Yehao Deng

List of Publications by Year
in descending order

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49 papers	12,762 citations	57681 46 h-index	214428 50 g-index
51 all docs	51 docs citations	51 times ranked	12411 citing authors

#	Article	IF	Citations
1	Evolution of defects during the degradation of metal halide perovskite solar cells under reverse bias and illumination. Nature Energy, 2022, 7, 65-73.	19.8	158
2	Pathways to High Efficiency Perovskite Monolithic Solar Modules. , 2022, 1, .		5
3	Revealing defective nanostructured surfaces and their impact on the intrinsic stability of hybrid perovskites. Energy and Environmental Science, 2021, 14, 1563-1572.	15.6	55
4	Metallic surface doping of metal halide perovskites. Nature Communications, 2021, 12, 7.	5.8	66
5	Preventing lead leakage with built-in resin layers for sustainable perovskite solar cells. Nature Sustainability, 2021, 4, 636-643.	11.5	111
6	Perovskite solar cells with embedded homojunction via nonuniform metal ion doping. Cell Reports Physical Science, 2021, 2, 100415.	2.8	10
7	Defect compensation in formamidiniumâ€“caesium perovskites for highly efficient solar mini-modules with improved photostability. Nature Energy, 2021, 6, 633-641.	19.8	215
8	Lead-adsorbing ionogel-based encapsulation for impact-resistant, stable, and lead-safe perovskite modules. Science Advances, 2021, 7, eabi8249.	4.7	71
9	Scalable Fabrication of Efficient Perovskite Solar Modules on Flexible Glass Substrates. Advanced Energy Materials, 2020, 10, 1903108.	10.2	186
10	Identifying the Soft Nature of Defective Perovskite Surface Layer and Its Removal Using a Facile Mechanical Approach. Joule, 2020, 4, 2661-2674.	11.7	81
11	Reduced Self-Doping of Perovskites Induced by Short Annealing for Efficient Solar Modules. Joule, 2020, 4, 1949-1960.	11.7	72
12	Trapping lead in perovskite solar modules with abundant and low-cost cation-exchange resins. Nature Energy, 2020, 5, 1003-1011.	19.8	126
13	Perovskite-filled membranes for flexible and large-area direct-conversion X-ray detector arrays. Nature Photonics, 2020, 14, 612-617.	15.6	228
14	Templated growth of oriented layered hybrid perovskites on 3D-like perovskites. Nature Communications, 2020, 11, 582.	5.8	167
15	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. Nature Communications, 2019, 10, 4498.	5.8	234
16	Fast Growth of Thin MAPbI₃ Crystal Wafers on Aqueous Solution Surface for Efficient Lateralâ€structure Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807707.	7.8	62
17	Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.	6.3	50
18	Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. ACS Energy Letters, 2019, 4, 1231-1240.	8.8	111

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19	Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. Science Advances, 2019, 5, eaav8925.	4.7	388
20	Tailoring solvent coordination for high-speed, room-temperature blading of perovskite photovoltaic films. Science Advances, 2019, 5, eaax7537.	4.7	312
21	Efficient sky-blue perovskite light-emitting diodes via photoluminescence enhancement. Nature Communications, 2019, 10, 5633.	5.8	267
22	Molecular doping enabled scalable blading of efficient hole-transport-layer-free perovskite solar cells. Nature Communications, 2018, 9, 1625.	5.8	314
23	Argon Plasma Treatment to Tune Perovskite Surface Composition for High Efficiency Solar Cells and Fast Photodetectors. Advanced Materials, 2018, 30, 1705176.	11.1	81
24	Excess charge-carrier induced instability of hybrid perovskites. Nature Communications, 2018, 9, 4981.	5.8	159
25	Large electrostrictive response in lead halide perovskites. Nature Materials, 2018, 17, 1020-1026.	13.3	137
26	Dual Functions of Crystallization Control and Defect Passivation Enabled by Sulfonic Zwitterions for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2018, 30, e1803428.	11.1	296
27	Surfactant-controlled ink drying enables high-speed deposition of perovskite films for efficient photovoltaic modules. Nature Energy, 2018, 3, 560-566.	19.8	585
28	CH ₃ NH ₃ PbI ₃ perovskites: Ferroelasticity revealed. Science Advances, 2017, 3, e1602165.	4.7	257
29	Monolithic integration of hybrid perovskite single crystals with heterogenous substrate for highly sensitive X-ray imaging. Nature Photonics, 2017, 11, 315-321.	15.6	580
30	Matching Charge Extraction Contact for Wideâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2017, 29, 1700607.	11.1	178
31	Composition Engineering in Doctorâ€Blading of Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700302.	10.2	239
32	Suppressed Ion Migration in Low-Dimensional Perovskites. ACS Energy Letters, 2017, 2, 1571-1572.	8.8	404
33	Ïâ€Conjugated Lewis Base: Efficient Trapâ€Passivation and Chargeâ€Extraction for Hybrid Perovskite Solar Cells. Advanced Materials, 2017, 29, 1604545.	11.1	543
34	Scaling behavior of moisture-induced grain degradation in polycrystalline hybrid perovskite thin films. Energy and Environmental Science, 2017, 10, 516-522.	15.6	720
35	Lowâ€Noise and Largeâ€Linearâ€Dynamicâ€Range Photodetectors Based on Hybridâ€Perovskite Thinâ€Singleâ€Crystals. Advanced Materials, 2017, 29, 1703209.	11.1	281
36	Selfâ€Filtered Narrowband Perovskite Photodetectors with Ultrafast and Tuned Spectral Response. Advanced Optical Materials, 2017, 5, 1700672.	3.6	78

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37	Thin single crystal perovskite solar cells to harvest below-bandgap light absorption. Nature Communications, 2017, 8, 1890.	5.8	467
38	Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. Science Advances, 2017, 3, eaao5616.	4.7	635
39	Dopant compensation in alloyed CH3NH3PbBr3â^'xClx perovskite single crystals for gamma-ray spectroscopy. Nature Materials, 2017, 16, 826-833.	13.3	475
40	Airâ€Stable, Efficient Mixedâ€Cation Perovskite Solar Cells with Cu Electrode by Scalable Fabrication of Active Layer. Advanced Energy Materials, 2016, 6, 1600372.	10.2	275
41	Low Temperature Solutionâ€Processed Sb:SnO₂ Nanocrystals for Efficient Planar Perovskite Solar Cells. ChemSusChem, 2016, 9, 2686-2691.	3.6	172
42	A Selfâ€Powered, Subâ€nanosecondâ€Response Solutionâ€Processed Hybrid Perovskite Photodetector for Timeâ€Resolved Photoluminescenceâ€Lifetime Detection. Advanced Materials, 2016, 28, 10794-10800.	11.1	295
43	Is Cu a stable electrode material in hybrid perovskite solar cells for a 30-year lifetime?. Energy and Environmental Science, 2016, 9, 3650-3656.	15.6	239
44	Enhancing stability and efficiency of perovskite solar cells with crosslinkable silane-functionalized and doped fullerene. Nature Communications, 2016, 7, 12806.	5.8	350
45	Grain boundary dominated ion migration in polycrystalline organicâ€“inorganic halide perovskite films. Energy and Environmental Science, 2016, 9, 1752-1759.	15.6	917
46	Thin-film semiconductor perspective of organometal trihalide perovskite materials for high-efficiency solar cells. Materials Science and Engineering Reports, 2016, 101, 1-38.	14.8	117
47	Lightâ€Induced Selfâ€Poling Effect on Organometal Trihalide Perovskite Solar Cells for Increased Device Efficiency and Stability. Advanced Energy Materials, 2015, 5, 1500721.	10.2	214
48	Scalable fabrication of efficient organolead trihalide perovskite solar cells with doctor-bladed active layers. Energy and Environmental Science, 2015, 8, 1544-1550.	15.6	606
49	Vividly colorful hybrid perovskite solar cells by doctor-blade coating with perovskite photonic nanostructures. Materials Horizons, 2015, 2, 578-583.	6.4	167