

CITATION REPORT

List of articles citing

Study on the stability of CH₃NH₃PbI₃ films and the effect of post-modification by aluminum oxide in all-solid-state hybrid solar cells

DOI: 10.1039/c3ta13606j

Journal of Materials Chemistry A, 2014, 2, 705-710.

Source: <https://exaly.com/paper-pdf/58884758/citation-report.pdf>

Version: 2024-04-19

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
915	In Situ Identification of Photo- and Moisture-Dependent Phase Evolution of Perovskite Solar Cells.		
914	Optical properties of organometallic perovskite: An ab initio study using relativistic GW correction and Bethe-Salpeter equation. 2014 , 108, 67015		44
913	Simple way to engineer metal-semiconductor interface for enhanced performance of perovskite organic lead iodide solar cells. 2014 , 6, 5651-6		88
912	Reduced ultraviolet light induced degradation and enhanced light harvesting using YVO4:Eu3+ down-shifting nano-phosphor layer in organometal halide perovskite solar cells. 2014 , 105, 033904		123
911	Influence of moisture on the preparation, crystal structure, and photophysical properties of organohalide perovskites. 2014 , 50, 15819-22		135
910	Graphene oxide as dual functional interface modifier for improving wettability and retarding recombination in hybrid perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 20105-20111	13	165
909	Atomic-Layer-Deposited Aluminum and Zirconium Oxides for Surface Passivation of TiO2 in High-Efficiency Organic Photovoltaics. 2014 , 4, 1400214		48
908	Role of chloride in the morphological evolution of organo-lead halide perovskite thin films. 2014 , 8, 10640-54		328
907	Bandgap calculations and trends of organometal halide perovskites. 2014 , 2, 081514		167
906	A hydrophobic hole transporting oligothiophene for planar perovskite solar cells with improved stability. 2014 , 50, 11196-9		235
905	Electrospun lead-doped titanium dioxide nanofibers and the in situ preparation of perovskite-sensitized photoanodes for use in high performance perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 16856-16862	13	73
904	Efficient hole-conductor-free, fully printable mesoscopic perovskite solar cells with a broad light harvester NH2CHNH2PbI3. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 17115-17121	13	158
903	Binary-metal perovskites toward high-performance planar-heterojunction hybrid solar cells. 2014 , 26, 6454-60		259
902	Multifunctional perovskite capping layers in hybrid solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 14973	13	55
901	Fabrication of semi-transparent perovskite films with centimeter-scale superior uniformity by the hybrid deposition method. 2014 , 7, 3989-3993		193
900	Materials processing routes to trap-free halide perovskites. 2014 , 14, 6281-6		567
899	Engineering of electron-selective contact for perovskite solar cells with efficiency exceeding 15%. 2014 , 8, 10161-7		209

898	Real-space observation of unbalanced charge distribution inside a perovskite-sensitized solar cell. 2014 , 5, 5001	262
897	Recent Research Developments of Perovskite Solar Cells. 2014 , 32, 957-963	31
896	Efficient organic-inorganic hybrid perovskite solar cells processed in air. 2014 , 16, 24691-6	56
895	Perovskite solar cells involving poly(tetraphenylbenzidine)s: investigation of hole carrier mobility, doping effects and photovoltaic properties. 2014 , 4, 43550-43559	25
894	The emergence of perovskite solar cells. 2014 , 8, 506-514	453 ⁸
893	Preparation of high performance perovskite-sensitized nanoporous titanium dioxide photoanodes by in situ method for use in perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 16531-16537 ¹³	59
892	Montmorillonite as bifunctional buffer layer material for hybrid perovskite solar cells with protection from corrosion and retarding recombination. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 13587-13592 ^{13, 231}	
891	An all-solid-state perovskite-sensitized solar cell based on the dual function polyaniline as the sensitizer and p-type hole-transporting material. 2014 , 267, 1-8	113
890	Long-term Stability of Mixed Perovskites. 2015 , 1771, 193-198	2
889	High-Performance Planar-Type Photodetector on (100) Facet of MAPbI ₃ Single Crystal. 2015 , 5, 16563	222
888	Beyond Efficiency: the Challenge of Stability in Mesoscopic Perovskite Solar Cells. 2015 , 5, 1501066	335
887	Stability of Metal Halide Perovskite Solar Cells. 2015 , 5, 1500963	861
886	Poröse und formanisotrope Einkristalle des Halbleiter-Perowskites CH ₃ NH ₃ PbI ₃ aus einer neuen Single-Source-Vorstufe. 2015 , 127, 1357-1362	5
885	The Role of Oxygen in the Degradation of Methylammonium Lead Trihalide Perovskite Photoactive Layers. 2015 , 54, 8208-12	606
884	The Role of Oxygen in the Degradation of Methylammonium Lead Trihalide Perovskite Photoactive Layers. 2015 , 127, 8326-8330	106
883	Pseudohalide-Induced Moisture Tolerance in Perovskite CH ₃ NH ₃ Pb(SCN) ₂ I Thin Films. 2015 , 127, 7727-7730	83
882	Similar Structural Dynamics for the Degradation of CH ₃ NH ₃ PbI ₃ in Air and in Vacuum. 2015 , 16, 3064-71	68
881	Formamidinium and Cesium Hybridization for Photo- and Moisture-Stable Perovskite Solar Cell. 2015 , 5, 1501310	1085

880	Organic Photodetectors in Analytical Applications. 2015 , 4, 688-722		30
879	Stability Issues on Perovskite Solar Cells. 2015 , 2, 1139-1151		158
878	Atomistic origins of CH ₃ NH ₃ PbI ₃ degradation to PbI ₂ in vacuum. 2015 , 106, 131904		141
877	Environmental Effects on the Photophysics of Organic-Inorganic Halide Perovskites. 2015 , 6, 2200-5		181
876	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. 2015 , 140, 396-404		57
875	Pinhole-free hole transport layers significantly improve the stability of MAPbI ₃ -based perovskite solar cells under operating conditions. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 15451-15456	13	101
874	Study on hole-transport-material-free planar TiO ₂ /CH ₃ NH ₃ PbI ₃ heterojunction solar cells: the simplest configuration of a working perovskite solar cell. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 14902-14909	13	39
873	Substitution induced band structure shape tuning in hybrid perovskites (CH ₃ NH ₃ Pb _{1-x} Sn _x I ₃) for efficient solar cell applications. 2015 , 5, 107497-107502		37
872	Beyond silicon: Alternative photovoltaic technologies. 2015 ,		
871	Numerical analysis of hybrid perovskite solar cells using inorganic hole conducting material. 2015 ,		2
870	Development of perovskite solar cells with nanophotonic front electrodes for improved light incoupling. 2015 ,		1
869	Understanding the rate-dependent J-V hysteresis, slow time component, and aging in CH ₃ NH ₃ PbI ₃ perovskite solar cells: the role of a compensated electric field. 2015 , 8, 995-1004		998
868	Vacuum-assisted thermal annealing of CH ₃ NH ₃ PbI ₃ for highly stable and efficient perovskite solar cells. 2015 , 9, 639-46		282
867	Temperature- and Component-Dependent Degradation of Perovskite Photovoltaic Materials under Concentrated Sunlight. 2015 , 6, 326-30		394
866	Air-Exposure Induced Dopant Redistribution and Energy Level Shifts in Spin-Coated Spiro-MeOTAD Films. 2015 , 27, 562-569		289
865	Ultrathin Atomic Layer Deposited TiO ₂ for Surface Passivation of Hydrothermally Grown 1D TiO ₂ Nanorod Arrays for Efficient Solid-State Perovskite Solar Cells. 2015 , 27, 1541-1551		157
864	A promising alternative solvent of perovskite to induce rapid crystallization for high-efficiency photovoltaic devices. 2015 , 5, 20521-20529		64
863	Interfaces in perovskite solar cells. 2015 , 11, 2472-86		293

862	Investigation of CH ₃ NH ₃ PbI ₃ degradation rates and mechanisms in controlled humidity environments using in situ techniques. 2015 , 9, 1955-63		954
861	Atmospheric effects on the photovoltaic performance of hybrid perovskite solar cells. 2015 , 137, 6-14		101
860	Perovskite thin-film solar cell: excitation in photovoltaic science. 2015 , 58, 221-238		54
859	Improvement of the humidity stability of organic/inorganic perovskite solar cells using ultrathin Al ₂ O ₃ layers prepared by atomic layer deposition. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 5360-5367	13	275
858	Efficient hybrid mesoscopic solar cells with morphology-controlled CH ₃ NH ₃ PbI ₃ -xCl _x derived from two-step spin coating method. 2015 , 7, 2242-8		85
857	Non-Thermal Annealing Fabrication of Efficient Planar Perovskite Solar Cells with Inclusion of NH ₄ Cl. 2015 , 27, 1448-1451		114
856	Hysteresis mechanism in perovskite photovoltaic devices and its potential application for multi-bit memory devices. 2015 , 26, 208-212		24
855	Light stability tests of methylammonium and formamidinium Pb-halide perovskites for solar cell applications. 2015 , 54, 08KF08		47
854	Surface Charge Trapping in Organolead Halide Perovskites Explored by Single-Particle Photoluminescence Imaging. 2015 , 6, 3195-3201		95
853	Uncovering the Veil of the Degradation in Perovskite CH ₃ NH ₃ PbI ₃ upon Humidity Exposure: A First-Principles Study. 2015 , 6, 3289-3295		147
852	Efficient planar perovskite solar cells with large fill factor and excellent stability. 2015 , 297, 53-58		51
851	Exploring Thermochromic Behavior of Hydrated Hybrid Perovskites in Solar Cells. 2015 , 6, 3180-3184		76
850	Improved stability of perovskite solar cells in ambient air by controlling the mesoporous layer. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 16860-16866	13	75
849	Enhancing Stability of Perovskite Solar Cells to Moisture by the Facile Hydrophobic Passivation. 2015 , 7, 17330-6		249
848	Hole transporting material-free and annealing-free thermal evaporated planar perovskite solar cells with an ultra-thin CH ₃ NH ₃ PbI ₃ -xCl _x layer. 2015 , 26, 104-108		14
847	Vertical TiO ₂ Nanorods as a Medium for Stable and High-Efficiency Perovskite Solar Modules. 2015 , 9, 8420-9		158
846	Highly porous Zinc Stannate (Zn ₂ SnO ₄) nanofibers scaffold photoelectrodes for efficient methyl ammonium halide perovskite solar cells. 2015 , 5, 11424		87
845	Under the spotlight: The organic/inorganic hybrid halide perovskite for optoelectronic applications. 2015 , 10, 355-396		700

844	Ab Initio Molecular Dynamics Simulations of Methylammonium Lead Iodide Perovskite Degradation by Water. 2015 , 27, 4885-4892		323
843	Recent progress in efficient hybrid lead halide perovskite solar cells. 2015 , 16, 036004		72
842	Precipitation of CH ₃ NH ₃ PbCl ₃ in CH ₃ NH ₃ PbI ₃ and Its Impact on Modulated Charge Separation. 2015 , 119, 9926-9933		41
841	Revealing the role of organic cations in hybrid halide perovskite CH ₃ NH ₃ PbI ₃ . 2015 , 6, 7026		489
840	Towards printed perovskite solar cells with cuprous oxide hole transporting layers: a theoretical design. 2015 , 30, 054004		37
839	Nucleation and Crystal Growth of Organic-Inorganic Lead Halide Perovskites under Different Relative Humidity. 2015 , 7, 9110-7		113
838	Solar hydrogen production using carbon quantum dots and a molecular nickel catalyst. 2015 , 137, 6018-25		417
837	Research progress of perovskite materials in photocatalysis- and photovoltaics-related energy conversion and environmental treatment. 2015 , 44, 5371-408		580
836	Multifaceted Excited State of CH ₃ NH ₃ PbI ₃ . Charge Separation, Recombination, and Trapping. 2015 , 6, 2086-95		99
835	Pseudohalide-induced moisture tolerance in perovskite CH ₃ NH ₃ Pb(SCN) ₂ I thin films. 2015 , 54, 7617-20		233
834	Tin perovskite/fullerene planar layer photovoltaics: improving the efficiency and stability of lead-free devices. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 11631-11640	13	156
833	Enhancing Thermal Stability and Lifetime of Solid-State Dye-Sensitized Solar Cells via Molecular Engineering of the Hole-Transporting Material Spiro-OMeTAD. 2015 , 7, 11107-16		229
832	Nanophotonic front electrodes for perovskite solar cells. 2015 , 106, 173101		45
831	Highly efficient and stable planar heterojunction perovskite solar cells via a low temperature solution process. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 12133-12138	13	81
830	Reversible Hydration of CH ₃ NH ₃ PbI ₃ in Films, Single Crystals, and Solar Cells. 2015 , 27, 3397-3407		888
829	Investigation of perovskite-sensitized nanoporous titanium dioxide photoanodes with different thicknesses in perovskite solar cells. 2015 , 286, 118-123		68
828	Multifunctional MgO Layer in Perovskite Solar Cells. 2015 , 16, 1727-32		60
827	Polarization Dependence of Water Adsorption to CH ₃ NH ₃ PbI ₃ (001) Surfaces. 2015 , 6, 4371-8		93

826	Degradation by Exposure of Coevaporated CH ₃ NH ₃ PbI ₃ Thin Films. 2015 , 119, 23996-24002	95
825	Interface and Composition Analysis on Perovskite Solar Cells. 2015 , 7, 26176-83	99
824	Flexible and Semitransparent Organolead Triiodide Perovskite Network Photodetector Arrays with High Stability. 2015 , 15, 7963-9	237
823	Investigation of the Interaction between Perovskite Films with Moisture via in Situ Electrical Resistance Measurement. 2015 , 7, 25113-20	56
822	Encapsulation for improving the lifetime of flexible perovskite solar cells. 2015 , 18, 118-125	186
821	(CH ₃ NH ₃) ₂ Pb(SCN) ₂ I ₂ : a more stable structural motif for hybrid halide photovoltaics?. 2015 , 6, 4594-8	100
820	Synthesis, Optical Properties, and Exciton Dynamics of Organolead Bromide Perovskite Nanocrystals. 2015 , 119, 26672-26682	83
819	Improved photovoltaic performance in perovskite solar cells based on CH ₃ NH ₃ PbI ₃ films fabricated under controlled relative humidity. 2015 , 5, 93957-93963	25
818	Subphthalocyanine as hole transporting material for perovskite solar cells. 2015 , 5, 69813-69818	40
817	The influence of different mask aperture on the open-circuit voltage measurement of perovskite solar cells. 2015 , 7, 043104	12
816	Ab initio design of CsSn(XxY 1X) ₃ (X and Y = Cl, Br, and I) perovskites for photovoltaics. 2015 , 5, 077158	8
815	Interfacial engineering of self-assembled monolayer modified semi-roll-to-roll planar heterojunction perovskite solar cells on flexible substrates. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 24254-24260	13 115
814	Simple Triphenylamine-Based Hole-Transporting Materials for Perovskite Solar Cells. 2015 , 182, 733-741	51
813	Intrinsic Thermal Instability of Methylammonium Lead Trihalide Perovskite. 2015 , 5, 1500477	1386
812	Stability of Organic Cations in Solution-Processed CH ₃ NH ₃ PbI ₃ Perovskites: Formation of Modified Surface Layers. 2015 , 119, 21329-21335	70
811	Mixed perovskite based on methyl-ammonium and polymeric-ammonium for stable and reproducible solar cells. 2015 , 51, 15430-3	74
810	Copper oxide as inorganic hole transport material for lead halide perovskite based solar cells. 2015 , 120, 370-380	157
809	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid ammonium chlorides. 2015 , 7, 703-11	898

808	Formation of low resistance Ti/Al-based ohmic contacts on (1102) semipolar n-type GaN. 2015 , 652, 167-171		8
807	Photodecomposition and Morphology Evolution of Organometal Halide Perovskite Solar Cells. 2015 , 119, 20810-20816		83
806	High-performance inverted planar perovskite solar cells without a hole transport layer via a solution process under ambient conditions. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 19294-19298	13	30
805	A simple approach for the fabrication of perovskite solar cells in air. 2015 , 297, 504-510		55
804	Synergistic enhancement and mechanism study of mechanical and moisture stability of perovskite solar cells introducing polyethylene-imine into the CH ₃ NH ₃ PbI ₃ /HTM interface. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 22176-22182	13	68
803	Ab Initio Study of Interaction of Water, Hydroxyl Radicals, and Hydroxide Ions with CH ₃ NH ₃ PbI ₃ and CH ₃ NH ₃ PbBr ₃ Surfaces. 2015 , 119, 22370-22378		103
802	Stability of organometal perovskites with organic overlayers. 2015 , 5, 087185		10
801	Structural investigation of co-evaporated methyl ammonium lead halide perovskite films during growth and thermal decomposition using different PbX ₂ (X = I, Cl) precursors. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 19842-19849	13	33
800	Core/Shell Structured TiO ₂ /CdS Electrode to Enhance the Light Stability of Perovskite Solar Cells. 2015 , 7, 27863-70		73
799	Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. 2015 , 6, 10030		492
798	Degradation mechanism of perovskite CH ₃ NH ₃ PbI ₃ diode devices studied by electroluminescence and photoluminescence imaging spectroscopy. 2015 , 8, 102302		19
797	Material Innovation in Advancing Organometal Halide Perovskite Functionality. 2015 , 6, 4862-72		35
796	Nanoscale charge localization induced by random orientations of organic molecules in hybrid perovskite CH ₃ NH ₃ PbI ₃ . 2015 , 15, 248-53		211
795	Fully vacuum-processed perovskite solar cells with high open circuit voltage using MoO ₃ /NPB as hole extraction layers. 2015 , 17, 102-106		100
794	Perovskite-based solar cells: impact of morphology and device architecture on device performance. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8943-8969	13	465
793	Porous and shape-anisotropic single crystals of the semiconductor perovskite CH ₃ NH ₃ PbI ₃ from a single-source precursor. 2015 , 54, 1341-6		45
792	Review of recent progress in chemical stability of perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8970-8980	13	1337
791	Enhanced Environmental Stability of Planar Heterojunction Perovskite Solar Cells Based on Blade-Coating. 2015 , 5, 1401229		278

790	Recent progress in organic/inorganic halide perovskite solar cells: mechanisms and material design. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8992-9010	13	133
789	The roles of alkyl halide additives in enhancing perovskite solar cell performance. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 9058-9062	13	135
788	High-performance perovskite-graphene hybrid photodetector. 2015 , 27, 41-6		651
787	Effects of Solution-Based Fabrication Conditions on Morphology of Lead Halide Perovskite Thin Film Solar Cells. 2016 , 2016, 1-12		10
786	Using Low Temperature Photoluminescence Spectroscopy to Investigate CH ₃ NH ₃ PbI ₃ /Hybrid Perovskite Degradation. 2016 , 21,		12
785	The Progress of Interface Design in Perovskite-Based Solar Cells. 2016 , 6, 1600460		121
784	Stabilization of Organic-Inorganic Perovskite Layers by Partial Substitution of Iodide by Bromide in Methylammonium Lead Iodide. 2016 , 17, 1505-11		37
783	Stability issues of the next generation solar cells. 2016 , 10, 281-299		54
782	New Horizons for Perovskite Solar Cells Employing DNA-CTMA as the Hole-Transporting Material. 2016 , 9, 1736-42		29
781	A Self-Powered and Stable All-Perovskite Photodetector/Solar Cell Nanosystem. 2016 , 26, 1296-1302		164
780	Nanostructuring Mixed-Dimensional Perovskites: A Route Toward Tunable, Efficient Photovoltaics. 2016 , 28, 3653-61		201
779	Laser Crystallization of Organic-Inorganic Hybrid Perovskite Solar Cells. 2016 , 10, 7907-14		95
778	Stability Comparison of Perovskite Solar Cells Based on Zinc Oxide and Titania on Polymer Substrates. 2016 , 9, 687-95		84
777	Copper-Doped Chromium Oxide Hole-Transporting Layer for Perovskite Solar Cells: Interface Engineering and Performance Improvement. 2016 , 3, 1500799		52
776	Recent Advances in Improving the Stability of Perovskite Solar Cells. 2016 , 6, 1501420		251
775	UV Degradation and Recovery of Perovskite Solar Cells. 2016 , 6, 38150		195
774	Synergistic Effects of Water and Oxygen Molecule Co-adsorption on (001) Surfaces of Tetragonal CH ₃ NH ₃ PbI ₃ : A First-Principles Study. 2016 , 120, 28448-28455		40
773	Photoelectric characteristics of CH ₃ NH ₃ PbI ₃ /p-Si heterojunction. 2016 , 37, 053002		4

772	Optical properties and degradation monitoring of CH ₃ NH ₃ PbI ₃ . 2016 ,		
771	High Performance Perovskite Solar Cells through Surface Modification, Mixed Solvent Engineering and Nanobowl-Assisted Light Harvesting. 2016 , 1, 3175-3184		7
770	Thermodynamic origin of instability in hybrid halide perovskites. 2016 , 6, 37654		59
769	Differentially pumped spray deposition as a rapid screening tool for organic and perovskite solar cells. 2016 , 6, 20357		26
768	Degradation of organometallic perovskite solar cells induced by trap states. 2016 , 108, 093901		35
767	Degradation mechanism of CH ₃ NH ₃ PbI ₃ perovskite materials upon exposure to humid air. 2016 , 119, 115501		140
766	Research Update: Strategies for improving the stability of perovskite solar cells. 2016 , 4, 091503		106
765	Phosphor coated NiO-based planar inverted organometallic halide perovskite solar cells with enhanced efficiency and stability. 2016 , 109, 171103		22
764	Room-Temperature Atomic Layer Deposition of Al ₂ O ₃ : Impact on Efficiency, Stability and Surface Properties in Perovskite Solar Cells. 2016 , 9, 3401-3406		72
763	Synergistic effects of three-dimensional orchid-like TiO ₂ nanowire networks and plasmonic nanoparticles for highly efficient mesoscopic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 7322-7329	13	26
762	The Effect of Humidity upon the Crystallization Process of Two-Step Spin-Coated Organic-Inorganic Perovskites. 2016 , 17, 112-8		26
761	Nanostructured Materials for High Efficiency Perovskite Solar Cells. 2016 , 1-39		3
760	Not All That Glitters Is Gold: Metal-Migration-Induced Degradation in Perovskite Solar Cells. 2016 , 10, 6306-14		759
759	Thiocyanate assisted performance enhancement of formamidinium based planar perovskite solar cells through a single one-step solution process. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 9430-9436	13	97
758	Hydrophobic Hole-Transporting Materials Incorporating Multiple Thiophene Cores with Long Alkyl Chains for Efficient Perovskite Solar Cells. 2016 , 209, 529-540		26
757	Ammonium-iodide-salt additives induced photovoltaic performance enhancement in one-step solution process for perovskite solar cells. 2016 , 684, 84-90		49
756	Stability of solution-processed MAPbI ₃ and FAPbI ₃ layers. 2016 , 18, 13413-22		151
755	Degradation of Co-Evaporated Perovskite Thin Films. 2016 , 1, 923-929		3

754	In situ investigation of the formation and metastability of formamidinium lead tri-iodide perovskite solar cells. 2016 , 9, 2372-2382	64
753	Advancements in the stability of perovskite solar cells: degradation mechanisms and improvement approaches. 2016 , 6, 38079-38091	131
752	The interaction between hybrid organic-inorganic halide perovskite and selective contacts in perovskite solar cells: an infrared spectroscopy study. 2016 , 18, 13583-90	46
751	Influence of Electrode Interfaces on the Stability of Perovskite Solar Cells: Reduced Degradation Using MoO _x /Al for Hole Collection. 2016 , 1, 38-45	209
750	High Chloride Doping Levels Stabilize the Perovskite Phase of Cesium Lead Iodide. 2016 , 16, 3563-70	208
749	Induced Crystallization of Perovskites by a Perylene Underlayer for High-Performance Solar Cells. 2016 , 10, 5479-89	111
748	Stable and durable CH ₃ NH ₃ PbI ₃ perovskite solar cells at ambient conditions. 2016 , 27, 235404	50
747	Coordination engineering toward high performance organic-inorganic hybrid perovskites. 2016 , 320-321, 53-65	30
746	Effect of Water Vapor, Temperature, and Rapid Annealing on Formamidinium Lead Triiodide Perovskite Crystallization. 2016 , 1, 155-161	21
745	Photostability and Moisture Stability of CH ₃ NH ₃ PbI ₃ -based Solar Cells by Ethyl Cellulose. 2016 , 81, 1292-1298	17
744	Hydrophobic hole-transporting layer induced porous PbI ₂ film for stable and efficient perovskite solar cells in 50% humidity. 2016 , 157, 989-995	14
743	La ₂ O ₃ interface modification of mesoporous TiO ₂ nanostructures enabling highly efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 15478-15485	13 45
742	Recent progress on stability issues of organic-inorganic hybrid lead perovskite-based solar cells. 2016 , 6, 89356-89366	57
741	Encapsulation for long-term stability enhancement of perovskite solar cells. 2016 , 30, 162-172	200
740	Investigation of moisture stability and PL characteristics of terpeneol-passivated organic-inorganic hybrid perovskite. 2016 , 5, 1	21
739	Progress of interface engineering in perovskite solar cells. 2016 , 59, 728-742	36
738	Comparing the Effect of Mesoporous and Planar Metal Oxides on the Stability of Methylammonium Lead Iodide Thin Films. 2016 , 28, 7344-7352	38
737	Constructing water-resistant CH ₃ NH ₃ PbI ₃ perovskite films via coordination interaction. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 17018-17024	13 69

736	Methylammonium lead iodide grain boundaries exhibit depth-dependent electrical properties. 2016 , 9, 3642-3649	42
735	Optical monitoring of CH ₃ NH ₃ PbI ₃ thin films upon atmospheric exposure. 2016 , 49, 405102	14
734	Fatigue behavior of planar CH ₃ NH ₃ PbI ₃ perovskite solar cells revealed by light on/off diurnal cycling. 2016 , 27, 509-514	57
733	Air-stable, hole-conductor-free high photocurrent perovskite solar cells with CH ₃ NH ₃ PbI ₃ /NiO nanoparticles composite. 2016 , 27, 535-544	61
732	Identification and Mitigation of a Critical Interfacial Instability in Perovskite Solar Cells Employing Copper Thiocyanate Hole-Transporter. 2016 , 3, 1600571	80
731	Effect of Halide Composition on the Photochemical Stability of Perovskite Photovoltaic Materials. 2016 , 9, 2572-2577	53
730	Facile Thiol-Ene Thermal Crosslinking Reaction Facilitated Hole-Transporting Layer for Highly Efficient and Stable Perovskite Solar Cells. 2016 , 6, 1601165	50
729	Ab initio static and dynamic study of CH ₃ NH ₃ PbI ₃ degradation in the presence of water, hydroxyl radicals, and hydroxide ions. 2016 , 6, 76938-76947	18
728	Encapsulation of Perovskite Solar Cells for High Humidity Conditions. 2016 , 9, 2597-2603	113
727	Effect of crystal structures on the stability of CH ₃ NH ₃ PbI ₃ under humidity environment. 2016 , 136, 470-474	6
726	Electric-Field-Induced Degradation of Methylammonium Lead Iodide Perovskite Solar Cells. 2016 , 7, 3091-6	123
725	Exceptionally Stable CH ₃ NH ₃ PbI ₃ Films in Moderate Humid Environmental Condition. 2016 , 3, 1500262	48
724	First-Principles Modeling of Organohalide Thin Films and Interfaces. 2016 , 19-52	4
723	APbI ₃ (A = CH ₃ NH ₃ and HC(NH ₂) ₂) Perovskite Solar Cells: From Sensitization to Planar Heterojunction. 2016 , 223-253	3
722	Facile synthesis, characterization and structural evolution of nanorods single-crystalline (C ₄ H ₉ NH ₃) ₂ PbI ₂ X ₂ mixed halide organometal perovskite for solar cell application. 2016 , 127, 9775-9787	23
721	Defect properties of the two-dimensional (CH ₃ NH ₃) ₂ Pb(SCN) ₂ I ₂ perovskite: a density-functional theory study. 2016 , 18, 25786-90	27
720	Facile Synthesis and Characterization of Sulfur Doped Low Bandgap Bismuth Based Perovskites by Soluble Precursor Route. 2016 , 28, 6436-6440	69
719	Efficient perovskite solar cells via simple interfacial modification toward a mesoporous TiO ₂ electron transportation layer. 2016 , 6, 82282-82288	27

7 ¹⁸	Spontaneous configurational evolution induced by an in situ self-formed p-type CuI interface layer in perovskite solar cells. 2016 , 6, 82759-82762	7
7 ¹⁷	Effects of water molecules on the chemical stability of MA ₂ GeI ₃ perovskite explored from a theoretical viewpoint. 2016 , 18, 24526-36	19
7 ¹⁶	Redox Chemistry Dominates the Degradation and Decomposition of Metal Halide Perovskite Optoelectronic Devices. 2016 , 1, 595-602	151
7 ¹⁵	Improving All-Inorganic Perovskite Photodetectors by Preferred Orientation and Plasmonic Effect. 2016 , 12, 5622-5632	271
7 ¹⁴	Interface modification for organic and perovskite solar cells. 2016 , 59, 743-756	21
7 ¹³	Metal-nanostructures as a modern and powerful platform to create transparent electrodes for thin-film photovoltaics. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 14481-14508	13 63
7 ¹²	Material and Device Stability in Perovskite Solar Cells. 2016 , 9, 2528-2540	198
7 ¹¹	Schottky junctions on perovskite single crystals: light-modulated dielectric constant and self-biased photodetection. 2016 , 4, 8304-8312	104
7 ¹⁰	Advanced Raman Spectroscopy of Methylammonium Lead Iodide: Development of a Non-destructive Characterisation Methodology. 2016 , 6, 35973	75
7 ⁰⁹	The Influence of Water Vapor on the Stability and Processing of Hybrid Perovskite Solar Cells Made from Non-Stoichiometric Precursor Mixtures. 2016 , 9, 2699-2707	66
7 ⁰⁸	Multidimensional Perovskites: A Mixed Cation Approach Towards Ambient Stable and Tunable Perovskite Photovoltaics. 2016 , 9, 2541-2558	69
7 ⁰⁷	Interaction of Organic Cation with Water Molecule in Perovskite MAPbI ₃ : From Dynamic Orientational Disorder to Hydrogen Bonding. 2016 , 28, 7385-7393	133
7 ⁰⁶	Strategic improvement of the long-term stability of perovskite materials and perovskite solar cells. 2016 , 18, 27026-27050	116
7 ⁰⁵	The effect of moisture on the structures and properties of lead halide perovskites: a first-principles theoretical investigation. 2016 , 18, 23174-83	71
7 ⁰⁴	Organic-Inorganic Halide Perovskite Photovoltaics. 2016 ,	91
7 ⁰³	Low-Energy Electron-Induced Transformations in Organolead Halide Perovskite. 2016 , 55, 10083-7	36
7 ⁰²	Using elemental Pb surface as a precursor to fabricate large area CH ₃ NH ₃ PbI ₃ perovskite solar cells. 2016 , 389, 540-546	26
7 ⁰¹	Investigation on a dopant-free hole transport material for perovskite solar cells. 2016 , 6, 69365-69369	21

700	Optical Transitions in Hybrid Perovskite Solar Cells: Ellipsometry, Density Functional Theory, and Quantum Efficiency Analyses for CH ₃ NH ₃ PbI ₃ . 2016 , 5,	229
699	Functionalization of perovskite thin films with moisture-tolerant molecules. 2016 , 1,	369
698	Simple Approach to Improving the Amplified Spontaneous Emission Properties of Perovskite Films. 2016 , 8, 32978-32983	40
697	Trapped charge-driven degradation of perovskite solar cells. 2016 , 7, 13422	390
696	Low-Energy Electron-Induced Transformations in Organolead Halide Perovskite. 2016 , 128, 10237-10241	5
695	Improved Phase Stability of Formamidinium Lead Triiodide Perovskite by Strain Relaxation. 2016 , 1, 1014-1020	244
694	Observation of Nanoscale Morphological and Structural Degradation in Perovskite Solar Cells by in Situ TEM. 2016 , 8, 32333-32340	43
693	Highly Efficient Perovskite Solar Cells with Substantial Reduction of Lead Content. 2016 , 6, 35705	74
692	Assessing the toxicity of Pb- and Sn-based perovskite solar cells in model organism <i>Danio rerio</i> . 2016 , 6, 18721	299
691	Investigation of the Hydrolysis of Perovskite Organometallic Halide CH ₃ NH ₃ PbI ₃ in Humidity Environment. 2016 , 6, 21976	90
690	Degradation and regeneration of hybrid perovskites. 2016 , 6, 101846-101852	6
689	Bibliography. 2016 , 269-288	
688	Thin Film Electrochemical Capacitors Based on Organolead Triiodide Perovskite. 2016 , 2, 1600114	23
687	Perovskite materials in energy storage and conversion. 2016 , 11, 338-369	59
686	Improvement of stability of ZnO/CH ₃ NH ₃ PbI ₃ bilayer by aging step for preparing high-performance perovskite solar cells under ambient conditions. 2016 , 6, 62522-62528	19
685	Curing of degraded MAPbI ₃ perovskite films. 2016 , 6, 60620-60625	13
684	Hydrophobic coating over a CH ₃ NH ₃ PbI ₃ absorbing layer towards air stable perovskite solar cells. 2016 , 4, 6848-6854	41
683	Encapsulated perovskite based photovoltaics devices with high stability. 2016 , 1, 3191-3198	

682	Systematic study on the impact of water on the performance and stability of perovskite solar cells. 2016 , 6, 52448-52458		26
681	A new carbazole-based hole-transporting material with low dopant content for perovskite solar cells. 2016 , 210, 673-680		29
680	TiO ₂ passivation for improved efficiency and stability of ZnO nanorods based perovskite solar cells. 2016 , 6, 57996-58002		34
679	Nanoconfined Crystallization of MAPbI ₃ to Probe Crystal Evolution and Stability. 2016 , 16, 4744-4751		22
678	Controlled orientation of perovskite films through mixed cations toward high performance perovskite solar cells. 2016 , 27, 87-94		102
677	Is Excess PbI ₂ Beneficial for Perovskite Solar Cell Performance?. 2016 , 6, 1502206		226
676	Oxygen Degradation in Mesoporous Al ₂ O ₃ /CH ₃ NH ₃ PbI ₃ -xCl _x Perovskite Solar Cells: Kinetics and Mechanisms. 2016 , 6, 1600014		159
675	Lewis Acid-Base Adduct Approach for High Efficiency Perovskite Solar Cells. 2016 , 49, 311-9		690
674	Efficient bifacial dye-sensitized solar cells through disorder by design. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 1953-1961	13	28
673	Highly Efficient and Air Stable Inverted Polymer Solar Cells Using LiF-Modified ITO Cathode and MoO ₃ /AgAl Alloy Anode. 2016 , 8, 3792-9		41
672	Effect of cesium chloride modification on the film morphology and UV-induced stability of planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 11688-11695	13	84
671	In situ processed gold nanoparticle-embedded TiO ₂ nanofibers enabling plasmonic perovskite solar cells to exceed 14% conversion efficiency. 2016 , 8, 2664-77		118
670	Evolution of Chemical Composition, Morphology, and Photovoltaic Efficiency of CH ₃ NH ₃ PbI ₃ Perovskite under Ambient Conditions. 2016 , 28, 303-311		152
669	Organic-inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. 2016 , 45, 655-89		1049
668	Photovoltaic Properties of Two-Dimensional (CH ₃ NH ₃) ₂ Pb(SCN) ₂ I ₂ Perovskite: A Combined Experimental and Density Functional Theory Study. 2016 , 7, 1213-8		112
667	Composition-controlled organometal halide perovskite via CH ₃ NH ₃ I pressure in a vacuum co-deposition process. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 5663-5668	13	21
666	Organohalide Lead Perovskites for Photovoltaic Applications. 2016 , 7, 851-66		125
665	Thermally stable Ti/Al-based ohmic contacts to N-polar n-GaN by using an indium interlayer. 2016 , 55, 031001		3

664	Parameters responsible for the degradation of CH ₃ NH ₃ PbI ₃ -based solar cells on polymer substrates. 2016 , 22, 211-222		16
663	An innovative design of perovskite solar cells with Al ₂ O ₃ inserting at ZnO/perovskite interface for improving the performance and stability. 2016 , 22, 223-231		130
662	Method for improving illumination instability of organic/inorganic halide perovskite solar cells. 2016 , 61, 236-244		9
661	Role of the chemical substitution on the structural and luminescence properties of the mixed halide perovskite thin MAPbI ₃ -xBr _x (0 ≤ x ≤ 1) films. 2016 , 371, 112-117		79
660	Intrinsic charge carrier dynamics and device stability of perovskite/ZnO mesostructured solar cells in moisture. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 5474-5481	13	54
659	Humidity-Induced Grain Boundaries in MAPbI ₃ Perovskite Films. 2016 , 120, 6363-6368		83
658	Degradation of co-evaporated perovskite thin film in air. 2016 , 649, 151-155		33
657	Interface degradation of perovskite solar cells and its modification using an annealing-free TiO ₂ NPs layer. 2016 , 30, 30-35		84
656	Efficient bifacial perovskite solar cell based on a highly transparent poly(3,4-ethylenedioxythiophene) as the p-type hole-transporting material. 2016 , 306, 171-177		55
655	Enhanced UV-light stability of planar heterojunction perovskite solar cells with caesium bromide interface modification. 2016 , 9, 490-498		450
654	Recent advancements in perovskite solar cells: flexibility, stability and large scale. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 6755-6771	13	118
653	Single-crystalline lead halide perovskite arrays for solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 1214-1217	13	41
652	Photoluminescence characterisations of a dynamic aging process of organic-inorganic CH ₃ NH ₃ PbBr ₃ perovskite. 2016 , 8, 1926-31		47
651	High Performance Perovskite Hybrid Solar Cells with E-beam-Processed TiO _x Electron Extraction Layer. 2016 , 8, 1876-83		37
650	Progress in research on the stability of organometal perovskite solar cells. 2016 , 123, 74-87		100
649	Amazing stable open-circuit voltage in perovskite solar cells using AgAl alloy electrode. 2016 , 146, 35-43		61
648	Nano-structured electron transporting materials for perovskite solar cells. 2016 , 8, 6209-21		94
647	Planar heterojunction organometal halide perovskite solar cells: roles of interfacial layers. 2016 , 9, 12-30		396

646	Organometal halide perovskite solar cells: degradation and stability. 2016 , 9, 323-356	1188
645	Tailoring interface of lead-halide perovskite solar cells. 2017 , 10, 1471-1497	35
644	Photonic Nanostructures Patterned by Thermal Nanoimprint Directly into Organo-Metal Halide Perovskites. 2017 , 29, 1605003	124
643	Carbon Nanotubes in TiO Nanofiber Photoelectrodes for High-Performance Perovskite Solar Cells. 2017 , 4, 1600504	65
642	2D homologous organic-inorganic hybrids as light-absorbers for planer and nanorod-based perovskite solar cells. 2017 , 162, 93-102	67
641	Anisotropic moisture erosion of CH ₃ NH ₃ PbI ₃ single crystals. 2017 , 19, 901-904	23
640	Effect of Structure, Temperature, and Metal Work Function on Performance of Organometallic Perovskite Solar Cells. 2017 , 46, 1806-1810	5
639	In Situ Identification of Photo- and Moisture-Dependent Phase Evolution of Perovskite Solar Cells. 2017 , 2, 342-348	49
638	Suppressed decomposition of organometal halide perovskites by impermeable electron-extraction layers in inverted solar cells. 2017 , 8, 13938	211
637	Study on degradation mechanism of perovskite solar cell and their recovering effects by introducing CH ₃ NH ₃ I layers. 2017 , 43, 229-234	26
636	The application of Al ₂ TiO ₅ at the TiO ₂ /perovskite interface to decrease carrier losses in solar cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 3691-3698	13 8
635	Accelerated Degradation Due to Weakened Adhesion from Li-TFSI Additives in Perovskite Solar Cells. 2017 , 9, 7029-7035	91
634	Valence band dispersion measurements of perovskite single crystals using angle-resolved photoemission spectroscopy. 2017 , 19, 5361-5365	28
633	Vortex Fluidics Improved Morphology of CH ₃ NH ₃ PbI ₃ -xCl _x Films for Perovskite Solar Cells. 2017 , 2, 369-374	4
632	Doping optimization of organic-inorganic hybrid perovskite CH ₃ NH ₃ PbI ₃ for high thermoelectric efficiency. 2017 , 225, 108-114	27
631	Photocurrent Spectroscopy of Perovskite Layers and Solar Cells: A Sensitive Probe of Material Degradation. 2017 , 8, 838-843	13
630	Advances in hole transport materials engineering for stable and efficient perovskite solar cells. 2017 , 34, 271-305	278
629	Air-Induced High-Quality CH ₃ NH ₃ PbI ₃ Thin Film for Efficient Planar Heterojunction Perovskite Solar Cells. 2017 , 121, 6575-6580	42

628	Preparation and characterization of mixed formamidinium lead iodide/methyl ammonium lead bromide layers. 2017 , 148, 827-833		1
627	Light-Induced Degradation of CH ₃ NH ₃ PbI ₃ Hybrid Perovskite Thin Film. 2017 , 121, 3904-3910		196
626	Research progress of low-dimensional perovskites: synthesis, properties and optoelectronic applications. 2017 , 38, 011004		8
625	Degradation mechanism of planar-perovskite solar cells: correlating evolution of iodine distribution and photocurrent hysteresis. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 4527-4534	13	57
624	Solution-Processed Cu(In, Ga)(S, Se) Nanocrystal as Inorganic Hole-Transporting Material for Efficient and Stable Perovskite Solar Cells. 2017 , 12, 159		31
623	Room temperature atomic layer deposited Al ₂ O ₃ on CH ₃ NH ₃ PbI ₃ characterized by synchrotron-based X-ray photoelectron spectroscopy. 2017 , 411, 49-52		12
622	All-inorganic quantum-dot light-emitting diodes based on perovskite emitters with low turn-on voltage and high humidity stability. 2017 , 5, 4565-4570		128
621	Device stability of perovskite solar cells [A review]. 2017 , 77, 131-146		263
620	Ab initio study of the role of oxygen and excess electrons in the degradation of CH ₃ NH ₃ PbI ₃ . <i>Journal of Materials Chemistry A</i> , 2017 , 5, 9042-9049	13	48
619	Recent progress in stabilizing hybrid perovskites for solar cell applications. 2017 , 355, 98-133		76
618	Stable ultra-fast broad-bandwidth photodetectors based on CsPbI ₃ perovskite and NaYF ₄ :Yb,Er quantum dots. 2017 , 9, 6278-6285		84
617	Synergetic Effect of Chloride Doping and CH ₃ NH ₃ PbCl on CH ₃ NH ₃ PbI ₃ Perovskite-Based Solar Cells. 2017 , 10, 2365-2369		42
616	In situ investigation of degradation at organometal halide perovskite surfaces by X-ray photoelectron spectroscopy at realistic water vapour pressure. 2017 , 53, 5231-5234		57
615	Impact of moisture on efficiency-determining electronic processes in perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 10917-10927	13	70
614	Dual function of a high-contrast hydrophobic/hydrophilic coating for enhanced stability of perovskite solar cells in extremely humid environments. 2017 , 10, 3885-3895		18
613	Ultrasensitive all-solution-processed field-effect transistor based perovskite photodetectors with sol-gel SiO ₂ as the dielectric layer. 2017 , 717, 150-155		15
612	CdTe thin film solar cell with NiO as a back contact buffer layer. 2017 , 169, 61-67		31
611	Synthesis of a nanostructured rutile TiO ₂ electron transporting layer via an etching process for efficient perovskite solar cells: impact of the structural and crystalline properties of TiO ₂ . <i>Journal of Materials Chemistry A</i> , 2017 , 5, 12340-12353	13	20

610	Recent progress and remaining challenges in organometallic halides based perovskite solar cells. 2017 , 78, 1-14	39
609	Relationship between ion migration and interfacial degradation of CH ₃ NH ₃ PbI ₃ perovskite solar cells under thermal conditions. 2017 , 7, 1200	93
608	Fabrication and investigation of a new highly humidity stable nanocrystalline perovskite, tetramethylammonium lead triiodide to be used in solar cells. 2017 , 43, 11552-11555	7
607	Organometal Trihalide Perovskite Absorbers: Optoelectronic Properties and Applications for Solar Cells. 2017 , 289-312	
606	Hydrazine solution processed CuSbSe ₂ : Temperature dependent phase and crystal orientation evolution. 2017 , 168, 112-118	16
605	Stabilität von Perowskit-Solarzellen: Einfluss der Substitution von A-Kation und X-Anion. 2017 , 129, 1210-1233	24
604	The Origin of Lower Hole Carrier Concentration in Methylammonium Tin Halide Films Grown by a Vapor-Assisted Solution Process. 2017 , 2, 22-28	82
603	Perovskite solar cells: An integrated hybrid lifecycle assessment and review in comparison with other photovoltaic technologies. 2017 , 80, 1321-1344	150
602	Secondary Hydrothermally Processed Engineered Titanium Dioxide Nanostructures for Efficient Perovskite Solar Cells. 2017 , 5, 1775-1787	6
601	Enhancing efficiency and stability of perovskite solar cells via a high mobility p-type PbS buffer layer. 2017 , 38, 1-11	51
600	Radiative Thermal Annealing/in Situ X-ray Diffraction Study of Methylammonium Lead Triiodide: Effect of Antisolvent, Humidity, Annealing Temperature Profile, and Film Substrates. 2017 , 29, 5931-5941	26
599	Efficient electron transfer layer based on Al ₂ O ₃ passivated TiO ₂ nanorod arrays for high performance evaporation-route deposited FAPbI ₃ perovskite solar cells. 2017 , 170, 187-196	24
598	Experimental evaluation of room temperature crystallization and phase evolution of hybrid perovskite materials. 2017 , 19, 3834-3843	29
597	Energy-Down-Shift CsPbCl ₃ :Mn Quantum Dots for Boosting the Efficiency and Stability of Perovskite Solar Cells. 2017 , 2, 1479-1486	178
596	Organic-Inorganic Halide Perovskite Formation: In Situ Dissociation of Cation Halide and Metal Halide Complexes during Crystal Formation. 2017 , 121, 13532-13538	15
595	Quantum Dynamics of Photogenerated Charge Carriers in Hybrid Perovskites: Dopants, Grain Boundaries, Electric Order, and Other Realistic Aspects. 2017 , 2, 1588-1597	25
594	Perovskite solar cells - An overview of critical issues. 2017 , 53, 1-37	87
593	Recent efficient strategies for improving the moisture stability of perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 15447-15459	13 104

592	Mechanical signatures of degradation of the photovoltaic perovskite CH ₃ NH ₃ PbI ₃ upon water vapor exposure. 2017 , 110, 121903		32
591	Constructing Mie-Scattering Porous Interface-Fused Perovskite Films to Synergistically Boost Light Harvesting and Carrier Transport. 2017 , 56, 5232-5236		67
590	Constructing Mie-Scattering Porous Interface-Fused Perovskite Films to Synergistically Boost Light Harvesting and Carrier Transport. 2017 , 129, 5316-5320		10
589	Hybrid Organic-Inorganic Perovskite Memory with Long-Term Stability in Air. 2017 , 7, 673		61
588	Electronic and defect properties of (CH ₃ NH ₃) ₂ Pb(SCN) ₂ I ₂ analogues for photovoltaic applications. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 7845-7853	13	37
587	Perovskite Materials: Solar Cell and Optoelectronic Applications. 2017 , 1-14		1
586	Current status of electron transport layers in perovskite solar cells: materials and properties. 2017 , 7, 17044-17062		218
585	Enhancement of thermal stability for perovskite solar cells through cesium doping. 2017 , 7, 17473-17479		140
584	Solution processing of air-stable molecular semiconducting iodosalts, Cs ₂ SnI ₆ Br _x , for potential solar cell applications. 2017 , 1, 710-724		123
583	Inorganic cesium lead halide CsPbX ₃ nanowires for long-term stable solar cells. 2017 , 60, 285-294		42
582	Hybrid Perovskite Photovoltaic Devices: Properties, Architecture, and Fabrication Methods. 2017 , 5, 373-401		21
581	Novel efficient hole-transporting materials based on a 1,1'-bi-2-naphthol core for perovskite solar cells. 2017 , 7, 482-492		7
580	A multifunctional poly-N-vinylcarbazole interlayer in perovskite solar cells for high stability and efficiency: a test with new triazatruxene-based hole transporting materials. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 1913-1918	13	69
579	Dimension engineering on cesium lead iodide for efficient and stable perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 2066-2072	13	157
578	High efficiency CH ₃ NH ₃ PbI ₃ :CdS perovskite solar cells with CuInS ₂ as the hole transporting layer. 2017 , 341, 396-403		47
577	Highly enhanced long time stability of perovskite solar cells by involving a hydrophobic hole modification layer. 2017 , 32, 165-173		50
576	Multinuclear Magnetic Resonance Tracking of Hydro, Thermal, and Hydrothermal Decomposition of CH ₃ NH ₃ PbI ₃ . 2017 , 121, 1013-1024		63
575	Ab initio study of the role of iodine in the degradation of CH ₃ NH ₃ PbI ₃ . <i>Journal of Materials Chemistry A</i> , 2017 , 5, 23976-23986	13	16

574	Synergistic effect of caprolactam as lewis base and interface engineering for efficient and stable planar perovskite solar cells. 2017 , 42, 222-231	28
573	Enhanced Performance and Stability of Perovskite Solar Cells Using NHI Interfacial Modifier. 2017 , 9, 41006-41013	36
572	Evolution characteristics of perovskite solar cells in air and vacuum environments. 2017 , 150, 111-116	4
571	Toward Environmentally Robust Organic Electronics: Approaches and Applications. 2017 , 29, 1703638	94
570	Caesium Methyl Ammonium Mixed-Cation Lead Iodide Perovskite Crystals: Analysis and Application for Perovskite Solar Cells. 2017 , 257, 267-280	17
569	An isopropanol-assisted fabrication strategy of pinhole-free perovskite films in air for efficient and stable planar perovskite solar cells. 2017 , 363, 317-326	18
568	The Effect of Stoichiometry on the Stability of Inorganic Cesium Lead Mixed-Halide Perovskites Solar Cells. 2017 , 121, 19642-19649	83
567	Enhanced efficiency and stability of inverted perovskite solar cells by interfacial engineering with alkyl bisphosphonic molecules. 2017 , 7, 42105-42112	9
566	Enhanced electronic transport in Fe ³⁺ -doped TiO ₂ for high efficiency perovskite solar cells. 2017 , 5, 10754-10760	69
565	Stability Issues of Inorganic/Organic Hybrid Lead Perovskite Solar Cells. 2017 , 147-178	1
564	Impact of H ₂ O on organic/inorganic hybrid perovskite solar cells. 2017 , 10, 2284-2311	248
563	Preparation of CHNHPbI thin films with tens of micrometer scale at high temperature. 2017 , 7, 8458	13
562	C additive-assisted crystallization in CHNHPbSnI perovskite solar cells with high stability and efficiency. 2017 , 9, 13967-13975	62
561	Effect of Excess PbI ₂ in Fully Printable Carbon-based Perovskite Solar Cells. 2017 , 5, 1880-1886	20
560	Enhanced Moisture Stability of Cesium-Containing Compositional Perovskites by a Feasible Interfacial Engineering. 2017 , 4, 1700598	49
559	A Hybrid Perovskite Solar Cell Modified With Copper Indium Sulfide Nanocrystals to Enhance Hole Transport and Moisture Stability. 2017 , 1, 1700078	16
558	Improved efficiency and short-term stability of the planar heterojunction perovskite solar cells with a polyelectrolyte layer. 2017 , 214, 1700281	3
557	Recent advances in interfacial engineering of perovskite solar cells. 2017 , 50, 373002	117

556	In situ investigation of halide incorporation into perovskite solar cells. 2017 , 7, 575-582		6
555	High-Performance Rigid and Flexible Perovskite Solar Cells with Low-Temperature Solution-Processable Binary Metal Oxide Hole-Transporting Materials. 2017 , 1, 1700058		54
554	Improved Stability of Polymer Solar Cells in Ambient Air via Atomic Layer Deposition of Ultrathin Dielectric Layers. 2017 , 4, 1700231		7
553	Hindered Amine Light Stabilizers Increase the Stability of Methylammonium Lead Iodide Perovskite Against Light and Oxygen. 2017 , 10, 3760-3764		15
552	Graded Mixed Hole Transport Layer in a Perovskite Solar Cell: Improving Moisture Stability and Efficiency. 2017 , 9, 27720-27726		72
551	Low temperature fabrication of hybrid solar cells using co-sensitizer of perovskite and lead sulfide nanoparticles. 2017 , 50, 247-254		8
550	Collective Molecular Mechanisms in the CH ₃ NH ₃ PbI ₃ Dissolution by Liquid Water. 2017 , 11, 9183-9190		49
549	Growth of MAPbBr ₃ perovskite crystals and its interfacial properties with Al and Ag contacts for perovskite solar cells. 2017 , 73, 50-55		11
548	High Stability Bilayered Perovskites through Crystallization Driven Self-Assembly. 2017 , 9, 28743-28749		18
547	Enhanced Performance of Perovskite Solar Cells with Zinc Chloride Additives. 2017 , 9, 42875-42882		81
546	Comparison of performance and stability of perovskite solar cells with CuInS ₂ and PH1000 hole transport layers fabricated in a humid atmosphere. 2017 , 19, 1		5
545	Two-Dimensional Lead Halide Perovskites Templated by a Conjugated Asymmetric Diammonium. 2017 , 56, 14991-14998		41
544	Insights into the increased degradation rate of CH ₃ NH ₃ PbI ₃ solar cells in combined water and O ₂ environments. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 25469-25475	13	39
543	Instability in CH ₃ NH ₃ PbI ₃ perovskite solar cells due to elemental migration and chemical composition changes. 2017 , 7, 15406		65
542	Unraveling the Light-Induced Degradation Mechanisms of CH ₃ NH ₃ PbI ₃ Perovskite Films. 2017 , 3, 1700158		89
541	Stabilization of hybrid perovskite CH ₃ NH ₃ PbI ₃ thin films by graphene passivation. 2017 , 9, 19227-19235		13
540	Surface engineering of perovskite films for efficient solar cells. 2017 , 7, 14478		33
539	Humidity resistant fabrication of CH ₃ NH ₃ PbI ₃ perovskite solar cells and modules. 2017 , 39, 60-68		152

538	Application of luminescence downshifting materials for enhanced stability of CH ₃ NH ₃ PbI ₃ (1-x)Cl ₃ x perovskite photovoltaic devices. 2017 , 49, 129-134		14
537	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions and cations. 2017 , 2,		1241
536	Capturing the Sun: A Review of the Challenges and Perspectives of Perovskite Solar Cells. 2017 , 7, 1700264		235
535	Facile in situ synthesis of stable luminescent organic-inorganic lead halide perovskite nanoparticles in a polymer matrix. 2017 , 5, 7207-7214		23
534	Enhancing the stability of organolead halide perovskite films through polymer encapsulation. 2017 , 7, 32942-32951		33
533	Methylammonium cation deficient surface for enhanced binding stability at TiO ₂ /CH ₃ NH ₃ PbI ₃ interface. 2017 , 10, 483-490		8
532	Catalytic role of H ₂ O in degradation of inorganic-organic perovskite (CH ₃ NH ₃ PbI ₃) in air. 2017 , 41, 1063-1069		25
531	Long-term stability of organic-inorganic hybrid perovskite solar cells with high efficiency under high humidity conditions. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 1374-1379	13	64
530	Transamidation of dimethylformamide during alkylammonium lead triiodide film formation for perovskite solar cells. 2017 , 32, 45-55		31
529	A facile molecularly engineered copper (II) phthalocyanine as hole transport material for planar perovskite solar cells with enhanced performance and stability. 2017 , 31, 322-330		100
528	Stability of Perovskite Solar Cells: A Prospective on the Substitution of the A Cation and X Anion. 2017 , 56, 1190-1212		376
527	High-efficiency humidity-stable planar perovskite solar cells based on atomic layer architecture. 2017 , 10, 91-100		184
526	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. 2017 , 8, 2230		166
525	Enhancing the efficiency of planar heterojunction perovskite solar cells via interfacial engineering with 3-aminopropyl trimethoxy silane hydrolysate. 2017 , 4, 170980		12
524	Morphology Analysis and Optimization: Crucial Factor Determining the Performance of Perovskite Solar Cells. 2017 , 22,		14
523	Photovoltaic Module Durability and Reliability: Analysis of a 23-Year-Old Array Operating in Quebec, Canada. 2017 ,		
522	Application of Nanostructured Electrodes in Halide Perovskite Solar Cells and Electrochromic Devices. 2018 , 67-90		
521	Tin oxide as an emerging electron transport medium in perovskite solar cells. 2018 , 179, 102-117		32

520	Recent Progress on the Long-Term Stability of Perovskite Solar Cells. 2018 , 5, 1700387	248
519	Multifunctional cellulose-paper for light harvesting and smart sensing applications. 2018 , 6, 3143-3181	107
518	Intrinsic Instability of the Hybrid Halide Perovskite Semiconductor CH ₃ NH ₃ PbI ₃ *. 2018 , 35, 036104	107
517	High-Efficiency Polycrystalline Perovskite Light-Emitting Diodes Based on Mixed Cations. 2018 , 12, 2883-2892	84
516	Electronic band structure and carrier concentration of formamidiniumcesium mixed cation lead mixed halide hybrid perovskites. 2018 , 112, 092104	35
515	Evolution of organometal halide solar cells. 2018 , 35, 74-107	22
514	Characterising degradation of perovskite solar cells through in-situ and operando electron microscopy. 2018 , 47, 243-256	51
513	Defects in metal triiodide perovskite materials towards high-performance solar cells: origin, impact, characterization, and engineering. 2018 , 47, 4581-4610	300
512	Organo-lead halide perovskite regulated green light emitting poly(vinylidene fluoride) electrospun nanofiber mat and its potential utility for ambient mechanical energy harvesting application. 2018 , 49, 380-392	58
511	Improving Efficiency and Light Stability of Perovskite Solar Cells by Incorporating YVO ₄ :Eu ³⁺ , Bi ³⁺ Nanophosphor into the Mesoporous TiO ₂ Layer. 2018 , 1, 2096-2102	22
510	An ultra-broadband perovskite-PbS quantum dot sensitized carbon nanotube photodetector. 2018 , 10, 9044-9052	24
509	Highly Stable Hybrid Perovskite Solar Cells Modified with Polyethylenimine via Ionic Bonding. 2018 , 4, 649-655	17
508	Material challenges for solar cells in the twenty-first century: directions in emerging technologies. 2018 , 19, 336-369	102
507	The Effect of Hydrophobicity of Ammonium Salts on Stability of Quasi-2D Perovskite Materials in Moist Condition. 2018 , 8, 1800051	151
506	Highly stable and efficient hybrid perovskite solar cells improved with conductive polyanilines. 2018 , 106, 35-39	26
505	Remarkable long-term stability of nanoconfined metal-halide perovskite crystals against degradation and polymorph transitions. 2018 , 10, 8320-8328	11
504	Alkyne-modified water-stable alkylammonium lead (II) iodide perovskite. 2018 , 8, 289-296	
503	Photovoltaic performances of mono- and mixed-halide structures for perovskite solar cell: A review. 2018 , 90, 248-274	35

502	The Role of Excitation Energy in Photobrightening and Photodegradation of Halide Perovskite Thin Films. 2018 , 9, 2062-2069	57
501	Critical Role of Water in Defect Aggregation and Chemical Degradation of Perovskite Solar Cells. 2018 , 9, 2196-2201	72
500	One-step roll-to-roll air processed high efficiency perovskite solar cells. 2018 , 46, 185-192	214
499	Pseudohalogen-Based 2D Perovskite: A More Complex Thermal Degradation Mechanism Than 3D Perovskite. 2018 , 57, 2045-2050	7
498	Efficient and stable planar heterojunction perovskite solar cells fabricated under ambient conditions with high humidity. 2018 , 55, 140-145	36
497	Improved Stability of Organometal Halide Perovskite Films and Solar Cells toward Humidity via Surface Passivation with Oleic Acid. 2018 , 1, 387-392	47
496	Ligand-Free, Highly Dispersed NiOx Nanocrystal for Efficient, Stable, Low-Temperature Processable Perovskite Solar Cells. 2018 , 2, 1800004	40
495	Chemical vapor deposition in fabrication of robust and highly efficient perovskite solar cells based on single-walled carbon nanotubes counter electrodes. 2018 , 747, 703-711	25
494	Synthesis and Photocatalytic Application of Stable Lead-Free Cs AgBiBr Perovskite Nanocrystals. 2018 , 14, e1703762	288
493	Dynamics of Photoinduced Degradation of Perovskite Photovoltaics: From Reversible to Irreversible Processes. 2018 , 1, 799-806	60
492	Electrodeposition of organic/inorganic tri-halide perovskites solar cell. 2018 , 378, 717-731	26
491	Atmospheric pressure plasma enhanced spatial atomic layer deposition of SnOx as conductive gas diffusion barrier. 2018 , 36, 01A112	21
490	Progress in perovskite solar cells based on ZnO nanostructures. 2018 , 163, 289-306	66
489	Spatial Atmospheric Pressure Atomic Layer Deposition of Tin Oxide as an Impermeable Electron Extraction Layer for Perovskite Solar Cells with Enhanced Thermal Stability. 2018 , 10, 6006-6013	52
488	Distributed Feedback Lasers Based on MAPbBr3. 2018 , 3, 1700253	48
487	Environmental Surface Stability of the MAPbBr3 Single Crystal. 2018 , 122, 3513-3522	39
486	Grain Boundary Modification via F4TCNQ To Reduce Defects of Perovskite Solar Cells with Excellent Device Performance. 2018 , 10, 1909-1916	91
485	Photovoltaic Performance of Vapor-Assisted Solution-Processed Layer Polymorph of CsSbI. 2018 , 10, 2566-2573	84

484	Scanning Probe Microscopy Applied to Organic-Inorganic Halide Perovskite Materials and Solar Cells. 2018 , 2, 1700295	46
483	Effect of guanidinium on the optical properties and structure of the methylammonium lead halide perovskite. 2018 , 739, 1059-1064	12
482	Organo-Lead Halide Perovskite Induced Electroactive β Phase in Porous PVDF Films: An Excellent Material for Photoactive Piezoelectric Energy Harvester and Photodetector. 2018 , 10, 4121-4130	82
481	Optical-Electrical-Chemical Engineering of PEDOT:PSS by Incorporation of Hydrophobic Nafion for Efficient and Stable Perovskite Solar Cells. 2018 , 10, 3902-3911	70
480	High-Performance Photodetectors Based on Single All-Inorganic CsPbBr ₃ Perovskite Microwire. 2018 , 5, 2113-2119	42
479	Encapsulation of CH ₃ NH ₃ PbBr Perovskite Quantum Dots in MOF-5 Microcrystals as a Stable Platform for Temperature and Aqueous Heavy Metal Ion Detection. 2018 , 57, 4613-4619	117
478	Review of recent developments and persistent challenges in stability of perovskite solar cells. 2018 , 90, 210-222	72
477	Roll-over behavior in current-voltage curve introduced by an energy barrier at the front contact in thin film CdTe solar cell. 2018 , 165, 27-34	18
476	Highly stable hole-conductor-free CH ₃ NH ₃ Pb(I ₁ -Br) ₃ perovskite solar cells with carbon counter electrode. 2018 , 748, 1006-1012	15
475	Nature of Photoinduced Quenching Traps in Methylammonium Lead Triiodide Perovskite Revealed by Reversible Photoluminescence Decline. 2018 , 5, 2034-2043	36
474	Sm ³⁺ /Te ³⁺ -doped glass-ceramic waveguide as reduced ultraviolet light induced degradation and improved photon harvesting for perovskite solar cells. 2018 , 731, 1009-1013	8
473	Improving the moisture stability of perovskite solar cells by using PMMA/P3HT based hole-transport layers. 2018 , 2, 81-89	31
472	Effect of temperature on light induced degradation in methylammonium lead iodide perovskite thin films and solar cells. 2018 , 174, 566-571	67
471	Using photoluminescence to monitor the optoelectronic properties of methylammonium lead halide perovskites in light and dark over periods of days. 2018 , 194, 353-358	11
470	Temperature-Dependent Thermal Conductivity Study of MAPbI ₃ : Using Mild Aging To Reach a Thermal Percolation Threshold for Greatly Improved Heat Transport. 2018 , 122, 13243-13249	5
469	p-Type CuI Islands on TiO ₂ Electron Transport Layer for a Highly Efficient Planar-Perovskite Solar Cell with Negligible Hysteresis. 2018 , 8, 1702235	94
468	Recent theoretical progress in the development of perovskite photovoltaic materials. 2018 , 27, 637-649	32
467	Recent advancement in metal cathode and hole-conductor-free perovskite solar cells for low-cost and high stability: A route towards commercialization. 2018 , 82, 845-857	59

466	Application of mixed-organic-cation for high performance hole-conductor-free perovskite solar cells. 2018 , 510, 118-126		11
465	Cesium compounds as interface modifiers for stable and efficient perovskite solar cells. 2018 , 174, 172-186		38
464	Interfacial Interactions in Monolayer and Few-Layer SnS/CH ₃ NH ₃ PbI ₃ Perovskite van der Waals Heterostructures and Their Effects on Electronic and Optical Properties. 2018 , 19, 291-299		12
463	A comparative study of one-step and two-step approaches for MAPbI ₃ perovskite layer and its influence on the performance of mesoscopic perovskite solar cell. 2018 , 692, 44-49		25
462	Cerium oxide as an efficient electron extraction layer for p-i-n structured perovskite solar cells. 2018 , 54, 471-474		44
461	Lead iodide as a buffer layer in UV-induced degradation of CH ₃ NH ₃ PbI ₃ films. 2018 , 159, 794-799		19
460	Metal ions diffusion at heterojunction chromium Oxide/CH ₃ NH ₃ PbI ₃ interface on the stability of perovskite solar cells. 2018 , 10, 93-99		20
459	Exploration of Crystallization Kinetics in Quasi Two-Dimensional Perovskite and High Performance Solar Cells. 2018 , 140, 459-465		248
458	The Degradation and Blinking of Single CsPbI ₃ Perovskite Quantum Dots. 2018 , 122, 13407-13415		76
457	Theoretical lifetime extraction and experimental demonstration of stable cesium-containing tri-cation perovskite solar cells with high efficiency. 2018 , 265, 98-106		29
456	The influence of perovskite layer and hole transport material on the temperature stability about perovskite solar cells. 2018 , 159, 914-919		27
455	Influence of water intercalation and hydration on chemical decomposition and ion transport in methylammonium lead halide perovskites. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 1067-1074	13	64
454	Frontiers, opportunities, and challenges in perovskite solar cells: A critical review. 2018 , 35, 1-24		205
453	Highly Efficient Perovskite Solar Cells Based on Zn Ti O Nanoparticles as Electron Transport Material. 2018 , 11, 424-431		14
452	The role of Pbi in CH ₃ NH ₃ PbI ₃ perovskite stability, solar cell parameters and device degradation. 2017 , 20, 605-614		106
451	Recent progress in organohalide lead perovskites for photovoltaic and optoelectronic applications. 2018 , 373, 258-294		41
450	Tailoring a dynamic crystalline process during the conversion of lead-halide perovskite layer to achieve high performance solar cells. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 24793-24804	13	13
449	First-Principles Insight into the Degradation Mechanism of CH ₃ NH ₃ PbI ₃ Perovskite: Light-Induced Defect Formation and Water Dissociation. 2018 , 122, 27340-27349		18

448	Dimensionality engineering of hybrid halide perovskite light absorbers. 2018 , 9, 5028	175
447	Enhanced Hetero-Junction Quality and Performance of Kesterite Solar Cells by Aluminum Hydroxide Nanolayers and Efficiency Limitation Revealed by Atomic-resolution Scanning Transmission Electron Microscopy. 2018 , 3, 1800279	3
446	Improving the stability of methylammonium lead iodide perovskite solar cells by cesium doping. 2018 , 667, 40-47	19
445	Surface potential mapping and n-type conductivity in organic/inorganic lead iodide crystals. 2018 , 20, 6551-6556	6
444	Full-inorganic Sb ₂ (S,Se) ₃ solar cells using carbon as both hole selection material and electrode. 2018 , 290, 457-464	15
443	Improving the photovoltaic effect by resistive switching. 2018 , 113, 133901	4
442	Efficient Photo- and Electroluminescence by Trap States Passivation in Vacuum-Deposited Hybrid Perovskite Thin Films. 2018 , 10, 36187-36193	21
441	Repairing Defects of Halide Perovskite Films To Enhance Photovoltaic Performance. 2018 , 10, 37005-37013	34
440	Defect Passivation of CsPbI ₂ Br ₂ Perovskites for High-Performance Solar Cells with Large Open-Circuit Voltage of 1.28 V. 2018 , 1, 5872-5878	54
439	Assessing the suitability of copper thiocyanate as a hole-transport layer in inverted CsSnI ₃ perovskite photovoltaics. 2018 , 8, 15722	8
438	CsBr-Induced Stable CsPbI ₂ Br ₂ (x 2018 , 10, 38183-38192	53
437	A Review of Inorganic Hole Transport Materials for Perovskite Solar Cells. 2018 , 5, 1800882	122
436	Initial photochemical stability in perovskite solar cells based on the Cu electrode and the appropriate charge transport layers. 2018 , 246, 101-107	16
435	Rational Strategies for Large-area Perovskite Solar Cells. 2018 , 307-337	1
434	Designing an efficient graphene quantum dot-filled luminescent down shifting layer to improve the stability and efficiency of perovskite solar cells by simple optical modeling.. 2018 , 8, 31502-31509	14
433	Formamidinium + cesium lead triiodide perovskites: Discrepancies between thin film optical absorption and solar cell efficiency. 2018 , 188, 228-233	15
432	Effect of Water, Oxygen, and Air Exposure on CH ₃ NH ₃ PbI _{3-x} Cl _x Perovskite Surface Electronic Properties. 2018 , 4, 1800307	30
431	Enhanced UV stability of perovskite solar cells with a SrO interlayer. 2018 , 63, 343-348	19

430	Morphology Control of Organic/Inorganic Bismuth-Based Perovskites for Solar Cell Application. 2018 , 215, 1800409		12
429	Interface Engineering in n-i-p Metal Halide Perovskite Solar Cells. 2018 , 2, 1800177		38
428	Metal halide perovskites: stability and sensing-ability. 2018 , 6, 10121-10137		82
427	Progress toward Stable Lead Halide Perovskite Solar Cells. 2018 , 2, 1961-1990		132
426	Directional Negative Thermal Expansion and Large Poisson Ratio in CH ₃ NH ₃ PbI ₃ Perovskite Revealed by Strong Coherent Shear Phonon Generation. 2018 , 9, 3161-3166		11
425	In situ XPS study of the surface chemistry of MAPI solar cells under operating conditions in vacuum. 2018 , 20, 17180-17187		42
424	Elucidating Surface and Bulk Emission in 3D Hybrid Organic/Inorganic Lead Bromide Perovskites. 2018 , 6, 1800470		18
423	Interaction of oxygen with halide perovskites. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 10847-10855	13	102
422	Stability and Degradation in Hybrid Perovskites: Is the Glass Half-Empty or Half-Full?. 2018 , 9, 3000-3007		72
421	An Overview of Hybrid Organic/Inorganic Metal Halide Perovskite Solar Cells. 2018 , 233-254		6
420	Semiconducting Metal Oxides for High Performance Perovskite Solar Cells. 2018 , 241-265		3
419	Low-Temperature Atomic Layer Deposition of Metal Oxide Layers for Perovskite Solar Cells with High Efficiency and Stability under Harsh Environmental Conditions. 2018 , 10, 23928-23937		64
418	Organometal Lead Halide Perovskite. 2018 , 25-42		3
417	Efficient Moisture-Resistant Perovskite Solar Cell With Nanostructure Featuring 3D Amine Motif. 2018 , 2, 1800069		8
416	Charge-Transporting Materials for Perovskite Solar Cells. 2018 , 185-246		4
415	Activation Energy of Organic Cation Rotation in CH ₃ NH ₃ PbI ₃ and CD ₃ NH ₃ PbI ₃ : Quasi-Elastic Neutron Scattering Measurements and First-Principles Analysis Including Nuclear Quantum Effects. 2018 , 9, 3969-3977		26
414	A NH ₄ F interface passivation strategy to produce air-processed high-performance planar perovskite solar cells. 2018 , 282, 653-661		24
413	Structural and thermodynamic aspects of organic-inorganic mixed halide (CH ₃ NH ₃ PbI _{3-x} Br _x) perovskite. 2018 ,		0

412	Stability of Perovskites at the Surface Analytic Level. 2018 , 9, 4657-4666		13
411	Continuous low temperature synthesis of MAPbX ₃ perovskite nanocrystals in a flow reactor. 2018 , 3, 640-644		31
410	Optimizing film morphology and crystal orientation of perovskite for efficient planar-heterojunction solar cells by slowing crystallization process. 2018 , 62, 26-34		7
409	Efficient 4,4',4'-tris(3-methylphenylphenylamino)triphenylamine (m-MTDATA) Hole Transport Layer in Perovskite Solar Cells Enabled by Using the Nonstoichiometric Precursors. 2018 , 28, 1803126		22
408	Anomalous effect of UV light on the humidity dependence of photocurrent in perovskite solar cells. 2018 , 29, 405701		3
407	Light-Induced Anomalous Resistive Switches Based on Individual Organic/Inorganic Halide Perovskite Micro-/Nanofibers. 2018 , 4, 1800206		15
406	An Er-doped TiO ₂ phase junction as an electron transport layer for efficient perovskite solar cells fabricated in air. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 15348-15358	13	27
405	Towards large-area perovskite solar cells: the influence of compact and mesoporous TiO ₂ electron transport layers. 2018 , 5, 085506		11
404	Lead-less mesoscopic perovskite solar cells with enhanced photovoltaic performance by strontium chloride substitution. 2018 , 44, 18863-18870		10
403	Enhanced stability of perovskite solar cells using hydrophobic organic fluoropolymer. 2018 , 113, 023902		11
402	Multiscale model for disordered hybrid perovskites: The concept of organic cation pair modes. 2018 , 98,		12
401	Low-Temperature Ionic Layer Adsorption and Reaction Grown Anatase TiO Nanocrystalline Films for Efficient Perovskite Solar Cell and Gas Sensor Applications. 2018 , 8, 11016		22
400	Laser Desorption/Ionization Mass Spectrometry of Perovskite Solar Cells: Identification of Interface Interactions and Degradation Reactions. 2018 , 2, 1800022		6
399	Ionic Liquid-Assisted Improvements in the Thermal Stability of CH ₃ NH ₃ PbI ₃ Perovskite Photovoltaics. 2018 , 12, 1800130		19
398	A Combined Theoretical and Experimental Study of CH ₃ NH ₃ PbI ₃ Containing AVAI Films Prepared via an Intramolecular Exchange Process. 2018 , 122, 19705-19711		1
397	Shape-preserving transformation of carbonate minerals into lead halide perovskite semiconductors based on ion exchange/insertion reactions. 2018 , 10, 740-745		37
396	Interface State-Induced Negative Differential Resistance Observed in Hybrid Perovskite Resistive Switching Memory. 2018 , 10, 21755-21763		51
395	Predominant Stable MAPbI ₃ Films Deposited via Chemical Vapor Deposition: Stability Studies in Illuminated and Darkened States Coupled with Temperature under an Open-Air Atmosphere. 2018 , 1, 3301-3312		13

394	A review on morphology engineering for highly efficient and stable hybrid perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 12842-12875	13	115
393	Phonon Interaction and Phase Transition in Single Formamidinium Lead Bromide Quantum Dots. 2018 , 18, 4440-4446		41
392	Interface modification via Al ₂ O ₃ with retarded charge recombinations for mesoscopic perovskite solar cells fabricated with spray deposition process in the air. 2019 , 463, 939-946		14
391	Improving the stability of metal halide perovskite solar cells from material to structure. 2019 , 33, 90-99		24
390	Enhanced long-term stability of perovskite solar cells by passivating grain boundary with polydimethylsiloxane (PDMS). <i>Journal of Materials Chemistry A</i> , 2019 , 7, 20832-20839	13	19
389	Robust Electron Transport Layers via In Situ Cross-Linking of Perylene Diimide and Fullerene for Perovskite Solar Cells. 2019 , 2, 6616-6623		6
388	Atomic-scale view of stability and degradation of single-crystal MAPbBr ₃ surfaces. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 20760-20766	13	27
387	Perovskite phase formation in formamidinium/methylammonium lead iodide bromide (FAPbI ₃) _{1-x} (MAPbBr ₃) _x materials and their morphological, optical and photovoltaic properties. 2019 , 125, 1		6
386	Understanding Hydrogen Bonding Interactions in Crosslinked Methylammonium Lead Iodide Crystals: Towards Reducing Moisture and Light Degradation Pathways. 2019 , 131, 14050-14059		2
385	Scalable Fabrication of Metal Halide Perovskite Solar Cells and Modules. 2019 , 4, 2147-2167		110
384	Sputtering of TiO ₂ for High-Efficiency Perovskite and 23.1% Perovskite/Silicon 4-Terminal Tandem Solar Cells. 2019 , 2, 6263-6268		11
383	Two-dimensional benzylammonium based perovskites incorporated with hexamethyldiammonium for solar cell application. 2019 , 277, 624-629		2
382	Tunable thiocyanate-doped perovskite microstructure via water-ethanol additives for stable solar cells at ambient conditions. 2019 , 200, 110029		10
381	Moisture-Resistant Electrospun Polymer Membranes for Efficient and Stable Fully Printable Perovskite Solar Cells Prepared in Humid Air. 2019 , 11, 27677-27685		10
380	Recent progress in fundamental understanding of halide perovskite semiconductors. 2019 , 106, 100580		69
379	Unraveling the Water Degradation Mechanism of CH ₃ NH ₃ PbI ₃ . 2019 , 123, 19385-19394		30
378	Enhanced efficiency and stability of perovskite solar cells by partial replacement of CH ₃ NH ₃ ⁺ with inorganic Cs ⁺ in CH ₃ NH ₃ PbI ₃ perovskite absorber layer. 2019 , 572, 1-11		8
377	Functional Metal Oxides in Perovskite Solar Cells. 2019 , 20, 2580-2586		21

376	Understanding Hydrogen Bonding Interactions in Crosslinked Methylammonium Lead Iodide Crystals: Towards Reducing Moisture and Light Degradation Pathways. 2019 , 58, 13912-13921	24	
375	High Power UV-Light Irradiation as a New Method for Defect Passivation in Degraded Perovskite Solar Cells to Recover and Enhance the Performance. 2019 , 9, 9448	15	
374	Thermochemical Stability of Hybrid Halide Perovskites. 2019 , 4, 2859-2870	49	
373	Doping Strategy for Efficient and Stable Triple Cation Hybrid Perovskite Solar Cells and Module Based on Poly(3-hexylthiophene) Hole Transport Layer. 2019 , 15, e1904399	38	
372	Role of Moisture in the Preparation of Efficient Planar Perovskite Solar Cells. 2019 , 7, 17691-17696	10	
371	Perovskite/Hole Transport Layer Interface Improvement by Solvent Engineering of Spiro-OMeTAD Precursor Solution. 2019 , 11, 44802-44810	17	
370	Reversing Organic-Inorganic Hybrid Perovskite Degradation in Water via pH and Hydrogen Bonds. 2019 , 10, 7245-7250	21	
369	Lead Halide Residue as a Source of Light-Induced Reversible Defects in Hybrid Perovskite Layers and Solar Cells. 2019 , 4, 3011-3017	29	
368	First-principles Study on Water Dissociation in Grain Boundary of MAPbI ₃ Perovskite. 2019 , 4, 1965-1971	1	
367	Enhanced Stability of MAPbI Perovskite Solar Cells using Poly(p-chloro-xylylene) Encapsulation. 2019 , 9, 15461	41	
366	Single-step direct laser writing of halide perovskite microlasers. 2019 , 12, 122001	10	
365	Superficial composition engineering for oxide nanoparticles derived Cu ₂ ZnSn(S, Se) ₄ solar cells by a three-step annealing process. 2019 , 193, 986-991	11	
364	The Role of Grain Boundaries in Perovskite Solar Cells. 2019 , 9, 1901489	115	
363	A novel inorganic hole-transporting material of CuInS ₂ for perovskite solar cells with high efficiency and improved stability. 2019 , 75, 105430	22	
362	Enhanced moisture stability of MAPbI ₃ perovskite solar cells through Barium doping. 2019 , 190, 396-404	13	
361	Database-driven high-throughput study of coating materials for hybrid perovskites. 2019 , 21, 083018	4	
360	ZnO-Modified Anode for High-Performance SnO ₂ -Based Planar Perovskite Solar Cells. 2019 , 2, 7062-7069	14	
359	Long-term stable perovskite solar cells with room temperature processed metal oxide carrier transporters. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 21085-21095	13	13

358	A study on the material characteristics of low temperature cured SnO ₂ films for perovskite solar cells under high humidity. 2019 , 30, 18452-18461		4
357	Temperature-driven anion migration in gradient halide perovskites. 2019 , 151, 134703		19
356	Improving the light harvesting and colour range of methyl ammonium lead tri-bromide (MAPbBr) perovskite solar cells through co-sensitisation with organic dyes. 2018 , 55, 35-38		11
355	Moisture-tolerant supermolecule for the stability enhancement of organic-inorganic perovskite solar cells in ambient air. 2019 , 11, 1228-1235		34
354	Effect of mechanical forces on thermal stability reinforcement for lead based perovskite materials. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 540-548	13	20
353	Encapsulation of Organic and Perovskite Solar Cells: A Review. 2019 , 9, 65		114
352	2-(Aminomethyl pyridine)SbI ₅ : An emerging visible-light driven organic/inorganic hybrid perovskite for photoelectrochemical and photocatalytic applications. 2019 , 242, 99-102		10
351	Study of inverted planar CH ₃ NH ₃ PbI ₃ perovskite solar cells fabricated under environmental conditions. 2019 , 180, 594-600		8
350	An inorganic hole-transport material of CuInSe ₂ for stable and efficient perovskite solar cells. 2019 , 67, 168-174		25
349	Stability progress of perovskite solar cells dependent on the crystalline structure: From 3D ABX ₃ to 2D Ruddlesden-Popper perovskite absorbers. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 5898-5933	13	70
348	Role of Water on the Rotational Dynamics of the Organic Methylammonium Cation: A First Principles Analysis. 2019 , 9, 668		10
347	Insight into the reaction mechanism of water, oxygen and nitrogen molecules on a tin iodine perovskite surface. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 5779-5793	13	21
346	Realizing a highly luminescent perovskite thin film by controlling the grain size and crystallinity through solvent vapour annealing. 2019 , 11, 5861-5867		16
345	Luminescent perovskite quantum dots: synthesis, microstructures, optical properties and applications. 2019 , 7, 1413-1446		129
344	Factors determining the vertical orientation of two-dimensional perovskites. 2019 , 21, 4529-4533		13
343	Stretchable and Ambient Stable Perovskite/Polymer Luminous Hybrid Nanofibers of Multicolor Fiber Mats and Their White LED Applications. 2019 , 11, 23605-23615		37
342	Surface Passivation of Perovskite Solar Cells Toward Improved Efficiency and Stability. 2019 , 11, 50		35
341	Origin of Extended UV Stability of 2D Atomic Layer Titania-Based Perovskite Solar Cells Unveiled by Ultrafast Spectroscopy. 2019 , 11, 21473-21480		6

340	Unraveling the Effect of Crystal Structure on Degradation of Methylammonium Lead Halide Perovskite. 2019 , 11, 22228-22239	12
339	Efficient rare earth co-doped TiO electron transport layer for high-performance perovskite solar cells. 2019 , 553, 14-21	28
338	Impact of Excess Lead Iodide on the Recombination Kinetics in Metal Halide Perovskites. 2019 , 4, 1370-1378	42
337	Polyoxometalate-Based Inorganic/Organic Hybrid [Cu(phen) ₂] ₂ [(Mo ₈ O ₂₆)]: A New Additive to Spiro-OMeTAD for Efficient and Stable Perovskite Solar Cells. 2019 , 2, 4224-4233	8
336	Analysis of light-induced degradation in inverted perovskite solar cells under short-circuited conditions. 2019 , 71, 123-130	17
335	Efficiency stability: dopant-free hole transporting materials towards stabilized perovskite solar cells. 2019 , 10, 6748-6769	125
334	An atomistic mechanism for the degradation of perovskite solar cells by trapped charge. 2019 , 11, 11369-11378	2
333	Electronic and optical absorption properties of organic-inorganic perovskites as influenced by different long-chain diamine molecules: first-principles calculations.. 2019 , 9, 14718-14726	9
332	Charge Trap Formation and Passivation in Methylammonium Lead Tribromide. 2019 , 123, 13812-13817	5
331	Unique characteristics of 2D Ruddlesden-Popper (2DRP) perovskite for future photovoltaic application. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 13860-13872	13 49
330	Improvement of perovskite crystallinity by omnidirectional heat transfer radiative thermal annealing.. 2019 , 9, 14868-14875	4
329	Origin of Exceptionally Slow Light Soaking Effect in Mesoporous Carbon Perovskite Solar Cells with AVA Additive. 2019 , 123, 11414-11421	25
328	In situ investigation of light soaking in organolead halide perovskite films. 2019 , 7, 041114	16
327	An overview of the decompositions in organo-metal halide perovskites and shielding with 2-dimensional perovskites. 2019 , 109, 160-186	27
326	Direct formed tri-iodide ions stabilizing colloidal precursor solution and promoting the reproducibility of perovskite solar cells by solution process. 2019 , 311, 132-140	4
325	Study of CH ₃ NH ₃ PbI ₃ as an active layer of organo-metal halide perovskite solar cells. 2019 ,	0
324	Air-Stable and Oriented Mixed Lead Halide Perovskite (FA/MA) by the One-Step Deposition Method Using Zinc Iodide and an Alkylammonium Additive. 2019 , 11, 17555-17562	16
323	Perovskites for Next-Generation Optical Sources. 2019 , 119, 7444-7477	391

322	Tailoring Passivation Molecular Structures for Extremely Small Open-Circuit Voltage Loss in Perovskite Solar Cells. 2019 , 141, 5781-5787	368
321	Uncovering the Mechanism Behind the Improved Stability of 2D Organic-Inorganic Hybrid Perovskites. 2019 , 15, e1900462	18
320	Highly luminescent CsPbX ₃ (X=Cl, Br, I) perovskite nanocrystals with tunable photoluminescence properties. 2019 , 789, 392-399	21
319	Enhancing Photostability of Perovskite Solar Cells by Eu(TTA)(Phen)MAA Interfacial Modification. 2019 , 11, 11481-11487	27
318	Impacts of alkaline on the defects property and crystallization kinetics in perovskite solar cells. 2019 , 10, 1112	124
317	Deprotonation and vacancies at the CH ₃ NH ₃ PbI ₃ /ZnO and CH ₃ NH ₃ PbI ₃ /GaN interfaces, detected in their theoretical XANES. 2019 , 7, 5307-5313	2
316	Understanding How Ambiance Affects the Performance of Hole-Conductor-Free Perovskite Solar Cells from a Chemical Perspective. 2019 , 2, 2387-2391	3
315	New Strategy to Overcome the Instability That Could Speed up the Commercialization of Perovskite Solar Cells. 2019 , 6, 1900134	9
314	Recent Challenges in Perovskite Solar Cells Toward Enhanced Stability, Less Toxicity, and Large-Area Mass Production. 2019 , 6, 1801758	36
313	Applying BaTiO ₃ -coated TiO ₂ core-shell nanoparticles films as scaffold layers to optimize interfaces for better-performing perovskite solar cells. 2019 , 30, 7733-7742	1
312	Materials Discovery of Stable and Nontoxic Halide Perovskite Materials for High-Efficiency Solar Cells. 2019 , 29, 1804354	34
311	Efficient air-stable perovskite solar cells with a (FAI)(MAI)(MABr)(PbI)(PbBr) active layer fabricated a vacuum flash-assisted method under RH > 50.. 2019 , 9, 10148-10154	9
310	Lead-Free Cs ₂ BiAgBr ₆ Double Perovskite-Based Humidity Sensor with Superfast Recovery Time. 2019 , 29, 1902234	90
309	Low-Cost CuIn _{1-x} GaxSe ₂ Ultra-Thin Hole-Transporting Material Layer for Perovskite/CIGSe Heterojunction Solar Cells. 2019 , 9, 719	6
308	Retarding Thermal Degradation in Hybrid Perovskites by Ionic Liquid Additives. 2019 , 29, 1902021	56
307	Stability improvement under high efficiency next stage development of perovskite solar cells. 2019 , 62, 684-707	38
306	PbI ₂ Initiated Cross-Linking and Integration of a Polymer Matrix with Perovskite Films: 1000 h Operational Devices under Ambient Humidity and Atmosphere and with Direct Solar Illumination. 2019 , 2, 2214-2222	17
305	Fullerene Polymer Complex Inducing Dipole Electric Field for Stable Perovskite Solar Cells. 2019 , 29, 1804419	28

304	Causes and Solutions of Recombination in Perovskite Solar Cells. 2019 , 31, e1803019	242
303	Engineering of hole-selective contact for high-performance perovskite solar cell featuring silver back-electrode. 2019 , 54, 7789-7797	37
302	Amino acid salt-driven planar hybrid perovskite solar cells with enhanced humidity stability. 2019 , 59, 481-491	49
301	Pyrrolidinium lead iodide from crystallography: a new perovskite with low bandgap and good water resistance. 2019 , 55, 3251-3253	23
300	A Review of Perovskites Solar Cell Stability. 2019 , 29, 1808843	554
299	Atmospherically induced defects in (FASnI3)0.6(MAPbI3)x Cl3x)0.4 perovskites. 2019 , 52, 175102	6
298	Highly Efficient Perovskite Solar Cells Processed Under Ambient Conditions Using In Situ Substrate-Heating-Assisted Deposition. 2019 , 3, 1800318	29
297	High-Working-Pressure Sputtering of ZnO for Stable and Efficient Perovskite Solar Cells. 2019 , 1, 389-396	13
296	Effective Strategies for High Performance Hysteresis-free Mixed Perovskite Solar Cells. 2019 ,	1
295	Pseudohalide (SCN) ⁻ -doped CsPbI3 for high-performance solar cells. 2019 , 7, 13736-13742	33
294	Plasmon enhanced up-conversion nanoparticles in perovskite solar cells for effective utilization of near infrared light. 2019 , 11, 22813-22819	15
293	Liquid water-induced growth of the 1D morphology of CH3NH3PbI3 hybrid perovskites. 2019 , 21, 7365-7372	3
292	Influence of drying temperature on morphology of MAPbI3 thin films and the performance of solar cells. 2019 , 773, 511-518	19
291	Enhanced Seebeck Effect of a MAPbBr3 Single Crystal by an Organic and a Metal Modified Layer. 2019 , 5, 1800759	11
290	Improved Moisture Stability of Perovskite Solar Cells with a Surface-Treated PCBM Layer. 2019 , 3, 1800289	14
289	In Situ Monitoring of Thermal Degradation of CH3NH3PbI3 Films by Spectroscopic Ellipsometry. 2019 , 123, 1362-1369	9
288	Mixed Dimensional 2D/3D Hybrid Perovskite Absorbers: The Future of Perovskite Solar Cells?. 2019 , 29, 1806482	178
287	Low dimensional metal halide perovskites and hybrids. 2019 , 137, 38-65	173

286	Advances in Solar Energy: Solar Cells and Their Applications. 2019 , 75-127	1
285	Two-dimensional lead-free hybrid halide perovskite using superatom anions with tunable electronic properties. 2019 , 191, 33-38	75
284	Machine Learning for Understanding Compatibility of Organic/Inorganic Hybrid Perovskites with Post-Treatment Amines. 2019 , 4, 397-404	39
283	Unraveling the light-induced degradation mechanism of CH ₃ NH ₃ PbI ₃ perovskite films. 2019 , 67, 19-25	26
282	Highly stable hole-conductor-free perovskite solar cells based upon ammonium chloride and a carbon electrode. 2019 , 540, 315-321	16
281	Crafting Inorganic Materials for Use in Energy Capture and Storage. 2019 , 35, 9101-9114	6
280	Hydrophobic polythiophene hole-transport layers to address the moisture-induced decomposition problem of perovskite solar cells. 2019 , 97, 435-441	3
279	Stability Challenges for Perovskite Solar Cells. 2019 , 5, 253-265	24
278	Moisture stability in nanostructured perovskite solar cells. 2019 , 237, 356-360	18
277	Optoelectronic Properties and the Stability of Mixed MA _{1-x} FA _x PbI ₃ Perovskites. 2020 , 8, 1900743	3
276	Perovskite-Based Phototransistors and Hybrid Photodetectors. 2020 , 30, 1903907	127
275	Carbon-Electrode Based Perovskite Solar Cells: Effect of Bulk Engineering and Interface Engineering on the Power Conversion Properties. 2020 , 4, 1900190	21
274	Comparison of the treatment outcomes of endoscopic and surgical resection of GI stromal tumors in the stomach: a propensity score-matched case-control study. 2020 , 91, 527-536	12
273	Inhibited aggregation of lithium salt in spiro-OMeTAD toward highly efficient perovskite solar cells. 2020 , 70, 104483	40
272	Air-processed and mixed-cation single crystal engineering-based perovskite films for efficient and air-stable perovskite solar cells. 2020 , 31, 2167-2176	7
271	Stability of Lead and Tin Halide Perovskites: The Link between Defects and Degradation. 2020 , 11, 574-585	52
270	Crystal structure features of CH ₃ NH ₃ PbI _{3-x} Br _x hybrid perovskites prepared by ball milling: a route to more stable materials. 2020 , 22, 767-775	9
269	Orientationally engineered 2D/3D perovskite for high efficiency solar cells. 2020 , 4, 324-330	25

268	Ethanol induced structure reorganization of 2D layered perovskites (OA) ₂ (MA) _{n-1} Pb _n I _{3n+1} . 2020 , 220, 116981	4
267	Hierarchically Anatase TiO ₂ microspheres composed of tiny octahedra used as mesoporous layer in perovskite solar cells. 2020 , 331, 135281	3
266	Modulable hysteresis behavior controlled by water-promoted decomposition in a single CH ₃ NH ₃ PbI ₃ micro/nanowire. 2020 , 507, 145048	4
265	Cuboctahedral stability in Titanium halide perovskites via machine learning. 2020 , 173, 109415	10
264	Microscopic insight into the reversibility of photodegradation in MAPbI ₃ thin films. 2020 , 219, 116916	5
263	Degradation Studies of Cs ₃ Sb ₂ I ₉ : A Lead-Free Perovskite. 2020 , 3, 47-55	20
262	Shining Emitter in a Stable Host: Design of Halide Perovskite Scintillators for X-ray Imaging from Commercial Concept. 2020 , 14, 5183-5193	110
261	Structural Evolution During Perovskite Crystal Formation and Degradation: In Situ and Operando X-Ray Diffraction Studies. 2020 , 10, 1903074	14
260	Surface Treatment of Cu:NiO _x Hole-Transporting Layer Using Alanine for Hysteresis-Free and Thermally Stable Inverted Perovskite Solar Cells. 2020 , 10,	3
259	Hysteresis and Instability Predicted in Moisture Degradation of Perovskite Solar Cells. 2020 , 12, 48882-48889	8
258	Recent Progress on the Stability of Perovskite Solar Cells in a Humid Environment. 2020 , 124, 27251-27266	19
257	Room-temperature random lasing of metal-halide perovskites via morphology-controlled synthesis. 2020 , 2, 5833-5840	7
256	UV _{D3} treated annealing-free cerium oxide as electron transport layers in flexible planar perovskite solar cells. 2020 , 2, 4062-4069	6
255	Molecular Ferroelectrics-Driven High-Performance Perovskite Solar Cells. 2020 , 132, 20149-20157	6
254	Molecular Ferroelectrics-Driven High-Performance Perovskite Solar Cells. 2020 , 59, 19974-19982	33
253	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. 2020 , 4, 2000308	19
252	DFT study of electronic and optical properties of CH ₃ NH ₃ SnI ₃ perovskite. 2020 , 1-13	6
251	Durable strategies for perovskite photovoltaics. 2020 , 8, 100703	3

250	Encapsulation of UV Glue, Hydrophobicity of Binder and Carbon Electrode Enhance the Stability of Organic/Inorganic Hybrid Perovskite Solar Cells up to 5 Years. 2020 , 8, 2000513	6
249	Multifunctional Charge Transporting Materials for Perovskite Light-Emitting Diodes. 2020 , 32, e2002176	23
248	Improving Efficiency and Stability of Carbon-Based Perovskite Solar Cells by a Multifunctional Triple-Layer System: Antireflective, UV-Protective, Superhydrophobic, and Self-Cleaning. 2020 , 4, 2000491	5
247	Growth mechanism of CH ₃ NH ₃ I in a vacuum processed perovskite. 2020 , 2, 3906-3911	2
246	Synthesis of halide perovskite microwires via methylammonium cations reaction. 2020 , 14, 332-340	0
245	Atomic-Scale Insights into Emergent Photovoltaic Absorbers. 2020 ,	
244	Incorporating of Lanthanides Ions into Perovskite Film for Efficient and Stable Perovskite Solar Cells. 2020 , 16, e2001770	23
243	Defect-Related Broadband Emission in Two-Dimensional Lead Bromide Perovskite Microsheets. 2020 , 11, 8157-8163	26
242	A bilayer TiO ₂ /Al ₂ O ₃ as the mesoporous scaffold for enhanced air stability of ambient-processed perovskite solar cells. 2020 , 1, 2057-2067	9
241	Effects of Oxygen and Water on the Formation and Degradation Processes of (CH ₃ NH ₃)PbI ₃ Thin Films. 2020 , 3, 11269-11274	3
240	Template Stripping of Perovskite Thin Films for Dry Interfacing and Surface Structuring. 2020 , 12, 26601-26606	6
239	Study of the stability of lead halide perovskite under two different fluoropolymer top coatings. 2020 , 5, 377-383	1
238	Dye Sensitization and Local Surface Plasmon Resonance-Enhanced Upconversion Luminescence for Efficient Perovskite Solar Cells. 2020 , 12, 24737-24746	35
237	Enhancing Perovskite Solar Cell Performance through Femtosecond Laser Polishing. 2020 , 4, 2000189	9
236	Pb-Based Halide Perovskites: Recent Advances in Photo(electro)catalytic Applications and Looking Beyond. 2020 , 30, 1909667	46
235	Study on the properties of perovskite materials under light and different temperatures and electric fields based on DFT. 2020 , 10, 20960-20971	2
234	Solution-Processed, Self-Powered Broadband CH ₃ NH ₃ PbI ₃ Photodetectors Driven by Asymmetric Electrodes. 2020 , 8, 2000215	19
233	Understanding the thermal degradation mechanism of perovskite solar cells via dielectric and noise measurements. 2020 , 31, 365403	6

232	Vapor-Phase Photocatalytic Overall Water Splitting Using Hybrid Methylammonium Copper and Lead Perovskites. 2020 , 10,	6
231	Gas chromatography-mass spectrometry analyses of encapsulated stable perovskite solar cells. 2020 , 368,	167
230	The use of nickel oxide as a hole transport material in perovskite solar cell configuration: Achieving a high performance and stable device. 2020 , 44, 9839-9863	10
229	Interface Engineering Driven Stabilization of Halide Perovskites against Moisture, Heat, and Light for Optoelectronic Applications. 2020 , 10, 2000768	32
228	Improved environmental stability of cobalt incorporated methylammonium lead iodide perovskite for resistive switching applications. 2020 , 538, 110900	3
227	Organic-inorganic hybrid perovskite electronics. 2020 , 22, 13347-13357	12
226	Interaction engineering in organic/inorganic hybrid perovskite solar cells. 2020 , 7, 2208-2236	13
225	High quality silicon: Colloidal quantum dot heterojunction based infrared photodetector. 2020 , 116, 101102	23
224	Ethylammonium Lead Iodide Formation in MAPbI ₃ Precursor Solutions by DMF Decomposition and Organic Cation Exchange Reaction. 2020 , 10, 162	3
223	Shining Light on the Photoluminescence Properties of Metal Halide Perovskites. 2020 , 30, 1910004	58
222	Multi-component engineering to enable long-term operational stability of perovskite solar cells. 2020 , 2, 024008	7
221	Reviewing and understanding the stability mechanism of halide perovskite solar cells. 2020 , 2, 1034-1056	29
220	Spontaneously Self-Assembly of a 2D/3D Heterostructure Enhances the Efficiency and Stability in Printed Perovskite Solar Cells. 2020 , 10, 2000173	81
219	Recent advances in hybrid organic-inorganic materials with spatial architecture for state-of-the-art applications. 2020 , 112, 100663	93
218	Nano-Micro Dimensional Structures of Fiber-Shaped Luminous Halide Perovskite Composites for Photonic and Optoelectronic Applications. 2020 , 41, e2000157	5
217	2D Perovskite Seeding Layer for Efficient Air-Processable and Stable Planar Perovskite Solar Cells. 2020 , 30, 2003081	25
216	Aqueous solvent-regulated crystallization and interfacial modification in perovskite solar cells with enhanced stability and performance. 2020 , 471, 228447	9
215	Significance of Ambient Temperature Control for Highly Reproducible Layered Perovskite Light-Emitting Diodes. 2020 , 7, 2489-2497	10

214	Understanding the interplay of stability and efficiency in A-site engineered lead halide perovskites. 2020 , 8, 070901	35
213	Light-induced degradation and self-healing inside CH ₃ NH ₃ PbI ₃ -based solar cells. 2020 , 116, 253303	6
212	Molecular aspects of organic cations affecting the humidity stability of perovskites. 2020 , 13, 805-820	53
211	A hysteresis-free perovskite transistor with exceptional stability through molecular cross-linking and amine-based surface passivation. 2020 , 12, 7641-7650	24
210	Mechanism of segmentation of lead halide perovskite at interfaces with GaN and ZnO. 2020 , 514, 145924	1
209	Investigating the Effects of Chemical Gradients on Performance and Reliability within Perovskite Solar Cells with TOF-SIMS. 2020 , 10, 1903674	29
208	Two-dimensional cyclohexane methylamine based perovskites as stable light absorbers for solar cells. 2020 , 201, 13-20	4
207	Defect proliferation in CsPbBr ₃ crystal induced by ion migration. 2020 , 116, 063505	30
206	Mesostructured perovskite solar cells based on Zn ₂ SnO ₄ Single Crystal Mesoporous Layer with efficiency of 18.32%. 2020 , 823, 153730	6
205	How far are we from attaining 10-year lifetime for metal halide perovskite solar cells?. 2020 , 140, 100545	43
204	A kirigami-inspired island-chain design for wearable moistureproof perovskite solar cells with high stretchability and performance stability. 2020 , 12, 3646-3656	16
203	Formation Thermodynamics, Stability, and Decomposition Pathways of CsPbX ₃ (X = Cl, Br, I) Photovoltaic Materials. 2020 , 124, 4252-4260	16
202	Balanced strain-dependent carrier dynamics in flexible organic/inorganic hybrid perovskites. 2020 , 8, 3374-3379	13
201	Hybrid AlO-CH ₃ NH ₃ PbI Perovskites towards Avoiding Toxic Solvents. 2020 , 13,	3
200	Water driven photoluminescence enhancement and recovery of CH ₃ NH ₃ PbBr ₃ /Silicon oil/PDMS-urea composite. 2020 , 834, 155088	5
199	Competing Dissolution Pathways and Ligand Passivation-Enhanced Interfacial Stability of Hybrid Perovskites with Liquid Water. 2020 , 12, 23584-23594	9
198	In situ observation of γ -phase suppression by lattice strain in all-inorganic perovskite solar cells. 2020 , 73, 104803	13
197	Stability factors of perovskite (CH ₃ NH ₃ PbI ₃) thinfilms for solar cell applications: A study. 2021 , 39, 1829-1832	2

196	High-Performance Quasi-2D Perovskite/Single-Walled Carbon Nanotube Phototransistors for Low-Cost and Sensitive Broadband Photodetection. 2021 , 2, 2000084	13	
195	Compositional effect on water adsorption on metal halide perovskites. 2021 , 538, 148058	11	
194	Amino-mediated anchoring of FAPbBr ₃ perovskite quantum dots on silica spheres for efficient visible light photocatalytic NO removal. 2021 , 406, 126740	11	
193	Down-conversion Ce-doped TiO ₂ nanorod arrays and commercial available carbon based perovskite solar cells: Improved performance and UV photostability. 2021 , 46, 5677-5688	8	
192	Influences of the orientations of CH ₃ NH ₃ molecules on physical properties of organo-inorganic hybrid perovskite CH ₃ NH ₃ PbI ₃ . 2021 , 26, 101816	0	
191	In CH NH Pbi Perovskite Film, the Surface Termination Layer Dominates the Moisture Degradation Pathway. 2021 , 27, 3729-3736	5	
190	2D Hybrid Halide Perovskites: Synthesis, Properties, and Applications. 2021 , 5, 2000395	7	
189	Structural Properties and Stability of Inorganic CsPbI ₃ Perovskites. 2021 , 2, 2000089	13	
188	Device design optimization with interface engineering for highly efficient mixed cations and halides perovskite solar cells. 2021 , 20, 103707	11	
187	Rare-earth quantum cutting in metal halide perovskites - a review. 2021 , 8, 1072-1083	15	
186	Doping in Semiconductor Oxides-Based Electron Transport Materials for Perovskite Solar Cells Application. 2021 , 5, 2000605	9	
185	Acute effects of CH ₃ NHPbi perovskite on <i>Scenedesmus obliquus</i> and <i>Daphnia magna</i> in aquatic environment. 2021 , 208, 111677	6	
184	First-principles study of aziridinium tin iodide perovskites for photovoltaics. 2021 , 9, 982-990	3	
183	Ambient Fabrication of Organic-Inorganic Hybrid Perovskite Solar Cells.. 2021 , 5, e2000744	23	
182	Stability of the CsPbI ₃ perovskite: from fundamentals to improvements. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 11124-11144	13	26
181	Polymers and interfacial modifiers for durable perovskite solar cells: a review. 2021 , 9, 12509-12522	7	
180	Phase stability investigation of CsPbI ₃ perovskite for solar cell application. 2021 ,	0	
179	Self-passivated hybrid perovskite films for improved photovoltaic performance of solar cells. 2021 , 56, 6374-6384	0	

178	Carbon-Based Printable Perovskite Solar Cells with a Mesoporous TiO ₂ Electron Transporting Layer Derived from Metal-Organic Framework NH ₂ -MIL-125. 2021 , 9, 2000957		3
177	Nondestructive passivation of the TiO ₂ electron transport layer in perovskite solar cells by the PEIE-2D MOF interfacial modified layer. 2021 , 9, 7057-7064		7
176	Raman spectroscopy insights into the band phases of formamidinium lead iodide (FAPbI ₃). 2021 , 50, 3315-3323		1
175	Water and oxygen co-induced microstructure relaxation and evolution in CH ₃ NH ₃ PbI ₃ . 2021 , 23, 17242-17247		1
174	Observing and Understanding the Corrosion of Silver Nanowire Electrode by Precursor Reagents and MAPbI ₃ Film in Different Environmental Conditions. 2021 , 8, 2001669		2
173	Perovskite solar cells. 2021 , 249-281		1
172	Insights into iodoplumbate complex evolution of precursor solutions for perovskite solar cells: from aging to degradation. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 6732-6748	13	9
171	Effect of film structure on CH ₃ NH ₃ PbI ₃ perovskite thin films degradation. 2021 , 11, 025226		0
170	The Opto-Electronic Functional Devices Based on Three-Dimensional Lead Halide Perovskites. 2021 , 11, 1453		4
169	Dual-function interface engineering for efficient perovskite solar cells. 2021 , 3, e12092		9
168	Atomic and electronic structure of cesium lead triiodide surfaces. 2021 , 154, 074712		1
167	Commercial Carbon-Based all-Inorganic Perovskite Solar Cells with a High Efficiency of 13.81%: Interface Engineering and Photovoltaic Performance. 2021 , 4, 3255-3264		3
166	A review of stability and progress in tin halide perovskite solar cell. 2021 , 216, 26-47		25
165	Exciton-Phonon Interaction-Induced Large In-Plane Optical Anisotropy in Two-Dimensional All-Inorganic Perovskite Crystals. 2021 , 12, 3387-3392		4
164	Surface Ligand Engineering for a Lead-Free CsCuBr Microcrystal-Based Humidity Sensor with a Giant Response. 2021 , 12, 3401-3409		14
163	Gentle Materials Need Gentle Fabrication: Encapsulation of Perovskites by Gas-Phase Alumina Deposition. 2021 , 12, 2348-2357		4
162	Efficient and Stable Perovskite Solar Cells with a Superhydrophobic Two-Dimensional Capping Layer. 2021 , 12, 4052-4058		8
161	Impact of P3HT Regioregularity and Molecular Weight on the Efficiency and Stability of Perovskite Solar Cells. 2021 , 9, 5061-5073		14

160	Photoemission Studies on the Environmental Stability of Thermal Evaporated MAPbI ₃ Thin Films and MAPbBr ₃ Single Crystals. 2021 , 14, 2005	0
159	The influence of localized states on the optical absorption and carrier transport properties of acylamino hybrid perovskites with tunable electronic structures. 2021 , 70, 240-250	1
158	A novel red-emitting Ca ₂ GdHf ₂ Al ₃ O ₁₂ :Eu ³⁺ phosphor for light-emitting diodes and field emission display. 2021 , 864, 158840	5
157	Stable and ultraviolet-enhanced broadband photodetectors based on Si nanowire arrays-Cs ₃ Cu ₂ I ₅ nanocrystals hybrid structures. 2021 , 18, 100398	4
156	All-Inorganic Halide Perovskite Nanocrystals: Future Prospects and Challenges to Go Lead Free. 2021 , 218, 2100185	1
155	Pseudohalide substitution and potassium doping in FA _{0.98} K _{0.02} Pb(SCN) ₂ I for high-stability hole-conductor-free perovskite solar cells. 2021 , 494, 229781	5
154	Real-Time Investigation of Sn(II) Oxidation in Pb-Free Halide Perovskites by X-ray Absorption and Mössbauer Spectroscopy. 2021 , 4, 4327-4332	2
153	A combined chrome oxide and titanium oxide based electron-transport layer for high-performance perovskite solar cells. 2021 , 771, 138496	1
152	Research Progress on Structure and Property of Hybrid Organic-Inorganic Perovskite. 2021 , 781, 022069	2
151	Molecularly Engineered Interfaces in Metal Halide Perovskite Solar Cells. 2021 , 12, 4882-4901	7
150	Lattice Strain Relaxation and Grain Homogenization for Efficient Inverted MAPbI Perovskite Solar Cells. 2021 , 12, 4569-4575	14
149	Carbon-based all-inorganic perovskite solar cells: Progress, challenges and strategies toward 20% efficiency. 2021 ,	6
148	Advanced Applications of Atomic Layer Deposition in Perovskite-Based Solar Cells. 2021 , 2, 2100011	3
147	The effects of heteroatoms-doping on the stability, electronic and magnetic properties of CH ₃ NH ₃ PbI ₃ perovskite. 2021 , 24, 101027	4
146	In Situ Phase-Transition Crystallization of All-Inorganic Water-Resistant Exciton-Radiative Heteroepitaxial CsPbBr ₃ /CsPb ₂ Br ₅ Core/Shell Perovskite Nanocrystals. 2021 , 33, 4948-4959	11
145	Ambient fabrication of perovskite solar cells through delay-deposition technique. 2021 , 10, 1	
144	A New Type of Hybrid Copper Iodide as Nontoxic and Ultrastable LED Emissive Layer Material. 2021 , 6, 2565-2574	16
143	Thermal Transport in Engineered Hybrid Organic/Inorganic Perovskite Metasurfaces. 2021 , 125, 15134-15144	2

142	Impact of Humidity and Temperature on the Stability of the Optical Properties and Structure of MAPbI ₃ , MAFAPI and (FAPbI) ₃ (MAPbBr) Perovskite Thin Films. 2021 , 14,	3
141	A roadmap towards stable perovskite solar cells: prospective on substitution of organic (A) & inorganic (B) cations. 2021 , 32, 18466-18511	0
140	A Review on Emerging Barrier Materials and Encapsulation Strategies for Flexible Perovskite and Organic Photovoltaics. 2021 , 11, 2101383	13
139	Picosecond laser seal welding of perovskite films. 2021 , 140, 107083	1
138	A study of single-/multi-layer structures of CH ₃ NH ₃ SnI ₃ by density functional theory. 2021 , 53, 1	1
137	Multilayered Ruddlesden-Popper perovskite hybrids with alternative organic spacers of 4-XC ₆ H ₄ C ₂ H ₄ NH ₂ (where X = H, Br, Cl) for solar cell applications. 2021 , 56, 17167-17177	1
136	Multi-Walled Carbon Nanotube-Assisted Encapsulation Approach for Stable Perovskite Solar Cells. 2021 , 26,	1
135	Molecular Insights into Water Vapor Adsorption and Interfacial Moisture Stability of Hybrid Perovskites for Robust Optoelectronics. 2021 , 175, 121334	1
134	Mesoporous TiO ₂ electron transport layer engineering for efficient inorganic-organic hybrid perovskite solar cells using hydrochloric acid treatment. 2021 , 732, 138768	3
133	Grain Boundaries in Methylammonium Lead Halide Perovskites Facilitate Water Diffusion. 2100087	2
132	Upscaling perovskite solar cells via the ambient deposition of perovskite thin films. 2021 , 3, 747-764	2
131	Bulky organic cations engineered lead-halide perovskites: a review on dimensionality and optoelectronic applications. 2021 , 21, 100759	6
130	Progress of Pb-Sn Mixed Perovskites for Photovoltaics: A Review.	3
129	Modified colored semi-transparent perovskite solar cells with enhanced stability. 2021 , 875, 159781	3
128	Superhalogen Boron Tetrafluoride Surface Modification Reduces the Formation of Organic Cation Vacancies on the Surface of Halide Perovskite Films. 2021 , 125, 21223-21233	0
127	Air fabrication of SnO ₂ based planar perovskite solar cells with an efficiency approaching 20%: Synergistic passivation of multi-defects by choline chloride. 2021 ,	0
126	The effect of alkylamines on the morphology and optical properties of organic perovskites. 2021 , 226, 483-488	3
125	Binary-mixed organic electron transport layers for planar heterojunction perovskite solar cells with high efficiency and thermal reliability. 2021 , 420, 129678	4

124	Advances in perovskite solar cells: Film morphology control and interface engineering. 2021 , 317, 128368	2
123	Investigation of CH ₃ NH ₃ PbI ₃ and CH ₃ NH ₃ SnI ₃ based perovskite solar cells with CuInSe ₂ nanocrystals. 2021 , 246, 167839	0
122	Recent strategies to improve moisture stability in metal halide perovskites materials and devices. 2022 , 65, 219-235	3
121	Perpendicularly oriented 2D perovskite thin films prepared using the bar-coating method and DMSO additive. 2021 , 57, 3395-3398	2
120	The structural stability and defect-tolerance of ionic spinel semiconductors for high-efficiency solar cells. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 14566-14575	13 4
119	Application of two-dimensional materials in perovskite solar cells: recent progress, challenges, and prospective solutions.	4
118	Perovskite-Based Nanocrystals: Synthesis and Applications beyond Solar Cells. 2018 , 2, 1700380	108
117	Synergistic Benefits of Cesium-Doped Aqueous Precursor in Air-Processed Inverted Perovskite Solar Cells. 2020 , 4, 1900406	6
116	Exploring performances of hybrid perovskites tin-based photovoltaic solar cells: Non-equilibrium Green's functions and macroscopic approaches. 2020 , 591, 412247	6
115	Adsorbed carbon nanomaterials for surface and interface-engineered stable rubidium multi-cation perovskite solar cells. 2018 , 10, 773-790	27
114	Rapid degradation of PFAS in aqueous solutions by reverse vortex flow gliding arc plasma. 2020 , 6, 1044-1057	22
113	Theoretical investigation of halide perovskites for solar cell and optoelectronic applications. 2020 , 29, 108401	7
112	Quantum dot-modified titanium dioxide nanoparticles as an energy-band tunable electron-transporting layer for open air-fabricated planar perovskite solar cells. 2020 , 10, 184798042096163	4
111	Highly luminescent and stable lead-free cesium copper halide perovskite powders for UV-pumped phosphor-converted light-emitting diodes. 2020 , 8, 768	53
110	Progress and Prospect on Stability of Perovskite Photovoltaics. 2017 , 4, 16-30	7
109	Recent progress in material study and photovoltaic device of Sb ₂ Se ₃ . 2015 , 64, 038406	12
108	Factors influencing the stability of perovskite solar cells. 2015 , 64, 038803	5
107	A review of the perovskite solar cells. 2015 , 64, 038805	17

- 106 An in-situ real time study of the perovskite film micro-structural evolution in a humid environment by using synchrotron based characterization technique. **2017**, 66, 018401 2
- 105 Stability of Hybrid Perovskite Solar Cells. **2021**, 411-427
- 104 Recent progress in electron transport bilayer for efficient and low-cost perovskite solar cells: a review. 1 0
- 103 Emerging Perovskite Solar Cell Technology: Remedial Actions for the Foremost Challenges. 2101085 11
- 102 Probing the microscopic mechanisms in photovoltaic degradation behaviors of CH₃NH₃PbI₃ perovskite films via photoconductive atomic force microscopy. **2021**, 27, 101540 0
- 101 Time- and Excitation-dependent Photoluminescence Characterisation of CH₃NH₃PbI₃ Perovskite films. **2015**,
- 100 Progress on nanopatterned front electrodes for perovskite thin-film solar cells. **2016**,
- 99 Degradation and Stability of Organic-Inorganic Perovskite Solar Cells. **2016**, 4, 68-79
- 98 16 Photoelectrochemical Approaches to Solar-H₂ Generation. **2017**, 691-716
- 97 Counter Electrode Materials for Organic-Inorganic Perovskite Solar Cells. **2019**, 165-225 1
- 96 Rutile TiO₂ nanorod arrays grown by solution-processed for high efficiency solid-state perovskite solar cells. **2019**,
- 95 Environmental Assessment of Perovskite Solar Cells. **2022**, 279-289 1
- 94 Organometal Halide Perovskite-Based Materials and Their Applications in Solar Cell Devices. **2020**, 259-281
- 93 Pseudohalide Perovskite Absorbers. **2020**, 65-85
- 92 Review: Perovskite Photovoltaics. **2020**, 53-63
- 91 A mechanistic investigation of moisture-induced degradation of methylammonium lead iodide. **2020**, 117, 253304 2
- 90 First-principles study of Cs₂Ti_{1-x}M_xBr₆ (M = Pb, Sn) and numerical simulation of the solar cells based on Cs₂Ti_{0.25}Sn_{0.75}Br₆ perovskite. **2021**, 45, 8049-8060 2
- 89 Approach To Enhance the Stability and Efficiency of Triple-Cation Perovskite Solar Cells by Reactive Antisolvents. **2021**, 4, 47-60 0

88	Surface reconstruction of tetragonal methylammonium lead triiodide. 2021 , 9, 111102	2
87	Chemical Processing of Mixed-Cation Hybrid Perovskites: Stabilizing Effects of Configurational Entropy. 2021 , 1-31	0
86	Dopant-Free Hole-Transporting Materials for Perovskite Solar Cells. 2021 , 331-367	
85	Towards improving the optoelectronics properties of MAPbI ₃ (1-x)Br _{3x} /ZnO heterojunction by bromine doping. 2022 , 249, 168283	3
84	Insights into the Adsorption of Water and Oxygen on the Cubic CsPbBr ₃ Surfaces: A First-Principle Study.	
83	Electrodeposited PEDOT:PSS-AlO Improves the Steady-State Efficiency of Inverted Perovskite Solar Cells. 2021 , 13,	0
82	Interfacial engineering of mp-TiO ₂ /CH ₃ NH ₃ PbI ₃ with Al ₂ O ₃ : Effect of different phases of alumina on performance and stability of perovskite solar cells. 2021 , 36, 4938	0
81	Strain Engineering for Tailored Carrier Transport and Thermoelectric Performance in Mixed Halide Perovskites CsPb(I _{1-x} Br _x) ₃ .	4
80	MAPbI Photodetectors with 4.7 MHz Bandwidth and Their Application in Organic Optocouplers.. 2022 , 815-821	0
79	Investigation of emission behaviour of perovskite nanocrystals using nano to microspheres of TiO ₂ . 2022 , 46, 844-850	3
78	A comprehensive analysis of PV cell parameters with varying halides stoichiometry in mixed halide perovskite solar cells. 2022 , 123, 111905	2
77	Enhanced Perovskite Solar Cell Performance via 2-Amino-5-iodobenzoic Acid Passivation.. 2022 ,	3
76	Decomposition of Organic Perovskite Precursors on MoO: Role of Halogen and Surface Defects.. 2022 ,	1
75	Double-Side healing at CsPbI ₂ Br/ZnO interface by bipyrimidine hydroiodide enables inverted solar cells with enhanced efficiency and stability. 2022 , 435, 134760	2
74	Spacer Engineering of Thiophene-Based Two-Dimensional/Three-Dimensional Hybrid Perovskites for Stable and Efficient Solar Cells.	2
73	Fabry-Perot Mode-Limited High-Purcell-Enhanced Spontaneous Emission from Laser-Induced CsPbBr Quantum Dots in CsPbBr Microcavities.. 2021 ,	5
72	Strategies for highly efficient and stable cesium lead iodide perovskite photovoltaics: mechanisms and processes. 2022 , 10, 4999-5023	3
71	What Would It Take to Manufacture Perovskite Solar Cells in Space?. 2022 , 7, 1040-1042	4

70	Multifunctional Additive (L-4-Fluorophenylalanine) for Efficient and Stable Inverted Perovskite Solar Cells. 2101101	0
69	What Happens When Halide Perovskites Meet with Water?. 2022 , 2281-2290	12
68	NH ₄ Br-Assisted Two-Step-Processing of Guanidinium-Rich Perovskite Films for Extremely Stable Carbon-Based Perovskite Solar Cells in Ambient Air. 2101103	0
67	Nanophotonic-structured front contact for high-performance perovskite solar cells. 1	0
66	Soft X-ray characterization of halide perovskite film by scanning transmission X-ray microscopy.. 2022 , 12, 4520	0
65	Growth of Hybrid Perovskite Films via Single-Source Perovskite Nanoparticle Evaporation.. 2022 ,	1
64	Protective Coating Interfaces for Perovskite Solar Cell Materials: A First-Principles Study.. 2022 ,	1
63	Effect of Cs partial substitution on crystal systems and bandgap values of MASnCl ₃ . 2022 , 633, 413784	
62	Simulation of perovskite solar cells using molybdenum oxide thin films as interfacial layer for enhancing device performance. 2022 , 32, e00426	
61	Lead-Free Cs AgSbCl Double Perovskite Nanocrystals for Effective Visible-Light Photocatalytic C-C Coupling Reactions.. 2021 , e202102334	6
60	Chemical passivation of methylammonium fragments eliminates traps, extends charge lifetimes, and restores structural stability of CH ₃ NH ₃ PbI ₃ perovskite. 1	3
59	Aiming at the industrialization of perovskite solar cells: Coping with stability challenge. 2021 , 119, 250503	1
58	Discovery of Lead-Free Perovskites for High-Performance Solar Cells via Machine Learning: Ultrabroadband Absorption, Low Radiative Combination, and Enhanced Thermal Conductivities.. 2021 , e2103648	8
57	The adsorption postures of water on CH ₃ NH ₃ PbI ₃ surfaces: a first-principles insight. 2022 , 2247, 012003	
56	Silicon Dioxide Nanoparticles Increase the Incidence Depth of Short-Wavelength Light in Active Layer for High-Performance Perovskite Solar Cells.	0
55	CHAPTER 9. Hybrid Solar Cells. 298-340	
54	Multifunctional Organic Additive for Improving the Open Circuit Voltage of Perovskite Solar Cells.	1
53	Charge-carrier dynamics and regulation strategies in perovskite light-emitting diodes: From materials to devices. 2022 , 9, 021308	4

52	Yb-doped SnO ₂ electron transfer layer assisting the fabrication of high-efficiency and stable perovskite solar cells in air. 2022 , 12, 14631-14638		1
51	Quaternary ammonium halide-containing cellulose derivatives for defect passivation in MAPbI ₃ -based perovskite solar cells.		1
50	Synergistic Effect between NiO _x and P3HT Enabling Efficient and Stable Hole Transport Pathways for Regular Perovskite Photovoltaics. 2201423		1
49	Nanomaterials for Perovskite Solar Cells. 2022 , 1-43		
48	Effect of oxidized CdO quantum dots doped TiO ₂ electron transport layer on performance of mesoporous perovskite solar cells.		0
47	Characterization of interfaces: Lessons from the past for the future of perovskite solar cells. 2022 , 43, 051202		1
46	The Degradation and Recovery Behavior of Mix-cations Perovskite Solar Cells in Moisture and Gas Mixture Environment. <i>Journal of Materials Chemistry A</i> ,	13	1
45	Low Threshold and Ultrastability of One-Step Air-Processed All-Inorganic CsPbX ₃ Thin Films toward Full-Color Visible Amplified Spontaneous Emission.		1
44	Intrinsic and extrinsic stability of triple-cation perovskite solar cells through synergistic influence of organic additive. 2022 , 100906		1
43	Photoinstability aversion in perovskite solar cell by downconversion cadmium chalcogenide filters. 2022 , 12,		
42	Single-Photon Emission from Single Microplate MAPbI ₃ Nanocrystals with Ultranarrow Photoluminescence Linewidths and Exciton Fine Structures. 2200606		1
41	Dopant compensation in p-type doped MAPbI ₃ -Cu _x I ₃ alloyed perovskite crystals. 2022 , 121, 012102		
40	Enhanced field emission properties of ZnO:Al/SrTiO ₃ perovskite composite films by ZnO:Al film.		
39	Recent Criterion on Stability Enhancement of Perovskite Solar Cells. 2022 , 10, 1408		0
38	Novel 3D Printing Encapsulation Strategies for Perovskite Photodetectors. 2200521		0
37	Perovskite Solar Cells: A Review of the Recent Advances. 2022 , 12, 1089		4
36	Stability and efficiency issues, solutions and advancements in perovskite solar cells: A review. 2022 ,		5
35	Intensity Modulated Photocurrent Microspectroscopy for Next Generation Photovoltaics. 2200493		

34	Fast Charge Transfer and High Stability via Hybridization of Hygroscopic Cu-BTC Metal-Organic Framework Nanocrystals with a Light-Absorbing Layer for Perovskite Solar Cells. 2022 , 14, 35495-35503	1
33	Thermal-Radiation-Driven Ultrafast Crystallization of Perovskite Films Under Heavy Humidity for Efficient Inverted Solar Cells. 2205143	0
32	Effect of out-gassing from polymeric encapsulant materials on the lifetime of perovskite solar cells. 2022 , 246, 111887	1
31	Simple harmonic oscillation model explaining MA torsional locking in surface passivated MAPbI ₃ crystal. 2022 , 806, 139967	1
30	A BODIPY small molecule as hole transporting material for efficient perovskite solar cells. 2022 , 6, 4322-4330	0
29	Recent Advances in the Combined Elevated Temperature, Humidity and Light Stability of Perovskite Solar Cells.	1
28	Stabilization of Perovskite Solar Cells: Recent Developments and Future Perspectives. 2204380	7
27	Single-Crystal Hybrid Lead Halide Perovskites: Growth, Properties, and Device Integration for Solar Cell Application. 2022 , 22, 6338-6362	0
26	Achieving Low Threshold and High Optical Gain Amplified Spontaneous Emission in MAPbI ₃ Perovskite Films via Symmetric Waveguide Effect. 2201328	0
25	Probing the photodegradation of MAPbI ₃ perovskite with concentrated sunlight. 2022 , 133, 113012	0
24	stability and photoelectric properties of alkali metal-doped MAPbI ₃ (001) surface in humid environment. 2022 ,	0
23	Preparation of Perovskite Solar Cells in the Air: Degradation Mechanism and Prospects on Large-area Fabrication.	1
22	Increasing the efficiency of perovskite solar cells using Cs ₄ CuSb ₂ Cl ₁₂ quantum dots as an interface layer: A numerical study. 095440892211343	0
21	Study on the long time aging behavior of MAPbI ₃ : from experiment to first-principles simulation. 2022 , 12, 32979-32985	0
20	Suppressing the crystallographic disorders induced by excess PbI ₂ to achieve trade-off between efficiency and stability for PbI ₂ -rich perovskite solar cells. 2022 , 108014	0
19	Recent review of interfacial engineering for perovskite solar cells: effect of functional groups on the stability and efficiency. 2022 , 26, 101224	1
18	Water dopant control of structural stability and charge recombination of perovskite solar cells: A first-principles study. 2023 , 612, 155794	0
17	A Review of Perovskite-Based Photodetectors and Their Applications. 2022 , 12, 4390	1

- 16 In situ crystal reconstruction strategy based highly efficient air-processed inorganic CsPbI₂Br perovskite photovoltaics for indoor, outdoor, and switching applications. ○
- 15 Gold Polyiodide Hybrid Perovskite Solar Cells. 406-412 ○
- 14 Efficient and Stable Inverted Perovskite Solar Cells with TOASiW 12 -Modified Al as a Cathode. 2209290 1
- 13 Perovskite solar cells. **2023**, 129-156 ○
- 12 Lead-free 2D MASnBr₃ and Ruddlesden-Popper BA₂MASn₂Br₇ as light harvesting materials. **2023**, 13, 7939-7951 ○
- 11 Degradation Behavior of Methylammonium Lead Iodide (CH₃NH₃PbI₃) Perovskite Film in Ambient Atmosphere and Device. **2023**, 255, 89-98 ○
- 10 Instability of solution-processed perovskite films: origin and mitigation strategies. **2023**, 2, 012102 ○
- 9 Treasure trove for efficient hydrogen evolution through water splitting using diverse perovskite photocatalysts. **2023**, 29, 101387 ○
- 8 Perovskite-Sensitized Upconversion under Operando Conditions. **2023**, 127, 4773-4783 ○
- 7 Various approaches to synthesize water-stable halide PeNCs. **2023**, 11, 6796-6813 ○
- 6 The role of Pb oxidation state of the precursor in the formation of 2D perovskite microplates. **2023**, 15, 6285-6294 ○
- 5 Aqueous strategy for controllable in-situ growth of high-quality perovskite nanocrystals@polymer films toward white light-emitting diodes. **2023**, 462, 142330 ○
- 4 Facile Fabrication of Mixed-Cation FA_{1-x}Cs_xPbI₃ Perovskites Thin Films for Photodetector Applications. **2023**, 10, 312 ○
- 3 Examining a Year-Long Chemical Degradation Process and Reaction Kinetics in Pristine and Defect-Passivated Lead Halide Perovskites. **2023**, 35, 2904-2917 ○
- 2 Review on Chemical Stability of Lead Halide Perovskite Solar Cells. **2023**, 15, ○
- 1 Advances in the large-scale production, fabrication, stability, and lifetime considerations of electronic materials for clean energy applications. **2023**, 27-60 ○