

# Lambertz Andreas

## 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.

81  
papers

2,149  
citations

22  
h-index

45  
g-index

90  
ext. papers

2,381  
ext. citations

5.9  
avg, IF

4.42  
L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 81 | Intrinsic microcrystalline silicon: A new material for photovoltaics. <i>Solar Energy Materials and Solar Cells</i> , <b>2000</b> , 62, 97-108   | 6.4  | 507       |
| 80 | Microcrystalline silicon solar cells deposited at high rates. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 114913   | 2.5  | 152       |
| 79 | Multijunction Si photocathodes with tunable photovoltages from 2.0 V to 2.8 V for light induced water splitting. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 145-154  | 35.4 | 107       |
| 78 | Microcrystalline silicon oxygen alloys for application in silicon solar cells and modules. <i>Solar Energy Materials and Solar Cells</i> , <b>2013</b> , 119, 134-143  | 6.4  | 98        |
| 77 | Hydrogenated amorphous silicon oxide containing a microcrystalline silicon phase and usage as an intermediate reflector in thin-film silicon solar cells. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 113109                        | 2.5  | 98        |
| 76 | Development of highly efficient thin film silicon solar cells on texture-etched zinc oxide-coated glass substrates. <i>Solar Energy Materials and Solar Cells</i> , <b>2001</b> , 66, 275-281  | 6.4  | 81        |
| 75 | Characterization and simulation of a-Si:H/ $\mu$ -Si:H tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2011</b> , 95, 3318-3327   | 6.4  | 74        |
| 74 | 3D photonic crystal intermediate reflector for micromorph thin-film tandem solar cell. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2008</b> , 205, 2796-2810  | 1.6  | 67        |
| 73 | Analysis of short circuit current gains by an anti-reflective textured cover on silicon thin film solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2013</b> , 21, 1672-1681                                       | 6.8  | 62        |
| 72 | A constructive combination of antireflection and intermediate-reflector layers for a-Si $\mu$ -Si thin film solar cells. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 053509   | 3.4  | 59        |
| 71 | Thickness dependence of microcrystalline silicon solar cell properties. <i>Solar Energy Materials and Solar Cells</i> , <b>2001</b> , 66, 345-351  | 6.4  | 57        |
| 70 | Microcrystalline silicon oxide ( $\mu$ -SiO <sub>x</sub> :H) alloys: A versatile material for application in thin film silicon single and tandem junction solar cells. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 1954-1957 | 3.9  | 43        |
| 69 | Boron-doped hydrogenated microcrystalline silicon oxide ( $\mu$ -SiO <sub>x</sub> :H) for application in thin-film silicon solar cells. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 1962-1965                                | 3.9  | 39        |
| 68 | Preparation and measurement of highly efficient a-Si:H single junction solar cells and the advantages of $\mu$ -SiO <sub>x</sub> :H n-layers. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 939-948          | 6.8  | 37        |
| 67 | Oxygen and nitrogen impurities in microcrystalline silicon deposited under optimized conditions: Influence on material properties and solar cell performance. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 074509 <sup>5</sup>       | 2.5  | 37        |
| 66 | Versatility of doped nanocrystalline silicon oxide for applications in silicon thin-film and heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 174, 196-201  | 6.4  | 36        |
| 65 | Development of Thin Film Amorphous Silicon Tandem Junction Based Photocathodes Providing High Open-Circuit Voltages for Hydrogen Production. <i>International Journal of Photoenergy</i> , <b>2014</b> , 2014, 1-10                            | 2.1  | 36        |

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|----|---|------|----|
| 64 | A silicon carbide-based highly transparent passivating contact for crystalline silicon solar cells approaching efficiencies of 24%. <i>Nature Energy</i> , <b>2021</b> , 6, 529-537   | 62.3 | 29 |
| 63 | Microcrystalline silicon n-i-p solar cells prepared with microcrystalline silicon oxide ( $\beta$ -SiO <sub>x</sub> :H) n-layer. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA                       |      | 28 |
| 62 | Changes in electric and optical properties of intrinsic microcrystalline silicon upon variation of the structural composition. <i>Journal of Non-Crystalline Solids</i> , <b>2002</b> , 299-302, 772-777  | 3.9  | 27 |
| 61 | Light-induced degradation of adapted quadruple junction thin film silicon solar cells for photoelectrochemical water splitting. <i>Solar Energy Materials and Solar Cells</i> , <b>2016</b> , 145, 142-147  | 6.4  | 26 |
| 60 | Tension of knotted surgical sutures shows tissue specific rapid loss in a rodent model. <i>BMC Surgery</i> , <b>2011</b> , 11, 36   | 2.3  | 24 |
| 59 | Biocompatibility and biomechanical analysis of elastic TPU threads as new suture material. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2017</b> , 105, 99-106  | 3.5  | 21 |
| 58 | p- and n-type microcrystalline silicon oxide ( $\beta$ -SiO <sub>x</sub> :H) for applications in thin film silicon tandem solar cells. <i>Canadian Journal of Physics</i> , <b>2014</b> , 92, 932-935   | 1.1  | 21 |
| 57 | Advancing tandem solar cells by spectrally selective multilayer intermediate reflectors. <i>Optics Express</i> , <b>2014</b> , 22 Suppl 5, A1270-7  | 3.3  | 20 |
| 56 | Front contact optimization for rear-junction SHJ solar cells with ultra-thin n-type nanocrystalline silicon oxide. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 209, 110471  | 6.4  | 19 |
| 55 | Polyvinylidene Fluoride as a Suture Material: Evaluation of Comet Tail-Like Infiltrate and Foreign Body Granuloma. <i>European Surgical Research</i> , <b>2015</b> , 55, 1-11   | 1.1  | 18 |
| 54 | Improved homogeneity of microcrystalline absorber layer in thin-film silicon tandem solar cells. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2009</b> , 159-160, 44-47                             | 3.1  | 18 |
| 53 | Spin Density and Conductivity in Thin Silicon Films upon Transition from Microcrystalline to Amorphous Growth. <i>Physica Status Solidi A</i> , <b>2001</b> , 186, R4-R6  |      | 18 |
| 52 | N-side illuminated microcrystalline silicon solar cells. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 2841-2843   | 3.4  | 18 |
| 51 | Determination of the optical properties of non-uniformly thick non-hydrogenated sputtered silicon thin films on glass. <i>Thin Solid Films</i> , <b>2004</b> , 460, 247-255   | 2.2  | 17 |
| 50 | Electron spin resonance studies of microcrystalline and amorphous silicon irradiated with high energy electrons. <i>Journal of Non-Crystalline Solids</i> , <b>2006</b> , 352, 1020-1023  | 3.9  | 16 |
| 49 | Elastic mesh with thermoplastic polyurethane filaments preserves effective porosity of textile implants. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2015</b> , 103, 2654-60  | 5.4  | 13 |
| 48 | Electrical detection of electron spin resonance in microcrystalline silicon pin solar cells. <i>Philosophical Magazine</i> , <b>2009</b> , 89, 2655-2676  | 1.6  | 13 |
| 47 | N-type hydrogenated amorphous silicon oxide containing a microcrystalline silicon phase as an intermediate reflector in silicon thin film solar cells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA |      | 12 |

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|----|--|------|----|
| 46 | Optimization of Transparent Passivating Contact for Crystalline Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2020</b> , 10, 46-53  | 3.7  | 11 |
| 45 | Novel series connection concept for thin film solar modules. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2013</b> , 21, 972-979   | 6.8  | 10 |
| 44 | Window layer development for microcrystalline silicon solar cells in n-i-p configuration. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA                         |      | 10 |
| 43 | Influence of Room Temperature Sputtered Al-Doped Zinc Oxide on Passivation Quality in Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 1485-1491                      | 3.7  | 9  |
| 42 | Thin-film silicon solar cells applying optically decoupled back reflectors. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2013</b> , 178, 645-650               | 3.1  | 9  |
| 41 | Transparent-conductive-oxide-free front contacts for high-efficiency silicon heterojunction solar cells. <i>Joule</i> , <b>2021</b> , 5, 1535-1547   | 27.8 | 9  |
| 40 | Laser-induced drug release for local tumor control--a proof of concept. <i>Journal of Surgical Research</i> , <b>2014</b> , 192, 312-6   | 2.5  | 8  |
| 39 | Low-resistivity p-type a-Si:H/AZO hole contact in high-efficiency silicon heterojunction solar cells. <i>Applied Surface Science</i> , <b>2021</b> , 542, 148749   | 6.7  | 8  |
| 38 | Impact of doped microcrystalline silicon oxide layers on crystalline silicon surface passivation. <i>Canadian Journal of Physics</i> , <b>2014</b> , 92, 758-762   | 1.1  | 7  |
| 37 | Performance of superstrate multijunction amorphous silicon-based solar cells using optical layers for current management. <i>Solar Energy Materials and Solar Cells</i> , <b>2009</b> , 93, 973-975              | 6.4  | 7  |
| 36 | Defects and structure of $\mu\text{c-SiOx:H}$ deposited by PECVD. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA   |      | 7  |
| 35 | Electron spin resonance in thin film silicon after low temperature electron irradiation. <i>Thin Solid Films</i> , <b>2007</b> , 515, 7513-7516  | 2.2  | 7  |
| 34 | High Stabilized Efficiency Single and Multi-junction Thin Film Silicon Solar Cells. <i>Energy Procedia</i> , <b>2016</b> , 102, 64-69  | 2.3  | 6  |
| 33 | Improved biocompatibility of profiled sutures through lower macrophages adhesion. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2019</b> , 107, 1772-1778                   | 3.5  | 6  |
| 32 | Influence of Oxygen on Sputtered Titanium-Doped Indium Oxide Thin Films and Their Application in Silicon Heterojunction Solar Cells. <i>Solar Rrl</i> , <b>2021</b> , 5, 2000501                                 | 7.1  | 6  |
| 31 | Improved Infrared Light Management with Transparent Conductive Oxide/Amorphous Silicon Back Reflector in High-Efficiency Silicon Heterojunction Solar Cells. <i>Solar Rrl</i> , <b>2021</b> , 5, 2000576         | 7.1  | 6  |
| 30 | Post-deposition catalytic-doping of microcrystalline silicon thin layer for application in silicon heterojunction solar cell. <i>Thin Solid Films</i> , <b>2017</b> , 635, 63-65                                 | 2.2  | 5  |
| 29 | Electronic and Structural Properties of N-Type Microcrystalline Silicon Oxide (Mc-Sio <sub>x</sub> :H) Films for Applications in Thin Film Silicon Solar Cells. <i>Energy Procedia</i> , <b>2015</b> , 84, 71-77 | 2.3  | 5  |

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| 28 | Bifacial microcrystalline silicon solar cells with improved performance due to $\beta$ -SiO <sub>x</sub> :H doped layers. <i>Canadian Journal of Physics</i> , <b>2014</b> , 92, 913-916  | 1.1 | 5 |
| 27 | Optical and Electrical Effects of p-type $\beta$ -SiO <sub>x</sub> :H in Thin-Film Silicon Solar Cells on Various Front Textures. <i>International Journal of Photoenergy</i> , <b>2014</b> , 2014, 1-10  | 2.1 | 5 |
| 26 | Structure of the ESR spectra of thin film silicon after electron bombardment. <i>Journal of Non-Crystalline Solids</i> , <b>2008</b> , 354, 2329-2332   | 3.9 | 5 |
| 25 | Development of a Transparent Passivated Contact as a Front Side Contact for Silicon Heterojunction Solar Cells <b>2018</b> ,  |     | 5 |
| 24 | Spectrally selective intermediate reflectors for tandem thin-film silicon solar cells <b>2013</b> ,   |     | 4 |
| 23 | Role of bandgap grading for the performance of a-SiGe:H based solar cells <b>1996</b> ,   |     | 4 |
| 22 | Temperature and hydrogen diffusion length in hydrogenated amorphous silicon films on glass while scanning with a continuous wave laser at 532 nm wavelength. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 153103                        | 2.5 | 4 |
| 21 | Analysis of parasitic losses due to intermediate reflectors in silicon tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2017</b> , 163, 185-190   | 6.4 | 3 |
| 20 | Selective Dry Etching of p-Type Si Films for Photolithography Processing of Interdigitated Back Contact Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 1292-1297                                     | 3.7 | 3 |
| 19 | Phosphorus Catalytic Doping on Intrinsic Silicon Thin Films for the Application in Silicon Heterojunction Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 56615-56621  | 9.5 | 2 |
| 18 | Novel interconnection scheme for thin-film silicon solar modules with conductive intermediate reflector. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2015</b> , 9, 103-107   | 2.5 | 2 |
| 17 | Microcrystalline silicon absorber layers prepared at high deposition rates for thin-film tandem solar cells. <i>EPJ Photovoltaics</i> , <b>2013</b> , 4, 45201  | 0.7 | 2 |
| 16 | N-type Microcrystalline Silicon Oxide ( $\beta$ -SiO <sub>x</sub> :H) Window Layers with Combined Anti-reflection Effects for n-i-p Thin Film Silicon Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1245, 1 |     | 2 |
| 15 | Photovoltaics: Nanoengineered Materials and Their Functionality in Solar Cells <b>2017</b> , 181-206  |     | 1 |
| 14 | Influence of gentamicin-coded PVDF suture material on the healing of intestinal anastomosis in a rat model. <i>International Journal of Colorectal Disease</i> , <b>2015</b> , 30, 1571-80  | 3   | 1 |
| 13 | Development of Conductive SiC:H as a New Hydrogenation Technique for Tunnel Oxide Passivating Contacts. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 29986-29992   | 9.5 | 1 |
| 12 | 3D photonic crystals for photon management in solar cells <b>2010</b> ,   |     | 1 |
| 11 | The effect of aging on the dark conductivity and 1/f noise in hydrogenated microcrystalline silicon thin films. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA                                    |     | 1 |

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|----|---|-----|---|
| 10 | Conductance fluctuations in VHF-PECVD grown hydrogenated microcrystalline silicon thin films. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2003</b> , 14, 731-732                                       | 2.1 | 1 |
| 9  | Effect of oxygen and hydrogen flow ratio on indium tin oxide films in rear-junction silicon heterojunction solar cells. <i>Solar Energy</i> , <b>2022</b> , 231, 578-585  | 6.8 | 1 |
| 8  | Light-induced performance of SHJ solar modules under 2000 h illumination. <i>Solar Energy Materials and Solar Cells</i> , <b>2022</b> , 235, 111459   | 6.4 | 1 |
| 7  | Application of Room Temperature Sputtered Al-doped Zinc Oxide in Silicon Heterojunction Solar Cells <b>2018</b> ,   |     | 1 |
| 6  | Function Analysis of the Phosphine Gas Flow for n-Type Nanocrystalline Silicon Oxide Layer in Silicon Heterojunction Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 7544-7551                            | 6.1 | 1 |
| 5  | How Thin Practical Silicon Heterojunction Solar Cells Could Be? Experimental Study under 1 Sun and under Indoor Illumination. <i>Solar Rrl</i> ,2100594   | 7.1 | 1 |
| 4  | Porcine-derived biomaterials in tissue engineering and reconstructive surgery: Considerations and alternatives in Muslim patients. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2019</b> , 13, 253-260 | 4.4 | 0 |
| 3  | Improved tissue integration of a new elastic intraperitoneal stoma mesh prosthesis. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2020</b> , 108, 2250-2257                              | 3.5 |   |
| 2  | Measurement of Impurity Profiles in Microcrystalline Silicon Solar Cells by SIMS. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 609, 1351  |     |   |
| 1  | The Impact of Reflectance Variation in Silicon Heterojunction Solar Cells and Modules on the Perception of Color Differences. <i>IEEE Journal of Photovoltaics</i> , <b>2021</b> , 11, 306-311                                | 3.7 |   |