

Ralph Gottschalg

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2426022/publications.pdf>

Version: 2024-02-01

96
papers

2,192
citations

236833

25
h-index

243529

44
g-index

100
all docs

100
docs citations

100
times ranked

2064
citing authors

#	ARTICLE	IF	CITATIONS
1	Damp-heat induced degradation in photovoltaic modules manufactured with passivated emitter and rear contact solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 1061-1071.	4.4	12
2	Loss analysis and optimization of PV module components and design to achieve higher energy yield and longer service life in desert regions. <i>Applied Energy</i> , 2020, 280, 116028.	5.1	20
3	A European proficiency test on thin-film tandem photovoltaic devices. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 1258-1276.	4.4	0
4	Solar Over-Irradiance Events: Preliminary Results from a Global Study. , 2020, , .		1
5	Particle-size dependent parameter studies for laboratory soiling tests: influence of temperature, relative humidity and tilt angle. , 2020, , .		0
6	Systematic causes of problems in operation of PV systems. , 2020, , .		1
7	Techno-Economic Assessment of Soiling Losses and Mitigation Strategies for Solar Power Generation. <i>Joule</i> , 2019, 3, 2303-2321.	11.7	207
8	Interlaboratory comparison of short-circuit current versus irradiance linearity measurements of photovoltaic devices. <i>Solar Energy</i> , 2019, 182, 256-263.	2.9	10
9	Spectral Response Measurements of Perovskite Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 220-226.	1.5	17
10	The future scope of large-scale solar in the UK: Site suitability and target analysis. <i>Renewable Energy</i> , 2019, 133, 1136-1146.	4.3	38
11	Realistic Adhesion Test for Photovoltaic Modules Qualification. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 218-223.	1.5	4
12	Influence of Viscoelastic Properties of Encapsulation Materials on the Thermomechanical Behavior of Photovoltaic Modules. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 183-188.	1.5	11
13	Satellite or ground-based measurements for production of site specific hourly irradiance data: Which is most accurate and where?. <i>Solar Energy</i> , 2018, 165, 240-255.	2.9	19
14	Centralized Volt-Var Optimization Strategy Considering Malicious Attack on Distributed Energy Resources Control. <i>IEEE Transactions on Sustainable Energy</i> , 2018, 9, 148-156.	5.9	44
15	Centralized Volt-Var Optimization Strategy Considering Malicious Attack on Distributed Energy Resources Control. , 2018, , .		1
16	A GIS-Based Method for Identification of Wide Area Rooftop Suitability for Minimum Size PV Systems Using LiDAR Data and Photogrammetry. <i>Energies</i> , 2018, 11, 3506.	1.6	27
17	Results of the round robin calibration of reference solar cells within the PhotoClass project. <i>International Journal of Metrology and Quality Engineering</i> , 2018, 9, 8.	0.4	5
18	Impact of Component Reliability on Large Scale Photovoltaic Systems™ Performance. <i>Energies</i> , 2018, 11, 1579.	1.6	39

#	ARTICLE	IF	CITATIONS
19	Effect of viscoelasticity of ethylene vinyl acetate encapsulants on photovoltaic module solder joint degradation due to thermomechanical fatigue. Japanese Journal of Applied Physics, 2018, 57, 08RG03.	0.8	4
20	Electroluminescence Imaging of PV Devices: Advanced Vignetting Calibration. IEEE Journal of Photovoltaics, 2018, 8, 1297-1304.	1.5	26
21	Compressed Sensing Current Mapping Spatial Characterization of Photovoltaic Devices. IEEE Journal of Photovoltaics, 2017, 7, 486-492.	1.5	9
22	Performance and durability of broadband antireflection coatings for thin film CdTe solar cells. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	26
23	Extensive validation of CM SAF surface radiation products over Europe. Remote Sensing of Environment, 2017, 199, 171-186.	4.6	80
24	Compensation of temporal averaging bias in solar irradiance data. IET Renewable Power Generation, 2017, 11, 1288-1294.	1.7	6
25	Reduced Measurement Uncertainty in PV Module Batch Testing. , 2017, , .		0
26	Inference of missing PV monitoring data using neural networks. , 2017, , .		0
27	Interpolating and Estimating Horizontal Diffuse Solar Irradiation to Provide UK-Wide Coverage: Selection of the Best Performing Models. Energies, 2017, 10, 181.	1.6	17
28	The UK Solar Farm Fleet: A Challenge for the National Grid? â€. Energies, 2017, 10, 1220.	1.6	5
29	Comparison of solar radiation and PV generation variability: system dispersion in the UK. IET Renewable Power Generation, 2017, 11, 550-557.	1.7	7
30	Cross-Characterization for Imaging Parasitic Resistive Losses in Thin-Film Photovoltaic Modules. Journal of Imaging, 2016, 2, 23.	1.7	11
31	Changes of solar cell parameters during damp-heat exposure. Progress in Photovoltaics: Research and Applications, 2016, 24, 1346-1358.	4.4	56
32	Inference of missing PV monitoring data using neural networks. , 2016, , .		5
33	Electroluminescence imaging of PV devices: Camera calibration and image correction. , 2016, , .		12
34	Adhesion requirements for photovoltaic modules of polymeric encapsulation. , 2016, , .		1
35	Compressed sensing current mapping methods for PV characterisation. , 2016, , .		3
36	Inference of missing data in photovoltaic monitoring datasets. IET Renewable Power Generation, 2016, 10, 434-439.	1.7	16

#	ARTICLE	IF	CITATIONS
37	Compressive Current Response Mapping of Photovoltaic Devices Using MEMS Mirror Arrays. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1945-1950.	2.4	13
38	Uncertainty Estimation of Temperature Coefficient Measurements of PV Modules. IEEE Journal of Photovoltaics, 2016, 6, 1554-1563.	1.5	15
39	Optical technique for photovoltaic spatial current response measurements using compressive sensing and random binary projections. Journal of Photonics for Energy, 2016, 6, 025508.	0.8	1
40	Assessment of potential for photovoltaic roof installations by extraction of roof tilt from light detection and ranging data and aggregation to census geography. IET Renewable Power Generation, 2016, 10, 467-473.	1.7	11
41	Improved Model for Circumsolar Irradiance Calculation as an Extended Light Source and Spectral Implications for High-Concentration Photovoltaic Devices. IEEE Journal of Photovoltaics, 2016, 6, 258-265.	1.5	5
42	Effect of seasonal spectral variations on performance of three different photovoltaic technologies in India. International Journal of Energy and Environmental Engineering, 2016, 7, 93-103.	1.3	40
43	Spatially and spectrally resolved electroluminescence measurement system for photovoltaic characterisation. IET Renewable Power Generation, 2015, 9, 446-452.	1.7	11
44	Optical modelling for concentrating photovoltaic systems: insolation transfer variations with solar source descriptions. IET Renewable Power Generation, 2015, 9, 412-419.	1.7	2
45	Multi-domain analysis of photovoltaic impacts via integrated spatial and probabilistic modelling. IET Renewable Power Generation, 2015, 9, 424-431.	1.7	14
46	Large scale PV systems under non-uniform and fault conditions. Solar Energy, 2015, 116, 303-313.	2.9	22
47	Energy yields of small grid connected photovoltaic system: effects of component reliability and maintenance. IET Renewable Power Generation, 2015, 9, 432-437.	1.7	33
48	Accelerated Spatially Resolved Electrical Simulation of Photovoltaic Devices Using Photovoltaic-Oriented Nodal Analysis. IEEE Transactions on Electron Devices, 2015, 62, 1390-1398.	1.6	10
49	Towards modelling realistic ageing rates of amorphous silicon devices in operational environment. Japanese Journal of Applied Physics, 2015, 54, 08KG03.	0.8	0
50	Determining spectral response of a photovoltaic device using polychromatic filters. IET Renewable Power Generation, 2014, 8, 467-473.	1.7	4
51	Irradiance modelling for individual cells of shaded solar photovoltaic arrays. Solar Energy, 2014, 110, 410-419.	2.9	39
52	Degradation of interfacial adhesion strength within photovoltaic mini-modules during damp-heat exposure. Progress in Photovoltaics: Research and Applications, 2014, 22, 796-809.	4.4	41
53	Distributed electrical network modelling approach for spatially resolved characterisation of photovoltaic modules. IET Renewable Power Generation, 2014, 8, 459-466.	1.7	8
54	Dust-induced shading on photovoltaic modules. Progress in Photovoltaics: Research and Applications, 2014, 22, 218-226.	4.4	163

#	ARTICLE	IF	CITATIONS
55	Fast electrical modeling for spatially-resolved characterization of amorphous silicon photovoltaic cells. , 2014, , .		1
56	Potential for LED solar simulators. , 2013, , .		7
57	Spatially-resolved modelling of dust effect on cadmium telluride photovoltaic modules. Solar Energy, 2013, 90, 154-163.	2.9	21
58	Data sets for energy rating of photovoltaic modules. Solar Energy, 2013, 93, 267-279.	2.9	34
59	Modeling spatial electrical properties in photovoltaic modules using PV-oriented nodal analysis. , 2013, , .		3
60	Modeling A-Si module ageing using the concept of environmental dose. , 2013, , .		0
61	Accuracy of Energy Yield Prediction of Photovoltaic Modules. Japanese Journal of Applied Physics, 2012, 51, 10NF01.	0.8	2
62	Solar Profiles and Spectral Modeling for CPV Simulations. IEEE Journal of Photovoltaics, 2012, 2, 62-67.	1.5	9
63	Soiling correction model for long term energy prediction in photovoltaic modules. , 2012, , .		7
64	Optimised inverter sizing for photovoltaic systems in high-latitude maritime climates. IET Renewable Power Generation, 2011, 5, 58.	1.7	23
65	Effects of spectrum on the power rating of amorphous silicon photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2011, 19, 640-648.	4.4	28
66	Spatially distributed model for the analysis of laser beam induced current (LBIC) measurements of thin film silicon solar modules. Solar Energy Materials and Solar Cells, 2011, 95, 111-114.	3.0	27
67	Voltage-dependent quantum efficiency measurements of amorphous silicon multi-junction mini-modules. Solar Energy Materials and Solar Cells, 2011, 95, 123-126.	3.0	26
68	Effect of loading on long term performance of single junction amorphous silicon modules. Solar Energy Materials and Solar Cells, 2011, 95, 119-122.	3.0	9
69	Limited laser beam induced current measurements: a tool for analysing integrated photovoltaic modules. Measurement Science and Technology, 2011, 22, 085702.	1.4	15
70	Solar profiles and spectral modelling for CPV simulations. , 2011, , .		0
71	Mapping the performance of PV modules, effects of module type and data averaging. Solar Energy, 2010, 84, 324-338.	2.9	247
72	Indoor measurement of photovoltaic device characteristics at varying irradiance, temperature and spectrum for energy rating. Measurement Science and Technology, 2010, 21, 115701.	1.4	12

#	ARTICLE	IF	CITATIONS
73	Performance measurements at varying irradiance spectrum, intensity and module temperature of amorphous silicon solar cells. , 2010, , .		1
74	Large scale PV system monitoring - modules technology intercomparison. , 2010, , .		2
75	Performance characterisation of photovoltaic modules. , 2010, , .		1
76	Large scale evaluation of photovoltaic technologies in different climates. , 2009, , .		1
77	Outlier identification in outdoor measurement data - effects of different strategies on the performance descriptors of photovoltaic modules. , 2009, , .		7
78	Electrical mismatch within single junction amorphous silicon and micromorph tandem thin film PV modules. , 2009, , .		6
79	Equilibrium thermal characteristics of a building integrated photovoltaic tiled roof. Solar Energy, 2009, 83, 1893-1901.	2.9	36
80	An LED-based photovoltaic measurement system with variable spectrum and flash speed. Solar Energy Materials and Solar Cells, 2009, 93, 825-830.	3.0	54
81	Uncertainty in Photovoltaic performance parameters " dependence on location and material. Solar Energy Materials and Solar Cells, 2009, 93, 1124-1128.	3.0	31
82	The spectral variation effects on energy yield of optimized multi-junction solar cell. , 2009, , .		1
83	Effect of module degradation on inverter sizing. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	3
84	Advantages in using LEDs as the main light source in solar simulators for measuring PV device characteristics. Proceedings of SPIE, 2008, , .	0.8	14
85	Applying modern informatics technologies to monitoring photovoltaic (PV) modules and systems. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	7
86	Modeling the effect of varying spectra on multi junction A-Si solar cells. Desalination, 2007, 209, 78-85.	4.0	4
87	Accuracy of Energy Prediction Methodologies. , 2006, , .		4
88	Long-Term Performance of Amorphous Photovoltaic Modules. , 2006, , .		4
89	Photovoltaic Performance Measurements in Europe: PV-Catapult Round Robin Tests. , 2006, , .		13
90	The Effects of Solar Cell Capacitance on Calibration Accuracy When using a Flash Simulator. , 2006, , .		16

#	ARTICLE	IF	CITATIONS
91	The effect of spectral variations on the performance parameters of single and double junction amorphous silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2005, 85, 415-428.	3.0	88
92	A critical appraisal of the factors affecting energy production from amorphous silicon photovoltaic arrays in a maritime climate. <i>Solar Energy</i> , 2004, 77, 909-916.	2.9	31
93	On the importance of considering the incident spectrum when measuring the outdoor performance of amorphous silicon photovoltaic devices. <i>Measurement Science and Technology</i> , 2004, 15, 460-466.	1.4	59
94	Experimental study of variations of the solar spectrum of relevance to thin film solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2003, 79, 527-537.	3.0	99
95	The influence of the measurement environment on the accuracy of the extraction of the physical parameters of solar cells. <i>Measurement Science and Technology</i> , 1999, 10, 796-804.	1.4	58
96	Actual PV module performance including spectral losses in the UK. , 0, , .		7