Michael RienÃ¤cker

List of Publications by Year
in descending order

25 papers	1,502 citations	471509 17 h-index	610901 24 g-index
25 all docs	25 docs citations	25 times ranked	1275 citing authors

#	Article	IF	Citations
1	Laser contact openings for local poly-Si-metal contacts enabling 26.1%-efficient POLO-IBC solar cells. Solar Energy Materials and Solar Cells, 2018, 186, 184-193.	6.2	475
2	Working principle of carrier selective poly-Si/c-Si junctions: Is tunnelling the whole story?. Solar Energy Materials and Solar Cells, 2016, 158, 60-67.	6.2	177
3	2D/3D Heterostructure for Semitransparent Perovskite Solar Cells with Engineered Bandgap Enables Efficiencies Exceeding 25% in Fourâ€Terminal Tandems with Silicon and CIGS. Advanced Functional Materials, 2020, 30, 1909919.	14.9	123
4	Junction Resistivity of Carrier-Selective Polysilicon on Oxide Junctions and Its Impact on Solar Cell Performance. IEEE Journal of Photovoltaics, 2017, 7, 11-18.	2.5	91
5	Maximizing tandem solar cell power extraction using a three-terminal design. Sustainable Energy and Fuels, 2018, 2, 1141-1147.	4.9	67
6	Separating the two polarities of the POLO contacts of an 26.1%-efficient IBC solar cell. Scientific Reports, 2020, 10, 658.	3.3	66
7	Improvement of the SRH bulk lifetime upon formation of n-type POLO junctions for 25% efficient Si solar cells. Solar Energy Materials and Solar Cells, 2017, 173, 85-91.	6.2	65
8	Pinhole density and contact resistivity of carrier selective junctions with polycrystalline silicon on oxide. Applied Physics Letters, 2017, 110, .	3.3	61
9	Temperature-dependent contact resistance of carrier selective Poly-Si on oxide junctions. Solar Energy Materials and Solar Cells, 2018, 185, 425-430.	6.2	54
10	A Taxonomy for Three-Terminal Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1233-1242.	17.4	51
11	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
12	Recombination Behavior of Photolithography-free Back Junction Back Contact Solar Cells with Carrier-selective Polysilicon on Oxide Junctions for Both Polarities. Energy Procedia, 2016, 92, 412-418.	1.8	42
13	Equivalent Performance in Three-Terminal and Four-Terminal Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1584-1589.	2.5	31
14	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
15	From PERC to Tandem: POLO- and p⁺/n⁺ Poly-Si Tunneling Junction as Interface Between Bottom and Top Cell. IEEE Journal of Photovoltaics, 2019, 9, 49-54.	2.5	29
16	Changes in hydrogen concentration and defect state density at the poly-Si/SiOx/c-Si interface due to firing. Solar Energy Materials and Solar Cells, 2021, 231, 111297.	6.2	19
17	Toward Low-Cost 4-Terminal GaAs//Si Tandem Solar Cells. ACS Applied Energy Materials, 2019, 2, 2375-2380.	5.1	17
18	Optimization of four terminal rear heterojunction GaAs on Si interdigitated back contact tandem solar cells. Applied Physics Letters, 2021, 118, .	3.3	13

#	Article	IF	Citations
19	Photonic crystals for highly efficient silicon single junction solar cells. Solar Energy Materials and Solar Cells, 2021, 233, 111337.	6.2	11
20	Towards 28 %-efficient Si single-junction solar cells with better passivating POLO junctions and photonic crystals. Solar Energy Materials and Solar Cells, 2022, 238, 111560.	6.2	10
21	Nanostructured front electrodes for perovskite/c-Si tandem photovoltaics. Optics Express, 2020, 28, 8878.	3.4	8
22	Characterization of multiterminal tandem photovoltaic devices and their subcell coupling. Cell Reports Physical Science, 2021, 2, 100677.	5.6	8
23	III- V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2017, , .		3
24	Yield analysis and comparison of GaInP/Si and GaInP/GaAs multi-terminal tandem solar cells. AIP Conference Proceedings, 2018, , .	0.4	2
25	Rear side dielectrics on interdigitating p+-(i)-n+ back-contact solar cells â˜’ hydrogenation vs. charge effects. EPJ Photovoltaics, 2021, 12, 6.	1.6	2