

Jonathan J S Scragg

List of Publications by Year in descending order

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63
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138251

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2958
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| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Chemical Insights into the Instability of $\text{Cu}_2\text{ZnSnS}_4$ Films during Annealing. Chemistry of Materials, 2011, 23, 4625-4633. | 3.2 | 416 |
| 2 | A Detrimental Reaction at the Molybdenum Back Contact in $\text{Cu}_2\text{ZnSn(S,Se)}_4$ Thin-Film Solar Cells. Journal of the American Chemical Society, 2012, 134, 19330-19333. | 6.6 | 353 |
| 3 | New routes to sustainable photovoltaics: evaluation of $\text{Cu}_2\text{ZnSnS}_4$ as an alternative absorber material. Physica Status Solidi (B): Basic Research, 2008, 245, 1772-1778. | 0.7 | 322 |
| 4 | A low-temperature order-disorder transition in $\text{Cu}_2\text{ZnSnS}_4$ thin films. Applied Physics Letters, 2014, 104, . | 1.5 | 315 |
| 5 | $\text{Cu}_2\text{ZnSnSe}_4$ thin film solar cells produced by selenisation of magnetron sputtered precursors. Progress in Photovoltaics: Research and Applications, 2009, 17, 315-319. | 4.4 | 276 |
| 6 | Towards sustainable materials for solar energy conversion: Preparation and photoelectrochemical characterization of $\text{Cu}_2\text{ZnSnS}_4$. Electrochemistry Communications, 2008, 10, 639-642. | 2.3 | 264 |
| 7 | Effects of Back Contact Instability on $\text{Cu}_2\text{ZnSnS}_4$ Devices and Processes. Chemistry of Materials, 2013, 25, 3162-3171. | 3.2 | 263 |
| 8 | Synthesis and characterization of $\text{Cu}_2\text{ZnSnS}_4$ absorber layers by an electrodeposition-annealing route. Thin Solid Films, 2009, 517, 2481-2484. | 0.8 | 233 |
| 9 | A 3.2% efficient Kesterite device from electrodeposited stacked elemental layers. Journal of Electroanalytical Chemistry, 2010, 646, 52-59. | 1.9 | 230 |
| 10 | Thermodynamic Aspects of the Synthesis of Thin-Film Materials for Solar Cells. ChemPhysChem, 2012, 13, 3035-3046. | 1.0 | 173 |
| 11 | Cu-Zn disorder and band gap fluctuations in $\text{Cu}_2\text{ZnSn(S,Se)}_4$: Theoretical and experimental investigations. Physica Status Solidi (B): Basic Research, 2016, 253, 247-254. | 0.7 | 173 |
| 12 | Influence of precursor sulfur content on film formation and compositional changes in $\text{Cu}_2\text{ZnSnS}_4$ films and solar cells. Solar Energy Materials and Solar Cells, 2012, 98, 110-117. | 3.0 | 172 |
| 13 | Rapid annealing of reactively sputtered precursors for $\text{Cu}_2\text{ZnSnS}_4$ solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 10-17. | 4.4 | 131 |
| 14 | Reduced interface recombination in $\text{Cu}_2\text{ZnSnS}_4$ solar cells with atomic layer deposition ZnO/SnO_2 buffer layers. Applied Physics Letters, 2015, 107, . | 1.5 | 99 |
| 15 | Zn(O, S) Buffer Layers and Thickness Variations of CdS Buffer for $\text{Cu}_2\text{ZnSnS}_4$ Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 465-469. | 1.5 | 82 |
| 16 | Shallow defects in $\text{Cu}_2\text{ZnSnS}_4$. Physica B: Condensed Matter, 2009, 404, 4949-4952. | 1.3 | 80 |
| 17 | Chalcogenide Perovskite BaZrS_3 : Thin Film Growth by Sputtering and Rapid Thermal Processing. ACS Applied Energy Materials, 2020, 3, 2762-2770. | 2.5 | 59 |
| 18 | Chalcogenide Perovskites: Tantalizing Prospects, Challenging Materials. Advanced Optical Materials, 2022, 10, . | 3.6 | 58 |

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|----|--|-----|-----------|
| 19 | 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 |
| 20 | Reactive sputtering of precursors for Cu ₂ ZnSnS ₄ thin film solar cells. <i>Thin Solid Films</i> , 2012, 520, 7093-7099. | 0.8 | 55 |
| 21 | 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 |
| 22 | Order-disorder transition in B-type Cu ₂ ZnSnS ₄ and limitations of ordering through thermal treatments. <i>Applied Physics Letters</i> , 2016, 108, . | 1.5 | 46 |
| 23 | Interference effects in photoluminescence spectra of Cu ₂ ZnSnS ₄ and Cu(In,Ga)Se ₂ thin films. <i>Journal of Applied Physics</i> , 2015, 118, . | 1.1 | 45 |
| 24 | Annealing behavior of reactively sputtered precursor films for Cu ₂ ZnSnS ₄ solar cells. <i>Thin Solid Films</i> , 2013, 535, 22-26. | 0.8 | 43 |
| 25 | 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 |
| 26 | Evolution of Cu ₂ ZnSnS ₄ during Non-Equilibrium Annealing with Quasi-in Situ Monitoring of Sulfur Partial Pressure. <i>Chemistry of Materials</i> , 2017, 29, 3713-3722. | 3.2 | 40 |
| 27 | Copper Zinc Tin Sulfide Thin Films for Photovoltaics. , 2011, , . | | 38 |
| 28 | Secondary compound formation revealed by transmission electron microscopy at the Cu ₂ ZnSnS ₄ /Mo interface. <i>Thin Solid Films</i> , 2013, 535, 31-34. | 0.8 | 38 |
| 29 | Influence of the Cu ₂ ZnSnS ₄ absorber thickness on thin film solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 2889-2896. | 0.8 | 37 |
| 30 | Optical properties of reactively sputtered Cu ₂ ZnSnS ₄ solar absorbers determined by spectroscopic ellipsometry and spectrophotometry. <i>Solar Energy Materials and Solar Cells</i> , 2016, 149, 170-178. | 3.0 | 35 |
| 31 | 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 |
| 32 | Evolution of Na ⁺ S(²⁻ O) Compounds on the Cu ₂ ZnSnS ₄ Absorber Surface and Their Effects on CdS Thin Film Growth. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 18600-18607. | 4.0 | 30 |
| 33 | 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 |
| 34 | 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 |
| 35 | 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 |
| 36 | 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 |

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| 37 | Cu out-diffusion in kesteritesâ€™ A transmission electron microscopy specimen preparation artifact. Applied Physics Letters, 2013, 102, . | 1.5 | 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. | 4.0 | 22 |
| 39 | Sulfurization of Co-Evaporated Cu(In,Ga)Se₂ as a Postdeposition Treatment. IEEE Journal of Photovoltaics, 2018, 8, 604-610. | 1.5 | 21 |
| 40 | Photoluminescence investigation of Cu₂ZnSnS₄ thin film solar cells. Thin Solid Films, 2015, 582, 146-150. | 0.8 | 19 |
| 41 | The Single Phase Region in Cu₂ZnSnS₄ Thin Films from Theory and Combinatorial Experiments. Chemistry of Materials, 2018, 30, 4624-4638. | 3.2 | 19 |
| 42 | Reactively sputtered films in the Cu x Sâ€™ZnSâ€™Sn y system: From metastability to equilibrium. Thin Solid Films, 2015, 582, 208-214. | 0.8 | 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 Cu₂ZnSn(S,Se)₄ thin film solar cells. Thin Solid Films, 2017, 639, 91-97. | 0.8 | 15 |
| 45 | Prospects for defect engineering in Cu₂ZnSnS₄ solar absorber films. Journal of Materials Chemistry A, 2020, 8, 15864-15874. | 5.2 | 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. | 0.8 | 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. | 0.8 | 13 |
| 48 | Triple Phase Boundary Photovoltammetry: Resolving Rhodamine B Reactivity in 4â€™(3â€™Phenylpropyl)â€™Pyridine Microdroplets. ChemPhysChem, 2010, 11, 2862-2870. | 1.0 | 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. | 0.8 | 11 |
| 50 | Towards Sustainable Photovoltaic Solar Energy Conversion: Studies Of New Absorber Materials. ECS Transactions, 2009, 19, 179-187. | 0.3 | 10 |
| 51 | CuInSe₂ precursor films electro-deposited directly onto MoSe₂. Journal of Electroanalytical Chemistry, 2010, 645, 16-21. | 1.9 | 8 |
| 52 | Effects of different needles and substrates on CuInS₂ deposited by electrostatic spray deposition. Thin Solid Films, 2011, 519, 3544-3551. | 0.8 | 8 |
| 53 | Reactive sputtering of Cu₂ZnSnS₄ thin films â€™ Target effects on the deposition process stability. Surface and Coatings Technology, 2014, 240, 281-285. | 2.2 | 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. | 1.5 | 6 |

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| 55 | High Throughput X-ray Diffraction Analysis of Combinatorial Polycrystalline Thin Film Libraries. <i>Analytical Chemistry</i> , 2010, 82, 4564-4569. | 3.2 | 5 |
| 56 | Calculation of point defect concentration in Cu ₂ ZnSnS ₄ : Insights into the high-temperature equilibrium and quenching. <i>Journal of Applied Physics</i> , 2017, 122, . | 1.1 | 5 |
| 57 | Thin-film Photovoltaics Based on Earth-abundant Materials. <i>RSC Energy and Environment Series</i> , 2014, , 118-185. | 0.2 | 4 |
| 58 | 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 |
| 59 | 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 |
| 60 | Raman spectroscopy study on in-situ monitoring of Cu ₂ ZnSnS ₄ 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 ²⁺ ZnSnS ⁴⁻ absorber surface and its effect on CdS growth. , 2016, , . | | 0 |