

CH₃NH₃PbI₃ Perovskite Planar Heterojunction Hybrid Solar Cells

Advanced Materials

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Flexible, low-temperature, solution processed ZnO-based perovskite solid state solar cells. Chemical Communications, 2013, 49, 11089.	2.2	553
2	A perspective of mesoscopic solar cells based on metal chalcogenide quantum dots and organometal-halide perovskites. NPC Asia Materials, 2013, 5, e68-e68.	3.8	143
3	Origin and elimination of photocurrent hysteresis by fullerene passivation in CH ₃ NH ₃ PbI ₃ planar heterojunction solar cells. Nature Communications, 2014, 5, 5784.	5.8	2,531
4	Efficient methylammonium lead iodide perovskite solar cells with active layers from 300 to 900 nm. APL Materials, 2014, 2, .	2.2	118
5	CH ₃ NH ₃ PbI ₃ -Based Planar Solar Cells with Magnetron-Sputtered Nickel Oxide. ACS Applied Materials & Interfaces, 2014, 6, 22862-22870.	4.0	214
6	Moisture assisted perovskite film growth for high performance solar cells. Applied Physics Letters, 2014, 105, .	1.5	667
7	Reproducible One-Step Fabrication of Compact MAPbCl ₃ Thin Films Derived from Mixed-Lead-Halide Precursors. Chemistry of Materials, 2014, 26, 7145-7150.	3.2	81
8	Comparative Studies on Rigid π -Conjugated Organic Dyes: Structure-Property Relationships and Photovoltaic Performance. ChemSusChem, 2014, 7, 3396-3406.	3.6	7
9	Efficient perovskite solar cells based on low-temperature solution-processed (CH ₃ NH ₃)PbI ₃ perovskite/CuInS ₂ planar heterojunctions. Nanoscale Research Letters, 2014, 9, 457.	3.1	22
10	Nickel Oxide Electrode Interlayer in CH ₃ NH ₃ PbI ₃ Perovskite/PCBM Planar Heterojunction Hybrid Solar Cells. Advanced Materials, 2014, 26, 4107-4113.	11.1	646
11	Mixed solvents for the optimization of morphology in solution-processed, inverted-type perovskite/fullerene hybrid solar cells. Nanoscale, 2014, 6, 6679.	2.8	275
12	The Importance of Perovskite Pore Filling in Organometal Mixed Halide Sensitized TiO ₂ -Based Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1096-1102.	2.1	221
13	Current progress and future perspectives for organic/inorganic perovskite solar cells. Materials Today, 2014, 17, 16-23.	8.3	349
14	Perovskite-Based Hybrid Solar Cells Exceeding 10% Efficiency with High Reproducibility Using a Thin Film Sandwich Approach. Advanced Materials, 2014, 26, 2041-2046.	11.1	637
15	A Simple 3,4-Ethylenedioxythiophene Based Hole-Transporting Material for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2014, 53, 4085-4088.	7.2	379
16	Study on the stability of CH ₃ NH ₃ PbI ₃ films and the effect of post-modification by aluminum oxide in all-solid-state hybrid solar cells. Journal of Materials Chemistry A, 2014, 2, 705-710.	5.2	963
17	Additive Enhanced Crystallization of Solution-Processed Perovskite for Highly Efficient Planar Heterojunction Solar Cells. Advanced Materials, 2014, 26, 3748-3754.	11.1	1,344
18	Solid-State Perovskite-Sensitized p-Type Mesoporous Nickel Oxide Solar Cells. ChemSusChem, 2014, 7, 2150-2153.	3.6	69

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19	Organohalide lead perovskites for photovoltaic applications. <i>Energy and Environmental Science</i> , 2014, 7, 2448-2463.	15.6	1,220
20	Synthesis of PbI_2 Single-Layered Inorganic Nanotubes Encapsulated Within Carbon Nanotubes. <i>Advanced Materials</i> , 2014, 26, 2016-2021.	11.1	52
21	Titanium Dioxide Nanomaterials for Photovoltaic Applications. <i>Chemical Reviews</i> , 2014, 114, 10095-10130.	23.0	669
22	Nanocrystalline Rutile Electron Extraction Layer Enables Low-Temperature Solution Processed Perovskite Photovoltaics with 13.7% Efficiency. <i>Nano Letters</i> , 2014, 14, 2591-2596.	4.5	397
23	Efficient, high yield perovskite photovoltaic devices grown by interdiffusion of solution-processed precursor stacking layers. <i>Energy and Environmental Science</i> , 2014, 7, 2619-2623.	15.6	1,154
24	Cesium-doped methylammonium lead iodide perovskite light absorber for hybrid solar cells. <i>Nano Energy</i> , 2014, 7, 80-85.	8.2	459
25	Large fill-factor bilayer iodine perovskite solar cells fabricated by a low-temperature solution-process. <i>Energy and Environmental Science</i> , 2014, 7, 2359-2365.	15.6	754
26	Advancements in perovskite solar cells: photophysics behind the photovoltaics. <i>Energy and Environmental Science</i> , 2014, 7, 2518-2534.	15.6	694
27	Solution Deposition-Conversion for Planar Heterojunction Mixed Halide Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2014, 4, 1400355.	10.2	325
28	Perovskite solar cells employing organic charge-transport layers. <i>Nature Photonics</i> , 2014, 8, 128-132.	15.6	1,320
29	Planar Heterojunction Perovskite Solar Cells via Vapor-Assisted Solution Process. <i>Journal of the American Chemical Society</i> , 2014, 136, 622-625.	6.6	2,091
30	Structure of Methylammonium Lead Iodide Within Mesoporous Titanium Dioxide: Active Material in High-Performance Perovskite Solar Cells. <i>Nano Letters</i> , 2014, 14, 127-133.	4.5	282
31	The origin of high efficiency in low-temperature solution-processable bilayer organometal halide hybrid solar cells. <i>Energy and Environmental Science</i> , 2014, 7, 399-407.	15.6	965
32	Flexible high efficiency perovskite solar cells. <i>Energy and Environmental Science</i> , 2014, 7, 994.	15.6	409
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34	$\text{NH}_2\text{CH}_2\text{NH}_2\text{PbI}_3$: An Alternative Organolead Iodide Perovskite Sensitizer for Mesoscopic Solar Cells. <i>Chemistry of Materials</i> , 2014, 26, 1485-1491.	3.2	516
35	Organolead Halide Perovskite: New Horizons in Solar Cell Research. <i>Journal of Physical Chemistry C</i> , 2014, 118, 5615-5625.	1.5	616
36	Role of the Selective Contacts in the Performance of Lead Halide Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 680-685.	2.1	583

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37	High voltage and efficient bilayer heterojunction solar cells based on an organic–inorganic hybrid perovskite absorber with a low-cost flexible substrate. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 6033-6040.	1.3	86
38	Low-Temperature Solution-Processed Perovskite Solar Cells with High Efficiency and Flexibility. <i>ACS Nano</i> , 2014, 8, 1674-1680.	7.3	1,320
39	Sub-150 °C processed meso-superstructured perovskite solar cells with enhanced efficiency. <i>Energy and Environmental Science</i> , 2014, 7, 1142-1147.	15.6	560
40	Organometal halide perovskites as useful materials in sensitized solar cells. <i>Dalton Transactions</i> , 2014, 43, 5247.	1.6	65
41	Effect of CH ₃ NH ₃ PbI ₃ thickness on device efficiency in planar heterojunction perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 19873-19881.	5.2	314
42	Morphology and Carrier Extraction Study of Organic–Inorganic Metal Halide Perovskite by One- and Two-Photon Fluorescence Microscopy. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3849-3853.	2.1	84
43	Compact Layer Free Perovskite Solar Cells with 13.5% Efficiency. <i>Journal of the American Chemical Society</i> , 2014, 136, 17116-17122.	6.6	407
44	A highly efficient (>6%) Cd _{1-x} Mn _x Se quantum dot sensitized solar cell. <i>Journal of Materials Chemistry A</i> , 2014, 2, 19653-19659.	5.2	126
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46	Improved charge transport of Nb-doped TiO ₂ nanorods in methylammonium lead iodide bromide perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 19616-19622.	5.2	127
47	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al ₂ O ₃ and NiO Nanoparticles. <i>Angewandte Chemie</i> , 2014, 126, 9493-9496.	1.6	31
48	Enhancing the efficiency of TiO ₂ -perovskite heterojunction solar cell via evaporating Cs ₂ CO ₃ on TiO ₂ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 912-916.	1.2	12
49	Solution Chemistry Engineering toward High-Efficiency Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 4175-4186.	2.1	227
50	Improved External Quantum Efficiency from Solution-Processed (CH ₃ NH ₃)PbI ₃ Perovskite/PC ₇₁ BM Planar Heterojunction for High Efficiency Hybrid Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 25899-25905.	1.5	40
51	Optimized Organometal Halide Perovskite Planar Hybrid Solar Cells via Control of Solvent Evaporation Rate. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26513-26520.	1.5	58
52	Perovskite photovoltaics featuring solution-processable TiO ₂ as an interfacial electron-transporting layer display to improve performance and stability. <i>Nanoscale</i> , 2014, 6, 11403-11410.	2.8	24
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54	Solvent Annealing of Perovskite-Induced Crystal Growth for Photovoltaic Device Efficiency Enhancement. <i>Advanced Materials</i> , 2014, 26, 6503-6509.	11.1	1,527

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57	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al ₂ O ₃ and NiO Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 9339-9342.	7.2	57
58	Sequential Deposition of CH ₃ NH ₃ PbI ₃ on Planar NiO Film for Efficient Planar Perovskite Solar Cells. ACS Photonics, 2014, 1, 547-553.	3.2	245
59	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.	5.2	276
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68	Lead Methylammonium Triiodide Perovskite-Based Solar Cells: An Interfacial Charge Transfer Investigation. ChemSusChem, 2014, 7, 3088-3094.	3.6	51
69	Recent Research Developments of Perovskite Solar Cells. Chinese Journal of Chemistry, 2014, 32, 957-963.	2.6	37
70	Enhanced Photoluminescence and Solar Cell Performance <i>via</i> Lewis Base Passivation of Organic-Inorganic Lead Halide Perovskites. ACS Nano, 2014, 8, 9815-9821.	7.3	1,439
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76	Performance enhancement of solution processed perovskite solar cells incorporating functionalized silica nanoparticles. <i>Journal of Materials Chemistry A</i> , 2014, 2, 17077-17084.	5.2	32
77	Highly efficient fullerene/perovskite planar heterojunction solar cells via cathode modification with an amino-functionalized polymer interlayer. <i>Journal of Materials Chemistry A</i> , 2014, 2, 19598-19603.	5.2	186
78	Efficient planar heterojunction perovskite solar cells employing graphene oxide as hole conductor. <i>Nanoscale</i> , 2014, 6, 10505-10510.	2.8	352
79	An 80.11% FF record achieved for perovskite solar cells by using the NH ₄ Cl additive. <i>Nanoscale</i> , 2014, 6, 9935-9938.	2.8	368
80	Solvent engineering for high-performance inorganic-organic hybrid perovskite solar cells. <i>Nature Materials</i> , 2014, 13, 897-903.	13.3	5,796
81	Controllable Self-Induced Passivation of Hybrid Lead Iodide Perovskites toward High Performance Solar Cells. <i>Nano Letters</i> , 2014, 14, 4158-4163.	4.5	1,343
82	High-Performance Flexible Broadband Photodetector Based on Organolead Halide Perovskite. <i>Advanced Functional Materials</i> , 2014, 24, 7373-7380.	7.8	791
83	Mesoporous perovskite solar cells: material composition, charge-carrier dynamics, and device characteristics. <i>Faraday Discussions</i> , 2014, 176, 301-312.	1.6	115
84	Improved High-Efficiency Perovskite Planar Heterojunction Solar Cells via Incorporation of a Polyelectrolyte Interlayer. <i>Chemistry of Materials</i> , 2014, 26, 5190-5193.	3.2	178
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94	Benefits of very thin PCBM and LiF layers for solution-processed perovskite solar cells. <i>Energy and Environmental Science</i> , 2014, 7, 2642-2646.	15.6	622
95	Highly compact TiO ₂ layer for efficient hole-blocking in perovskite solar cells. <i>Applied Physics Express</i> , 2014, 7, 052301.	1.1	199
96	Organometallic Halide Perovskites: Sharp Optical Absorption Edge and Its Relation to Photovoltaic Performance. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1035-1039.	2.1	2,153
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101	Improving the Stability of a Liquid-type Perovskite Solar Cell by Capping Spiro-OMeTAD Layer onto CH ₃ NH ₃ PbI ₃ /TiO ₂ Film. <i>Chemistry Letters</i> , 2015, 44, 1446-1448.	0.7	1
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103	Insight into Evolution, Processing and Performance of Multi-length-scale Structures in Planar Heterojunction Perovskite Solar Cells. <i>Scientific Reports</i> , 2015, 5, 13657.	1.6	37
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109	High-Quality Mixed-Cation Perovskites from a Phase-Pure Non-Stoichiometric Intermediate (FAl) _{1-x} Pb ₂ for Solar Cells. <i>Advanced Materials</i> , 2015, 27, 4918-4923.	11.1	140
110	Planar Heterojunction Perovskite Solar Cells Incorporating Metal-Organic Framework Nanocrystals. <i>Advanced Materials</i> , 2015, 27, 7229-7235.	11.1	134
111	Controllable Perovskite Crystallization by Water Additive for High-Performance Solar Cells. <i>Advanced Functional Materials</i> , 2015, 25, 6671-6678.	7.8	321
112	Solar Rechargeable Batteries Based on Lead-Organohalide Electrolyte. <i>Advanced Energy Materials</i> , 2015, 5, 1501418.	10.2	35
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119	Transient Response of Organo-Metal-Halide Solar Cells Analyzed by Time-Resolved Current-Voltage Measurements. <i>Photonics</i> , 2015, 2, 1101-1115.	0.9	14
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121	Perovskite Solar Cells: Potentials, Challenges, and Opportunities. <i>International Journal of Photoenergy</i> , 2015, 2015, 1-13.	1.4	65
122	A panchromatic hybrid crystal of iodoplumbate nanowires and J-aggregated naphthalene diimides with long-lived charge-separated states. <i>Dalton Transactions</i> , 2015, 44, 5957-5960.	1.6	76
123	Characterization of an abnormal photoluminescence behavior upon crystal-phase transition of perovskite CH ₃ NH ₃ PbI ₃ . <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 16405-16411.	1.3	215
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128	Critical parameters in TiO ₂ /ZrO ₂ /Carbon-based mesoscopic perovskite solar cell. <i>Journal of Power Sources</i> , 2015, 293, 533-538.	4.0	114
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140	Electronic Structures and Photoconversion Mechanism in Perovskite/Fullerene Heterojunctions. Advanced Functional Materials, 2015, 25, 1213-1218.	7.8	86
141	Nanocarbons for mesoscopic perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 9020-9031.	5.2	104
142	Phosphonium Halides as Both Processing Additives and Interfacial Modifiers for High Performance Planar Heterojunction Perovskite Solar Cells. Small, 2015, 11, 3344-3350.	5.2	91
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147	Enhanced Photovoltaic Performance of CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells through Interfacial Engineering Using Self-Assembling Monolayer. Journal of the American Chemical Society, 2015, 137, 2674-2679.	6.6	590
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149	The effect of external electric field on the performance of perovskite solar cells. Organic Electronics, 2015, 18, 107-112.	1.4	32

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