

Jonathan J S Scragg

List of Publications by Year in descending order

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159358

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67
times ranked

2958
citing authors

#	ARTICLE	IF	CITATIONS
1	Chalcogenide Perovskites: Tantalizing Prospects, Challenging Materials. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	58
2	Synthesis of BaZrS ₃ Perovskite Thin Films at a Moderate Temperature on Conductive Substrates. <i>ACS Applied Energy Materials</i> , 2022, 5, 6335-6343.	2.5	27
3	Alkali Dispersion in (Ag,Cu)(In,Ga)Se ₂ Thin Film Solar Cells—Insight from Theory and Experiment. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 7188-7199.	4.0	22
4	Band Tails and Cu—Zn Disorder in Cu ₂ ZnSnS ₄ Solar Cells. <i>ACS Applied Energy Materials</i> , 2020, 3, 7520-7526.	2.5	26
5	Chalcogenide Perovskite BaZrS ₃ : Thin Film Growth by Sputtering and Rapid Thermal Processing. <i>ACS Applied Energy Materials</i> , 2020, 3, 2762-2770.	2.5	59
6	Wide-gap (Ag,Cu)(In,Ga)Se ₂ solar cells with different buffer materials—A path to a better heterojunction. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 237-250.	4.4	47
7	Prospects for defect engineering in Cu ₂ ZnSnS ₄ solar absorber films. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15864-15874.	5.2	15
8	Thermodynamic stability, phase separation and Ag grading in (Ag,Cu)(In,Ga)Se ₂ solar absorbers. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8740-8751.	5.2	29
9	Back and front contacts in kesterite solar cells: state-of-the-art and open questions. <i>JPhys Energy</i> , 2019, 1, 044005.	2.3	57
10	Antimony-Doped Tin Oxide as Transparent Back Contact in Cu ₂ ZnSnS ₄ Thin-Film Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1900542.	0.8	3
11	Structural and Electronic Properties of Cu ₂ MnSnS ₄ from Experiment and First-Principles Calculations. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800743.	0.7	25
12	Sulfurization of Co-Evaporated Cu(In,Ga)Se ₂ as a Postdeposition Treatment. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 604-610.	1.5	21
13	The effect of stoichiometry on Cu-Zn ordering kinetics in Cu ₂ ZnSnS ₄ thin films. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	35
14	The Single Phase Region in Cu ₂ ZnSnS ₄ Thin Films from Theory and Combinatorial Experiments. <i>Chemistry of Materials</i> , 2018, 30, 4624-4638.	3.2	19
15	TiN Interlayers with Varied Thickness in Cu ₂ ZnSnS ₄ Thin Film Solar Cells: Effect on Na Diffusion, Back Contact Stability, and Performance. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1800491.	0.8	13
16	Thio-olivine Mn ₂ SiS ₄ thin films by reactive magnetron sputtering: Structural and optical properties with insights from first principles calculations. <i>Materials and Design</i> , 2018, 152, 110-118.	3.3	4
17	Investigation of the SnS/Cu ₂ ZnSnS ₄ Interfaces in Kesterite Thin-Film Solar Cells. <i>ACS Energy Letters</i> , 2017, 2, 976-981.	8.8	40
18	In Situ Monitoring of Cu ₂ ZnSnS ₄ Absorber Formation With Raman Spectroscopy During Mo/Cu ₂ SnS ₃ /ZnS Thin-Film Stack Annealing. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 906-912.	1.5	6

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19	Evolution of Cu ₂ ZnSnS ₄ during Non-Equilibrium Annealing with Quasi-in Situ Monitoring of Sulfur Partial Pressure. Chemistry of Materials, 2017, 29, 3713-3722.	3.2	40
20	Characterization of TiN back contact interlayers with varied thickness for Cu ₂ ZnSn(S,Se) ₄ thin film solar cells. Thin Solid Films, 2017, 639, 91-97.	0.8	15
21	Calculation of point defect concentration in Cu ₂ ZnSnS ₄ : Insights into the high-temperature equilibrium and quenching. Journal of Applied Physics, 2017, 122, .	1.1	5
22	Evolution of Na-S(-O) compounds on Cu ₂ ZnSnS ₄ absorber surface and its effect on CdS growth. , 2016, , .		0
23	Order-disorder transition in B-type Cu ₂ ZnSnS ₄ and limitations of ordering through thermal treatments. Applied Physics Letters, 2016, 108, .	1.5	46
24	Evolution of Na-S(-O) Compounds on the Cu ₂ ZnSnS ₄ Absorber Surface and Their Effects on CdS Thin Film Growth. ACS Applied Materials & Interfaces, 2016, 8, 18600-18607.	4.0	30
25	Optical properties of reactively sputtered Cu ₂ ZnSnS ₄ solar absorbers determined by spectroscopic ellipsometry and spectrophotometry. Solar Energy Materials and Solar Cells, 2016, 149, 170-178.	3.0	35
26	Cu-Zn disorder and band gap fluctuations in Cu ₂ ZnSn(S,Se) ₄ : Theoretical and experimental investigations. Physica Status Solidi (B): Basic Research, 2016, 253, 247-254.	0.7	173
27	Reduced interface recombination in Cu ₂ ZnSnS ₄ solar cells with atomic layer deposition ZnO buffer layers. Applied Physics Letters, 2015, 107, .	1.5	99
28	Potential of CuS cap to prevent decomposition of Cu ₂ ZnSnS ₄ during annealing. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2843-2849.	0.8	11
29	Influence of the Cu ₂ ZnSnS ₄ absorber thickness on thin film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2889-2896.	0.8	37
30	Raman spectroscopy study on in-situ monitoring of Cu ₂ ZnSnS ₄ synthesis. , 2015, , .		2
31	Interference effects in photoluminescence spectra of Cu ₂ ZnSnS ₄ and Cu(In,Ga)Se ₂ thin films. Journal of Applied Physics, 2015, 118, .	1.1	45
32	Photoluminescence investigation of Cu ₂ ZnSnS ₄ thin film solar cells. Thin Solid Films, 2015, 582, 146-150.	0.8	19
33	Reactively sputtered films in the Cu _x S _{1-x} ZnS _{1-y} Sn _y system: From metastability to equilibrium. Thin Solid Films, 2015, 582, 208-214.	0.8	17
34	Thin-film Photovoltaics Based on Earth-abundant Materials. RSC Energy and Environment Series, 2014, , 118-185.	0.2	4
35	Rapid annealing of reactively sputtered precursors for Cu ₂ ZnSnS ₄ solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 10-17.	4.4	131
36	A low-temperature order-disorder transition in Cu ₂ ZnSnS ₄ thin films. Applied Physics Letters, 2014, 104, .	1.5	315

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37	Reactive sputtering of Cu ₂ ZnSnS ₄ thin films – Target effects on the deposition process stability. Surface and Coatings Technology, 2014, 240, 281-285.	2.2	6
38	Zn(O, S) Buffer Layers and Thickness Variations of CdS Buffer for Cu ₂ ZnSnS ₄ Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 465-469.	1.5	82
39	Effects of Back Contact Instability on Cu ₂ ZnSnS ₄ Devices and Processes. Chemistry of Materials, 2013, 25, 3162-3171.	3.2	263
40	Annealing behavior of reactively sputtered precursor films for Cu ₂ ZnSnS ₄ solar cells. Thin Solid Films, 2013, 535, 22-26.	0.8	43
41	Diffusion of Fe and Na in co-evaporated Cu(In,Ga)Se ₂ devices on steel substrates. Thin Solid Films, 2013, 535, 188-192.	0.8	13
42	Secondary compound formation revealed by transmission electron microscopy at the Cu ₂ ZnSnS ₄ /Mo interface. Thin Solid Films, 2013, 535, 31-34.	0.8	38
43	Cu out-diffusion in kesterites – A transmission electron microscopy specimen preparation artifact. Applied Physics Letters, 2013, 102, .	1.5	22
44	A Detrimental Reaction at the Molybdenum Back Contact in Cu ₂ ZnSn(S,Se) ₄ Thin-Film Solar Cells. Journal of the American Chemical Society, 2012, 134, 19330-19333.	6.6	353
45	Reactive sputtering of precursors for Cu ₂ ZnSnS ₄ thin film solar cells. Thin Solid Films, 2012, 520, 7093-7099.	0.8	55
46	Thermodynamic Aspects of the Synthesis of Thin-Film Materials for Solar Cells. ChemPhysChem, 2012, 13, 3035-3046.	1.0	173
47	Influence of precursor sulfur content on film formation and compositional changes in Cu ₂ ZnSnS ₄ films and solar cells. Solar Energy Materials and Solar Cells, 2012, 98, 110-117.	3.0	172
48	Chemical Insights into the Instability of Cu ₂ ZnSnS ₄ Films during Annealing. Chemistry of Materials, 2011, 23, 4625-4633.	3.2	416
49	The Influences of Sulfurisation Variables and Precursor Composition on the Development of the CZTS Phase. , 2011, , 111-153.		0
50	Electrodeposition of Metallic Precursors. , 2011, , 9-57.		1
51	Copper Zinc Tin Sulfide Thin Films for Photovoltaics. , 2011, , .		38
52	Effects of different needles and substrates on CuInS ₂ deposited by electrostatic spray deposition. Thin Solid Films, 2011, 519, 3544-3551.	0.8	8
53	CuInSe ₂ precursor films electro-deposited directly onto MoSe ₂ . Journal of Electroanalytical Chemistry, 2010, 645, 16-21.	1.9	8
54	Triple Phase Boundary Photovoltammetry: Resolving Rhodamine B Reactivity in 4-(3-Phenylpropyl)pyridine Microdroplets. ChemPhysChem, 2010, 11, 2862-2870.	1.0	11

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55	A 3.2% efficient Kesterite device from electrodeposited stacked elemental layers. Journal of Electroanalytical Chemistry, 2010, 646, 52-59.	1.9	230
56	High Throughput X-ray Diffraction Analysis of Combinatorial Polycrystalline Thin Film Libraries. Analytical Chemistry, 2010, 82, 4564-4569.	3.2	5
57	Synthesis and characterization of Cu ₂ ZnSnS ₄ absorber layers by an electrodeposition-annealing route. Thin Solid Films, 2009, 517, 2481-2484.	0.8	233
58	Cu ₂ ZnSnSe ₄ thin film solar cells produced by selenisation of magnetron sputtered precursors. Progress in Photovoltaics: Research and Applications, 2009, 17, 315-319.	4.4	276
59	Shallow defects in Cu ₂ ZnSnS ₄ . Physica B: Condensed Matter, 2009, 404, 4949-4952.	1.3	80
60	A review of the challenges facing kesterite based thin film solar cells. , 2009, , .		16
61	Towards Sustainable Photovoltaic Solar Energy Conversion: Studies Of New Absorber Materials. ECS Transactions, 2009, 19, 179-187.	0.3	10
62	New routes to sustainable photovoltaics: evaluation of Cu ₂ ZnSnS ₄ as an alternative absorber material. Physica Status Solidi (B): Basic Research, 2008, 245, 1772-1778.	0.7	322
63	Towards sustainable materials for solar energy conversion: Preparation and photoelectrochemical characterization of Cu ₂ ZnSnS ₄ . Electrochemistry Communications, 2008, 10, 639-642.	2.3	264