Monica Morales-Masis

List of Publications by Year
in descending order

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59 papers	2,288 citations	218381 26 h-index	214527 47 g-index
61 all docs	61 docs citations	61 times ranked	2942 citing authors

#	Article	IF	Citations
1	Transparent Electrodes for Efficient Optoelectronics. Advanced Electronic Materials, 2017, 3, 1600529.	2.6	310
2	Sputtered rear electrode with broadband transparency for perovskite solar cells. Solar Energy Materials and Solar Cells, 2015, 141, 407-413.	3.0	223
3	Zrâ€Doped Indium Oxide (IZRO) Transparent Electrodes for Perovskiteâ€Based Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1901741.	7.8	124
4	Low-Temperature High-Mobility Amorphous IZO for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1340-1347.	1.5	113
5	A passivating contact for silicon solar cells formed during a single firing thermal annealing. Nature Energy, 2018, 3, 800-808.	19.8	109
6	Zinc tin oxide as high-temperature stable recombination layer for mesoscopic perovskite/silicon monolithic tandem solar cells. Applied Physics Letters, 2016, 109, .	1.5	105
7	An Indiumâ€Free Anode for Largeâ€Area Flexible OLEDs: Defectâ€Free Transparent Conductive Zinc Tin Oxide. Advanced Functional Materials, 2016, 26, 384-392.	7.8	90
8	Parasitic Absorption Reduction in Metal Oxide-Based Transparent Electrodes: Application in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 17260-17267.	4.0	80
9	Interplay of annealing temperature and doping in hole selective rear contacts based on silicon-rich silicon-carbide thin films. Solar Energy Materials and Solar Cells, 2017, 173, 18-24.	3.0	79
10	Conductance switching in Ag₂S devices fabricated byin situsulfurization. Nanotechnology, 2009, 20, 095710.	1.3	75
11	Observing â€œquantizedâ€•conductance steps in silver sulfide: Two parallel resistive switching mechanisms. Journal of Applied Physics, 2012, 111, .	1.1	65
12	In Situ Hall Effect Monitoring of Vacuum Annealing of In2O3:H Thin Films. Materials, 2015, 8, 561-574.	1.3	48
13	Environmental stability of high-mobility indium-oxide based transparent electrodes. APL Materials, 2015, 3, 116105.	2.2	47
14	Highly Conductive and Broadband Transparent Zr-Doped In₂O₃ as Front Electrode for Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1202-1207.	1.5	46
15	Sputtered transparent electrodes for optoelectronic devices: Induced damage and mitigation strategies. Matter, 2021, 4, 3549-3584.	5.0	43
16	Toward Annealingâ€Stable Molybdenumâ€Oxideâ€Based Holeâ€Selective Contacts For Silicon Photovoltaics. Solar Rrl, 2018, 2, 1700227.	3.1	42
17	Pressing challenges of halide perovskite thin film growth. APL Materials, 2020, 8, .	2.2	42
18	Crystalline Silicon Solar Cells With Coannealed Electron- and Hole-Selective SiC _x Passivating Contacts. IEEE Journal of Photovoltaics, 2018, 8, 1478-1485.	1.5	39

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19	c-texture versus a-texture low pressure metalorganic chemical vapor deposition ZnO films: Lower resistivity despite smaller grain size. Thin Solid Films, 2014, 565, 1-6.	0.8	35
20	Bulk and surface nucleation processes in Ag<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>S conductance switches. Physical Review B, 2011, 84, .	1.1	33
21	Singleâ€Source, Solventâ€Free, Room Temperature Deposition of Black Î³â€CsSnI₃ Films. Advanced Materials Interfaces, 2020, 7, 2000162.	1.9	32
22	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. Physical Review B, 2017, 95, .	1.1	31
23	Hydrogen plasma treatment for improved conductivity in amorphous aluminum doped zinc tin oxide thin films. APL Materials, 2014, 2, 096113.	2.2	30
24	Metallization of Si heterojunction solar cells by nanosecond laser ablation and Ni-Cu plating. Solar Energy Materials and Solar Cells, 2017, 159, 243-250.	3.0	30
25	Towards a quantitative description of solid electrolyte conductance switches. Nanoscale, 2010, 2, 2275.	2.8	29
26	Pulsed Laser Deposition of Cs₂AgBiBr₆: from Mechanochemically Synthesized Powders to Dry, Single-Step Deposition. Chemistry of Materials, 2021, 33, 7417-7422.	3.2	29
27	Copper and Transparent-Conductor Reflectarray Elements on Thin-Film Solar Cell Panels. IEEE Transactions on Antennas and Propagation, 2014, 62, 3813-3818.	3.1	28
28	Scalable Pulsed Laser Deposition of Transparent Rear Electrode for Perovskite Solar Cells. Advanced Materials Technologies, 2021, 6, 2000856.	3.0	28
29	Exploring co-sputtering of ZnO:Al and SiO2 for efficient electron-selective contacts on silicon solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 67-73.	3.0	23
30	Zr-doped indium oxide electrodes: Annealing and thickness effects on microstructure and carrier transport. Physical Review Materials, 2019, 3, .	0.9	23
31	Bridging the p-type transparent conductive materials gap: synthesis approaches for disperse valence band materials. Journal of Photonics for Energy, 2020, 10, 1.	0.8	20
32	Increasing Polycrystalline Zinc Oxide Grain Size by Control of Film Preferential Orientation. Crystal Growth and Design, 2015, 15, 5886-5891.	1.4	19
33	Color Tuning of Electrochromic TiO₂ Nanofibrous Layers Loaded with Metal and Metal Oxide Nanoparticles for Smart Colored Windows. ACS Applied Nano Materials, 2021, 4, 8600-8610.	2.4	17
34	Tuning the porosity of zinc oxide electrodes: from dense to nanopillar films. Materials Research Express, 2015, 2, 075006.	0.8	16
35	Tuning the Optoelectronic Properties of ZnO:Al by Addition of Silica for Light Trapping in Highâ€Efficiency Crystalline Si Solar Cells. Advanced Materials Interfaces, 2016, 3, 1500462.	1.9	16
36	Carrier scattering mechanisms limiting mobility in hydrogen-doped indium oxide. Journal of Applied Physics, 2018, 123, .	1.1	15

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37	New Route for â€œCold-Passivationâ€•of Defects in Tin-Based Oxides. Journal of Physical Chemistry C, 2018, 122, 17612-17620.	1.5	15
38	Amorphous gallium oxide grown by low-temperature PECVD. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 021518.	0.9	13
39	Wafer-scale pulsed laser deposition of ITO for solar cells: reduced damage vs. interfacial resistance. Materials Advances, 2022, 3, 3469-3478.	2.6	13
40	Optical properties of highly-crystalline tin-doped indium oxide films in their near-zero permittivity spectral region. Optical Materials Express, 2022, 12, 96.	1.6	12
41	ITO Topâ€Electrodes via Industrialâ€Scale PLD for Efficient Bufferâ€Layerâ€Free Semitransparent Perovskite Solar Cells. Advanced Materials Technologies, 2022, 7, .	3.0	12
42	Tailoring the surface morphology of zinc oxide films for high-performance micromorph solar cells. Solar Energy Materials and Solar Cells, 2014, 128, 378-385.	3.0	11
43	Mechanical integrity of hybrid indium-free electrodes for flexible devices. Organic Electronics, 2016, 35, 136-141.	1.4	10
44	Origins of infrared transparency in highly conductive perovskite stannate BaSnO3. APL Materials, 2020, 8, 061108.	2.2	9
45	Correlation between Vickers microhardness, porous layer thickness and porosity in p-type nanostructured silicon. Applied Surface Science, 2007, 253, 7188-7191.	3.1	8
46	Microchannel contacting of crystalline silicon solar cells. Scientific Reports, 2017, 7, 9085.	1.6	8
47	Direct Imaging of Dopant Distribution in Polycrystalline ZnO Films. ACS Applied Materials & Interfaces, 2017, 9, 7241-7248.	4.0	7
48	APCVD of dual layer transparent conductive oxides for photovoltaic applications. Thin Solid Films, 2015, 590, 260-265.	0.8	6
49	Three-dimensional in situ imaging of single-grain growth in polycrystalline In2O3:Zr films. Communications Materials, 2022, 3, .	2.9	6
50	Optical Evaluation of the Rear Contacts of Crystalline Silicon Solar Cells by Coupled Electromagnetic and Statistical Ray-Optics Modeling. IEEE Journal of Photovoltaics, 2017, 7, 718-726.	1.5	5
51	Determination of Vickers microhardness on porous silicon surfaces. Thin Solid Films, 2008, 516, 1961-1963.	0.8	3
52	Hybrid sequential deposition process for fully textured perovskite/silicon tandem solar cells. , 2018, , .		2
53	High performance amorphous Zn-Sn-O: impact of composition, microstructure, and thermal treatments in the optoelectronic properties. Proceedings of SPIE, 2017, , .	0.8	1
54	Paths for maximal light incoupling and excellent electrical performances in silicon heterojunction solar cells. , 2019, , .		1

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55	Single-Source Pulsed Laser Deposition of MAPbI3. , 2021, , .		1
56	High Temperature Stability of Amorphous Zn-Sn-O Transparent Conductive Oxides Investigated by In Situ TEM and X-ray Diffraction. Microscopy and Microanalysis, 2016, 22, 1582-1583.	0.2	0
57	What Limits Mobility in Hydrogenated Indium Oxide?. , 2018, , .		0
58	Corrections to â€œHighly Conductive and Broadband Transparent Zr-Doped In2O3 as Front Electrode for Solar Cellsâ€•[Sep 18 1202-1207]. IEEE Journal of Photovoltaics, 2019, 9, 1155-1155.	1.5	0
59	Broadband-transparent conducting oxides for efficient solar cells: case of zirconium-doped indium oxide. , 2019, , .		0