Jonathan J S Scragg

List of Publications by Year
in descending order

63 papers	4,678 citations	159585 30 h-index	138484 58 g-index
67 all docs	67 docs citations	67 times ranked	2958 citing authors

#	Article	IF	Citations
1	Chemical Insights into the Instability of Cu₂ZnSnS₄ Films during Annealing. Chemistry of Materials, 2011, 23, 4625-4633.	6.7	416
2	A Detrimental Reaction at the Molybdenum Back Contact in Cu₂ZnSn(S,Se)₄ Thin-Film Solar Cells. Journal of the American Chemical Society, 2012, 134, 19330-19333.	13.7	353
3	New routes to sustainable photovoltaics: evaluation of Cu₂ZnSnS₄ as an alternative absorber material. Physica Status Solidi (B): Basic Research, 2008, 245, 1772-1778.	1.5	322
4	A low-temperature order-disorder transition in Cu2ZnSnS4 thin films. Applied Physics Letters, 2014, 104, .	3.3	315
5	Cu₂ZnSnSe₄ thin film solar cells produced by selenisation of magnetron sputtered precursors. Progress in Photovoltaics: Research and Applications, 2009, 17, 315-319.	8.1	276
6	Towards sustainable materials for solar energy conversion: Preparation and photoelectrochemical characterization of Cu2ZnSnS4. Electrochemistry Communications, 2008, 10, 639-642.	4.7	264
7	Effects of Back Contact Instability on Cu₂ZnSnS₄ Devices and Processes. Chemistry of Materials, 2013, 25, 3162-3171.	6.7	263
8	Synthesis and characterization of Cu2ZnSnS4 absorber layers by an electrodeposition-annealing route. Thin Solid Films, 2009, 517, 2481-2484.	1.8	233
9	A 3.2% efficient Kesterite device from electrodeposited stacked elemental layers. Journal of Electroanalytical Chemistry, 2010, 646, 52-59.	3.8	230
10	Thermodynamic Aspects of the Synthesis of Thinâ€Film Materials for Solar Cells. ChemPhysChem, 2012, 13, 3035-3046.	2.1	173
11	Cuâ€"Zn disorder and band gap fluctuations in Cu₂ZnSn(S,Se)₄: Theoretical and experimental investigations. Physica Status Solidi (B): Basic Research, 2016, 253, 247-254.	1.5	173
12	Influence of precursor sulfur content on film formation and compositional changes in Cu2ZnSnS4 films and solar cells. Solar Energy Materials and Solar Cells, 2012, 98, 110-117.	6.2	172
13	Rapid annealing of reactively sputtered precursors for Cu₂ZnSnS₄ solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 10-17.	8.1	131
14	Reduced interface recombination in Cu2ZnSnS4 solar cells with atomic layer deposition Zn1â^'<i>x</i>Sn<i>x</i>O<i>y</i> buffer layers. Applied Physics Letters, 2015, 107, .	3.3	99
15	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.	2.5	82
16	Shallow defects in Cu2ZnSnS4. Physica B: Condensed Matter, 2009, 404, 4949-4952.	2.7	80
17	Chalcogenide Perovskite BaZrS₃: Thin Film Growth by Sputtering and Rapid Thermal Processing. ACS Applied Energy Materials, 2020, 3, 2762-2770.	5.1	59
18	Chalcogenide Perovskites: Tantalizing Prospects, Challenging Materials. Advanced Optical Materials, 2022, 10, .	7.3	58

#	ARTICLE	IF	CITATIONS
19	Back and front contacts in kesterite solar cells: state-of-the-art and open questions. JPhys Energy, 2019, 1, 044005.	5.3	57
20	Reactive sputtering of precursors for Cu2ZnSnS4 thin film solar cells. Thin Solid Films, 2012, 520, 7093-7099.	1.8	55
21	Wideâ€gap (Ag,Cu)(In,Ga)Se₂ solar cells with different buffer materialsâ€"A path to a better heterojunction. Progress in Photovoltaics: Research and Applications, 2020, 28, 237-250.	8.1	47
22	Order-disorder transition in B-type Cu2ZnSnS4 and limitations of ordering through thermal treatments. Applied Physics Letters, 2016, 108, .	3.3	46
23	Interference effects in photoluminescence spectra of Cu2ZnSnS4 and Cu(In,Ga)Se2 thin films. Journal of Applied Physics, 2015, 118, .	2.5	45
24	Annealing behavior of reactively sputtered precursor films for Cu2ZnSnS4 solar cells. Thin Solid Films, 2013, 535, 22-26.	1.8	43
25	Investigation of the SnS/Cu₂ZnSnS₄ Interfaces in Kesterite Thin-Film Solar Cells. ACS Energy Letters, 2017, 2, 976-981.	17.4	40
26	Evolution of Cu₂ZnSnS₄ during Non-Equilibrium Annealing with Quasi-in Situ Monitoring of Sulfur Partial Pressure. Chemistry of Materials, 2017, 29, 3713-3722.	6.7	40
27	Copper Zinc Tin Sulfide Thin Films for Photovoltaics. , 2011, , .		38
28	Secondary compound formation revealed by transmission electron microscopy at the Cu2ZnSnS4/Mo interface. Thin Solid Films, 2013, 535, 31-34.	1.8	38
29	Influence of the Cu₂ZnSnS₄ absorber thickness on thin film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2889-2896.	1.8	37
30	Optical properties of reactively sputtered Cu2ZnSnS4 solar absorbers determined by spectroscopic ellipsometry and spectrophotometry. Solar Energy Materials and Solar Cells, 2016, 149, 170-178.	6.2	35
31	The effect of stoichiometry on Cu-Zn ordering kinetics in Cu2ZnSnS4 thin films. Journal of Applied Physics, 2018, 123, .	2.5	35
32	Evolution of Naâ€"S(â€"O) Compounds on the Cu₂ZnSnS₄ Absorber Surface and Their Effects on CdS Thin Film Growth. ACS Applied Materials & Interfaces, 2016, 8, 18600-18607.	8.0	30
33	Thermodynamic stability, phase separation and Ag grading in (Ag,Cu)(In,Ga)Se₂ solar absorbers. Journal of Materials Chemistry A, 2020, 8, 8740-8751.	10.3	29
34	Synthesis of BaZrS₃ Perovskite Thin Films at a Moderate Temperature on Conductive Substrates. ACS Applied Energy Materials, 2022, 5, 6335-6343.	5.1	27
35	Band Tails and Cuâ€"Zn Disorder in Cu₂ZnSnS₄ Solar Cells. ACS Applied Energy Materials, 2020, 3, 7520-7526.	5.1	26
36	Structural and Electronic Properties of Cu₂MnSnS₄ from Experiment and Firstâ€Principles Calculations. Physica Status Solidi (B): Basic Research, 2019, 256, 1800743.	1.5	25

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37	Cu out-diffusion in kesteritesâ€"A transmission electron microscopy specimen preparation artifact. Applied Physics Letters, 2013, 102, .	3.3	22
38	Alkali Dispersion in (Ag,Cu)(In,Ga)Se₂ Thin Film Solar Cellsâ€"Insight from Theory and Experiment. ACS Applied Materials & Interfaces, 2021, 13, 7188-7199.	8.0	22
39	Sulfurization of Co-Evaporated Cu(In,Ga)Se₂ as a Postdeposition Treatment. IEEE Journal of Photovoltaics, 2018, 8, 604-610.	2.5	21
40	Photoluminescence investigation of Cu 2 ZnSnS 4 thin film solar cells. Thin Solid Films, 2015, 582, 146-150.	1.8	19
41	The Single Phase Region in Cu₂ZnSnS₄ Thin Films from Theory and Combinatorial Experiments. Chemistry of Materials, 2018, 30, 4624-4638.	6.7	19
42	Reactively sputtered films in the Cu x Sâ€"ZnSâ€"SnS y system: From metastability to equilibrium. Thin Solid Films, 2015, 582, 208-214.	1.8	17
43	A review of the challenges facing kesterite based thin film solar cells. , 2009, , .		16
44	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.	1.8	15
45	Prospects for defect engineering in Cu₂ZnSnS₄ solar absorber films. Journal of Materials Chemistry A, 2020, 8, 15864-15874.	10.3	15
46	Diffusion of Fe and Na in co-evaporated Cu(In,Ga)Se2 devices on steel substrates. Thin Solid Films, 2013, 535, 188-192.	1.8	13
47	TiN Interlayers with Varied Thickness in Cu₂ZnSnS(e)₄ Thin Film Solar Cells: Effect on Na Diffusion, Back Contact Stability, and Performance. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800491.	1.8	13
48	Triple Phase Boundary Photovoltammetry: Resolving Rhodamine B Reactivity in 4â€(3â€Phenylpropyl)â€Pyridine Microdroplets. ChemPhysChem, 2010, 11, 2862-2870.	2.1	11
49	Potential of CuS cap to prevent decomposition of Cu₂ZnSnS₄ during annealing. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2843-2849.	1.8	11
50	Towards Sustainable Photovoltaic Solar Energy Conversion: Studies Of New Absorber Materials. ECS Transactions, 2009, 19, 179-187.	0.5	10
51	CuInSe2 precursor films electro-deposited directly onto MoSe2. Journal of Electroanalytical Chemistry, 2010, 645, 16-21.	3.8	8
52	Effects of different needles and substrates on CuInS2 deposited by electrostatic spray deposition. Thin Solid Films, 2011, 519, 3544-3551.	1.8	8
53	Reactive sputtering of Cu2ZnSnS4 thin films â€" Target effects on the deposition process stability. Surface and Coatings Technology, 2014, 240, 281-285.	4.8	6
54	In Situ Monitoring of Cu2ZnSnS4 Absorber Formation With Raman Spectroscopy During Mo/Cu2SnS3/ZnS Thin-Film Stack Annealing. IEEE Journal of Photovoltaics, 2017, 7, 906-912.	2.5	6

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55	High Throughput X-ray Diffraction Analysis of Combinatorial Polycrystalline Thin Film Libraries. Analytical Chemistry, 2010, 82, 4564-4569.	6.5	5
56	Calculation of point defect concentration in Cu2ZnSnS4: Insights into the high-temperature equilibrium and quenching. Journal of Applied Physics, 2017, 122, .	2.5	5
57	Thin-film Photovoltaics Based on Earth-abundant Materials. RSC Energy and Environment Series, 2014, , 118-185.	0.5	4
58	Thio-olivine Mn2SiS4 thin films by reactive magnetron sputtering: Structural and optical properties with insights from first principles calculations. Materials and Design, 2018, 152, 110-118.	7.0	4
59	Antimonyâ€Doped Tin Oxide as Transparent Back Contact in Cu 2 ZnSnS 4 Thinâ€Film Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900542.	1.8	3
60	Raman spectroscopy study on in-situ monitoring of Cu2ZnSnS4 synthesis. , 2015, , .		2
61	Electrodeposition of Metallic Precursors. , 2011, , 9-57.		1
62	The Influences of Sulfurisation Variables and Precursor Composition on the Development of the CZTS Phase. , 2011, , 111-153.		0
63	Evolution of Na-S(-O) compounds on Cu<inf>2</inf>ZnSnS<inf>4</inf> absorber surface and its effect on CdS growth. , 2016, , .		0