

Billy J Stanbery

List of Publications by Year in descending order

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52
papers

1,394
citations

759233

12
h-index

642732

23
g-index

53
all docs

53
docs citations

53
times ranked

1900
citing authors

#	ARTICLE	IF	CITATIONS
1	Terawatt-scale photovoltaics: Transform global energy. <i>Science</i> , 2019, 364, 836-838.	12.6	320
2	Copper Indium Selenides and Related Materials for Photovoltaic Devices. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2002, 27, 73-117.	12.3	289
3	The 2020 photovoltaic technologies roadmap. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 493001.	2.8	274
4	Comparison of device performance and measured transport parameters in widely-varying Cu(In,Ga)(Se,S) solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2006, 14, 25-43.	8.1	70
5	Economic viability of thin-film tandem solar modules in the United States. <i>Nature Energy</i> , 2018, 3, 387-394.	39.5	68
6	Chemical fluctuation-induced nanodomains in Cu(In,Ga)Se ₂ films. <i>Applied Physics Letters</i> , 2005, 87, 121904.	3.3	61
7	Epitaxial growth and characterization of CuInSe ₂ crystallographic polytypes. <i>Journal of Applied Physics</i> , 2002, 91, 3598-3604.	2.5	56
8	Study of Cd-free buffer layers using In _x (OH,S) _y on CIGS solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2001, 69, 131-137.	6.2	32
9	Innovation highway: Breakthrough milestones and key developments in chalcopyrite photovoltaics from a retrospective viewpoint. <i>Thin Solid Films</i> , 2017, 633, 2-12.	1.8	32
10	Lattice dynamics of CuAu-orderedCuInSe ₂ . <i>Physical Review B</i> , 2003, 68, .	3.2	31
11	Porphyrim thin film cells in ultrahigh vacuum: the requirement of water and oxygen for photovoltaic response. <i>The Journal of Physical Chemistry</i> , 1985, 89, 4950-4956.	2.9	19
12	CIGS photovoltaics: reviewing an evolving paradigm. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 173001.	2.8	17
13	Electron and proton radiation effects on GaAs and CuInSe ₂ / thin film solar cells. , 1988, , .		16
14	High-efficiency GaAs/CuInSe ₂ / and AlGaAs/CuInSe ₂ / thin-film tandem solar cells. , 0, , .		10
15	Thermodynamic assessment of the Cu-In-Se system and application to thin film photovoltaics. , 1996, , .		9
16	Atmospheric pressure synthesis of In ₂ Se ₃ , Cu ₂ Se, and CuInSe ₂ without external selenization from solution precursors. <i>Journal of Materials Research</i> , 2009, 24, 1375-1387.	2.6	9
17	High efficiency GaAs/CuInSe ₂ / tandem junction solar cells. , 1988, , .		8
18	Lightweight tandem GaAs/CuInSe ₂ / solar cells. <i>IEEE Transactions on Electron Devices</i> , 1990, 37, 438-442.	3.0	7

#	ARTICLE	IF	CITATIONS
19	Thin film CuInGaSe ₂ cell development. , 0, , .		7
20	Reaction engineering and precursor film deposition for CIS synthesis. AIP Conference Proceedings, 1997, , .	0.4	7
21	Photon and carrier management design for nonplanar thin-film copper indium gallium selenide photovoltaics. Solar Energy Materials and Solar Cells, 2017, 161, 149-156.	6.2	6
22	Silicon nitride anti-reflection coatings for CdS/CuInSe ₂ thin film solar cells by electron beam assisted chemical vapor deposition. Solar Cells, 1985, 14, 289-291.	0.6	5
23	Long and Short Range Ordering of CuInSe ₂ . Japanese Journal of Applied Physics, 2000, 39, 411.	1.5	5
24	Comment on Seibert, M.K.; Rees, W.E. Through the Eye of a Needle: An Eco-Heterodox Perspective on the Renewable Energy Transition. Energies 2021, 14, 4508. Energies, 2022, 15, 971.	3.1	5
25	Role of sodium in the control of defect structures in CIS [solar cells]. , 0, , .		4
26	TLM measurements varying the intrinsic a-Si:H layer thickness in silicon heterojunction solar cells. , 2017, , .		4
27	Effects of buffer layer processing on CIGS excess carrier lifetime: application of dual-beam optical modulation to process analysis [of solar cells]. , 1996, , .		3
28	Voltage-matched, two-terminal, GaAs (AlGaAs)/CuInSe ₂ tandem solar cells. , 0, , .		2
29	Novel Multilayer Process for CuInSe ₂ Thin Film Formation by Rapid Thermal Processing. Materials Research Society Symposia Proceedings, 1997, 485, 163.	0.1	2
30	XPS studies of sodium compound formation and surface segregation in CIGS thin films [solar cells]. , 0, , .		2
31	Structure Investigations of Several In-rich (Cu ₂ Se) _x (In ₂ Se ₃) _{1-x} Compositions: From Local Structure to Long Range Order. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	2
32	Solution-deposited CIGS thin films for ultra-low-cost photovoltaics. , 2010, , .		2
33	Copper Indium Gallium Selenide photovoltaic modules manufactured by reactive transfer. , 2010, , .		2
34	Lightweight (AlGaAs)GaAs/CuInSe ₂ tandem junction solar cells for space applications. IEEE Aerospace and Electronic Systems Magazine, 1989, 4, 23-32.	1.3	1
35	Investigation of buffer layer process on CIGS solar cells by dual beam optical modulation technique. , 0, , .		1
36	The intra-absorber junction (IA) model for the device physics of copper indium selenide-based photovoltaics. , 0, , .		1

#	ARTICLE	IF	CITATIONS
37	Low cost copper indium gallium selenide by the FASST [®] process. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	1
38	Rapid reactive transfer printing of CIGS photovoltaics. , 2009, , .		1
39	Field assisted simultaneous synthesis and transfer FASST [®] method used in conjunction with liquid precursors to produce CIGS solar cells. , 2010, , .		1
40	Metrology and process optimization for large area monolithically integrated Cu(In,Ga)Se ₂ modules. , 2012, , .		1
41	Electroluminescence and thermal imaging of large-area Cu(In, Ga)Se ₂ modules. , 2013, , .		1
42	Growth and characterization of CdS buffer layers by CBD and MOCVD. , 1999, , .		0
43	Cuprous selenide defect equilibria and homogeneity range determined by coulometric titration. , 0, , .		0
44	Nanoengineered CIGS thin films for low cost photovoltaics. Proceedings of SPIE, 2008, , .	0.8	0
45	Development and manufacture of reactive-transfer-printed CIGS photovoltaic modules. Proceedings of SPIE, 2010, , .	0.8	0
46	High-Efficiency Low-Cost Photovoltaic Modules Based on CIGS Thin Films from Solution Precursors. Materials Research Society Symposia Proceedings, 2010, 1247, 1.	0.1	0
47	Solution deposited precursors and rapid optical processing used in the production of CIGS solar cells. , 2011, , .		0
48	Solution-based precursors in conjunction with rapid optical processing for high-quality hybrid CIGS. Proceedings of SPIE, 2011, , .	0.8	0
49	Using amorphous zinc-tin oxide alloys in the emitter structure of CIGS PV devices. , 2012, , .		0
50	Electroluminescence intensity analysis of neutral bulk and space charge region collection effects on large-area CIGS module performance. , 2014, , .		0
51	Through-the-glass spectroscopic ellipsometry for simultaneous mapping of coating properties and stress in the glass. , 2015, , .		0
52	Absorption enhancing and passivating non-planar thin-film device architectures for copper indium gallium selenide photovoltaics. , 2016, , .		0