

Maikel F A M Van Hest

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

77
papers

4,737
citations

27
h-index

68
g-index

91
ext. papers

5,703
ext. citations

13.8
avg, IF

5.68
L-index

#	Paper	IF	Citations
77	Solvation of NiO for hole transport layer deposition in perovskite solar cells. <i>Nanotechnology</i> , 2021 , 33,	3.4	1
76	Carrier gradients and the role of charge selective contacts in lateral heterojunction all back contact perovskite solar cells. <i>Cell Reports Physical Science</i> , 2021 , 2, 100520	6.1	1
75	The Molybdenum Oxide Interface Limits the High-Temperature Operational Stability of Unencapsulated Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2020 , 5, 2349-2360	20.1	31
74	Improving Low-Bandgap Tin/Lead Perovskite Solar Cells via Contact Engineering and Gas Quench Processing. <i>ACS Energy Letters</i> , 2020 , 5, 1215-1223	20.1	43
73	Toward Scalable Perovskite Solar Modules Using Blade Coating and Rapid Thermal Processing. <i>ACS Applied Energy Materials</i> , 2020 , 3, 3714-3720	6.1	26
72	Triple-halide wide-band gap perovskites with suppressed phase segregation for efficient tandems. <i>Science</i> , 2020 , 367, 1097-1104	33.3	366
71	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. <i>Advanced Energy Materials</i> , 2020 , 10, 1904054	21.8	119
70	Three-terminal III/V/Si tandem solar cells enabled by a transparent conductive adhesive. <i>Sustainable Energy and Fuels</i> , 2020 , 4, 549-558	5.8	28
69	Learning from existing photovoltaic technologies to identify alternative perovskite module designs. <i>Energy and Environmental Science</i> , 2020 , 13, 3393-3403	35.4	18
68	Enabling Flexible All-Perovskite Tandem Solar Cells. <i>Joule</i> , 2019 , 3, 2193-2204	27.8	211
67	Carrier lifetimes of $>1 \mu$ s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. <i>Science</i> , 2019 , 364, 475-479	33.3	496
66	Measurement of band offsets and shunt resistance in CdTe solar cells through temperature and intensity dependence of open circuit voltage and photoluminescence. <i>Solar Energy</i> , 2019 , 189, 389-397	6.8	8
65	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. <i>Joule</i> , 2019 , 3, 1734-1745	27.8	131
64	Rapid thermal processing of cost-effective contacts for silicon solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2019 , 27, 453-459	6.8	1
63	Design of low bandgap tin/lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. <i>Nature Energy</i> , 2019 , 4, 939-947	62.3	152
62	Transparent Conductive Adhesives for Tandem Solar Cells Using Polymer-Particle Composites. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 8086-8091	9.5	14
61	Curtailling Perovskite Processing Limitations via Lamination at the Perovskite/Perovskite Interface. <i>ACS Energy Letters</i> , 2018 , 3, 1192-1197	20.1	17

60	Measurement of Relaxation Time of Excess Carriers in Si and CIGS Solar Cells by Modulated Electroluminescence Technique. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018 , 215, 1700267	1.6	7
59	Effect of supersonic spraying impact velocity on opto-electric properties of transparent conducting flexible films consisting of silver nanowire, ITO, and polyimide multilayers. <i>Journal of Alloys and Compounds</i> , 2018 , 739, 653-659	5.7	6
58	Highly Efficient Perovskite Solar Modules by Scalable Fabrication and Interconnection Optimization. <i>ACS Energy Letters</i> , 2018 , 3, 322-328	20.1	111
57	Scalable Deposition of High-Efficiency Perovskite Solar Cells by Spray-Coating. <i>ACS Applied Energy Materials</i> , 2018 , 1, 1853-1857	6.1	59
56	Scalable fabrication of perovskite solar cells. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	532
55	Degradation of Highly Alloyed Metal Halide Perovskite Precursor Inks: Mechanism and Storage Solutions. <i>ACS Energy Letters</i> , 2018 , 3, 979-985	20.1	57
54	Scalable slot-die coating of high performance perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2018 , 2, 2442-2449	5.8	109
53	Outlook and Challenges of Perovskite Solar Cells toward Terawatt-Scale Photovoltaic Module Technology. <i>Joule</i> , 2018 , 2, 1437-1451	27.8	113
52	Synthesis of CZTS/Se and Their Solid Solution from Electrodeposited Cu ₂ SnZn Metal Precursor: A Study of S and Se Replacement Reaction. <i>ACS Applied Energy Materials</i> , 2018 , 1, 3351-3358	6.1	3
51	Roll-to-Roll Printing of Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2018 , 3, 2558-2565	20.1	137
50	A novel blanket annealing process to achieve highly transparent and conducting Al doped ZnO thin films: Its mechanism and application in perovskite solar cells. <i>Solar Energy</i> , 2018 , 174, 815-825	6.8	18
49	Scalable Fabrication of Perovskite Solar Cells to Meet Climate Targets. <i>Joule</i> , 2018 , 2, 2464-2476	27.8	29
48	Stability at Scale: Challenges of Module Interconnects for Perovskite Photovoltaics. <i>ACS Energy Letters</i> , 2018 , 3, 2502-2503	20.1	23
47	Stabilization of wide band-gap p-type wurtzite MnTe thin films on amorphous substrates. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 6297-6304	7.1	14
46	Stable p-i-n FAPbBr ₃ Devices with Improved Efficiency Using Sputtered ZnO as Electron Transport Layer. <i>Advanced Materials Interfaces</i> , 2017 , 4, 1601143	4.6	22
45	Radiative Thermal Annealing/in Situ X-ray Diffraction Study of Methylammonium Lead Triiodide: Effect of Antisolvent, Humidity, Annealing Temperature Profile, and Film Substrates. <i>Chemistry of Materials</i> , 2017 , 29, 5931-5941	9.6	26
44	Perovskite ink with wide processing window for scalable high-efficiency solar cells. <i>Nature Energy</i> , 2017 , 2,	62.3	398
43	High-Performance Flexible Perovskite Solar Cells on Ultrathin Glass: Implications of the TCO. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 4960-4966	6.4	85

42	Influence of dipping cycles on physical, optical, and electrical properties of Cu ₂ NiSnS ₄ : Direct solution dip coating for photovoltaic applications. <i>Journal of Alloys and Compounds</i> , 2017 , 725, 510-518	5.7	25
41	The formation mechanism for printed silver-contacts for silicon solar cells. <i>Nature Communications</i> , 2016 , 7, 11143	17.4	73
40	Development of solution-processed nanowire composites for opto-electronics. <i>MRS Communications</i> , 2016 , 6, 341-347	2.7	2
39	Hydrazine-Free Solution-Deposited CuIn(S,Se) ₂ Solar Cells by Spray Deposition of Metal Chalcogenides. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 11893-7	9.5	26
38	Combinatorial Chemical Bath Deposition of CdS Contacts for Chalcogenide Photovoltaics. <i>ACS Combinatorial Science</i> , 2016 , 18, 583-9	3.9	16
37	III-V/Si wafer bonding using transparent, conductive oxide interlayers. <i>Applied Physics Letters</i> , 2015 , 106, 263904	3.4	18
36	Back contact band offset study of Mo-CZTS based solar cell structure by using XPS/UPS techniques 2015 ,		3
35	Indium zinc oxide mediated wafer bonding for III-V/Si tandem solar cells 2015 ,		6
34	Processing-phase diagrams: a new tool for solution-deposited thin-film development applied to the In ₅ O(OPri) ₁₃ Th ₂ O ₃ system. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 2360	7.1	2
33	Non-contact printed aluminum for metallization of Si photovoltaics. <i>Thin Solid Films</i> , 2014 , 556, 525-528	2.2	3
32	Carbon- and oxygen-free Cu(InGa)(S,Se) ₂ solar cell with a 4.63% conversion efficiency by electrostatic spray deposition. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 8369-77	9.5	20
31	Printed monolithic interconnects for photovoltaic applications 2014 ,		2
30	Improving mechanical stability and electrical properties of silver nanowire films with a zinc tin oxide overcoat 2014 ,		3
29	Improved fill factors in solution-processed ZnO/Cu ₂ O photovoltaics. <i>Thin Solid Films</i> , 2013 , 536, 280-285	2.2	22
28	Wettability and photocatalysis of CF ₄ plasma etched titania films of honeycomb structure. <i>Ceramics International</i> , 2013 , 39, 9737-9742	5.1	5
27	Niobium-Doped Titania Photocatalyst Film Prepared via a Nonaqueous Sol-Gel Method. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 2623-2627	3.8	22
26	Superhydrophilic Transparent Titania Films by Supersonic Aerosol Deposition. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 1596-1601	3.8	23
25	Radio-frequency superimposed direct current magnetron sputtered Ga:ZnO transparent conducting thin films. <i>Journal of Applied Physics</i> , 2012 , 111, 093718	2.5	12

24	Tuning Hydrophobicity with Honeycomb Surface Structure and Hydrophilicity with CF ₄ Plasma Etching for Aerosol-Deposited Titania Films. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 3955-3961	3.8	13
23	Non-contact printed aluminum metallization of Si photovoltaic devices 2012 ,		3
22	Inkjet printed metallizations for Cu(In _{1-x} Ga _x)Se ₂ photovoltaic cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2011 , 19, 973-976	6.8	7
21	High-Efficiency Low-Cost Photovoltaic Modules Based on CIGS Thin Films from Solution Precursors. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1247, 1		
20	Field assisted simultaneous synthesis and transfer FASST method used in conjunction with liquid precursors to produce CIGS solar cells 2010 ,		1
19	Solution synthesis and characterization of indium-zinc formate precursors for transparent conducting oxides. <i>Inorganic Chemistry</i> , 2010 , 49, 5424-31	5.1	12
18	Low-cost inorganic solar cells: from ink to printed device. <i>Chemical Reviews</i> , 2010 , 110, 6571-94	68.1	376
17	Direct write metallization for photovoltaic cells and scaling thereof 2010 ,		7
16	Effect of deposition distance and temperature on electrical, optical and structural properties of radio-frequency magnetron-sputtered gallium-doped zinc oxide. <i>Thin Solid Films</i> , 2010 , 519, 190-196	2.2	33
15	Solution deposition of amorphous IZO films by ultrasonic spray pyrolysis 2009 ,		2
14	Inkjet printed contacts for use in photovoltaics 2009 ,		3
13	Atmospheric pressure synthesis of In ₂ Se ₃ , Cu ₂ Se, and CuInSe ₂ without external selenization from solution precursors. <i>Journal of Materials Research</i> , 2009 , 24, 1375-1387	2.5	9
12	Ultrasonically sprayed and inkjet printed thin film electrodes for organic solar cells. <i>Thin Solid Films</i> , 2009 , 517, 2781-2786	2.2	93
11	Spray deposition of high quality CuInSe ₂ and CdTe films. <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , 2008 ,		4
10	Direct-write contacts: Metallization and contact formation. <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , 2008 ,		2
9	General mobility and carrier concentration relationship in transparent amorphous indium zinc oxide films. <i>Physical Review B</i> , 2008 , 77,	3.3	187
8	The Remarkable Thermal Stability of Amorphous In-Zn-O Transparent Conductors. <i>Advanced Functional Materials</i> , 2008 , 18, 3169-3178	15.6	135
7	Pulsed laser deposited Nb doped TiO ₂ as a transparent conducting oxide. <i>Thin Solid Films</i> , 2008 , 516, 4133-4138	2.2	62

6	Sputtered Nb- and Ta-doped TiO ₂ transparent conducting oxide films on glass. <i>Journal of Materials Research</i> , 2007 , 22, 2832-2837	2.5	44
5	Fabrication of nanoporous titania on glass and transparent conducting oxide substrates by anodization of titanium films. <i>Journal of Materials Research</i> , 2007 , 22, 681-687	2.5	20
4	Multi-Layer Inkjet Printed Contacts for Silicon Solar Cells 2006 ,		8
3	Combinatorial Growth and Analysis of the Transparent Conducting Oxide ZnO/In (IZO). <i>Macromolecular Rapid Communications</i> , 2004 , 25, 344-347	4.8	16
2	Direct Deposition of Nonaqueous SnO ₂ Dispersion by Blade Coating on Perovskites for the Scalable Fabrication of p-i-n Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> ,	6.1	3
1	Photovoltaics. <i>Advanced Micro & Nanosystems</i> , 279-294		1