

Florian N Ruske

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5441097/publications.pdf>

Version: 2024-02-01

66
papers

1,674
citations

257101

24
h-index

288905

40
g-index

66
all docs

66
docs citations

66
times ranked

1472
citing authors

#	ARTICLE	IF	CITATIONS
1	Improved electrical transport in Al-doped zinc oxide by thermal treatment. Journal of Applied Physics, 2010, 107, .	1.1	172
2	Towards wafer quality crystalline silicon thin-film solar cells on glass. Solar Energy Materials and Solar Cells, 2014, 128, 190-197.	3.0	105
3	High power pulsed magnetron sputtering of transparent conducting oxides. Thin Solid Films, 2008, 516, 5847-5859.	0.8	101
4	Band lineup in amorphous/crystalline silicon heterojunctions and the impact of hydrogen microstructure and topological disorder. Physical Review B, 2011, 83, .	1.1	96
5	ZnO:Al films deposited by in-line reactive AC magnetron sputtering for a-Si:H thin film solar cells. Thin Solid Films, 2006, 496, 16-25.	0.8	88
6	Polycrystalline silicon thin-film solar cells on glass. Solar Energy Materials and Solar Cells, 2009, 93, 1004-1008.	3.0	75
7	Optical modeling of free electron behavior in highly doped ZnO films. Thin Solid Films, 2009, 518, 1289-1293.	0.8	70
8	Large area ZnO:Al films with tailored light scattering properties for photovoltaic applications. Thin Solid Films, 2007, 515, 8695-8698.	0.8	64
9	Optical characterization of aluminum-doped zinc oxide films by advanced dispersion theories. Thin Solid Films, 2004, 455-456, 201-206.	0.8	60
10	Conversion efficiency and process stability improvement of electron beam crystallized thin film silicon solar cells on glass. Solar Energy Materials and Solar Cells, 2014, 123, 13-16.	3.0	49
11	Microstructure and photovoltaic performance of polycrystalline silicon thin films on temperature-stable ZnO:Al layers. Journal of Applied Physics, 2009, 106, .	1.1	47
12	Damp heat stable doped zinc oxide films. Thin Solid Films, 2014, 555, 48-52.	0.8	43
13	Hydrogen doping of DC sputtered ZnO:Al films from novel target material. Surface and Coatings Technology, 2005, 200, 236-240.	2.2	42
14	Influence of damp heat on the optical and electrical properties of Al-doped zinc oxide. Thin Solid Films, 2009, 517, 2291-2294.	0.8	42
15	Temperature stability of ZnO:Al film properties for poly-Si thin-film devices. Applied Physics Letters, 2007, 91, 241911.	1.5	39
16	Reactive deposition of aluminium-doped zinc oxide thin films using high power pulsed magnetron sputtering. Thin Solid Films, 2008, 516, 4472-4477.	0.8	39
17	Improving the electrical and optical properties of DC-sputtered ZnO:Al by thermal post deposition treatments. Thin Solid Films, 2012, 520, 4203-4207.	0.8	39
18	Influence of Hydrogen Plasma on the Defect Passivation of Polycrystalline Si Thin Film Solar Cells. Plasma Processes and Polymers, 2009, 6, S36.	1.6	33

#	ARTICLE	IF	CITATIONS
19	Influence of Silicon Layers on the Growth of ITO and AZO in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 703-709.	1.5	31
20	Hard x-ray photoelectron spectroscopy study of the buried Si/ZnO thin-film solar cell interface: Direct evidence for the formation of Si ²⁺ O at the expense of Zn-O bonds. Applied Physics Letters, 2011, 99, .	1.5	28
21	Solid-phase crystallization of amorphous silicon on ZnO:Al for thin-film solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 855-858.	3.0	26
22	Optoelectrical analysis of TCO+Silicon oxide double layers at the front and rear side of silicon heterojunction solar cells. Solar Energy Materials and Solar Cells, 2022, 236, 111493.	3.0	26
23	Improved conversion efficiency of a-Si:H/ μ c-Si:H thin-film solar cells by using annealed Al-doped zinc oxide as front electrode material. Progress in Photovoltaics: Research and Applications, 2014, 22, 1285-1291.	4.4	24
24	High mobility In ₂ O ₃ :H as contact layer for a-Si:H/c-Si heterojunction and $\frac{1}{4}$ c-Si:H thin film solar cells. Thin Solid Films, 2015, 594, 316-322.	0.8	24
25	Advantageous light management in Cu(In,Ga)Se ₂ superstrate solar cells. Solar Energy Materials and Solar Cells, 2016, 150, 76-81.	3.0	24
26	Reversible changes in the lattice site structure for In implanted into GaN. Applied Physics Letters, 2002, 80, 4531-4533.	1.5	21
27	DC reactive sputtering of aluminium doped zinc oxide films for solar modules controlled by target voltage. Thin Solid Films, 2009, 518, 1204-1207.	0.8	18
28	Solution-Processed Crystalline Silicon Thin-Film Solar Cells. Advanced Materials Interfaces, 2014, 1, 1300046.	1.9	17
29	Identification of intra-grain and grain boundary defects in polycrystalline Si thin films by electron paramagnetic resonance. Physica Status Solidi - Rapid Research Letters, 2013, 7, 959-962.	1.2	16
30	Process stabilisation for large area reactive MF-sputtering of Al-doped ZnO. Thin Solid Films, 2006, 502, 44-49.	0.8	14
31	Analysis of Urbach-like absorption tails in thermally treated ZnO:Al thin films. Applied Physics Letters, 2013, 103, 192108.	1.5	14
32	As-grown textured zinc oxide films by ion beam treatment and magnetron sputtering. Thin Solid Films, 2012, 520, 4208-4213.	0.8	13
33	Light trapping for a-Si:H/ μ c-Si:H tandem solar cells using direct pulsed laser interference texturing. Physica Status Solidi - Rapid Research Letters, 2015, 9, 36-40.	1.2	12
34	Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. Journal of Physical Chemistry C, 2020, 124, 27867-27881.	1.5	12
35	Impact of solid-phase crystallization of amorphous silicon on the chemical structure of the buried Si/ZnO thin film solar cell interface. Applied Physics Letters, 2010, 97, 072105.	1.5	11
36	Annealing Behaviour of GaN after Implantation with Hafnium and Indium. Physica Status Solidi (B): Basic Research, 2001, 228, 331-335.	0.7	10

#	ARTICLE	IF	CITATIONS
37	Very thin, highly conductive ZnO:Al front electrode on textured glass as substrate for thin film silicon solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 44-47.	1.2	10
38	Hybrid Perovskite Degradation from an Optical Perspective: A Spectroscopic Ellipsometry Study from the Deep Ultraviolet to the Middle Infrared. <i>Advanced Optical Materials</i> , 2022, 10, 2101553.	3.6	10
39	Rigorous optical simulation of light management in crystalline silicon thin film solar cells with rough interface textures. <i>Proceedings of SPIE</i> , 2011, , .	0.8	9
40	High mobility annealing of Transparent Conductive Oxides. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012, 34, 012004.	0.3	9
41	The complex interface chemistry of thin-film silicon/zinc oxide solar cell structures. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 26266-26272.	1.3	9
42	Optical characterization of high mobility polycrystalline ZnO:Al films. <i>Proceedings of SPIE</i> , 2012, , .	0.8	8
43	Potential of high-mobility sputtered zinc oxide as front contact for high efficiency thin film silicon solar cells. <i>Thin Solid Films</i> , 2014, 555, 138-142.	0.8	7
44	Chemical interaction at the buried silicon/zinc oxide thin-film solar cell interface as revealed by hard X-ray photoelectron spectroscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 190, 309-313.	0.8	6
45	Advanced microhole arrays for light trapping in thin film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2014, 125, 298-304.	3.0	6
46	Deposition and Properties of TCOs. <i>Engineering Materials</i> , 2012, , 301-330.	0.3	6
47	Flux of Positive Ions and Film Growth in Reactive Sputtering of Al-Doped ZnO Thin Films. <i>Plasma Processes and Polymers</i> , 2007, 4, S336-S340.	1.6	5
48	Optical on-line monitoring for the long-term stabilization of a reactive mid-frequency sputtering process of Al-doped zinc oxide films. <i>Thin Solid Films</i> , 2010, 518, 3115-3118.	0.8	5
49	Structural investigations of silicon nanostructures grown by self-organized island formation for photovoltaic applications. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 108, 719-726.	1.1	5
50	Water-assisted nitrogen mediated crystallisation of ZnO films. <i>Thin Solid Films</i> , 2015, 590, 177-183.	0.8	5
51	Pretreatment of glass substrates by Ar/O ₂ ion beams for the as-sputtered rough Al doped zinc oxide thin films. <i>Surface and Coatings Technology</i> , 2011, 205, S223-S228.	2.2	4
52	Determination of Plasma Parameters during Deposition of ZnO Films by Ceramic and Metallic Targets and Correlation with Film Properties. <i>Plasma Processes and Polymers</i> , 2007, 4, S527-S530.	1.6	3
53	Light trapping in polycrystalline silicon thin-film solar cells based on liquid phase crystallization on textured substrates. , 2013, , .		3
54	ZnO:Al with tuned properties for photovoltaic applications: thin layers and high mobility material. <i>Proceedings of SPIE</i> , 2013, , .	0.8	3

#	ARTICLE	IF	CITATIONS
55	Crack formation and Zn diffusion in high-temperature processed poly-Si/ZnO:Al stacks. Thin Solid Films, 2014, 566, 83-87.	0.8	3
56	Combination of nitrogen mediated crystallisation with post-deposition annealingâ€”Towards ultra-thin ZnO:Al contacts. Thin Solid Films, 2015, 589, 750-754.	0.8	3
57	Polycrystalline Silicon Thin-film Solar Cells on ZnO:Al Coated Glass. Materials Research Society Symposia Proceedings, 2008, 1066, 1.	0.1	2
58	Optical properties and Limits of a Large-Area Periodic Nanophotonic Light Trapping Design for Polycrystalline Silicon Thin Film Solar Cells. Materials Research Society Symposia Proceedings, 2013, 1493, 59-64.	0.1	2
59	A comparison of scattering and non-scattering anti-reflection designs for back contacted polycrystalline thin film silicon solar cells in superstrate configuration. , 2014, , .		2
60	Elucidating the Effect of the Different Buffer Layers on the Thermal Stability of CIGSe Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 648-657.	1.5	2
61	On the influence of sub-wavelength Al/Si interface roughness on the efficiency of crystalline Si-solar cells. Thin Solid Films, 2012, 525, 158-161.	0.8	1
62	Material properties of high-mobility TCOs and application to solar cells. Proceedings of SPIE, 2014, , .	0.8	1
63	Reactive sputtering of ZnO/ZnO:Al contacts for chalcopyrite solar modules. Thin Solid Films, 2011, 520, 1295-1298.	0.8	0
64	Structural properties of Si/SiO ₂ nanostructures grown by decomposition of substoichiometric SiO _x N _y layers for photovoltaic applications. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 676-681.	0.8	0
65	Direct pulsed laser interference texturing for light trapping in a-Si:H ^{1/4} c-Si:H tandem solar cells. Proceedings of SPIE, 2014, , .	0.8	0
66	Annealing related changes in nearâ€”edge absorption and structural properties of Alâ€”doped ZnO thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1468-1471.	0.8	0