Klemens Ilse

List of Publications by Year
in descending order

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42 papers	1,790 citations	361413 20 h-index	330143 37 g-index
43 all docs	43 docs citations	43 times ranked	838 citing authors

#	Article	IF	Citations
1	Techno-Economic Assessment of Soiling Losses and Mitigation Strategies for Solar Power Generation. Joule, 2019, 3, 2303-2321.	24.0	207
2	Fundamentals of soiling processes on photovoltaic modules. Renewable and Sustainable Energy Reviews, 2018, 98, 239-254.	16.4	185
3	Characterization of dust accumulated on photovoltaic panels in Doha, Qatar. Solar Energy, 2017, 142, 123-135.	6.1	182
4	Modeling of photovoltaic soiling loss as a function of environmental variables. Solar Energy, 2017, 157, 397-407.	6.1	129
5	Comprehensive analysis of soiling and cementation processes on PV modules in Qatar. Solar Energy Materials and Solar Cells, 2018, 186, 309-323.	6.2	109
6	Investigation of factors affecting condensation on soiled PV modules. Solar Energy, 2018, 159, 488-500.	6.1	92
7	Effect of dust and weather conditions on photovoltaic performance in Doha, Qatar. , 2015, , .		87
8	Outdoor soiling microscope for measuring particle deposition and resuspension. Solar Energy, 2016, 137, 158-164.	6.1	75
9	Dew as a Detrimental Influencing Factor for Soiling of PV Modules. IEEE Journal of Photovoltaics, 2019, 9, 287-294.	2.5	68
10	Microstructural analysis of the cementation process during soiling on glass surfaces in arid and semiâ€arid climates. Physica Status Solidi - Rapid Research Letters, 2016, 10, 525-529.	2.4	57
11	Dominant environmental parameters for dust deposition and resuspension in desert climates. Aerosol Science and Technology, 2018, 52, 788-798.	3.1	52
12	Dust potency in the context of solar photovoltaic (PV) soiling loss. Solar Energy, 2021, 220, 1040-1052.	6.1	48
13	Comparing Indoor and Outdoor Soiling Experiments for Different Glass Coatings and Microstructural Analysis of Particle Caking Processes. IEEE Journal of Photovoltaics, 2018, 8, 203-209.	2.5	43
14	Electrodynamic dust shield performance under simulated operating conditions for solar energy applications. Solar Energy Materials and Solar Cells, 2018, 185, 80-85.	6.2	42
15	Solar PV soiling mitigation by electrodynamic dust shield in field conditions. Solar Energy, 2019, 188, 271-277.	6.1	40
16	Advanced performance testing of anti-soiling coatings â€“ Part I: Sequential laboratory test methodology covering the physics of natural soiling processes. Solar Energy Materials and Solar Cells, 2019, 202, 110048.	6.2	39
17	Efficiency of Electrodynamic Dust Shield at Dust Loading Levels Relevant to Solar Energy Applications. IEEE Journal of Photovoltaics, 2018, 8, 196-202.	2.5	34
18	Performance Improvement Techniques for Photovoltaic Systems in Qatar: Results of First year of Outdoor Exposure. Energy Procedia, 2015, 77, 386-396.	1.8	27

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19	Advanced performance testing of anti-soiling coatings - Part II: Particle-size dependent analysis for physical understanding of dust removal processes and determination of adhesion forces. Solar Energy Materials and Solar Cells, 2019, 202, 110049.	6.2	27
20	Multi-year field assessment of seasonal variability of photovoltaic soiling and environmental factors in a desert environment. Solar Energy, 2020, 211, 1392-1402.	6.1	27
21	Effect of tilt angle on soiling in perpendicular wind. Solar Energy, 2019, 194, 294-301.	6.1	22
22	Loss analysis and optimization of PV module components and design to achieve higher energy yield and longer service life in desert regions. Applied Energy, 2020, 280, 116028.	10.1	20
23	Effect of relative humidity on dust removal performance of electrodynamic dust shield. Journal of Electrostatics, 2020, 105, 103434.	1.9	20
24	Measurement of electrodynamic dust shield efficiency in field conditions. Journal of Electrostatics, 2019, 97, 26-30.	1.9	18
25	Optimum PV module interconnection layout and mounting orientation to reduce inhomogeneous soiling losses in desert environments. Solar Energy, 2020, 203, 267-274.	6.1	18
26	Potential-Induced Degradation of Bifacial PERC Solar Cells Under Illumination. IEEE Journal of Photovoltaics, 2019, 9, 1522-1525.	2.5	14
27	Resilience of industrial PV module glass coatings to cleaning processes. Journal of Renewable and Sustainable Energy, 2020, 12, 053504.	2.0	13
28	Outdoor performance of anti-soiling coatings in various climates of Saudi Arabia. Solar Energy Materials and Solar Cells, 2022, 235, 111470.	6.2	13
29	Combined Soiling and Abrasion Testing of Antisoiling Coatings. IEEE Journal of Photovoltaics, 2020, 10, 243-249.	2.5	12
30	Particle size-dependent adhesion forces and wind removal efficiency of anti-soiling coatings on textured solar glasses. MRS Communications, 2019, 9, 964-970.	1.8	11
31	Quantification of abrasion-induced ARC transmission losses from reflection spectroscopy. , 2019, , .		11
32	Time-of-day and Exposure Influences on PV Soiling. , 2017, , .		10
33	Geometrical correction factors for finite-size probe tips in microscopic four-point-probe resistivity measurements. Journal of Applied Physics, 2014, 116, .	2.5	9
34	Abrasion testing of anti-reflective coatings under various conditions. Solar Energy Materials and Solar Cells, 2022, 240, 111732.	6.2	7
35	Rotational force test method for determination of particle adhesionâ€"from a simplified model to realistic dusts. Journal of Renewable and Sustainable Energy, 2020, 12, .	2.0	6
36	Influence of soiling and moisture ingress on long term PID susceptibility of photovoltaic modules. AIP Conference Proceedings, 2019, , .	0.4	5

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37	Integrated lowâ€temperature process for the fabrication of amorphous Si nanoparticles embedded in Al₂O₃ for nonâ€volatile memory application. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2446-2451.	1.8	3
38	Laboratory calibration of a light scattering soiling sensor. Solar Energy, 2022, 236, 569-575.	6.1	3
39	Mitigation of soiling losses by smart heating and night tilting for ASC and standard PV module glass. , 2021, , .		2
40	Field evaluation of two types of EDS-integrated PV modules with different configurations and surface properties. Solar Energy, 2022, 241, 515-524.	6.1	2
41	Enhanced density of negative fixed charges in Al₂O₃layers on Si through a subsequent deposition of TiO₂. Proceedings of SPIE, 2016, , .	0.8	1
42	Integrated lowâ€temperature process for the fabrication of amorphous Si nanoparticles embedded in Al₂O₃ for nonâ€volatile memory application (Phys. Status Solidi A 9â•2016). Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2540-2540.	1.8	0