Mathias Mews

List of Publications by Citations

32 papers	1,214 citations	15 h-index	32 g-index
32 ext. papers	1,394 ext. citations	5.2 avg, IF	4.33 L-index

#	Paper	IF	Citations
32	Monolithic perovskite/silicon-heterojunction tandem solar cells processed at low temperature. *Energy and Environmental Science*, **2016**, 9, 81-88	35.4	469
31	Hydrogen plasma treatments for passivation of amorphous-crystalline silicon-heterojunctions on surfaces promoting epitaxy. *Applied Physics Letters*, **2013**, 102, 122106	3.4	115
30	Oxygen vacancies in tungsten oxide and their influence on tungsten oxide/silicon heterojunction solar cells. *Solar Energy Materials and Solar Cells*, **2016**, 158, 77-83	6.4	91
29	Crystalline silicon solar cells with tetracene interlayers: the path to silicon-singlet fission heterojunction devices. *Materials Horizons*, **2018**, 5, 1065-1075	14.4	58
28	Potential of PEDOT:PSS as a hole selective front contact for silicon heterojunction solar cells. *Scientific Reports*, **2017**, 7, 2170	4.9	49
27	Valence band alignment and hole transport in amorphous/crystalline silicon heterojunction solar cells. *Applied Physics Letters*, **2015**, 107, 013902	3.4	39
26	Over 20% conversion efficiency on silicon heterojunction solar cells by IPA-free substrate texturization. *Applied Surface Science*, **2014**, 301, 56-62	6.7	34
25	Sputtered Tungsten Oxide as Hole Contact for Silicon Heterojunction Solar Cells. *IEEE Journal of Photovoltaics*, **2017**, 7, 1209-1215	3.7	33
24	Three-Terminal Perovskite/Silicon Tandem Solar Cells with Top and Interdigitated Rear Contacts. *ACS Applied Energy Materials*, **2020**, 3, 1381-1392	6.1	31
23	Toward Annealing-Stable Molybdenum-Oxide-Based Hole-Selective Contacts For Silicon Photovoltaics. *Solar Rrl*, **2018**, 2, 1700227	7.1	31
22	CsxFA1−xPb(I1−yBry)3 Perovskite Compositions: the Appearance of Wrinkled Morphology and its Impact on Solar Cell Performance. *Journal of Physical Chemistry C*, **2018**, 122, 17123-17135	3.8	31
21	Valence band offset in heterojunctions between crystalline silicon and amorphous silicon (sub)oxides (a-SiOx:H, 0 Applied Physics Letters, **2015**, 106, 031601	3.4	29
20	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. *Advanced Functional Materials*, **2019**, 29, 1901476	15.6	27
19	Passivation of Textured Silicon Wafers:Influence of Pyramid Size Distribution, a-Si:H Deposition Temperature, and Post-treatment. *Energy Procedia*, **2013**, 38, 881-889	2.3	27
18	Plasma-enhanced atomic-layer-deposited MoO x emitters for silicon heterojunction solar cells. *Applied Physics A: Materials Science and Processing*, **2015**, 120, 811-816	2.6	26
17	Comparison of TMB and B2H6 as Precursors for Emitter Doping in High Efficiency Silicon Hetero Junction Solar Cells. *Energy Procedia*, **2014**, 60, 123-128	2.3	12
16	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	6.4	12

15	Amorphous Silicon Passivation of Surfaces Promoting Epitaxy. *Energy Procedia*, **2013**, 38, 855-861	2.3	10
14	Solution-processed amorphous silicon surface passivation layers. *Applied Physics Letters*, **2014**, 105, 122113	3.4	10
13	Amorphous/crystalline silicon heterojunction solar cells with black silicon texture. *Physica Status Solidi - Rapid Research Letters*, **2014**, 8, 831-835	2.5	10
12	Optimized Metallization for Interdigitated Back Contact Silicon Heterojunction Solar Cells. *Solar Rrl*, **2017**, 1, 1700021	7.1	9
11	Hydrogen Plasma Treatments of Amorphous/Crystalline Silicon Heterojunctions. *Energy Procedia*, **2014**, 55, 827-833	2.3	8
10	Approach for a Simplified Fabrication Process for IBC-SHJ Solar Cells with High Fill Factors. *Energy Procedia*, **2013**, 38, 732-736	2.3	8
9	Evolution of the Charge Carrier Lifetime Characteristics in Crystalline Silicon Wafers During Processing of Heterojunction Solar Cells. *Energy Procedia*, **2014**, 55, 219-228	2.3	8
8	Electrochemically deposited ZnO nanostructured array films as antireflection coating on silicon heterojunction solar cells. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 166-170	1.6	6
7	Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. *Journal of Physical Chemistry C*, **2020**, 124, 27867-27881	3.8	6
6	In-system photoelectron spectroscopy study of tin oxide layers produced from tetrakis(dimethylamino)tin by plasma enhanced atomic layer deposition. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2018**, 36, 02D401	2.9	6
5	AgGaSe2 thin films grown by chemical close-spaced vapor transport for photovoltaic applications: structural, compositional and optical properties. *Journal of Physics Condensed Matter*, **2012**, 24, 175801	1.8	6
4	Electronic structure of indium-tungsten-oxide alloys and their energy band alignment at the heterojunction to crystalline silicon. *Applied Physics Letters*, **2018**, 112, 011602	3.4	5
3	Aluminium metallisation for interdigitated back-contact silicon heterojunction solar cells. *Japanese Journal of Applied Physics*, **2017**, 56, 08MB22	1.4	4
2	Interdigitated back contact silicon heterojunction solar cells: Towards an industrially applicable structuring method **2018**,		3
1	Optical and structural properties of electrochemically deposited ZnO nanorod arrays suitable for improvement of the light harvesting in thin film solar cells. *Journal of Physics: Conference Series*, **2014**, 559, 012018	0.3	1