Oki Gunawan

List of Publications by Year
in descending order

81 papers	14,429 citations	47006 47 h-index	85541 71 g-index
83 all docs	83 docs citations	83 times ranked	8031 citing authors

#	Article	IF	Citations
1	p-Type molecular doping by charge transfer in halide perovskite. Materials Advances, 2021, 2, 2956-2965.	5.4	17
2	Optoelectronic property comparison for isostructural Cu₂BaGeSe₄ and Cu₂BaSnS₄ solar absorbers. Journal of Materials Chemistry A, 2021, 9, 23619-23630.	10.3	10
3	Flexible CIGS, CdTe and a-Si:H based thin film solar cells: A review. Progress in Materials Science, 2020, 110, 100619.	32.8	270
4	Comparing the Effect of Mn Substitution in Sulfide and Sulfoselenideâ€Based Kesterite Solar Cells. Solar Rrl, 2020, 4, 1900521.	5.8	7
5	Dustâ€Sized Highâ€Powerâ€Density Photovoltaic Cells on Si and SOI Substrates for Waferâ€Levelâ€Packaged Small Edge Computers. Advanced Materials, 2020, 32, e2004573.	21.0	7
6	Magnetic-tip trap system. Physical Review Research, 2020, 2, .	3.6	2
7	Improving Carrier-Transport Properties of CZTS by Mg Incorporation with Spray Pyrolysis. ACS Applied Materials & Interfaces, 2019, 11, 25824-25832.	8.0	42
8	Impact of PbI₂ Passivation and Grain Size Engineering in CH₃NH₃PbI₃ Solar Absorbers as Revealed by Carrierâ€Resolved Photoâ€Hall Technique. Advanced Energy Materials, 2019, 9, 1902706.	19.5	52
9	Carrier-resolved photo-Hall effect. Nature, 2019, 575, 151-155.	27.8	66
10	The electrical and optical properties of kesterites. JPhys Energy, 2019, 1, 044002.	5.3	43
11	Reducing the interfacial defect density of CZTSSe solar cells by Mn substitution. Journal of Materials Chemistry A, 2018, 6, 1540-1550.	10.3	60
12	Improving the charge separation and collection at the buffer/absorber interface by double-layered Mn-substituted CZTS. Solar Energy Materials and Solar Cells, 2018, 185, 351-358.	6.2	27
13	Patching of Lattice Defects in Two-Dimensional Diffusion Barriers. ACS Applied Nano Materials, 2018, 1, 3068-3074.	5.0	2
14	Compositional effects in Ag2ZnSnSe4 thin films and photovoltaic devices. Acta Materialia, 2017, 126, 383-388.	7.9	25
15	Industrial perspectives on earth abundant, multinary thin film photovoltaics. Semiconductor Science and Technology, 2017, 32, 033004.	2.0	31
16	Unconventional kesterites: The quest to reduce band tailing in CZTSSe. Current Opinion in Green and Sustainable Chemistry, 2017, 4, 29-36.	5.9	29
17	Earthâ€Abundant Chalcogenide Photovoltaic Devices with over 5% Efficiency Based on a Cu₂BaSn(S,Se)₄ Absorber. Advanced Materials, 2017, 29, 1606945.	21.0	112
18	Analysis of loss mechanisms in Ag2ZnSnSe4 Schottky barrier photovoltaics. Journal of Applied Physics, 2017, 121, .	2.5	12

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19	Back Contact Engineering for Increased Performance in Kesterite Solar Cells. Advanced Energy Materials, 2017, 7, 1602585.	19.5	54
20	Preparation of single-phase SnSe thin-films and modification of electrical properties via stoichiometry control for photovoltaic application. Journal of Alloys and Compounds, 2017, 722, 474-481.	5.5	50
21	The one-dimensional camelback potential in the parallel dipole line trap: Stability conditions and finite size effect. Journal of Applied Physics, 2017, 121, 133902.	2.5	6
22	Ultrathin high band gap solar cells with improved efficiencies from the worldâ€™s oldest photovoltaic material. Nature Communications, 2017, 8, 682.	12.8	94
23	Record Efficiencies for Selenium Photovoltaics and Application to Indoor Solar Cells. , 2017, , .		5
24	Fabrication and performance limitations in single crystal Cu2ZnSnSe4 solar cells. , 2017, , .		1
25	Optimization of Silver-alloying for improved photovoltaic properties of CZTSSe. , 2016, , .		0
26	Inorganic photovoltaics â€" Planar and nanostructured devices. Progress in Materials Science, 2016, 82, 294-404.	32.8	50
27	Effects of Postsynthesis Thermal Conditions on Methylammonium Lead Halide Perovskite: Band Bending at Grain Boundaries and Its Impacts on Solar Cell Performance. Journal of Physical Chemistry C, 2016, 120, 21330-21335.	3.1	25
28	Photovoltaic Device with over 5% Efficiency Based on an nâ€Type Ag₂ZnSnSe₄ Absorber. Advanced Energy Materials, 2016, 6, 1601182.	19.5	102
29	Photovoltaic effect in earth abundant solution processed Cu2MnSnS4 and Cu2MnSn(S,Se)4 thin films. Solar Energy Materials and Solar Cells, 2016, 157, 867-873.	6.2	57
30	Enhancement of Open-Circuit Voltage of Solution-Processed Cu₂ZnSnS₄ Solar Cells with 7.2% Efficiency by Incorporation of Silver. ACS Energy Letters, 2016, 1, 1256-1261.	17.4	133
31	Photovoltaic Materials and Devices Based on the Alloyed Kesterite Absorber (Ag<i>_x</i>Cu_{1â€"}<i>_x</i>)₂ZnSnSe₄. Advanced Energy Materials, 2016, 6, 1502468.	19.5	226
32	Atomic Layer Deposited Aluminum Oxide for Interface Passivation of Cu₂ZnSn(S,Se)₄ Thinâ€Film Solar Cells. Advanced Energy Materials, 2016, 6, 1600198.	19.5	75
33	Fill Factor Losses in Cu₂ZnSn(S<i>_x</i>Se_{1âˆ'<i>x</i>})₄ Solar Cells: Insights from Physical and Electrical Characterization of Devices and Exfoliated Films. Advanced Energy Materials, 2016, 6, 1501609.	19.5	84
34	Thin-Film Deposition and Characterization of a Sn-Deficient Perovskite Derivative Cs₂SnI₆. Chemistry of Materials, 2016, 28, 2315-2322.	6.7	329
35	Monolithic Perovskiteâ€CIGS Tandem Solar Cells via In Situ Band Gap Engineering. Advanced Energy Materials, 2015, 5, 1500799.	19.5	219
36	High intensity and integrated Suns-Voc characterization of high performance kesterite solar cells. , 2015, , .		1

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37	Flexible kesterite solar cells on ceramic substrates for advanced thermal processing. , 2015, , .		3
38	Examination of electronic structure differences between CIGSSe and CZTSSe by photoluminescence study. Journal of Applied Physics, 2015, 117, .	2.5	27
39	The impact of sodium on the sub-bandgap states in CZTSe and CZTS. Applied Physics Letters, 2015, 106, .	3.3	51
40	A parallel dipole line system. Applied Physics Letters, 2015, 106, .	3.3	57
41	Cu₂ZnSnSe₄ Thinâ€Film Solar Cells by Thermal Coâ€evaporation with 11.6% Efficiency and Improved Minority Carrier Diffusion Length. Advanced Energy Materials, 2015, 5, 1401372.	19.5	408
42	Solar Cells: High Efficiency Cu2ZnSn(S,Se)4Solar Cells by Applying a Double In2S3/CdS Emitter (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	21.0	10
43	Atomic layer deposition of Al-incorporated Zn(O,S) thin films with tunable electrical properties. Applied Physics Letters, 2014, 105, .	3.3	18
44	Understanding the relationship between Cu2ZnSn(S,Se)4 material properties and device performance. MRS Communications, 2014, 4, 159-170.	1.8	59
45	Electrodeposited Cu₂ZnSnSe₄ thin film solar cell with 7% power conversion efficiency. Progress in Photovoltaics: Research and Applications, 2014, 22, 58-68.	8.1	142
46	Device Characteristics of CZTSSe Thinâ€Film Solar Cells with 12.6% Efficiency. Advanced Energy Materials, 2014, 4, 1301465.	19.5	2,651
47	High-Efficiency Devices With Pure Solution-Processed Cu$_{f 2}$ ZnSn(S,Se)$_{f 4}$ Absorbers. IEEE Journal of Photovoltaics, 2014, 4, 483-485.	2.5	29
48	Optical designs that improve the efficiency of Cu₂ZnSn(S,Se)₄solar cells. Energy and Environmental Science, 2014, 7, 1029-1036.	30.8	200
49	Suns-<i>VOC</i> characteristics of high performance kesterite solar cells. Journal of Applied Physics, 2014, 116, .	2.5	90
50	Perovskite-kesterite monolithic tandem solar cells with high open-circuit voltage. Applied Physics Letters, 2014, 105, .	3.3	175
51	Semi-empirical device model for Cu2ZnSn(S,Se)4 solar cells. Applied Physics Letters, 2014, 105, .	3.3	81
52	High Efficiency Cu₂ZnSn(S,Se)₄ Solar Cells by Applying a Double In₂S₃/CdS Emitter. Advanced Materials, 2014, 26, 7427-7431.	21.0	400
53	Thin film solar cell with 8.4% power conversion efficiency using an earthâ€abundant Cu₂ZnSnS₄ absorber. Progress in Photovoltaics: Research and Applications, 2013, 21, 72-76.	8.1	1,054
54	Solutionâ€processed Cu(In,Ga)(S,Se)₂ absorber yielding a 15.2% efficient solar cell. Progress in Photovoltaics: Research and Applications, 2013, 21, 82-87.	8.1	343

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55	Minority carrier diffusion length extraction in Cu₂ZnSn(Se,S)₄ solar cells. Journal of Applied Physics, 2013, 114, 114511.	2.5	91
56	Band tailing and efficiency limitation in kesterite solar cells. Applied Physics Letters, 2013, 103, .	3.3	576
57	Prospects and performance limitations for Cuâ€"Znâ€"Snâ€"Sâ€"Se photovoltaic technology. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20110432.	3.4	166
58	Beyond 11% Efficiency: Characteristics of Stateâ€ofâ€theâ€Art Cu₂ZnSn(S,Se)₄ Solar Cells. Advanced Energy Materials, 2013, 3, 34-38.	19.5	922
59	Device characteristics of high performance Cu<inf>2</inf>ZnSnS<inf>4</inf> solar cell. , 2012, , .		4
60	Electronically active defects in the Cu2ZnSn(Se,S)4 alloys as revealed by transient photocapacitance spectroscopy. Applied Physics Letters, 2012, 101, 142106.	3.3	48
61	Hydrazine-Processed Ge-Substituted CZTSe Solar Cells. Chemistry of Materials, 2012, 24, 4588-4593.	6.7	165
62	Electronic properties of the Cu2ZnSn(Se,S)4 absorber layer in solar cells as revealed by admittance spectroscopy and related methods. Applied Physics Letters, 2012, 100, .	3.3	194
63	Device characteristics of a 10.1% hydrazineâ€processed Cu₂ZnSn(Se,S)₄ solar cell. Progress in Photovoltaics: Research and Applications, 2012, 20, 6-11.	8.1	720
64	A High Efficiency Electrodeposited Cu₂ZnSnS₄ Solar Cell. Advanced Energy Materials, 2012, 2, 253-259.	19.5	504
65	Low band gap liquid-processed CZTSe solar cell with 10.1% efficiency. Energy and Environmental Science, 2012, 5, 7060.	30.8	303
66	Progress towards marketable earth-abundant chalcogenide solar cells. Thin Solid Films, 2011, 519, 7378-7381.	1.8	137
67	Band alignment at the Cu2ZnSn(SxSe1â^'x)4/CdS interface. Applied Physics Letters, 2011, 98, .	3.3	256
68	The path towards a high-performance solution-processed kesterite solar cell. Solar Energy Materials and Solar Cells, 2011, 95, 1421-1436.	6.2	1,118
69	Defects in Cu(In,Ga)Se₂ Chalcopyrite Semiconductors: A Comparative Study of Material Properties, Defect States, and Photovoltaic Performance. Advanced Energy Materials, 2011, 1, 845-853.	19.5	134
70	Dopant profile control of epitaxial emitter for silicon solar cells by low temperature epitaxy. Applied Physics Letters, 2011, 99, 011102.	3.3	7
71	High efficiency Cu<inf>2</inf>ZnSn(S<inf>x</inf>Se<inf>1−x</inf>)<inf>4</inf> thin film solar cells by thermal co-evaporation. , 2011, , .		2
72	Antimony assisted low-temperature processing of CuIn1â^'xGaxSe2â^'ySy solar cells. Thin Solid Films, 2010, 519, 852-856.	1.8	74

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73	Capacitance analysis of wire-array solar cell. , 2010, , .		0
74	12% Efficiency CuIn(Se,S)₂ Photovoltaic Device Prepared Using a Hydrazine Solution Process. Chemistry of Materials, 2010, 22, 1010-1014.	6.7	189
75	Wire textured, multi-crystalline Si solar cells created using self-assembled masks. Optics Express, 2010, 18, A568.	3.4	3
76	Loss mechanisms in hydrazine-processed Cu2ZnSn(Se,S)4 solar cells. Applied Physics Letters, 2010, 97, .	3.3	341
77	Torwards marketable efficiency solution-processed kesterite and chalcopyrite photovoltaic devices. , 2010, , .		13
78	Wire-textured silicon solar cells. , 2010, , .		1
79	Characteristics of vaporâ€“liquidâ€“solid grown silicon nanowire solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 1388-1393.	6.2	196
80	Size-dependent modulation of carrier mobility in top-down fabricated silicon nanowires. Applied Physics Letters, 2009, 95, 023113.	3.3	27
81	Measurement of Carrier Mobility in Silicon Nanowires. Nano Letters, 2008, 8, 1566-1571.	9.1	113