

# Christopher A Deline

## List of Publications by Year in descending order

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Version: 2024-02-01

73  
papers

2,286  
citations

331670

21  
h-index

315739

38  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1665  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization and performance of bifacial solar modules: A global perspective. <i>Applied Energy</i> , 2018, 212, 1601-1610.	10.1	198
2	A review of crystalline silicon bifacial photovoltaic performance characterisation and simulation. <i>Energy and Environmental Science</i> , 2019, 12, 116-148.	30.8	155
3	Performance of Power-Limited Differential Power Processing Architectures in Mismatched PV Systems. <i>IEEE Transactions on Power Electronics</i> , 2015, 30, 618-631.	7.9	146
4	Robust PV Degradation Methodology and Application. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 525-531.	2.5	121
5	A simplified model of uniform shading in large photovoltaic arrays. <i>Solar Energy</i> , 2013, 96, 274-282.	6.1	116
6	Performance of Mismatched PV Systems With Submodule Integrated Converters. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 396-404.	2.5	84
7	Model and Validation of Single-Axis Tracking With Bifacial PV. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 715-721.	2.5	78
8	Comparison of Bifacial Solar Irradiance Model Predictions With Field Validation. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 82-88.	2.5	78
9	Partially shaded operation of a grid-tied PV system. , 2009, , .		73
10	Partial-Shading Assessment of Photovoltaic Installations via Module-Level Monitoring. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 1618-1624.	2.5	65
11	Assessment of Bifacial Photovoltaic Module Power Rating Methodologiesâ€”Inside and Out. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 575-580.	2.5	64
12	A Sensitivity Study of the Impact of Installation Parameters and System Configuration on the Performance of Bifacial PV Arrays. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 798-805.	2.5	58
13	A Practical Irradiance Model for Bifacial PV Modules. , 2017, , .		57
14	Silicon Heterojunction System Field Performance. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 177-182.	2.5	53
15	Plume detachment from a magnetic nozzle. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	49
16	PV field reliability statusâ€”Analysis of 100 000 solar systems. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 739-754.	8.1	49
17	Mitigation of Hot-Spots in Photovoltaic Systems Using Distributed Power Electronics. <i>Energies</i> , 2018, 11, 726.	3.1	48
18	Thermal and Electrical Effects of Partial Shade in Monolithic Thin-Film Photovoltaic Modules. <i>IEEE Journal of Photovoltaics</i> , 2015, 5, 1742-1747.	2.5	45

#	ARTICLE	IF	CITATIONS
19	Performance and Reliability Implications of Two-Dimensional Shading in Monolithic Thin-Film Photovoltaic Modules. IEEE Journal of Photovoltaics, 2013, 3, 1367-1375.	2.5	42
20	Partially shaded operation of multi-string photovoltaic systems. , 2010, , .		40
21	Estimating and parameterizing mismatch power loss in bifacial photovoltaic systems. Progress in Photovoltaics: Research and Applications, 2020, 28, 691-703.	8.1	39
22	Outdoor Field Performance from Bifacial Photovoltaic Modules and Systems. , 2017, , .		31
23	Analysis of irradiance models for bifacial PV modules. , 2016, , .		28
24	An Overview of Spread Spectrum Time Domain Reflectometry Responses to Photovoltaic Faults. IEEE Journal of Photovoltaics, 2020, 10, 844-851.	2.5	25
25	International collaboration framework for the calculation of performance loss rates: Data quality, benchmarks, and trends (towards a uniform methodology). Progress in Photovoltaics: Research and Applications, 2021, 29, 573-602.	8.1	25
26	Degradation of individual cells in a module measured with differential $IV$ analysis. Progress in Photovoltaics: Research and Applications, 2011, 19, 977-982.	8.1	22
27	Reducing Interanalyst Variability in Photovoltaic Degradation Rate Assessments. IEEE Journal of Photovoltaics, 2020, 10, 206-212.	2.5	22
28	Determining Outdoor CPV Cell Temperature. AIP Conference Proceedings, 2011, , .	0.4	21
29	Impact of distributed power electronics on the lifetime and reliability of PV systems. Progress in Photovoltaics: Research and Applications, 2017, 25, 821-835.	8.1	20
30	An Illumination- and Temperature-Dependent Analytical Model for Copper Indium Gallium Diselenide (CIGS) Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1298-1307.	2.5	19
31	Fleet-Scale Energy-Yield Degradation Analysis Applied to Hundreds of Residential and Nonresidential Photovoltaic Systems. IEEE Journal of Photovoltaics, 2019, 9, 476-482.	2.5	19
32	Detection and Localization of Disconnections in PV Strings Using Spread-Spectrum Time-Domain Reflectometry. IEEE Journal of Photovoltaics, 2020, 10, 236-242.	2.5	19
33	bifacial_radiance: a python package for modeling bifacial solar photovoltaic systems. Journal of Open Source Software, 2020, 5, 1865.	4.6	18
34	Photovoltaic fleet degradation insights. Progress in Photovoltaics: Research and Applications, 2022, 30, 1166-1175.	8.1	18
35	High accuracy plasma density measurement using hybrid Langmuir probe and microwave interferometer method. Review of Scientific Instruments, 2007, 78, 113504.	1.3	16
36	Partial shade evaluation of distributed power electronics for photovoltaic systems. , 2012, , .		16

#	ARTICLE	IF	CITATIONS
37	Use conditions and efficiency measurements of DC power optimizers for photovoltaic systems. , 2013, , .		16
38	Evaluation and field assessment of bifacial photovoltaic module power rating methodologies. , 2016, , .		15
39	A cell-level photovoltaic model for high-granularity simulations. , 2013, , .		14
40	Signal Processing on PV Time-Series Data: Robust Degradation Analysis Without Physical Models. IEEE Journal of Photovoltaics, 2020, 10, 546-553.	2.5	14
41	Module mismatch loss and recoverable power in unshaded PV installations. , 2012, , .		13
42	Recovery of inter-row shading losses using differential power-processing submodule DCâ€“DC converters. Solar Energy, 2016, 135, 512-517.	6.1	13
43	Spread Spectrum Time Domain Reflectometry for Complex Impedances: Application to PV Arrays. , 2018, , .		13
44	Metastable electrical characteristics of polycrystalline thin-film photovoltaic modules upon exposure and stabilization. Journal of Photonics for Energy, 2012, 2, 022001.	1.3	12
45	Evaluation of Maxim module-Integrated electronics at the DOE Regional Test Centers. , 2014, , .		11
46	PV Degradation â€“ Mounting & Temperature. , 2019, , .		11
47	Detection and Localization of Damaged Photovoltaic Cells and Modules Using Spread Spectrum Time Domain Reflectometry. IEEE Journal of Photovoltaics, 2021, 11, 195-201.	2.5	11
48	Electrical bias as an alternate method for reproducible measurement of copper indium gallium diselenide (CIGS) photovoltaic modules. Proceedings of SPIE, 2012, , .	0.8	10
49	Effect of torque-tube parameters on rear-irradiance and rear-shading loss for bifacial PV performance on single-axis tracking systems. , 2019, , .		10
50	A physics-based compact model for CIGS and CdTe solar cells: From voltage-dependent carrier collection to light-enhanced reverse breakdown. , 2015, , .		9
51	Progress toward a stabilization and preconditioning protocol for polycrystalline thin-film photovoltaic modules. , 2010, , .		8
52	Numerical Validation of an Algorithm for Combined Soiling and Degradation Analysis of Photovoltaic Systems. , 2019, , .		8
53	Unsupervised azimuth estimation of solar arrays in low-resolution satellite imagery through semantic segmentation and Hough transform. Applied Energy, 2021, 298, 117273.	10.1	8
54	Transient response of cadmium telluride modules to light exposure. , 2011, , .		7

#	ARTICLE	IF	CITATIONS
55	Modeling and simulation of conventionally wired photovoltaic systems based on differential power processing SubMIC-enhanced PV modules. , 2014, , .		7
56	Measured and estimated performance of a fleet of shaded photovoltaic systems with string and module-level inverters. Progress in Photovoltaics: Research and Applications, 2017, 25, 714-726.	8.1	7
57	Simplified method for modeling the impact of arbitrary partial shading conditions on PV array performance. , 2015, , .		6
58	PV Lifetime Project: Measuring PV Module Performance Degradation: 2018 Indoor Flash Testing Results. , 2018, , .		6
59	Measuring Irradiance for Bifacial PV Systems. , 2021, , .		6
60	Suggested Modifications for Bifacial Capacity Testing. , 2019, , .		6
61	A comparison study of the performance of south/north-facing vs east/west-facing bifacial modules under shading condition. , 2018, , .		5
62	Thermal and electrical effects of partial shade in monolithic thin-film photovoltaic modules. , 2015, , .		4
63	Performance of differential power-processing submodule DC-DC converters in recovering inter-row shading losses. , 2015, , .		4
64	LCOE*: Re-thinking LCOE for Photovoltaic Systems. , 2019, , .		4
65	Field-Array Benchmark of Commercial Bifacial PV Technologies with Publicly Available Data. , 2020, , .		4
66	Physics of Plasma Detachment in a Magnetic Nozzle. , 2006, , .		3
67	Assessment of Plasma-Flow Effect on Langmuir Triple-Probe Operation via Kinetic Simulation. IEEE Transactions on Plasma Science, 2009, 37, 1843-1849.	1.3	3
68	Performance Index Assessment for the PV Fleet Performance Data Initiative. , 2021, , .		3
69	PV Fleet Performance Data Initiative Program and Methodology. , 2020, , .		3
70	Recent advancements in the numerical simulation of surface irradiance for solar energy applications. , 2017, , .		2
71	Field-Aging Test Bed for Behind-the-Meter PV + Energy Storage. , 2019, , .		2
72	Metastable electrical characteristics of polycrystalline thin-film photovoltaic modules upon exposure and stabilization. , 2011, , .		1

#	ARTICLE	IF	CITATIONS
73	Corrections to "Model and Validation of Single-Axis Tracking With Bifacial PV", IEEE Journal of Photovoltaics, 2019, 9, 1880-1880.	2.5	0