

# 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	Photovoltaic fleet degradation insights. Progress in Photovoltaics: Research and Applications, 2022, 30, 1166-1175.	8.1	18
2	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
3	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
4	Measuring Irradiance for Bifacial PV Systems. , 2021, , .		6
5	Performance Index Assessment for the PV Fleet Performance Data Initiative. , 2021, , .		3
6	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
7	Reducing Interanalyst Variability in Photovoltaic Degradation Rate Assessments. IEEE Journal of Photovoltaics, 2020, 10, 206-212.	2.5	22
8	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
9	PV field reliability statusâ€”Analysis of 100 000 solar systems. Progress in Photovoltaics: Research and Applications, 2020, 28, 739-754.	8.1	49
10	Estimating and parameterizing mismatch power loss in bifacial photovoltaic systems. Progress in Photovoltaics: Research and Applications, 2020, 28, 691-703.	8.1	39
11	An Overview of Spread Spectrum Time Domain Reflectometry Responses to Photovoltaic Faults. IEEE Journal of Photovoltaics, 2020, 10, 844-851.	2.5	25
12	Signal Processing on PV Time-Series Data: Robust Degradation Analysis Without Physical Models. IEEE Journal of Photovoltaics, 2020, 10, 546-553.	2.5	14
13	bifacial_radiance: a python package for modeling bifacial solar photovoltaic systems. Journal of Open Source Software, 2020, 5, 1865.	4.6	18
14	Field-Array Benchmark of Commercial Bifacial PV Technologies with Publicly Available Data. , 2020, , .		4
15	PV Fleet Performance Data Initiative Program and Methodology. , 2020, , .		3
16	Corrections to â€œModel and Validation of Single-Axis Tracking With Bifacial PVâ€. IEEE Journal of Photovoltaics, 2019, 9, 1880-1880.	2.5	0
17	A review of crystalline silicon bifacial photovoltaic performance characterisation and simulation. Energy and Environmental Science, 2019, 12, 116-148.	30.8	155
18	Model and Validation of Single-Axis Tracking With Bifacial PV. IEEE Journal of Photovoltaics, 2019, 9, 715-721.	2.5	78

#	ARTICLE	IF	CITATIONS
19	PV Degradation – Mounting & Temperature. , 2019, , .		11
20	Numerical Validation of an Algorithm for Combined Soiling and Degradation Analysis of Photovoltaic Systems. , 2019, , .		8
21	LCOE*: Re-thinking LCOE for Photovoltaic Systems. , 2019, , .		4
22	Field-Aging Test Bed for Behind-the-Meter PV + Energy Storage. , 2019, , .		2
23	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
24	Comparison of Bifacial Solar Irradiance Model Predictions With Field Validation. IEEE Journal of Photovoltaics, 2019, 9, 82-88.	2.5	78
25	Effect of torque-tube parameters on rear-irradiance and rear-shading loss for bifacial PV performance on single-axis tracking systems. , 2019, , .		10
26	Suggested Modifications for Bifacial Capacity Testing. , 2019, , .		6
27	Optimization and performance of bifacial solar modules: A global perspective. Applied Energy, 2018, 212, 1601-1610.	10.1	198
28	Robust PV Degradation Methodology and Application. IEEE Journal of Photovoltaics, 2018, 8, 525-531.	2.5	121
29	Silicon Heterojunction System Field Performance. IEEE Journal of Photovoltaics, 2018, 8, 177-182.	2.5	53
30	A Sensitivity Study of the Impact of Installation Parameters and System Configuration on the Performance of Bifacial PV Arrays. IEEE Journal of Photovoltaics, 2018, 8, 798-805.	2.5	58
31	Spread Spectrum Time Domain Reflectometry for Complex Impedances: Application to PV Arrays. , 2018, , .		13
32	A comparison study of the performance of south/north-facing vs east/west-facing bifacial modules under shading condition. , 2018, , .		5
33	PV Lifetime Project: Measuring PV Module Performance Degradation: 2018 Indoor Flash Testing Results. , 2018, , .		6
34	Mitigation of Hot-Spots in Photovoltaic Systems Using Distributed Power Electronics. Energies, 2018, 11, 726.	3.1	48
35	Assessment of Bifacial Photovoltaic Module Power Rating Methodologies – Inside and Out. IEEE Journal of Photovoltaics, 2017, 7, 575-580.	2.5	64
36	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

#	ARTICLE	IF	CITATIONS
37	Measured and estimated performance of a fleet of shaded photovoltaic systems with string and module-level inverters. <i>Progress in Photovoltaics: Research and Applications</i> , 2017, 25, 714-726.	8.1	7
38	A Practical Irradiance Model for Bifacial PV Modules. , 2017, , .		57
39	Recent advancements in the numerical simulation of surface irradiance for solar energy applications. , 2017, , .		2
40	Outdoor Field Performance from Bifacial Photovoltaic Modules and Systems. , 2017, , .		31
41	Analysis of irradiance models for bifacial PV modules. , 2016, , .		28
42	Evaluation and field assessment of bifacial photovoltaic module power rating methodologies. , 2016, , .		15
43	An Illumination- and Temperature-Dependent Analytical Model for Copper Indium Gallium Diselenide (CIGS) Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 1298-1307.	2.5	19
44	Recovery of inter-row shading losses using differential power-processing submodule DC-DC converters. <i>Solar Energy</i> , 2016, 135, 512-517.	6.1	13
45	Thermal and electrical effects of partial shade in monolithic thin-film photovoltaic modules. , 2015, , .		4
46	Performance of differential power-processing submodule DC-DC converters in recovering inter-row shading losses. , 2015, , .		4
47	Simplified method for modeling the impact of arbitrary partial shading conditions on PV array performance. , 2015, , .		6
48	A physics-based compact model for CIGS and CdTe solar cells: From voltage-dependent carrier collection to light-enhanced reverse breakdown. , 2015, , .		9
49	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
50	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
51	Partial-Shading Assessment of Photovoltaic Installations via Module-Level Monitoring. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 1618-1624.	2.5	65
52	Evaluation of Maxim module-Integrated electronics at the DOE Regional Test Centers. , 2014, , .		11
53	Modeling and simulation of conventionally wired photovoltaic systems based on differential power processing SubMIC-enhanced PV modules. , 2014, , .		7
54	Performance of Mismatched PV Systems With Submodule Integrated Converters. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 396-404.	2.5	84

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55	A simplified model of uniform shading in large photovoltaic arrays. Solar Energy, 2013, 96, 274-282.	6.1	116
56	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
57	Use conditions and efficiency measurements of DC power optimizers for photovoltaic systems. , 2013, , .		16
58	A cell-level photovoltaic model for high-granularity simulations. , 2013, , .		14
59	Electrical bias as an alternate method for reproducible measurement of copper indium gallium diselenide (CIGS) photovoltaic modules. Proceedings of SPIE, 2012, , .	0.8	10
60	Metastable electrical characteristics of polycrystalline thin-film photovoltaic modules upon exposure and stabilization. Journal of Photonics for Energy, 2012, 2, 022001.	1.3	12
61	Partial shade evaluation of distributed power electronics for photovoltaic systems. , 2012, , .		16
62	Module mismatch loss and recoverable power in unshaded PV installations. , 2012, , .		13
63	Metastable electrical characteristics of polycrystalline thin-film photovoltaic modules upon exposure and stabilization. , 2011, , .		1
64	Determining Outdoor CPV Cell Temperature. AIP Conference Proceedings, 2011, , .	0.4	21
65	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
66	Transient response of cadmium telluride modules to light exposure. , 2011, , .		7
67	Progress toward a stabilization and preconditioning protocol for polycrystalline thin-film photovoltaic modules. , 2010, , .		8
68	Partially shaded operation of multi-string photovoltaic systems. , 2010, , .		40
69	Plume detachment from a magnetic nozzle. Physics of Plasmas, 2009, 16, .	1.9	49
70	Partially shaded operation of a grid-tied PV system. , 2009, , .		73
71	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
72	High accuracy plasma density measurement using hybrid Langmuir probe and microwave interferometer method. Review of Scientific Instruments, 2007, 78, 113504.	1.3	16

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73	Physics of Plasma Detachment in a Magnetic Nozzle. , 2006, , .		3