Michael Saliba

List of Publications by Year in Descending Order

136 papers	28,064 citations	63 h-index	153 g-index
153 ext. papers	31,989 ext. citations	17 avg, IF	7.44 L-index

#	Paper	IF	Citations
136	High-Efficiency Solar Cells with Polyelemental, Multicomponent Perovskite Materials **2022**, 233-246		0
135	An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. *Nature Energy*, **2022**, 7, 107-115	62.3	26
134	Perovskite Photovoltaics. *Springer Handbooks*, **2022**, 1267-1303	1.3	
133	Roadmap on organic‑inorganic hybrid perovskite semiconductors and devices. *APL Materials*, **2021**, 9, 109202	5.7	28
132	One-Step Solvent-Free Mechanochemical Incorporation of Insoluble Cesium Salt into Perovskites for Wide Band-Gap Solar Cells. *Chemistry of Materials*, **2021**, 33, 3971-3979	9.6	1
131	Defect Passivation in Lead-Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. *Angewandte Chemie*, **2021**, 133, 21804-21828	3.6	22
130	In the Quest of Low-Frequency Impedance Spectra of Efficient Perovskite Solar Cells. *Energy Technology*, **2021**, 9, 2100229	3.5	5
129	Defect Passivation in Lead-Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. *Angewandte Chemie - International Edition*, **2021**, 60, 21636-21660	16.4	63
128	Physical Passivation of Grain Boundaries and Defects in Perovskite Solar Cells by an Isolating Thin Polymer. *ACS Energy Letters*, **2021**, 6, 2626-2634	20.1	21
127	Charge carrier management for developing high-efficiency perovskite solar cells. *Matter*, **2021**, 4, 1758-1759	12.7	4
126	Emerging perovskite monolayers. *Nature Materials*, **2021**, 20, 1325-1336	27	31
125	Photoelectrochemical Water-Splitting Using CuO-Based Electrodes for Hydrogen Production: A Review. *Advanced Materials*, **2021**, 33, e2007285	24	26
124	Experience is more than the sum of its parts. *Nature Energy*, **2021**, 6, 2-2	62.3	
123	Shaping Perovskites: Crystallization Mechanism of Rapid Thermally Annealed, Prepatterned Perovskite Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 6854-6863	9.5	5
122	Defect Passivation of Perovskite Films for Highly Efficient and Stable Solar Cells. *Solar Rrl*, **2021**, 5, 2100295	7.1	16
121	Zooming In on Metal Halide Perovskites: New Energy Frontiers Emerge. *ACS Energy Letters*, **2021**, 6, 2750-2754	20.1	2
120	Ionic Liquid Stabilizing High-Efficiency Tin Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2101539	21.8	37

119	Top-Down Approach to Study Chemical and Electronic Properties of Perovskite Solar Cells: Sputtered Depth Profiling Versus Tapered Cross-Sectional Photoelectron Spectroscopies. *Solar Rrl*, **2021**, 5, 2100298	7.1	2
118	Impedance Spectroscopy for Metal Halide Perovskite Single Crystals: Recent Advances, Challenges, and Solutions. *ACS Energy Letters*, **2021**, 6, 3275-3286	20.1	13
117	Encapsulation Strategies for Highly Stable Perovskite Solar Cells under Severe Stress Testing: Damp Heat, Freezing, and Outdoor Illumination Conditions. *ACS Applied Materials & Interfaces*, **2021**, 13, 45455-45464	9.5	9
116	Mechanism of ultrafast energy transfer between the organic-inorganic layers in multiple-ring aromatic spacers for 2D perovskites. *Nanoscale*, **2021**, 13, 15668-15676	7.7	1
115	Recent Advances in Plasmonic Perovskite Solar Cells. *Advanced Science*, **2020**, 7, 1902448	13.6	45
114	Tin Halide Perovskite Films Made of Highly Oriented 2D Crystals Enable More Efficient and Stable Lead-free Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 1923-1929	20.1	61
113	Flash Infrared Pulse Time Control of Perovskite Crystal Nucleation and Growth from Solution. *Crystal Growth and Design*, **2020**, 20, 670-679	3.5	7
112	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. *Nature Energy*, **2020**, 5, 35-49	62.3	369
111	Photodoping through local charge carrier accumulation in alloyed hybrid perovskites for highly efficient luminescence. *Nature Photonics*, **2020**, 14, 123-128	33.9	60
110	Highly efficient and rapid manufactured perovskite solar cells via Flash InfraRed Annealing. *Materials Today*, **2020**, 35, 9-15	21.8	22
109	Bandgap tuning and compositional exchange for lead halide perovskite materials **2020**, 1-22		2
108	Current Density Mismatch in Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 2886-2888	20.1	59
107	Embedded Nickel-Mesh Transparent Electrodes for Highly Efficient and Mechanically Stable Flexible Perovskite Photovoltaics: Toward a Portable Mobile Energy Source. *Advanced Materials*, **2020**, 32, e2003422	24	30
106	Negative Capacitance and Inverted Hysteresis: Matching Features in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2020**, 11, 8417-8423	6.4	21
105	Ultrathin polymeric films for interfacial passivation in wide band-gap perovskite solar cells. *Scientific Reports*, **2020**, 10, 22260	4.9	13
104	Crystal Orientation and Grain Size: Do They Determine Optoelectronic Properties of MAPbI Perovskite?. *Journal of Physical Chemistry Letters*, **2019**, 10, 6010-6018	6.4	52
103	PbZrTiO3 ferroelectric oxide as an electron extraction material for stable halide perovskite solar cells. *Sustainable Energy and Fuels*, **2019**, 3, 382-389	5.8	26
102	Cation influence on carrier dynamics in perovskite solar cells. *Nano Energy*, **2019**, 58, 604-611	17.1	56

101	Bright and fast scintillation of organolead perovskite MAPbBr3 at low temperatures. *Materials Horizons*, **2019**, 6, 1740-1747	14.4	68
100	Energy Selects. *ACS Energy Letters*, **2019**, 4, 1455-1457	20.1	4
99	Flash infrared annealing as a cost-effective and low environmental impact processing method for planar perovskite solar cells. *Materials Today*, **2019**, 31, 39-46	21.8	44
98	Highly efficient and stable inverted perovskite solar cells using down-shifting quantum dots as a light management layer and moisture-assisted film growth. *Journal of Materials Chemistry A*, **2019**, 7, 14753-14760	13	58
97	Polyelemental, Multicomponent Perovskite Semiconductor Libraries through Combinatorial Screening. *Advanced Energy Materials*, **2019**, 9, 1803754	21.8	58
96	The Bloom of Perovskite Optoelectronics: Fundamental Science Matters. *ACS Energy Letters*, **2019**, 4, 861-865	20.1	16
95	Dopant-Free Hole-Transporting Polymers for Efficient and Stable Perovskite Solar Cells. *Macromolecules*, **2019**, 52, 2243-2254	5.5	33
94	A partially-planarised hole-transporting quart-p-phenylene for perovskite solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 4332-4335	7.1	5
93	Molecular engineering of enamine-based small organic compounds as hole-transporting materials for perovskite solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 2717-2724	7.1	11
92	The impact of energy alignment and interfacial recombination on the internal and external open-circuit voltage of perovskite solar cells. *Energy and Environmental Science*, **2019**, 12, 2778-2788	35.4	348
91	Perovskites for Laser and Detector Applications. *Energy and Environmental Materials*, **2019**, 2, 146-153	13	23
90	Oxygen Plasma-Induced p-Type Doping Improves Performance and Stability of PbS Quantum Dot Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 26047-26052	9.5	25
89	Tunable green lasing from circular grating distributed feedback based on CH3NH3PbBr3 perovskite. *Optical Materials Express*, **2019**, 9, 2006	2.6	12
88	Perovskite Solar Cell Modeling Using Light- and Voltage-Modulated Techniques. *Journal of Physical Chemistry C*, **2019**, 123, 6444-6449	3.8	37
87	Energy Spotlight: New Inroads in Metal Halide Perovskite Research. *ACS Energy Letters*, **2019**, 4, 3036-3038	20.1	3
86	Synergistic Crystal and Interface Engineering for Efficient and Stable Perovskite Photovoltaics. *Advanced Energy Materials*, **2019**, 9, 1802646	21.8	150
85	Multilayer evaporation of MAFAPbI3� Cl x for the fabrication of efficient and large-scale device perovskite solar cells. *Journal Physics D: Applied Physics*, **2019**, 52, 034005	3	11
84	A chain is as strong as its weakest link �Stability study of MAPbI3 under light and temperature. *Materials Today*, **2019**, 29, 10-19	21.8	43

83	Planar Perovskite Solar Cells with High Open-Circuit Voltage Containing a Supramolecular Iron Complex as Hole Transport Material Dopant. *ChemPhysChem*, **2018**, 19, 1363-1370	3.2	13
82	Carbon Nanoparticles in High-Performance Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1702719	21.8	59
81	Perovskite solar cells must come of age. *Science*, **2018**, 359, 388-389	33.3	111
80	Poly(ethylene glycol)-[60]Fullerene-Based Materials for Perovskite Solar Cells with Improved Moisture Resistance and Reduced Hysteresis. *ChemSusChem*, **2018**, 11, 1032-1039	8.3	43
79	One-step mechanochemical incorporation of an insoluble cesium additive for high performance planar heterojunction solar cells. *Nano Energy*, **2018**, 49, 523-528	17.1	70
78	Greener, Nonhalogenated Solvent Systems for Highly Efficient Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1800177	21.8	80
77	Effect of Rubidium for Thermal Stability of Triple-cation Perovskite Solar Cells. *Chemistry Letters*, **2018**, 47, 814-816	1.7	17
76	Perowskit-Solarzellen: atomare Ebene, Schichtqualit□ und Leistungsf□igkeit der Zellen. *Angewandte Chemie*, **2018**, 130, 2582-2598	3.6	28
75	Perovskite Solar Cells: From the Atomic Level to Film Quality and Device Performance. *Angewandte Chemie - International Edition*, **2018**, 57, 2554-2569	16.4	324
74	Perovskite Solar Cells: From the Laboratory to the Assembly Line. *Chemistry - A European Journal*, **2018**, 24, 3083-3100	4.8	100
73	Temperature dependent two-photon photoluminescence of CH3NH3PbBr3: structural phase and exciton to free carrier transition. *Optical Materials Express*, **2018**, 8, 511	2.6	22
72	Blue and red wavelength resolved impedance response of efficient perovskite solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2407-2411	5.8	13
71	Surface modification of a hole transporting layer for an efficient perovskite solar cell with an enhanced fill factor and stability. *Molecular Systems Design and Engineering*, **2018**, 3, 717-722	4.6	23
70	From Exceptional Properties to Stability Challenges of Perovskite Solar Cells. *Small*, **2018**, 14, e1802385	11	44
69	Measuring Aging Stability of Perovskite Solar Cells. *Joule*, **2018**, 2, 1019-1024	27.8	83
68	How to Make over 20% Efficient Perovskite Solar Cells in Regular (n□) and Inverted (p□) Architectures. *Chemistry of Materials*, **2018**, 30, 4193-4201	9.6	339
67	Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1702116	21.8	84
66	Enhanced charge carrier mobility and lifetime suppress hysteresis and improve efficiency in planar perovskite solar cells. *Energy and Environmental Science*, **2018**, 11, 78-86	35.4	202

65	Efficient and Stable Inorganic Perovskite Solar Cells Manufactured by Pulsed Flash Infrared Annealing. *Advanced Energy Materials*, **2018**, 8, 1802060	21.8	78
64	Methylammonium-free, high-performance, and stable perovskite solar cells on a planar architecture. *Science*, **2018**, 362, 449-453	33.3	573
63	A full overview of international standards assessing the long-term stability of perovskite solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 21794-21808	13	82
62	Elucidation of Charge Recombination and Accumulation Mechanism in Mixed Perovskite Solar Cells. *Journal of Physical Chemistry C*, **2018**, 122, 15149-15154	3.8	49
61	Understanding the effect of chlorobenzene and isopropanol anti-solvent treatments on the recombination and interfacial charge accumulation in efficient planar perovskite solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 14307-14314	13	81
60	Room-Temperature Formation of Highly Crystalline Multication Perovskites for Efficient, Low-Cost Solar Cells. *Advanced Materials*, **2017**, 29, 1606258	24	106
59	Migration of cations induces reversible performance losses over day/night cycling in perovskite solar cells. *Energy and Environmental Science*, **2017**, 10, 604-613	35.4	387
58	High Temperature-Stable Perovskite Solar Cell Based on Low-Cost Carbon Nanotube Hole Contact. *Advanced Materials*, **2017**, 29, 1606398	24	173
57	Stabilization of the Perovskite Phase of Formamidinium Lead Triiodide by Methylammonium, Cs, and/or Rb Doping. *Journal of Physical Chemistry Letters*, **2017**, 8, 1191-1196	6.4	96
56	The rapid evolution of highly efficient perovskite solar cells. *Energy and Environmental Science*, **2017**, 10, 710-727	35.4	811
55	Mechanosynthesis of pure phase mixed-cation MAxFA1−xPbI3 hybrid perovskites: photovoltaic performance and electrochemical properties. *Sustainable Energy and Fuels*, **2017**, 1, 689-693	5.8	66
54	Nondestructive Probing of Perovskite Silicon Tandem Solar Cells Using Multiwavelength Photoluminescence Mapping. *IEEE Journal of Photovoltaics*, **2017**, 7, 1081-1086	3.7	21
53	Femtosecond Charge-Injection Dynamics at Hybrid Perovskite Interfaces. *ChemPhysChem*, **2017**, 18, 2381-2389	5.2	21
52	Spontaneous crystal coalescence enables highly efficient perovskite solar cells. *Nano Energy*, **2017**, 39, 24-29	17.1	51
51	Methoxydiphenylamine-substituted fluorene derivatives as hole transporting materials: role of molecular interaction on device photovoltaic performance. *Scientific Reports*, **2017**, 7, 150	4.9	19
50	Monolithic CIGS–Perovskite Tandem Cell for Optimal Light Harvesting without Current Matching. *ACS Photonics*, **2017**, 4, 861-867	6.3	23
49	Identifying and suppressing interfacial recombination to achieve high open-circuit voltage in perovskite solar cells. *Energy and Environmental Science*, **2017**, 10, 1207-1212	35.4	242
48	Chemical Distribution of Multiple Cation (Rb+, Cs+, MA+, and FA+) Perovskite Materials by Photoelectron Spectroscopy. *Chemistry of Materials*, **2017**, 29, 3589-3596	9.6	141

47	Additives, Hole Transporting Materials and Spectroscopic Methods to Characterize the Properties of Perovskite Films. *Chimia*, **2017**, 71, 754-761	1.3	3
46	Reduction in the Interfacial Trap Density of Mechanochemically Synthesized MAPbI. *ACS Applied Materials & Interfaces*, **2017**, 9, 28418-28425	9.5	55
45	Globularity-Selected Large Molecules for a New Generation of Multication Perovskites. *Advanced Materials*, **2017**, 29, 1702005	24	67
44	Perovskite solar cell –electrochemical double layer capacitor interplay. *Electrochimica Acta*, **2017**, 258, 825-833	6.7	13
43	Promises and challenges of perovskite solar cells. *Science*, **2017**, 358, 739-744	33.3	1016
42	Interfacial Kinetics of Efficient Perovskite Solar Cells. *Crystals*, **2017**, 7, 252	2.3	20
41	Additive-Free Transparent Triarylamine-Based Polymeric Hole-Transport Materials for Stable Perovskite Solar Cells. *ChemSusChem*, **2016**, 9, 2567-2571	8.3	56
40	Highly efficient and stable planar perovskite solar cells by solution-processed tin oxide. *Energy and Environmental Science*, **2016**, 9, 3128-3134	35.4	603
39	Highly Efficient and Stable Perovskite Solar Cells based on a Low-Cost Carbon Cloth. *Advanced Energy Materials*, **2016**, 6, 1601116	21.8	91
38	Inverted Current–Voltage Hysteresis in Mixed Perovskite Solar Cells: Polarization, Energy Barriers, and Defect Recombination. *Advanced Energy Materials*, **2016**, 6, 1600396	21.8	174
37	A molecularly engineered hole-transporting material for efficient perovskite solar cells. *Nature Energy*, **2016**, 1,	62.3	693
36	Structured Organic-Inorganic Perovskite toward a Distributed Feedback Laser. *Advanced Materials*, **2016**, 28, 923-9	24	209
35	Enhanced electronic properties in mesoporous TiO2 via lithium doping for high-efficiency perovskite solar cells. *Nature Communications*, **2016**, 7, 10379	17.4	626
34	Cesium-containing triple cation perovskite solar cells: improved stability, reproducibility and high efficiency. *Energy and Environmental Science*, **2016**, 9, 1989-1997	35.4	3740
33	Ionic polarization-induced current-voltage hysteresis in CH3NH3PbX3 perovskite solar cells. *Nature Communications*, **2016**, 7, 10334	17.4	500
32	Exploration of the compositional space for mixed lead halogen perovskites for high efficiency solar cells. *Energy and Environmental Science*, **2016**, 9, 1706-1724	35.4	498
31	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. *Science*, **2016**, 351, 151-5	33.3	2024
30	Monolithic perovskite/silicon-heterojunction tandem solar cells processed at low temperature. *Energy and Environmental Science*, **2016**, 9, 81-88	35.4	469

29	Unbroken Perovskite: Interplay of Morphology, Electro-optical Properties, and Ionic Movement. *Advanced Materials*, **2016**, 28, 5031-7	24	208
28	Highly Efficient Perovskite Solar Cells Employing an Easily Attainable Bifluorenylidene-Based Hole-Transporting Material. *Angewandte Chemie*, **2016**, 128, 7590-7594	3.6	28
27	Highly Efficient Perovskite Solar Cells Employing an Easily Attainable Bifluorenylidene-Based Hole-Transporting Material. *Angewandte Chemie - International Edition*, **2016**, 55, 7464-8	16.4	141
26	Optical analysis of CHNHSn Pb I absorbers: a roadmap for perovskite-on-perovskite tandem solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 11214-11221	13	87
25	Not All That Glitters Is Gold: Metal-Migration-Induced Degradation in Perovskite Solar Cells. *ACS Nano*, **2016**, 10, 6306-14	16.7	759
24	Towards optical optimization of planar monolithic perovskite/silicon-heterojunction tandem solar cells. *Journal of Optics (United Kingdom)*, **2016**, 18, 064012	1.7	66
23	Branched methoxydiphenylamine-substituted fluorene derivatives as hole transporting materials for high-performance perovskite solar cells. *Energy and Environmental Science*, **2016**, 9, 1681-1686	35.4	125
22	Incorporation of rubidium cations into perovskite solar cells improves photovoltaic performance. *Science*, **2016**, 354, 206-209	33.3	2628
21	Enhancing Efficiency of Perovskite Solar Cells via N-doped Graphene: Crystal Modification and Surface Passivation. *Advanced Materials*, **2016**, 28, 8681-8686	24	228
20	Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency. *Advanced Energy Materials*, **2016**, 6, 1600767	21.8	165
19	Silolothiophene-linked triphenylamines as stable hole transporting materials for high efficiency perovskite solar cells. *Energy and Environmental Science*, **2015**, 8, 2946-2953	35.4	145
18	Enhanced Amplified Spontaneous Emission in Perovskites Using a Flexible Cholesteric Liquid Crystal Reflector. *Nano Letters*, **2015**, 15, 4935-41	11.5	97
17	Charge selective contacts, mobile ions and anomalous hysteresis in organic-inorganic perovskite solar cells. *Materials Horizons*, **2015**, 2, 315-322	14.4	338
16	Highly efficient planar perovskite solar cells through band alignment engineering. *Energy and Environmental Science*, **2015**, 8, 2928-2934	35.4	949
15	Plasmonic-Induced Photon Recycling in Metal Halide Perovskite Solar Cells. *Advanced Functional Materials*, **2015**, 25, 5038-5046	15.6	167
14	Working Principles of Perovskite Photodetectors: Analyzing the Interplay Between Photoconductivity and Voltage-Driven Energy-Level Alignment. *Advanced Functional Materials*, **2015**, 25, 6936-6947	15.6	114
13	Templated microstructural growth of perovskite thin films via colloidal monolayer lithography. *Energy and Environmental Science*, **2015**, 8, 2041-2047	35.4	94
12	Ultrasmooth organic-inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. *Nature Communications*, **2015**, 6, 6142	17.4	695

11	Supramolecular halogen bond passivation of organic-inorganic halide perovskite solar cells. *Nano Letters*, **2014**, 14, 3247-54	11.5	527
10	Low-temperature processed electron collection layers of graphene/TiO2 nanocomposites in thin film perovskite solar cells. *Nano Letters*, **2014**, 14, 724-30	11.5	917
9	Sub-150 ℃ processed meso-superstructured perovskite solar cells with enhanced efficiency. *Energy and Environmental Science*, **2014**, 7, 1142-1147	35.4	511
8	Influence of Thermal Processing Protocol upon the Crystallization and Photovoltaic Performance of Organic Inorganic Lead Trihalide Perovskites. *Journal of Physical Chemistry C*, **2014**, 118, 17171-17177	3.8	214
7	Thermally induced structural evolution and performance of mesoporous block copolymer-directed alumina perovskite solar cells. *ACS Nano*, **2014**, 8, 4730-9	16.7	241
6	Enhancement of perovskite-based solar cells employing core-shell metal nanoparticles. *Nano Letters*, **2013**, 13, 4505-10	11.5	447
5	Plasmonic activity of large-area gold nanodot arrays on arbitrary substrates. *Nano Letters*, **2010**, 10, 47-51	11.5	15
4	Transition from isolated to collective modes in plasmonic oligomers. *Nano Letters*, **2010**, 10, 2721-6	11.5	483
3	In Situ Methylammonium Chloride-Assisted Perovskite Crystallization Strategy for High-Performance Solar Cells448-456		3
2	Optimization of SnO2 electron transport layer for efficient planar perovskite solar cells with very low hysteresis. *Materials Advances*,	3.3	2
1	Solution-processed perovskite thin-films: the journey from lab- to large-scale solar cells. *Energy and Environmental Science*,	35.4	18