Yi Hou

List of Publications by Year in Descending Order

76 papers	6,103 citations	41 h-index	78 g-index
80 ext. papers	8,044 ext. citations	19.7 avg, IF	5.8 L-index

#	Paper	IF	Citations
76	Monolithic Perovskite-silicon Tandem Solar cells: from the Lab to Fab?. *Advanced Materials*, **2022**, e2106540	24	6
75	Scalable processing for realizing 21.7%-efficient all-perovskite tandem solar modules.. *Science*, **2022**, 376, 762-767	33.3	18
74	Discovery of temperature-induced stability reversal in perovskites using high-throughput robotic learning. *Nature Communications*, **2021**, 12, 2191	17.4	26
73	Dopant-Assisted Matrix Stabilization Enables Thermoelectric Performance Enhancement in n-Type Quantum Dot Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 18999-19007	9.5	0
72	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized □CsPbI3 Perovskite. *Angewandte Chemie*, **2021**, 133, 16300-16306	3.6	1
71	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized □CsPbI Perovskite. *Angewandte Chemie - International Edition*, **2021**, 60, 16164-16170	16.4	59
70	Toward Stable Monolithic Perovskite/Silicon Tandem Photovoltaics: A Six-Month Outdoor Performance Study in a Hot and Humid Climate. *ACS Energy Letters*, **2021**, 6, 2944-2951	20.1	9
69	An antibonding valence band maximum enables defect-tolerant and stable GeSe photovoltaics. *Nature Communications*, **2021**, 12, 670	17.4	16
68	Efficient bifacial monolithic perovskite/silicon tandem solar cells via bandgap engineering. *Nature Energy*, **2021**, 6, 167-175	62.3	76
67	Band Engineering via Gradient Molecular Dopants for CsFA Perovskite Solar Cells. *Advanced Functional Materials*, **2021**, 31, 2010572	15.6	3
66	One-Step Synthesis of SnI□(DMSO) Adducts for High-Performance Tin Perovskite Solar Cells. *Journal of the American Chemical Society*, **2021**, 143, 10970-10976	16.4	89
65	Passivation of the Buried Interface via Preferential Crystallization of 2D Perovskite on Metal Oxide Transport Layers. *Advanced Materials*, **2021**, 33, e2103394	24	25
64	Quantum Dot Self-Assembly Enables Low-Threshold Lasing. *Advanced Science*, **2021**, 8, e2101125	13.6	12
63	Bright and Stable Light-Emitting Diodes Based on Perovskite Quantum Dots in Perovskite Matrix. *Journal of the American Chemical Society*, **2021**, 143, 15606-15615	16.4	22
62	Strain-activated light-induced halide segregation in mixed-halide perovskite solids. *Nature Communications*, **2020**, 11, 6328	17.4	29
61	Stable, Bromine-Free, Tetragonal Perovskites with 1.7 eV Bandgaps via A-Site Cation Substitution **2020**, 2, 869-872		9
60	Dimensional Mixing Increases the Efficiency of 2D/3D Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2020**, 11, 5115-5119	6.4	22

59	Chloride Insertion-Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. *Journal of the American Chemical Society*, **2020**, 142, 5126-5134	16.4	61
58	Pervasive functional translation of noncanonical human open reading frames. *Science*, **2020**, 367, 1140-1146	33.3	168
57	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. *Science*, **2020**, 367, 1135-1140	33.3	298
56	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. *Nature Communications*, **2020**, 11, 1257	17.4	114
55	Regulating strain in perovskite thin films through charge-transport layers. *Nature Communications*, **2020**, 11, 1514	17.4	165
54	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. *Nature Nanotechnology*, **2020**, 15, 668-674	28.7	281
53	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. *Advanced Materials*, **2020**, 32, e1907058	24	92
52	Multi-cation perovskites prevent carrier reflection from grain surfaces. *Nature Materials*, **2020**, 19, 412-418	27	52
51	Heterogeneous Supersaturation in Mixed Perovskites. *Advanced Science*, **2020**, 7, 1903166	13.6	8
50	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140	62.3	552
49	Engineering of the Electron Transport Layer/Perovskite Interface in Solar Cells Designed on TiO2 Rutile Nanorods. *Advanced Functional Materials*, **2020**, 30, 1909738	15.6	30
48	Visualizing and Suppressing Nonradiative Losses in High Open-Circuit Voltage n-i-p-Type CsPbI3 Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 271-279	20.1	24
47	All-Perovskite Tandem Solar Cells: A Roadmap to Uniting High Efficiency with High Stability. *Accounts of Materials Research*, **2020**, 1, 63-76	7.5	28
46	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1 cm2 using surface-anchoring zwitterionic antioxidant. *Nature Energy*, **2020**, 5, 870-880	62.3	233
45	Bifunctional Surface Engineering on SnO2 Reduces Energy Loss in Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 2796-2801	20.1	104
44	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. *ACS Energy Letters*, **2019**, 4, 1521-1527	20.1	89
43	Reducing Defects in Halide Perovskite Nanocrystals for Light-Emitting Applications. *Journal of Physical Chemistry Letters*, **2019**, 10, 2629-2640	6.4	122
42	Ionic dipolar switching hinders charge collection in perovskite solar cells with normal and inverted hysteresis. *Solar Energy Materials and Solar Cells*, **2019**, 195, 291-298	6.4	17

41	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. *Joule*, **2019**, 3, 1963-1976	27.8	154
40	Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. *Advanced Materials*, **2019**, 31, e1903559	24	85
39	Perovskite Solar Cells: Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines (Adv. Mater. 46/2019). *Advanced Materials*, **2019**, 31, 1970330	24	1
38	Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. *Journal of Materials Chemistry A*, **2019**, 7, 26020-26028	13	30
37	Double-Side-Passivated Perovskite Solar Cells with Ultra-low Potential Loss. *Solar Rrl*, **2019**, 3, 1800296	7.1	74
36	Assembling Mesoscale-Structured Organic Interfaces in Perovskite Photovoltaics. *Advanced Materials*, **2019**, 31, e1806516	24	11
35	Switching Off Hysteresis in Perovskite Solar Cells by Fine-Tuning Energy Levels of Extraction Layers. *Advanced Energy Materials*, **2018**, 8, 1703376	21.8	36
34	Evidence of Tailoring the Interfacial Chemical Composition in Normal Structure Hybrid Organohalide Perovskites by a Self-Assembled Monolayer. *ACS Applied Materials & Interfaces*, **2018**, 10, 5511-5518	9.5	27
33	Exploring the Stability of Novel Wide Bandgap Perovskites by a Robot Based High Throughput Approach. *Advanced Energy Materials*, **2018**, 8, 1701543	21.8	55
32	Single molecular precursor ink for AgBiS2 thin films: synthesis and characterization. *Journal of Materials Chemistry C*, **2018**, 6, 7642-7651	7.1	11
31	Resolving a Critical Instability in Perovskite Solar Cells by Designing a Scalable and Printable Carbon Based Electrode-Interface Architecture. *Advanced Energy Materials*, **2018**, 8, 1802085	21.8	25
30	The Interplay of Contact Layers: How the Electron Transport Layer Influences Interfacial Recombination and Hole Extraction in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2018**, 9, 6249-6256	6.4	45
29	Abnormal strong burn-in degradation of highly efficient polymer solar cells caused by spinodal donor-acceptor demixing. *Nature Communications*, **2017**, 8, 14541	17.4	223
28	Suppression of Hysteresis Effects in Organohalide Perovskite Solar Cells. *Advanced Materials Interfaces*, **2017**, 4, 1700007	4.6	44
27	A generic interface to reduce the efficiency-stability-cost gap of perovskite solar cells. *Science*, **2017**, 358, 1192-1197	33.3	418
26	Deciphering the Role of Impurities in Methylammonium Iodide and Their Impact on the Performance of Perovskite Solar Cells. *Advanced Materials Interfaces*, **2016**, 3, 1600593	4.6	25
25	Organic and perovskite solar modules innovated by adhesive top electrode and depth-resolved laser patterning. *Energy and Environmental Science*, **2016**, 9, 2302-2313	35.4	57
24	Overcoming Electrode-Induced Losses in Organic Solar Cells by Tailoring a Quasi-Ohmic Contact to Fullerenes via Solution-Processed Alkali Hydroxide Layers. *Advanced Energy Materials*, **2016**, 6, 1502195	21.8	26

23	Overcoming the Interface Losses in Planar Heterojunction Perovskite-Based Solar Cells. *Advanced Materials*, **2016**, 28, 5112-20	24	167
22	Extending the environmental lifetime of unpackaged perovskite solar cells through interfacial design. *Journal of Materials Chemistry A*, **2016**, 4, 11604-11610	13	43
21	A Series of Pyrene-Substituted Silicon Phthalocyanines as Near-IR Sensitizers in Organic Ternary Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1502355	21.8	52
20	Exploring the Limiting Open-Circuit Voltage and the Voltage Loss Mechanism in Planar CH3NH3PbBr3 Perovskite Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1600132	21.8	59
19	Coloring Semitransparent Perovskite Solar Cells via Dielectric Mirrors. *ACS Nano*, **2016**, 10, 5104-12	16.7	79
18	Effective Ligand Engineering of the Cu2ZnSnS4 Nanocrystal Surface for Increasing Hole Transport Efficiency in Perovskite Solar Cells. *Advanced Functional Materials*, **2016**, 26, 8300-8306	15.6	56
17	Photoinduced degradation of methylammonium lead triiodide perovskite semiconductors. *Journal of Materials Chemistry A*, **2016**, 4, 15896-15903	13	92
16	A Universal Interface Layer Based on an Amine-Functionalized Fullerene Derivative with Dual Functionality for Efficient Solution Processed Organic and Perovskite Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1401692	21.8	141
15	A generic concept to overcome bandgap limitations for designing highly efficient multi-junction photovoltaic cells. *Nature Communications*, **2015**, 6, 7730	17.4	50
14	Elucidating the Excited-State Properties of CuInS2 Nanocrystals upon Phase Transformation: Quasi-Quantum Dots Versus Bulk Behavior. *Advanced Electronic Materials*, **2015**, 1, 1500040	6.4	3
13	Pushing efficiency limits for semitransparent perovskite solar cells. *Journal of Materials Chemistry A* , **2015**, 3, 24071-24081	13	85
12	Low-Temperature Solution-Processed Kesterite Solar Cell Based on in Situ Deposition of Ultrathin Absorber Layer. *ACS Applied Materials & Interfaces*, **2015**, 7, 21100-6	9.5	21
11	Interface Engineering of Perovskite Hybrid Solar Cells with Solution-Processed PeryleneDiimide Heterojunctions toward High Performance. *Chemistry of Materials*, **2015**, 27, 227-234	9.6	208
10	High-performance semitransparent perovskite solar cells with solution-processed silver nanowires as top electrodes. *Nanoscale*, **2015**, 7, 1642-9	7.7	257
9	In-situ X-ray diffraction analysis of the recrystallization process in Cu2ZnSnS4 nanoparticles synthesised by hot-injection. *Thin Solid Films*, **2015**, 582, 269-271	2.2	10
8	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Low-Cost and Water-Free PEDOT Hole-Extraction Layer. *Advanced Energy Materials*, **2015**, 5, 1500543	21.8	72
7	Sub-bandgap photon harvesting for organic solar cells via integrating up-conversion nanophosphors. *Organic Electronics*, **2015**, 19, 113-119	3.5	12
6	Towards low-cost, environmentally friendly printed chalcopyrite and kesterite solar cells. *Energy and Environmental Science*, **2014**, 7, 1829-1849	35.4	164

5	Improved High-Efficiency Perovskite Planar Heterojunction Solar Cells via Incorporation of a Polyelectrolyte Interlayer. *Chemistry of Materials*, **2014**, 26, 5190-5193	9.6	163
4	Monolithic perovskite/organic tandem solar cells with 23.6% efficiency enabled by reduced voltage losses and optimized interconnecting layer. *Nature Energy*,	62.3	18
3	Synthesis, Applications, and Prospects of Quantum-Dot-in-Perovskite Solids. *Advanced Energy Materials*,2100774	21.8	19
2	Ligand-bridged charge extraction and enhanced quantum efficiency enable efficient nip perovskite/silicon tandem solar cells. *Energy and Environmental Science*,	35.4	26
1	Quantum-size-tuned heterostructures enable efficient and stable inverted perovskite solar cells. *Nature Photonics*,	33.9	35