Dimitrios Hariskos

List of Publications by Year
in descending order

66 papers	6,126 citations	279798 23 h-index	175258 52 g-index
69 all docs	69 docs citations	69 times ranked	4355 citing authors

#	Article	IF	Citations
1	New world record efficiency for Cu(In,Ga)Se₂ thinâ€film solar cells beyond 20%. Progress in Photovoltaics: Research and Applications, 2011, 19, 894-897.	8.1	1,888
2	Effects of heavy alkali elements in Cu(In,Ga)Se₂ solar cells with efficiencies up to 22.6%. Physica Status Solidi - Rapid Research Letters, 2016, 10, 583-586.	2.4	1,285
3	Properties of Cu(In,Ga)Se₂ solar cells with new record efficiencies up to 21.7%. Physica Status Solidi - Rapid Research Letters, 2015, 9, 28-31.	2.4	813
4	Compositional investigation of potassium doped Cu(In,Ga)Se₂ solar cells with efficiencies up to 20.8%. Physica Status Solidi - Rapid Research Letters, 2014, 8, 219-222.	2.4	483
5	Improved Photocurrent in Cu(In,Ga)Se₂ Solar Cells: From 20.8% to 21.7% Efficiency with CdS Buffer and 21.0% Cd-Free. IEEE Journal of Photovoltaics, 2015, 5, 1487-1491.	2.5	178
6	Gallium gradients in Cu(In,Ga)Se₂thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 717-733.	8.1	122
7	New reaction kinetics for a highâ€rate chemical bath deposition of the Zn(S,O) buffer layer for Cu(In,Ga)Se₂â€based solar cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 534-542.	8.1	114
8	Heavy Alkali Treatment of Cu(In,Ga)Se₂Solar Cells: Surface versus Bulk Effects. Advanced Energy Materials, 2020, 10, 1903752.	19.5	107
9	High-efficiency Cu(In,Ga)Se2 cells and modules. Solar Energy Materials and Solar Cells, 2013, 119, 51-58.	6.2	106
10	Direct evidence for grain boundary passivation in Cu(In,Ga)Se2 solar cells through alkali-fluoride post-deposition treatments. Nature Communications, 2019, 10, 3980.	12.8	95
11	Advances in Cost-Efficient Thin-Film Photovoltaics Based on Cu(In,Ga)Se2. Engineering, 2017, 3, 445-451.	6.7	79
12	High-efficiency Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2017, 633, 13-17.	1.8	58
13	Rubidium distribution at atomic scale in high efficient Cu(In,Ga)Se2 thin-film solar cells. Applied Physics Letters, 2018, 112, .	3.3	57
14	CIGS Cells and Modules With High Efficiency on Glass and Flexible Substrates. IEEE Journal of Photovoltaics, 2014, 4, 440-446.	2.5	56
15	Substitution of the CdS buffer layer in CIGS thin-film solar cells. Vakuum in Forschung Und Praxis, 2014, 26, 23-27.	0.1	55
16	Microscopic origins of performance losses in highly efficient Cu(In,Ga)Se2 thin-film solar cells. Nature Communications, 2020, 11, 4189.	12.8	51
17	Quality and stability of compound indium sulphide as source material for buffer layers in Cu(In,Ga)Se2 solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 148-152.	6.2	50
18	Comparison of charge distributions in CIGS thin-film solar cells with ZnS/(Zn,Mg)O and CdS/i-ZnO buffers. Thin Solid Films, 2011, 519, 7549-7552.	1.8	47

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19	Influence of RbF post deposition treatment on heterojunction and grain boundaries in high efficient (21.1%) Cu(In,Ga)Se2 solar cells. Nano Energy, 2019, 60, 103-110.	16.0	46
20	Chemical bath deposition of Zn(O,S) and CdS buffers: Influence of Cu(In,Ga)Se2 grain orientation. Applied Physics Letters, 2013, 102, .	3.3	40
21	Method for a High-Rate Solution Deposition of Zn(O,S) Buffer Layer for High-Efficiency Cu(In,Ga)Se₂-Based Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1321-1326.	2.5	33
22	Impact of annealing on Cu(In,Ga)Se2 solar cells with Zn(O,S)/(Zn,Mg)O buffers. Thin Solid Films, 2013, 535, 180-183.	1.8	30
23	Depth profiling with SNMS and SIMS of Zn(O,S) buffer layers for Cu(In,Ga)Se₂ thinâ€film solar cells. Surface and Interface Analysis, 2013, 45, 1811-1820.	1.8	26
24	Evidence for Chemical and Electronic Nonuniformities in the Formation of the Interface of RbF-Treated Cu(In,Ga)Se₂ with CdS. ACS Applied Materials & Interfaces, 2017, 9, 44173-44180.	8.0	25
25	Verification of phototransistor model for Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2015, 582, 392-396.	1.8	23
26	Rubidium Fluoride Post-Deposition Treatment: Impact on the Chemical Structure of the Cu(In,Ga)Se₂ Surface and CdS/Cu(In,Ga)Se₂ Interface in Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 37602-37608.	8.0	19
27	Valence band offsets at Cu(In,Ga)Se₂/Zn(O,S) interfaces. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1972-1980.	1.8	17
28	Impact of RbF-PDT on Cu(In,Ga)Se₂ solar cells with CdS and Zn(O,S) buffer layers. EPJ Photovoltaics, 2020, 11, 8.	1.6	17
29	Improved growth of solution-deposited thin films on polycrystalline Cu(In,Ga)Se₂. Physica Status Solidi - Rapid Research Letters, 2016, 10, 300-304.	2.4	16
30	Accelerated Aging and Contact Degradation of CIGS Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 514-519.	2.5	15
31	A closer look at initial CdS growth on high-efficiency Cu(In, Ga)Se<inf>2</inf> absorbers using surface-sensitive methods. , 2016, , .		14
32	UVâ€Selective Optically Transparent Zn(O,S)â€Based Solar Cells. Solar Rrl, 2020, 4, 2000470.	5.8	12
33	Influence of Substrate Temperature during InxSy Sputtering on Cu(In,Ga)Se2/Buffer Interface Properties and Solar Cell Performance. Applied Sciences (Switzerland), 2020, 10, 1052.	2.5	12
34	Electrostatic potential fluctuations and lightâ€soaking effects in Cu(In,Ga)Se₂ solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 919-934.	8.1	11
35	Improved photocurrent in Cu(In,Ga)Se2 solar cells: From 20.8% to 21.7% efficiency. , 2015, , .		10
36	Thermodynamic limitations for alkali metals in Cu(In,Ga)Se₂. Journal of Materials Research, 2017, 32, 3789-3800.	2.6	10

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37	Resonant Raman scattering based approaches for the quantitative assessment of nanometric ZnMgO layers in high efficiency chalcogenide solar cells. Scientific Reports, 2017, 7, 1144.	3.3	9
38	Effects of Sputtered In_xS_y Buffer on CIGS with RbF Post-Deposition Treatment. ECS Journal of Solid State Science and Technology, 2021, 10, 055006.	1.8	8
39	Photo-assisted electrodeposition of a ZnO front contact on a p/n junction. Electrochimica Acta, 2016, 220, 176-183.	5.2	6
40	Nearâ€Surface [Ga]/([In]+[Ga]) Composition in Cu(In,Ga)Se 2 Thinâ€Film Solar Cell Absorbers: An Overlooked Material Feature. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800856.	1.8	6
41	Giant V oc Boost of Lowâ€Temperature Annealed Cu(In,Ga)Se 2 with Sputtered Zn(O,S) Buffers. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900145.	2.4	6
42	Structural and microchemical characterization of Cu(In,Ga)Se2 solar cells with solution-grown CdS, Zn(O,S), and Inx(O,S)y buffers. Thin Solid Films, 2019, 671, 133-138.	1.8	6
43	Evaluation of defect formation in chalcopyrite compounds under Cu-poor conditions by advanced structural and vibrational analyses. Acta Materialia, 2022, 223, 117507.	7.9	5
44	Effects of material properties of bandâ€gapâ€graded Cu(In,Ga)Se₂ thin films on the onset of the quantum efficiency spectra of corresponding solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 1238-1246.	8.1	5
45	Influence of sputtered gallium oxide as buffer or high-resistive layer on performance of Cu(In,Ga)Se2-based solar cells. Journal of Materials Research, 2022, 37, 1825-1834.	2.6	5
46	Short-circuit current improvement of CuGaSe2 solar cells with a ZnS/(Zn,Mg)O buffer combination. Physica Status Solidi - Rapid Research Letters, 2008, 2, 80-82.	2.4	4
47	Characterization of solution-grown and sputtered In_x(O,S)_y buffer layers in Cu(In,Ga)Se₂ solar cells by analytical TEM. Semiconductor Science and Technology, 2020, 35, 034001.	2.0	4
48	The Application of Sputtered Gallium Oxide as Buffer for Cu(In,Ga)Se₂ Solar Cells. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100180.	2.4	4
49	Using the inelastic background in hard x-ray photoelectron spectroscopy for a depth-resolved analysis of the CdS/Cu(In,Ga)Se2 interface. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	4
50	Photoluminescence studies of polycrystalline Cu(In,Ga)Se2: Lateral inhomogeneities beyond Abbe's diffraction limit. Journal of Applied Physics, 2015, 118, .	2.5	3
51	IZO or IOH Window Layers Combined with Zn(O,S) and CdS Buffers for Cu(In,Ga)Se₂ Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700688.	1.8	3
52	Accelerated aging and contact degradation of CIGS solar cells. , 2012, , .		2
53	Long term endurance test and contact degradation of CIGS solar cells. , 2013, , .		2
54	Electrodeposition of ZnO-doped films as window layer for Cd-free CIGS-based solar cells. , 2016, , .		2

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55	Averaged angle-resolved electroreflectance spectroscopy on Cu(In,Ga)Se2 solar cells: Determination of buffer bandgap energy and identification of secondary phase. Applied Physics Letters, 2019, 115, .	3.3	2
56	Influence of Cu(In,Ga)Se<inf>2</inf> grain orientation on solution growth of Zn(O,S) and CdS. , 2012, , .		1
57	Fluctuations in net doping and lifetime in Cu(In,Ga)Se2 solar cells. , 2018, , .		1
58	Numerical simulation of CIGS solar cells with Zn(O,S) or (Cd,Zn)S buffers and (Zn,Mg)O as high-resistive layer. , 2019, , .		1
59	Deuterium Markers in CdS and Zn(O,S) Buffer Layers Deposited by Solution Growth for Cu(In,Ga)Se₂ Thinâ€Film Solar Cells. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700288.	2.4	0
60	Increased and FF in ZnO1-xSx-buffered CuIn1-xGaxSe2 Solar Cells by Cadmium Partial Electrolyte Treatment. , 2017, , .		0
61	Notice of Removal Method for a high-rate solution deposition of Zn(O,S) buffer layer for high efficiency Cu(In,Ga)Se2-based solar cells. , 2017, , .		0
62	Microscopic materials properties of a high-efficiency Cu(In,Ga)Se2 solar cell - a case study. , 2018, , .		0
63	Electroreflectance spectroscopy on CdS and Zn(O,S) buffer layers in Cu(In,Ga)Se<inf>2</inf> solar cells: Suppression of interference effects. , 2018, , .		0
64	Modification of electronic grain boundary properties of Cu(In, Ga)Se<inf>2</inf> by alkali-fluoride post deposition treatments. , 2018, , .		0
65	Electroreflectance studies of Zn(O,S) buffer layers in Cu(In,Ga)Se2 solar cells: Bandgap energies and secondary phases. , 2019, , .		0
66	Correlative APT/EBIC investigations of sputtered In-based and Zn(O,S) buffers for CIGS solar cells. , 2020, , .		0