Yudania SÃ¡nchez

List of Publications by Year
in descending order

93 papers	2,155 citations	236612 25 h-index	253896 43 g-index
94 all docs	94 docs citations	94 times ranked	1675 citing authors

#	Article	IF	Citations
1	Large Efficiency Improvement in Cu₂ZnSnSe₄ Solar Cells by Introducing a Superficial Ge Nanolayer. Advanced Energy Materials, 2015, 5, 1501070.	10.2	188
2	Impact of Sn(S,Se) Secondary Phases in Cu₂ZnSn(S,Se)₄ Solar Cells: a Chemical Route for Their Selective Removal and Absorber Surface Passivation. ACS Applied Materials & Interfaces, 2014, 6, 12744-12751.	4.0	132
3	ZnSe Etching of Znâ€Rich Cu₂ZnSnSe₄: An Oxidation Route for Improved Solarâ€Cell Efficiency. Chemistry - A European Journal, 2013, 19, 14814-14822.	1.7	118
4	Optimization of CdS buffer layer for highâ€performance Cu₂ZnSnSe₄ solar cells and the effects of light soaking: elimination of crossover and red kink. Progress in Photovoltaics: Research and Applications, 2015, 23, 1660-1667.	4.4	110
5	Complex Surface Chemistry of Kesterites: Cu/Zn Reordering after Low Temperature Postdeposition Annealing and Its Role in High Performance Devices. Chemistry of Materials, 2015, 27, 5279-5287.	3.2	99
6	Alkali doping strategies for flexible and light-weight Cu₂ZnSnSe₄ solar cells. Journal of Materials Chemistry A, 2016, 4, 1895-1907.	5.2	88
7	The importance of back contact modification in Cu2ZnSnSe4 solar cells: The role of a thin MoO2 layer. Nano Energy, 2016, 26, 708-721.	8.2	77
8	Impact of Na Dynamics at the Cu₂ZnSn(S,Se)₄/CdS Interface During Post Low Temperature Treatment of Absorbers. ACS Applied Materials & Interfaces, 2016, 8, 5017-5024.	4.0	72
9	Formation and impact of secondary phases in Cu-poor Zn-rich Cu2ZnSn(S1âˆ'Se)4 (0â‰yâ‰1) based solar cells. Solar Energy Materials and Solar Cells, 2015, 140, 289-298.	3.0	60
10	Back and front contacts in kesterite solar cells: state-of-the-art and open questions. JPhys Energy, 2019, 1, 044005.	2.3	57
11	Characterization of Cu₂SnS₃polymorphism and its impact on optoelectronic properties. Journal of Materials Chemistry A, 2017, 5, 23863-23871.	5.2	56
12	8.2% pure selenide kesterite thinâ€film solar cells from largeâ€area electrodeposited precursors. Progress in Photovoltaics: Research and Applications, 2016, 24, 38-51.	4.4	52
13	Bifacial Kesterite Solar Cells on FTO Substrates. ACS Sustainable Chemistry and Engineering, 2017, 5, 11516-11524.	3.2	45
14	Is It Possible To Develop Complex Sâ€"Se Graded Band Gap Profiles in Kesterite-Based Solar Cells?. ACS Applied Materials & Interfaces, 2019, 11, 32945-32956.	4.0	42
15	Evaluation of AA-CVD deposited phase pure polymorphs of SnS for thin films solar cells. RSC Advances, 2019, 9, 14899-14909.	1.7	42
16	Towards high performance Cd-free CZTSe solar cells with a ZnS(O,OH) buffer layer: the influence of thiourea concentration on chemical bath deposition. Journal Physics D: Applied Physics, 2016, 49, 125602.	1.3	39
17	Route towards low cost-high efficiency second generation solar cells: current status and perspectives. Journal of Materials Science: Materials in Electronics, 2015, 26, 5562-5573.	1.1	38
18	Compositional paradigms in multinary compound systems for photovoltaic applications: a case study of kesterites. Journal of Materials Chemistry A, 2015, 3, 9451-9455.	5.2	34

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19	Earth-abundant absorber based solar cells onto low weight stainless steel substrate. Solar Energy Materials and Solar Cells, 2014, 130, 347-353.	3.0	33
20	Ultra-thin CdS for highly performing chalcogenides thin film based solar cells. Solar Energy Materials and Solar Cells, 2016, 158, 138-146.	3.0	31
21	Rear Band gap Grading Strategies on Snâ€“Ge-Alloyed Kesterite Solar Cells. ACS Applied Energy Materials, 2020, 3, 10362-10375.	2.5	29
22	Transition-Metal Oxides for Kesterite Solar Cells Developed on Transparent Substrates. ACS Applied Materials & Interfaces, 2020, 12, 33656-33669.	4.0	29
23	Characterization of Cu2ZnSnSe4 solar cells prepared from electrochemically co-deposited Cuâ€“Znâ€“Sn alloy. Solar Energy Materials and Solar Cells, 2015, 132, 21-28.	3.0	28
24	Efficient Sb2Se3/CdS planar heterojunction solar cells in substrate configuration with (hk0) oriented Sb2Se3 thin films. Solar Energy Materials and Solar Cells, 2020, 215, 110603.	3.0	28
25	CZTS solar cells and the possibility of increasing VOC using evaporated Al2O3 at the CZTS/CdS interface. Solar Energy, 2020, 198, 696-703.	2.9	28
26	C<scp>ZTS</scp>e solar cells developed on polymer substrates: Effects of lowâ€temperature processing. Progress in Photovoltaics: Research and Applications, 2018, 26, 55-68.	4.4	23
27	Sputtered ZnSnO Buffer Layers for Kesterite Solar Cells. ACS Applied Energy Materials, 2020, 3, 1883-1891.	2.5	23
28	Efficient Seâ€Rich Sb₂Se₃/CdS Planar Heterojunction Solar Cells by Sequential Processing: Control and Influence of Se Content. Solar Rrl, 2020, 4, 2000141.	3.1	23
29	CdS/ZnS Bilayer Thin Films Used As Buffer Layer in 10%-Efficient Cu₂ZnSnSe₄ Solar Cells. ACS Applied Energy Materials, 2020, 3, 6815-6823.	2.5	21
30	Ge doped Cu2ZnSnS4: An investigation on absorber recrystallization and opto-electronic properties of solar cell. Solar Energy Materials and Solar Cells, 2019, 198, 44-52.	3.0	20
31	Optical and electrical properties of In-doped Cu2ZnSnSe4. Solar Energy Materials and Solar Cells, 2016, 151, 44-51.	3.0	19
32	Optimization of CBD-CdS physical properties for solar cell applications considering a MIS structure. Materials and Design, 2016, 99, 254-261.	3.3	18
33	Pneumatically sprayed Cu₂ZnSnS₄films under Ar and Arâ€“H₂atmosphere. Journal Physics D: Applied Physics, 2014, 47, 245101.	1.3	17
34	Sulfurization of co-evaporated Cu2ZnSnSe4 thin film solar cells: The role of Na. Solar Energy Materials and Solar Cells, 2018, 186, 115-123.	3.0	17
35	Investigation on limiting factors affecting Cu2ZnGeSe4 efficiency: Effect of annealing conditions and surface treatment. Solar Energy Materials and Solar Cells, 2020, 216, 110701.	3.0	17
36	Does Sb₂Se₃ Admit Nonstoichiometric Conditions? How Modifying the Overall Se Content Affects the Structural, Optical, and Optoelectronic Properties of Sb₂Se₃ Thin Films. ACS Applied Materials & Interfaces, 2022, 14, 11222-11234.	4.0	17

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37	Effect of post annealing thermal heating on Cu2ZnSnS4 solar cells processed by sputtering technique. Solar Energy, 2022, 237, 196-202.	2.9	17
38	Insights into the Formation Pathways of Cu₂ZnSnSe₄ Using Rapid Thermal Processes. ACS Applied Energy Materials, 2018, 1, 1981-1989.	2.5	16
39	Optimization of ink-jet printed precursors for Cu2ZnSn(S,Se)4 solar cells. Journal of Alloys and Compounds, 2018, 735, 2462-2470.	2.8	16
40	Towards In-reduced photovoltaic absorbers: Evaluation of zinc-blende CuInSe2-ZnSe solid solution. Solar Energy Materials and Solar Cells, 2017, 160, 26-33.	3.0	15
41	Conformal chalcopyrite based photocathode for solar refinery applications. Solar Energy Materials and Solar Cells, 2016, 158, 184-188.	3.0	14
42	Effect of rapid thermal annealing on the Mo back contact properties for Cu2ZnSnSe4 solar cells. Journal of Alloys and Compounds, 2016, 675, 158-162.	2.8	14
43	Cu2ZnSnSe4 based solar cells combining co-electrodeposition and rapid thermal processing. Solar Energy, 2018, 173, 955-963.	2.9	13
44	Partial substitution of the CdS buffer layer with interplay of fullerenes in kesterite solar cells. Journal of Materials Chemistry C, 2020, 8, 12533-12542.	2.7	13
45	Uncovering details behind the formation mechanisms of Cu2ZnGeSe4 photovoltaic absorbers. Journal of Materials Chemistry C, 2020, 8, 4003-4011.	2.7	13
46	Non-destructive assessment of ZnO:Al window layers in advanced Cu(In,Ga)Se₂photovoltaic technologies. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 56-60.	0.8	12
47	Influence of Zn excess on compositional, structural and vibrational properties of Cu2ZnSn0.5Ge0.5Se4 thin films and their effect on solar cell efficiency. Solar Energy, 2020, 199, 864-871.	2.9	12
48	Selenization of Cu2ZnSnS4 thin films obtained by pneumatic spray pyrolysis. Journal of Analytical and Applied Pyrolysis, 2016, 120, 45-51.	2.6	11
49	Pre-annealing of metal stack precursors and its beneficial effect on kesterite absorber properties and device performance. Solar Energy Materials and Solar Cells, 2018, 185, 226-232.	3.0	11
50	Effect of Na and the back contact on Cu2Zn(Sn,Ge)Se4 thin-film solar cells: Towards semi-transparent solar cells. Solar Energy, 2020, 206, 555-563.	2.9	11
51	Rear interface engineering of kesterite Cu₂ZnSnSe₄ solar cells by adding CuGaSe₂ thin layers. Progress in Photovoltaics: Research and Applications, 2021, 29, 334-343.	4.4	11
52	Vitreous enamel as sodium source for efficient kesterite solar cells on commercial ceramic tiles. Solar Energy Materials and Solar Cells, 2016, 154, 11-17.	3.0	10
53	Routes to develop a [S]/([S]+[Se]) gradient in wide band-gap Cu2ZnGe(S,Se)4 thin-film solar cells. Journal of Alloys and Compounds, 2021, 868, 159253.	2.8	10
54	High efficiency Cu₂ZnSnS₄ solar cells over FTO substrates and their CZTS/CdS interface passivation <i>via</i> thermal evaporation of Al₂O₃. Journal of Materials Chemistry C, 2021, 9, 5356-5361.	2.7	10

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55	Influence of co-electrodeposition parameters in the synthesis of kesterite thin films for photovoltaic. Journal of Alloys and Compounds, 2020, 839, 155679.	2.8	10
56	Processing pathways of Cu2Zn(SnGe)Se4 based solar cells: The role of CdS buffer layer. Materials Science in Semiconductor Processing, 2017, 67, 14-19.	1.9	9
57	Thin film photovoltaic devices prepared with Cu3BiS3 ternary compound. Materials Science in Semiconductor Processing, 2018, 87, 37-43.	1.9	9
58	High V<inf>OC</inf> Cu<inf>2</inf>ZnSnSe<inf>4</inf>/CdS:Cu based solar cell: Evidences of a metal-insulator-semiconductor (MIS) type hetero-junction. , 2014, , .		8
59	Influence of Amorphous Silicon Carbide Intermediate Layer in the Back-Contact Structure of Cu₂ZnSnSe₄Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1327-1332.	1.5	8
60	Over 10% Efficient Wide Bandgap CIGSe Solar Cells on Transparent Substrate with Na Predeposition Treatment. Solar Rrl, 2020, 4, 2000284.	3.1	8
61	Cu₂ZnSnS₄absorber layers deposited by spray pyrolysis for advanced photovoltaic technology. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 126-134.	0.8	7
62	Influence of Sn concentration on the physical properties of CdO:Sn thin films deposited by spray pyrolysis. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3713-3719.	0.8	6
63	Chemical bath deposition route for the synthesis of ultra-thin CuIn(S,Se) 2 based solar cells. Thin Solid Films, 2015, 582, 74-78.	0.8	6
64	Detrimental effect of Sn-rich secondary phases on Cu2ZnSnSe4 based solar cells. Journal of Renewable and Sustainable Energy, 2016, 8, 033502.	0.8	6
65	Characterization of Modules and Arrays with Suns Voc. , 2017, , .		6
66	Cu content dependence of Cu2Zn(SnGe)Se4 solar cells prepared by using sequential thermal evaporation technique of Cu/Sn/Cu/Zn/Ge stacked layers. Journal of Materials Science: Materials in Electronics, 2018, 29, 15363-15368.	1.1	6
67	Enhanced Heteroâ€Junction Quality and Performance of Kesterite Solar Cells by Aluminum Hydroxide Nanolayers and Efficiency Limitation Revealed by Atomicâ€resolution Scanning Transmission Electron Microscopy. Solar Rrl, 2018, 3, 1800279.	3.1	6
68	Defect depth-profiling in kesterite absorber by means of chemical etching and surface analysis. Applied Surface Science, 2021, 540, 148342.	3.1	6
69	Insights on the limiting factors of Cu2ZnGeSe4 based solar cells. Solar Energy Materials and Solar Cells, 2021, 227, 111106.	3.0	6
70	Investigation of selenization process of electrodeposited Cuâ€"Znâ€"Sn precursor for Cu2ZnSnSe4 thin-film solar cells. Thin Solid Films, 2015, 589, 165-172.	0.8	5
71	Wide band gap Cu2ZnGe(S,Se)4 thin films and solar cells: Influence of Na content and incorporation method. Solar Energy, 2021, 226, 251-259.	2.9	5
72	Properties of sputter-grown CuGaS2 absorber and CuGaS2/Cd1-xZnxS buffer heterointerface for solar cell application. Thin Solid Films, 2022, 743, 139063.	0.8	5

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73	Large performance improvement in Cu2ZnSnSe4 based solar cells by surface engineering with a nanometric Ge layer. , 2015, , .		4
74	Cationic compositional optimization of CuIn(S 1-y Se y) 2 ultra-thin layers obtained by chemical bath deposition. Applied Surface Science, 2017, 404, 57-62.	3.1	4
75	Study of CBD-CdS/CZTGSe solar cells using different Cd sources: behavior of devices as a MIS structure. Journal of Materials Science: Materials in Electronics, 2017, 28, 18706-18714.	1.1	4
76	The effect of annealing temperature on Cu₂ZnGeSe₄ thin films and solar cells grown on transparent substrates. JPhys Materials, 2021, 4, 034009.	1.8	4
77	Efficient bifacial Cu2ZnSnSe4 solar cells. , 2015, , .		3
78	Overcoming the Voc limitation of CZTSe solar cells. , 2016, , .		2
79	Tailoring doping of efficient Sb2Se3 solar cells in substrate configuration by low temperature post deposition selenization process. , 2018, , .		2
80	Insights on the Thermal Stability of the Sb₂Se₃ Quasiâ€1D Photovoltaic Technology. Solar Rrl, 2021, 5, 2100517.	3.1	2
81	High efficiency Cu2ZnSnSe4:In doped based solar cells. , 2015, , .		1
82	Advanced hybrid buffer layers for Cu<inf>2</inf>ZnSnSe<inf>4</inf> solar cells. , 2016, , .		1
83	Solar Probe Plus Array Reliability. , 2017, , .		1
84	Reference: Proceedings Of the IEEE PVSC Conf., 2017 The Development of a DC Breakdown Voltage Test for Photovoltaic Insulating Materials. , 2017, , .		1
85	An innovative alkali doping strategy for Cu<inf>2</inf>ZnSnSe<inf>4</inf> through the CdS buffer layer. , 2018, , .		1
86	An Insight into Pure Ge Based Kesterite Synthesis. , 2019, , .		1
87	Bromine etching of kesterite thin films: perspectives in depth defect profiling and device performance improvement. , 2021, , .		1
88	UV-Raman scattering assessment of ZnO:Al layers from Cu(In, Ga)Se<inf>2</inf> based solar cells: Application for fast on-line process monitoring. , 2013, , .		0
89	Cu2ZnSnSe4 based solar cells prepared at high temperatures on Si/SiO2 sodium-free substrate. , 2015, , .		0
90	Development of Cu<inf>2</inf>SnS<inf>3</inf> based solar cells by a sequential process. , 2016, , .		0

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91	CdS bi-layers for optimized CdS/Cu<inf>2</inf>ZnSnSe<inf>4</inf> solar cells. , 2016, , .		0
92	Large-Area Junction Damage in Potential-Induced Degradation of c-Si Solar Modules. , 2017, , .		0
93	Numerical modeling and experimental realization of wide bandgap ZnTe-based solar cells for semi-transparent PV application. , 2019, , .		0