Henning Schulte-Huxel

List of Publications by Year
in descending order

49 papers	654 citations	516710 16 h-index	610901 24 g-index
49 all docs	49 docs citations	49 times ranked	711 citing authors

#	Article	IF	Citations
1	Optical Constants of UV Transparent EVA and the Impact on the PV Module Output Power under Realistic Irradiation. Energy Procedia, 2016, 92, 523-530.	1.8	60
2	Three-terminal IIIâ€“V/Si tandem solar cells enabled by a transparent conductive adhesive. Sustainable Energy and Fuels, 2020, 4, 549-558.	4.9	46
3	Backâ€contacted bottom cells with three terminals: Maximizing power extraction from currentâ€mismatched tandem cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 410-423.	8.1	31
4	Reduced Module Operating Temperature and Increased Yield of Modules With PERC Instead of Al-BSF Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 44-50.	2.5	30
5	UV-induced degradation of PERC solar modules with UV-transparent encapsulation materials. Progress in Photovoltaics: Research and Applications, 2017, 25, 409-416.	8.1	29
6	Present status and future perspectives of bifacial PERC+ solar cells and modules. Japanese Journal of Applied Physics, 2018, 57, 08RA01.	1.5	29
7	For none, one, or two polaritiesâ€”How do POLO junctions fit best into industrial Si solar cells?. Progress in Photovoltaics: Research and Applications, 2020, 28, 503-516.	8.1	28
8	String-Level Modeling of Two, Three, and Four Terminal Si-Based Tandem Modules. IEEE Journal of Photovoltaics, 2018, 8, 1370-1375.	2.5	26
9	Energy Yield Analysis of Multiterminal Si-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1376-1383.	2.5	26
10	Simulation-based roadmap for the integration of poly-silicon on oxide contacts into screen-printed crystalline silicon solar cells. Scientific Reports, 2021, 11, 996.	3.3	24
11	High-Efficiency Cells From Layer Transfer: A First Step Toward Thin-Film/Wafer Hybrid Silicon Technologies. IEEE Journal of Photovoltaics, 2011, 1, 9-15.	2.5	23
12	Optimized Interconnection of Passivated Emitter and Rear Cells by Experimentally Verified Modeling. IEEE Journal of Photovoltaics, 2016, 6, 432-439.	2.5	23
13	Aluminum-Based Mechanical and Electrical Laser Interconnection Process for Module Integration of Silicon Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 16-21.	2.5	20
14	Aging behaviour of laser welded Al-interconnections in crystalline silicon modules. Solar Energy Materials and Solar Cells, 2012, 106, 22-26.	6.2	18
15	Building blocks for back-junction back-contacted cells and modules with ion-implanted poly-Si junctions. , 2014, , .		18
16	Optimizing the Solar Cell Front Side Metallization and the Cell Interconnection for High Module Power Output. Energy Procedia, 2016, 92, 531-539.	1.8	17
17	Interconnect-shingling: Maximizing the active module area with conventional module processes. Solar Energy Materials and Solar Cells, 2019, 200, 109991.	6.2	17
18	Increased Light Harvesting by Structured Cell Interconnection Ribbons: An Optical Ray Tracing Study Using a Realistic Daylight Model. Energy Procedia, 2016, 92, 505-514.	1.8	16

#	Article	IF	Citations
19	PV module current gains due to structured backsheets. Energy Procedia, 2017, 124, 495-503.	1.8	14
20	Three Bypass Diodes Architecture at the Limit. IEEE Journal of Photovoltaics, 2020, 10, 1828-1838.	2.5	14
21	A 22.3% Efficient pâ€Type Back Junction Solar Cell with an Alâ€Printed Frontâ€Side Grid and a Passivating n⁺â€Type Polysilicon on Oxide Contact at the Rear Side. Solar Rrl, 2020, 4, 2000435.	5.8	13
22	Al-Foil on Encapsulant for the Interconnection of Al-Metalized Silicon Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 77-82.	2.5	12
23	High-Efficiency Modules With Passivated Emitter and Rear Solar Cellsâ€”An Analysis of Electrical and Optical Losses. IEEE Journal of Photovoltaics, 2017, 7, 25-31.	2.5	12
24	Homogenous Voltage-Matched Strings Using Three-Terminal Tandem Solar Cells: Fundamentals and End Losses. IEEE Journal of Photovoltaics, 2021, 11, 1078-1086.	2.5	12
25	UV radiation hardness of photovoltaic modules featuring crystalline Si solar cells with AlO_x/p⁺â€type Si and SiN_y/n⁺â€type Si interfaces. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700178.	2.4	11
26	Interconnection of busbarâ€free back contacted solar cells by laser welding. Progress in Photovoltaics: Research and Applications, 2015, 23, 1057-1065.	8.1	10
27	Partial shading of one solar cell in a photovoltaic module with 3-terminal cell interconnection. Solar Energy Materials and Solar Cells, 2021, 219, 110811.	6.2	9
28	Measuring the light recovery factor of backsheets in photovoltaic modules. Solar Energy Materials and Solar Cells, 2018, 186, 175-183.	6.2	7
29	Spectra-Dependent Stability of the Passivation Quality of Al2O3/c-Si Interfaces. IEEE Journal of Photovoltaics, 2018, 8, 96-102.	2.5	6
30	Principle of Module-Level Processing Demonstrated at Single a-Si:H/c-Si Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1018-1024.	2.5	5
31	Two-level Metallization and Module Integration of Point-contacted Solar Cells. Energy Procedia, 2014, 55, 361-368.	1.8	5
32	Reducing UV induced degradation losses of solar modules with c-Si solar cells featuring dielectric passivation layers. , 2017, , .		5
33	Thin Crystalline Macroporous Silicon Solar Cells with Ion Implanted Emitter. Energy Procedia, 2013, 38, 910-918.	1.8	4
34	Laser-welded Interconnection of Screen-printed Si Solar Cells. Energy Procedia, 2014, 55, 356-360.	1.8	4
35	Simultaneous Contacting and Interconnection of Passivated Emitter and Rear Solar Cells. Energy Procedia, 2016, 92, 515-522.	1.8	4
36	Module interconnection of both sides-contacted silicon solar cells by screen-printing. , 2013, , .		3

#	Article	IF	Citations
37	From highâ€efficiency nâ€type solar cells to modules exceeding 20% efficiency with aluminumâ€based cell interconnection. Progress in Photovoltaics: Research and Applications, 2013, 21, 1354-1362.	8.1	3
38	Analysis of Thermal Processes Driving Laser Welding of Aluminum Deposited on Glass Substrates for Module Interconnection of Silicon Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1606-1612.	2.5	3
39	Effect of UV illumination on the passivation quality of AlO<inf>x</inf>/c-Si interfaces. , 2016, , .		3
40	Impact of Ag Pads on the Series Resistance of PERC Solar Cells. Energy Procedia, 2016, 92, 743-749.	1.8	3
41	III- V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2017, , .		3
42	Yield analysis and comparison of GaInP/Si and GaInP/GaAs multi-terminal tandem solar cells. AIP Conference Proceedings, 2018, , .	0.4	2
43	III-V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2019, , .		2
44	Laser microwelding of thin Al layers for interconnection of crystalline Si solar cells: analysis of process limits for ns and Î¼s lasers. Journal of Photonics for Energy, 2014, 4, 041597.	1.3	1
45	Thermal processes driving laser-welding for module interconnection. , 2015, , .		1
46	III-V/Si tandem cell to module interconnection - comparison between different operation modes. , 2017, , .		1
47	Ray Tracing of Complete Solar Cell Modules. , 2019, , .		1
48	Notice of Removal 20.2% Module efficiency on large area with passivated emitter and rear solar cells. , 2017, , .		0
49	HVPE-Grown GaAs//Si Tandem Device Performance. , 2018, , .		0