

# Aãcha Hessler-Wyser

## List of Publications by Year in descending order

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50  
papers

2,371  
citations

279798

23  
h-index

197818

49  
g-index

53  
all docs

53  
docs citations

53  
times ranked

3106  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of secondary electron intensities for dopant profiling in ion implanted semiconductors: a correlative study combining SE, SIMS and ECV methods. <i>Semiconductor Science and Technology</i> , 2021, 36, 085003.	2.0	2
2	Quantification of hydrogen in nanostructured hydrogenated passivating contacts for silicon photovoltaics combining SIMS-APT-TEM: A multiscale correlative approach. <i>Applied Surface Science</i> , 2021, 555, 149650.	6.1	4
3	Passivating Polysilicon Recombination Junctions for Crystalline Silicon Solar Cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021, 15, 2100272.	2.4	6
4	Analysis of hydrogen distribution and migration in fired passivating contacts (FPC). <i>Solar Energy Materials and Solar Cells</i> , 2019, 200, 110018.	6.2	38
5	A method for quantitative nanoscale imaging of dopant distributions using secondary ion mass spectrometry: an application example in silicon photovoltaics. <i>MRS Communications</i> , 2019, 9, 916-923.	1.8	10
6	Field test and electrode optimization of electrodynamic cleaning systems for solar panels. <i>Progress in Photovoltaics: Research and Applications</i> , 2019, 27, 1020-1033.	8.1	15
7	Quantifying competitive grain overgrowth in polycrystalline ZnO thin films. <i>Acta Materialia</i> , 2019, 173, 74-86.	7.9	5
8	Zr-doped indium oxide electrodes: Annealing and thickness effects on microstructure and carrier transport. <i>Physical Review Materials</i> , 2019, 3, .	2.4	23
9	Amorphous gallium oxide grown by low-temperature PECVD. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, 021518.	2.1	13
10	Improved Optics in Monolithic Perovskite/Silicon Tandem Solar Cells with a Nanocrystalline Silicon Recombination Junction. <i>Advanced Energy Materials</i> , 2018, 8, 1701609.	19.5	192
11	New Route for "Cold-Passivation" of Defects in Tin-Based Oxides. <i>Journal of Physical Chemistry C</i> , 2018, 122, 17612-17620.	3.1	15
12	A Low Resistance Calcium/Reduced Titania Passivated Contact for High Efficiency Crystalline Silicon Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1602606.	19.5	97
13	Direct Imaging of Dopant Distribution in Polycrystalline ZnO Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7241-7248.	8.0	7
14	High performance amorphous Zn-Sn-O: impact of composition, microstructure, and thermal treatments in the optoelectronic properties. <i>Proceedings of SPIE</i> , 2017, , .	0.8	1
15	Zinc blende "wurtzite polytypism in nanocrystalline ZnO films. <i>Acta Materialia</i> , 2017, 130, 240-248.	7.9	12
16	ITO/MoOx/a-Si:H(i) Hole-Selective Contacts for Silicon Heterojunction Solar Cells: Degradation Mechanisms and Cell Integration. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 1584-1590.	2.5	52
17	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. <i>Physical Review B</i> , 2017, 95, .	3.2	31
18	Tuning the Optoelectronic Properties of ZnO:Al by Addition of Silica for Light Trapping in High-Efficiency Crystalline Si Solar Cells. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500462.	3.7	16

#	ARTICLE	IF	CITATIONS
19	In Situ TEM Analysis of Organic-Inorganic Metal-Halide Perovskite Solar Cells under Electrical Bias. Nano Letters, 2016, 16, 7013-7018.	9.1	115
20	Strategies for Doped Nanocrystalline Silicon Integration in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1132-1140.	2.5	54
21	An Indium-Free Anode for Large-Area Flexible OLEDs: Defect-Free Transparent Conductive Zinc Tin Oxide. Advanced Functional Materials, 2016, 26, 384-392.	14.9	90
22	Lithium Fluoride Based Electron Contacts for High Efficiency n-Type Crystalline Silicon Solar Cells. Advanced Energy Materials, 2016, 6, 1600241.	19.5	134
23	Solid-liquid interdiffusion (SLID) bonding in the Au-In system: experimental study and 1D modelling. Journal of Micromechanics and Microengineering, 2015, 25, 125016.	2.6	12
24	Optical and structural analysis of sol-gel derived Cu-Co-Mn-Si oxides for black selective solar nanocomposite multilayered coatings. Solar Energy Materials and Solar Cells, 2015, 143, 573-580.	6.2	17
25	Increasing Polycrystalline Zinc Oxide Grain Size by Control of Film Preferential Orientation. Crystal Growth and Design, 2015, 15, 5886-5891.	3.0	19
26	22.5% efficient silicon heterojunction solar cell with molybdenum oxide hole collector. Applied Physics Letters, 2015, 107, .	3.3	360
27	Passivated contacts to n <sup>+</sup> and p <sup>+</sup> silicon based on amorphous silicon and thin dielectrics. , 2014, , .		10
28	Measurements of local chemistry and structure in Ni(O)-YSZ composites during reduction using energy-filtered environmental TEM. Chemical Communications, 2014, 50, 1808.	4.1	9
29	Self-Patterned Nanoparticle Layers for Vertical Interconnects: Application in Tandem Solar Cells. Nano Letters, 2014, 14, 5085-5091.	9.1	17
30	Time-Resolved X-Ray Microtomography Observation of Intermetallic Formation Between Solid Fe and Liquid Al. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4119-4123.	2.2	23
31	A Review of RedOx Cycling of Solid Oxide Fuel Cells Anode. Membranes, 2012, 2, 585-664.	3.0	163
32	Three-dimensional microstructural changes in the Ni-YSZ solid oxide fuel cell anode during operation. Acta Materialia, 2012, 60, 3491-3500.	7.9	93
33	Combined Cr and S poisoning in solid oxide fuel cell cathodes. Journal of Power Sources, 2012, 201, 112-120.	7.8	44
34	Cr-poisoning in (La,Sr)(Co,Fe)O <sub>3</sub> cathodes after 10,000h SOFC stack testing. Journal of Power Sources, 2012, 211, 177-183.	7.8	65
35	Nd-nickelate solid oxide fuel cell cathode sensitivity to Cr and Si contamination. Journal of Power Sources, 2012, 213, 223-228.	7.8	19
36	UV-nanoimprint lithography and large area roll-to-roll texturization with hyperbranched polymer nanocomposites for light-trapping applications. Solar Energy Materials and Solar Cells, 2012, 103, 147-156.	6.2	43

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37	Silicon Filaments in Silicon Oxide for Next-Generation Photovoltaics. <i>Advanced Materials</i> , 2012, 24, 1182-1186.	21.0	118
38	Design of experiment approach applied to reducing and oxidizing tolerance of anode supported solid oxide fuel cell. Part II: Electrical, electrochemical and microstructural characterization of tape-cast cells. <i>Journal of Power Sources</i> , 2011, 196, 8909-8917.	7.8	23
39	Design of experiment approach applied to reducing and oxidizing tolerance of anode supported solid oxide fuel cell. Part I: Microstructure optimization. <i>Journal of Power Sources</i> , 2011, 196, 7058-7069.	7.8	37
40	Air side contamination in Solid Oxide Fuel Cell stack testing. <i>Journal of Power Sources</i> , 2011, 196, 7225-7231.	7.8	51
41	X-ray Imaging and Analysis of 3D Microstructural Changes in Aged Ni-YSZ Anode. <i>ECS Transactions</i> , 2011, 35, 1323-1327.	0.5	5
42	On Potential Application of Coated Ferritic Stainless Steel Grades K41X and K44X in SOFC/HTE Interconnects. <i>ECS Transactions</i> , 2011, 35, 2481-2488.	0.5	3
43	Multi-Scale Assessment of Cr Contamination Levels in SOFC Cathode Environment. <i>ECS Transactions</i> , 2011, 35, 2001-2008.	0.5	5
44	Rapid chromium quantification in solid oxide fuel cell cathodes. <i>Scripta Materialia</i> , 2010, 63, 895-898.	5.2	19
45	Cathode thickness-dependent tolerance to Cr-poisoning in solid oxide fuel cells. <i>Electrochemistry Communications</i> , 2010, 12, 1682-1685.	4.7	19
46	Properties of interfaces in amorphous/crystalline silicon heterojunctions. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 651-656.	1.8	63
47	In situ Reduction and Oxidation of Nickel from Solid Oxide Fuel Cells in a Transmission Electron Microscope. <i>ECS Transactions</i> , 2009, 25, 1985-1992.	0.5	29
48	Sulfur as Pollutant Species on the Cathode Side of a SOFC System. <i>ECS Transactions</i> , 2009, 25, 2845-2852.	0.5	34
49	RedOx study of anode-supported solid oxide fuel cell. <i>Journal of Power Sources</i> , 2009, 193, 55-64.	7.8	131
50	Rapid Preparation and SEM Microstructural Characterization of Nickel- $\gamma$ -Yttria-Stabilized Zirconia Cermet. <i>Journal of the American Ceramic Society</i> , 2008, 91, 3405-3407.	3.8	7