Dietmar Knipp

List of Publications by Year
in descending order

59 papers	1,445 citations	279798 23 h-index	330143 37 g-index
59 all docs	59 docs citations	59 times ranked	1525 citing authors

#	Article	IF	Citations
1	Light trapping in thin-film silicon solar cells with submicron surface texture. Optics Express, 2009, 17, 23058.	3.4	157
2	Zinc oxide films prepared by solâ€“gel spin coating technique. Applied Physics A: Materials Science and Processing, 2011, 104, 263-268.	2.3	121
3	Perovskite/Silicon Tandem Solar Cells: From Detailed Balance Limit Calculations to Photon Management. Nano-Micro Letters, 2019, 11, 58.	27.0	115
4	Perovskite/perovskite planar tandem solar cells: A comprehensive guideline for reaching energy conversion efficiency beyond 30%. Nano Energy, 2021, 79, 105400.	16.0	69
5	Nanophotonic design of perovskite/silicon tandem solar cells. Journal of Materials Chemistry A, 2018, 6, 3625-3633.	10.3	53
6	Spray Pyrolyzed TiO2 Embedded Multi-Layer Front Contact Design for High-Efficiency Perovskite Solar Cells. Nano-Micro Letters, 2021, 13, 36.	27.0	50
7	Light trapping in periodically textured amorphous silicon thin film solar cells using realistic interface morphologies. Optics Express, 2013, 21, A595.	3.4	46
8	Enhanced photon management in silicon thin film solar cells with different front and back interface texture. Scientific Reports, 2016, 6, 29639.	3.3	46
9	Influence of back contact morphology on light trapping and plasmonic effects in microcrystalline silicon single junction and micromorph tandem solar cells. Solar Energy Materials and Solar Cells, 2013, 110, 49-57.	6.2	38
10	Approaching Perfect Light Incoupling in Perovskite and Silicon Thin Film Solar Cells by Moth Eye Surface Textures. Advanced Theory and Simulations, 2018, 1, 1800030.	2.8	38
11	Electrical and Optical Properties of Nickelâ€Oxide Films for Efficient Perovskite Solar Cells. Small Methods, 2020, 4, 2000454.	8.6	37
12	Influence of contact effect on the performance of microcrystalline silicon thin-film transistors. Applied Physics Letters, 2006, 89, 203509.	3.3	36
13	Light-Trapping and Interface Morphologies of Amorphous Silicon Solar Cells on Multiscale Surface Textured Substrates. IEEE Journal of Photovoltaics, 2014, 4, 16-21.	2.5	34
14	Optics of Perovskite Solar Cell Front Contacts. ACS Applied Materials & Interfaces, 2019, 11, 14693-14701.	8.0	32
15	Rough versus planar interfaces: How to maximize the short circuit current of perovskite single and tandem solar cells. Materials Today Energy, 2019, 11, 106-113.	4.7	32
16	Random versus periodic: Determining light trapping of randomly textured thin film solar cells by the superposition of periodic surface textures. Solar Energy Materials and Solar Cells, 2015, 143, 183-189.	6.2	31
17	Influence of Perovskite Interface Morphology on the Photon Management in Perovskite/Silicon Tandem Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 15080-15086.	8.0	30
18	Perovskite Color Detectors: Approaching the Efficiency Limit. ACS Applied Materials & Interfaces, 2020, 12, 47831-47839.	8.0	29

#	Article	IF	Citations
19	Vertically Stacked Perovskite Detectors for Color Sensing and Color Vision. Advanced Materials Interfaces, 2020, 7, 2000459.	3.7	28
20	On the interplay of cell thickness and optimum period of silicon thinâ€film solar cells: light trapping and plasmonic losses. Progress in Photovoltaics: Research and Applications, 2016, 24, 379-388.	8.1	27
21	Predicting the Interface Morphologies of Silicon Films on Arbitrary Substrates: Application in Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 7109-7116.	8.0	25
22	Near field control for enhanced photovoltaic performance and photostability in perovskite solar cells. Nano Energy, 2021, 89, 106388.	16.0	25
23	P-Type Characteristic of Nitrogen-Doped ZnO Films. Journal of Electronic Materials, 2018, 47, 5607-5613.	2.2	23
24	Non-resonant metal-oxide metasurfaces for efficient perovskite solar cells. Solar Energy, 2020, 198, 570-577.	6.1	23
25	Improved Nanophotonic Front Contact Design for Highâ€Performance Perovskite Singleâ€Junction and Perovskite/Perovskite Tandem Solar Cells. Solar Rrl, 2021, 5, 2100509.	5.8	23
26	Low-temperature treated anatase TiO2 nanophotonic-structured contact design for efficient triple-cation perovskite solar cells. Chemical Engineering Journal, 2021, 426, 131831.	12.7	22
27	On the interplay of interface morphology and microstructure of high-efficiency microcrystalline silicon solar cells. Solar Energy Materials and Solar Cells, 2016, 151, 81-88.	6.2	21
28	From randomly self-textured substrates to highly efficient thin film solar cells: Influence of geometric interface engineering on light trapping, plasmonic losses and charge extraction. Solar Energy Materials and Solar Cells, 2017, 160, 141-148.	6.2	21
29	High-mobility microcrystalline silicon thin-film transistors prepared near the transition to amorphous growth. Journal of Applied Physics, 2008, 104, .	2.5	19
30	Towards 3D organic solar cells. Nano Energy, 2017, 31, 582-589.	16.0	18
31	Atomic layer deposition of metal oxides for efficient perovskite single-junction and perovskite/silicon tandem solar cells. RSC Advances, 2020, 10, 14856-14866.	3.6	18
32	<title>Characterization of novel three- and six-channel color moire free sensors</title>. , 1998, , .		15
33	Influence of low temperature thermal annealing on the performance of microcrystalline silicon thin-film transistors. Journal of Applied Physics, 2007, 101, 074503.	2.5	15
34	Microcrystalline-Silicon Transistors and CMOS Inverters Fabricated Near the Transition to Amorphous-Growth Regime. IEEE Transactions on Electron Devices, 2009, 56, 1924-1929.	3.0	15
35	Gap States in Small Molecule Thinâ€Film Transistors. Advanced Electronic Materials, 2016, 2, 1500179.	5.1	12
36	Comparison of Light Trapping in Silicon Nanowire and Surface Textured Thin-Film Solar Cells. Applied Sciences (Switzerland), 2017, 7, 427.	2.5	12

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37	Color Sensing by Optical Antennas: Approaching the Quantum Efficiency Limit. ACS Photonics, 2019, 6, 2041-2048.	6.6	12
38	Enhancing the energy conversion efficiency of low mobility solar cells by a 3D device architecture. Journal of Materials Chemistry C, 2019, 7, 10289-10296.	5.5	10
39	Combining Photosynthesis and Photovoltaics: A Hybrid Energy-Harvesting System Using Optical Antennas. ACS Applied Materials & Interfaces, 2020, 12, 40261-40268.	8.0	8
40	Band-Gap-Engineered Transparent Perovskite Solar Modules to Combine Photovoltaics with Photosynthesis. ACS Applied Materials & Interfaces, 2021, 13, 39230-39238.	8.0	8
41	Maximizing the short circuit current of organic solar cells by partial decoupling of electrical and optical properties. Applied Nanoscience (Switzerland), 2018, 8, 339-346.	3.1	7
42	Beyond Tristimulus Color Vision with Perovskite-Based Multispectral Sensors. ACS Applied Materials & Interfaces, 2022, 14, 11645-11653.	8.0	7
43	Electrical Stability of High-Mobility Microcrystalline Silicon Thin-Film Transistors. Journal of Display Technology, 2012, 8, 27-34.	1.2	6
44	Tunable Multispectral Color Sensor with Plasmonic Reflector. ACS Photonics, 2018, 5, 378-383.	6.6	5
45	Tiling of Solar Cell Surfaces: Influence on Photon Management and Microstructure. Advanced Materials Interfaces, 2018, 5, 1700814.	3.7	5
46	Microcrystalline silicon thin-film transistors operating at very high frequencies. Applied Physics Letters, 2010, 97, 073502.	3.3	4
47	Reversible photochromic and photoluminescence in iodide perovskites. Thin Solid Films, 2021, 737, 138950.	1.8	4
48	Spectrometers shrink down. Nature Photonics, 2007, 1, 444-445.	31.4	3
49	Standing wave spectrometer with semi-transparent organic detector. Journal of Materials Chemistry C, 2018, 6, 11457-11464.	5.5	3
50	Contact Effects in High Mobility Microcrystalline Silicon Thin-Film Transistors. Materials Research Society Symposia Proceedings, 2007, 989, 3.	0.1	2
51	Silicon Thin-Film Solar Cells Approaching the Geometric Light-Trapping Limit: Surface Texture Inspired by Self-Assembly Processes. ACS Photonics, 2018, 5, 2799-2806.	6.6	2
52	Modelling of contact effects in microcrystalline silicon thin-film transistors. Applied Physics A: Materials Science and Processing, 2009, 96, 751-758.	2.3	1
53	Realizing high aspect ratio silver micro and nanostructures by microcontact printing of alkyl thiol self-assembled monolayers. MRS Advances, 2019, 4, 2441-2451.	0.9	1
54	Optics in high efficiency perovskite tandem solar cells. , 2022, , 319-345.		1

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55	Influence of the Structural Properties of Microcrystalline Silicon on the Performance of High Mobility Thin-Film Transistors. Materials Research Society Symposia Proceedings, 2008, 1066, 1.	0.1	0
56	Microcrystalline Silicon Thin-Film Transistors for Ambipolar and CMOS Inverters. Materials Research Society Symposia Proceedings, 2009, 1153, 1.	0.1	0
57	Optics in Thin-film Silicon Solar Cells with Integrated Lamellar Gratings. Materials Research Society Symposia Proceedings, 2009, 1153, 1.	0.1	0
58	Ambipolar characteristics of microcrystalline silicon thinâ€film transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1144-1147.	0.8	0
59	Influence of Annealing Treatment on the Structural and Optical Properties of ZnO Nanorods. Materials Research Society Symposia Proceedings, 2010, 1247, 1.	0.1	0