Archana Sinha

List of Publications by Year
in descending order

41 papers	456 citations	933447 10 h-index	794594 19 g-index
42 all docs	42 docs citations	42 times ranked	358 citing authors

#	Article	IF	Citations
1	UVâ€induced degradation of highâ€efficiency silicon PV modules with different cell architectures. Progress in Photovoltaics: Research and Applications, 2023, 31, 36-51.	8.1	20
2	A Comparison of Emerging Nonfluoropolymer-Based Coextruded PV Backsheets to Industry-Benchmark Technologies. IEEE Journal of Photovoltaics, 2022, 12, 88-96.	2.5	7
3	Electrochemical degradation modes in bifacial silicon photovoltaic modules. Progress in Photovoltaics: Research and Applications, 2022, 30, 948-958.	8.1	11
4	Chemical and mechanical interfacial degradation in bifacial glass/glass and glass/transparent backsheet photovoltaic modules. Progress in Photovoltaics: Research and Applications, 2022, 30, 1423-1432.	8.1	8
5	Artificial linear brush abrasion of coatings for photovoltaic module first-surfaces. Solar Energy Materials and Solar Cells, 2021, 219, 110757.	6.2	25
6	Towards validation of combined-accelerated stress testing through failure analysis of polyamide-based photovoltaic backsheets. Scientific Reports, 2021, 11, 2019.	3.3	15
7	Understanding interfacial chemistry of positive bias high-voltage degradation in photovoltaic modules. Solar Energy Materials and Solar Cells, 2021, 223, 110959.	6.2	13
8	BACKFLIP: Identification of Materials and Changes Upon Aging of Emerging Fluoropolymer-Free and Industry-Benchmark PV Backsheets. , 2021, , .		3
9	Assessing UV-Induced Degradation in Bifacial Modules of Different Cell Technologies. , 2021, , .		5
10	Glass/glass photovoltaic module reliability and degradation: a review. Journal Physics D: Applied Physics, 2021, 54, 413002.	2.8	34
11	Failure Analysis of a New Polyamide-Based Fluoropolymer-Free Backsheet After Combined-Accelerated Stress Testing. IEEE Journal of Photovoltaics, 2021, 11, 1197-1205.	2.5	7
12	Role of Cation Ordering on Device Performance in (Ag,Cu)InSe₂ Solar Cells with KF Post-Deposition Treatment. ACS Applied Energy Materials, 2021, 4, 233-241.	5.1	2
13	Damp Heat Induced Degradation of Silicon Heterojunction Solar Cells With Cu-Plated Contacts. IEEE Journal of Photovoltaics, 2020, 10, 153-158.	2.5	24
14	Activation Energy for End-of-Life Solder Bond Degradation: Thermal Cycling of Field-Aged PV Modules. IEEE Journal of Photovoltaics, 2020, 10, 1762-1771.	2.5	8
15	Field-Aged Glass/Backsheet and Glass/Glass PV Modules: Encapsulant Degradation Comparison. IEEE Journal of Photovoltaics, 2020, 10, 607-615.	2.5	28
16	UV-Induced Degradation of High-Efficiency Solar Cells with Different Architectures. , 2020, , .		11
17	Reliability Analysis of Field-aged Glass/Glass PV Modules: Influence of Different Encapsulant Types. , 2020, , .		3
18	Evaluating Non-fluoropolymer-based Co-extruded Backsheets Using Combined-Accelerated Stress Testing and Materials Forensics. , 2020, , .		0

#	Article	IF	Citations
19	UV-Fluorescence Imaging of Silicon PV Modules After Outdoor Aging and Accelerated Stress Testing. , 2020, , .		5
20	Interfacial Characterization of Positive Bias Voltage Degradation in PV Modules. , 2020, , .		0
21	Towards Validation of Advanced Accelerated Stress Testing Protocols through Failure Analysis and Materials Characterization. , 2020, , .		1
22	Prediction of Climate-Specific Degradation Rate for Photovoltaic Encapsulant Discoloration. IEEE Journal of Photovoltaics, 2020, 10, 1093-1101.	2.5	18
23	Nondestructive Characterization and Accelerated UV Testing of Browned Field-Aged PV Modules. IEEE Journal of Photovoltaics, 2019, 9, 1733-1740.	2.5	10
24	Understanding PV Polymer Backsheet Degradation through X-ray Scattering. , 2019, , .		4
25	Solder Bond Degradation of Fielded PV Modules: Correlation between Performance, Series Resistance and Electroluminescence Imaging. , 2019, , .		3
26	Contact Resistivity and Sheet Resistance Measurements of Cells Extracted from Field-aged Modules. , 2019, , .		4
27	Activation Energy for Solder Bond Degradation: Thermal Cycling of Field-aged Modules at Multiple Upper Temperatures. , 2019, , .		2
28	Solder Bond Degradation of Fielded PV Modules: Climate Dependence of Intermetallic Compound Growth. , 2019, , .		3
29	Characterization of Encapsulant Degradation in Accelerated UV Stressed Mini-Modules with UV-cut and UV-pass EVA. , 2019, , .		8
30	Acceleration Factor Modeling for Degradation Rate Prediction of Photovoltaic Encapsulant Discoloration. , 2018, , .		7
31	Novel Accelerated UV Testing of Field-Aged Modules: Correlating EL and UV Fluorescence Images with Current Drop. , 2018, , .		1
32	Early Detection of Encapsulant Discoloration by UV Fluorescence Imaging and Yellowness Index Measurements. , 2018, , .		7
33	Activation Energy Determination for Photovoltaic Encapsulant Discoloration by Indoor Accelerated UV Testing. , 2018, , .		5
34	Acceleration factor for damp heat testing of PV modules. , 2018, , .		0
35	Effects of different excitation waveforms on detection and characterisation of delamination in PV modules by active infrared thermography. Nondestructive Testing and Evaluation, 2017, 32, 418-434.	2.1	7
36	Cross-Characterization for Imaging Parasitic Resistive Losses in Thin-Film Photovoltaic Modules. Journal of Imaging, 2016, 2, 23.	3.0	11

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37	Nondestructive characterization of encapsulant discoloration effects in crystalline-silicon PV modules. Solar Energy Materials and Solar Cells, 2016, 155, 234-242.	6.2	81
38	Detection and characterisation of delamination in PV modules by active infrared thermography. Nondestructive Testing and Evaluation, 2016, 31, 1-16.	2.1	25
39	Accelerated Spatially Resolved Electrical Simulation of Photovoltaic Devices Using Photovoltaic-Oriented Nodal Analysis. IEEE Transactions on Electron Devices, 2015, 62, 1390-1398.	3.0	10
40	Distributed electrical network modelling approach for spatially resolved characterisation of photovoltaic modules. IET Renewable Power Generation, 2014, 8, 459-466.	3.1	8
41	Modeling spatial electrical properties in photovoltaic modules using PV-oriented nodal analysis. , 2013, , .		3