

Florian N Ruske

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

64
papers

1,469
citations

22
h-index

37
g-index

66
ext. papers

1,570
ext. citations

3.2
avg, IF

4.06
L-index

| # | Paper | IF | Citations |
|----|--|-----|-----------|
| 64 | Improved electrical transport in Al-doped zinc oxide by thermal treatment. <i>Journal of Applied Physics</i> , 2010 , 107, 013708 | 2.5 | 163 |
| 63 | Towards wafer quality crystalline silicon thin-film solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 128, 190-197 | 6.4 | 100 |
| 62 | High power pulsed magnetron sputtering of transparent conducting oxides. <i>Thin Solid Films</i> , 2008 , 516, 5847-5859 | 2.2 | 93 |
| 61 | Band lineup in amorphous/crystalline silicon heterojunctions and the impact of hydrogen microstructure and topological disorder. <i>Physical Review B</i> , 2011 , 83, | 3.3 | 80 |
| 60 | ZnO:Al films deposited by in-line reactive AC magnetron sputtering for a-Si:H thin film solar cells. <i>Thin Solid Films</i> , 2006 , 496, 16-25 | 2.2 | 79 |
| 59 | Optical modeling of free electron behavior in highly doped ZnO films. <i>Thin Solid Films</i> , 2009 , 518, 1289-1293 | 2.2 | 67 |
| 58 | Polycrystalline silicon thin-film solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 1004-1008 | 6.4 | 63 |
| 57 | Large area ZnO:Al films with tailored light scattering properties for photovoltaic applications. <i>Thin Solid Films</i> , 2007 , 515, 8695-8698 | 2.2 | 62 |
| 56 | Optical characterization of aluminum-doped zinc oxide films by advanced dispersion theories. <i>Thin Solid Films</i> , 2004 , 455-456, 201-206 | 2.2 | 54 |
| 55 | Microstructure and photovoltaic performance of polycrystalline silicon thin films on temperature-stable ZnO:Al layers. <i>Journal of Applied Physics</i> , 2009 , 106, 084506 | 2.5 | 44 |
| 54 | Conversion efficiency and process stability improvement of electron beam crystallized thin film silicon solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 123, 13-16 | 6.4 | 43 |
| 53 | Damp heat stable doped zinc oxide films. <i>Thin Solid Films</i> , 2014 , 555, 48-52 | 2.2 | 38 |
| 52 | Reactive deposition of aluminium-doped zinc oxide thin films using high power pulsed magnetron sputtering. <i>Thin Solid Films</i> , 2008 , 516, 4472-4477 | 2.2 | 38 |
| 51 | Improving the electrical and optical properties of DC-sputtered ZnO:Al by thermal post deposition treatments. <i>Thin Solid Films</i> , 2012 , 520, 4203-4207 | 2.2 | 37 |
| 50 | Influence of damp heat on the optical and electrical properties of Al-doped zinc oxide. <i>Thin Solid Films</i> , 2009 , 517, 2291-2294 | 2.2 | 37 |
| 49 | Temperature stability of ZnO:Al film properties for poly-Si thin-film devices. <i>Applied Physics Letters</i> , 2007 , 91, 241911 | 3.4 | 36 |
| 48 | Hydrogen doping of DC sputtered ZnO:Al films from novel target material. <i>Surface and Coatings Technology</i> , 2005 , 200, 236-240 | 4.4 | 36 |

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| 47 | Influence of Hydrogen Plasma on the Defect Passivation of Polycrystalline Si Thin Film Solar Cells. <i>Plasma Processes and Polymers</i> , 2009 , 6, S36-S40 | 3.4 | 33 |
| 46 | Hard x-ray photoelectron spectroscopy study of the buried Si/ZnO thin-film solar cell interface: Direct evidence for the formation of Si ²⁺ at the expense of Zn-O bonds. <i>Applied Physics Letters</i> , 2011 , 99, 152104 | 3.4 | 24 |
| 45 | High mobility In ₂ O ₃ :H as contact layer for a-Si:H/c-Si heterojunction and μ -c-Si:H thin film solar cells. <i>Thin Solid Films</i> , 2015 , 594, 316-322 | 2.2 | 23 |
| 44 | 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. <i>Progress in Photovoltaics: Research and Applications</i> , 2014 , 22, 1285-1291 ²² | 6.8 | 22 |
| 43 | Solid-phase crystallization of amorphous silicon on ZnO:Al for thin-film solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 855-858 | 6.4 | 22 |
| 42 | Reversible changes in the lattice site structure for In implanted into GaN. <i>Applied Physics Letters</i> , 2002 , 80, 4531-4533 | 3.4 | 20 |
| 41 | DC reactive sputtering of aluminium doped zinc oxide films for solar modules controlled by target voltage. <i>Thin Solid Films</i> , 2009 , 518, 1204-1207 | 2.2 | 18 |
| 40 | Advantageous light management in Cu(In,Ga)Se ₂ superstrate solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 150, 76-81 | 6.4 | 18 |
| 39 | Solution-Processed Crystalline Silicon Thin-Film Solar Cells. <i>Advanced Materials Interfaces</i> , 2014 , 1, 1300046 | 4.6 | 17 |
| 38 | Identification of intra-grain and grain boundary defects in polycrystalline Si thin films by electron paramagnetic resonance. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 959-962 | 2.5 | 15 |
| 37 | Process stabilisation for large area reactive MF-sputtering of Al-doped ZnO. <i>Thin Solid Films</i> , 2006 , 502, 44-49 | 2.2 | 14 |
| 36 | Influence of Silicon Layers on the Growth of ITO and AZO in Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2020 , 10, 703-709 | 3.7 | 14 |
| 35 | As-grown textured zinc oxide films by ion beam treatment and magnetron sputtering. <i>Thin Solid Films</i> , 2012 , 520, 4208-4213 | 2.2 | 13 |
| 34 | Analysis of Urbach-like absorption tails in thermally treated ZnO:Al thin films. <i>Applied Physics Letters</i> , 2013 , 103, 192108 | 3.4 | 12 |
| 33 | Light trapping for a-Si:H/ μ -c-Si:H tandem solar cells using direct pulsed laser interference texturing. <i>Physica Status Solidi - Rapid Research Letters</i> , 2015 , 9, 36-40 | 2.5 | 9 |
| 32 | Impact of solid-phase crystallization of amorphous silicon on the chemical structure of the buried Si/ZnO thin film solar cell interface. <i>Applied Physics Letters</i> , 2010 , 97, 072105 | 3.4 | 9 |
| 31 | Annealing Behaviour of GaN after Implantation with Hafnium and Indium. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 228, 331-335 | 1.3 | 9 |
| 30 | 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 | 2.5 | 8 |

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| 29 | High mobility annealing of Transparent Conductive Oxides. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012 , 34, 012004 | 0.4 | 8 |
| 28 | The complex interface chemistry of thin-film silicon/zinc oxide solar cell structures. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 26266-72 | 3.6 | 7 |
| 27 | 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 | 2.2 | 7 |
| 26 | Optical characterization of high mobility polycrystalline ZnO:Al films 2012 , | | 7 |
| 25 | Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 27867-27881 | 3.8 | 6 |
| 24 | Advanced microhole arrays for light trapping in thin film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 125, 298-304 | 6.4 | 6 |
| 23 | 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 | 2.6 | 5 |
| 22 | Rigorous optical simulation of light management in crystalline silicon thin film solar cells with rough interface textures 2011 , | | 5 |
| 21 | 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 | 2.2 | 5 |
| 20 | 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 | 3.4 | 5 |
| 19 | Optoelectrical analysis of TCO+Silicon oxide double layers at the front and rear side of silicon heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2021 , 236, 111493 | 6.4 | 5 |
| 18 | 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 | 1.7 | 4 |
| 17 | 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 | 4.4 | 4 |
| 16 | Water-assisted nitrogen mediated crystallisation of ZnO films. <i>Thin Solid Films</i> , 2015 , 590, 177-183 | 2.2 | 3 |
| 15 | Combination of nitrogen mediated crystallisation with post-deposition annealing towards ultra-thin ZnO:Al contacts. <i>Thin Solid Films</i> , 2015 , 589, 750-754 | 2.2 | 3 |
| 14 | Light trapping in polycrystalline silicon thin-film solar cells based on liquid phase crystallization on textured substrates 2013 , | | 3 |
| 13 | 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 | 3.4 | 3 |
| 12 | Crack formation and Zn diffusion in high-temperature processed poly-Si/ZnO:Al stacks. <i>Thin Solid Films</i> , 2014 , 566, 83-87 | 2.2 | 2 |

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| 11 | Optical properties and Limits of a Large-Area Periodic Nanophotonic Light Trapping Design for Polycrystalline Silicon Thin Film Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1493, 59-64 | | 2 |
| 10 | ZnO:Al with tuned properties for photovoltaic applications: thin layers and high mobility material 2013 , | | 2 |
| 9 | Hybrid Perovskite Degradation from an Optical Perspective: A Spectroscopic Ellipsometry Study from the Deep Ultraviolet to the Middle Infrared. <i>Advanced Optical Materials</i> , 2101553 | 8.1 | 2 |
| 8 | Deposition and Properties of TCOs. <i>Engineering Materials</i> , 2012 , 301-330 | 0.4 | 2 |
| 7 | Material properties of high-mobility TCOs and application to solar cells 2014 , | | 1 |
| 6 | On the influence of sub-wavelength Al/Si interface roughness on the efficiency of crystalline Si-solar cells. <i>Thin Solid Films</i> , 2012 , 525, 158-161 | 2.2 | 1 |
| 5 | Polycrystalline Silicon Thin-film Solar Cells on ZnO:Al Coated Glass. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1066, 1 | | 1 |
| 4 | Elucidating the Effect of the Different Buffer Layers on the Thermal Stability of CIGSe Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2021 , 11, 648-657 | 3.7 | 0 |
| 3 | Annealing related changes in near-edge absorption and structural properties of Al-doped ZnO thin films. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014 , 11, 1468-1471 | | |
| 2 | Structural properties of Si/SiO ₂ nanostructures grown by decomposition of substoichiometric SiO _x N _y layers for photovoltaic applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013 , 210, 676-681 | 1.6 | |
| 1 | Reactive sputtering of ZnO/ZnO:Al contacts for chalcopyrite solar modules. <i>Thin Solid Films</i> , 2011 , 520, 1295-1298 | 2.2 | |