Yuchuan Shao

List of Publications by Year
in descending order

37 papers	22,802 citations	136950 32 h-index	330143 37 g-index
37 all docs	37 docs citations	37 times ranked	15894 citing authors

#	Article	IF	Citations
1	Electron-hole diffusion lengths > 175 Î¼m in solution-grown CH ₃ NH ₃ PbI ₃ single crystals. Science, 2015, 347, 967-970.	12.6	4,642
2	Origin and elimination of photocurrent hysteresis by fullerene passivation in CH3NH3PbI3 planar heterojunction solar cells. Nature Communications, 2014, 5, 5784.	12.8	2,531
3	Solvent Annealing of Perovskiteâ€Induced Crystal Growth for Photovoltaicâ€Device Efficiency Enhancement. Advanced Materials, 2014, 26, 6503-6509.	21.0	1,527
4	Giant switchable photovoltaic effect in organometal trihalide perovskite devices. Nature Materials, 2015, 14, 193-198.	27.5	1,372
5	Non-wetting surface-driven high-aspect-ratio crystalline grain growth for efficient hybrid perovskite solar cells. Nature Communications, 2015, 6, 7747.	12.8	1,336
6	Highly narrowband perovskite single-crystal photodetectors enabled by surface-charge recombination. Nature Photonics, 2015, 9, 679-686.	31.4	1,201
7	Efficient, high yield perovskite photovoltaic devices grown by interdiffusion of solution-processed precursor stacking layers. Energy and Environmental Science, 2014, 7, 2619-2623.	30.8	1,154
8	Understanding the physical properties of hybrid perovskites for photovoltaic applications. Nature Reviews Materials, 2017, 2, .	48.7	927
9	Grain boundary dominated ion migration in polycrystalline organicâ€“inorganic halide perovskite films. Energy and Environmental Science, 2016, 9, 1752-1759.	30.8	917
10	Large fill-factor bilayer iodine perovskite solar cells fabricated by a low-temperature solution-process. Energy and Environmental Science, 2014, 7, 2359-2365.	30.8	754
11	Correlation of energy disorder and open-circuit voltage in hybrid perovskite solar cells. Nature Energy, 2016, 1, .	39.5	646
12	Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. Science Advances, 2017, 3, eaao5616.	10.3	635
13	Scalable fabrication of efficient organolead trihalide perovskite solar cells with doctor-bladed active layers. Energy and Environmental Science, 2015, 8, 1544-1550.	30.8	606
14	Tailoring Passivation Molecular Structures for Extremely Small Open-Circuit Voltage Loss in Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 5781-5787.	13.7	585
15	Photovoltaic Switching Mechanism in Lateral Structure Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1500615.	19.5	567
16	Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. Science Advances, 2019, 5, eaav8925.	10.3	388
17	Enhancing stability and efficiency of perovskite solar cells with crosslinkable silane-functionalized and doped fullerene. Nature Communications, 2016, 7, 12806.	12.8	350
18	Molecular doping enabled scalable blading of efficient hole-transport-layer-free perovskite solar cells. Nature Communications, 2018, 9, 1625.	12.8	314

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19	Electricâ€Fieldâ€Driven Reversible Conversion Between Methylammonium Lead Triiodide Perovskites and Lead Iodide at Elevated Temperatures. Advanced Energy Materials, 2016, 6, 1501803.	19.5	287
20	Understanding the formation and evolution of interdiffusion grown organolead halide perovskite thin films by thermal annealing. Journal of Materials Chemistry A, 2014, 2, 18508-18514.	10.3	276
21	CH ₃ NH ₃ PbI ₃ perovskites: Ferroelasticity revealed. Science Advances, 2017, 3, e1602165.	10.3	257
22	Abnormal crystal growth in CH₃NH₃PbI_{3â^'x}Cl_xusing a multi-cycle solution coating process. Energy and Environmental Science, 2015, 8, 2464-2470.	30.8	240
23	Is Cu a stable electrode material in hybrid perovskite solar cells for a 30-year lifetime?. Energy and Environmental Science, 2016, 9, 3650-3656.	30.8	239
24	Unveiling the operation mechanism of layered perovskite solar cells. Nature Communications, 2019, 10, 1008.	12.8	216
25	Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. Nature Energy, 2020, 5, 657-665.	39.5	186
26	Matching Charge Extraction Contact for Wideâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2017, 29, 1700607.	21.0	178
27	Lateralâ€Structure Singleâ€Crystal Hybrid Perovskite Solar Cells via Piezoelectric Poling. Advanced Materials, 2016, 28, 2816-2821.	21.0	144
28	Organic solvent vapor sensitive methylammonium lead trihalide film formation for efficient hybrid perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 9146-9151.	10.3	74
29	Metallic surface doping of metal halide perovskites. Nature Communications, 2021, 12, 7.	12.8	66
30	Benign ferroelastic twin boundaries in halide perovskites for charge carrier transport and recombination. Nature Communications, 2020, 11, 2215.	12.8	47
31	Surface Passivation of MAPbBr₃ Perovskite Single Crystals to Suppress Ion Migration and Enhance Photoelectronic Performance. ACS Applied Materials & Interfaces, 2022, 14, 10917-10926.	8.0	39
32	Vacuum-free laminated top electrode with conductive tapes for scalable manufacturing of efficient perovskite solar cells. Nano Energy, 2015, 16, 47-53.	16.0	36
33	Defect Passivation via Additive Engineering to Improve Photodetection Performance in CsPbI₂Br Perovskite Photodetectors. ACS Applied Materials & Interfaces, 2021, 13, 56358-56365.	8.0	25
34	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency. Journal of Materials Chemistry A, 2022, 10, 8159-8171.	10.3	19
35	Improving the Performance of Perovskite Solar Cells with Insulating Additive-Modified Hole Transport Layers. ACS Applied Materials & Interfaces, 2022, 14, 11500-11508.	8.0	14
36	Superfast crystalline powder synthetic strategy toward scale-up of perovskite solar cells. Materials Today Energy, 2022, 27, 101049.	4.7	4

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37	Low-intensityâ€“low-temperature stability assessment of perovskite solar cells operating on simulated Martian surface conditions. Physical Chemistry Chemical Physics, 2022, 24, 17716-17722.	2.8	3