Tomas Leijtens

List of Publications by Year in Descending Order

52 papers	26,299 citations	44 h-index	53 g-index
53 ext. papers	29,343 ext. citations	20.6 avg, IF	7.15 L-index

#	Paper	IF	Citations
52	Enabling Flexible All-Perovskite Tandem Solar Cells. *Joule*, **2019**, 3, 2193-2204	27.8	211
51	Long-Range Charge Extraction in Back-Contact Perovskite Architectures via Suppressed Recombination. *Joule*, **2019**, 3, 1301-1313	27.8	50
50	Design of low bandgap tin‐lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. *Nature Energy*, **2019**, 4, 939-947	62.3	152
49	Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. *Chemical Reviews*, **2019**, 119, 3418-3451	68.1	663
48	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. *ACS Energy Letters*, **2018**, 3, 428-435	20.1	225
47	Tin‐lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2450-2459	5.8	127
46	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. *Nature Energy*, **2018**, 3, 828-838	62.3	454
45	Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. *ACS Energy Letters*, **2018**, 3, 1772-1778	20.1	132
44	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. *Advanced Energy Materials*, **2018**, 8, 1800591	21.8	44
43	Encapsulating perovskite solar cells to withstand damp heat and thermal cycling. *Sustainable Energy and Fuels*, **2018**, 2, 2398-2406	5.8	157
42	23.6%-efficient monolithic perovskite/silicon tandem solar cells with improved stability. *Nature Energy*, **2017**, 2,	62.3	965
41	Defect-Assisted Photoinduced Halide Segregation in Mixed-Halide Perovskite Thin Films. *ACS Energy Letters*, **2017**, 2, 1416-1424	20.1	307
40	Towards enabling stable lead halide perovskite solar cells; interplay between structural, environmental, and thermal stability. *Journal of Materials Chemistry A*, **2017**, 5, 11483-11500	13	241
39	The Potential of Multijunction Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 2506-2513	20.1	180
38	Mechanism of Tin Oxidation and Stabilization by Lead Substitution in Tin Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 2159-2165	20.1	242
37	Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. *Journal of the American Chemical Society*, **2017**, 139, 11117-11124	16.4	353
36	Minimal Effect of the Hole-Transport Material Ionization Potential on the Open-Circuit Voltage of Perovskite Solar Cells. *ACS Energy Letters*, **2016**, 1, 556-560	20.1	100

35	Photo-induced halide redistribution in organic-inorganic perovskite films. *Nature Communications*, **2016**, 7, 11683	17.4	621
34	Perovskite-perovskite tandem photovoltaics with optimized band gaps. *Science*, **2016**, 354, 861-865	33.3	865
33	Thermal and Environmental Stability of Semi-Transparent Perovskite Solar Cells for Tandems Enabled by a Solution-Processed Nanoparticle Buffer Layer and Sputtered ITO Electrode. *Advanced Materials*, **2016**, 28, 3937-43	24	344
32	Hydrophobic Organic Hole Transporters for Improved Moisture Resistance in Metal Halide Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 5981-9	9.5	158
31	Cesium Lead Halide Perovskites with Improved Stability for Tandem Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 746-51	6.4	788
30	Thermal and environmental stability of semi-transparent perovskite solar cells for tandems by a solution-processed nanoparticle buffer layer and sputtered ITO electrode **2016**,		2
29	Carrier trapping and recombination: the role of defect physics in enhancing the open circuit voltage of metal halide perovskite solar cells. *Energy and Environmental Science*, **2016**, 9, 3472-3481	35.4	317
28	Cross-Linkable, Solvent-Resistant Fullerene Contacts for Robust and Efficient Perovskite Solar Cells with Increased J and V. *ACS Applied Materials & Interfaces*, **2016**, 8, 25896-25904	9.5	39
27	The Importance of Moisture in Hybrid Lead Halide Perovskite Thin Film Fabrication. *ACS Nano*, **2015** , 9, 9380-93	16.7	366
26	The Role of Hole Transport between Dyes in Solid-State Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2015**, 119, 18975-18985	3.8	32
25	Employing PEDOT as the p-Type Charge Collection Layer in Regular Organic-Inorganic Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 1666-73	6.4	81
24	Dye monolayers used as the hole transporting medium in dye-sensitized solar cells. *Advanced Materials*, **2015**, 27, 5889-94	24	18
23	Modulating the Electron-Hole Interaction in a Hybrid Lead Halide Perovskite with an Electric Field. *Journal of the American Chemical Society*, **2015**, 137, 15451-9	16.4	51
22	Stability of Metal Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1500963	21.8	861
21	Mapping Electric Field-Induced Switchable Poling and Structural Degradation in Hybrid Lead Halide Perovskite Thin Films. *Advanced Energy Materials*, **2015**, 5, 1500962	21.8	179
20	C60 as an Efficient n-Type Compact Layer in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 2399-405	6.4	271
19	Novel low cost hole transporting materials for efficient organic-inorganic perovskite solar cells **2015**,		1
18	The Importance of Perovskite Pore Filling in Organometal Mixed Halide Sensitized TiO2-Based Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1096-102	6.4	200

17	High Photoluminescence Efficiency and Optically Pumped Lasing in Solution-Processed Mixed Halide Perovskite Semiconductors. *Journal of Physical Chemistry Letters*, **2014**, 5, 1421-6	6.4	1292
16	Towards Long-Term Photostability of Solid-State Dye Sensitized Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1301667	21.8	47
15	Observation of Annealing-Induced Doping in TiO_2 Mesoporous Single Crystals for Use in Solid State Dye Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 1821-1827	3.8	19
14	Sub-150 °C processed meso-superstructured perovskite solar cells with enhanced efficiency. *Energy and Environmental Science*, **2014**, 7, 1142-1147	35.4	511
13	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. *Journal of Physical Chemistry Letters*, **2014**, 5, 4207-12	6.4	126
12	Recombination Kinetics in Organic-Inorganic Perovskites: Excitons, Free Charge, and Subgap States. *Physical Review Applied*, **2014**, 2,	4.3	874
11	Carbon nanotube/polymer composites as a highly stable hole collection layer in perovskite solar cells. *Nano Letters*, **2014**, 14, 5561-8	11.5	944
10	Lessons learned: from dye-sensitized solar cells to all-solid-state hybrid devices. *Advanced Materials* , **2014**, 26, 4013-30	24	133
9	Anomalous Hysteresis in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1511-5	6.4	1951
8	Electronic properties of meso-superstructured and planar organometal halide perovskite films: charge trapping, photodoping, and carrier mobility. *ACS Nano*, **2014**, 8, 7147-55	16.7	328
7	Modeling the effect of ionic additives on the optical and electronic properties of a dye-sensitized TiO_2 heterointerface: absorption, charge injection and aggregation. *Journal of Materials Chemistry A*, **2013**, 1, 14675	13	36
6	Overcoming ultraviolet light instability of sensitized TiO_2 with meso-superstructured organometal tri-halide perovskite solar cells. *Nature Communications*, **2013**, 4, 2885	17.4	1367
5	Electron-hole diffusion lengths exceeding 1 micrometer in an organometal trihalide perovskite absorber. *Science*, **2013**, 342, 341-4	33.3	7280
4	Lithium salts as "redox active" p-type dopants for organic semiconductors and their impact in solid-state dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2013**, 15, 2572-9	3.6	459
3	Mesoporous TiO_2 single crystals delivering enhanced mobility and optoelectronic device performance. *Nature*, **2013**, 495, 215-9	50.4	669
2	Charge density dependent mobility of organic hole-transporters and mesoporous TiO_2 determined by transient mobility spectroscopy: implications to dye-sensitized and organic solar cells. *Advanced Materials*, **2013**, 25, 3227-33	24	189
1	Hole transport materials with low glass transition temperatures and high solubility for application in solid-state dye-sensitized solar cells. *ACS Nano*, **2012**, 6, 1455-62	16.7	277