

Tianyi Huang

List of Publications by Year in descending order

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52
papers

8,078
citations

101384

36
h-index

168136

53
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53
all docs

53
docs citations

53
times ranked

7109
citing authors

#	ARTICLE	IF	CITATIONS
1	Near-Infrared Materials: The Turning Point of Organic Photovoltaics. <i>Advanced Materials</i> , 2022, 34, e2107330.	11.1	111
2	Rethinking the A cation in halide perovskites. <i>Science</i> , 2022, 375, eabj1186.	6.0	207
3	Stability-limiting heterointerfaces of perovskite photovoltaics. <i>Nature</i> , 2022, 605, 268-273.	13.7	229
4	Lattice strain suppresses point defect formation in halide perovskites. <i>Nano Research</i> , 2022, 15, 5746-5751.	5.8	21
5	Light-induced trap emptying revealed by intensity-dependent quantum efficiency of organic solar cells. <i>Journal of Applied Physics</i> , 2022, 131, 135501.	1.1	5
6	Wide-Gap Perovskite via Synergetic Surface Passivation and Its Application toward Efficient Stacked Tandem Photovoltaics. <i>Small</i> , 2022, 18, e2103887.	5.2	3
7	Towards High-Performance Semitransparent Organic Photovoltaics: Dual-Functional <i>p</i> -Type Soft Interlayer. <i>ACS Nano</i> , 2022, 16, 1231-1238.	7.3	12
8	Rational selection of the polymeric structure for interface engineering of perovskite solar cells. <i>Joule</i> , 2022, 6, 1032-1048.	11.7	72
9	Stable and Efficient Methylammonium-, Cesium-, and Bromide-Free Perovskite Solar Cells by In-situ Interlayer Formation. <i>Advanced Functional Materials</i> , 2021, 31, 2007520.	7.8	34
10	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. <i>Science</i> , 2021, 371, 636-640.	6.0	184
11	Surface Reconstruction of Halide Perovskites During Post-treatment. <i>Journal of the American Chemical Society</i> , 2021, 143, 6781-6786.	6.6	109
12	Prospects for metal halide perovskite-based tandem solar cells. <i>Nature Photonics</i> , 2021, 15, 411-425.	15.6	195
13	Tailored Key Parameters of Perovskite for High-Performance Photovoltaics. <i>Accounts of Materials Research</i> , 2021, 2, 447-457.	5.9	5
14	Unraveling the surface state of photovoltaic perovskite thin film. <i>Matter</i> , 2021, 4, 2417-2428.	5.0	22
15	Material, Phase, and Interface Stability of Photovoltaic Perovskite: A Perspective. <i>Journal of Physical Chemistry C</i> , 2021, 125, 19088-19096.	1.5	7
16	Defect passivation of perovskites in high efficiency solar cells. <i>JPhys Energy</i> , 2021, 3, 042003.	2.3	13
17	Performance-limiting formation dynamics in mixed-halide perovskites. <i>Science Advances</i> , 2021, 7, eabj1799.	4.7	54
18	The Original Design Principles of the Y-Series Nonfullerene Acceptors, from Y1 to Y6. <i>ACS Nano</i> , 2021, 15, 18679-18682.	7.3	51

#	ARTICLE	IF	CITATIONS
19	Translating local binding energy to a device effective one. <i>Sustainable Energy and Fuels</i> , 2020, 4, 760-771.	2.5	8
20	Potassium-Presenting Zinc Oxide Surfaces Induce Vertical Phase Separation in Fullerene-Free Organic Photovoltaics. <i>Nano Letters</i> , 2020, 20, 715-721.	4.5	48
21	Shallow Iodine Defects Accelerate the Degradation of Γ -Phase Formamidinium Perovskite. <i>Joule</i> , 2020, 4, 2426-2442.	11.7	173
22	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. <i>Journal of the American Chemical Society</i> , 2020, 142, 20071-20079.	6.6	145
23	The surface of halide perovskites from nano to bulk. <i>Nature Reviews Materials</i> , 2020, 5, 809-827.	23.3	224
24	Quantitative Specifications to Avoid Degradation during E-Beam and Induced Current Microscopy of Halide Perovskite Devices. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18961-18967.	1.5	4
25	Solid-phase hetero epitaxial growth of Γ -phase formamidinium perovskite. <i>Nature Communications</i> , 2020, 11, 5514.	5.8	71
26	Transparent Hole-Transporting Frameworks: A Unique Strategy to Design High-Performance Semitransparent Organic Photovoltaics. <i>Advanced Materials</i> , 2020, 32, e2003891.	11.1	60
27	Narrowing the Band Gap: The Key to High-Performance Organic Photovoltaics. <i>Accounts of Chemical Research</i> , 2020, 53, 1218-1228.	7.6	171
28	A Polymerization-Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. <i>Advanced Materials</i> , 2020, 32, e1907769.	11.1	161
29	Redox-inactive samarium(III) acetylacetonate as dopant enabling cation substitution and interfacial passivation for efficient and stable CsPbI ₂ Br perovskite solar cells. <i>APL Materials</i> , 2020, 8, 071102.	2.2	12
30	High Performance Indium-Gallium-Zinc Oxide Thin Film Transistor via Interface Engineering. <i>Advanced Functional Materials</i> , 2020, 30, 2003285.	7.8	33
31	Steric Impediment of Ion Migration Contributes to Improved Operational Stability of Perovskite Solar Cells. <i>Advanced Materials</i> , 2020, 32, e1906995.	11.1	142
32	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. <i>Journal of the American Chemical Society</i> , 2019, 141, 13948-13953.	6.6	163
33	Design of a Rigid Scaffold Structure toward Efficient and Stable Organic Photovoltaics. <i>Matter</i> , 2019, 1, 402-411.	5.0	8
34	A Small Molecule Charge Driver enables Perovskite Quantum Dot Solar Cells with Efficiency Approaching 13%. <i>Advanced Materials</i> , 2019, 31, e1900111.	11.1	92
35	Core-Shell ZnO@SnO ₂ Nanoparticles for Efficient Inorganic Perovskite Solar Cells. <i>Journal of the American Chemical Society</i> , 2019, 141, 17610-17616.	6.6	113
36	Rational Tuning of Molecular Interaction and Energy Level Alignment Enables High-Performance Organic Photovoltaics. <i>Advanced Materials</i> , 2019, 31, e1904215.	11.1	162

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37	Highly Efficient Semitransparent Organic Solar Cells with Color Rendering Index Approaching 100. <i>Advanced Materials</i> , 2019, 31, e1807159.	11.1	152
38	Perovskite-polymer composite cross-linker approach for highly-stable and efficient perovskite solar cells. <i>Nature Communications</i> , 2019, 10, 520.	5.8	405
39	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. <i>Nature Communications</i> , 2019, 10, 570.	5.8	377
40	Enabling Efficient Tandem Organic Photovoltaics with High Fill Factor via Reduced Charge Recombination. <i>ACS Energy Letters</i> , 2019, 4, 1535-1540.	8.8	18
41	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. <i>Joule</i> , 2019, 3, 1464-1477.	11.7	448
42	Verification and mitigation of ion migration in perovskite solar cells. <i>APL Materials</i> , 2019, 7, .	2.2	179
43	A Review of Perovskites Solar Cell Stability. <i>Advanced Functional Materials</i> , 2019, 29, 1808843.	7.8	835
44	Constructive molecular configurations for surface-defect passivation of perovskite photovoltaics. <i>Science</i> , 2019, 366, 1509-1513.	6.0	846
45	Unraveling Sunlight by Transparent Organic Semiconductors toward Photovoltaic and Photosynthesis. <i>ACS Nano</i> , 2019, 13, 1071-1077.	7.3	134
46	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. <i>Joule</i> , 2019, 3, 432-442.	11.7	65
47	Tuning Molecular Interactions for Highly Reproducible and Efficient Formamidinium Perovskite Solar Cells via Adduct Approach. <i>Journal of the American Chemical Society</i> , 2018, 140, 6317-6324.	6.6	338
48	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21%. <i>Journal of the American Chemical Society</i> , 2018, 140, 17255-17262.	6.6	235
49	Unique Energy Alignments of a Ternary Material System toward High-Performance Organic Photovoltaics. <i>Advanced Materials</i> , 2018, 30, e1801501.	11.1	116
50	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. <i>Nature Communications</i> , 2018, 9, 3021.	5.8	575
51	Transparent Polymer Photovoltaics for Solar Energy Harvesting and Beyond. <i>Joule</i> , 2018, 2, 1039-1054.	11.7	211
52	Metal Oxide Nanostructures Generated from In Situ Sacrifice of Zinc in Bimetallic Textures as Flexible Ni/Fe Fast Battery Electrodes. <i>Chemistry - an Asian Journal</i> , 2017, 12, 1920-1926.	1.7	6