Optical Transfer Function. Japanese Journal of Applied Physics, 2012, 51, 10ND06.	1.5	2
84	Antireflective coatings for multijunction solar cells under wide-angle ray bundles. Optics Express, 2012, 20, 8136.	3.4	39
85	Characterization Capabilities of Solar Simulators for Concentrator Photovoltaic Modules. Japanese Journal of Applied Physics, 2012, 51, 10ND12.	1.5	4
86	The effect of concentration on the performance of quantum dot intermediate-band solar cells. , 2012, , .		7
87	Probing the effects of non-uniform light beams and chromatic aberration on the performance of concentrators using multijunction cells. , 2012, , .		3
88	Outdoor performance of fluid dielectric CPV modules. AIP Conference Proceedings, 2012, , .	0.4	1
89	Hybrid lighting-CPV, a new efficient concept combining illumination with CPV. , 2012, , .		2
90	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

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91	The dome-shaped Fresnel-Koehler concentrator. , 2012, , .		4
92	Preface: 8th International Conference on Concentrating Photovoltaic Systems. , 2012, , .		0
93	Third-generation EUCLIDES concentrator results. Progress in Photovoltaics: Research and Applications, 2012, 20, 356-371.	8.1	9
94	Concentration photovoltaic optical system irradiance distribution measurements and its effect on multi-junction solar cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 423-430.	8.1	65
95	Power rating of CPV systems based on spectrally corrected DNI. , 2012, , .		29
96	Characterizing FluidReflex Optical Transfer Function. Japanese Journal of Applied Physics, 2012, 51, 10ND06.	1.5	2
97	Characterization Capabilities of Solar Simulators for Concentrator Photovoltaic Modules. Japanese Journal of Applied Physics, 2012, 51, 10ND12.	1.5	6
98	Quantifying the Solar Simulator Requirements for Indoor Testing of CPV Modules. , 2011, , .		1
99	FluidReflex Concentrator: From Elementary Unit to Module. , 2011, , .		1
100	Effects of Temperature on Hybrid Lens Performance. AIP Conference Proceedings, 2011, , .	0.4	31
101	Equipment for Static Characterization of Angular Transmission and Misalignments of CPV. , 2011, , .		1
102	Spatial and spectral non-uniform irradiance distribution effects on multijunction solar cells. , 2011, , .		1
103	Angular Transmission Characterization of CPV Modules Based On CCD Measurements. , 2010, , .		3
104	Indoor Performance Rating Of CPV Modules at Multiple Temperatures and Irradiance Levels. AIP Conference Proceedings, 2010, , .	0.4	3
105	Indoor Characterization of Multi-Junction Solar Cells Under Non Uniform Light Patterns. , 2010, , .		7
106	Optical Characterization of FluidReflex Concentrator. , 2010, , .		0
107	Effect of soiling in CPV systems. Solar Energy, 2010, 84, 1327-1335.	6.1	157
108	Laser grooved buried contact cells optimised for linear concentration systems. Solar Energy Materials and Solar Cells, 2010, 94, 187-193.	6.2	21

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109	Radial CPV receiver. Progress in Photovoltaics: Research and Applications, 2010, 18, 353-362.	8.1	11
110	Multijunction solar cell model for translating I-V characteristics as a function of irradiance, spectrum, and cell temperature. Progress in Photovoltaics: Research and Applications, 2010, 18, 272-284.	8.1	23
111	Two-dimensional angular transmission characterization of CPV modules. Optics Express, 2010, 18, A499.	3.4	20
112	Advanced Aspects of Indoor Characterization of CPV Modules. , 2010, , .		0
113	Characterization of five CPV module technologies with the Helios 3198 solar simulator. , 2009, , .		14
114	Comparative analysis of different secondary optical elements for aspheric primary lenses. Optics Express, 2009, 17, 6487.	3.4	140
115	Pilot production of concentrator silicon solar cells: Approaching industrialization. Solar Energy Materials and Solar Cells, 2008, 92, 1697-1705.	6.2	28
116	Solar simulator for concentrator photovoltaic systems. Optics Express, 2008, 16, 14894.	3.4	127
117	Solar simulator for indoor characterization of large area high-concentration PV modules. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	4
118	Qualification Testing of TPV Systems and Components: First Steps. AIP Conference Proceedings, 2007, , .	0.4	1
119	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
120	Spectral Characterization of Mini Concentrator Optics for its Use With MJ Cells. , 2006, , .		3
121	Prediction of PV Concentrators Energy Production. , 2006, , .		1
122	Large-Area Si-Cell Encapsulation for Concentrator Systems: Review of Critical Points and New Proposal for the Third Generation of Euclides. , 2006, , .		1
123	Photovoltaic Concentrator Systems Facing the Problems of Commercialization. , 2006, , .		2
124	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
125	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
126	Two-dimensional modeling of front contact silicon solar cells. Progress in Photovoltaics: Research and Applications, 2004, 12, 503-516.	8.1	6

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127	Performance of front contact silicon solar cells under concentration. Progress in Photovoltaics: Research and Applications, 2004, 12, 517-528.	8.1	9
128	Performance prediction of concentrator solar cells and modules from dark I-V characteristics. Progress in Photovoltaics: Research and Applications, 2003, 11, 165-178.	8.1	13
129	Characterization of optical collectors for concentration photovoltaic applications. Progress in Photovoltaics: Research and Applications, 2003, 11, 387-405.	8.1	32
130	Interaction between Sun tracking deviations and inverter MPP strategy in concentrators connected to grid. , 0, , .		5
131	Rating and modelling of concentrator systems. , 0, , .		1