Stefan Paetel

List of Publications by Year
in descending order

32 papers	2,990 citations	623188 14 h-index	500791 28 g-index
32 all docs	32 docs citations	32 times ranked	3424 citing authors

#	Article	IF	Citations
1	New world record efficiency for Cu(In,Ga)Se₂ thinâ€film solar cells beyond 20%. Progress in Photovoltaics: Research and Applications, 2011, 19, 894-897.	4.4	1,888
2	Very Large Capacitance Enhancement in a Two-Dimensional Electron System. Science, 2011, 332, 825-828.	6.0	185
3	Thin-film solar cells exceeding 22% solar cell efficiency: An overview on CdTe-, Cu(In,Ga)Se2-, and perovskite-based materials. Applied Physics Reviews, 2018, 5, .	5.5	175
4	Gallium gradients in Cu(In,Ga)Se₂thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 717-733.	4.4	122
5	New reaction kinetics for a highâ€rate chemical bath deposition of the Zn(S,O) buffer layer for Cu(In,Ga)Se₂â€based solar cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 534-542.	4.4	114
6	High-efficiency Cu(In,Ga)Se2 cells and modules. Solar Energy Materials and Solar Cells, 2013, 119, 51-58.	3.0	106
7	Advances in Cost-Efficient Thin-Film Photovoltaics Based on Cu(In,Ga)Se2. Engineering, 2017, 3, 445-451.	3.2	79
8	CIGS Cells and Modules With High Efficiency on Glass and Flexible Substrates. IEEE Journal of Photovoltaics, 2014, 4, 440-446.	1.5	56
9	Scalable perovskite/CIGS thin-film solar module with power conversion efficiency of 17.8%. Journal of Materials Chemistry A, 2017, 5, 9897-9906.	5.2	47
10	Sputtered Transparent Electrodes (IO:H and IZO) with Low Parasitic Near-Infrared Absorption for Perovskiteâ€"Cu(In,Ga)Se₂ Tandem Solar Cells. ACS Applied Energy Materials, 2019, 2, 7823-7831.	2.5	35
11	Method for a High-Rate Solution Deposition of Zn(O,S) Buffer Layer for High-Efficiency Cu(In,Ga)Se₂-Based Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1321-1326.	1.5	33
12	Toward scalable perovskiteâ€based multijunction solar modules. Progress in Photovoltaics: Research and Applications, 2019, 27, 733-738.	4.4	17
13	Impact of RbF-PDT on Cu(In,Ga)Se₂ solar cells with CdS and Zn(O,S) buffer layers. EPJ Photovoltaics, 2020, 11, 8.	0.8	17
14	Microâ€cone textures for improved light inâ€coupling and retroreflectionâ€inspired light trapping at the front surface of solar modules. Progress in Photovoltaics: Research and Applications, 2019, 27, 593-602.	4.4	16
15	Application of indium zinc oxide window layers in Cu(In,Ga)Se 2 solar cells. Thin Solid Films, 2017, 633, 239-242.	0.8	13
16	Indium zinc oxide window layer for high-efficiency Cu(In,Ga)Se 2 solar cells. Thin Solid Films, 2017, 634, 160-164.	0.8	12
17	Challenges in the deposition of (Ag,Cu)(In,Ga)Se₂ absorber layers for thin-film solar cells. JPhys Materials, 2021, 4, 024003.	1.8	10
18	Investigation of vertical compositional gradients in Cu(In,Ga)Se2 by highly spatially and spectrally resolved cathodoluminescence microscopy. Thin Solid Films, 2013, 535, 270-274.	0.8	9

#	Article	IF	Citations
19	Effects of Sputtered In_xS_y Buffer on CIGS with RbF Post-Deposition Treatment. ECS Journal of Solid State Science and Technology, 2021, 10, 055006.	0.9	8
20	Copper variation in Cu(In,Ga)Se 2 solar cells with indium sulphide buffer layer. Thin Solid Films, 2015, 582, 328-331.	0.8	7
21	Freeform surface invisibility cloaking of interconnection lines in thin-film photovoltaic modules. Solar Energy Materials and Solar Cells, 2018, 182, 294-301.	3.0	7
22	Nearâ€Surface [Ga]/([In]+[Ga]) Composition in Cu(In,Ga)Se 2 Thinâ€Film Solar Cell Absorbers: An Overlooked Material Feature. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800856.	0.8	6
23	Insights into the Effects of RbFâ€Postâ€Deposition Treatments on the Absorber Surface of High Efficiency Cu(In,Ga)Se₂ Solar Cells and Development of Analytical and Machine Learning Process Monitoring Methodologies Based on Combinatorial Analysis. Advanced Energy Materials, 2022, 12, .	10.2	6
24	DLTS investigations on CIGS solar cells from an inline co-evaporation system with RbF post-deposition treatment. EPJ Photovoltaics, 2022, 13, 7.	0.8	5
25	Influence of sputtered gallium oxide as buffer or high-resistive layer on performance of Cu(In,Ga)Se2-based solar cells. Journal of Materials Research, 2022, 37, 1825-1834.	1.2	5
26	The Application of Sputtered Gallium Oxide as Buffer for Cu(In,Ga)Se₂ Solar Cells. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100180.	1.2	4
27	Behavior of Na and RbFâ€Treated CdS/Cu(In,Ga)Se₂ Solar Cells with Stress Testing under Heat, Light, and Junction Bias. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000530.	1.2	3
28	Writing Nanowires with Large Conductivity Ratios in LaAlO₃/SrTiO₃ Interfaces. Journal of the Physical Society of Japan, 2012, 81, 064703.	0.7	2
29	Efficient, large-area scalable Perovskite-Si and Perovskite-CIGS tandem solar modules. , 2018, , .		2
30	CIGS Device Models with Variations of Buffer Layer, Alkali Content, and Oxidation. , 2020, , .		1
31	Notice of Removal Method for a high-rate solution deposition of Zn(O,S) buffer layer for high efficiency Cu(In,Ga)Se2-based solar cells. , 2017, , .		0
32	Effects of Alkali and Oxidation Treatments on Efficiency and Stability of CdS/CIGS Solar Cells. , 2020, , .		0