

# Markus Neuschitzer

## List of Publications by Year in descending order

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Version: 2024-02-01

41  
papers

1,820  
citations

304743

22  
h-index

361022

35  
g-index

41  
all docs

41  
docs citations

41  
times ranked

1777  
citing authors

#	ARTICLE	IF	CITATIONS
1	Large Efficiency Improvement in Cu <sub>2</sub> ZnSnSe <sub>4</sub> Solar Cells by Introducing a Superficial Ge Nanolayer. <i>Advanced Energy Materials</i> , 2015, 5, 1501070.	19.5	188
2	How small amounts of Ge modify the formation pathways and crystallization of kesterites. <i>Energy and Environmental Science</i> , 2018, 11, 582-593.	30.8	169
3	Impact of Sn(S,Se) Secondary Phases in Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Solar Cells: a Chemical Route for Their Selective Removal and Absorber Surface Passivation. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 12744-12751.	8.0	132
4	Optimization of CdS buffer layer for high-performance Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells and the effects of light soaking: elimination of crossover and red kink. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 1660-1667.	8.1	110
5	Complex Surface Chemistry of Kesterites: Cu/Zn Reordering after Low Temperature Postdeposition Annealing and Its Role in High Performance Devices. <i>Chemistry of Materials</i> , 2015, 27, 5279-5287.	6.7	99
6	Multiwavelength excitation Raman scattering analysis of bulk and two-dimensional MoS <sub>2</sub> : vibrational properties of atomically thin MoS <sub>2</sub> layers. <i>2D Materials</i> , 2015, 2, 035006.	4.4	97
7	Alkali doping strategies for flexible and light-weight Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 1895-1907.	10.3	88
8	Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells with 10.6% efficiency through innovative absorber engineering with Ge superficial nanolayer. <i>Progress in Photovoltaics: Research and Applications</i> , 2016, 24, 1359-1367.	8.1	77
9	The importance of back contact modification in Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells: The role of a thin MoO <sub>2</sub> layer. <i>Nano Energy</i> , 2016, 26, 708-721.	16.0	77
10	Impact of Na Dynamics at the Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> /CdS Interface During Post Low Temperature Treatment of Absorbers. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 5017-5024.	8.0	72
11	Boosting and Grain Growth Enhancing Ge-Doping Strategy for Cu <sub>2</sub> ZnSnSe <sub>4</sub> Photovoltaic Absorbers. <i>Journal of Physical Chemistry C</i> , 2016, 120, 9661-9670.	3.1	69
12	Systematic compositional changes and their influence on lattice and optoelectronic properties of Cu <sub>2</sub> ZnSnSe <sub>4</sub> kesterite solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016, 144, 579-585.	6.2	62
13	Photovoltaic properties of thin film heterojunctions with cupric oxide absorber. <i>Journal of Renewable and Sustainable Energy</i> , 2013, 5, .	2.0	58
14	Revealing the beneficial effects of Ge doping on Cu <sub>2</sub> ZnSnSe <sub>4</sub> thin film solar cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 11759-11772.	10.3	46
15	Bifacial Kesterite Solar Cells on FTO Substrates. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 11516-11524.	6.7	45
16	Evaluation of AA-CVD deposited phase pure polymorphs of SnS for thin films solar cells. <i>RSC Advances</i> , 2019, 9, 14899-14909.	3.6	42
17	Towards high performance Cd-free CZTSe solar cells with a ZnS(O,OH) buffer layer: the influence of thiourea concentration on chemical bath deposition. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 125602.	2.8	39
18	Earth-abundant absorber based solar cells onto low weight stainless steel substrate. <i>Solar Energy Materials and Solar Cells</i> , 2014, 130, 347-353.	6.2	33

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19	Ultra-thin CdS for highly performing chalcogenides thin film based solar cells. Solar Energy Materials and Solar Cells, 2016, 158, 138-146.	6.2	31
20	Cu <sub>2</sub> ZnSnSe <sub>4</sub> -Based Solar Cells With Efficiency Exceeding 10% by Adding a Superficial Ge Nanolayer: The Interaction Between Ge and Na. IEEE Journal of Photovoltaics, 2016, 6, 754-759.	2.5	28
21	Efficient Sb <sub>2</sub> Se <sub>3</sub> /CdS planar heterojunction solar cells in substrate configuration with (hk0) oriented Sb <sub>2</sub> Se <sub>3</sub> thin films. Solar Energy Materials and Solar Cells, 2020, 215, 110603.	6.2	28
22	Advanced characterization of electrodeposition-based high efficiency solar cells: Non-destructive Raman scattering quantitative assessment of the anion chemical composition in Cu(In,Ga)(S,Se) <sub>2</sub> absorbers. Solar Energy Materials and Solar Cells, 2015, 143, 212-217.	6.2	26
23	C <sub>ZTS</sub> e solar cells developed on polymer substrates: Effects of low-temperature processing. Progress in Photovoltaics: Research and Applications, 2018, 26, 55-68.	8.1	23
24	Temperature dependent electrical characterization of thin film Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. Journal Physics D: Applied Physics, 2016, 49, 085101.	2.8	21
25	Grazing-incidence in-plane X-ray diffraction on ultra-thin organic films using standard laboratory equipment. Journal of Applied Crystallography, 2012, 45, 367-370.	4.5	18
26	X-ray based tools for the investigation of buried interfaces in organic electronic devices. Organic Electronics, 2013, 14, 479-487.	2.6	16
27	Chemically and morphologically distinct grain boundaries in Ge-doped Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells revealed with STEM-EELS. Materials and Design, 2017, 122, 102-109.	7.0	16
28	Towards In-reduced photovoltaic absorbers: Evaluation of zinc-blende CuInSe <sub>2</sub> -ZnSe solid solution. Solar Energy Materials and Solar Cells, 2017, 160, 26-33.	6.2	15
29	Effect of rapid thermal annealing on the Mo back contact properties for Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. Journal of Alloys and Compounds, 2016, 675, 158-162.	5.5	14
30	Temperature dependent electroreflectance study of Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. Materials Science in Semiconductor Processing, 2015, 39, 251-254.	4.0	13
31	Zn-poor Cu <sub>2</sub> ZnSnSe <sub>4</sub> thin films and solar cell devices. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 109-115.	1.8	13
32	Raman scattering quantitative assessment of the anion composition ratio in Zn(O,S) layers for Cd-free chalcogenide-based solar cells. RSC Advances, 2016, 6, 24536-24542.	3.6	13
33	Selenization of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films obtained by pneumatic spray pyrolysis. Journal of Analytical and Applied Pyrolysis, 2016, 120, 45-51.	5.5	11
34	High V <sub>OC</sub> ; Cu <sub>2</sub> ZnSnSe <sub>4</sub> /CdS:Cu based solar cell: Evidences of a metal-insulator-semiconductor (MIS) type heterojunction. , 2014, , .		8
35	Assessment of Chemical and Electronic Surface Properties of the Cu <sub>2</sub> ZnSn(SSe) <sub>4</sub> After Different Etching Procedures by Synchrotron-based Spectroscopies. Energy Procedia, 2015, 84, 8-16.	1.8	6
36	Chemical bath deposition route for the synthesis of ultra-thin CuIn(S,Se) <sub>2</sub> based solar cells. Thin Solid Films, 2015, 582, 74-78.	1.8	6

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37	Large performance improvement in Cu <sub>2</sub> ZnSnSe <sub>4</sub> based solar cells by surface engineering with a nanometric Ge layer. , 2015, , .		4
38	Efficient bifacial Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. , 2015, , .		3
39	1D and 2D numerical simulations of Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. , 2015, , .		3
40	Bi-directional crystallization of Cu <sub>2</sub> ZnSnSe <sub>4</sub> assisted with back/front Ge nanolayers. , 2016, , .		1
41	Cu <sub>2</sub> ZnSnSe <sub>4</sub> based solar cells prepared at high temperatures on Si/SiO <sub>2</sub> sodium-free substrate. , 2015, , .		0