Susanne Siebentritt

List of Publications by Year
in descending order

158 papers	6,992 citations	66343 42 h-index	64796 79 g-index
164 all docs	164 docs citations	164 times ranked	4424 citing authors

#	Article	IF	Citations
1	Kesteritesâ€"a challenging material for solar cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 512-519.	8.1	532
2	The Consequences of Kesterite Equilibria for Efficient Solar Cells. Journal of the American Chemical Society, 2011, 133, 3320-3323.	13.7	457
3	Why are kesterite solar cells not 20% efficient?. Thin Solid Films, 2013, 535, 1-4.	1.8	321
4	Is the Cu/Zn Disorder the Main Culprit for the Voltage Deficit in Kesterite Solar Cells?. Advanced Energy Materials, 2016, 6, 1502276.	19.5	277
5	The electronic structure of chalcopyritesâ€"bands, point defects and grain boundaries. Progress in Photovoltaics: Research and Applications, 2010, 18, 390-410.	8.1	237
6	Raman analysis of monoclinic Cu2SnS3 thin films. Applied Physics Letters, 2012, 100, .	3.3	232
7	Thin film solar cells based on the ternary compound Cu2SnS3. Thin Solid Films, 2012, 520, 6291-6294.	1.8	232
8	Wide gap chalcopyrites: material properties and solar cells. Thin Solid Films, 2002, 403-404, 1-8.	1.8	217
9	Detection of a ZnSe secondary phase in coevaporated Cu2ZnSnSe4 thin films. Applied Physics Letters, 2011, 98, .	3.3	195
10	What limits the efficiency of chalcopyrite solar cells?. Solar Energy Materials and Solar Cells, 2011, 95, 1471-1476.	6.2	188
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	Grain boundaries in Cu(In,â€‰Ga)(Se,â€‰S)2 thin-film solar cells. Applied Physics A: Materials Science and Processing, 2009, 96, 221-234.	2.3	158
13	Alternative buffers for chalcopyrite solar cells. Solar Energy, 2004, 77, 767-775.	6.1	155
14	Coevaporation of Cu2ZnSnSe4 thin films. Applied Physics Letters, 2010, 97, .	3.3	137
15	Why do we make Cu(In,Ga)Se2 solar cells non-stoichiometric?. Solar Energy Materials and Solar Cells, 2013, 119, 18-25.	6.2	119
16	Heavy Alkali Treatment of Cu(In,Ga)Se₂Solar Cells: Surface versus Bulk Effects. Advanced Energy Materials, 2020, 10, 1903752.	19.5	107
17	Discrimination and detection limits of secondary phases in Cu2ZnSnS4 using X-ray diffraction and Raman spectroscopy. Thin Solid Films, 2014, 569, 113-123.	1.8	98
18	Route Toward High-Efficiency Single-Phase Cu$_{f 2}$ZnSn(S,Se)$_{f 4}$ Thin-Film Solar Cells: Model Experiments and Literature Review. IEEE Journal of Photovoltaics, 2011, 1, 200-206.	2.5	91

#	Article	IF	Citations
19	Controlled electrodeposition of Cuâ€“Ga from a deep eutectic solvent for low cost fabrication of CuGaSe2 thin film solar cells. Physical Chemistry Chemical Physics, 2011, 13, 4292.	2.8	90
20	Evidence for a Neutral Grain-Boundary Barrier in Chalcopyrites. Physical Review Letters, 2006, 97, 146601.	7.8	89
21	Charge and doping distributions by capacitance profiling in Cu(In,Ga)Se2 solar cells. Journal of Applied Physics, 2008, 103, 063701.	2.5	82
22	Influence of S/Se ratio on series resistance and on dominant recombination pathway in Cu2ZnSn(SSe)4 thin film solar cells. Thin Solid Films, 2013, 535, 291-295.	1.8	80
23	Self-compensation of intrinsic defects in the ternary semiconductorCuGaSe2. Physical Review B, 2004, 69, .	3.2	72
24	Large Neutral Barrier at Grain Boundaries in Chalcopyrite Thin Films. Physical Review Letters, 2010, 104, 196602.	7.8	71
25	Direct Synthesis of Single-Phase p-Type SnS by Electrodeposition from a Dicyanamide Ionic Liquid at High Temperature for Thin Film Solar Cells. Journal of Physical Chemistry C, 2013, 117, 4383-4393.	3.1	70
26	HCl and Br2-MeOH etching of Cu2ZnSnSe4 polycrystalline absorbers. Thin Solid Films, 2013, 535, 83-87.	1.8	66
27	Do we really need another PL study of CuInSe2?. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2304-2310.	0.8	61
28	Degradation and passivation of CuInSe2. Applied Physics Letters, 2012, 101, .	3.3	60
29	What is the bandgap of kesterite?. Solar Energy Materials and Solar Cells, 2016, 158, 126-129.	6.2	59
30	Defects and transport in the wide gap chalcopyrite CuGaSe2. Journal of Physics and Chemistry of Solids, 2003, 64, 1621-1626.	4.0	57
31	Cu₂ZnSnSe₄ thin film solar cells produced via coâ€evaporation and annealing including a SnSe₂ capping layer. Progress in Photovoltaics: Research and Applications, 2014, 22, 51-57.	8.1	56
32	Cu-rich CuInSe₂ solar cells with a Cu-poor surface. Progress in Photovoltaics: Research and Applications, 2015, 23, 754-764.	8.1	55
33	Sodium enhances indium-gallium interdiffusion in copper indium gallium diselenide photovoltaic absorbers. Nature Communications, 2018, 9, 826.	12.8	51
34	Detecting ZnSe secondary phase in Cu2ZnSnSe4 by room temperature photoluminescence. Applied Physics Letters, 2013, 102, .	3.3	49
35	Cuâ€Rich Precursors Improve Kesterite Solar Cells. Advanced Energy Materials, 2014, 4, 1300543.	19.5	49
36	Quasi Fermi level splitting of Cu-rich and Cu-poor Cu(In,Ga)Se2 absorber layers. Applied Physics Letters, 2016, 109, .	3.3	49

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37	Alkali treatments of Cu(In,Ga)Se₂ thinâ€film absorbers and their impact on transport barriers. Progress in Photovoltaics: Research and Applications, 2018, 26, 911-923.	8.1	49
38	Electronic defects in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Cu</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:m mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> : Towards a comprehensive model. Physical Review Materials, 2019, 3, .	2.4	48
39	Kesterite absorber layer uniformity from electrodeposited preâ€cursors. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1241-1244.	0.8	46
40	The three A symmetry Raman modes of kesterite in Cu_2ZnSnSe_4. Optics Express, 2013, 21, A695.	3.4	45
41	Current loss due to recombination in Cu-rich CuInSe2 solar cells. Journal of Applied Physics, 2014, 115, .	2.5	44
42	Stability of surfaces in the chalcopyrite system. Applied Physics Letters, 2006, 88, 151919.	3.3	42
43	Excitonic Photoluminescence from CuGaSe₂ Single Crystals and Epitaxial Layers: Temperature Dependence of the Band Gap Energy. Japanese Journal of Applied Physics, 2000, 39, 322.	1.5	40
44	Admittance spectroscopy in kesterite solar cells: Defect signal or circuit response. Applied Physics Letters, 2013, 102, .	3.3	40
45	Chalcopyrite compound semiconductors for thin film solar cells. Current Opinion in Green and Sustainable Chemistry, 2017, 4, 1-7.	5.9	40
46	Over 15% efficient wide-band-gap Cu(In,Ga)S2 solar cell: Suppressing bulk and interface recombination through composition engineering. Joule, 2021, 5, 1816-1831.	24.0	36
47	Cd-free buffer layers for CIGS solar cells prepared by a dry process. Solar Energy Materials and Solar Cells, 2002, 70, 447-457.	6.2	35
48	Revisiting radiative deep-level transitions in CuGaSe2 by photoluminescence. Applied Physics Letters, 2016, 109, 032105.	3.3	35
49	Highâ€performance low bandgap thin film solar cells for tandem applications. Progress in Photovoltaics: Research and Applications, 2018, 26, 437-442.	8.1	35
50	Buffer Layers, Defects, and the Capacitance Step in the Admittance Spectrum of a Thin-Film Solar Cell. Physical Review Applied, 2018, 9, .	3.8	35
51	Excitation-intensity dependence of shallow and deep-level photoluminescence transitions in semiconductors. Journal of Applied Physics, 2019, 126, .	2.5	35
52	How band tail recombination influences the openâ€circuit voltage of solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 702-712.	8.1	35
53	Chemical instability at chalcogenide surfaces impacts chalcopyrite devices well beyond the surface. Nature Communications, 2020, 11, 3634.	12.8	34
54	Reconciliation of luminescence and Hall measurements on the ternary semiconductor CuGaSe2. Applied Physics Letters, 2005, 86, 091909.	3.3	33

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55	Innovation highway: Breakthrough milestones and key developments in chalcopyrite photovoltaics from a retrospective viewpoint. Thin Solid Films, 2017, 633, 2-12.	1.8	32
56	Quasi-Fermi-Level Splitting of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Cu</mml:mi></mml:math> -Poor and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Cu</mml:mi></mml:math> -Rich <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Cu</mml:mi><mml:mi>In</mml:mi><mml:mi	3.8	30
57	Feedback mechanism for the stability of the band gap of CuInSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	29
58	Direct Evaluation of Defect Distributions From Admittance Spectroscopy. IEEE Journal of Photovoltaics, 2014, 4, 1665-1670.	2.5	29
59	Influence of copper excess on the absorber quality of CuInSe2. Applied Physics Letters, 2011, 99, .	3.3	28
60	The Optical Diode Ideality Factor Enables Fast Screening of Semiconductors for Solar Cells. Solar Rrl, 2018, 2, 1800248.	5.8	28
61	Challenge in Cu-rich <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CuInSe</mml:mi><mml:mn>2</mml:mn></mml:msub> thin film solar cells: Defect caused by etching. Physical Review Materials, 2019, 3, .	2.4	27
62	Interdiffusion and Doping Gradients at the Buffer/Absorber Interface in Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 28553-28565.	8.0	25
63	Defect levels in the epitaxial and polycrystalline CuGaSe2 by photocurrent and capacitance methods. Journal of Applied Physics, 2011, 110, 103711.	2.5	24
64	Potassium Fluoride Ex Situ Treatment on Both Cu-Rich and Cu-Poor CuInSe2 Thin Film Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 684-689.	2.5	24
65	Influence of Sodium and Rubidium Postdeposition Treatment on the Quasi-Fermi Level Splitting of Cu(In,Ga)Se₂Thin Films. IEEE Journal of Photovoltaics, 2018, 8, 1320-1325.	2.5	24
66	The impact of Kelvin probe force microscopy operation modes and environment on grain boundary band bending in perovskite and Cu(In,Ga)Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e210" altimg="si5.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> solar cells. Nano Energy, 2021, 88, 106270.	16.0	24
67	Different Bandgaps in Cu$_2$ ZnSnSe$_4$: A High Temperature Coevaporation Study. IEEE Journal of Photovoltaics, 2015, 5, 641-648.	2.5	22
68	How photoluminescence can predict the efficiency of solar cells. JPhys Materials, 2021, 4, 042010.	4.2	22
69	Highly conductive ZnO films with high near infrared transparency. Progress in Photovoltaics: Research and Applications, 2015, 23, 1630-1641.	8.1	21
70	High voltage, please!. Nature Energy, 2017, 2, 840-841.	39.5	21
71	Ultra-thin passivation layers in Cu(In,Ga)Se2 thin-film solar cells: full-area passivated front contacts and their impact on bulk doping. Scientific Reports, 2020, 10, 7530.	3.3	21
72	Single Second Laser Annealed CuInSe2 Semiconductors from Electrodeposited Precursors as Absorber Layers for Solar Cells. Journal of Physical Chemistry C, 2014, 118, 1451-1460.	3.1	20

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73	Composition dependent doping and transport properties of CuGaSe₂. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	19
74	Hole transport mechanisms in CuGaSe2. Thin Solid Films, 2005, 480-481, 312-317.	1.8	19
75	Lone conduction band in Cu2ZnSnSe4. Applied Physics Letters, 2012, 100, .	3.3	19
76	Diffuse electroreflectance of thin-film solar cells: Suppression of interference-related lineshape distortions. Applied Physics Letters, 2015, 107, .	3.3	19
77	Composition dependent characterization of copper indium diselenide thin film solar cells synthesized from electrodeposited binary selenide precursor stacks. Solar Energy Materials and Solar Cells, 2014, 126, 88-95.	6.2	17
78	Time-resolved photoluminescence on double graded Cu(In,Ga)Se2 â€“ Impact of front surface recombination and its temperature dependence. Science and Technology of Advanced Materials, 2019, 20, 313-323.	6.1	17
79	A review of the challenges facing kesterite based thin film solar cells. , 2009, , .		16
80	Influence of secondary phase CuxSe on the optoelectronic quality of chalcopyrite thin films. Applied Physics Letters, 2011, 98, 201910.	3.3	15
81	Simplified formation process for Cu2ZnSnS4-based solar cells. Thin Solid Films, 2014, 573, 148-158.	1.8	15
82	MOCVD as a dry deposition method of ZnSe buffers for Cu(In,Ga)(S,Se)2 solar cells. Progress in Photovoltaics: Research and Applications, 2004, 12, 333-338.	8.1	14
83	MOVPE of CuGaSe2 on GaAs in the presence of a CuxSe secondary phase. Journal of Crystal Growth, 2011, 315, 82-86.	1.5	14
84	Influence of Conduction Band Offsets at Window/Buffer and Buffer/Absorber Interfaces on the Roll-Over of J-V Curves of CIGS Solar Cells. , 2017, , .		14
85	Near surface defects: Cause of deficit between internal and external openâ€circuit voltage in solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 263-275.	8.1	14
86	Polarization of defect related optical transitions in chalcopyrites. Applied Physics Letters, 2008, 93, 092102.	3.3	13
87	Cu(In,Ga)Se₂ solar cells with improved current based on surface treated stoichiometric absorbers. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600482.	1.8	13
88	Optical properties of Cu_2ZnSnSe_4 thin films and identification of secondary phases by spectroscopic ellipsometry. Optics Express, 2017, 25, 5327.	3.4	13
89	The hunt for the third acceptor in CuInSe₂ and Cu(In,Ga)Se₂ absorber layers. Journal of Physics Condensed Matter, 2019, 31, 425702.	1.8	13
90	Oxidation as Key Mechanism for Efficient Interface Passivation in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Cu</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>In</mml:mi><mml:mo>,</mml:mo><mml:mi>Ga</mml:mi><mml:mo) Tj ETQq0 0 0 rgBT /Overlo Thin-Film Solar Cells. Physical Review Applied, 2020, 13, .	3.8	13

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91	Surface treatment of CIS solar cells grown under Cu-excess. , 2011, , .		12
92	Multiple phases of Cu2ZnSnSe4 detected by room temperature photoluminescence. Journal of Applied Physics, 2014, 116, .	2.5	12
93	Can we see defects in capacitance measurements of thinâ€film solar cells?. Progress in Photovoltaics: Research and Applications, 2019, 27, 1045-1058.	8.1	12
94	Potassium fluoride postdeposition treatment with etching step on both Cu-rich and Cu-poor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>CuInS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> thin film solar cells. Physical Review Materials, 2018, 2, .	2.4	12
95	On the chemistry of grain boundaries in CuInS2 films. Nano Energy, 2020, 76, 105081.	16.0	11
96	Passivating Surface Defects and Reducing Interface Recombination in CuInS₂ Solar Cells by a Facile Solution Treatment. Solar Rrl, 2021, 5, 2100078.	5.8	11
97	Understanding Performance Limitations of Cu(In,Ga)Se₂ Solar Cells due to Metastable Defectsâ€”A Route toward Higher Efficiencies. Solar Rrl, 2021, 5, 2100063.	5.8	11
98	Metastable behavior of donors in CuGaSe2 under illumination. Applied Physics Letters, 2008, 92, 062107.	3.3	10
99	Spatial variations of optoelectronic properties in single crystalline CuGaSe2 thin films studied by photoluminescence. Thin Solid Films, 2011, 519, 7332-7336.	1.8	10
100	Influence of the Se environment on Cu-rich CIS devices. Physica B: Condensed Matter, 2014, 439, 101-104.	2.7	10
101	A Î£3 grain boundary in an epitaxial chalcopyrite film. Thin Solid Films, 2007, 515, 6168-6171.	1.8	9
102	The Effect of Potassium Fluoride Postdeposition Treatments on the Optoelectronic Properties of Cu(In,Ga)Se 2 Single Crystals. Solar Rrl, 2021, 5, 2000727.	5.8	9
103	Carrier recombination mechanism and photovoltage deficit in 1.7-eV band gap near-stoichiometric Cu(In,Ga) <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Materials, 2021, 5, .	2.4	9
104	Admittance spectroscopy of polycrystalline and epitaxially grown CuGaSe2. Journal of Physics and Chemistry of Solids, 2005, 66, 1940-1943.	4.0	8
105	High-Efficient ZnO/PVD-CdS/Cu(In,Ga)Se₂ Thin Film Solar Cells: Formation of the Buffer-Absorber Interface and Transport Properties. Materials Research Society Symposia Proceedings, 2005, 865, 14251.	0.1	8
106	Kinetics of Charge Trapping and Emission in CIGS Solar Cells. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	8
107	The influence of Se pressure on the electronic properties of CuInSe2 grown under Cu-excess. Applied Physics Letters, 2014, 105, .	3.3	8
108	Detection of a MoSe2 secondary phase layer in CZTSe by spectroscopic ellipsometry. Journal of Applied Physics, 2015, 118, 185302.	2.5	8

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109	Impact of annealing on electrical properties of Cu2ZnSnSe4 absorber layers. Journal of Applied Physics, 2016, 120, 045703.	2.5	8
110	Thin-film (Sb,Bi)2Se3 Semiconducting Layers with Tunable Band Gaps Below 1ÂeV for Photovoltaic Applications. Physical Review Applied, 2020, 14, .	3.8	8
111	Absorber composition: A critical parameter for the effectiveness of heat treatments in chalcopyrite solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 1063-1076.	8.1	8
112	CuGaSe₂-Based Solar Cells with High Open Circuit Voltage. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	7
113	Role of high series resistance in admittance spectroscopy of kesterite solar cells. , 2013, , .		7
114	Electrical Characterization of Defects in Cu-Rich Grown CuInSe2Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 546-551.	2.5	7
115	Improved Chemically Deposited Zn(O,S) Buffers for Cu(In,Ga)(S,Se)₂ Solar Cells by Controlled Incorporation of Indium. IEEE Journal of Photovoltaics, 2016, 6, 319-325.	2.5	7
116	Phonon coupling and shallow defects in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>CuIn</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2020, 101, .	3.2	7
117	Metastable defect in CuInSe2 probed by modulated photo current experiments above 390â€‰K. Applied Physics Letters, 2014, 104, .	3.3	6
118	Detection of Cu2Zn5SnSe8 and Cu2Zn6SnSe9 phases in co-evaporated Cu2ZnSnSe4 thin-films. Applied Physics Letters, 2015, 107, .	3.3	6
119	Correcting for interference effects in the photoluminescence of Cu(In,Ga)Se₂ thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, .	0.8	6
120	Origin of Interface Limitation in Zn(O,S)/CuInS₂-Based Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 9676-9684.	8.0	6
121	Photoluminescence excitation spectroscopy of highly compensated CuGaSe2. Physica Status Solidi (B): Basic Research, 2005, 242, 2627-2632.	1.5	5
122	Defect band transport in p-type CuGaSe2. Journal of Physics Condensed Matter, 2005, 17, 2699-2704.	1.8	5
123	Epitaxially grown single grain boundaries in chalcopyrites. Journal of Physics Condensed Matter, 2007, 19, 016004.	1.8	5
124	Temperature dependence of potential fluctuations in chalcopyrites. , 2011, , .		5
125	Nano-scale Characterization of Thin-Film Solar Cells. Microscopy and Microanalysis, 2014, 20, 394-395.	0.4	5
126	Optimization of buffer layer/i-layer band alignment. , 2015, , .		5

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127	Photoluminescence studies in epitaxial CZTSe thin films. Journal of Applied Physics, 2016, 120, 125701.	2.5	5
128	Investigation on the Angle and Spectral Dependence of the Internal and the External Quantum Efficiency of Crystalline Silicon Solar Cells and Modules. IEEE Journal of Photovoltaics, 2018, 8, 1738-1747.	2.5	5
129	Lifetime, quasi-Fermi level splitting and doping concentration of Cu-rich CuInS₂ absorbers. Materials Research Express, 2021, 8, 025905.	1.6	5
130	Variable chemical decoration of extended defects in Cu-poor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>ZnSnS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> thin films. Physical Review Materials, 2019, 3, .	2.4	5
131	Comprehensive physicochemical and photovoltaic analysis of different Zn substitutes (Mn, Mg, Fe, Ni,) Tj ETQq1 1 0.784314 rgBT /Ov	10.3	5
132	Sulfide Chalcopyrite Solar Cellsâ€"â€"Are They the Same as Selenides with a Wider Bandgap?. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	5
133	A Neutral Barrier at CGS Grain Boundaries - Compositional and Structural Dependencies. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	4
134	Synthesis and Characterization of CuInSe₂ Thin Films by Annealing of Electrodeposited In₂Se₃/Cu and In₂Se₃/Cu_xSe_y Stacks. ECS Transactions, 2010, 25, 129-142.	0.5	4
135	In-Se surface treatment of Cu-rich grown CuInSe<inf>2</inf>. , 2014, , .		4
136	Thin-film Photovoltaics Based on Earth-abundant Materials. RSC Energy and Environment Series, 2014, , 118-185.	0.5	4
137	Cu-Chalcopyritesâ€"Unique Materials for Thin-Film Solar Cells. Springer Series in Materials Science, 2006, , 1-8.	0.6	3
138	Molecular beam epitaxy of Cu<inf>2</inf>ZnSnSe<inf>4</inf> thin films grown on GaAs(001). , 2013, , .		3
139	Modulated photocurrent experiments-comparison of different data treatments. Journal of Applied Physics, 2014, 116, 103710.	2.5	3
140	Epitaxial Cu 2 ZnSnSe 4 thin films and devices. Thin Solid Films, 2015, 582, 193-197.	1.8	3
141	Influence of stoichiometry and temperature on quasi Fermi level splitting of sulfide CIS absorber layers. , 2018, , .		3
142	Oxidation/reduction cycles and their reversible effect on the dipole formation at CuInSe2 surfaces. Physical Review Materials, 2020, 4, .	2.4	3
143	How much gallium do we need for a p-type Cu(In,Ga)Se2?. APL Materials, 2022, 10, .	5.1	3
144	Assessment of crystal quality and unit cell orientation in epitaxial Cu_2ZnSnSe_4 layers using polarized Raman scattering. Optics Express, 2014, 22, 28240.	3.4	2

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145	Alternative Etching for Improved Cu-rich CuInSe2 Solar Cells. Materials Research Society Symposia Proceedings, 2015, 1771, 163-168.	0.1	2
146	Experimental Evidence For CdS-related Transport Barrier in Thin Film Solar Cells and Its Impact on Admittance Spectroscopy. , 2017, , .		2
147	Photoluminescence-Based Method for Imaging Buffer Layer Thickness in CIGS Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 181-187.	2.5	2
148	Passivation of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">CuInSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> surface via cadmium pre-electrolyte treatment. Physical Review Materials, 2020, 4, .	2.4	2
149	Polarized Luminescence of Defects in CuGaSe2. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	1
150	How does the selenium activity influence CuInSe2devices grown under Cu-excess?. , 2013, , .		1
151	Annealing of wet treated Cu(In,Ga)(S,Se) 2 solar cells with an indium sulfide buffer. Thin Solid Films, 2015, 582, 313-316.	1.8	1
152	Environmental stability of highly conductive nominally undoped ZnO layers. , 2016, , .		1
153	Correction to â€œPotassium Fluoride ex-situ Treatment on both Cu-rich and Cu-poor CuInSe2 Thin Film Solar Cellsâ€•[Mar 17 684-689]. IEEE Journal of Photovoltaics, 2017, 7, 1166-1166.	2.5	1
154	Interface Effects of Alkali Treatment on Cu-Rich Thin Film Solar Cells. , 2017, , .		1
155	Pressure dependent synthesis of CuInSe<inf>2</inf> thin film solar cells from electrodeposited binary selenide stacks. , 2011, , .		0
156	Study on the quasi Fermi level splitting of Cu(In, Ga)Se<inf>2</inf> absorber layers with Cu-rich and Cu-poor composition. , 2016, , .		0
157	Surface characterization of epitaxial Cu-rich CuInSe2 absorbers. , 2019, , .		0
158	Polycrystalline (Sb,Bi)2Se3 thin film layers for SWIR detection. , 2019, , .		0