

Andrea Crovetto

List of Publications by Year in descending order

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Version: 2024-02-01

41
papers

1,458
citations

361045

20
h-index

329751

37
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43
all docs

43
docs citations

43
times ranked

1909
citing authors

#	ARTICLE	IF	CITATIONS
1	An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. <i>Nature Energy</i> , 2022, 7, 107-115.	19.8	136
2	What is the band alignment of Cu ₂ ZnSn(S,Se) solar cells?. <i>Solar Energy Materials and Solar Cells</i> , 2017, 169, 177-194.	3.0	124
3	Bi-resonant structure with piezoelectric PVDF films for energy harvesting from random vibration sources at low frequency. <i>Sensors and Actuators A: Physical</i> , 2016, 247, 547-554.	2.0	104
4	A universal approach for the synthesis of two-dimensional binary compounds. <i>Nature Communications</i> , 2019, 10, 2957.	5.8	93
5	Modeling and Optimization of an Electrostatic Energy Harvesting Device. <i>Journal of Microelectromechanical Systems</i> , 2014, 23, 1141-1155.	1.7	92
6	Sulfide perovskites for solar energy conversion applications: computational screening and synthesis of the selected compound LaYS ₃ . <i>Energy and Environmental Science</i> , 2017, 10, 2579-2593.	15.6	91
7	Ultra-thin Cu ₂ ZnSnS ₄ solar cell by pulsed laser deposition. <i>Solar Energy Materials and Solar Cells</i> , 2017, 166, 91-99.	3.0	83
8	An electret-based energy harvesting device with a wafer-level fabrication process. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 114010.	1.5	70
9	Dielectric function and double absorption onset of monoclinic Cu ₂ SnS ₃ : Origin of experimental features explained by first-principles calculations. <i>Solar Energy Materials and Solar Cells</i> , 2016, 154, 121-129.	3.0	62
10	Parallel Evaluation of the BiI ₃ , BiOI, and Ag ₃ BiI ₆ Layered Photoabsorbers. <i>Chemistry of Materials</i> , 2020, 32, 3385-3395.	3.2	48
11	Interface band gap narrowing behind open circuit voltage losses in Cu ₂ ZnSnS ₄ solar cells. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	35
12	How the relative permittivity of solar cell materials influences solar cell performance. <i>Solar Energy</i> , 2017, 149, 145-150.	2.9	35
13	Temperature dependent photoreflectance study of Cu ₂ SnS ₃ thin films produced by pulsed laser deposition. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	35
14	Monolithic thin-film chalcogenide-silicon tandem solar cells enabled by a diffusion barrier. <i>Solar Energy Materials and Solar Cells</i> , 2020, 207, 110334.	3.0	34
15	Lattice-matched Cu ₂ ZnSnS ₄ /CeO ₂ solar cell with open circuit voltage boost. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	32
16	Shining Light on Sulfide Perovskites: LaYS ₃ Material Properties and Solar Cells. <i>Chemistry of Materials</i> , 2019, 31, 3359-3369.	3.2	32
17	Assessing the defect tolerance of kesterite-inspired solar absorbers. <i>Energy and Environmental Science</i> , 2020, 13, 3489-3503.	15.6	28
18	Large process-dependent variations in band alignment and interface band gaps of Cu ₂ ZnSnS ₄ /CdS solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2018, 187, 233-240.	3.0	27

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19	Wide Band Gap $\text{Cu}_2\text{SrSnS}_4$ Solar Cells from Oxide Precursors. ACS Applied Energy Materials, 2019, 2, 7340-7344.	2.5	23
20	On performance limitations and property correlations of Al-doped ZnO deposited by radio-frequency sputtering. Journal Physics D: Applied Physics, 2016, 49, 295101.	1.3	20
21	Semitransparent Selenium Solar Cells as a Top Cell for Tandem Photovoltaics. Solar Rrl, 2021, 5, 2100111.	3.1	20
22	Optical properties and surface characterization of pulsed laser-deposited $\text{Cu}_2\text{ZnSnS}_4$ by spectroscopic ellipsometry. Thin Solid Films, 2015, 582, 203-207.	0.8	19
23	Surface passivation and carrier selectivity of the thermal-atomic-layer-deposited TiO_2 on crystalline silicon. Japanese Journal of Applied Physics, 2017, 56, 08MA11.	0.8	19
24	Nitride-Based Interfacial Layers for Monolithic Tandem Integration of New Solar Energy Materials on Si: The Case of CZTS. ACS Applied Energy Materials, 2020, 3, 4600-4609.	2.5	19
25	Synthesis of ligand-free CZTS nanoparticles via a facile hot injection route. Nanotechnology, 2016, 27, 185603.	1.3	17
26	Nondestructive Thickness Mapping of Wafer-Scale Hexagonal Boron Nitride Down to a Monolayer. ACS Applied Materials & Interfaces, 2018, 10, 25804-25810.	4.0	17
27	Selenium Thin-Film Solar Cells with Cadmium Sulfide as a Heterojunction Partner. ACS Applied Energy Materials, 2021, 4, 10697-10702.	2.5	15
28	Water Adsorption Enhances Electrical Conductivity in Transparent P-Type CuI. ACS Applied Materials & Interfaces, 2020, 12, 48741-48747.	4.0	15
29	A MEMS Energy Harvesting Device for Vibration with Low Acceleration. Procedia Engineering, 2012, 47, 770-773.	1.2	14
30	TaS_2 Back Contact Improving Oxide-Converted $\text{Cu}_2\text{BaSnS}_4$ Solar Cells. ACS Applied Energy Materials, 2020, 3, 1190-1198.	2.5	13
31	Experimental and First-Principles Spectroscopy of $\text{Cu}_2\text{SrSnS}_4$ and $\text{Cu}_2\text{BaSnS}_4$ Photoabsorbers. ACS Applied Materials & Interfaces, 2020, 12, 50446-50454.	4.0	13
32	Formation of copper tin sulfide films by pulsed laser deposition at 248 and 355 nm. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	12
33	Prediction and realisation of high mobility and degenerate p-type conductivity in CaCuP thin films. Chemical Science, 2022, 13, 5872-5883.	3.7	12
34	Investigation of $\text{Cu}_2\text{ZnSnS}_4$ nanoparticles for thin-film solar cell applications. Thin Solid Films, 2017, 628, 163-169.	0.8	10
35	Reactive phosphine combinatorial co-sputtering of cation disordered ZnGeP_2 films. Journal of Materials Chemistry C, 2022, 10, 870-879.	2.7	8
36	Boron Phosphide Films by Reactive Sputtering: Searching for a p-type Transparent Conductor. Advanced Materials Interfaces, 2022, 9, .	1.9	8

#	ARTICLE	IF	CITATIONS
37	Semiconductor band alignment from first principles: A new nonequilibrium Green's function method applied to the CZTSe/CdS interface for photovoltaics. , 2016, , .		7
38	Resonant x-ray ptychographic nanotomography of kesterite solar cells. Physical Review Research, 2020, 2, .	1.3	7
39	Crystallize It before It Diffuses: Kinetic Stabilization of Thin-Film Phosphorus-Rich Semiconductor CuP ₂ . Journal of the American Chemical Society, 2022, 144, 13334-13343.	6.6	5
40	ZnS top layer for enhancement of the crystallinity of CZTS absorber during the annealing. , 2015, , .		2
41	Estimating complete band diagrams of non-ideal heterointerfaces by combining ellipsometry and photoemission spectroscopy. Journal of Applied Physics, 2018, 124, 085302.	1.1	2