Tianyi Huang

List of Publications by Year
in descending order

52 papers	8,078 citations	101543 36 h-index	168389 53 g-index
53 all docs	53 docs citations	53 times ranked	7109 citing authors

#	Article	IF	Citations
1	Constructive molecular configurations for surface-defect passivation of perovskite photovoltaics. Science, 2019, 366, 1509-1513.	12.6	846
2	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	14.9	835
3	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. Nature Communications, 2018, 9, 3021.	12.8	575
4	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	24.0	448
5	Perovskite-polymer composite cross-linker approach for highly-stable and efficient perovskite solar cells. Nature Communications, 2019, 10, 520.	12.8	405
6	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. Nature Communications, 2019, 10, 570.	12.8	377
7	Tuning Molecular Interactions for Highly Reproducible and Efficient Formamidinium Perovskite Solar Cells via Adduct Approach. Journal of the American Chemical Society, 2018, 140, 6317-6324.	13.7	338
8	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21%. Journal of the American Chemical Society, 2018, 140, 17255-17262.	13.7	235
9	Stability-limiting heterointerfaces of perovskite photovoltaics. Nature, 2022, 605, 268-273.	27.8	229
10	The surface of halide perovskites from nano to bulk. Nature Reviews Materials, 2020, 5, 809-827.	48.7	224
11	Transparent Polymer Photovoltaics for Solar Energy Harvesting and Beyond. Joule, 2018, 2, 1039-1054.	24.0	211
12	Rethinking the A cation in halide perovskites. Science, 2022, 375, eabj1186.	12.6	207
13	Prospects for metal halide perovskite-based tandem solar cells. Nature Photonics, 2021, 15, 411-425.	31.4	195
14	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. Science, 2021, 371, 636-640.	12.6	184
15	Verification and mitigation of ion migration in perovskite solar cells. APL Materials, 2019, 7, .	5.1	179
16	Shallow Iodine Defects Accelerate the Degradation of Î±-Phase Formamidinium Perovskite. Joule, 2020, 4, 2426-2442.	24.0	173
17	Narrowing the Band Gap: The Key to High-Performance Organic Photovoltaics. Accounts of Chemical Research, 2020, 53, 1218-1228.	15.6	171
18	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	13.7	163

#	Article	IF	Citations
19	Rational Tuning of Molecular Interaction and Energy Level Alignment Enables Highâ€Performance Organic Photovoltaics. Advanced Materials, 2019, 31, e1904215.	21.0	162
20	A Polymerizationâ€Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1907769.	21.0	161
21	Highly Efficient Semitransparent Organic Solar Cells with Color Rendering Index Approaching 100. Advanced Materials, 2019, 31, e1807159.	21.0	152
22	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 20071-20079.	13.7	145
23	Steric Impediment of Ion Migration Contributes to Improved Operational Stability of Perovskite Solar Cells. Advanced Materials, 2020, 32, e1906995.	21.0	142
24	Unraveling Sunlight by Transparent Organic Semiconductors toward Photovoltaic and Photosynthesis. ACS Nano, 2019, 13, 1071-1077.	14.6	134
25	Unique Energy Alignments of a Ternary Material System toward Highâ€Performance Organic Photovoltaics. Advanced Materials, 2018, 30, e1801501.	21.0	116
26	Coreâ€"Shell ZnO@SnO₂ Nanoparticles for Efficient Inorganic Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 17610-17616.	13.7	113
27	Nearâ€Infrared Materials: The Turning Point of Organic Photovoltaics. Advanced Materials, 2022, 34, e2107330.	21.0	111
28	Surface Reconstruction of Halide Perovskites During Post-treatment. Journal of the American Chemical Society, 2021, 143, 6781-6786.	13.7	109
29	A Smallâ€Molecule â€œCharge Driverâ€•enables Perovskite Quantum Dot Solar Cells with Efficiency Approaching 13%. Advanced Materials, 2019, 31, e1900111.	21.0	92
30	Rational selection of the polymeric structure for interface engineering of perovskite solar cells. Joule, 2022, 6, 1032-1048.	24.0	72
31	Solid-phase hetero epitaxial growth of Î±-phase formamidinium perovskite. Nature Communications, 2020, 11, 5514.	12.8	71
32	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. Joule, 2019, 3, 432-442.	24.0	65
33	Transparent Holeâ€Transporting Frameworks: A Unique Strategy to Design Highâ€Performance Semitransparent Organic Photovoltaics. Advanced Materials, 2020, 32, e2003891.	21.0	60
34	Performance-limiting formation dynamics in mixed-halide perovskites. Science Advances, 2021, 7, eabj1799.	10.3	54
35	The Original Design Principles of the Y-Series Nonfullerene Acceptors, from Y1 to Y6. ACS Nano, 2021, 15, 18679-18682.	14.6	51
36	Potassium-Presenting Zinc Oxide Surfaces Induce Vertical Phase Separation in Fullerene-Free Organic Photovoltaics. Nano Letters, 2020, 20, 715-721.	9.1	48

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37	Stable and Efficient Methylammoniumâ€, Cesiumâ€, and Bromideâ€Free Perovskite Solar Cells by Inâ€Situ Interlayer Formation. Advanced Functional Materials, 2021, 31, 2007520.	14.9	34
38	High Performance Indiumâ€Galliumâ€Zinc Oxide Thin Film Transistor via Interface Engineering. Advanced Functional Materials, 2020, 30, 2003285.	14.9	33
39	Unraveling the surface state of photovoltaic perovskite thin film. Matter, 2021, 4, 2417-2428.	10.0	22
40	Lattice strain suppresses point defect formation in halide perovskites. Nano Research, 2022, 15, 5746-5751.	10.4	21
41	Enabling Efficient Tandem Organic Photovoltaics with High Fill Factor via Reduced Charge Recombination. ACS Energy Letters, 2019, 4, 1535-1540.	17.4	18
42	Defect passivation of perovskites in high efficiency solar cells. JPhys Energy, 2021, 3, 042003.	5.3	13
43	Redox-inactive samarium(III) acetylacetonate as dopant enabling cation substitution and interfacial passivation for efficient and stable CsPbI2Br perovskite solar cells. APL Materials, 2020, 8, 071102.	5.1	12
44	Towards High-Performance Semitransparent Organic Photovoltaics: Dual-Functional <i>p</i>-Type Soft Interlayer. ACS Nano, 2022, 16, 1231-1238.	14.6	12
45	Design of a Rigid Scaffold Structure toward Efficient and Stable Organic Photovoltaics. Matter, 2019, 1, 402-411.	10.0	8
46	Translating local binding energy to a device effective one. Sustainable Energy and Fuels, 2020, 4, 760-771.	4.9	8
47	Material, Phase, and Interface Stability of Photovoltaic Perovskite: A Perspective. Journal of Physical Chemistry C, 2021, 125, 19088-19096.	3.1	7
48	Metal Oxide Nanostructures Generated from In Situ Sacrifice of Zinc in Bimetallic Textures as Flexible Ni/Fe Fast Battery Electrodes. Chemistry - an Asian Journal, 2017, 12, 1920-1926.	3.3	6
49	Tailored Key Parameters of Perovskite for High-Performance Photovoltaics. Accounts of Materials Research, 2021, 2, 447-457.	11.7	5
50	Light-induced trap emptying revealed by intensity-dependent quantum efficiency of organic solar cells. Journal of Applied Physics, 2022, 131, 135501.	2.5	5
51	Quantitative Specifications to Avoid Degradation during E-Beam and Induced Current Microscopy of Halide Perovskite Devices. Journal of Physical Chemistry C, 2020, 124, 18961-18967.	3.1	4
52	Wideâ€Gap Perovskite via Synergetic Surface Passivation and Its Application toward Efficient Stacked Tandem Photovoltaics. Small, 2022, 18, e2103887.	10.0	3