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6.5% efficient perovskite quantum-dot-sensitized solar cell

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#	Paper	IF	Citations
2262	Interfacial engineering of quantum dot-sensitized TiO <sub>2</sub> fibrous electrodes for futuristic photoanodes in photovoltaic applications. <b>2012</b> , 22, 14228		28
2261	Quantum confinement effect of CdSe induced by nanoscale solvothermal reaction. <i>Nanoscale</i> , <b>2012</b> , 4, 6642-8	7.7	13
2260	Efficient hybrid solar cells based on meso-superstructured organometal halide perovskites. <b>2012</b> , 338, 643-7		7959
2259	Mesoscopic CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> heterojunction solar cells. <b>2012</b> , 134, 17396-9		1623
2258	Lead iodide perovskite sensitized all-solid-state submicron thin film mesoscopic solar cell with efficiency exceeding 9%. <b>2012</b> , 2, 591		5719
2257	Synthesis, structure, and photovoltaic property of a nanocrystalline 2H perovskite-type novel sensitizer (CH <sub>3</sub> CH <sub>2</sub> NH <sub>3</sub> )PbI <sub>3</sub> . <b>2012</b> , 7, 353		203
2256	High-efficiency cascade CdS/CdSe quantum dot-sensitized solar cells based on hierarchical tetrapod-like ZnO nanoparticles. <b>2012</b> , 14, 13539-48		43
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2254	Effect of nanostructured electrode architecture and semiconductor deposition strategy on the photovoltaic performance of quantum dot sensitized solar cells. <b>2012</b> , 75, 139-147		61
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2249	Sequential deposition as a route to high-performance perovskite-sensitized solar cells. <b>2013</b> , 499, 316-9		7488
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2242	Depleted hole conductor-free lead halide iodide heterojunction solar cells. <b>2013</b> , 6, 3249	626
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2235	Recent developments in sensitizers for mesoporous sensitized solar cells. <b>2013</b> , 6, 373-385	5
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2233	Enhanced photovoltaic performance of a quantum dot-sensitized solar cell using a Nb-doped TiO <sub>2</sub> electrode. <b>2013</b> , 24, 415401	13
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2229	The importance of the TiO <sub>2</sub> /quantum dots interface in the recombination processes of quantum dot sensitized solar cells. <b>2013</b> , 15, 3841-5	91
2228	Effect of Different Hole Transport Materials on Recombination in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite-Sensitized Mesoscopic Solar Cells. <b>2013</b> , 4, 1532-6	425

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2223	Efficient inorganic-organic hybrid heterojunction solar cells containing perovskite compound and polymeric hole conductors. <b>2013</b> , 7, 486-491	2185
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2220	High-performance perovskite-polymer hybrid solar cells via electronic coupling with fullerene monolayers. <b>2013</b> , 13, 3124-8	545
2219	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite/fullerene planar-heterojunction hybrid solar cells. <b>2013</b> , 25, 3727-32	1189
2218	All-solid-state hybrid solar cells based on a new organometal halide perovskite sensitizer and one-dimensional TiO <sub>2</sub> nanowire arrays. <i>Nanoscale</i> , <b>2013</b> , 5, 3245-8	7-7 375
2217	One-step preparation and assembly of aqueous colloidal CdS(x)Se(1-x) nanocrystals within mesoporous TiO <sub>2</sub> films for quantum dot-sensitized solar cells. <b>2013</b> , 5, 5139-48	51
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2212	Efficient electron injection in non-toxic silver sulfide (Ag <sub>2</sub> S) sensitized solar cells. <b>2013</b> , 240, 8-13	52
2211	Synthesis and crystal chemistry of the hybrid perovskite (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> for solid-state sensitised solar cell applications. <b>2013</b> , 1, 5628	1972
2210	High performance hybrid solar cells sensitized by organolead halide perovskites. <b>2013</b> , 6, 1480	491

2209	High efficiency solid-state sensitized solar cell-based on submicrometer rutile TiO <sub>2</sub> nanorod and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite sensitizer. <b>2013</b> , 13, 2412-7	825
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2202	MAPbI <sub>3</sub> -xCl <sub>x</sub> mixed halide perovskite for hybrid solar cells: the role of chloride as dopant on the transport and structural properties. <b>2014</b> , 1667, 41	2
2201	DYE- AND PEROVSKITE-SENSITISED MESOSCOPIC SOLAR CELLS. <b>2014</b> , 413-452	1
2200	CHAPTER 7:Perovskite Solar Cells. 242-257	3
2199	Tunable ferroelectric polarization and its interplay with spin-orbit coupling in tin iodide perovskites. <b>2014</b> , 5, 5900	215
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2188	[(p-Carboxyaminophenyl)porphyrin derivatives: new dyes for TiO <sub>2</sub> dye-sensitized solar cells. <b>2014</b> , 16, 1	6
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2109	Morphology and Carrier Extraction Study of Organic-Inorganic Metal Halide Perovskite by One- and Two-Photon Fluorescence Microscopy. <b>2014</b> , 5, 3849-53	80
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2107	Nanowires of methylammonium lead iodide (CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> ) prepared by low temperature solution-mediated crystallization. <b>2014</b> , 14, 6761-6	221
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2101 The photophysics of perovskite solar cells. **2014,**

2100 Epitaxial growth of successive CdSe ultrathin films and quantum dot layers on TiO<sub>2</sub> nanorod arrays for photo-electrochemical cells. **2014,** 4, 12154

11

2099 Effect of cationic groups in organic sulfide electrolyte on the performance of CdS quantum dot sensitized solar cells. **2014,** 59, 3209-3215

2098 MODULATING CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> PEROVSKITE CRYSTALLIZATION BEHAVIOR THROUGH PRECURSOR CONCENTRATION. **2014,** 09, 1440003

8

2097 Solution Chemistry Engineering toward High-Efficiency Perovskite Solar Cells. **2014,** 5, 4175-86

209

2096 Strong Photocurrent Amplification in Perovskite Solar Cells with a Porous TiO<sub>2</sub> Blocking Layer under Reverse Bias. **2014,** 5, 3931-6

96

2095 Interplay of Orientational Order and Electronic Structure in Methylammonium Lead Iodide: Implications for Solar Cell Operation. **2014,** 26, 6557-6569

252

2094 New iridium complex as additive to the spiro-OMeTAD in perovskite solar cells with enhanced stability. **2014,** 2, 081507

55

2093 Size and concentration effects of gold nanoparticles on optical and electrical properties of plasmonic dye sensitized solar cells. **2014,** 109, 11-23

61

2092 CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3-x</sub>(BF<sub>4</sub>)<sub>x</sub>: molecular ion substituted hybrid perovskite. **2014,** 50, 9741-4

75

2091 ORGANOMETAL HALIDE PEROVSKITE PHOTOVOLTAICS: A DIAMOND IN THE ROUGH. **2014,** 09, 1440002

23

2090 Shape-controlled synthesis of organolead halide perovskite nanocrystals and their tunable optical absorption. **2014,** 1, 015034

35

2089 Photocurrent induced by conducting channels of hole transporting layer to adjacent photoactive perovskite sensitized TiO<sub>2</sub> thin film: solar cell paradigm. **2014,** 30, 12786-94

32

2088 Recent developments in dye-sensitized solar cells. **2014,** 15, 3902-27

73

2087 Conformal organohalide perovskites enable lasing on spherical resonators. **2014,** 8, 10947-52

290

2086 A layered hybrid perovskite solar-cell absorber with enhanced moisture stability. **2014,** 53, 11232-5

1217

2085 Quantum Dot-Sensitized Solar Cells. **2014,** 89-136

2

2084 Perovskite solar cell with an efficient TiO<sub>2</sub> compact film. **2014,** 6, 15959-65

258

2083	First-Principles Hybrid Functional Study of the Organic-Inorganic Perovskites CH <sub>3</sub> NH <sub>3</sub> SnBr <sub>3</sub> and CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> . <b>2014</b> , 118, 24383-24388	104
2082	Liquid phase deposition of TiO <sub>2</sub> nanolayer affords CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /nanocarbon solar cells with high open-circuit voltage. <b>2014</b> , 176, 271-86	47
2081	Perowskit als Lichtabsorptionsmaterial: ein Durchbruch in der Photovoltaik. <b>2014</b> , 126, 2854-2867	85
2080	A Layered Hybrid Perovskite Solar-Cell Absorber with Enhanced Moisture Stability. <b>2014</b> , 126, 11414-11417	577
2079	High-performance planar heterojunction perovskite solar cells: Preserving long charge carrier diffusion lengths and interfacial engineering. <b>2014</b> , 7, 1749-1758	180
2078	The light and shade of perovskite solar cells. <b>2014</b> , 13, 838-42	1600
2077	Size-controlled SiO <sub>2</sub> nanoparticles as scaffold layers in thin-film perovskite solar cells. <b>2014</b> , 2, 16429-16433	67
2076	Influence of compact TiO <sub>2</sub> layer on the photovoltaic characteristics of the organometal halide perovskite-based solar cells. <b>2014</b> , 27, 569-576	25
2075	Termination Dependence of Tetragonal CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Surfaces for Perovskite Solar Cells. <b>2014</b> , 5, 2903-9	272
2074	Binary-metal perovskites toward high-performance planar-heterojunction hybrid solar cells. <b>2014</b> , 26, 6454-60	259
2073	Band filling with free charge carriers in organometal halide perovskites. <b>2014</b> , 8, 737-743	772
2072	Planar heterojunction perovskite/PC71BM solar cells with enhanced open-circuit voltage via a (2/1)-step spin-coating process. <b>2014</b> , 2, 15897-15903	288
2071	Multifunctional perovskite capping layers in hybrid solar cells. <b>2014</b> , 2, 14973	55
2070	Effective hole extraction using MoO <sub>x</sub> -Al contact in perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> solar cells. <b>2014</b> , 104, 213906	126
2069	Boosting the power conversion efficiency of perovskite solar cells using self-organized polymeric hole extraction layers with high work function. <b>2014</b> , 26, 6461-6	295
2068	Novel ruthenium sensitizers having different numbers of carboxyl groups for dye-sensitized solar cells: effects of the adsorption manner at the TiO <sub>2</sub> surface on the solar cell performance. <b>2014</b> , 53, 9375-84	21
2067	First-Principles Study of Lead Iodide Perovskite Tetragonal and Orthorhombic Phases for Photovoltaics. <b>2014</b> , 118, 19565-19571	196
2066	Photoanode Based on (001)-Oriented Anatase Nanoplatelets for Organic-Inorganic Lead Iodide Perovskite Solar Cell. <b>2014</b> , 26, 4675-4678	38

2065	Low band gap S,N-heteroacene-based oligothiophenes as hole-transporting and light absorbing materials for efficient perovskite-based solar cells. <b>2014</b> , 7, 2981	119
2064	Real-space observation of unbalanced charge distribution inside a perovskite-sensitized solar cell. <b>2014</b> , 5, 5001	262
2063	Growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> cuboids with controlled size for high-efficiency perovskite solar cells. <b>2014</b> , 9, 927-32	1442
2062	Photoinduced Giant Dielectric Constant in Lead Halide Perovskite Solar Cells. <b>2014</b> , 5, 2390-4	551
2061	Femtosecond time-resolved transient absorption spectroscopy of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite films: evidence for passivation effect of PbI <sub>2</sub> . <b>2014</b> , 136, 12205-8	417
2060	Recent Research Developments of Perovskite Solar Cells. <b>2014</b> , 32, 957-963	31
2059	Correlated electron-hole plasma in organometal perovskites. <b>2014</b> , 5, 5049	437
2058	A perspective on the production of dye-sensitized solar modules. <b>2014</b> , 7, 3952-3981	325
2057	Enhanced photoluminescence and solar cell performance via Lewis base passivation of organic-inorganic lead halide perovskites. <b>2014</b> , 8, 9815-21	1194
2056	Radiative Recombination and Photoconversion of Methylammonium Lead Iodide Perovskite by First Principles: Properties of an Inorganic Semiconductor within a Hybrid Body. <b>2014</b> , 118, 24843-24853	69
2055	Water photolysis at 12.3% efficiency via perovskite photovoltaics and Earth-abundant catalysts. <b>2014</b> , 345, 1593-6	1920
2054	Charge transfer and recombination at the metal oxide/CH <sub>3</sub> NH <sub>3</sub> PbCl <sub>2</sub> /spiro-OMeTAD interfaces: uncovering the detailed mechanism behind high efficiency solar cells. <b>2014</b> , 16, 19984-92	78
2053	Carbon nanotube/polymer composites as a highly stable hole collection layer in perovskite solar cells. <b>2014</b> , 14, 5561-8	944
2052	Computed and Experimental Absorption Spectra of the Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2014</b> , 5, 3061-5	80
2051	Structure engineering of hole-conductor free perovskite-based solar cells with low-temperature-processed commercial carbon paste as cathode. <b>2014</b> , 6, 16140-6	214
2050	Infrared-driven unimolecular reaction of CH <sub>2</sub> HOOC Criegee intermediates to OH radical products. <b>2014</b> , 345, 1596-8	102
2049	Efficient organic-inorganic hybrid perovskite solar cells processed in air. <b>2014</b> , 16, 24691-6	56
2048	Monitoring the Phase Formation of Coevaporated Lead Halide Perovskite Thin Films by in Situ X-ray Diffraction. <b>2014</b> , 5, 3308-12	81

2047	Gas-assisted preparation of lead iodide perovskite films consisting of a monolayer of single crystalline grains for high efficiency planar solar cells. <b>2014</b> , 10, 10-18	461
2046	Perovskite photovoltaics: a high-efficiency newcomer to the solar cell family. <i>Nanoscale</i> , <b>2014</b> , 6, 12287-97	104
2045	Elucidating Transport-Recombination Mechanisms in Perovskite Solar Cells by Small-Perturbation Techniques. <b>2014</b> , 118, 22913-22922	155
2044	Highly efficient fullerene/perovskite planar heterojunction solar cells via cathode modification with an amino-functionalized polymer interlayer. <b>2014</b> , 2, 19598-19603	174
2043	Efficient star-shaped hole transporting materials with diphenylethenyl side arms for an efficient perovskite solar cell. <b>2014</b> , 2, 19136-19140	107
2042	The emergence of perovskite solar cells. <b>2014</b> , 8, 506-514	453 <sup>8</sup>
2041	Bifacial illuminated PbS quantum dot-sensitized solar cells with translucent CuS counter electrodes. <b>2014</b> , 25, 3016-3022	6
2040	An 80.11% FF record achieved for perovskite solar cells by using the NH <sub>4</sub> Cl additive. <i>Nanoscale</i> , <b>2014</b> , 6, 9935-8	7-7 342
2039	A hybrid lead iodide perovskite and lead sulfide QD heterojunction solar cell to obtain a panchromatic response. <b>2014</b> , 2, 11586-11590	64
2038	Improving conversion efficiency of CdS quantum dots-sensitized TiO <sub>2</sub> nanotube arrays by doping with Zn <sup>2+</sup> and decorating with ZnO nanoparticles. <b>2014</b> , 146, 531-537	11
2037	Lessons learned: from dye-sensitized solar cells to all-solid-state hybrid devices. <b>2014</b> , 26, 4013-30	133
2036	Highly conjugated electron rich thiophene antennas on phenothiazine and phenoxazine-based sensitizers for dye sensitized solar cells. <b>2014</b> , 195, 208-216	29
2035	Organolead halide perovskite: A rising player in high-efficiency solar cells. <b>2014</b> , 35, 983-988	22
2034	Structural and electronic properties of organo-halide lead perovskites: a combined IR-spectroscopy and ab initio molecular dynamics investigation. <b>2014</b> , 16, 16137-44	195
2033	Organo-metal halide perovskite-based solar cells with CuSCN as the inorganic hole selective contact. <b>2014</b> , 2, 12754-12760	157
2032	Organo-metal perovskite based solar cells: sensitized versus planar architecture. <b>2014</b> , 4, 29012-29021	51
2031	Mesoporous perovskite solar cells: material composition, charge-carrier dynamics, and device characteristics. <b>2014</b> , 176, 301-12	103
2030	A thin pristine non-triarylamine hole-transporting material layer for efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2014</b> , 4, 32918	35

2029	Morphology-photovoltaic property correlation in perovskite solar cells: One-step versus two-step deposition of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2014</b> , 2, 081510	337
2028	Efficient planar perovskite solar cells based on 1.8 eV band gap CH <sub>3</sub> NH <sub>3</sub> PbI <sub>2</sub> Br nanosheets via thermal decomposition. <b>2014</b> , 136, 12241-4	203
2027	Surfactant enhanced surface coverage of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx perovskite for highly efficient mesoscopic solar cells. <b>2014</b> , 272, 351-355	44
2026	Enhanced Crystallinity in Organic/Inorganic Lead Halide Perovskites on Mesoporous TiO <sub>2</sub> via Disorder/Order Phase Transition. <b>2014</b> , 26, 4466-4471	110
2025	Hole-transporting small molecules based on thiophene cores for high efficiency perovskite solar cells. <b>2014</b> , 7, 3420-5	122
2024	Unraveling the nanoscale morphologies of mesoporous perovskite solar cells and their correlation to device performance. <b>2014</b> , 14, 2735-40	49
2023	Influence of Thermal Processing Protocol upon the Crystallization and Photovoltaic Performance of Organic/Inorganic Lead Trihalide Perovskites. <b>2014</b> , 118, 17171-17177	214
2022	Slow Dynamic Processes in Lead Halide Perovskite Solar Cells. Characteristic Times and Hysteresis. <b>2014</b> , 5, 2357-63	556
2021	Mixed-organic-cation perovskite photovoltaics for enhanced solar-light harvesting. <b>2014</b> , 53, 3151-7	960
2020	Metal-Oxide-Free Methylammonium Lead Iodide Perovskite-Based Solar Cells: the Influence of Organic Charge Transport Layers. <b>2014</b> , 4, 1400345	148
2019	High-efficiency perovskite solar cells based on the black polymorph of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> . <b>2014</b> , 26, 4991-8	732
2018	Thermally induced structural evolution and performance of mesoporous block copolymer-directed alumina perovskite solar cells. <b>2014</b> , 8, 4730-9	241
2017	Organolead halide perovskites: a family of promising semiconductor materials for solar cells. <b>2014</b> , 59, 2092-2101	15
2016	Laminated carbon nanotube networks for metal electrode-free efficient perovskite solar cells. <b>2014</b> , 8, 6797-804	371
2015	Benefits of very thin PCBM and LiF layers for solution-processed p-i-n perovskite solar cells. <b>2014</b> , 7, 2642-2646	570
2014	CH <sub>3</sub> NH <sub>3</sub> SnxPb(1-x)I <sub>3</sub> Perovskite Solar Cells Covering up to 1060 nm. <b>2014</b> , 5, 1004-11	734
2013	Organometallic Halide Perovskites: Sharp Optical Absorption Edge and Its Relation to Photovoltaic Performance. <b>2014</b> , 5, 1035-9	1699
2012	Enhanced photovoltaic performance of perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> solar cells with freestanding TiO <sub>2</sub> nanotube array films. <b>2014</b> , 50, 6368-71	142

2011	Perovskite solar cells with 12.8% efficiency by using conjugated quinolino acridine based hole transporting material. <b>2014</b> , 136, 8516-9	228
2010	Anomalous Hysteresis in Perovskite Solar Cells. <b>2014</b> , 5, 1511-5	1951
2009	Enhanced photovoltaic performance utilizing effective charge transfers and light scattering effects by the combination of mesoporous, hollow 3D-ZnO along with 1D-ZnO in CdS quantum dot sensitized solar cells. <b>2014</b> , 16, 9625-33	27
2008	Fabrication and Characterization of TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -based Photovoltaic Devices. <b>2014</b> , 43, 916-918	34
2007	Ein Klassiker im neuen Gewand: Perowskit-Solarzellen. <b>2014</b> , 126, 647-649	19
2006	A Simple 3,4-Ethylenedioxythiophene Based Hole-Transporting Material for Perovskite Solar Cells. <b>2014</b> , 126, 4169-4172	61
2005	Two-step deposition method for high-efficiency perovskite solar cells. <b>2015</b> , 40, 654-659	38
2004	Vapor-assisted solution process for perovskite materials and solar cells. <b>2015</b> , 40, 667-673	32
2003	Steps toward efficient inorganic-organic hybrid perovskite solar cells. <b>2015</b> , 40, 648-653	28
2002	Effects of Niobium Addition into TiO <sub>2</sub> Layers on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -based Photovoltaic Devices. <b>2015</b> , 44, 1033-1035	20
2001	Improving the Stability of a Liquid-type Perovskite Solar Cell by Capping Spiro-OMeTAD Layer onto CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> Film. <b>2015</b> , 44, 1446-1448	1
2000	Silver Iodide Formation in Methyl Ammonium Lead Iodide Perovskite Solar Cells with Silver Top Electrodes. <b>2015</b> , 2, 1500195	500
1999	Lattice dynamics and vibrational spectra of the orthorhombic, tetragonal, and cubic phases of methylammonium lead iodide. <b>2015</b> , 92,	360
1998	Electrodeposited Ultrathin TiO <sub>2</sub> Blocking Layers for Efficient Perovskite Solar Cells. <b>2015</b> , 5, 16098	80
1997	Organometal Halide Perovskites for Photovoltaic Applications. <b>2015</b> , 535-566	7
1996	Lead: Inorganic Chemistry. <b>2015</b> , 1-24	3
1995	Determination of Chloride Content in Planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -Cl <sub>x</sub> Solar Cells by Chemical Analysis. <b>2015</b> , 44, 1089-1091	29
1994	Perovskite Photovoltaics: Rare Functions of Organo Lead Halide in Solar Cells and Optoelectronic Devices. <b>2015</b> , 44, 720-729	194



1993	Effects of Different Solvents on the Planar Hetero-junction Perovskite Solar Cells. <b>2015</b> , 22, 05002	6
1992	Electronic structure and optical properties of Cs <sub>2</sub> AX <sub>2</sub> X <sub>4</sub> (A=Ge,Sn,Pb; X <sub>2</sub> ,X=Cl,Br,I). <b>2015</b> , 5, 127224	17
1991	Stable and Efficient Perovskite Solar Cells Based on Titania Nanotube Arrays. <b>2015</b> , 11, 5533-9	69
1990	Efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells Employing Nanostructured p-Type NiO Electrode Formed by a Pulsed Laser Deposition. <b>2015</b> , 27, 4013-9	414
1989	Planar Heterojunction Perovskite Solar Cells Incorporating Metal-Organic Framework Nanocrystals. <b>2015</b> , 27, 7229-35	105
1988	Light-Induced Self-Poling Effect on Organometal Trihalide Perovskite Solar Cells for Increased Device Efficiency and Stability. <b>2015</b> , 5, 1500721	182
1987	Beyond Efficiency: the Challenge of Stability in Mesoscopic Perovskite Solar Cells. <b>2015</b> , 5, 1501066	335
1986	Plasmonic-Induced Photon Recycling in Metal Halide Perovskite Solar Cells. <b>2015</b> , 25, 5038-5046	167
1985	Copper(I) Iodide as Hole-Conductor in Planar Perovskite Solar Cells: Probing the Origin of J <sub>V</sub> Hysteresis. <b>2015</b> , 25, 5650-5661	224
1984	Stability of Metal Halide Perovskite Solar Cells. <b>2015</b> , 5, 1500963	861
1983	Probing Molecular and Crystalline Orientation in Solution-Processed Perovskite Solar Cells. <b>2015</b> , 25, 5529-5536	51
1982	Upscaling of Perovskite Solar Cells: Fully Ambient Roll Processing of Flexible Perovskite Solar Cells with Printed Back Electrodes. <b>2015</b> , 5, 1500569	258
1981	Methylamine-Gas-Induced Defect-Healing Behavior of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films for Perovskite Solar Cells. <b>2015</b> , 54, 9705-9	326
1980	Life Cycle Assessment of Titania Perovskite Solar Cell Technology for Sustainable Design and Manufacturing. <b>2015</b> , 8, 3882-91	50
1979	Charge Accumulation and Hysteresis in Perovskite-Based Solar Cells: An Electro-Optical Analysis. <b>2015</b> , 5, 1500829	196
1978	Solution-Processed Cu <sub>2</sub> O and CuO as Hole Transport Materials for Efficient Perovskite Solar Cells. <b>2015</b> , 11, 5528-32	352
1977	Selective Deposition of Insulating Metal Oxide in Perovskite Solar Cells with Enhanced Device Performance. <b>2015</b> , 8, 2625-9	9
1976	Efficiency Records in Mesoscopic Dye-Sensitized Solar Cells. <b>2015</b> , 15, 803-28	36

1975	High-Performance Semitransparent Perovskite Solar Cells with 10% Power Conversion Efficiency and 25% Average Visible Transmittance Based on Transparent CuSCN as the Hole-Transporting Material. <b>2015</b> , 5, 1500486	181
1974	Understanding the Impact of Bromide on the Photovoltaic Performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Solar Cells. <b>2015</b> , 27, 7221-8	70
1973	A Strategy to Design a Donor-Acceptor Polymeric Hole Conductor for an Efficient Perovskite Solar Cell. <b>2015</b> , 5, 1500471	50
1972	Methylamine-Gas-Induced Defect-Healing Behavior of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films for Perovskite Solar Cells. <b>2015</b> , 127, 9841-9845	35
1971	Hierarchically Structured Hole Transport Layers of Spiro-OMeTAD and Multiwalled Carbon Nanotubes for Perovskite Solar Cells. <b>2015</b> , 8, 2358-62	54
1970	Control and Study of the Stoichiometry in Evaporated Perovskite Solar Cells. <b>2015</b> , 8, 3847-52	49
1969	Electrochemical Impedance Spectroscopic Analysis of Sensitization-Based Solar Cells. <b>2015</b> , 55, 990-1001	28
1968	Efficient Hole Transporting Materials with Two or Four N,N-Di(4-methoxyphenyl)aminophenyl Arms on an Ethene Unit for Perovskite Solar Cells. <b>2015</b> , 21, 15919-23	33
1967	High-Performance Planar Solar Cells Based On CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xCl <sub>x</sub> Perovskites with Determined Chlorine Mole Fraction. <b>2015</b> , 25, 4867-4873	89
1966	Bismuth Based Hybrid Perovskites A <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> (A: Methylammonium or Cesium) for Solar Cell Application. <b>2015</b> , 27, 6806-13	807
1965	Formamidinium and Cesium Hybridization for Photo- and Moisture-Stable Perovskite Solar Cell. <b>2015</b> , 5, 1501310	1085
1964	Mechanically Recoverable and Highly Efficient Perovskite Solar Cells: Investigation of Intrinsic Flexibility of Organic/Inorganic Perovskite. <b>2015</b> , 5, 1501406	106
1963	Fabrication and Characterization of a Perovskite-Type Solar Cell with a Substrate Size of 70 mm. <b>2015</b> , 5, 646-655	18
1962	Material Exchange Property of Organo Lead Halide Perovskite with Hole-Transporting Materials. <b>2015</b> , 2, 1043-1053	16
1961	Stability Issues on Perovskite Solar Cells. <b>2015</b> , 2, 1139-1151	158
1960	Crystal Structures of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> and Related Perovskite Compounds Used for Solar Cells. <b>2015</b> ,	51
1959	Hybrid Organic-Inorganic Perovskites Open a New Era for Low-Cost, High Efficiency Solar Cells. <b>2015</b> , 2015, 1-10	14
1958	Perovskite Solar Cells: Potentials, Challenges, and Opportunities. <b>2015</b> , 2015, 1-13	47

1957	Sb <sub>2</sub> S <sub>3</sub> Quantum-Dot Sensitized Solar Cells with Silicon Nanowire Photoelectrode. <b>2015</b> , 2015, 1-10	2
1956	Development and Prospect of Nanoarchitected Solar Cells. <b>2015</b> , 2015, 1-11	4
1955	. <b>2015</b> ,	12
1954	The dynamics of methylammonium ions in hybrid organic-inorganic perovskite solar cells. <b>2015</b> , 6, 7124	446
1953	Modulation of photovoltage in mesoscopic perovskite solar cell by controlled interfacial electron injection. <b>2015</b> , 5, 47334-47340	23
1952	PV glazing technologies. <b>2015</b> , 49, 306-322	114
1951	Fiber-Shaped Perovskite Solar Cell. <b>2015</b> , 97-115	1
1950	Solvent engineering towards controlled grain growth in perovskite planar heterojunction solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 10595-9	7-7 251
1949	Solid state transformation of the crystalline monohydrate (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> (H <sub>2</sub> O) to the (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> perovskite. <b>2015</b> , 51, 11290-2	40
1948	A computational view of the change in the geometric and electronic properties of perovskites caused by the partial substitution of Pb by Sn. <b>2015</b> , 17, 17679-87	37
1947	Pinhole-free hole transport layers significantly improve the stability of MAPbI <sub>3</sub> -based perovskite solar cells under operating conditions. <b>2015</b> , 3, 15451-15456	101
1946	Study on hole-transport-material-free planar TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> heterojunction solar cells: the simplest configuration of a working perovskite solar cell. <b>2015</b> , 3, 14902-14909	39
1945	Growth of large CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X=I, Br) single crystals in solution. <b>2015</b> , 422, 75-79	46
1944	Effects of incorporating PbS quantum dots in perovskite solar cells based on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2015</b> , 293, 577-584	47
1943	Self-template-directed synthesis of porous perovskite nanowires at room temperature for high-performance visible-light photodetectors. <b>2015</b> , 54, 5693-6	176
1942	Substantial improvement of perovskite solar cells stability by pinhole-free hole transport layer with doping engineering. <b>2015</b> , 5, 9863	101
1941	Elucidating the reaction pathways in the synthesis of organolead trihalide perovskite for high-performance solar cells. <b>2015</b> , 5, 10557	45
1940	Improving efficiency of planar hybrid CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Cl <sub>x</sub> perovskite solar cells by isopropanol solvent treatment. <b>2015</b> , 24, 205-211	38

1939	Free-standing flexible carbon electrode for highly efficient hole-conductor-free perovskite solar cells. <b>2015</b> , 93, 861-868	158
1938	Smooth perovskite thin films and efficient perovskite solar cells prepared by the hybrid deposition method. <b>2015</b> , 3, 14631-14641	108
1937	Efficient and non-hysteresis CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /PCBM planar heterojunction solar cells. <b>2015</b> , 24, 106-112	89
1936	Ferroelectric Polarization of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> : A Detailed Study Based on Density Functional Theory and Symmetry Mode Analysis. <b>2015</b> , 6, 2223-31	151
1935	Defect migration in methylammonium lead iodide and its role in perovskite solar cell operation. <b>2015</b> , 8, 2118-2127	1003
1934	Effects of Oxide Contact Layer on the Preparation and Properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for Perovskite Solar Cell Application. <b>2015</b> , 119, 14919-14928	74
1933	Fast Crystallization and Improved Stability of Perovskite Solar Cells with Zn <sub>2</sub> SnO <sub>4</sub> Electron Transporting Layer: Interface Matters. <b>2015</b> , 7, 28404-11	94
1932	Perovskites: Solar cells & engineering applications [materials and device developments. <b>2015</b> , 122, 678-699	90
1931	Exploring the performance limiting parameters of perovskite solar cell through experimental analysis and device simulation. <b>2015</b> , 122, 773-782	32
1930	Microstructures of Organometal Trihalide Perovskites for Solar Cells: Their Evolution from Solutions and Characterization. <b>2015</b> , 6, 4827-39	283
1929	Comparison of Recombination Dynamics in CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Films: Influence of Exciton Binding Energy. <b>2015</b> , 6, 4688-92	284
1928	TiO <sub>2</sub> quantum dots as superb compact block layers for high-performance CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells with an efficiency of 16.97. <i>Nanoscale</i> , <b>2015</b> , 7, 20539-46	7.7 76
1927	Thickness of the hole transport layer in perovskite solar cells: performance versus reproducibility. <b>2015</b> , 5, 99356-99360	61
1926	Beyond silicon: Alternative photovoltaic technologies. <b>2015</b> ,	
1925	Numerical analysis of hybrid perovskite solar cells using inorganic hole conducting material. <b>2015</b> ,	2
1924	Low temperature two-step solution process for perovskite solar cells with planar structure. <b>2015</b> ,	
1923	Evaluation of radiation tolerance of perovskite solar cell for use in space. <b>2015</b> ,	16
1922	Illumination dependent carrier dynamics of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> perovskite. <b>2015</b> ,	

1921	Thermodynamic regulation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> crystal growth and its effect on photovoltaic performance of perovskite solar cells. <b>2015</b> , 3, 19901-19906	78
1920	Effect of ferroelectric nanodomains in perovskite solar cells. <b>2015</b> ,	
1919	Shell-in-Shell TiO <sub>2</sub> hollow microspheres and optimized application in light-trapping perovskite solar cells. <b>2015</b> , 40, 60-66	16
1918	Chalcogenide perovskites for photovoltaics. <b>2015</b> , 15, 581-5	160
1917	New generation solar cells: concepts, trends and perspectives. <b>2015</b> , 51, 3957-72	134
1916	Advancements in all-solid-state hybrid solar cells based on organometal halide perovskites. <b>2015</b> , 2, 378-405	102
1915	Understanding the rate-dependent J-V hysteresis, slow time component, and aging in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells: the role of a compensated electric field. <b>2015</b> , 8, 995-1004	998
1914	Structure and function relationships in alkylammonium lead(II) iodide solar cells. <b>2015</b> , 3, 9201-9207	52
1913	A bifacial quantum dot-sensitized solar cell with all-lead sulfide photoanode. <b>2015</b> , 276, 215-221	8
1912	Superior Photovoltaic Properties of Lead Halide Perovskites: Insights from First-Principles Theory. <b>2015</b> , 119, 5253-5264	186
1911	Nanocarbons for mesoscopic perovskite solar cells. <b>2015</b> , 3, 9020-9031	88
1910	Ultrathin Atomic Layer Deposited TiO <sub>2</sub> for Surface Passivation of Hydrothermally Grown 1D TiO <sub>2</sub> Nanorod Arrays for Efficient Solid-State Perovskite Solar Cells. <b>2015</b> , 27, 1541-1551	157
1909	Influence of Air Annealing on High Efficiency Planar Structure Perovskite Solar Cells. <b>2015</b> , 27, 1597-1603	212
1908	Organic-organic halide perovskite based solar cells – revolutionary progress in photovoltaics. <b>2015</b> , 2, 315-335	55
1907	Resonance Raman and excitation energy dependent charge transfer mechanism in halide-substituted hybrid perovskite solar cells. <b>2015</b> , 9, 2088-101	124
1906	Control of organic-organic halide perovskites in solid-state solar cells: a perspective. <b>2015</b> , 60, 405-418	37
1905	Organic photovoltaic initial stage degradation analysis using impedance spectroscopy. <b>2015</b> , 202, 63-67	6
1904	Low-Temperature Processed and Carbon-Based ZnO/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /C Planar Heterojunction Perovskite Solar Cells. <b>2015</b> , 119, 4600-4605	132

1903	Multi-dimensional titanium dioxide with desirable structural qualities for enhanced performance in quantum-dot sensitized solar cells. <b>2015</b> , 282, 202-210		40
1902	Ferroelectric Domain Wall Induced Band Gap Reduction and Charge Separation in Organometal Halide Perovskites. <b>2015</b> , 6, 693-9		258
1901	Zr Incorporation into TiO <sub>2</sub> Electrodes Reduces Hysteresis and Improves Performance in Hybrid Perovskite Solar Cells while Increasing Carrier Lifetimes. <b>2015</b> , 6, 669-75		91
1900	Electrolytes in dye-sensitized solar cells. <b>2015</b> , 115, 2136-73		744
1899	Growth, patterning and alignment of organolead iodide perovskite nanowires for optoelectronic devices. <i>Nanoscale</i> , <b>2015</b> , 7, 4163-70	7-7	149
1898	Trap states in lead iodide perovskites. <b>2015</b> , 137, 2089-96		672
1897	Atmospheric effects on the photovoltaic performance of hybrid perovskite solar cells. <b>2015</b> , 137, 6-14		101
1896	Investigation on regeneration kinetics at perovskite/oxide interface with scanning electrochemical microscopy. <b>2015</b> , 3, 9216-9222		17
1895	Inverted planar heterojunction perovskite solar cells employing polymer as the electron conductor. <b>2015</b> , 7, 3994-9		87
1894	Fiber-Shaped Energy Harvesting and Storage Devices. <b>2015</b> ,		25
1893	Fabrication of metal-oxide-free CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells processed at low temperature. <b>2015</b> , 3, 3271-3275		147
1892	Efficiency enhancement by defect engineering in perovskite photovoltaic cells prepared using evaporated PbI <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> I multilayers. <b>2015</b> , 3, 9223-9231		63
1891	Perovskite thin-film solar cell: excitation in photovoltaic science. <b>2015</b> , 58, 221-238		54
1890	Uniform, stable, and efficient planar-heterojunction perovskite solar cells by facile low-pressure chemical vapor deposition under fully open-air conditions. <b>2015</b> , 7, 2708-14		155
1889	Upconversion enhancement of lanthanide-doped NaYF <sub>4</sub> for quantum dot-sensitized solar cells. <b>2015</b> , 155, 357-363		30
1888	High efficiency solar cells combining a perovskite and a silicon heterojunction solar cells via an optical splitting system. <b>2015</b> , 106, 013506		100
1887	Inorganic p-type contact materials for perovskite-based solar cells. <b>2015</b> , 3, 9011-9019		133
1886	The theoretical investigation on the 4-(4-phenyl-4-thiaphthylbutadieny)-triphenylamine derivatives as hole transporting materials for perovskite-type solar cells. <b>2015</b> , 17, 5991-8		60

1885	Spontaneous Defect Annihilation in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films at Room Temperature Revealed by Time-Resolved Photoluminescence Spectroscopy. <b>2015</b> , 6, 482-6	72
1884	Facile preparation of organometallic perovskite films and high-efficiency solar cells using solid-state chemistry. <b>2015</b> , 8, 263-270	30
1883	Photoelectronic Responses in Solution-Processed Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Solar Cells Studied by Photoluminescence and Photoabsorption Spectroscopy. <b>2015</b> , 5, 401-405	151
1882	Fabrication of Planar Heterojunction Perovskite Solar Cells by Controlled Low-Pressure Vapor Annealing. <b>2015</b> , 6, 493-9	103
1881	Comparative study of vapor- and solution-crystallized perovskite for planar heterojunction solar cells. <b>2015</b> , 7, 3382-8	54
1880	Efficient hybrid mesoscopic solar cells with morphology-controlled CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xCl <sub>x</sub> derived from two-step spin coating method. <b>2015</b> , 7, 2242-8	85
1879	Thermal Effects on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite from Ab Initio Molecular Dynamics Simulations. <b>2015</b> , 119, 8991-8997	101
1878	Structural and electronic properties of organo-halide hybrid perovskites from ab initio molecular dynamics. <b>2015</b> , 17, 9394-409	116
1877	Rapid processing of perovskite solar cells in under 2.5 seconds. <b>2015</b> , 3, 9123-9127	54
1876	Formation of organic/organic mixed halide perovskite films by thermal evaporation of PbCl <sub>2</sub> and CH <sub>3</sub> NH <sub>3</sub> I compounds. <b>2015</b> , 5, 26175-26180	44
1875	Nanowire perovskite solar cell. <b>2015</b> , 15, 2120-6	282
1874	Perovskite solar cells: film formation and properties. <b>2015</b> , 3, 9032-9050	327
1873	Mesoporous SnO <sub>2</sub> nanoparticle films as electron-transporting material in perovskite solar cells. <b>2015</b> , 5, 28424-28429	124
1872	Hot-Electron Injection in a Sandwiched TiO <sub>2</sub> /Au/TiO <sub>2</sub> Structure for High-Performance Planar Perovskite Solar Cells. <b>2015</b> , 5, 1500038	100
1871	Triple cathode buffer layers composed of PCBM, C60, and LiF for high-performance planar perovskite solar cells. <b>2015</b> , 7, 6230-7	114
1870	15.76% efficiency perovskite solar cells prepared under high relative humidity: importance of PbI <sub>2</sub> morphology in two-step deposition of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2015</b> , 3, 8808-8815	267
1869	Enhanced performance in hybrid perovskite solar cell by modification with spinel lithium titanate. <b>2015</b> , 3, 8882-8889	19
1868	Enhancing the photocurrent of perovskite solar cells via modification of the TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> heterojunction interface with amino acid. <b>2015</b> , 3, 9133-9136	85

1867	Once again, organometallic tri-halide perovskites. <b>2015</b> , 18, 172-173	13
1866	Degradation observations of encapsulated planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells at high temperatures and humidity. <b>2015</b> , 3, 8139-8147	739
1865	Indolocarbazole based small molecules: an efficient hole transporting material for perovskite solar cells. <b>2015</b> , 5, 55321-55327	37
1864	AgAl alloy electrode for efficient perovskite solar cells. <b>2015</b> , 5, 56037-56044	19
1863	Thickness effects of ZnO thin film on the performance of tri-iodide perovskite absorber based photovoltaics. <b>2015</b> , 120, 117-122	35
1862	Cubic Perovskite Structure of Black Formamidinium Lead Iodide, [HC(NH <sub>2</sub> ) <sub>2</sub> ]PbI <sub>3</sub> , at 298 K. <b>2015</b> , 6, 3209-3212	343
1861	Optimizing Composition and Morphology for Large-Grain Perovskite Solar Cells via Chemical Control. <b>2015</b> , 27, 5570-5576	78
1860	Air-processed, efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx perovskite solar cells with organic polymer PTB7 as a hole-transport layer. <b>2015</b> , 5, 66981-66987	28
1859	Organic dyes for the sensitization of nanostructured ZnO photoanodes: effect of the anchoring functions. <b>2015</b> , 5, 68929-68938	6
1858	Uncovering the Veil of the Degradation in Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> upon Humidity Exposure: A First-Principles Study. <b>2015</b> , 6, 3289-3295	147
1857	Efficient planar perovskite solar cells with large fill factor and excellent stability. <b>2015</b> , 297, 53-58	51
1856	Effect of surface composition on electronic properties of methylammonium lead iodide perovskite. <b>2015</b> , 1, 213-220	42
1855	High efficiency stable inverted perovskite solar cells without current hysteresis. <b>2015</b> , 8, 2725-2733	479
1854	Efficient electron-blocking layer-free planar heterojunction perovskite solar cells with a high open-circuit voltage. <b>2015</b> , 26, 265-272	77
1853	Solvent-assisted growth of organichorganic hybrid perovskites with enhanced photovoltaic performances. <b>2015</b> , 143, 360-368	14
1852	Efficient Light Harvester Layer Prepared by Solid/Mist Interface Reaction for Perovskite Solar Cells. <b>2015</b> , 7, 16907-12	22
1851	Glimpses of the modification of perovskite with graphene-analogous materials in photocatalytic applications. <b>2015</b> , 2, 807-823	29
1850	Interface engineering for high-performance perovskite hybrid solar cells. <b>2015</b> , 3, 19205-19217	127



1849	A tubular perovskite solar cell: improvement of charge separation at the perovskite/HTM interface. <b>2015</b> , 51, 14076-9	15
1848	Energetics and dynamics in organic-inorganic halide perovskite photovoltaics and light emitters. <b>2015</b> , 26, 342001	61
1847	Study on structure, thermal stabilization and light absorption of lead-bromide perovskite light harvesters. <b>2015</b> , 26, 8726-8731	7
1846	Ultrafast photoinduced dynamics of the organolead trihalide perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> on mesoporous TiO <sub>2</sub> scaffolds in the 320-920 nm range. <b>2015</b> , 17, 19238-46	46
1845	Formamidinium tin-based perovskite with low E <sub>g</sub> for photovoltaic applications. <b>2015</b> , 3, 14996-15000	338
1844	Recent advances in flexible perovskite solar cells. <b>2015</b> , 51, 14696-707	71
1843	A mesoporous nickel counter electrode for printable and reusable perovskite solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 13363-8	7-7 51
1842	Perovskite Solar Cells with Near 100% Internal Quantum Efficiency Based on Large Single Crystalline Grains and Vertical Bulk Heterojunctions. <b>2015</b> , 137, 9210-3	210
1841	Transparent conducting oxide free backside illuminated perovskite solar cells. <b>2015</b> , 107, 013901	8
1840	Reversible Halide Exchange Reaction of Organometal Trihalide Perovskite Colloidal Nanocrystals for Full-Range Band Gap Tuning. <b>2015</b> , 15, 5191-9	359
1839	Recent advances in critical materials for quantum dot-sensitized solar cells: a review. <b>2015</b> , 3, 17497-17510	143
1838	Ionic transport in hybrid lead iodide perovskite solar cells. <b>2015</b> , 6, 7497	1649
1837	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Cl <sub>x</sub> in Planar or Mesoporous Perovskite Solar Cells: Comprehensive Insight into the Dependence of Performance on Architecture. <b>2015</b> , 119, 15868-15873	59
1836	Pedestrian Guide to Symmetry Properties of the Reference Cubic Structure of 3D All-Inorganic and Hybrid Perovskites. <b>2015</b> , 6, 2238-42	40
1835	Enhancing Stability of Perovskite Solar Cells to Moisture by the Facile Hydrophobic Passivation. <b>2015</b> , 7, 17330-6	249
1834	Colloidal CuInS <sub>2</sub> Quantum Dots as Inorganic Hole-Transporting Material in Perovskite Solar Cells. <b>2015</b> , 7, 17482-8	99
1833	Semitransparent Fully Air Processed Perovskite Solar Cells. <b>2015</b> , 7, 17776-81	65
1832	Perovskite solar cells: Brighter pieces of the puzzle. <b>2015</b> , 7, 616-7	13

1831	Synthetic biology: Six pack and stack. <b>2015</b> , 7, 617-9	2
1830	Morphological control of organic/inorganic perovskite layers by hot isostatic pressing for efficient planar solar cells. <b>2015</b> , 3, 17780-17787	27
1829	Perovskites for photovoltaics: a combined review of organic/inorganic halide perovskites and ferroelectric oxide perovskites. <b>2015</b> , 3, 18809-18828	186
1828	Ferroelectric Graphene-Perovskite Interfaces. <b>2015</b> , 6, 2496-502	60
1827	Towards design of metal oxide free perovskite solar cell paradigm: Materials processing and enhanced device performance. <b>2015</b> , 281, 599-605	6
1826	Under the spotlight: The organic/inorganic hybrid halide perovskite for optoelectronic applications. <b>2015</b> , 10, 355-396	700
1825	Direct measurement of the exciton binding energy and effective masses for charge carriers in organic/inorganic tri-halide perovskites. <b>2015</b> , 11, 582-587	1282
1824	Ab Initio Molecular Dynamics Simulations of Methylammonium Lead Iodide Perovskite Degradation by Water. <b>2015</b> , 27, 4885-4892	323
1823	Recent progress in efficient hybrid lead halide perovskite solar cells. <b>2015</b> , 16, 036004	72
1822	Perovskite photovoltaics: Signs of stability. <b>2015</b> , 10, 574-5	64
1821	Direct insight into crystallization and stability of hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> via solvothermal synthesis. <b>2015</b> , 3, 15854-15857	20
1820	Highly Reproducible Perovskite Solar Cells with Average Efficiency of 18.3% and Best Efficiency of 19.7% Fabricated via Lewis Base Adduct of Lead(II) Iodide. <b>2015</b> , 137, 8696-9	1751
1819	Visualized acid/base discoloration and optoelectronic investigations of azines and azomethines having double 4-[N,N-di(4-methoxyphenyl)amino]phenyl terminals. <b>2015</b> , 3, 7748-7755	12
1818	Enhanced efficiency of planar-heterojunction perovskite solar cells through a thermal gradient annealing process. <b>2015</b> , 5, 58041-58045	10
1817	Efficient, durable and flexible perovskite photovoltaic devices with Ag-embedded ITO as the top electrode on a metal substrate. <b>2015</b> , 3, 14592-14597	57
1816	Low-temperature, solution processed metal sulfide as an electron transport layer for efficient planar perovskite solar cells. <b>2015</b> , 3, 11750-11755	108
1815	A simple in situ tubular chemical vapor deposition processing of large-scale efficient perovskite solar cells and the research on their novel roll-over phenomenon in J-V curves. <b>2015</b> , 3, 12443-12451	57
1814	Stable and efficient hole transporting materials with a dimethylfluorenylamino moiety for perovskite solar cells. <b>2015</b> , 51, 9305-8	60

1813	Improved hole interfacial layer for planar perovskite solar cells with efficiency exceeding 15%. <b>2015</b> , 7, 9645-51		108
1812	Unipolar self-doping behavior in perovskite CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> . <b>2015</b> , 106, 103902		145
1811	Efficient inorganic solid solar cells composed of perovskite and PbS quantum dots. <i>Nanoscale</i> , <b>2015</b> , 7, 9902-7	7.7	66
1810	Efficient perovskite/fullerene planar heterojunction solar cells with enhanced charge extraction and suppressed charge recombination. <i>Nanoscale</i> , <b>2015</b> , 7, 9771-8	7.7	93
1809	Effects of Seed Layer on Growth of ZnO Nanorod and Performance of Perovskite Solar Cell. <b>2015</b> , 119, 10321-10328		130
1808	Efficient and stable planar heterojunction perovskite solar cells with an MoO <sub>3</sub> /PEDOT:PSS hole transporting layer. <i>Nanoscale</i> , <b>2015</b> , 7, 9427-32	7.7	182
1807	Thiols as interfacial modifiers to enhance the performance and stability of perovskite solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 9443-7	7.7	159
1806	A simple spiro-type hole transporting material for efficient perovskite solar cells. <b>2015</b> , 8, 1986-1991		184
1805	Laser-Scribing Patterning for the Production of Organometallic Halide Perovskite Solar Modules. <b>2015</b> , 5, 1087-1092		87
1804	Non-aggregated Zn(ii)octa(2,6-diphenylphenoxy) phthalocyanine as a hole transporting material for efficient perovskite solar cells. <b>2015</b> , 44, 10847-51		76
1803	On the Role of Interfaces in Planar-Structured HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Perovskite Solar Cells. <b>2015</b> , 8, 2414-9		56
1802	Use of Anodic TiO <sub>2</sub> Nanotube Layers as Mesoporous Scaffolds for Fabricating CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite-Based Solid-State Solar Cells. <b>2015</b> , 2, 824-828		32
1801	Nucleation and Crystal Growth of Organic-Inorganic Lead Halide Perovskites under Different Relative Humidity. <b>2015</b> , 7, 9110-7		113
1800	Recent Progress on Hole-Transporting Materials for Emerging Organometal Halide Perovskite Solar Cells. <b>2015</b> , 5, 1500213		376
1799	One-step, low-temperature deposited perovskite solar cell utilizing small molecule additive. <b>2015</b> , 5, 057405		41
1798	Nanocolumnar 1-dimensional TiO <sub>2</sub> photoanodes deposited by PVD-OAD for perovskite solar cell fabrication. <b>2015</b> , 3, 13291-13298		24
1797	Investigation on Interfacial Charge Transfer Process in CdSe x Te 1-x Alloyed Quantum Dot Sensitized Solar Cells. <b>2015</b> , 173, 156-163		32
1796	Planar perovskite solar cells with 15.75% power conversion efficiency by cathode and anode interfacial modification. <b>2015</b> , 3, 13533-13539		111

1795	Research progress of perovskite materials in photocatalysis- and photovoltaics-related energy conversion and environmental treatment. <b>2015</b> , 44, 5371-408	580
1794	Multifaceted Excited State of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . Charge Separation, Recombination, and Trapping. <b>2015</b> , 6, 2086-95	99
1793	Tailored SrTiO <sub>3</sub> /TiO <sub>2</sub> heterostructures for dye-sensitized solar cells with enhanced photoelectric conversion performance. <b>2015</b> , 3, 13390-13401	63
1792	Fine-tuning optical and electronic properties of graphene oxide for highly efficient perovskite solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 10708-18	7.7 66
1791	Investigating the charge carrier transport within the hole-transport material free perovskite solar cell processed in ambient air. <b>2015</b> , 140, 320-327	40
1790	A 2-terminal perovskite/silicon multijunction solar cell enabled by a silicon tunnel junction. <b>2015</b> , 106, 121105	371
1789	Self-Template-Directed Synthesis of Porous Perovskite Nanowires at Room Temperature for High-Performance Visible-Light Photodetectors. <b>2015</b> , 127, 5785-5788	42
1788	The effect of carbon black in carbon counter electrode for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> heterojunction solar cells. <b>2015</b> , 5, 30192-30196	34
1787	Chemical principles underpinning the performance of the metal-organic framework HKUST-1. <b>2015</b> , 6, 3674-3683	96
1786	A low cost azomethine-based hole transporting material for perovskite photovoltaics. <b>2015</b> , 3, 12159-12162	214
1785	Fundamental physics behind high-efficiency organo-metal halide perovskite solar cells. <b>2015</b> , 3, 15372-15385	99
1784	Colloidal Organohalide Perovskite Nanoplatelets Exhibiting Quantum Confinement. <b>2015</b> , 6, 1911-6	301
1783	Recent Progress of Innovative Perovskite Hybrid Solar Cells. <b>2015</b> , 55, 966-977	30
1782	Bright Visible-Infrared Light Emitting Diodes Based on Hybrid Halide Perovskite with Spiro-OMeTAD as a Hole-Injecting Layer. <b>2015</b> , 6, 1883-90	210
1781	Control of Nanostructures and Interfaces of Metal Oxide Semiconductors for Quantum-Dots-Sensitized Solar Cells. <b>2015</b> , 6, 1859-69	95
1780	Metal-halide perovskites for photovoltaic and light-emitting devices. <b>2015</b> , 10, 391-402	2083
1779	Emerging Thin-Film Photovoltaic Technologies. <b>2015</b> , 87, 376-389	11
1778	Thermally-activated recombination in one component of (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> /TiO <sub>2</sub> observed by photocurrent spectroscopy. <b>2015</b> , 51, 7309-12	3

1777	Alternating precursor layer deposition for highly stable perovskite films towards efficient solar cells using vacuum deposition. <b>2015</b> , 3, 9401-9405	121
1776	Solid-State Physics Perspective on Hybrid Perovskite Semiconductors. <b>2015</b> , 119, 10161-10177	175
1775	BiVO <sub>4</sub> semiconductor sensitized solar cells. <b>2015</b> , 58, 1489-1493	12
1774	Light Harvesting and Charge Recombination in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells Studied by Hole Transport Layer Thickness Variation. <b>2015</b> , 9, 4200-9	167
1773	Interfacial Electron Transfer Barrier at Compact TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Heterojunction. <b>2015</b> , 11, 3606-13	168
1772	A facile solvothermal growth of single crystal mixed halide perovskite CH <sub>3</sub> NH <sub>3</sub> Pb(Br(1-x)Cl(x)) <sub>3</sub> . <b>2015</b> , 51, 7820-3	114
1771	Efficient Solution-Processed Bulk Heterojunction Perovskite Hybrid Solar Cells. <b>2015</b> , 5, 1402024	90
1770	The cause for the low efficiency of dye sensitized solar cells with a combination of ruthenium dyes and cobalt redox. <b>2015</b> , 17, 10170-5	22
1769	A two-step route to planar perovskite cells exhibiting reduced hysteresis. <b>2015</b> , 106, 143902	74
1768	Phosphor positioning for effective wavelength conversion in dye-sensitized solar cells. <b>2015</b> , 13, 573-581	22
1767	Hierarchical i <sub>p</sub> and i <sub>n</sub> porous heterojunction in planar perovskite solar cells. <b>2015</b> , 3, 10526-10535	13
1766	Light-induced pyroelectric effect as an effective approach for ultrafast ultraviolet nanosensing. <b>2015</b> , 6, 8401	180
1765	Enhanced Organo-Metal Halide Perovskite Photoluminescence from Nanosized Defect-Free Crystallites and Emitting Sites. <b>2015</b> , 6, 4171-7	143
1764	New Physical Deposition Approach for Low Cost Inorganic Hole Transport Layer in Normal Architecture of Durable Perovskite Solar Cells. <b>2015</b> , 7, 21807-18	73
1763	Morphology-controlled CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films by hexane-assisted one-step solution deposition for hybrid perovskite mesoscopic solar cells with high reproductivity. <b>2015</b> , 3, 22839-22845	45
1762	Bath temperature and deposition potential dependences of CuSCN nanorod arrays prepared by electrochemical deposition. <b>2015</b> , 50, 7866-7874	9
1761	Fast-growing procedure for perovskite films in planar heterojunction perovskite solar cells. <b>2015</b> , 26, 1518-1521	16
1760	Additive-Modulated Evolution of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Black Polymorph for Mesoscopic Perovskite Solar Cells. <b>2015</b> , 27, 7149-7155	164

1759	Performance enhancement of planar heterojunction perovskite solar cells by n-doping of the electron transporting layer. <b>2015</b> , 51, 17413-6		65
1758	High efficiency flexible perovskite solar cells using superior low temperature TiO <sub>2</sub> . <b>2015</b> , 8, 3208-3214		457
1757	Managing Carrier Lifetime and Doping Property of Lead Halide Perovskite by Postannealing Processes for Highly Efficient Perovskite Solar Cells. <b>2015</b> , 119, 22812-22819		100
1756	Characterization of Perovskite Obtained from Two-Step Deposition on Mesoporous Titania. <b>2015</b> , 7, 25770-6		55
1755	A Liquid Junction Photoelectrochemical Solar Cell Based on p-Type MeNH <sub>3</sub> PbI <sub>3</sub> Perovskite with 1.05 V Open-Circuit Photovoltage. <b>2015</b> , 137, 14758-64		41
1754	Improving the interfacial contact between CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Cl <sub>x</sub> and Au by LiTFSI solution treatment for efficient photoelectric devices. <b>2015</b> , 24, 693-697		11
1753	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. <b>2015</b> , 51, 17658-61		266
1752	Theoretical limit of power conversion efficiency for organic and hybrid halide perovskite photovoltaics. <b>2015</b> , 54, 08KF04		12
1751	Goldschmidt's Rules and Strontium Replacement in Lead Halogen Perovskite Solar Cells: Theory and Preliminary Experiments on CH <sub>3</sub> NH <sub>3</sub> SrI <sub>3</sub> . <b>2015</b> , 119, 25673-25683		169
1750	Functional p-Type, Polymerized Organic Electrode Interlayer in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. <b>2015</b> , 7, 24973-81		30
1749	Band alignments at interface of ZnO/FAPbI <sub>3</sub> heterojunction by X-ray photoelectron spectroscopy. <b>2015</b> , 357, 1743-1746		8
1748	Spectrum-Dependent Spiro-OMeTAD Oxidization Mechanism in Perovskite Solar Cells. <b>2015</b> , 7, 24791-8		127
1747	Analysing the effect of crystal size and structure in highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells by spatially resolved photo- and electroluminescence imaging. <i>Nanoscale</i> , <b>2015</b> , 7, 19653-62	7-7	75
1746	High-efficiency heterojunction crystalline Si solar cell and optical splitting structure fabricated by applying thin-film Si technology. <b>2015</b> , 54, 08KD15		8
1745	First-Principles Study of Ion Diffusion in Perovskite Solar Cell Sensitizers. <b>2015</b> , 137, 10048-51		456
1744	Fabrication and Properties of High-Efficiency Perovskite/PCBM Organic Solar Cells. <b>2015</b> , 10, 1020		51
1743	Hole-conductor-free planar perovskite solar cells with 16.0% efficiency. <b>2015</b> , 3, 18389-18394		73
1742	Theoretical and experimental study of earth-abundant solar cell materials. <b>2015</b> ,		

1741	Subphthalocyanine as hole transporting material for perovskite solar cells. <b>2015</b> , 5, 69813-69818	40
1740	The influence of different mask aperture on the open-circuit voltage measurement of perovskite solar cells. <b>2015</b> , 7, 043104	12
1739	Dependence of device performance on the thickness of compact TiO <sub>2</sub> layer in perovskite/TiO <sub>2</sub> planar heterojunction solar cells. <b>2015</b> , 7, 043105	26
1738	Dynamic Optical Properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Single Crystals As Revealed by One- and Two-Photon Excited Photoluminescence Measurements. <b>2015</b> , 137, 10456-9	270
1737	Large-scale aligned crystalline CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite array films. <b>2015</b> , 3, 18847-18851	18
1736	Theoretical insights into multibandgap hybrid perovskites for photovoltaic applications. <b>2015</b> ,	
1735	Trap-limited charge recombination in intrinsic perovskite film and meso-superstructured perovskite solar cells and the passivation effect of the hole-transport material on trap states. <b>2015</b> , 17, 29501-6	32
1734	Determination of Thermal Expansion Coefficients and Locating the Temperature-Induced Phase Transition in Methylammonium Lead Perovskites Using X-ray Diffraction. <b>2015</b> , 54, 10678-85	164
1733	Multiscale morphology design of hybrid halide perovskites through a polymeric template. <i>Nanoscale</i> , <b>2015</b> , 7, 18956-63	7-7 67
1732	Graphene-Based Bulk-Heterojunction Solar Cells: A Review. <b>2015</b> , 15, 6237-78	56
1731	Investigation on optoelectronic characteristics of porous silicon/TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /graphene heterostructure light-emitting diodes prepared by spin-coating. <b>2015</b> ,	
1730	Visible-light activation of TiO <sub>2</sub> photocatalysts: Advances in theory and experiments. <b>2015</b> , 25, 1-29	679
1729	Doping of TiO <sub>2</sub> for sensitized solar cells. <b>2015</b> , 44, 8326-49	268
1728	Well-Defined Thiolated Nanographene as Hole-Transporting Material for Efficient and Stable Perovskite Solar Cells. <b>2015</b> , 137, 10914-7	198
1727	Tracking the formation of methylammonium lead triiodide perovskite. <b>2015</b> , 107, 061904	67
1726	Reduced surface defects of organometallic perovskite by thermal annealing for highly efficient perovskite solar cells. <b>2015</b> , 5, 75622-75629	58
1725	Smooth CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> from controlled solid-gas reaction for photovoltaic applications. <b>2015</b> , 5, 73760-73766	16
1724	Highly stable and efficient solid-state solar cells based on methylammonium lead bromide (CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> ) perovskite quantum dots. <b>2015</b> , 7, e208-e208	105

1723	Efficient Perovskite Hybrid Solar Cells via Controllable Crystallization Film Morphology. <b>2015</b> , 5, 1402-1407	4
1722	Highly efficient perovskite solar cells based on mechanically durable molybdenum cathode. <b>2015</b> , 17, 131-139	35
1721	Perovskite solar cells: Crystal crosslinking. <b>2015</b> , 7, 684-5	22
1720	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid ammonium chlorides. <b>2015</b> , 7, 703-11	898
1719	Influence of the Synthetic Procedures on the Structural and Optical Properties of Mixed-Halide (Br, I) Perovskite Films. <b>2015</b> , 119, 21304-21313	65
1718	Ionic Charge Transfer Complex Induced Visible Light Harvesting and Photocharge Generation in Perovskite. <b>2015</b> , 7, 20280-4	17
1717	Efficient, symmetric oligomer hole transporting materials with different cores for high performance perovskite solar cells. <b>2015</b> , 51, 15506-9	23
1716	Mechanosynthesis of the hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> : characterization and the corresponding solar cell efficiency. <b>2015</b> , 3, 20772-20777	131
1715	A crosslinked fullerene matrix doped with an ionic fullerene as a cathodic buffer layer toward high-performance and thermally stable polymer and organic metalhalide perovskite solar cells. <b>2015</b> , 3, 20382-20388	34
1714	Universal Features of Electron Dynamics in Solar Cells with TiO <sub>2</sub> Contact: From Dye Solar Cells to Perovskite Solar Cells. <b>2015</b> , 6, 3923-30	40
1713	Effects of Porosity and Amount of Surface Hydroxyl Groups of a Porous TiO <sub>2</sub> Layer on the Performance of a CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Photovoltaic Cell. <b>2015</b> , 119, 22304-22309	17
1712	Ambipolar solution-processed hybrid perovskite phototransistors. <b>2015</b> , 6, 8238	447
1711	Hydrochloric acid accelerated formation of planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite with high humidity tolerance. <b>2015</b> , 3, 19674-19678	108
1710	Influence of annealing temperature on the crystallization and ferroelectricity of perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> film. <b>2015</b> , 357, 391-396	26
1709	Mechanistic insights into perovskite photoluminescence enhancement: light curing with oxygen can boost yield thousandfold. <b>2015</b> , 17, 24978-87	272
1708	Controlled reaction for improved CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> transition in perovskite solar cells. <b>2015</b> , 44, 17841-9	12
1707	A solution-processed bathocuproine cathode interfacial layer for high-performance bromine-iodine perovskite solar cells. <b>2015</b> , 17, 26653-8	89
1706	Chemical engineering of methylammonium lead iodide/bromide perovskites: tuning of opto-electronic properties and photovoltaic performance. <b>2015</b> , 3, 21760-21771	79



1705	The influence of the mesoporous TiO <sub>2</sub> scaffold on the performance of methyl ammonium lead iodide (MAPI) perovskite solar cells: charge injection, charge recombination and solar cell efficiency relationship. <b>2015</b> , 3, 22154-22161	31
1704	Core/Shell Structured TiO <sub>2</sub> /CdS Electrode to Enhance the Light Stability of Perovskite Solar Cells. <b>2015</b> , 7, 27863-70	73
1703	Material Innovation in Advancing Organometal Halide Perovskite Functionality. <b>2015</b> , 6, 4862-72	35
1702	WITHDRAWN: Efficient inorganic/organic hybrid heterojunction solar cells containing perovskite compound. <b>2015</b> ,	1
1701	Control of I-V hysteresis in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cell. <b>2015</b> , 6, 4633-9	379
1700	Interface Engineering of Perovskite Hybrid Solar Cells with Solution-Processed PeryleneDiimide Heterojunctions toward High Performance. <b>2015</b> , 27, 227-234	208
1699	TiO <sub>2</sub> nanotube arrays based flexible perovskite solar cells with transparent carbon nanotube electrode. <b>2015</b> , 11, 728-735	249
1698	Nanoscale charge localization induced by random orientations of organic molecules in hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2015</b> , 15, 248-53	211
1697	Optical properties and limiting photocurrent of thin-film perovskite solar cells. <b>2015</b> , 8, 602-609	335
1696	Fully vacuum/processed perovskite solar cells with high open circuit voltage using MoO <sub>3</sub> /NPB as hole extraction layers. <b>2015</b> , 17, 102-106	100
1695	Perovskite-based solar cells: impact of morphology and device architecture on device performance. <b>2015</b> , 3, 8943-8969	465
1694	High performance planar heterojunction perovskite solar cells with fullerene derivatives as the electron transport layer. <b>2015</b> , 7, 1153-9	90
1693	Giant switchable photovoltaic effect in organometal trihalide perovskite devices. <b>2015</b> , 14, 193-8	1144
1692	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. <b>2015</b> , 5, 3786-3791	126
1691	Perovskite solar cells: from materials to devices. <b>2015</b> , 11, 10-25	967
1690	Enhancing efficiency of perovskite solar cell via surface microstructuring: Superior grain growth and light harvesting effect. <b>2015</b> , 112, 12-19	29
1689	High-performance and environmentally stable planar heterojunction perovskite solar cells based on a solution-processed copper-doped nickel oxide hole-transporting layer. <b>2015</b> , 27, 695-701	655
1688	Organic/organic lead halide perovskite solar cell materials: A possible stability problem. <b>2015</b> , 619, 193-195	82

1687	Metallohalide perovskite/polymer composite film for hybrid planar heterojunction solar cells. <b>2015</b> , 5, 775-783	64
1686	Electronic properties of $PbX_2CH_3NH_3X$ (X = Cl, Br, I) compounds for photovoltaic and photocatalytic applications. <b>2015</b> , 17, 2199-209	41
1685	Three-step sequential solution deposition of PbI <sub>2</sub> -free CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite. <b>2015</b> , 3, 9086-9091	89
1684	p-type Mesoscopic nickel oxide/organometallic perovskite heterojunction solar cells. <b>2014</b> , 4, 4756	333
1683	Band alignment of the hybrid halide perovskites CH <sub>3</sub> NH <sub>3</sub> PbCl <sub>3</sub> , CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2015</b> , 2, 228-231	198
1682	Electronic structures at the interface between Au and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2015</b> , 17, 896-902	72
1681	Thermal assisted oxygen annealing for high efficiency planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2014</b> , 4, 6752	88
1680	A new D $\pi$ A type organic sensitizer based on substituted dihydroindolo [2,3-b] carbazole and DPP unit with a bulky branched alkyl chain for highly efficient DSCs. <b>2015</b> , 3, 3777-3784	23
1679	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Sensitized Solar Cells Using a D-A Copolymer as Hole Transport Material. <b>2015</b> , 151, 21-26	50
1678	Perovskite thin films via atomic layer deposition. <b>2015</b> , 27, 53-8	171
1677	Organic/inorganic halide perovskites: an ambipolar class of materials with enhanced photovoltaic performances. <b>2015</b> , 3, 8981-8991	89
1676	3D Printer Based Slot-Die Coater as a Lab-to-Fab Translation Tool for Solution-Processed Solar Cells. <b>2015</b> , 5, 1401539	159
1675	Reversible photo-induced trap formation in mixed-halide hybrid perovskites for photovoltaics. <b>2015</b> , 6, 613-617	1266
1674	Temperature induced structural, electrical and optical changes in solution processed perovskite material: Application in photovoltaics. <b>2015</b> , 132, 615-622	54
1673	Recent progress in organic/inorganic halide perovskite solar cells: mechanisms and material design. <b>2015</b> , 3, 8992-9010	133
1672	Opto-electronic properties of TiO <sub>2</sub> nanohelices with embedded HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> perovskite solar cells. <b>2015</b> , 3, 9179-9186	60
1671	Halide perovskite materials for solar cells: a theoretical review. <b>2015</b> , 3, 8926-8942	882
1670	Temperature dependence of hole conductor free formamidinium lead iodide perovskite based solar cells. <b>2015</b> , 3, 9171-9178	162

1669	High-Performance Planar-Heterojunction Solar Cells Based on Ternary Halide Large-Band-Gap Perovskites. <b>2015</b> , 5, 1400960	108
1668	Recent advances in dye-sensitized solar cells: from photoanodes, sensitizers and electrolytes to counter electrodes. <b>2015</b> , 18, 155-162	511
1667	A Novel Oligomer as a Hole Transporting Material for Efficient Perovskite Solar Cells. <b>2015</b> , 5, 1400980	77
1666	Bulk heterojunctions push the photoresponse of perovskite solar cells to 970 nm. <b>2015</b> , 3, 9063-9066	78
1665	Perovskite solar cells: an emerging photovoltaic technology. <b>2015</b> , 18, 65-72	1073
1664	6. Perovskite-type solar cells. <b>2016</b> ,	
1663	Structural and Quantitative Investigation of Perovskite Pore Filling in Mesoporous Metal Oxides. <b>2016</b> , 6, 149	6
1662	Characterization and Photovoltaic Properties of BiFeO <sub>3</sub> Thin Films. <b>2016</b> , 6, 68	11
1661	Perovskite Solar Cells: Progress and Advancements. <b>2016</b> , 9, 861	71
1660	One-Dimensional TiO <sub>2</sub> Nanostructured Photoanodes: From Dye-Sensitised Solar Cells to Perovskite Solar Cells. <b>2016</b> , 9, 1030	18
1659	Effects of Cl Addition to Sb-Doped Perovskite-Type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Photovoltaic Devices. <b>2016</b> , 6, 147	37
1658	Highly Efficient Reproducible Perovskite Solar Cells Prepared by Low-Temperature Processing. <b>2016</b> , 21, 542	15
1657	Recent Advances in Interface Engineering for Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 21,	26
1656	Using Low Temperature Photoluminescence Spectroscopy to Investigate CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Hybrid Perovskite Degradation. <b>2016</b> , 21,	12
1655	Molecular-Based Fluorescent Nanoparticles Built from Dedicated Dipolar Thienothiophene Dyes as Ultra-Bright Green to NIR Nanoemitters. <b>2016</b> , 21,	14
1654	Recent Advances in Fabrication Techniques of Perovskite Solar Cells: A Review. <b>2016</b> , 13, 1290-1314	2
1653	Low-temperature plasma-enhanced atomic layer deposition of tin oxide electron selective layers for highly efficient planar perovskite solar cells. <b>2016</b> , 4, 12080-12087	175
1652	Enhanced Stability of Perovskite Solar Cells with Low-Temperature Hydrothermally Grown SnO <sub>2</sub> Electron Transport Layers. <b>2016</b> , 26, 6069-6075	128

1651	Pyrite-Based Bi-Functional Layer for Long-Term Stability and High-Performance of Organo-Lead Halide Perovskite Solar Cells. <b>2016</b> , 26, 5400-5407	41
1650	Inverted Perovskite Solar Cells: Progresses and Perspectives. <b>2016</b> , 6, 1600457	294
1649	The Progress of Interface Design in Perovskite-Based Solar Cells. <b>2016</b> , 6, 1600460	121
1648	Humidity controlled crystallization of thin CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films for high performance perovskite solar cell. <b>2016</b> , 10, 381-387	34
1647	Mechanochemical synthesis of methylammonium lead iodide perovskite. <b>2016</b> , 51, 9123-9130	26
1646	A close examination of the structure and dynamics of HC(NH)PbI by MD simulations and group theory. <b>2016</b> , 18, 27109-27118	41
1645	Wavelength conversion effect-assisted dye-sensitized solar cells for enhanced solar light harvesting. <b>2016</b> , 4, 11908-11915	13
1644	Pyrolysis preparation of WO <sub>3</sub> thin films using ammonium metatungstate DMF/water solution for efficient compact layers in planar perovskite solar cells. <b>2016</b> , 37, 033002	11
1643	Improving Performance and Stability of Flexible Planar-Heterojunction Perovskite Solar Cells Using Polymeric Hole-Transport Material. <b>2016</b> , 26, 4464-4471	120
1642	Chitosan-Assisted Crystallization and Film Forming of Perovskite Crystals through Biomineralization. <b>2016</b> , 11, 893-9	7
1641	Interfacial Engineering for Quantum-Dot-Sensitized Solar Cells. <b>2016</b> , 11, 1183-93	17
1640	Enhanced performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> perovskite solar cells by CH <sub>3</sub> NH <sub>3</sub> I modification of TiO <sub>2</sub> -perovskite layer interface. <b>2016</b> , 11, 316	42
1639	Electric-Field-Driven Reversible Conversion Between Methylammonium Lead Triiodide Perovskites and Lead Iodide at Elevated Temperatures. <b>2016</b> , 6, 1501803	228
1638	Nanostructuring Mixed-Dimensional Perovskites: A Route Toward Tunable, Efficient Photovoltaics. <b>2016</b> , 28, 3653-61	201
1637	Improve Hole Collection by Interfacial Chemical Redox Reaction at a Mesoscopic NiO/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Heterojunction for Efficient Photovoltaic Cells. <b>2016</b> , 3, 1600135	14
1636	Effective Improvement of the Photovoltaic Performance of Carbon-Based Perovskite Solar Cells by Additional Solvents. <b>2016</b> , 8, 347-357	63
1635	Developments in and prospects for photocathodic and tandem dye-sensitized solar cells. <b>2016</b> , 28, 44-71	38
1634	First-principles study of photovoltaics and carrier mobility for non-toxic halide perovskite CH <sub>3</sub> NH <sub>3</sub> SnCl <sub>3</sub> : theoretical prediction. <b>2016</b> , 18, 22188-95	40

1633	Enhanced performance of perovskite solar cells with solution-processed n-doping of the PCBM interlayer. <b>2016</b> , 6, 64962-64966	3
1632	Recent Advances in Improving the Stability of Perovskite Solar Cells. <b>2016</b> , 6, 1501420	251
1631	Transparent Conductive Oxide-Free Graphene-Based Perovskite Solar Cells with over 17% Efficiency. <b>2016</b> , 6, 1501873	161
1630	Hole-Conductor-Free Fully Printable Mesoscopic Solar Cell with Mixed-Anion Perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3(\text{Br})_x(\text{BF}_4)_{1-x}$ . <b>2016</b> , 6, 1502009	132
1629	Effects of chlorine addition to perovskite-type $\text{CH}_3\text{NH}_3\text{PbI}_3$ photovoltaic devices. <b>2016</b> , 124, 234-238	29
1628	Low temperature fabrication of perovskite solar cells with $\text{TiO}_2$ nanoparticle layers. <b>2016</b> ,	6
1627	The physics of photon induced degradation of perovskite solar cells. <b>2016</b> , 6, 115114	39
1626	Research Update: Behind the high efficiency of hybrid perovskite solar cells. <b>2016</b> , 4, 091505	36
1625	$\text{CH}_3\text{NH}_3\text{Cd}_{0.875}\text{Pb}_{0.125}\text{I}_3$ perovskite as potential photovoltaic materials. <b>2016</b> , 6, 115208	4
1624	Fabrication and characterization of perovskite-based $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{Ge}_x\text{I}_3$ , $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{Tl}_x\text{I}_3$ and $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{In}_x\text{I}_3$ photovoltaic devices. <b>2016</b> ,	21
1623	Encapsulation of Perovskite Nanocrystals into Macroscale Polymer Matrices: Enhanced Stability and Polarization. <b>2016</b> , 8, 35523-35533	288
1622	Solution-processed perovskite for direct X-ray detection. <b>2016</b> ,	2
1621	Research Update: Overview of progress about efficiency and stability on perovskite solar cells. <b>2016</b> , 4, 091504	23
1620	Exciton dynamics and non-linearities in two-dimensional hybrid organic perovskites. <b>2016</b> , 119, 064301	37
1619	Lattice thermal conductivity of organic-inorganic hybrid perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$ . <b>2016</b> , 108, 063902	84
1618	Degradation of Perovskite Solar Cell Based on $\text{CH}_3\text{NH}_3\text{PbI}_3\text{-2Cl}_2$ Structure. <b>2016</b> , 74, 285-291	
1617	Degradation of organometallic perovskite solar cells induced by trap states. <b>2016</b> , 108, 093901	35
1616	Research Update: Strategies for improving the stability of perovskite solar cells. <b>2016</b> , 4, 091503	106

1615	Single-walled carbon nanotubes as efficient charge extractors in perovskite solar cell. <b>2016,</b>	1
1614	High-efficiency planar-structure perovskite solar cells via homemade chamber with low pressure and low temperature process. <b>2016,</b>	
1613	Different emissive states in the bulk and at the surface of methylammonium lead bromide perovskite revealed by two-photon micro-spectroscopy and lifetime measurements. <b>2016,</b> 1, 046103	30
1612	The nature of hydrogen-bonding interaction in the prototypic hybrid halide perovskite, tetragonal CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2016,</b> 6, 21687	95
1611	Mixture interlayer for high performance organic-inorganic perovskite photodetectors. <b>2016,</b> 109, 123301	31
1610	Tunable bandgap in hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> Pb(Br <sub>3-x</sub> Y <sub>x</sub> ) single crystals and photodetector applications. <b>2016,</b> 6, 045115	50
1609	Photoelectrochemical characterization of p-type CH <sub>3</sub> NH <sub>3</sub> PM <sub>3</sub> perovskite. <b>2016,</b>	
1608	Comprehensive study of the two-step solution processes in ambient air for lead iodide perovskite solar cells. <b>2016,</b>	
1607	Density functional theory + U modeling of polarons in organohalide lead perovskites. <b>2016,</b> 6, 125037	17
1606	Solar Electricity and Solar Fuels: Status and Perspectives in the Context of the Energy Transition. <b>2016,</b> 22, 32-57	239
1605	Synergistic effects of three-dimensional orchid-like TiO <sub>2</sub> nanowire networks and plasmonic nanoparticles for highly efficient mesoscopic perovskite solar cells. <b>2016,</b> 4, 7322-7329	26
1604	Laser Processing in the Manufacture of Dye-Sensitized and Perovskite Solar Cell Technologies. <b>2016,</b> 3, 9-30	48
1603	The Effect of Humidity upon the Crystallization Process of Two-Step Spin-Coated Organic-Inorganic Perovskites. <b>2016,</b> 17, 112-8	26
1602	Perovskites as new radical photoinitiators for radical and cationic polymerizations. <b>2016,</b> 72, 7686-7690	15
1601	Efficient Perovskite Hybrid Photovoltaics via Alcohol-Vapor Annealing Treatment. <b>2016,</b> 26, 101-110	101
1600	Perovskite Solar Cells: Influence of Hole Transporting Materials on Power Conversion Efficiency. <b>2016,</b> 9, 10-27	237
1599	Low-temperature solution-processed Li-doped SnO <sub>2</sub> as an effective electron transporting layer for high-performance flexible and wearable perovskite solar cells. <b>2016,</b> 26, 208-215	331
1598	Polaron Stabilization by Cooperative Lattice Distortion and Cation Rotations in Hybrid Perovskite Materials. <b>2016,</b> 16, 3809-16	203

1597	Large Grained Perovskite Solar Cells Derived from Single-Crystal Perovskite Powders with Enhanced Ambient Stability. <b>2016</b> , 8, 14513-20	54
1596	Nitrogen-doped titanium dioxide: An overview of material design and dimensionality effect over modern applications. <b>2016</b> , 27, 1-29	69
1595	Improving performance and reducing hysteresis in perovskite solar cells by using F8BT as electron transporting layer. <b>2016</b> , 157, 79-84	23
1594	Efficiency Enhancement of Perovskite Solar Cells by Pumping Away the Solvent of Precursor Film Before Annealing. <b>2016</b> , 11, 248	9
1593	A controllable fabrication of grain boundary PbI <sub>2</sub> nanoplates passivated lead halide perovskites for high performance solar cells. <b>2016</b> , 26, 50-56	138
1592	Nanostructured Materials for High Efficiency Perovskite Solar Cells. <b>2016</b> , 1-39	3
1591	Suppressed hysteresis and improved stability in perovskite solar cells with conductive organic network. <b>2016</b> , 26, 139-147	83
1590	Advancing colloidal quantum dot photovoltaic technology. <b>2016</b> , 5, 31-54	16
1589	Optical Characteristic and Application of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Film in Schottky Diode. <b>2016</b> , 848, 440-445	
1588	Application of phenonaphthazine derivatives as hole-transporting materials for perovskite solar cells. <b>2016</b> , 25, 702-708	18
1587	Progress in emerging solution-processed thin film solar cells [Part II: Perovskite solar cells. <b>2016</b> , 62, 1012-1031	93
1586	Super color purity green quantum dot light-emitting diodes fabricated by using CdSe/CdS nanoplatelets. <i>Nanoscale</i> , <b>2016</b> , 8, 12182-8	7-7 89
1585	Carbon quantum dots as new hole transport material for perovskite solar cells. <b>2016</b> , 222, 17-22	42
1584	Mobile Ions in Organohalide Perovskites: Interplay of Electronic Structure and Dynamics. <b>2016</b> , 1, 182-188	143
1583	Hole Conductor Free Perovskite-based Solar Cells. <b>2016</b> ,	5
1582	Organo-Metal Lead Halide Perovskite Properties. <b>2016</b> , 1-4	
1581	The Evolution of Perovskite Solar Cells Structures. <b>2016</b> , 5-8	
1580	Crystal growth engineering for high efficiency perovskite solar cells. <b>2016</b> , 18, 5977-5985	71

1579	An ultra-thin, un-doped NiO hole transporting layer of highly efficient (16.4%) organic-inorganic hybrid perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 11403-12	7-7	242
1578	High-yield synthesis of oriented attachment TiO <sub>2</sub> nanorods as superior building blocks of photoanodes in quantum dot sensitized solar cells. <b>2016</b> , 6, 33713-33722		13
1577	Mechanism of biphasic charge recombination and accumulation in TiO <sub>2</sub> mesoporous structured perovskite solar cells. <b>2016</b> , 18, 12128-34		24
1576	Dynamical Origin of the Rashba Effect in Organohalide Lead Perovskites: A Key to Suppressed Carrier Recombination in Perovskite Solar Cells?. <b>2016</b> , 7, 1638-45		220
1575	The interaction between hybrid organic-inorganic halide perovskite and selective contacts in perovskite solar cells: an infrared spectroscopy study. <b>2016</b> , 18, 13583-90		46
1574	The benefits of graphene for hybrid perovskite solar cells. <b>2016</b> , 222, 3-16		42
1573	Thin films for photovoltaic application. <b>2016</b> , 496, 187-195		
1572	Pathways toward high-performance perovskite solar cells: review of recent advances in organo-metal halide perovskites for photovoltaic applications. <b>2016</b> , 6, 022001		170
1571	High-performance cadmium sulphide-based planar perovskite solar cell and the cadmium sulphide/perovskite interfaces. <b>2016</b> , 6, 022002		30
1570	p-i-n/n-i-p type planar hybrid structure of highly efficient perovskite solar cells towards improved air stability: synthetic strategies and the role of p-type hole transport layer (HTL) and n-type electron transport layer (ETL) metal oxides. <i>Nanoscale</i> , <b>2016</b> , 8, 10528-40	7-7	95
1569	An affordable green energy source Evolving through current developments of organic, dye sensitized, and perovskite solar cells. <b>2016</b> , 13, 859-906		3
1568	Vertically aligned nanostructured TiO <sub>2</sub> photoelectrodes for high efficiency perovskite solar cells via a block copolymer template approach. <i>Nanoscale</i> , <b>2016</b> , 8, 11472-9	7-7	40
1567	Novel Combination of Efficient Perovskite Solar Cells with Low Temperature Processed Compact TiO <sub>2</sub> Layer via Anodic Oxidation. <b>2016</b> , 8, 12836-42		19
1566	High Open-Circuit Voltage: Fabrication of Formamidinium Lead Bromide Perovskite Solar Cells Using Fluorene Dithiophene Derivatives as Hole-Transporting Materials. <b>2016</b> , 1, 107-112		92
1565	Perovskite photonic sources. <b>2016</b> , 10, 295-302		1079
1564	State and prospects of solar cells based on perovskites. <b>2016</b> , 52, 5-15		6
1563	ZnO nanowalls grown at low-temperature for electron collection in high-efficiency perovskite solar cells. <b>2016</b> , 154, 18-22		37
1562	Morphology control of planar heterojunction perovskite solar cells with fluorinated PDI films as organic electron transport layer. <b>2016</b> , 133, 331-338		41



1561	All solid-state solar cells based on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -sensitized TiO <sub>2</sub> nanotube arrays. <b>2016</b> , 83, 322-328	4
1560	New generation perovskite solar cells with solution-processed amino-substituted perylene diimide derivative as electron-transport layer. <b>2016</b> , 4, 8724-8733	96
1559	Realizing full coverage of perovskite film on substrate surface during solution processing: Characterization and elimination of uncovered surface. <b>2016</b> , 320, 204-211	17
1558	Dopant-free polymeric hole transport materials for highly efficient and stable perovskite solar cells. <b>2016</b> , 9, 2326-2333	265
1557	Room Temperature as a Goldilocks Environment for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells: The Importance of Temperature on Device Performance. <b>2016</b> , 120, 11382-11393	50
1556	Film-through large perovskite grains formation via a combination of sequential thermal and solvent treatment. <b>2016</b> , 4, 8554-8561	68
1555	Photostability and Moisture Stability of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -based Solar Cells by Ethyl Cellulose. <b>2016</b> , 81, 1292-1298	17
1554	Elucidating the evolution of the current-voltage characteristics of planar organometal halide perovskite solar cells to an S-shape at low temperature. <b>2016</b> , 157, 981-988	12
1553	A tailored TiO <sub>2</sub> electron selective layer for high-performance flexible perovskite solar cells via low temperature UV process. <b>2016</b> , 28, 380-389	100
1552	Thermal Stability of CuSCN Hole Conductor-Based Perovskite Solar Cells. <b>2016</b> , 9, 2592-2596	118
1551	Electronic and optical properties of MAPbX perovskites (X = I, Br, Cl): a unified DFT and GW theoretical analysis. <b>2016</b> , 18, 27158-27164	108
1550	Recent progress on stability issues of organic-inorganic hybrid lead perovskite-based solar cells. <b>2016</b> , 6, 89356-89366	57
1549	Temperature dependence of pyro-phototronic effect on self-powered ZnO/perovskite heterostructured photodetectors. <b>2016</b> , 9, 3695-3704	60
1548	A perspective on the recent progress in solution-processed methods for highly efficient perovskite solar cells. <b>2016</b> , 17, 650-658	26
1547	Hole-Transport Materials for Perovskite Solar Cells. <b>2016</b> , 55, 14522-14545	601
1546	Ion-Exchange-Induced 2D-3D Conversion of HMA FA PbI <sub>2</sub> Cl Perovskite into a High-Quality MA FA PbI <sub>2</sub> Perovskite. <b>2016</b> , 55, 13460-13464	71
1545	Enhanced electronic properties in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> via LiCl mixing for hole-conductor-free printable perovskite solar cells. <b>2016</b> , 4, 16731-16736	72
1544	Multiple-Stage Structure Transformation of Organic-Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2016</b> , 6,	11

1543	Vibrational Response of Methylammonium Lead Iodide: From Cation Dynamics to Phonon-Phonon Interactions. <b>2016</b> , 9, 2994-3004		38
1542	Solution-Processable Cathode Buffer Layer for High-Performance ITO/CuSCN-based Planar Heterojunction Perovskite Solar Cell. <b>2016</b> , 218, 263-270		19
1541	High-coverage organic-inorganic perovskite film fabricated by double spin coating for improved solar power conversion and amplified spontaneous emission. <b>2016</b> , 661, 131-135		11
1540	Mapping Morphological and Structural Properties of Lead Halide Perovskites by Scanning Nanofocus XRD. <b>2016</b> , 26, 8221-8230		22
1539	Ion-Exchange-Induced 2D/3D Conversion of HMA1-xFAxPbI3Cl Perovskite into a High-Quality MA1-xFAxPbI3 Perovskite. <b>2016</b> , 128, 13658-13662		7
1538	Synthesis, properties, and optical applications of low-dimensional perovskites. <b>2016</b> , 52, 13637-13655		212
1537	Formulation engineering for optimizing ternary electron acceptors exemplified by isomeric PC71BM in planar perovskite solar cells. <b>2016</b> , 4, 18776-18782		22
1536	A solution processed nanostructured p-type NiO electrode for efficient inverted perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 19189-19194	7-7	38
1535	Exceedingly Cheap Perovskite Solar Cells Using Iron Pyrite Hole Transport Materials. <b>2016</b> , 1, 5316-5319		18
1534	Controllable lasing performance in solution-processed organic-inorganic hybrid perovskites. <i>Nanoscale</i> , <b>2016</b> , 8, 18483-18488	7-7	19
1533	Constructing water-resistant CH3NH3PbI3 perovskite films via coordination interaction. <b>2016</b> , 4, 17018-17024		69
1532	Ambient air-processed mixed-ion perovskites for high-efficiency solar cells. <b>2016</b> , 4, 16536-16545		44
1531	Nano-structured CuO-Cu2O Complex Thin Film for Application in CH3NH3PbI3 Perovskite Solar Cells. <b>2016</b> , 11, 402		50
1530	Promoting crystalline grain growth and healing pinholes by water vapor modulated post-annealing for enhancing the efficiency of planar perovskite solar cells. <b>2016</b> , 4, 13458-13467		52
1529	Ultrafast Spectroscopy of Photoexcitations in Organometal Trihalide Perovskites. <b>2016</b> , 26, 1617-1627		30
1528	The interface and its role in carrier transfer/recombination dynamics for the planar perovskite solar cells prepared under fully open air conditions. <b>2016</b> , 16, 1353-1363		15
1527	Temperature-dependent excitonic photoluminescence excited by two-photon absorption in perovskite CsPbBr3 quantum dots. <b>2016</b> , 41, 3821-4		184
1526	Effect of Chlorine Substitution on Lattice Distortion and Ferroelectricity of CH3NH3PbI3. <b>2016</b> , 120, 17972-17977		20

1525	Optimization of Pbl <sub>2</sub> /MAPbI <sub>3</sub> Perovskite Composites by Scanning Electrochemical Microscopy. <b>2016</b> , 120, 19890-19895	42
1524	Indium tin oxide (ITO)-free, top-illuminated, flexible perovskite solar cells. <b>2016</b> , 4, 14017-14024	47
1523	Role of the Dopants on the Morphological and Transport Properties of Spiro-MeOTAD Hole Transport Layer. <b>2016</b> , 28, 5702-5709	134
1522	Solid-State Ligand-Exchange Fabrication of CHNHPbI Capped PbS Quantum Dot Solar Cells. <b>2016</b> , 3, 1500432	35
1521	Efficient Perovskite Solar Cells Employing Inorganic Interlayers. <b>2016</b> , 2, 182-188	41
1520	Inverted Planar Structure of Perovskite Solar Cells. <b>2016</b> , 307-324	1
1519	Flexible Perovskite Solar Cell. <b>2016</b> , 325-341	1
1518	First-Principles Modeling of Organohalide Thin Films and Interfaces. <b>2016</b> , 19-52	4
1517	Defect Physics of CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = I, Br, Cl) Perovskites. <b>2016</b> , 79-105	17
1516	APbI <sub>3</sub> (A = CH <sub>3</sub> NH <sub>3</sub> and HC(NH <sub>2</sub> ) <sub>2</sub> ) Perovskite Solar Cells: From Sensitization to Planar Heterojunction. <b>2016</b> , 223-253	3
1515	Methodologies for high efficiency perovskite solar cells. <b>2016</b> , 3, 15	65
1514	One-step fabrication of a mixed-halide perovskite film for a high-efficiency inverted solar cell and module. <b>2016</b> , 4, 13525-13533	72
1513	50% Sn-Based Planar Perovskite Solar Cell with Power Conversion Efficiency up to 13.6%. <b>2016</b> , 6, 1601353	128
1512	Ternary Halide Perovskites for Highly Efficient Solution-Processed Hybrid Solar Cells. <b>2016</b> , 1, 712-718	16
1511	Cobalt Polypyridyl Complexes as Transparent Solution-Processable Solid-State Charge Transport Materials. <b>2016</b> , 6, 1600874	17
1510	Towards nanostructured perovskite solar cells with enhanced efficiency: Coupled optical and electrical modeling. <b>2016</b> , 137, 364-370	38
1509	Synthesis of Photoactive Materials by Sonication: Application in Photocatalysis and Solar Cells. <b>2016</b> , 374, 59	11
1508	Thermal degradation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite into NH <sub>3</sub> and CH <sub>3</sub> I gases observed by coupled thermogravimetry-mass spectrometry analysis. <b>2016</b> , 9, 3406-3410	468

1507	Efficient perovskite solar cells via simple interfacial modification toward a mesoporous TiO <sub>2</sub> electron transportation layer. <b>2016</b> , 6, 82282-82288	27
1506	Localized surface plasmon for enhanced lasing performance in solution-processed perovskites. <b>2016</b> , 24, 20696-702	22
1505	Mixed-solvent-vapor annealing of perovskite for photovoltaic device efficiency enhancement. <b>2016</b> , 28, 417-425	90
1504	Distinction between Capacitive and Noncapacitive Hysteretic Currents in Operation and Degradation of Perovskite Solar Cells. <b>2016</b> , 1, 683-688	70
1503	Surface coverage enhancement of a mixed halide perovskite film by using an UV-ozone treatment. <b>2016</b> , 69, 406-411	14
1502	HONHCl optimized CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films for improving performance of planar heterojunction perovskite solar cells via a one-step route. <b>2016</b> , 18, 26254-26261	7
1501	Impact of Conformality and Crystallinity for Ultrathin 4 nm Compact TiO <sub>2</sub> Layers in Perovskite Solar Cells. <b>2016</b> , 3, 1600580	18
1500	Potentials and challenges towards application of perovskite solar cells. <b>2016</b> , 59, 769-778	13
1499	Dynamics of Photocarrier Separation in MAPbI <sub>3</sub> Perovskite Multigrain Films under a Quasistatic Electric Field. <b>2016</b> , 120, 19595-19602	15
1498	Light-induced annihilation of Frenkel defects in organo-lead halide perovskites. <b>2016</b> , 9, 3180-3187	243
1497	Material and Device Stability in Perovskite Solar Cells. <b>2016</b> , 9, 2528-2540	198
1496	Iodomethane-Mediated Organometal Halide Perovskite with Record Photoluminescence Lifetime. <b>2016</b> , 8, 23181-9	30
1495	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. <b>2016</b> , 4, 14276-14283	178
1494	Schottky junctions on perovskite single crystals: light-modulated dielectric constant and self-biased photodetection. <b>2016</b> , 4, 8304-8312	104
1493	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> , A Potential Solar Cell Candidate: Structural and Spectroscopic Investigations. <b>2016</b> , 120, 9732-9739	22
1492	Carbon-Based CsPbBr <sub>3</sub> Perovskite Solar Cells: All-Ambient Processes and High Thermal Stability. <b>2016</b> , 8, 33649-33655	208
1491	Flame-made ultra-porous TiO <sub>2</sub> layers for perovskite solar cells. <b>2016</b> , 27, 505403	9
1490	Symmetry-Based Tight Binding Modeling of Halide Perovskite Semiconductors. <b>2016</b> , 7, 3833-3840	40

1489	Tuning Pbl <sub>2</sub> layers by n-butanol additive for improving CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> light harvesters of perovskite solar cells. <b>2016</b> , 6, 89609-89613	12
1488	Layered 2D alkyldiammonium lead iodide perovskites: synthesis, characterization, and use in solar cells. <b>2016</b> , 4, 15638-15646	134
1487	Effects of Antimony Addition to Perovskite-type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Photovoltaic Devices. <b>2016</b> , 45, 134-136	51
1486	CHNHPbI: precise structural consequences of water absorption at ambient conditions. <b>2016</b> , 72, 716-722	28
1485	Effect of Hole Transport Layer in Planar Inverted Perovskite Solar Cells. <b>2016</b> , 45, 89-91	12
1484	Highly stabilized perovskite solar cell prepared using vacuum deposition. <b>2016</b> , 6, 93525-93531	9
1483	Domain-dependent electronic structure and optical absorption property in hybrid organic-inorganic perovskite. <b>2016</b> , 18, 27358-27365	9
1482	Tuning the Fermi-level of TiO mesoporous layer by lanthanum doping towards efficient perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 16881-16885	7-7 75
1481	Advances in Perovskite Solar Cells. <b>2016</b> , 3, 1500324	397
1480	New advances in small molecule hole-transporting materials for perovskite solar cells. <b>2016</b> , 27, 1293-1303	16
1479	Unreacted Pbl <sub>2</sub> as a Double-Edged Sword for Enhancing the Performance of Perovskite Solar Cells. <b>2016</b> , 138, 10331-43	537
1478	Active-layer evolution and efficiency improvement of (CH <sub>3</sub> NH <sub>3</sub> 3Bi <sub>2</sub> I <sub>9</sub> -based solar cell on TiO <sub>2</sub> -deposited ITO substrate. <b>2016</b> , 9, 2921-2930	78
1477	Organic-Inorganic Halide Perovskite Photovoltaics. <b>2016</b> ,	91
1476	Improved oxidation stability of tin iodide cubic perovskite treated by 5-ammonium valeric acid iodide. <b>2016</b> , 183, 391-393	25
1475	Room-Temperature, Hydrochloride-Assisted, One-Step Deposition for Highly Efficient and Air-Stable Perovskite Solar Cells. <b>2016</b> , 28, 8309-8314	85
1474	Unveiling the Low-Temperature Pseudodegradation of Photovoltaic Performance in Planar Perovskite Solar Cell by Optoelectronic Observation. <b>2016</b> , 6, 1600814	19
1473	Parallelized Nanopillar Perovskites for Semitransparent Solar Cells Using an Anodized Aluminum Oxide Scaffold. <b>2016</b> , 6, 1601055	64
1472	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. <b>2016</b> , 28, 8144-8149	206

1471	Identifying the Molecular Structures of Intermediates for Optimizing the Fabrication of High-Quality Perovskite Films. <b>2016</b> , 138, 9919-26	203
1470	Room-temperature water-vapor annealing for high-performance planar perovskite solar cells. <b>2016</b> , 4, 17267-17273	51
1469	Lochtransportmaterialien für Perowskit-Solarzellen. <b>2016</b> , 128, 14740-14764	54
1468	Optimization of Lead-free Organic-Inorganic Tin(II) Halide Perovskite Semiconductors by Scanning Electrochemical Microscopy. <b>2016</b> , 220, 205-210	34
1467	Colloidal Precursor-Induced Growth of Ultra-Even CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for High-Performance Paintable Carbon-Based Perovskite Solar Cells. <b>2016</b> , 8, 30184-30192	47
1466	Functionalization of perovskite thin films with moisture-tolerant molecules. <b>2016</b> , 1,	369
1465	Towards stable and commercially available perovskite solar cells. <b>2016</b> , 1,	763
1464	Self-formed grain boundary healing layer for highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2016</b> , 1,	757
1463	High coverage solution-processed planar perovskite solar cell grown based on the Stranski-Graevanov mechanism at low temperature and short time. <b>2016</b> , 6, 112677-112685	13
1462	CH <sub>3</sub> NH <sub>3</sub> Pb(BF <sub>4</sub> ) and (CH <sub>3</sub> NH <sub>3</sub> )Pb(BF <sub>4</sub> ) Family of 3D and 2D Perovskites without and with Iodide and Bromide Ions Substitution. <b>2016</b> , 7, 4757-4762	23
1461	Wearable energy-smart ribbons for synchronous energy harvest and storage. <b>2016</b> , 7, 13319	116
1460	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. <b>2016</b> , 7, 13407	140
1459	A novel dual function acetic acid vapor-assisted thermal annealing process for high-performance TiO <sub>2</sub> nanorods-based perovskite solar cells. <b>2016</b> , 222, 933-937	9
1458	Efficient inverted-type perovskite solar cells using UV-ozone treated MoO <sub>x</sub> and WO <sub>x</sub> as hole transporting layers. <b>2016</b> , 139, 484-488	73
1457	Cs <sup>+</sup> incorporation into CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite: substitution limit and stability enhancement. <b>2016</b> , 4, 17819-17827	78
1456	Synthesis and characterization of tetratriphenylamine Zn phthalocyanine as hole transporting material for perovskite solar cells. <b>2016</b> , 140, 60-65	27
1455	Facile fabrication of large-grain CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xBr <sub>x</sub> films for high-efficiency solar cells via CH <sub>3</sub> NH <sub>3</sub> Br-selective Ostwald ripening. <b>2016</b> , 7, 12305	358
1454	Highly Efficient Perovskite Solar Cells with Substantial Reduction of Lead Content. <b>2016</b> , 6, 35705	74

1453	Polyethyleneimine High-Energy Hydrophilic Surface Interfacial Treatment toward Efficient and Stable Perovskite Solar Cells. <b>2016</b> , 8, 32574-32580	41
1452	Novel Solvent-free Perovskite Deposition in Fabrication of Normal and Inverted Architectures of Perovskite Solar Cells. <b>2016</b> , 6, 33649	21
1451	Improved Performance and Stability of Inverted Planar Perovskite Solar Cells Using Fulleropyrrolidine Layers. <b>2016</b> , 8, 31426-31432	52
1450	Controlled growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> nanowires in arrays of open nanofluidic channels. <b>2016</b> , 6, 19834	75
1449	Structures and Electronic Properties of Different CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> Interface: A First-Principles Study. <b>2016</b> , 6, 20131	60
1448	Investigation of the Hydrolysis of Perovskite Organometallic Halide CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> in Humidity Environment. <b>2016</b> , 6, 21976	90
1447	Efficiency Enhancement of Hybrid Perovskite Solar Cells with MEH-PPV Hole-Transporting Layers. <b>2016</b> , 6, 34319	63
1446	Degradation and regeneration of hybrid perovskites. <b>2016</b> , 6, 101846-101852	6
1445	Evaluating the Optoelectronic Quality of Hybrid Perovskites by Conductive Atomic Force Microscopy with Noise Spectroscopy. <b>2016</b> , 8, 30985-30991	39
1444	Perylene Bisimides as efficient electron transport layers in planar heterojunction perovskite solar cells. <b>2016</b> , 59, 1658-1662	9
1443	Enhanced perovskite morphology and crystallinity for high performance perovskite solar cells using a porous hole transport layer from polystyrene nanospheres. <b>2016</b> , 18, 32903-32909	22
1442	ITO-free perovskite solar cells using photolithography processed metal grids as transparent anodes. <b>2016</b> ,	0
1441	Photovoltaic and Amplified Spontaneous Emission Studies of High-Quality Formamidinium Lead Bromide Perovskite Films. <b>2016</b> , 26, 2846-2854	57
1440	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. <b>2016</b> , 28, 5214-21	403
1439	Structure-Tuned Lead Halide Perovskite Nanocrystals. <b>2016</b> , 28, 566-73	196
1438	Self-Doped Conducting Polymer as a Hole-Extraction Layer in Organic/Inorganic Hybrid Perovskite Solar Cells. <b>2016</b> , 3, 1500678	80
1437	Fast Free-Carrier Diffusion in CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Single Crystals Revealed by Time-Resolved One- and Two-Photon Excitation Photoluminescence Spectroscopy. <b>2016</b> , 2, 1500290	94
1436	n and p-type properties in organo-metal halide perovskites studied by Seebeck effects. <b>2016</b> , 35, 216-220	11

1435	Enhanced Photovoltaic Performance of Perovskite Solar Cells Using Polymer P(VDF-TrFE) as a Processed Additive. <b>2016</b> , 120, 12980-12988	62
1434	Solvent engineering for fast growth of centimetric high-quality CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite single crystals. <b>2016</b> , 40, 7261-7264	17
1433	Hybrid nanostructures of TiO <sub>2</sub> nanorod array/Cu <sub>2</sub> O with a CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> interlayer for enhanced photocatalytic activity and photoelectrochemical performance. <b>2016</b> , 6, 57695-57700	5
1432	Modulating carrier dynamics through perovskite film engineering. <b>2016</b> , 18, 27119-27123	26
1431	Soft-cover deposition of scaling-up uniform perovskite thin films for high cost-performance solar cells. <b>2016</b> , 9, 2295-2301	144
1430	Pure- or mixed-solvent assisted treatment for crystallization dynamics of planar lead halide perovskite solar cells. <b>2016</b> , 155, 166-175	16
1429	Enhanced photovoltaic performance of perovskite solar cells with mesoporous SiO <sub>2</sub> scaffolds. <b>2016</b> , 325, 534-540	22
1428	High-performance flexible and air-stable perovskite solar cells with a large active area based on poly(3-hexylthiophene) nanofibrils. <b>2016</b> , 4, 11307-11316	42
1427	Microstructure modulation of the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> layer in perovskite solar cells by 2-propanol pre-wetting and annealing in a spray-assisted solution process. <b>2016</b> , 4, 11372-11380	17
1426	Asymmetric Cathodoluminescence Emission in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Br <sub>x</sub> Perovskite Single Crystals. <b>2016</b> , 3, 947-952	25
1425	A SnO <sub>x</sub> -brookite TiO <sub>2</sub> bilayer electron collector for hysteresis-less high efficiency plastic perovskite solar cells fabricated at low process temperature. <b>2016</b> , 52, 8119-22	54
1424	Design and synthesis of dinuclear alkynylplatinum(II) terpyridine complexes as sensitizers for light-harvesting. <b>2016</b> , 120, 54-59	3
1423	High performance planar-heterojunction perovskite solar cells using amino-based fulleropyrrolidine as the electron transporting material. <b>2016</b> , 4, 10130-10134	41
1422	Is CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Polar?. <b>2016</b> , 7, 2412-9	116
1421	Low temperature synthesis of hierarchical TiO nanostructures for high performance perovskite solar cells by pulsed laser deposition. <b>2016</b> , 18, 27067-27072	24
1420	Cuprous Oxide as a Potential Low-Cost Hole-Transport Material for Stable Perovskite Solar Cells. <b>2016</b> , 9, 302-13	96
1419	Hole-Transporting Materials Based on Twisted Bimesitylenes for Stable Perovskite Solar Cells with High Efficiency. <b>2016</b> , 9, 274-9	39
1418	Status and outlook of sensitizers/dyes used in dye sensitized solar cells (DSSC): a review. <b>2016</b> , 40, 1303-1320	128



1417	Role of LiTFSI in high Tg triphenylamine-based hole transporting material in perovskite solar cell. <b>2016</b> , 6, 68553-68559	18
1416	Highly Efficient Organic Hole Transporting Materials for Perovskite and Organic Solar Cells with Long-Term Stability. <b>2016</b> , 28, 686-93	151
1415	High-Efficiency Flexible Solar Cells Based on Organometal Halide Perovskites. <b>2016</b> , 28, 4532-40	86
1414	Oxidized Ni/Au Transparent Electrode in Efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. <b>2016</b> , 28, 3290-7	50
1413	Organolead Halide Perovskites for Low Operating Voltage Multilevel Resistive Switching. <b>2016</b> , 28, 6562-7	219
1412	Energy-Efficient Hybrid Perovskite Memristors and Synaptic Devices. <b>2016</b> , 2, 1600100	215
1411	Is Excess PbI <sub>2</sub> Beneficial for Perovskite Solar Cell Performance?. <b>2016</b> , 6, 1502206	226
1410	Advances in the structure and materials of perovskite solar cells. <b>2016</b> , 42, 625-639	10
1409	Improved morphology and enhanced stability via solvent engineering for planar heterojunction perovskite solar cells. <b>2016</b> , 31, 142-148	36
1408	Challenges in the ambient Raman spectroscopy characterization of methylammonium lead triiodide perovskite thin films. <b>2016</b> , 9, 81-86	20
1407	Dark-blue mirror-like perovskite dense films for efficient organic-inorganic hybrid solar cells. <b>2016</b> , 4, 3689-3696	5
1406	Recent progress in electron transport layers for efficient perovskite solar cells. <b>2016</b> , 4, 3970-3990	393
1405	Investigating relation of photovoltaic factors with properties of perovskite films based on various solvents. <b>2016</b> , 21, 51-61	54
1404	Probing structural adaptability in templated vanadium selenites. <b>2016</b> , 114, 184-193	6
1403	Photophysical Analysis of the Formation of Organic-Inorganic Trihalide Perovskite Films: Identification and Characterization of Crystal Nucleation and Growth. <b>2016</b> , 120, 3071-3076	21
1402	Recent progress and challenges of organometal halide perovskite solar cells. <b>2016</b> , 79, 026501	97
1401	Dynamic Growth of Pinhole-Free Conformal CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Film for Perovskite Solar Cells. <b>2016</b> , 8, 4684-90	44
1400	Excited state and charge-carrier dynamics in perovskite solar cell materials. <b>2016</b> , 27, 082001	31

1399	All-solution processed semi-transparent perovskite solar cells with silver nanowires electrode. <b>2016</b> , 27, 095202		46
1398	Lead-Free MA <sub>2</sub> CuCl(x)Br(4-x) Hybrid Perovskites. <b>2016</b> , 55, 1044-52		345
1397	Lewis Acid-Base Adduct Approach for High Efficiency Perovskite Solar Cells. <b>2016</b> , 49, 311-9		690
1396	Dopant interdiffusion effects in n-i-p structured spiro-OMeTAD hole transport layer of organometal halide perovskite solar cells. <b>2016</b> , 31, 71-76		24
1395	Influence of void-free perovskite capping layer on the charge recombination process in high performance CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 4181-93	7.7	22
1394	High conductivity Ag-based metal organic complexes as dopant-free hole-transport materials for perovskite solar cells with high fill factors. <b>2016</b> , 7, 2633-2638		78
1393	Crystal organometal halide perovskites with promising optoelectronic applications. <b>2016</b> , 4, 11-27		133
1392	van der Waals Heterojunction Devices Based on Organohalide Perovskites and Two-Dimensional Materials. <b>2016</b> , 16, 367-73		163
1391	Color-Tuned Perovskite Films Prepared for Efficient Solar Cell Applications. <b>2016</b> , 120, 42-47		83
1390	A room-temperature CuAlO <sub>2</sub> hole interfacial layer for efficient and stable planar perovskite solar cells. <b>2016</b> , 4, 1326-1335		96
1389	In situ processed gold nanoparticle-embedded TiO <sub>2</sub> nanofibers enabling plasmonic perovskite solar cells to exceed 14% conversion efficiency. <i>Nanoscale</i> , <b>2016</b> , 8, 2664-77	7.7	118
1388	SiO <sub>2</sub> /TiO <sub>2</sub> based hollow nanostructures as scaffold layers and Al-doping in the electron transfer layer for efficient perovskite solar cells. <b>2016</b> , 4, 1306-1311		40
1387	High-efficiency perovskite solar cells based on anatase TiO <sub>2</sub> nanotube arrays. <b>2016</b> , 598, 1-5		8
1386	Organic-inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. <b>2016</b> , 45, 655-89		1049
1385	Low-temperature solution processable n-i-p perovskite solar cell. <b>2016</b> , 55, 04EA01		3
1384	Surface Decorating of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Nanoparticles with the Chemically Adsorbed Perylenetetracarboxylic Diimide. <b>2016</b> , 32, 3294-9		21
1383	Theoretical insights into hybrid perovskites for photovoltaic applications. <b>2016</b> ,		6
1382	Carrier scattering processes and low energy phonon spectroscopy in hybrid perovskites crystals. <b>2016</b> ,		10

1381	Perovskite Solar Cells Based on Low-Temperature Processed Indium Oxide Electron Selective Layers. <b>2016</b> , 8, 8460-6	100
1380	Application of benzodithiophene based AD <sub>n</sub> structured materials in efficient perovskite solar cells and organic solar cells. <b>2016</b> , 23, 40-49	56
1379	Evaluating replicability of laboratory experiments in economics. <b>2016</b> , 351, 1433-6	493
1378	Photon recycling in lead iodide perovskite solar cells. <b>2016</b> , 351, 1430-3	501
1377	Efficient lead acetate sourced planar heterojunction perovskite solar cells with enhanced substrate coverage via one-step spin-coating. <b>2016</b> , 33, 194-200	45
1376	High performance perovskite solar cells with functional highly porous TiO <sub>2</sub> thin films constructed in ambient air. <b>2016</b> , 151, 36-43	30
1375	Structure and Growth Control of Organic-Inorganic Halide Perovskites for Optoelectronics: From Polycrystalline Films to Single Crystals. <b>2016</b> , 3, 1500392	152
1374	Dual function interfacial layer for highly efficient and stable lead halide perovskite solar cells. <b>2016</b> , 4, 6091-6097	66
1373	Effects of CH <sub>3</sub> NH <sub>3</sub> PbI(3-x)Cl <sub>x</sub> Perovskite Layer on the Performance of Inverted Type Hybrid Organic Solar Cells Based on ZnO/P3HT. <b>2016</b> , 846, 292-297	
1372	Photoferroelectric and Photopiezoelectric Properties of Organometal Halide Perovskites. <b>2016</b> , 7, 1460-5	59
1371	Charge carrier dynamics of methylammonium lead iodide: from PbI <sub>2</sub> to low-dimensional broadly emitting perovskites. <b>2016</b> , 18, 10800-8	40
1370	Composition-controlled organometal halide perovskite via CH <sub>3</sub> NH <sub>3</sub> I pressure in a vacuum co-deposition process. <b>2016</b> , 4, 5663-5668	21
1369	Stabilized Wide Bandgap MAPbBr <sub>3</sub> Perovskite by Enhanced Grain Size and Improved Crystallinity. <b>2016</b> , 3, 1500301	182
1368	Organohalide Lead Perovskites for Photovoltaic Applications. <b>2016</b> , 7, 851-66	125
1367	Zero-Dimensional Hybrid Organic-Inorganic Halide Perovskite Modeling: Insights from First Principles. <b>2016</b> , 7, 888-99	35
1366	Origin of J-V Hysteresis in Perovskite Solar Cells. <b>2016</b> , 7, 905-17	530
1365	Chalcogenide perovskites: An emerging class of ionic semiconductors. <b>2016</b> , 22, 129-135	104
1364	Ultrathin Cu <sub>2</sub> O as an efficient inorganic hole transporting material for perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 6173-9	7.7 157

1363	Thin-film semiconductor perspective of organometal trihalide perovskite materials for high-efficiency solar cells. <b>2016</b> , 101, 1-38		91
1362	Hydrophobic Organic Hole Transporters for Improved Moisture Resistance in Metal Halide Perovskite Solar Cells. <b>2016</b> , 8, 5981-9		158
1361	A perylene diimide-based non-fullerene acceptor as an electron transporting material for inverted perovskite solar cells. <b>2016</b> , 6, 19923-19927		44
1360	Easily accessible polymer additives for tuning the crystal-growth of perovskite thin-films for highly efficient solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 5552-8	7.7	68
1359	Mobile Ion Induced Slow Carrier Dynamics in Organic-Inorganic Perovskite $\text{CH}_3\text{NH}_3\text{PbBr}_3$ <b>2016</b> , 8, 5351-7		87
1358	Planar versus mesoscopic perovskite microstructures: The influence of $\text{CH}_3\text{NH}_3\text{PbI}_3$ morphology on charge transport and recombination dynamics. <b>2016</b> , 22, 439-452		64
1357	Surface Properties of $\text{CH}_3\text{NH}_3\text{PbI}_3$ for Perovskite Solar Cells. <b>2016</b> , 49, 554-61		119
1356	Perovskite solar cells fabricated using dicarboxylic fullerene derivatives. <b>2016</b> , 40, 2829-2834		18
1355	Credible evidence for the passivation effect of remnant $\text{PbI}_2$ in $\text{CH}_3\text{NH}_3\text{CH}_2\text{PbI}_2$ films in improving the performance of perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 6600-8	7.7	73
1354	Working from Both Sides: Composite Metallic Semitransparent Top Electrode for High Performance Perovskite Solar Cells. <b>2016</b> , 8, 4523-31		50
1353	Spray reaction prepared $\text{FA}_{1-x}\text{Cs}_x\text{PbI}_3$ solid solution as a light harvester for perovskite solar cells with improved humidity stability. <b>2016</b> , 6, 14792-14798		77
1352	Visible light response, electrical transport, and amorphization in compressed organolead iodine perovskites. <i>Nanoscale</i> , <b>2016</b> , 8, 11426-31	7.7	69
1351	Critical kinetic control of non-stoichiometric intermediate phase transformation for efficient perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 12892-9	7.7	83
1350	Ionic polarization-induced current-voltage hysteresis in $\text{CH}_3\text{NH}_3\text{PbX}_3$ perovskite solar cells. <b>2016</b> , 7, 10334		500
1349	Ligand-Stabilized Reduced-Dimensionality Perovskites. <b>2016</b> , 138, 2649-55		889
1348	A general non- $\text{CH}_3\text{NH}_3\text{X}$ (X = I, Br) one-step deposition of $\text{CH}_3\text{NH}_3\text{PbX}_3$ perovskite for high performance solar cells. <b>2016</b> , 4, 3245-3248		43
1347	Spatially Non-uniform Trap State Densities in Solution-Processed Hybrid Perovskite Thin Films. <b>2016</b> , 7, 715-21		133
1346	Organic-Inorganic hybrid $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite materials as channels in thin-film field-effect transistors. <b>2016</b> , 6, 16243-16249		53

1345	A modified sequential deposition method for fabrication of perovskite solar cells. <b>2016</b> , 126, 243-251	33
1344	Novel CdS Hole-Blocking Layer for Photostable Perovskite Solar Cells. <b>2016</b> , 8, 4226-32	70
1343	New Scalable Cold-Roll Pressing for Post-treatment of Perovskite Microstructure in Perovskite Solar Cells. <b>2016</b> , 120, 2520-2528	26
1342	Exploring the electrochemical properties of hole transport materials with spiro-cores for efficient perovskite solar cells from first-principles. <i>Nanoscale</i> , <b>2016</b> , 8, 6146-54	7-7 87
1341	Hybrid Organic-Inorganic Coordination Complexes as Tunable Optical Response Materials. <b>2016</b> , 55, 3393-400	23
1340	Solution-Processed CuS NPs as an Inorganic Hole-Selective Contact Material for Inverted Planar Perovskite Solar Cells. <b>2016</b> , 8, 7800-5	103
1339	Aluminum-Doped Zinc Oxide as Highly Stable Electron Collection Layer for Perovskite Solar Cells. <b>2016</b> , 8, 7826-33	158
1338	Cross-stacked superaligned carbon nanotube electrodes for efficient hole conductor-free perovskite solar cells. <b>2016</b> , 4, 5569-5577	82
1337	Role of the chemical substitution on the structural and luminescence properties of the mixed halide perovskite thin MAPbI <sub>3</sub> 1-xBr <sub>x</sub> (0 ≤ x ≤ 1) films. <b>2016</b> , 371, 112-117	79
1336	Molecular design and photovoltaic performance of a novel thiocyanate-based layered organometal perovskite material. <b>2016</b> , 215, 56-63	27
1335	Ultrafast Dynamics of Hole Injection and Recombination in Organometal Halide Perovskite Using Nickel Oxide as p-Type Contact Electrode. <b>2016</b> , 7, 1096-101	78
1334	Near room temperature approaches for the preparation of air-stable and crystalline CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2016</b> , 173, 491-497	1
1333	Graphene in perovskite solar cells: device design, characterization and implementation. <b>2016</b> , 4, 6185-6235	149
1332	Efficient Planar Perovskite Solar Cells with Reduced Hysteresis and Enhanced Open Circuit Voltage by Using PW12-TiO <sub>2</sub> as Electron Transport Layer. <b>2016</b> , 8, 8520-6	33
1331	Design, fabrication and modification of metal oxide semiconductor for improving conversion efficiency of excitonic solar cells. <b>2016</b> , 320-321, 193-215	49
1330	Highly Efficient Flexible Perovskite Solar Cells Using Solution-Derived NiO <sub>x</sub> Hole Contacts. <b>2016</b> , 10, 3630-6	370
1329	Exploration of the compositional space for mixed lead halogen perovskites for high efficiency solar cells. <b>2016</b> , 9, 1706-1724	498
1328	Graphene oxide modified hole transport layer for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> planar heterojunction solar cells. <b>2016</b> , 131, 176-182	56

1327	Improving Efficiency of Blue Organic Light-Emitting Diode with Sulfobutylated Lignin Doped PEDOT as Anode Buffer Layer. <b>2016</b> , 4, 2004-2011		11
1326	Design rules for the broad application of fast (. <b>2016</b> , 6, 27475-27484		35
1325	Plasmonic Nanoparticle Enhancement of Solution-Processed Solar Cells: Practical Limits and Opportunities. <b>2016</b> , 3, 158-173		85
1324	Organic-inorganic and all-inorganic lead halide nanoparticles [Invited]. <b>2016</b> , 24, A285-301		58
1323	Boosting the efficiency and the stability of low cost perovskite solar cells by using CuPc nanorods as hole transport material and carbon as counter electrode. <b>2016</b> , 20, 108-116		211
1322	Decreasing Charge Losses in Perovskite Solar Cells Through mp-TiO <sub>2</sub> /MAPI Interface Engineering. <b>2016</b> , 28, 207-213		71
1321	Efficient hysteresis-less bilayer type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /perovskite hybrid solar cells. <b>2016</b> , 27, 024004		13
1320	Halogen Effects on Ordering and Bonding of CH <sub>3</sub> NH <sub>3</sub> <sup>+</sup> in CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = Cl, Br, I) Hybrid Perovskites: A Vibrational Spectroscopic Study. <b>2016</b> , 120, 2509-2519		148
1319	High-efficiency robust perovskite solar cells on ultrathin flexible substrates. <b>2016</b> , 7, 10214		444
1318	Trace surface-clean palladium nanosheets as a conductivity enhancer in hole-transporting layers to improve the overall performances of perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 3274-7	7.7	21
1317	Photo-induced degradation of lead halide perovskite solar cells caused by the hole transport layer/metal electrode interface. <b>2016</b> , 4, 1991-1998		77
1316	Recent advancements in perovskite solar cells: flexibility, stability and large scale. <b>2016</b> , 4, 6755-6771		118
1315	Recent Advances in the Inverted Planar Structure of Perovskite Solar Cells. <b>2016</b> , 49, 155-65		472
1314	14.7% efficient mesoscopic perovskite solar cells using single walled carbon nanotubes/carbon composite counter electrodes. <i>Nanoscale</i> , <b>2016</b> , 8, 6379-85	7.7	129
1313	Star-shaped hole transport materials with indeno[1,2-b] thiophene or fluorene on a triazine core for efficient perovskite solar cells. <b>2016</b> , 4, 1186-1190		34
1312	Role of Ferroelectric Nanodomains in the Transport Properties of Perovskite Solar Cells. <b>2016</b> , 16, 988-92		64
1311	Photoluminescence characterisations of a dynamic aging process of organic-inorganic CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> perovskite. <i>Nanoscale</i> , <b>2016</b> , 8, 1926-31	7.7	47
1310	Effect of the filtration of PbI <sub>2</sub> solution for zinc oxide nanowire based perovskite solar cells. <b>2016</b> , 55, 01AE09		4

1309	Perovskite solar cells based on bottom-fused TiO <sub>2</sub> nanocones. <b>2016</b> , 4, 1520-1530		30
1308	Efficient luminescent solar cells based on tailored mixed-cation perovskites. <b>2016</b> , 2, e1501170		1498
1307	Graphene oxide/PEDOT:PSS composite hole transport layer for efficient and stable planar heterojunction perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 1513-22	7.7	134
1306	Entropic stabilization of mixed A-cation ABX <sub>3</sub> metal halide perovskites for high performance perovskite solar cells. <b>2016</b> , 9, 656-662		882
1305	Room-temperature mixed-solvent-vapor annealing for high performance perovskite solar cells. <b>2016</b> , 4, 321-326		87
1304	High-efficiency bulk heterojunction memory devices fabricated using organometallic halide perovskite:poly(N-vinylcarbazole) blend active layers. <b>2016</b> , 45, 484-8		28
1303	Effect of relative humidity on crystal growth, device performance and hysteresis in planar heterojunction perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 6300-7	7.7	92
1302	Synthesis of tunable-band-gap "Open-Box" halide perovskites by use of anion exchange and internal dissolution procedures. <b>2016</b> , 461, 162-167		2
1301	Band-gap tuning of lead halide perovskite using a single step spin-coating deposition process. <b>2016</b> , 164, 498-501		50
1300	Mesoscopic perovskite solar cells with an admixture of nanocrystalline TiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> : role of interconnectivity of TiO <sub>2</sub> charge collection. <i>Nanoscale</i> , <b>2016</b> , 8, 6341-51	7.7	24
1299	Observation of a hot-phonon bottleneck in lead-iodide perovskites. <b>2016</b> , 10, 53-59		577
1298	Planar heterojunction organometal halide perovskite solar cells: roles of interfacial layers. <b>2016</b> , 9, 12-30		396
1297	Null current hysteresis for acetylacetonate electron extraction layer in perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 6328-34	7.7	25
1296	Wavelength-tunable waveguides based on polycrystalline organic-inorganic perovskite microwires. <i>Nanoscale</i> , <b>2016</b> , 8, 6258-64	7.7	66
1295	Organometal halide perovskite solar cells: degradation and stability. <b>2016</b> , 9, 323-356		1188
1294	Structural and optical properties of methylammonium lead iodide across the tetragonal to cubic phase transition: implications for perovskite solar cells. <b>2016</b> , 9, 155-163		355
1293	Discovering lead-free perovskite solar materials with a split-anion approach. <i>Nanoscale</i> , <b>2016</b> , 8, 6284-9	7.7	97
1292	Chemical bath deposited rutile TiO <sub>2</sub> compact layer toward efficient planar heterojunction perovskite solar cells. <b>2017</b> , 391, 337-344		62

1291	Lead-free pseudo-three-dimensional organic/inorganic iodobismuthates for photovoltaic applications. <b>2017</b> , 1, 308-316	72
1290	Gas-assisted coating of Bi-based (CH <sub>3</sub> NH <sub>3</sub> ) <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> active layer in perovskite solar cells. <b>2017</b> , 191, 77-79	29
1289	Influence of Surface Termination on the Energy Level Alignment at the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/C60 Interface. <b>2017</b> , 29, 958-968	119
1288	An X-ray scattering and electron microscopy study of methylammonium bismuth perovskites for solar cell applications. <b>2017</b> , 32, 1888-1898	3
1287	Thermal Conductivity of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> and CsPbI <sub>3</sub> : Measuring the Effect of the Methylammonium Ion on Phonon Scattering. <b>2017</b> , 121, 3228-3233	52
1286	Influence of a compact CdS layer on the photovoltaic performance of perovskite-based solar cells. <b>2017</b> , 1, 504-509	20
1285	Optical and electronic properties of mixed halide (X = I, Cl, Br) methylammonium lead perovskite solar cells. <b>2017</b> , 5, 1714-1723	94
1284	Perovskite Solar Cells. <b>2017</b> , 277-291	3
1283	Effect of Structure, Temperature, and Metal Work Function on Performance of Organometallic Perovskite Solar Cells. <b>2017</b> , 46, 1806-1810	5
1282	The novel dopant for hole-transporting material opens a new processing route to efficiently reduce hysteresis and improve stability of planar perovskite solar cells. <b>2017</b> , 342, 886-895	61
1281	Lead acetate film as precursor for two-step deposition of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2017</b> , 89, 89-96	6
1280	Moving into the domain of perovskite sensitized solar cell. <b>2017</b> , 72, 907-915	19
1279	A TiO nanotube network electron transport layer for high efficiency perovskite solar cells. <b>2017</b> , 19, 4956-4961	28
1278	Fabrication and characterization of perovskite-based CH <sub>3</sub> NH <sub>3</sub> Pb <sub>1-x</sub> As <sub>x</sub> I <sub>3+x</sub> Cl <sub>y</sub> photovoltaic devices. <b>2017</b> ,	1
1277	A simple fabrication of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite for solar cells using low-purity PbI <sub>2</sub> . <b>2017</b> , 38, 014004	8
1276	Readily synthesized dopant-free hole transport materials with phenol core for stabilized mixed perovskite solar cells. <b>2017</b> , 344, 160-169	58
1275	Textured CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> thin film with enhanced stability for high performance perovskite solar cells. <b>2017</b> , 33, 485-496	65
1274	Perovskite solar cells: Danger from within. <b>2017</b> , 2,	29



1273	Performance enhancement of perovskite solar cells using a La-doped BaSnO <sub>3</sub> electron transport layer. <b>2017</b> , 5, 3675-3682		70
1272	Probe Decomposition of Methylammonium Lead Iodide Perovskite in N and O by in Situ Infrared Spectroscopy. <b>2017</b> , 121, 1169-1174		28
1271	Controlled growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films towards efficient perovskite solar cells by varied-stoichiometric intermediate adduct. <b>2017</b> , 403, 572-577		21
1270	Efficient perovskite solar cells by combination use of Au nanoparticles and insulating metal oxide. <i>Nanoscale</i> , <b>2017</b> , 9, 2852-2864	7-7	53
1269	Efficient planar n-i-p type heterojunction flexible perovskite solar cells with sputtered TiO electron transporting layers. <i>Nanoscale</i> , <b>2017</b> , 9, 3095-3104	7-7	83
1268	Thermal Precursor Approach to Pristine Fullerene Film as Electron Selective Layer in Perovskite Solar Cells. <b>2017</b> , 6, M3078-M3083		10
1267	Resistive Switching Properties through Iodine Migrations of a Hybrid Perovskite Insulating Layer. <b>2017</b> , 4, 1601035		52
1266	Advances in hole transport materials engineering for stable and efficient perovskite solar cells. <b>2017</b> , 34, 271-305		278
1265	Modeling and analysis of HTM-free perovskite solar cells based on ZnO electron transport layer. <b>2017</b> , 104, 167-177		36
1264	Recent advances in perovskite solar cells: efficiency, stability and lead-free perovskite. <b>2017</b> , 5, 11462-11482		307
1263	Rapid and Complete Conversion of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for Perovskite/C <sub>60</sub> Planar-Heterojunction Solar Cells by Two-Step Deposition. <b>2017</b> , 35, 687-692		5
1262	The synergistic effect of H <sub>2</sub> O and DMF towards stable and 20% efficiency inverted perovskite solar cells. <b>2017</b> , 10, 808-817		315
1261	Low-temperature processed SnO <sub>2</sub> compact layer by incorporating TiO <sub>2</sub> layer toward efficient planar heterojunction perovskite solar cells. <b>2017</b> , 164, 87-92		59
1260	Between the Sheets: Postsynthetic Transformations in Hybrid Perovskites. <b>2017</b> , 29, 1868-1884		67
1259	Tunable Light-Emitting Diodes Utilizing Quantum-Confined Layered Perovskite Emitters. <b>2017</b> , 4, 476-481		106
1258	Highly Efficient Electron-Selective Layer Free Perovskite Solar Cells by Constructing Effective p $\bar{n}$ Heterojunction. <b>2017</b> , 1, 1600027		59
1257	Inorganic Rubidium Cation as an Enhancer for Photovoltaic Performance and Moisture Stability of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Perovskite Solar Cells. <b>2017</b> , 27, 1605988		148
1256	Perovskite Solar Cells: The Birth of a New Era in Photovoltaics. <b>2017</b> , 2, 822-830		259

1255	In-Situ Formed Type I Nanocrystalline Perovskite Film for Highly Efficient Light-Emitting Diode. <b>2017</b> , 11, 3311-3319	134
1254	Fully Ambient-Processed Perovskite Film for Perovskite Solar Cells: Effect of Solvent Polarity on Lead Iodide. <b>2017</b> , 9, 10743-10751	36
1253	Photoelectrochemical water splitting over mesoporous CuPbI <sub>3</sub> films prepared by electrophoretic technique. <b>2017</b> , 148, 981-989	7
1252	Photovoltaic properties of Cu-doped CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> with perovskite structure. <b>2017</b> ,	13
1251	Enhanced Photovoltaic Performance of Mesoscopic Perovskite Solar Cells by Controlling the Interaction between CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films and CsPbX <sub>3</sub> Perovskite Nanoparticles. <b>2017</b> , 121, 4239-4245	42
1250	Research progress of low-dimensional perovskites: synthesis, properties and optoelectronic applications. <b>2017</b> , 38, 011004	8
1249	Impact of synthetic routes on the structural and physical properties of butyl-1,4-diammonium lead iodide semiconductors. <b>2017</b> , 5, 11730-11738	28
1248	The rapid evolution of highly efficient perovskite solar cells. <b>2017</b> , 10, 710-727	811
1247	Electrospray technique in fabricating perovskite-based hybrid solar cells under ambient conditions. <b>2017</b> , 7, 10985-10991	12
1246	Perovskite Solar Cells on the Way to Their Radiative Efficiency Limit Insights Into a Success Story of High Open-Circuit Voltage and Low Recombination. <b>2017</b> , 7, 1602358	331
1245	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> grain growth and interfacial properties in meso-structured perovskite solar cells fabricated by two-step deposition. <b>2017</b> , 18, 253-262	36
1244	Inhibition of a structural phase transition in one-dimensional organometal halide perovskite nanorods grown inside porous silicon nanotube templates. <b>2017</b> , 95,	11
1243	Solution-Processed Cu(In, Ga)(S, Se) Nanocrystal as Inorganic Hole-Transporting Material for Efficient and Stable Perovskite Solar Cells. <b>2017</b> , 12, 159	31
1242	Automated synthesis of quantum dot nanocrystals by hot injection: Mixing induced self-focusing. <b>2017</b> , 320, 232-243	17
1241	Synthesizing conditions for organic-inorganic hybrid perovskite using methylammonium lead iodide. <b>2017</b> , 105, 16-22	5
1240	Effect of Selective Contacts on the Thermal Stability of Perovskite Solar Cells. <b>2017</b> , 9, 7148-7153	145
1239	The investigation of an amidine-based additive in the perovskite films and solar cells. <b>2017</b> , 38, 014001	6
1238	The effect of grain orientation on the morphological stability of the organic-inorganic perovskite films under elevated temperature. <b>2017</b> , 38, 014002	4

1237	Device stability of perovskite solar cells – A review. <b>2017</b> , 77, 131-146	263
1236	Polymorphic Phase Control Mechanism of Organic–Inorganic Hybrid Perovskite Engineered by Dual-Site Alloying. <b>2017</b> , 121, 9508-9515	14
1235	A Printable Organic Electron Transport Layer for Low-Temperature-Processed, Hysteresis-Free, and Stable Planar Perovskite Solar Cells. <b>2017</b> , 7, 1700226	39
1234	Simple dopant-free hole-transporting materials with p-conjugated structure for stable perovskite solar cells. <b>2017</b> , 416, 124-132	15
1233	Metal-Nanowire-Electrode-Based Perovskite Solar Cells: Challenging Issues and New Opportunities. <b>2017</b> , 7, 1602751	44
1232	Synergetic Effect of Chloride Doping and CH <sub>3</sub> NH <sub>3</sub> PbCl on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>2</sub> Cl Perovskite-Based Solar Cells. <b>2017</b> , 10, 2365-2369	42
1231	Infiltration of methylammonium metal halide in highly porous membranes using sol-gel-derived coating method. <b>2017</b> , 416, 96-102	9
1230	High photovoltage in perovskite solar cells: New physical insights from the ultrafast transient absorption spectroscopy. <b>2017</b> , 683, 211-215	22
1229	Energy and charge transfer cascade in methylammonium lead bromide perovskite nanoparticle aggregates. <b>2017</b> , 8, 4371-4380	33
1228	Structure and interstitial iodide migration in hybrid perovskite methylammonium lead iodide. <b>2017</b> , 8, 15152	62
1227	Current Advancements in Material Research and Techniques Focusing on Lead-free Perovskite Solar Cells. <b>2017</b> , 46, 1276-1284	28
1226	Improving Interfacial Charge Recombination in Planar Heterojunction Perovskite Photovoltaics with Small Molecule as Electron Transport Layer. <b>2017</b> , 7, 1700522	139
1225	Tailoring Organic Cation of 2D Air-Stable Organometal Halide Perovskites for Highly Efficient Planar Solar Cells. <b>2017</b> , 7, 1700162	257
1224	Ultrasensitive all-solution-processed field-effect transistor based perovskite photodetectors with sol-gel SiO <sub>2</sub> as the dielectric layer. <b>2017</b> , 717, 150-155	15
1223	Synthesis of Photoactive Materials by Sonication: Application in Photocatalysis and Solar Cells. <b>2017</b> , 95-115	2
1222	Recent advances in quantum dot-sensitized solar cells: insights into photoanodes, sensitizers, electrolytes and counter electrodes. <b>2017</b> , 1, 1217-1231	86
1221	Temperature-modulated crystal growth and performance for highly reproducible and efficient perovskite solar cells. <b>2017</b> , 19, 13147-13152	14
1220	Synthesis of a nanostructured rutile TiO <sub>2</sub> electron transporting layer via an etching process for efficient perovskite solar cells: impact of the structural and crystalline properties of TiO <sub>2</sub> . <b>2017</b> , 5, 12340-12353 <sup>20</sup>	

1219	Enhanced light absorption of thin perovskite solar cells using textured substrates. <b>2017</b> , 168, 214-220		36
1218	Rashba Band Splitting in Organohalide Lead Perovskites: Bulk and Surface Effects. <b>2017</b> , 8, 2247-2252		76
1217	An ABX <sub>3</sub> organic-inorganic perovskite-type material with the formula (C <sub>5</sub> N <sub>2</sub> H <sub>9</sub> )CdCl <sub>3</sub> : Application for detection of volatile organic solvent molecules. <b>2017</b> , 131, 22-26		12
1216	Spray deposited lanthanum doped TiO <sub>2</sub> compact layers as electron selective contact for perovskite solar cells. <b>2017</b> , 168, 85-90		30
1215	Increased Efficiency for Perovskite Photovoltaics Based on Aluminum-Doped Zinc Oxide Transparent Electrodes via Surface Modification. <b>2017</b> , 121, 10282-10288		13
1214	The effect of illumination on the formation of metal halide perovskite films. <b>2017</b> , 545, 208-212		197
1213	Combinatorial screening of halide perovskite thin films and solar cells by mask-defined IR laser molecular beam epitaxy. <b>2017</b> , 18, 307-315		18
1212	Organic and Inorganic Hybrid Solar Cells. <b>2017</b> , 1-35		2
1211	Organic-Inorganic Hybrid Perovskite Solar Cells with Scalable and Roll-to-Roll Compatible Printing/Coating Processes. <b>2017</b> , 313-362		2
1210	Tuning the crystal growth of perovskite thin-films by adding the 2-pyridylthiourea additive for highly efficient and stable solar cells prepared in ambient air. <b>2017</b> , 5, 13448-13456		74
1209	Controlling crystal growth by chloride-assisted synthesis: Towards optimized charge transport in hybrid halide perovskites. <b>2017</b> , 166, 269-275		8
1208	Structural Stability, Vibrational Properties, and Photoluminescence in CsSnI <sub>3</sub> Perovskite upon the Addition of SnF <sub>2</sub> . <b>2017</b> , 56, 84-91		78
1207	Electrosprayed TiO <sub>2</sub> nanoporous hemispheres for enhanced electron transport and device performance of formamidinium based perovskite solar cells. <i>Nanoscale</i> , <b>2017</b> , 9, 412-420	7-7	15
1206	Photocatalytic hydrogen generation from hydriodic acid using methylammonium lead iodide in dynamic equilibrium with aqueous solution. <b>2017</b> , 2,		301
1205	Perovskite solar cells: An integrated hybrid lifecycle assessment and review in comparison with other photovoltaic technologies. <b>2017</b> , 80, 1321-1344		150
1204	Size-controlled CdSe quantum dots to boost light harvesting capability and stability of perovskite photovoltaic cells. <i>Nanoscale</i> , <b>2017</b> , 9, 10075-10083	7-7	16
1203	Hole transporting materials for mesoscopic perovskite solar cells [Towards a rational design?]. <b>2017</b> , 5, 16446-16466		105
1202	Long-Lived Photoinduced Polarons in Organohalide Perovskites. <b>2017</b> , 8, 3081-3086		45

1201	Self-encapsulated semi-transparent perovskite solar cells with water-soaked stability and metal-free electrode. <b>2017</b> , 48, 308-313	15
1200	Morphology and structure improvement of the hybrid CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite film via external doping. <b>2017</b> , 636, 296-301	4
1199	Tunability of Band Gap and Photoluminescence in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films by Anodized Aluminum Oxide Templates. <b>2017</b> , 7, 1918	23
1198	Secondary Hydrothermally Processed Engineered Titanium Dioxide Nanostructures for Efficient Perovskite Solar Cells. <b>2017</b> , 5, 1775-1787	6
1197	Enhancing efficiency and stability of perovskite solar cells via a high mobility p-type PbS buffer layer. <b>2017</b> , 38, 1-11	51
1196	SnO <sub>2</sub> nanotube arrays grown via an in situ template-etching strategy for effective and stable perovskite solar cells. <b>2017</b> , 325, 378-385	39
1195	The Nature of Electron Mobility in Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2017</b> , 17, 3646-3654	44
1194	Effect of water on the effective Goldschmidt tolerance factor and photoelectric conversion efficiency of organic-inorganic perovskite: insights from first-principles calculations. <b>2017</b> , 19, 14955-14960	6
1193	Perovskite/Polymer Hybrid Thin Films for High External Quantum Efficiency Photodetectors with Wide Spectral Response from Visible to Near-Infrared Wavelengths. <b>2017</b> , 5, 1700213	40
1192	Effects of organic cations on the defect physics of tin halide perovskites. <b>2017</b> , 5, 15124-15129	135
1191	Deciphering the NH <sub>4</sub> PbI <sub>3</sub> Intermediate Phase for Simultaneous Improvement on Nucleation and Crystal Growth of Perovskite. <b>2017</b> , 27, 1701804	89
1190	A 200-nm length TiO <sub>2</sub> nanorod array with a diameter of 13 nm and areal density of 1100 μm <sup>2</sup> for efficient perovskite solar cells. <b>2017</b> , 43, 12534-12539	13
1189	Performance enhancement of perovskite solar cell by controlling deposition temperature of copper phthalocyanine as a dopant-free hole transporting layer. <b>2017</b> , 48, 211-216	19
1188	The Interplay between Trap Density and Hysteresis in Planar Heterojunction Perovskite Solar Cells. <b>2017</b> , 17, 4270-4276	175
1187	O <sub>3</sub> fast and simple treatment-enhanced p-doped Spiro-MeOTAD for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> vapor-assisted processed CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2017</b> , 26, 068803	2
1186	Layer-controlled two-dimensional perovskites: synthesis and optoelectronics. <b>2017</b> , 5, 5610-5627	47
1185	Hybrid Perovskites: Effective Crystal Growth for Optoelectronic Applications. <b>2017</b> , 7, 1602596	54
1184	Theoretical Treatment of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells. <b>2017</b> , 56, 15806-15817	84

1183	Theoretische Abhandlung über CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -Perowskit-Solarzellen. <b>2017</b> , 129, 16014-16026	4
1182	Dielectric Response: Answer to Many Questions in the Methylammonium Lead Halide Solar Cell Absorbers. <b>2017</b> , 7, 1700600	111
1181	Two cyclohexanofullerenes used as electron transport materials in perovskite solar cells. <b>2017</b> , 468, 146-151	9
1180	Exploring the PbS <sub>2</sub> Bi <sub>2</sub> S <sub>3</sub> Series for Next Generation Energy Conversion Materials. <b>2017</b> , 29, 5156-5167	24
1179	Organic-Inorganic Halide Perovskite Formation: In Situ Dissociation of Cation Halide and Metal Halide Complexes during Crystal Formation. <b>2017</b> , 121, 13532-13538	15
1178	Sequential Dip-spin Coating Method: Fully Infiltration of MAPbI <sub>3</sub> -xCl <sub>x</sub> into Mesoporous TiO <sub>2</sub> for Stable Hybrid Perovskite Solar Cells. <b>2017</b> , 245, 734-741	12
1177	Improving the efficiency and stability of inverted perovskite solar cells with dopamine-copolymerized PEDOT:PSS as a hole extraction layer. <b>2017</b> , 5, 13817-13822	63
1176	Ternary oxide BaSnO <sub>3</sub> nanoparticles as an efficient electron-transporting layer for planar perovskite solar cells. <b>2017</b> , 722, 196-206	19
1175	First determination of the valence band dispersion of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> hybrid organic-inorganic perovskite. <b>2017</b> , 50, 26LT02	26
1174	CdSe quantum dots using selenourea as selenium source in polymer matrix. <b>2017</b> , 28, 14638-14645	4
1173	Current state and perspectives for organo-halide perovskite solar cells. Part 1. Crystal structures and thin film formation, morphology, processing, degradation, stability improvement by carbon nanotubes. A review. <b>2017</b> , 3, 1-25	20
1172	Interface modification with PCBM intermediate layers for planar formamidinium perovskite solar cells. <b>2017</b> , 7, 30422-30427	13
1171	Fabrication and characterization of perovskite photovoltaic devices with TiO <sub>2</sub> nanoparticle layers. <b>2017</b> ,	2
1170	Enhanced Performance of Planar Perovskite Solar Cells Using Low-Temperature Solution-Processed Al-Doped SnO as Electron Transport Layers. <b>2017</b> , 12, 238	45
1169	Performance Enhancement of Tri-Cation and Dual-Anion Mixed Perovskite Solar Cells by Au@SiO <sub>2</sub> Nanoparticles. <b>2017</b> , 27, 1606545	43
1168	Luminescence spectroscopy of lead-halide perovskites: materials properties and application as photovoltaic devices. <b>2017</b> , 5, 3427-3437	88
1167	Acridine-based novel hole transporting material for high efficiency perovskite solar cells. <b>2017</b> , 5, 7603-7611	44
1166	Mechanical signatures of degradation of the photovoltaic perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> upon water vapor exposure. <b>2017</b> , 110, 121903	32

1165	Fast Fabrication of a Stable Perovskite Solar Cell with an Ultrathin Effective Novel Inorganic Hole Transport Layer. <b>2017</b> , 33, 3624-3634	15
1164	Solution-Based Synthesis of Ultrasmall Nb <sub>2</sub> O <sub>5</sub> Nanoparticles for Functional Thin Films in Dye-Sensitized and Perovskite Solar Cells. <b>2017</b> , 236, 131-139	16
1163	Study of Arylamine-Substituted Porphyrins as Hole-Transporting Materials in High-Performance Perovskite Solar Cells. <b>2017</b> , 9, 13231-13239	82
1162	Improving the stability of the perovskite solar cells by V <sub>2</sub> O <sub>5</sub> modified transport layer film. <b>2017</b> , 7, 18456-18465	4
1161	Enhanced interfacial electron transfer of inverted perovskite solar cells by introduction of CoSe into the electron-transporting-layer. <b>2017</b> , 353, 123-130	18
1160	Bulk heterojunction perovskite solar cells based on room temperature deposited hole-blocking layer: Suppressed hysteresis and flexible photovoltaic application. <b>2017</b> , 351, 123-129	57
1159	Comparison of life cycle environmental impacts of different perovskite solar cell systems. <b>2017</b> , 166, 9-17	55
1158	Perovskite Materials: Solar Cell and Optoelectronic Applications. <b>2017</b> , 1-14	1
1157	Tailoring a compact and stable Langmuir bi-dimensional PbX-based layered perovskite film at the air-water interface and on solid support. <b>2017</b> , 498, 194-201	0
1156	Thermally Induced Crystallization of High Quality CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Film with Large Grains for Highly Efficient Perovskite Solar Cells. <b>2017</b> , 23, 5658-5662	6
1155	TiO <sub>2</sub> colloid-based compact layers for hybrid lead halide perovskite solar cells. <b>2017</b> , 7, 112-119	17
1154	Cesium Iodide Interface Modification for High Efficiency, High Stability and Low Hysteresis Perovskite Solar Cells. <b>2017</b> , 236, 122-130	27
1153	Mixed cation hybrid lead halide perovskites with enhanced performance and stability. <b>2017</b> , 5, 11450-11461	123
1152	Enabling the sunlight driven response of thermally induced shape memory polymers by rewritable CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite coating. <b>2017</b> , 5, 7285-7290	33
1151	LowDimensional Halide Perovskites and Their Advanced Optoelectronic Applications. <b>2017</b> , 9, 36	52
1150	The Rise of Highly Efficient and Stable Perovskite Solar Cells. <b>2017</b> , 50, 487-491	224
1149	Inorganic cesium lead halide CsPbX <sub>3</sub> nanowires for long-term stable solar cells. <b>2017</b> , 60, 285-294	42
1148	Ultrasensitivity broadband photodetectors based on perovskite: Research on film crystallization and electrode optimization. <b>2017</b> , 46, 35-43	18

1147	Electron injection and scaffold effects in perovskite solar cells. <b>2017</b> , 5, 634-644	52
1146	Sequential Introduction of Cations Deriving Large-Grain Cs FA Pbl Thin Film for Planar Hybrid Solar Cells: Insight into Phase-Segregation and Thermal-Healing Behavior. <b>2017</b> , 13, 1603225	56
1145	Controlled Deposition and Performance Optimization of Perovskite Solar Cells Using Ultrasonic Spray-Coating of Photoactive Layers. <b>2017</b> , 10, 1405-1412	49
1144	Modifying CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> nanocrystals with arylamines. <b>2017</b> , 103, 164-169	6
1143	A facile deposition method for CuSCN: Exploring the influence of CuSCN on J-V hysteresis in planar perovskite solar cells. <b>2017</b> , 32, 310-319	32
1142	An overview of the Challenges in the commercialization of dye sensitized solar cells. <b>2017</b> , 71, 675-686	110
1141	Enhanced Charge Carrier Transport and Device Performance Through Dual-Cesium Doping in Mixed-Cation Perovskite Solar Cells with Near Unity Free Carrier Ratios. <b>2017</b> , 9, 2358-2368	24
1140	Crystal and electronic structures of substituted halide perovskites based on density functional calculation and molecular dynamics. <b>2017</b> , 485-486, 22-28	7
1139	A new potential for methylammonium lead iodide. <b>2017</b> , 19, 2313-2321	15
1138	Hybrid Perovskite Photovoltaic Devices: Properties, Architecture, and Fabrication Methods. <b>2017</b> , 5, 373-401	21
1137	Reproducible Planar Heterojunction Solar Cells Based on One-Step Solution-Processed Methylammonium Lead Halide Perovskites. <b>2017</b> , 29, 462-473	32
1136	Interface engineering in planar perovskite solar cells: energy level alignment, perovskite morphology control and high performance achievement. <b>2017</b> , 5, 1658-1666	266
1135	Emerging of Inorganic Hole Transporting Materials For Perovskite Solar Cells. <b>2017</b> , 17, 681-699	56
1134	Preface for the Halide Perovskites Forum. <b>2017</b> , 56, 1-2	4
1133	Low-temperature aqueous solution processed ZnO as an electron transporting layer for efficient perovskite solar cells. <b>2017</b> , 1, 802-806	19
1132	Enhancement of photocurrent in an ultra-thin perovskite solar cell by Ag nanoparticles deposited at low temperature. <b>2017</b> , 7, 1206-1214	26
1131	A multifunctional poly-N-vinylcarbazole interlayer in perovskite solar cells for high stability and efficiency: a test with new triazatruxene-based hole transporting materials. <b>2017</b> , 5, 1913-1918	69
1130	Dimension engineering on cesium lead iodide for efficient and stable perovskite solar cells. <b>2017</b> , 5, 2066-2072 <sup>157</sup>	



1129	Structure-Band Gap Relationships in Hexagonal Polytypes and Low-Dimensional Structures of Hybrid Tin Iodide Perovskites. <b>2017</b> , 56, 56-73	158
1128	Interpretation of inverted photocurrent transients in organic lead halide perovskite solar cells: proof of the field screening by mobile ions and determination of the space charge layer widths. <b>2017</b> , 10, 192-204	113
1127	Versatile plasmonic-effects at the interface of inverted perovskite solar cells. <i>Nanoscale</i> , <b>2017</b> , 9, 1229-1236	42
1126	Depth-resolved band alignments of perovskite solar cells with significant interfacial effects. <b>2017</b> , 5, 2563-2571	30
1125	A chemical approach to perovskite solar cells: control of electron-transporting mesoporous TiO and utilization of nanocarbon materials. <b>2017</b> , 46, 15615-15627	16
1124	Accurate and efficient band gap predictions of metal halide perovskites using the DFT-1/2 method: GW accuracy with DFT expense. <b>2017</b> , 7, 14386	89
1123	Efficiency enhancement in inverted planar perovskite solar cells by synergetic effect of sulfated graphene oxide (sGO) and PEDOT:PSS as hole transporting layer. <b>2017</b> , 7, 50410-50419	15
1122	Atmospheric pressure chemical vapor deposition of methylammonium bismuth iodide thin films. <b>2017</b> , 5, 24728-24739	32
1121	Thermal conductivity modeling of hybrid organic-inorganic crystals and superlattices. <b>2017</b> , 41, 394-407	21
1120	Higher efficiency perovskite solar cells using additives of LiI, LiTFSI and BMImI in the PbI <sub>2</sub> precursor. <b>2017</b> , 1, 2162-2171	40
1119	Colloidal engineering for monolayer CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films toward high performance perovskite solar cells. <b>2017</b> , 5, 24168-24177	71
1118	High-Performance and Hysteresis-Free Planar Solar Cells with PC71BM and C60 Composed Structure Prepared Irrespective of Humidity. <b>2017</b> , 5, 9718-9724	10
1117	Solution-Processed Ultrathin TiO Compact Layer Hybridized with Mesoporous TiO for High-Performance Perovskite Solar Cells. <b>2017</b> , 9, 36865-36874	34
1116	Improving Efficiency and Stability of Perovskite Solar Cells by Modifying Mesoporous TiO <sub>2</sub> Perovskite Interfaces with Both Aminocaproic and Caproic acids. <b>2017</b> , 4, 1700897	28
1115	Photo-electrochemical and interfacial-process analysis of WO <sub>3</sub> nanostructures supported on TiO <sub>2</sub> : An approach to BPA oxidation. <b>2017</b> , 72, 115-121	4
1114	Free Carrier Radiative Recombination and Photon Recycling in Lead Halide Perovskite Solar Cell Materials. <b>2017</b> , 90, 1129-1140	54
1113	Decorating Perovskite Quantum Dots in TiO <sub>2</sub> Nanotubes Array for Broadband Response Photodetector. <b>2017</b> , 27, 1703115	104
1112	Physicochemical Interface Engineering of CuI/Cu as Advanced Potential Hole-Transporting Materials/Metal Contact Couples in Hysteresis-Free Ultralow-Cost and Large-Area Perovskite Solar Cells. <b>2017</b> , 121, 21935-21944	52

1111	Organometal Trihalide Perovskites with Intriguing Ferroelectric and Piezoelectric Properties. <b>2017</b> , 27, 1702207	25
1110	Investigation on the role of Lewis bases in the ripening process of perovskite films for highly efficient perovskite solar cells. <b>2017</b> , 5, 20874-20881	88
1109	High Performance Metal Halide Perovskite Light-Emitting Diode: From Material Design to Device Optimization. <b>2017</b> , 13, 1701770	167
1108	Impact of halide stoichiometry on structure-tuned formation of CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> BYa hybrid perovskites. <b>2017</b> , 158, 367-379	7
1107	Photoluminescence Voltage (PLV) Hysteresis of Perovskite Solar Cells. <b>2017</b> , 121, 24389-24396	11
1106	Enhanced Efficiency of Perovskite Solar Cells by using Core-Ultrathin Shell Structure Ag@SiO <sub>2</sub> Nanowires as Plasmonic Antennas. <b>2017</b> , 3, 1700169	23
1105	Influence of the Grain Size on the Properties of CH <sub>3</sub> NH <sub>3</sub> PbI Thin Films. <b>2017</b> , 9, 38428-38435	14
1104	Interfacial Engineering with Cross-Linkable Fullerene Derivatives for High-Performance Perovskite Solar Cells. <b>2017</b> , 9, 38530-38536	15
1103	Adding to the Perovskite Universe: Inverse-Hybrid Perovskites. <b>2017</b> , 2, 2681-2685	20
1102	Caesium Methyl Ammonium Mixed-Cation Lead Iodide Perovskite Crystals: Analysis and Application for Perovskite Solar Cells. <b>2017</b> , 257, 267-280	17
1101	Efficient and stable perovskite solar cells based on high-quality CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Cl <sub>x</sub> films modified by V <sub>2</sub> O <sub>5</sub> additives. <b>2017</b> , 5, 24282-24291	21
1100	Radical polymers as interfacial layers in inverted hybrid perovskite solar cells. <b>2017</b> , 5, 23831-23839	32
1099	Organic-Inorganic Hybrid Interfacial Layer for High-Performance Planar Perovskite Solar Cells. <b>2017</b> , 9, 31746-31751	11
1098	New insights into the electronic structures and optical properties in the orthorhombic perovskite MAPbI <sub>3</sub> : a mixture of Pb and Ge/Sn. <b>2017</b> , 41, 11413-11421	23
1097	Improved performance of mesoscopic perovskite solar cell using an accelerated crystalline formation method. <b>2017</b> , 365, 169-178	16
1096	Water-resistant, monodispersed and stably luminescent CsPbBr/CsPbBr core-shell-like structure lead halide perovskite nanocrystals. <b>2017</b> , 28, 445602	76
1095	Bismuth Incorporation Stabilized CsPbI <sub>3</sub> for Fully Inorganic Perovskite Solar Cells. <b>2017</b> , 2, 2219-2227	368
1094	Electronic excitation induced hydrogen-bond adjustment and lattice control in organic-inorganic hybrid cubic perovskites: a fixed occupation molecular dynamics study. <b>2017</b> , 19, 26164-26168	1

1093	Additive-Assisted Controllable Growth of Perovskites. <b>2017</b> , 1-26	4
1092	Monolithic Wide Band Gap Perovskite/Perovskite Tandem Solar Cells with Organic Recombination Layers. <b>2017</b> , 121, 27256-27262	35
1091	Plasmonic Effects of Metallic Nanoparticles on Enhancing Performance of Perovskite Solar Cells. <b>2017</b> , 9, 34821-34832	77
1090	Surface treatment via Li-bis-(trifluoromethanesulfonyl) imide to eliminate the hysteresis and enhance the efficiency of inverted perovskite solar cells. <b>2017</b> , 5, 10280-10287	11
1089	Improved performance of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> perovskite solar cells utilizing PbI <sub>2</sub> precursors. <b>2017</b> , 687, 106-109	4
1088	Solution-processable antimony-based light-absorbing materials beyond lead halide perovskites. <b>2017</b> , 5, 20843-20850	118
1087	Perovskites beyond photovoltaics: field emission from morphology-tailored nanostructured methylammonium lead triiodide. <b>2017</b> , 19, 26708-26717	6
1086	Tunable hysteresis effect for perovskite solar cells. <b>2017</b> , 10, 2383-2391	135
1085	Stability Issues of Inorganic/Organic Hybrid Lead Perovskite Solar Cells. <b>2017</b> , 147-178	1
1084	In Situ Fabrication of Integrated Electrode of Perovskite Solar Cells. <b>2017</b> , 46, 1687-1690	6
1083	A benzobis(thiadiazole)-based small molecule as a solution-processing electron extraction material in planar perovskite solar cells. <b>2017</b> , 5, 10777-10784	22
1082	Dipole Order in Halide Perovskites: Polarization and Rashba Band Splittings. <b>2017</b> , 121, 23045-23054	39
1081	Materials chemistry approaches to the control of the optical features of perovskite solar cells. <b>2017</b> , 5, 20561-20578	27
1080	P-Type and Inorganic Hole Transporting Materials for Perovskite Solar Cells. <b>2017</b> , 63-109	1
1079	Enhanced optical absorption via cation doping hybrid lead iodine perovskites. <b>2017</b> , 7, 7843	39
1078	The interface degradation of planar organic/inorganic perovskite solar cell traced by light beam induced current (LBIC). <b>2017</b> , 7, 42973-42978	11
1077	Current progress and scientific challenges in the advancement of organic/inorganic lead halide perovskite solar cells. <b>2017</b> , 41, 10508-10527	19
1076	Enhanced efficiency and environmental stability of planar perovskite solar cells by suppressing photocatalytic decomposition. <b>2017</b> , 5, 17368-17378	58

1075	Effects of SbBr <sub>3</sub> addition to CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> solar cells. <b>2017</b> ,	9
1074	Effects of copper addition on photovoltaic properties of perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx solar cells. <b>2017</b> , 214, 1700268	16
1073	Impact of Interfacial Layers in Perovskite Solar Cells. <b>2017</b> , 10, 3687-3704	129
1072	Synthesis of Cesium Lead Halide Perovskite Quantum Dots. <b>2017</b> , 94, 1150-1156	38
1071	Bandgap Narrowing in Bi-Doped CH <sub>3</sub> NH <sub>3</sub> PbCl <sub>3</sub> Perovskite Single Crystals and Thin Films. <b>2017</b> , 121, 17436-17441	61
1070	Charge transport study of perovskite solar cells through constructing electron transport channels. <b>2017</b> , 214, 1700089	5
1069	Enhancing the Performance of Perovskite Solar Cells by Hybridizing SnS Quantum Dots with CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2017</b> , 13, 1700953	64
1068	Metal Oxides as Efficient Charge Transporters in Perovskite Solar Cells. <b>2017</b> , 7, 1602803	115
1067	Thermodynamically self-organized hole transport layers for high-efficiency inverted-planar perovskite solar cells. <i>Nanoscale</i> , <b>2017</b> , 9, 12677-12683	7-7 17
1066	Polymorphism of the Blocking TiO <sub>2</sub> Layer Deposited on F:SnO <sub>2</sub> and Its Influence on the Interfacial Energetic Alignment. <b>2017</b> , 121, 17305-17313	4
1065	Tunable White-Light Emission in Single-Cation-Templated Three-Layered 2D Perovskites (CH <sub>3</sub> CH <sub>2</sub> NH <sub>3</sub> )PbBrCl. <b>2017</b> , 139, 11956-11963	254
1064	Enhancing the Photovoltaic Performance of Perovskite Solar Cells with a Down-Conversion Eu-Complex. <b>2017</b> , 9, 26958-26964	59
1063	Origin of Hysteresis in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Thin Films. <b>2017</b> , 27, 1701924	66
1062	From colossal magnetoresistance to solar cells: An overview on 66 years of research into perovskites. <b>2017</b> , 214, 1700394	11
1061	Polymer assisted growth of high-quality perovskite films by Lewis acid-base adduct for efficient planar-heterojunction solar cells. <b>2017</b> , 95, 216-222	8
1060	Low temperature fabrication of hybrid solar cells using co-sensitizer of perovskite and lead sulfide nanoparticles. <b>2017</b> , 50, 247-254	8
1059	Potassium doped methylammonium lead iodide (MAPbI <sub>3</sub> ) thin films as a potential absorber for perovskite solar cells; structural, morphological, electronic and optoelectric properties. <b>2017</b> , 522, 57-65	22
1058	All-inorganic inverse perovskite solar cells using zinc oxide nanocolloids on spin coated perovskite layer. <b>2017</b> , 4, 18	14

1057	Role of Methylammonium Orientation in Ion Diffusion and Current-Voltage Hysteresis in the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite. <b>2017</b> , 2, 1997-2004	55
1056	Rationalizing the light-induced phase separation of mixed halide organic-inorganic perovskites. <b>2017</b> , 8, 200	264
1055	Hole Transfer in Dye-Sensitized Cesium Lead Halide Perovskite Photovoltaics: Effect of Interfacial Bonding. <b>2017</b> , 121, 20113-20125	11
1054	A Bifunctional Lewis Base Additive for Microscopic Homogeneity in Perovskite Solar Cells. <b>2017</b> , 3, 290-302	232
1053	An Investigation into Electric Field-Modulated Photoluminescence of Perovskite solar cells. <b>2017</b> , 2, 3099-3104	
1052	Behavior of Methylammonium Dipoles in MAPbX (X = Br and I). <b>2017</b> , 8, 4113-4121	76
1051	Interfaces in Perovskite Solar Cells. <b>2017</b> , 7, 1700623	225
1050	Improved Reproducibility and Intercalation Control of Efficient Planar Inorganic Perovskite Solar Cells by Simple Alternate Vacuum Deposition of Pbl and Csl. <b>2017</b> , 2, 4464-4469	37
1049	Synthetic Manipulation of Hybrid Perovskite Systems in Search of New and Enhanced Functionalities. <b>2017</b> , 10, 3722-3739	10
1048	Study on the development and stability of perovskite solar cells. <b>2017</b> ,	
1047	Perovskite solar cells using polymer electrolytes. <b>2017</b> , 655, 181-194	14
1046	Spatially inhomogeneous photoluminescence-voltage hysteresis in planar heterojunction perovskite-based solar cells. <b>2017</b> , 111, 223901	4
1045	Ultrafast Exciton Dynamics in Shape-Controlled Methylammonium Lead Bromide Perovskite Nanostructures: Effect of Quantum Confinement on Charge Carrier Recombination. <b>2017</b> , 121, 28556-28565	16
1044	Tunable TiO <sub>2</sub> /p-epin thin film as a low-temperature electron transport layer for photoelectrochemical cells. <b>2017</b> , 32, 829-837	17
1043	Emerging solar technologies: Perovskite solar cell. <b>2017</b> , 22, 1061-1083	14
1042	Temperature and spectral dependence of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films photoconductivity. <b>2017</b> , 110, 222107	12
1041	High-performance planar perovskite solar cells: Influence of solvent upon performance. <b>2017</b> , 9, 598-604	49
1040	Segregation of Native Defects to the Grain Boundaries in Methylammonium Lead Iodide Perovskite. <b>2017</b> , 8, 5935-5942	40

1039	Unique Trapped Dimer State of the Photogenerated Hole in Hybrid Orthorhombic CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite: Identification, Origin, and Implications. <b>2017</b> , 17, 7724-7730	14
1038	An Implantable Transparent Conductive Film with Water Resistance and Ultrabendability for Electronic Devices. <b>2017</b> , 9, 42302-42312	14
1037	Effect of Rubidium Incorporation on the Structural, Electrical, and Photovoltaic Properties of Methylammonium Lead Iodide-Based Perovskite Solar Cells. <b>2017</b> , 9, 41898-41905	46
1036	Enhancing moisture-tolerance and photovoltaic performances of FAPbI <sub>3</sub> by bismuth incorporation. <b>2017</b> , 5, 25258-25265	37
1035	First-Principles Study of Electron Injection and Defects at the TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Interface of Perovskite Solar Cells. <b>2017</b> , 8, 5840-5847	22
1034	Stabilization of hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> thin films by graphene passivation. <i>Nanoscale</i> , <b>2017</b> , 9, 19227-19235	33
1033	JV and CV investigation of the effect of small molecular fullerene and non-fullerene acceptors for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cell. <b>2017</b> , 50, 475303	4
1032	Solution-processed SnO <sub>2</sub> thin film for a hysteresis-free planar perovskite solar cell with a power conversion efficiency of 19.2%. <b>2017</b> , 5, 24790-24803	119
1031	Low-Cost Carbazole-Based Hole-Transport Material for Highly Efficient Perovskite Solar Cells. <b>2017</b> , 10, 3111-3117	32
1030	Photovoltaic Rudorffites: Lead-Free Silver Bismuth Halides Alternative to Hybrid Lead Halide Perovskites. <b>2017</b> , 10, 3754-3759	121
1029	Tuning the Fermi Level of TiO <sub>2</sub> Electron Transport Layer through Europium Doping for Highly Efficient Perovskite Solar Cells. <b>2017</b> , 5, 1820-1826	24
1028	Water-Soluble 2D Transition Metal Dichalcogenides as the Hole-Transport Layer for Highly Efficient and Stable p-i-n Perovskite Solar Cells. <b>2017</b> , 9, 25323-25331	80
1027	Perovskite solar cells – The stars of photovoltaic industry. <b>2017</b> ,	
1026	Progress on Perovskite Materials and Solar Cells with Mixed Cations and Halide Anions. <b>2017</b> , 9, 30197-30246	339
1025	Large grained and high charge carrier lifetime CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> thin-films: implications for perovskite solar cells. <b>2017</b> , 17, 1335-1340	17
1024	Enhanced photovoltaic performance and stability in mixed-cation perovskite solar cells via compositional modulation. <b>2017</b> , 247, 460-467	32
1023	PbI <sub>2</sub> platelets for inverted planar organolead Halide Perovskite solar cells via ultrasonic spray deposition. <b>2017</b> , 32, 074003	14
1022	In Situ Fabrication of Highly Luminescent Bifunctional Amino Acid Crosslinked 2D/3D NH <sub>3</sub> C <sub>4</sub> H <sub>9</sub> COO(CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> ) <sub>n</sub> Perovskite Films. <b>2017</b> , 27, 1603568	103

1021	Efficient and hysteresis-less pseudo-planar heterojunction perovskite solar cells fabricated by a facile and solution-saving one-step dip-coating method. <b>2017</b> , 40, 13-23	31
1020	Fullerene Multiadducts as Electron Collection Layers for Perovskite Solar Cells. <b>2017</b> , 46, 101-103	7
1019	Superflexible, high-efficiency perovskite solar cells utilizing graphene electrodes: towards future foldable power sources. <b>2017</b> , 10, 337-345	307
1018	Effect of temperature annealing treatments and acceptors in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cell fabrication. <b>2017</b> , 695, 2453-2457	8
1017	Nanosheet-based printable perovskite solar cells. <b>2017</b> , 159, 518-525	40
1016	Effects of polysilane-doped spiro-OMeTAD hole transport layers on photovoltaic properties. <b>2017</b> , 214, 1600591	11
1015	Organic functional materials based buffer layers for efficient perovskite solar cells. <b>2017</b> , 28, 503-511	21
1014	Efficient planar heterojunction perovskite solar cells with Li-doped compact TiO <sub>2</sub> layer. <b>2017</b> , 31, 462-468	204
1013	Efficient Planar Heterojunction Perovskite Solar Cells via Low-Pressure Proximity Evaporation Technique. <b>2017</b> , 7, 184-190	6
1012	Catalytic role of H <sub>2</sub> O in degradation of inorganic/organic perovskite (CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> ) in air. <b>2017</b> , 41, 1063-1069	25
1011	Reducing Hysteresis and Enhancing Performance of Perovskite Solar Cells Using Low-Temperature Processed Y-Doped SnO Nanosheets as Electron Selective Layers. <b>2017</b> , 13, 1601769	144
1010	Investigating the Role of 4-Tert Butylpyridine in Perovskite Solar Cells. <b>2017</b> , 7, 1601079	76
1009	Efficiency enhancement of hole-conductor-free perovskite solar cell based on ZnO nanostructure by Al doping in ZnO. <b>2017</b> , 692, 492-502	29
1008	Chlorine Incorporation in the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite: Small Concentration, Big Effect. <b>2017</b> , 56, 74-83	36
1007	Nonstoichiometric Adduct Approach for High-Efficiency Perovskite Solar Cells. <b>2017</b> , 56, 3-10	22
1006	Beyond methylammonium lead iodide: prospects for the emergent field of ns containing solar absorbers. <b>2016</b> , 53, 20-44	280
1005	High-resolution patterning of organohalide lead perovskite pixels for photodetectors using orthogonal photolithography. <b>2017</b> , 214, 1600302	28
1004	Graphene/CuS/PbS nanocomposite as an effective counter electrode for quantum dot sensitized solar cells. <b>2017</b> , 696, 369-375	11

1003	A review on triphenylamine (TPA) based organic hole transport materials (HTMs) for dye sensitized solar cells (DSSCs) and perovskite solar cells (PSCs): evolution and molecular engineering. <b>2017</b> , 5, 1348-1373	232
1002	Solution Processed Hybrid Organic-Inorganic CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Material and Optical Properties. <b>2017</b> , 4, 12661-12665	8
1001	Recent advances of flexible hybrid perovskite solar cells. <b>2017</b> , 71, 593-607	14
1000	Improved perovskite morphology and crystallinity using porous PbI <sub>2</sub> layers for efficient planar heterojunction solar cells. <b>2017</b> , 111, 243902	11
999	Novel Cobalt Complexes as a Dopant for Hole-transporting Material in Perovskite Solar Cells. <b>2017</b> , 85, 226-230	10
998	Parameters affecting morphologies and efficiencies of mesoporous perovskite solar cells. <b>2017</b> , 220, 012023	
997	Ruthenium acetylacetonate in interface engineering for high performance planar hybrid perovskite solar cells. <b>2017</b> , 25, A253-A263	15
996	A Simple Deposition Method for Self-Assembling Single Crystalline Hybrid Perovskite Nanostructures. <b>2017</b> , 34, 068103	1
995	Are E-W trackers a better option for future investments in PV sector-A detailed Techno-Commercial Study. <b>2017</b> ,	
994	The Effect of Post-Baking Temperature and Thickness of ZnO Electron Transport Layers for Efficient Planar Heterojunction Organometal-Trihalide Perovskite Solar Cells. <b>2017</b> , 7, 215	6
993	Interfacial Kinetics of Efficient Perovskite Solar Cells. <b>2017</b> , 7, 252	20
992	CH <sub>3</sub> NH <sub>3</sub> Cl Assisted Solvent Engineering for Highly Crystallized and Large Grain Size Mixed-Composition (FAPbI <sub>3</sub> ) <sub>0.85</sub> (MAPbBr <sub>3</sub> ) <sub>0.15</sub> Perovskites. <b>2017</b> , 7, 272	20
991	The Effect of Solvents on the Performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells. <b>2017</b> , 10, 599	30
990	Dopant Patterning by PECVD and Mechanical Masking for Passivated Tunneling Contact IBC Cell Architectures. <b>2017</b> ,	
989	Improving the Morphology of the Perovskite Absorber Layer in Hybrid Organic/Inorganic Halide Perovskite MAPbI <sub>3</sub> Solar Cells. <b>2017</b> , 2017, 1-9	4
988	Development of perovskite solar cell in ambient conditions. <b>2017</b> ,	1
987	Perovskite as Light Harvester: Prospects, Efficiency, Pitfalls and Roadmap. <b>2017</b> ,	1
986	Short-circuit current-density enhancement of silicon solar cells using plasmonics antireflective coating and luminescent downshifting. <b>2017</b> ,	



985	Effects of NH <sub>4</sub> Cl addition to perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> photovoltaic devices. <b>2017</b> , 125, 303-307	29
984	Stable Perovskite Sensitized Solar Cell Using PEO Based Polymer Electrolyte in Ambient Environment Condition. <b>2017</b> , 1, 171-175	5
983	Recent Progresses in Perovskite Solar Cells. <b>2017</b> ,	2
982	Third-Generation-Sensitized Solar Cells. <b>2017</b> ,	6
981	Fabrication and Characterization of Element-Doped Perovskite Solar Cells. <b>2017</b> ,	1
980	Introduction. <b>2017</b> , 1-28	1
979	Yttrium-doped TiO <sub>2</sub> nanorod arrays and application in perovskite solar cells for enhanced photocurrent density. <b>2018</b> , 651, 117-123	11
978	Composition-Dependent Energy Splitting between Bright and Dark Excitons in Lead Halide Perovskite Nanocrystals. <b>2018</b> , 18, 2074-2080	59
977	Organic/Inorganic Metal Halide Perovskite Optoelectronic Devices beyond Solar Cells. <b>2018</b> , 5, 1700780	100
976	Surface passivation with nitrogen-doped carbon dots for improved perovskite solar cell performance. <b>2018</b> , 53, 9180-9190	31
975	Influence of Synthesis Conditions on the Morphology and Spectral-Luminescent Properties of Films of Organic-Inorganic Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>2.98</sub> Cl <sub>0.02</sub> . <b>2018</b> , 88, 114-119	6
974	Insulated Interlayer for Efficient and Photostable Electron-Transport-Layer-Free Perovskite Solar Cells. <b>2018</b> , 10, 10132-10140	28
973	First principles investigation of half-metallicity and spin gapless semiconductor in CH <sub>3</sub> NH <sub>3</sub> Cr x Pb <sub>1-x</sub> I <sub>3</sub> mixed perovskites. <b>2018</b> , 124, 1	7
972	Post-treatment of perovskite film with phenylalkylammonium iodide for hysteresis-less perovskite solar cells. <b>2018</b> , 179, 57-65	64
971	A ternary organic electron transport layer for efficient and photostable perovskite solar cells under full spectrum illumination. <b>2018</b> , 6, 5566-5573	31
970	Chaotic signatures of photoconductive Cu <sub>2</sub> ZnSnS <sub>4</sub> nanostructures explored by Lorenz attractors. <b>2018</b> , 20, 023048	9
969	Recent Progress on the Long-Term Stability of Perovskite Solar Cells. <b>2018</b> , 5, 1700387	248
968	Strategies for high performance perovskite/crystalline silicon four-terminal tandem solar cells. <b>2018</b> , 179, 36-44	23

967	MoS <sub>2</sub> : a two-dimensional hole-transporting material for high-efficiency, low-cost perovskite solar cells. <b>2018</b> , 29, 205201	38
966	Evaporation-Induced Self-Assembly of Semi-Crystalline PbI <sub>2</sub> (DMSO) Complex Films as a Facile Route to Reproducible and Efficient Planar p-i-n Perovskite Solar Cells. <b>2018</b> , 3, 1807-1817	2
965	Composite Nature of Layered Hybrid Perovskites: Assessment on Quantum and Dielectric Confinements and Band Alignment. <b>2018</b> , 12, 3321-3332	94
964	Effects of CuBr addition to CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> (Cl) perovskite photovoltaic devices. <b>2018</b> ,	7
963	TiO <sub>2</sub> composite electron transport layers for planar perovskite solar cells by mixed spray pyrolysis with precursor solution incorporating TiO <sub>2</sub> nanoparticles. <b>2018</b> , 27, 018810	4
962	Inorganic Hole Transporting Materials for Stable and High Efficiency Perovskite Solar Cells. <b>2018</b> , 122, 14039-14063	125
961	Effects of CsBr addition on the performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> -based solar cells. <b>2018</b> ,	2
960	Evolution of organometal halide solar cells. <b>2018</b> , 35, 74-107	22
959	Ultrafast zero-bias photocurrent and terahertz emission in hybrid perovskites. <b>2018</b> , 1,	24
958	Device simulation of inverted CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> perovskite solar cells based on PCBM electron transport layer and NiO hole transport layer. <b>2018</b> , 169, 11-18	59
957	Investigating Recombination and Charge Carrier Dynamics in a One-Dimensional Nanopillared Perovskite Absorber. <b>2018</b> , 12, 4233-4245	29
956	Perovskite nanostructures for photovoltaic and energy storage devices. <b>2018</b> , 6, 9765-9798	67
955	Influence of hole transport material/metal contact interface on perovskite solar cells. <b>2018</b> , 29, 255201	10
954	Optimizing the efficiency of perovskite solar cells by a sub-nanometer compact titanium oxide electron transport layer. <b>2018</b> , 49, 230-236	13
953	Synthesis of Water-Soluble Antimony Sulfide Quantum Dots and Their Photoelectric Properties. <b>2018</b> , 13, 19	6
952	In Situ Monitoring the Uptake of Moisture into Hybrid Perovskite Thin Films. <b>2018</b> , 9, 2015-2021	41
951	Impedance Spectroscopy Measurements in Perovskite Solar Cells: Device Stability and Noise Reduction. <b>2018</b> , 3, 1044-1048	72
950	Crystal structure, optical behavior and electrical conduction of the new organic-inorganic compound CH <sub>3</sub> NH <sub>3</sub> CdI <sub>3</sub> . <b>2018</b> , 29, 9821-9828	6

949	Low-pressure assisted solution synthesis of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xCl <sub>x</sub> perovskite solar cells. <b>2018</b> , 44, 11603-11609	10
948	A review of perovskite solar cells with a focus on wire-shaped devices. <b>2018</b> , 25, 17-23	5
947	TiO <sub>2</sub> nanorod arrays/ZnO nanosheets heterostructured photoanode for quantum-dot-sensitized solar cells. <b>2018</b> , 166, 371-378	17
946	Stable perovskite solar cells using thiazolo [5,4-d]thiazole-core containing hole transporting material. <b>2018</b> , 49, 372-379	25
945	Novel Types of Dye-Sensitized and Perovskite-Based Tandem Solar Cells with a Common Counter Electrode. <b>2018</b> , 44, 126-129	10
944	Chelate-Pb Intermediate Engineering for High-Efficiency Perovskite Solar Cells. <b>2018</b> , 10, 14744-14750	12
943	Lead Halide Perovskites in Thin Film Photovoltaics: Background and Perspectives. <b>2018</b> , 91, 1058-1068	73
942	Charge carrier chemistry in methylammonium lead iodide. <b>2018</b> , 321, 69-74	28
941	A short review of nanographenes: structures, properties and applications. <b>2018</b> , 116, 987-1002	8
940	Effects of GeI <sub>2</sub> or ZnI <sub>2</sub> addition to perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> photovoltaic devices. <b>2018</b> ,	3
939	Stable and Efficient Organo-Metal Halide Hybrid Perovskite Solar Cells via $\pi$ -Conjugated Lewis Base Polymer Induced Trap Passivation and Charge Extraction. <b>2018</b> , 30, e1706126	192
938	Ligand-exchange TiO <sub>2</sub> nanocrystals induced formation of high-quality electron transporting layers at low temperature for efficient planar perovskite solar cells. <b>2018</b> , 178, 65-73	33
937	Efficient Planar-Heterojunction Perovskite Solar Cells Fabricated by High-Throughput Sheath-Gas-Assisted Electrospray. <b>2018</b> , 10, 7281-7288	5
936	Structural and compositional characteristics of vacuum deposited methylammonium lead halide perovskite layers in dependence on background pressure and substrate temperature. <b>2018</b> , 650, 51-57	2
935	Efficient small-molecule non-fullerene electron transporting materials for high-performance inverted perovskite solar cells. <b>2018</b> , 6, 4443-4448	50
934	Effect of layer number on flexible perovskite solar cells employing multiple layers of graphene as transparent conductive electrodes. <b>2018</b> , 744, 404-411	20
933	Efficient Carbon-Based CsPbBr <sub>3</sub> Inorganic Perovskite Solar Cells by Using Cu-Phthalocyanine as Hole Transport Material. <b>2018</b> , 10, 34	85
932	Effects of hot airflow during spin-coating process on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xCl <sub>x</sub> perovskite solar cells. <b>2018</b> ,	2

931	Aziridinium Lead Iodide: A Stable, Low-Band-Gap Hybrid Halide Perovskite for Photovoltaics. <b>2018</b> , 9, 874-880	16
930	Incredible PCE enhancement induced by damaged perovskite layers: deeply understanding the working principle of additives in bulk heterojunction perovskite solar cells. <b>2018</b> , 6, 4365-4373	15
929	Revealing the detailed path of sequential deposition for metal halide perovskite formation. <b>2018</b> , 4, e1701402	62
928	Infrared Dielectric Screening Determines the Low Exciton Binding Energy of Metal-Halide Perovskites. <b>2018</b> , 9, 620-627	62
927	Flash Infrared Annealing for Antisolvent-Free Highly Efficient Perovskite Solar Cells. <b>2018</b> , 8, 1702915	88
926	Predicted Lead-Free Perovskites for Solar Cells. <b>2018</b> , 30, 718-728	77
925	Efficient, Hysteresis-Free, and Stable Perovskite Solar Cells with ZnO as Electron-Transport Layer: Effect of Surface Passivation. <b>2018</b> , 30, 1705596	276
924	Methodologies toward Highly Efficient Perovskite Solar Cells. <b>2018</b> , 14, e1704177	266
923	Progress in perovskite solar cells based on ZnO nanostructures. <b>2018</b> , 163, 289-306	66
922	Metal Oxides in Photovoltaics: All-Oxide, Ferroic, and Perovskite Solar Cells. <b>2018</b> , 267-356	22
921	Highly efficient and stable inverted perovskite solar cell employing PEDOT:GO composite layer as a hole transport layer. <b>2018</b> , 8, 1070	116
920	Low-Temperature Solution-Processed CuCrO <sub>2</sub> Hole-Transporting Layer for Efficient and Photostable Perovskite Solar Cells. <b>2018</b> , 8, 1702762	100
919	Synergistic Hematite-Fullerene Electron-Extracting Layers for Improved Efficiency and Stability in Perovskite Solar Cells. <b>2018</b> , 5, 726-731	66
918	Halide Perovskites for Applications beyond Photovoltaics. <b>2018</b> , 2, 1700310	63
917	Extending the Compositional Space of Mixed Lead Halide Perovskites by Cs, Rb, K, and Na Doping. <b>2018</b> , 122, 13548-13557	64
916	The stable perovskite solar cell prepared by rapidly annealing perovskite film with water additive in ambient air. <b>2018</b> , 176, 280-287	20
915	Doping of [In <sub>2</sub> (phen) <sub>3</sub> Cl <sub>6</sub> ][CH <sub>3</sub> CN] <sub>2</sub> H <sub>2</sub> O Indium-Based Metal-Organic Framework into Hole Transport Layer for Enhancing Perovskite Solar Cell Efficiencies. <b>2018</b> , 8, 1702052	41
914	Oriented Grains with Preferred Low-Angle Grain Boundaries in Halide Perovskite Films by Pressure-Induced Crystallization. <b>2018</b> , 8, 1702369	56

913	All-Solution-Processed Silver Nanowire Window Electrode-Based Flexible Perovskite Solar Cells Enabled with Amorphous Metal Oxide Protection. <b>2018</b> , 8, 1702182	85
912	Fabrication and characterization of CH <sub>3</sub> NH <sub>3</sub> (Cs)Pb(Sn)I <sub>3</sub> (Cl) perovskite solar cells with TiO <sub>2</sub> nanoparticle layers. <b>2018</b> , 57, 02CE03	6
911	A Mini Review: Can Graphene Be a Novel Material for Perovskite Solar Cell Applications?. <b>2018</b> , 10, 27	52
910	Enhancing the efficiency of low-temperature planar perovskite solar cells by modifying the interface between perovskite and hole transport layer with polymers. <b>2018</b> , 261, 445-453	33
909	Searching for Hidden Perovskite Materials for Photovoltaic Systems by Combining Data Science and First Principle Calculations. <b>2018</b> , 5, 771-775	50
908	Post-healing of defects: an alternative way for passivation of carbon-based mesoscopic perovskite solar cells via hydrophobic ligand coordination. <b>2018</b> , 6, 2449-2455	52
907	Band Engineering via Sn-doping of Zinc Oxide Electron Transport Materials for Perovskite Solar Cells. <b>2018</b> , 3, 363-367	8
906	Mixed (5-AVA) <sub>x</sub> MA <sub>1-x</sub> PbI <sub>3</sub> (BF <sub>4</sub> ) <sub>y</sub> perovskites enhance the photovoltaic performance of hole-conductor-free printable mesoscopic solar cells. <b>2018</b> , 6, 2360-2364	33
905	New-generation integrated devices based on dye-sensitized and perovskite solar cells. <b>2018</b> , 11, 476-526	277
904	Universal Approach toward Hysteresis-Free Perovskite Solar Cell via Defect Engineering. <b>2018</b> , 140, 1358-1364	512
903	A strategic review on processing routes towards highly efficient perovskite solar cells. <b>2018</b> , 6, 2406-2431	150
902	Improving electron transport in the hybrid perovskite solar cells using CaMnO <sub>3</sub> -based buffer layer. <b>2018</b> , 45, 287-297	11
901	Graphene assisted effective hole-extraction on In <sub>2</sub> O <sub>3</sub> :H/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> interface: Studied by modulated surface spectroscopy. <b>2018</b> , 112, 011604	1
900	Progress in hole-transporting materials for perovskite solar cells. <b>2018</b> , 27, 650-672	71
899	Triphenylamine 3,6-carbazole derivative as hole-transporting material for mixed cation perovskite solar cells. <b>2018</b> , 72, 1779-1787	9
898	Tuning Molecular Interactions for Highly Reproducible and Efficient Formamidinium Perovskite Solar Cells via Adduct Approach. <b>2018</b> , 140, 6317-6324	233
897	Inverted planar organic-inorganic hybrid perovskite solar cells with NiO x hole-transport layers as light-in window. <b>2018</b> , 451, 325-332	13
896	Interfacial dynamic surface traps of lead sulfide (PbS) nanocrystals: test-platform for interfacial charge carrier traps at the organic/inorganic functional interface. <b>2018</b> , 51, 145306	4

895	Enhanced Crystallization by Methanol Additive in Antisolvent for Achieving High-Quality MAPbI <sub>3</sub> Perovskite Films in Humid Atmosphere. <b>2018</b> , 11, 2348-2357	51
894	Hysteresis-free two-dimensional perovskite solar cells prepared by single-source physical vapour deposition. <b>2018</b> , 169, 179-186	4
893	Enhancing the performance of planar heterojunction perovskite solar cells using stable semiquinone and amine radical modified hole transport layer. <b>2018</b> , 390, 134-141	21
892	Fabrication of hole-conductor-free perovskite solar cells based on Al doped ZnO and low-cost carbon electrode. <b>2018</b> , 29, 10092-10101	5
891	Enhanced performance of planar perovskite solar cells using low-temperature processed Ga-doped TiO <sub>2</sub> compact film as efficient electron-transport layer. <b>2018</b> , 272, 68-76	14
890	Water-Induced Dimensionality Reduction in Metal-Halide Perovskites. <b>2018</b> , 122, 14128-14134	56
889	Synthesis and Characterization of an Efficient Hole-Conductor Free Halide Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Semiconductor Absorber Based Photovoltaic Device for IOT. <b>2018</b> , 165, B3023-B3029	21
888	What Makes a Good Solar Cell?. <b>2018</b> , 8, 1703385	104
887	Highly (100)-oriented CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells prepared with NH <sub>4</sub> Cl using an air blow method.. <b>2018</b> , 8, 10389-10395	37
886	Highly Efficient and Stable Solar Cells with 2D MA <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> /3D MAPbI <sub>3</sub> Heterostructured Perovskites. <b>2018</b> , 8, 1703620	77
885	Boosting Visible Light Absorption of Metal-Oxide-Based Phototransistors via Heterogeneous In-Ga-Zn-O and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films. <b>2018</b> , 10, 12854-12861	30
884	SKPM study on organic-inorganic perovskite materials. <b>2018</b> , 8, 035114	7
883	Toward Highly Luminescent and Stabilized Silica-Coated Perovskite Quantum Dots through Simply Mixing and Stirring under Room Temperature in Air. <b>2018</b> , 10, 13053-13061	81
882	Effects of Excess PbI <sub>2</sub> Addition to CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx Perovskite Solar Cells. <b>2018</b> , 47, 528-531	16
881	First-Principles Modeling of Bismuth Doping in the MAPbI <sub>3</sub> Perovskite. <b>2018</b> , 122, 14107-14112	41
880	First-Principles Screening of All-Inorganic Lead-Free ABX <sub>3</sub> Perovskites. <b>2018</b> , 122, 7670-7675	50
879	CH <sub>3</sub> NH <sub>3</sub> Pb Eu I mixed halide perovskite for hybrid solar cells: the impact of divalent europium doping on efficiency and stability.. <b>2018</b> , 8, 11095-11101	33
878	Anharmonicity and Disorder in the Black Phases of Cesium Lead Iodide Used for Stable Inorganic Perovskite Solar Cells. <b>2018</b> , 12, 3477-3486	359

877	A novel ball milling technique for room temperature processing of TiO <sub>2</sub> nanoparticles employed as the electron transport layer in perovskite solar cells and modules. <b>2018</b> , 6, 7114-7122	26
876	Effect of interface defect density on performance of perovskite solar cell: Correlation of simulation and experiment. <b>2018</b> , 221, 150-153	33
875	Ru-Doping in TiO <sub>2</sub> electron transport layers of planar heterojunction perovskite solar cells for enhanced performance. <b>2018</b> , 6, 4746-4752	53
874	Large tunable photoeffect on ion conduction in halide perovskites and implications for photodecomposition. <b>2018</b> , 17, 445-449	301
873	Strategy to overcome recombination limited photocurrent generation in CsPbX <sub>3</sub> nanocrystal arrays. <b>2018</b> , 112, 113503	16
872	Fabrication of mixed perovskite organic cation thin films via controllable cation exchange. <b>2018</b> , 27, 024208	5
871	Thermodynamically Self-Healing 1DBD Hybrid Perovskite Solar Cells. <b>2018</b> , 8, 1703421	107
870	Improvement efficiency of perovskite solar cells by hybrid electro spray and vapor-assisted solution technology. <b>2018</b> , 57, 221-225	5
869	A review on electrical characterization techniques performed to study the device performance of quantum dot sensitized solar cells. <b>2018</b> , 159, 682-696	27
868	15% efficient carbon based planar-heterojunction perovskite solar cells using a TiO <sub>2</sub> /SnO <sub>2</sub> bilayer as the electron transport layer. <b>2018</b> , 6, 7409-7419	71
867	Limits and possible solutions in quantum dot organic solar cells. <b>2018</b> , 82, 1551-1564	20
866	Recent progress in perovskite solar cells. <b>2018</b> , 81, 2812-2822	109
865	Confined-solution process for high-quality CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> single crystals with controllable morphologies. <b>2018</b> , 11, 3306-3312	7
864	Printable carbon-based hole-conductor-free mesoscopic perovskite solar cells: From lab to market. <b>2018</b> , 7, 221-231	35
863	Role of organic cations on hybrid halide perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> surfaces. <b>2018</b> , 258, 488-494	9
862	Transparent and flexible photodetectors based on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite nanoparticles. <b>2018</b> , 434, 375-381	24
861	Inorganic-organic halide perovskites for new photovoltaic technology. <b>2018</b> , 5, 559-576	30
860	New class of lead free perovskite material for low-cost solar cell application. <b>2018</b> , 97, 572-577	33

859	2D Ruddlesden-Popper Perovskites for Optoelectronics. <b>2018</b> , 30, 1703487	423
858	Recent advancement in metal cathode and hole-conductor-free perovskite solar cells for low-cost and high stability: A route towards commercialization. <b>2018</b> , 82, 845-857	59
857	Hexagonal Array of Mesoscopic HTM-Based Perovskite Solar Cell with Embedded Plasmonic Nanoparticles. <b>2018</b> , 255, 1700291	11
856	Research progress in electron transport layer in perovskite solar cells. <b>2018</b> , 37, 95-106	16
855	Application of mixed-organic-cation for high performance hole-conductor-free perovskite solar cells. <b>2018</b> , 510, 118-126	11
854	Nanomaterials for Sustainable Energy Production and Storage: Present Day Applications and Possible Developments. <b>2018</b> , 31-72	2
853	Doped Copper Phthalocyanine via an Aqueous Solution Process for Normal and Inverted Perovskite Solar Cells. <b>2018</b> , 8, 1701688	64
852	Perovskite solar cells: Materials, configurations and stability. <b>2018</b> , 82, 2471-2489	73
851	Performance enhancement of perovskite solar cells by employing TiO nanorod arrays decorated with CuInS quantum dots. <b>2018</b> , 513, 693-699	23
850	Immobilization of Molecular Catalysts for Enhanced Redox Catalysis. <b>2018</b> , 10, 1686-1702	27
849	The merit of perovskite's dimensionality; can this replace the 3D halide perovskite?. <b>2018</b> , 11, 234-242	157
848	Preparation of mixed-ion and inorganic perovskite films using water and isopropanol as solvents for solar cell applications. <b>2018</b> , 2, 606-615	23
847	Effect of rubrene:P3HT bilayer on photovoltaic performance of perovskite solar cells with electrodeposited ZnO nanorods. <b>2018</b> , 27, 455-462	22
846	Dynamical Rashba Band Splitting in Hybrid Perovskites Modeled by Local Electric Fields. <b>2018</b> , 122, 124-132	7
845	The mixing effect of organic cations on the structural, electronic and optical properties of FAMAPbI perovskites. <b>2018</b> , 20, 941-950	19
844	Improving device performance of perovskite solar cells by micro-nanoscale composite mesoporous TiO <sub>2</sub> . <b>2018</b> , 57, 02CE01	1
843	Frontiers, opportunities, and challenges in perovskite solar cells: A critical review. <b>2018</b> , 35, 1-24	205
842	Nanocrystals of halide perovskite: Synthesis, properties, and applications. <b>2018</b> , 27, 622-636	31



841	Perovskite Solar Cells with ZnO Electron-Transporting Materials. <b>2018</b> , 30, 1703737	227
840	Interface Engineering for Highly Efficient and Stable Planar p-i-n Perovskite Solar Cells. <b>2018</b> , 8, 1701883	249
839	Explanation of the photocurrent generation of Cu <sub>2</sub> O quantum dots (QDs) sensitized p-CuSCN stable photoelectrochemical cells. <b>2018</b> , 5, 015005	
838	High-Performance Perovskite Solar Cells with a Weak Covalent TiO <sub>2</sub> :Eu <sup>3+</sup> Mesoporous Structure. <b>2018</b> , 1, 93-102	13
837	Influence of Radiation on the Properties and the Stability of Hybrid Perovskites. <b>2018</b> , 30, 1702905	112
836	Highly Efficient Perovskite Solar Cells Based on Zn Ti O Nanoparticles as Electron Transport Material. <b>2018</b> , 11, 424-431	14
835	Recent progress in flexible perovskite solar cells: Materials, mechanical tolerance and stability. <b>2018</b> , 82, 3127-3151	52
834	Recent progress in organohalide lead perovskites for photovoltaic and optoelectronic applications. <b>2018</b> , 373, 258-294	41
833	Structure-performance relationship on the asymmetric methoxy substituents of spiro-OMeTAD for perovskite solar cells. <b>2018</b> , 176, 318-323	14
832	The role of grain boundaries in perovskite solar cells. <b>2018</b> , 7, 149-160	149
831	. <b>2018</b> ,	2
830	Solution Processed Trilayer Structure for High-Performance Perovskite Photodetector. <b>2018</b> , 13, 399	27
829	Room temperature two-photon-pumped random lasers in FAPbBr/polyethylene oxide (PEO) composite perovskite thin film.. <b>2018</b> , 8, 36910-36914	9
828	Functional materials, device architecture, and flexibility of perovskite solar cell. <b>2018</b> , 1, 133-154	67
827	First-Principles Insight into the Degradation Mechanism of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite: Light-Induced Defect Formation and Water Dissociation. <b>2018</b> , 122, 27340-27349	18
826	TiO <sub>2</sub> /SnO <sub>2</sub> Nanocomposites as Electron Transporting Layer for Efficiency Enhancement in Planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -Based Perovskite Solar Cells. <b>2018</b> , 1, 6936-6944	12
825	Research progress of low-dimensional metal halide perovskites for lasing applications. <b>2018</b> , 27, 114209	6
824	The electronic structures and optical properties of B, C or N doped BaTiO <sub>3</sub> . <b>2018</b> , 8, 095216	4

823	Theoretical Insights into Perovskite Compounds $\text{MAPb}_{1-x}\text{BX}_3$ (X = Ge, Sn; Y = Cl, Br): An Exploration for Superior Optical Performance. <b>2018</b> , 122, 27205-27213	5
822	Unveiling the Role of tBP-LiTFSI Complexes in Perovskite Solar Cells. <b>2018</b> , 140, 16720-16730	120
821	Editorial Overview: Perovskite photovoltaics, fuels and light emitting diode. <b>2018</b> , 11, A5-A6	
820	High-throughput design of functional materials using materials genome approach. <b>2018</b> , 27, 128103	3
819	Fabrication and Characterization of $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Solar Cells Added with Polysilanes. <b>2018</b> , 2018, 1-7	17
818	Crystal facet engineering induced anisotropic transport of charge carriers in a perovskite. <b>2018</b> , 6, 11707-11713	1
817	Highly Efficient and Stable Inverted Perovskite Solar Cell Obtained via Treatment by Semiconducting Chemical Additive. <b>2019</b> , 31, e1805554	71
816	Working Principles of Perovskite Solar Cells. <b>2018</b> , 81-99	1
815	Ultrafast Exciton Dissociation at the 2D- $\text{WS}_2$ Monolayer/Perovskite Interface. <b>2018</b> , 122, 28910-28917	14
814	Materials toward the Upscaling of Perovskite Solar Cells: Progress, Challenges, and Strategies. <b>2018</b> , 28, 1803753	104
813	Effects of Electron-Phonon Coupling on Electronic Properties of Methylammonium Lead Iodide Perovskites. <b>2018</b> , 9, 7090-7097	27
812	Major Impediment to Highly Efficient, Stable and Low-Cost Perovskite Solar Cells. <b>2018</b> , 8, 964	18
811	Computational screening of methylammonium based halide perovskites with bandgaps suitable for perovskite-perovskite tandem solar cells. <b>2018</b> , 149, 214701	10
810	Quantum Dot Solar Cells. <b>2018</b> , 611-658	0
809	Stability Characterization of PbI-Added $\text{CH}_3\text{NH}_3\text{PbI}_2$ Photovoltaic Devices. <b>2018</b> , 10, 44443-44451	14
808	Ambient Air Condition for Room-Temperature Deposition of MAPbI Films in Highly Efficient Solar Cells. <b>2018</b> , 14, e1802240	14
807	Dopant-Free Hole Transporting Materials for Perovskite Solar Cells. <b>2018</b> , 2, 1800200	65
806	Fabrication techniques and morphological analysis of perovskite absorber layer for high-efficiency perovskite solar cell: A review. <b>2018</b> , 98, 469-488	25

805	Dye Sensitization of Titania Compact Layer for Efficient and Stable Perovskite Solar Cells. <b>2018</b> , 1, 6161-6171	27
804	Recent advances in high-performance semitransparent perovskite solar cells. <b>2018</b> , 11, 114-121	7
803	Interfacial Engineering of TiO <sub>2</sub> by Graphene Nanoplatelets for High-Efficiency Hysteresis-free Perovskite Solar Cells. <b>2018</b> , 6, 15391-15401	12
802	MoS Quantum Dot/Graphene Hybrids for Advanced Interface Engineering of a CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cell with an Efficiency of over 20. <b>2018</b> , 12, 10736-10754	138
801	Cystamine-configured lead halide based 2D hybrid molecular crystals: Synthesis and photoluminescence systematics. <b>2018</b> , 6, 114204	12
800	Large-area perovskite solar cells with Cs <sub>x</sub> FA <sub>1-x</sub> PbI <sub>3</sub> thin films deposited by a vapor-solid reaction method. <b>2018</b> , 6, 21143-21148	47
799	High performance perovskite solar cells fabricated from porous PbI <sub>2</sub> -xBr <sub>x</sub> prepared with mixture solvent pore generation treatment. <b>2018</b> , 292, 399-406	4
798	The effect of solution process control on the formation of the FAPbI <sub>3</sub> perovskite: FAPbI <sub>3</sub> versus MAPbI <sub>3</sub> solar cells. <b>2018</b> , 174, 780-785	9
797	Solvent Systems for Industrial-Scale Processing of Spiro-OMeTAD Hole Transport Layer in Perovskite Solar Cells. <b>2018</b> , 1, 6056-6063	13
796	A Method for the Preparation of Highly Oriented MAPbI <sub>3</sub> Crystallites for High-Efficiency Perovskite Solar Cells to Achieve an 86% Fill Factor. <b>2018</b> , 12, 10355-10364	88
795	Activated carbon as back contact for HTM-free mixed cation perovskite solar cell. <b>2018</b> , 91, 1268-1276	3
794	Excitation Density Dependent Photoluminescence Quenching and Charge Transfer Efficiencies in Hybrid Perovskite/Organic Semiconductor Bilayers. <b>2018</b> , 8, 1802474	36
793	Fabrication of efficient metal halide perovskite solar cells by vacuum thermal evaporation: A progress review. <b>2018</b> , 11, 130-140	28
792	High-Performance Fused Ring Electron Acceptor-Perovskite Hybrid. <b>2018</b> , 140, 14938-14944	51
791	CsBr-Induced Stable CsPbI <sub>3</sub> (x 2018, 10, 38183-38192	53
790	In Situ Grain Boundary Modification via Two-Dimensional Nanoplates to Remarkably Improve Stability and Efficiency of Perovskite Solar Cells. <b>2018</b> , 10, 39802-39808	19
789	Luminescent Intermediates and Humidity-Dependent Room-Temperature Conversion of the MAPbI <sub>3</sub> Perovskite Precursor. <b>2018</b> , 3, 14494-14502	15
788	Improving the performance of perovskite solar cells by adding 1,8-diiodooctane in the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite layer. <b>2018</b> , 176, 178-185	17

- 787 Dimethylammonium Incorporation in Lead Acetate Based MAPbI Perovskite Solar Cells. **2018**, 19, 3107-3115 38
- 786 Synthesis and dielectric characterisation of triiodide perovskite methylammonium lead iodide for energy applications. **2018**, 29, 18693-18698 2
- 785 Excitonic phenomena in perovskite quantum-dot supercrystals. **2018**, 20, 25023-25030 6
- 784 Synthesis of organo tin halide perovskites via simple aqueous acidic solution-based method. **2018**, 3, 471-477 11
- 783 In Situ Measurement of Electric-Field Screening in Hysteresis-Free PTAA/FACsPb(I<sub>Br</sub>)/C60 Perovskite Solar Cells Gives an Ion Mobility of  $\sim 3 \times 10^4$  cm<sup>2</sup>/(V s), 2 Orders of Magnitude Faster than Reported for Metal-Oxide-Contacted Perovskite Cells with Hysteresis. **2018**, 140, 12775-12784 35
- 782 Dependence of hysteresis on the perovskite film thickness: inverse behavior between TiO<sub>2</sub> and PCBM in a normal planar structure. **2018**, 6, 18206-18215 31
- 781 Rational Strategies for Large-area Perovskite Solar Cells. **2018**, 307-337 1
- 780 Inorganic Materials as Hole Selective Contacts and Intermediate Tunnel Junction Layer for Monolithic Perovskite-CIGSe Tandem Solar Cells. **2018**, 8, 1801692 12
- 779 A facile synthesis of two new IR optical perovskites based on 1,4-diazabicyclo[2,2,2]octane with a high laser damage threshold. **2018**, 47, 14497-14502
- 778 A Cryogenic Process for Antisolvent-Free High-Performance Perovskite Solar Cells. **2018**, 30, e1804402 39
- 777 Effect of Water, Oxygen, and Air Exposure on CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3-x</sub>Cl<sub>x</sub> Perovskite Surface Electronic Properties. **2018**, 4, 1800307 30
- 776 Metal Counter Electrodes for Perovskite Solar Cells. **2018**, 421-456 6
- 775 First-Principles DFT Calculations for Perovskite Solar Cells. **2018**, 487-509 5
- 774 First-Principles Calculations on Ferroelectrics for Energy Applications. **2018**, 311-348 1
- 773 Organic-Inorganic Hybrid Perovskites for Solar Energy Conversion. **2018**, 95-117
- 772 Precursor effects on methylamine gas-induced CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> films for stable carbon-based perovskite solar cells. **2018**, 174, 139-148 11
- 771 Molecular Iodine for a General Synthesis of Binary and Ternary Inorganic and Hybrid Organic-Inorganic Iodide Nanocrystals. **2018**, 30, 6915-6921 27
- 770 Investigation of Inverted Perovskite Solar Cells for Viscosity of PEDOT:PSS Solution. **2018**, 8, 358 6

769	UV Treatment of Low-Temperature Processed SnO Electron Transport Layers for Planar Perovskite Solar Cells. <b>2018</b> , 13, 216	12
768	Progress toward Stable Lead Halide Perovskite Solar Cells. <b>2018</b> , 2, 1961-1990	132
767	Withdrawn: MAPbI <sub>3</sub> and FAPbI <sub>3</sub> perovskites: Case study on optical and photovoltaic properties. <b>2018</b> ,	
766	Properties of MAPbI <sub>3</sub> perovskite layers grown with HCl additions. <b>2018</b> , 120, 136-140	
765	Efficient and Ambient-Air-Stable Solar Cell with Highly Oriented 2D@3D Perovskites. <b>2018</b> , 28, 1801654	76
764	Photovoltaics and Nanotechnology as Alternative Energy. <b>2018</b> , 211-241	1
763	Plant Sunscreen and Co(II)/(III) Porphyrins for UV-Resistant and Thermally Stable Perovskite Solar Cells: From Natural to Artificial. <b>2018</b> , 30, e1800568	75
762	Theoretical analysis of band alignment at back junction in SnTe perovskite solar cells with inverted p-i-n structure. <b>2020</b> , 206, 110268	28
761	Effects of alkylamine chain length on perovskite nanocrystals after washing and perovskite light-emitting diodes. <b>2020</b> , 59, SDDC04	7
760	Quantum mechanical molecular dynamics simulations of polaron formation in methylammonium lead iodide perovskite. <b>2019</b> , 22, 97-106	12
759	Band-bending induced passivation: high performance and stable perovskite solar cells using a perhydropoly(silazane) precursor. <b>2020</b> , 13, 1222-1230	72
758	High efficiency perovskite solar cells using nitrogen-doped graphene/ZnO nanorod composite as an electron transport layer. <b>2020</b> , 197, 78-83	55
757	Preparation of Ordered MAPbI <sub>3</sub> Perovskite Needle-Like Crystal Films by Electric Field and Microdroplet Jetting 3D Printing. <b>2020</b> , 20, 1405-1414	4
756	Surface passivation of perovskite thin films by phosphonium halides for efficient and stable solar cells. <b>2020</b> , 8, 2039-2046	30
755	High Efficiency Perovskite Solar Cells: Materials and Devices Engineering. <b>2020</b> , 21, 1-15	15
754	Density functional theory analysis of electronic and optical properties of orthorhombic perovskite CH <sub>3</sub> NH <sub>3</sub> SnX <sub>3</sub> (X' = Br, I). <b>2020</b> , 740, 137062	2
753	Photon recycling in perovskite CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = I, Br, Cl) bulk single crystals and polycrystalline films. <b>2020</b> , 220, 116987	13
752	Elimination of Yellow Phase: An Effective Method to Achieve High Quality HC(NH ) PbI -based Perovskite Films. <b>2020</b> , 13, 956-963	10

751	Atomistic Mechanism of the Nucleation of Methylammonium Lead Iodide Perovskite from Solution. <b>2020</b> , 32, 529-536	24
750	Polymer Electrolytes for Perovskite Solar Cell and Challenges. <b>2020</b> , 339-363	
749	Chemical Approaches for Stabilizing Perovskite Solar Cells. <b>2020</b> , 10, 1903249	88
748	Novel inorganic electron transport layers for planar perovskite solar cells: Progress and prospective. <b>2020</b> , 68, 104289	45
747	Strong Collectivity of Optical Transitions in Lead Halide Perovskite Quantum Dots. <b>2020</b> , 15, 581-590	2
746	Electrical Methods to Elucidate Charge Transport in Hybrid Perovskites Thin Films and Devices. <b>2020</b> , 20, 452-465	19
745	Rapid Characterization and Parameter Space Exploration of Perovskites Using an Automated Routine. <b>2020</b> , 22, 6-17	5
744	The balance between efficiency, stability and environmental impacts in perovskite solar cells: a review. <b>2020</b> , 2, 022001	52
743	Achieving Reproducible and High-Efficiency (>21%) Perovskite Solar Cells with a Presynthesized FAPbI <sub>3</sub> Powder. <b>2020</b> , 5, 360-366	81
742	. <b>2020</b> ,	11
741	Roadmap on halide perovskite and related devices. <b>2020</b> , 31, 152001	15
740	Effect of iodine doping on photoelectric properties of perovskite-based MOS devices. <b>2020</b> , 261, 127040	
739	Synthesis and optical applications of low dimensional metal-halide perovskites. <b>2020</b> , 31, 152002	20
738	Improving and Stabilizing Perovskite Solar Cells with Incorporation of Graphene in the Spiro-OMeTAD Layer: Suppressed Li Ions Migration and Improved Charge Extraction. <b>2020</b> , 3, 970-976	15
737	Interfacing pristine BiI <sub>3</sub> onto TiO <sub>2</sub> for efficient and stable planar perovskite solar cells. <b>2020</b> , 506, 144769	4
736	Research Direction toward Scalable, Stable, and High Efficiency Perovskite Solar Cells. <b>2020</b> , 10, 1903106	118
735	2017 P.V. Danckwerts Memorial Lecture special issue editorial: Advances in emerging technologies of chemical engineering towards sustainable energy and environment: Solar and biomass. <b>2020</b> , 215, 115384	3
734	The Low-Dimensional Three-Dimensional Tin Halide Perovskite: Film Characterization and Device Performance. <b>2020</b> , 13, 2	26

733	Interlayer Engineering for Flexible Large-Area Planar Perovskite Solar Cells. <b>2020</b> , 3, 777-784	5
732	Flow Synthesis of Metal Halide Perovskite Quantum Dots: From Rapid Parameter Space Mapping to AI-Guided Modular Manufacturing. <b>2020</b> , 3, 1053-1086	19
731	Epitaxial and quasiepitaxial growth of halide perovskites: New routes to high end optoelectronics. <b>2020</b> , 8, 100904	7
730	Low temperature preparation of all-inorganic CsPbI <sub>3</sub> perovskite solar cells with ethanediamine as additive. <b>2020</b> , 87, 105940	8
729	Recent Progress of Inverted Perovskite Solar Cells with a Modified PEDOT:PSS Hole Transport Layer. <b>2020</b> , 12, 49297-49322	37
728	Historical Analysis of High-Efficiency, Large-Area Solar Cells: Toward Upscaling of Perovskite Solar Cells. <b>2020</b> , 32, e2002202	45
727	Progress towards High-Efficiency and Stable Tin-Based Perovskite Solar Cells. <b>2020</b> , 13, 5092	17
726	A Quantitative Analysis of the Research Trends in Perovskite Solar Cells in 2009-2019. <b>2020</b> , 217, 2000441	1
725	Crystallization management for high-performance perovskite solar cells by introducing an antisolvent into the perovskite precursor. <b>2020</b> , 8, 15860-15867	7
724	Effect of doped polyaniline/graphene oxide ratio as a hole transport layer on the performance of perovskite solar cell. <b>2020</b> , 31, 18870-18882	0
723	Defect and interface engineering of highly efficient La <sub>2</sub> NiMnO <sub>6</sub> planar perovskite solar cell: A theoretical study. <b>2020</b> , 108, 110453	5
722	All-inorganic metal oxide transparent solar cells. <b>2020</b> , 217, 110708	7
721	High Efficiency over 20% of Perovskite Solar Cells by Spray Coating via a Simple Process. <b>2020</b> , 3, 9696-9702	15
720	Toward ideal hole transport materials: a review on recent progress in dopant-free hole transport materials for fabricating efficient and stable perovskite solar cells. <b>2020</b> , 13, 4057-4086	109
719	Perovskite solar cells: importance, challenges, and plasmonic enhancement. <b>2020</b> , 17, 1022-1035	11
718	Manganese Porphyrin Interface Engineering in Perovskite Solar Cells. <b>2020</b> , 3, 7353-7363	7
717	Lead-Free Small-Bandgap CsCuSbCl Double Perovskite Nanocrystals. <b>2020</b> , 11, 6463-6467	24
716	Long-term stable and highly efficient perovskite solar cells with a formamidinium chloride (FACI) additive. <b>2020</b> , 8, 17756-17764	19

715	An efficient phenylaminocarbazole-based three-dimensional hole-transporting materials for high-stability perovskite solar cells. <b>2020</b> , 182, 108663	2
714	Numerical analysis guidelines for the design of efficient novel nip structures for perovskite solar cell. <b>2020</b> , 207, 579-591	16
713	Methodologies for structural investigations of organic lead halide perovskites. <b>2020</b> , 38, 67-83	4
712	Controlling and Optimizing Amplified Spontaneous Emission in Perovskites. <b>2020</b> , 12, 35242-35249	12
711	Gradient band structure: high performance perovskite solar cells using poly(bisphenol A anhydride-co-1,3-phenylenediamine). <b>2020</b> , 8, 17113-17119	11
710	Advances in perovskite photodetectors. <b>2020</b> , 2, 1247-1256	50
709	Stannite Quaternary Cu <sub>2</sub> M(M = Ni, Co)SnS <sub>4</sub> as Low Cost Inorganic Hole Transport Materials in Perovskite Solar Cells. <b>2020</b> , 13, 5938	2
708	Environmental assessment of transparent conductive oxide-free efficient flexible organo-lead halide perovskite solar cell. <b>2020</b> , 1-10	1
707	On the efficiency limits of artificial and ultrafast light-funnels. <b>2020</b> , 1, 525-538	2
706	Crystallization control and multisite passivation of perovskites with amino acid to boost the efficiency and stability of perovskite solar cells. <b>2020</b> , 8, 17482-17490	19
705	First-principles identification of the charge-shifting mechanism and ferroelectricity in hybrid halide perovskites. <b>2020</b> , 10, 19635	4
704	Origin and Fundamentals of Perovskite Solar Cells. <b>2020</b> ,	1
703	Calculation and Fabrication of a CH <sub>3</sub> NH <sub>3</sub> Pb(SCN) <sub>3</sub> Perovskite Film as a Light Absorber in Carbon-based Hole-transport-layer-free Perovskite Solar Cells. <b>2020</b> , 77, 1210-1217	1
702	Bismuth Halide Perovskites for Photovoltaic Applications. <b>2020</b> ,	1
701	Chlorobenzene-Mediated Control of Crystallization in Perovskite Films for High-Performance Solar Cells. <b>2020</b> , 3, 12291-12297	5
700	Revealing the charge carrier kinetics in perovskite solar cells affected by mesoscopic structures and defect states from simple transient photovoltage measurements. <b>2020</b> , 10, 19197	13
699	Shape Control of Metal Halide Perovskite Single Crystals: From Bulk to Nanoscale. <b>2020</b> , 32, 7602-7617	30
698	Deposition Kinetics and Compositional Control of Vacuum-Processed CHNHPbI Perovskite. <b>2020</b> , 11, 6852-6859	20



697	Effect of alkaline earth metal chloride additives BCl (B = Mg, Ca, Sr and Ba) on the photovoltaic performance of FAPbI based perovskite solar cells. <b>2020</b> , 5, 1332-1343	16
696	High-Efficiency Perovskite Solar Cells. <b>2020</b> , 120, 7867-7918	587
695	A theoretical study for high-performance inverted p-i-n architecture perovskite solar cells with cuprous iodide as hole transport material. <b>2020</b> , 20, 1080-1089	3
694	Performance improvement of perovskite heterojunction solar cell using graphene. <b>2020</b> , 109, 110254	9
693	Passivation engineering for hysteresis-free mixed perovskite solar cells. <b>2020</b> , 215, 110648	14
692	A thin film (. <b>2020</b> , 8, 17420-17428	7
691	Graded heterojunction of perovskite/dopant-free polymeric hole-transport layer for efficient and stable metal halide perovskite devices. <b>2020</b> , 78, 105159	16
690	Materials and Methods for Interface Engineering toward Stable and Efficient Perovskite Solar Cells. <b>2020</b> , 5, 2742-2786	141
689	Effect of Additives AX (A = FA, MA, Cs, Rb, NH <sub>4</sub> , X = Cl, Br, I) in FAPbI <sub>3</sub> on Photovoltaic Parameters of Perovskite Solar Cells. <b>2020</b> , 4, 2000331	28
688	Dimensionality engineering of metal halide perovskites. <b>2020</b> , 13, 196-224	13
687	Pathway toward market entry of perovskite solar cells: A detailed study on the research trends and collaboration networks through bibliometrics. <b>2020</b> , 6, 2075-2085	10
686	Recent progress in the development of hole-transport materials to boost the power conversion efficiency of perovskite solar cells. <b>2020</b> , 26, e00210	9
685	Engineered Electronic Structure and Carrier Dynamics in Emerging CsAgNaFeCl Perovskite Single Crystals. <b>2020</b> , 11, 9535-9542	11
684	Non-equivalent TI doping for high performance perovskite solar cells: Crystal quality improvement with enhanced p-type character. <b>2020</b> , 479, 228818	2
683	Size Modulation and Heterovalent Doping Facilitated Hybrid Organic and Perovskite Quantum Dot Bulk Heterojunction Solar Cells. <b>2020</b> , 3, 11359-11367	10
682	Application of Metal-Organic Frameworks and Covalent Organic Frameworks as (Photo)Active Material in Hybrid Photovoltaic Technologies. <b>2020</b> , 13, 5602	8
681	Organic-Inorganic Hybrid Perovskite Nanomaterials: Synthesis and Application. <b>2020</b> , 5, 12641-12659	4
680	Near-Infrared-Transparent Perovskite Solar Cells and Perovskite-Based Tandem Photovoltaics. <b>2020</b> , 4, 2000395	27

679	Interface engineering for gain perovskite photodetectors with extremely high external quantum efficiency.. <b>2020</b> , 10, 32976-32983	5
678	. <b>2020</b> ,	
677	Optical properties of organic/inorganic perovskite microcrystals through the characterization of Fabry-Pérot resonances. <b>2020</b> , 49, 12798-12804	1
676	Growth mechanism of CH <sub>3</sub> NH <sub>3</sub> I in a vacuum processed perovskite. <b>2020</b> , 2, 3906-3911	2
675	Strain Engineering in Halide Perovskites. <b>2020</b> , 2, 1495-1508	37
674	New Synthetic Route of Ultrapure Alkylammonium Iodides for Perovskite Thin Films of Superior Optoelectronic Properties. <b>2020</b> , 8, 2000478	2
673	Pressure-Modulated Broadband Emission in 2D Layered Hybrid Perovskite-Like Bromoplumbate. <b>2020</b> , 59, 12431-12436	6
672	Metal oxide alternatives for efficient electron transport in perovskite solar cells: beyond TiO <sub>2</sub> and SnO <sub>2</sub> . <b>2020</b> , 8, 19768-19787	30
671	Efficiency progress of inverted perovskite solar cells. <b>2020</b> , 13, 3823-3847	92
670	Why choosing the right partner is important: stabilization of ternary CsGUAFAPI perovskites. <b>2020</b> , 22, 20880-20890	2
669	Unraveling the Photogenerated Electron Localization on the Defect-Free CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> (001) Surfaces: Understanding and Implications from a First-Principles Study. <b>2020</b> , 11, 8041-8047	4
668	Graphene/Metal Oxide Nanocomposite Usage as Photoanode in Dye-Sensitized and Perovskite Solar Cells. <b>2020</b> ,	1
667	Stability of organic-inorganic hybrid perovskite quasi-2D structures by modulation of alkylammonium ions. <b>2020</b> , 707, 140-146	2
666	A Bibliometric Panoramic Analysis on Perovskite Solar Cells by Using CiteSpace. <b>2020</b> ,	
665	Recent Progress of Lead Halide Perovskite Sensitized Solar Cells. <b>2020</b> ,	
664	Fiber Electronics. <b>2020</b> ,	1
663	Modulation of strain, electric field and organic cation rotation on the band gap and electronic structures of organic-inorganic hybrid perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2020</b> , 67, 559-568	0
662	Recent Progress and Challenges of Electron Transport Layers in Organic/Inorganic Perovskite Solar Cells. <b>2020</b> , 13, 5572	26

661	Improving the heterointerface in hybrid organic-inorganic perovskite solar cells by surface engineering: Insights from periodic hybrid density functional theory calculations. <b>2020</b> , 41, 1740-1747	5
660	Vertical Phase Separated Cesium Fluoride Doping Organic Electron Transport Layer: A Facile and Efficient Bridge-Linked Heterojunction for Perovskite Solar Cells. <b>2020</b> , 30, 2001418	28
659	Photocurrent transient measurements in MAPbI <sub>3</sub> thin films. <b>2020</b> , 31, 10047-10054	8
658	Aqueous Sn-S Complex Derived Electron Selective Layer for Perovskite Solar Cells. <b>2020</b> , 35, 272-279	1
657	Quantum Dynamics Simulations on the Adsorption Mechanism of Reducing and Oxidizing Gases on the CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Surface. <b>2020</b> , 3, 2000024	3
656	Challenges and approaches towards upscaling the assembly of hybrid perovskite solar cells. <b>2020</b> , 1, 292-309	22
655	Identifying, understanding and controlling defects and traps in halide perovskites for optoelectronic devices: a review. <b>2020</b> , 53, 373001	16
654	Whether Addition of Phenethylammonium Ion is Always Beneficial to Stability Enhancement of MAPbI <sub>3</sub> Perovskite Film?. <b>2020</b> , 7, 2000197	2
653	Boosting the power conversion efficiency of perovskite solar cells based on Sn doped TiO <sub>2</sub> electron extraction layer via modification the TiO <sub>2</sub> phase junction. <b>2020</b> , 205, 390-398	9
652	Correlation between efficiency and device characterization in MAPbI <sub>3</sub> -xCl <sub>x</sub> standard perovskite solar cells. <b>2020</b> , 31, 10251-10259	5
651	Progress toward Applications of Perovskite Solar Cells. <b>2020</b> , 34, 6624-6633	11
650	Electron Transport Materials: Evolution and Case Study for High-Efficiency Perovskite Solar Cells. <b>2020</b> , 4, 2000136	16
649	Ionicallly Generated Built-In Equilibrium Space Charge Zones—Paradigm Change for Lead Halide Perovskite Interfaces. <b>2020</b> , 30, 2002426	5
648	Progress in Materials Development for the Rapid Efficiency Advancement of Perovskite Solar Cells. <b>2020</b> , 16, e1907531	18
647	Interface Modification for Enhanced Efficiency and Stability Perovskite Solar Cells. <b>2020</b> , 124, 12948-12955	12
646	Research progress on hybrid organic-inorganic perovskites for photo-applications. <b>2020</b> , 31, 3055-3064	15
645	Making air-stable all-inorganic perovskite solar cells through dynamic hot-air. <b>2020</b> , 33, 100880	8
644	Computational study of iron perovskite CHNHFeI as an alternative to the lead perovskite CHNH <sub>3</sub> PbI <sub>3</sub> for application in solar cells. <b>2020</b> , 32, 465501	1

- 643 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
- 642 Characterization of Photovoltaic Property of a CH<sub>3</sub>NH<sub>3</sub>Sn<sub>1-x</sub>GexI<sub>3</sub> Lead-Free Perovskite Solar Cell. **2020**, 798, 012024 1
- 641 Interface Engineering Driven Stabilization of Halide Perovskites against Moisture, Heat, and Light for Optoelectronic Applications. **2020**, 10, 2000768 32
- 640 Modified poly(3,4-ethylenedioxythiophene) polystyrene sulfonate as transparent electrodes for ITO-free perovskite solar cells. **2020**, 13, 085501 1
- 639 Organic-inorganic hybrid perovskite electronics. **2020**, 22, 13347-13357 12
- 638 Environmentally stable lead-free cesium bismuth iodide (Cs<sub>3</sub>Bi<sub>2</sub>I<sub>9</sub>) perovskite: Synthesis to solar cell application. **2020**, 146, 109608 16
- 637 Exploring the impact of fractional-order capacitive behavior on the hysteresis effects of perovskite solar cells: A theoretical perspective. **2020**, 90, 105371 7
- 636 Spatiotemporal sampling of growing nanoparticles in an acetylene plasma. **2020**, 127, 173301 5
- 635 Semiconducting quantum dots: Modification and applications in biomedical science. **2020**, 63, 1631-1650 12
- 634 A Review on Solution-Processable Dopant-Free Small Molecules as Hole-Transporting Materials for Efficient Perovskite Solar Cells. **2020**, 4, 2000254 29
- 633 Tuning the crystallization process of perovskite active layer using a functionalized graphene oxide for enhanced photovoltaic performance. **2020**, 31, 12257-12268 5
- 632 Perovskite Materials: Recent Advancements and Challenges. **2020**, 2
- 631 Two-phase synthesized Cu<sub>2</sub>ZnSnS<sub>4</sub> nanoparticles as inorganic hole-transporting material of paintable carbon-based perovskite solar cells. **2020**, 201, 547-554 2
- 630 Spontaneous surface/interface ligand-anchored functionalization for extremely high fill factor over 86% in perovskite solar cells. **2020**, 75, 104929 33
- 629 Computational Investigation of the Folded and Unfolded Band Structure and Structural and Optical Properties of CsPb(I<sub>1-x</sub>Br<sub>x</sub>)<sub>3</sub> Perovskites. **2020**, 10, 342 4
- 628 Stability of Precursor Solution for Perovskite Solar Cell: Mixture (FAI + PbI) versus Synthetic FAPbI Crystal. **2020**, 12, 15167-15174 20
- 627 Phenothiazine-Based Hole Transport Materials for Perovskite Solar Cells. **2020**, 5, 5608-5619 16
- 626 Thin Film of TiO<sub>2</sub>/ZnO Binary Mixed Nanoparticles as Electron Transport Layers in Low-Temperature Processed Perovskite Solar Cells. **2020**, 15, 2050036 2

625	Hot-injection and ultrasonic irradiation syntheses of Cs <sub>2</sub> SnI <sub>6</sub> quantum dot using Sn long-chain amino-complex. <b>2020</b> , 22, 1	1
624	Advances in stable and flexible perovskite solar cells. <b>2020</b> , 20, 720-737	12
623	Efficient defect passivation of perovskite solar cells via stitching of an organic bidentate molecule. <b>2020</b> , 4, 3318-3325	13
622	A perovskite solar cell owing very high stabilities and power conversion efficiencies. <b>2020</b> , 201, 541-546	7
621	Methylammonium tin iodide perovskite: structural, electronic and thermodynamic properties by a DFT study with different exchange-correlation functionals. <b>2020</b> , 2, 1	6
620	Nanoscale Perovskite-Sensitized Solar Cell Revisited: Dye-Cell or Perovskite-Cell?. <b>2020</b> , 13, 2571-2576	9
619	In Situ Growth of MAPbBr Nanocrystals on Few-Layer MXene Nanosheets with Efficient Energy Transfer. <b>2020</b> , 16, e1905896	17
618	Efficient perovskite solar cells via surface passivation by a multifunctional small organic ionic compound. <b>2020</b> , 8, 8313-8322	41
617	Recent advances in hybrid organic-inorganic materials with spatial architecture for state-of-the-art applications. <b>2020</b> , 112, 100663	93
616	Water-resistant perovskite nanodots enable robust two-photon lasing in aqueous environment. <b>2020</b> , 11, 1192	65
615	High performance novel flexible perovskite solar cell based on a low-cost-processed ZnO:Co electron transport layer. <b>2020</b> , 13, 2546-2555	11
614	Self-Assembled Hydrophobic Molecule-Based Surface Modification: A Strategy to Improve Efficiency and Stability of Perovskite Solar Cells. <b>2020</b> ,	1
613	Impacts of the Hole Transport Layer Deposition Process on Buried Interfaces in Perovskite Solar Cells. <b>2020</b> , 1, 100103	6
612	Light Out-Coupling Management in Perovskite LEDs—What Can We Learn from the Past?. <b>2020</b> , 30, 2002570	26
611	Enhanced performance of perovskite solar cells via laser-induced heat treatment on perovskite film. <b>2020</b> , 206, 301-307	5
610	Hybrid Halide Perovskites. <b>2020</b> , 15-78	
609	Dielectric properties of CdSe quantum dots-loaded cryogel for potential future electronic applications. <b>2020</b> , 119, 105269	5
608	High-Performance Large-Area Perovskite Solar Cells Enabled by Confined Space Sublimation. <b>2020</b> , 12, 33870-33878	13

607	Preparation and Characterization of Highly Fluorescent TGA-CdTe Quantum Dot-Hyamine 1622 Additive Composite. <b>2020</b> , 12, 92-101	1
606	Perovskite nanogels: synthesis, properties, and applications. <b>2020</b> , 8, 12355-12379	4
605	Defect Energetics in Pseudo-Cubic Mixed Halide Lead Perovskites from First-Principles. <b>2020</b> , 124, 16729-16738	8
604	Recent trends in efficiency-stability improvement in perovskite solar cells. <b>2020</b> , 17, 100449	24
603	Hydrogen halide-free synthesis of organohalides for organometal trihalide perovskite solar cells. <b>2020</b> , 89, 375-382	3
602	Newly Developed Broadband Antireflective Nanostructures by Coating a Low-Index MgF Film onto a SiO <sub>2</sub> Moth-Eye Nanopattern. <b>2020</b> , 12, 10626-10636	16
601	Multi-cation perovskites prevent carrier reflection from grain surfaces. <b>2020</b> , 19, 412-418	52
600	Binary synergetic ions reduce defect density in ambient air processed perovskite solar cells. <b>2020</b> , 198, 335-342	5
599	Effect of reabsorption and photon recycling on photoluminescence spectra and transients in lead-halide perovskite crystals. <b>2020</b> , 3, 025003	9
598	Outstanding Photocurrent Density and Incident Photon-to-Current Conversion Efficiency of Liquid-State NiO Perovskite-Sensitized Solar Cells. <b>2020</b> , 217, 1900607	4
597	Atomistic Origins of the Limited Phase Stability of Cs <sup>+</sup> -Rich FAPbI <sub>3</sub> Mixtures. <b>2020</b> , 32, 2605-2614	14
596	Excitons in 2D perovskites for ultrafast terahertz photonic devices. <b>2020</b> , 6, eaax8821	53
595	Advanced Computing and Intelligent Engineering. <b>2020</b> ,	
594	Investigating the effects of carbon-based counter electrode layers on the efficiency of hole-transporter-free perovskite solar cells. <b>2020</b> , 5, 141-152	7
593	Introduction of LiCl into SnO <sub>2</sub> electron transport layer for efficient planar perovskite solar cells. <b>2020</b> , 745, 137220	15
592	A review on perovskite solar cells: Evolution of architecture, fabrication techniques, commercialization issues and status. <b>2020</b> , 198, 665-688	167
591	Molecular modeling and photovoltaic applications of porphyrin-based dyes: A review. <b>2020</b> , 24, 303-320	22
590	Materials chemistry and engineering in metal halide perovskite lasers. <b>2020</b> , 49, 951-982	143

589	Stable and High-Efficiency Methylammonium-Free Perovskite Solar Cells. <b>2020</b> , 32, e1905502	86
588	Multifunctional nanostructured materials for next generation photovoltaics. <b>2020</b> , 70, 104480	25
587	Development of Dopant-Free Organic Hole Transporting Materials for Perovskite Solar Cells. <b>2020</b> , 10, 1903326	111
586	Introduction of Multifunctional Triphenylamino Derivatives at the Perovskite/HTL Interface To Promote Efficiency and Stability of Perovskite Solar Cells. <b>2020</b> , 12, 9300-9306	25
585	Grain Boundary and Interface Passivation with Core-Shell Au@CdS Nanospheres for High-Efficiency Perovskite Solar Cells. <b>2020</b> , 30, 1908408	35
584	Elucidating the Doping Mechanism in Fluorene-Dithiophene-Based Hole Selective Layer Employing Ultrahydrophobic Ionic Liquid Dopant. <b>2020</b> , 12, 9395-9403	11
583	Low-dimensional metal halide perovskites and related optoelectronic applications. <b>2020</b> , 2, 341-378	36
582	Study on the Ultrafast Process of Perovskite Nanoparticles Modified by Different Alkyl Chains. <b>2020</b> , 36, 1507-1514	3
581	Recent advances in crystalline carbon dots for superior application potential. <b>2020</b> , 1, 525-553	37
580	Tunable relativistic quasiparticle electronic and excitonic behavior of the FAPb(I <sub>2</sub> Br) alloy. <b>2020</b> , 22, 11943-11955	5
579	Responsive Nanomaterials for Sustainable Applications. <b>2020</b> ,	1
578	Effect of deposition method on the structural and optical properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite thin films. <b>2020</b> , 103, 109836	27
577	Insights into mechanism of size-controlled synthesis of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> perovskite quantum dots and large nanoparticles with tunable optical properties. <b>2020</b> , 82, 105712	6
576	Heterogeneous Cation-Lattice Interaction and Dynamics in Triple-Cation Perovskites Revealed by Infrared Vibrational Nanoscopy. <b>2020</b> , 5, 1636-1643	11
575	The Investigation for Coating Method of Titanium Dioxide Layer in Perovskite Solar Cells. <b>2020</b> , 10, 236	2
574	Investigation of the effect of MAI and PBI( <sub>2</sub> ) concentrations on the properties of perovskite solar cells. <b>2020</b> , 43, 1	1
573	Raman Scattering Studies of the Structural Phase Transitions in Single-Crystalline CH <sub>3</sub> NH <sub>3</sub> PbCl. <b>2020</b> , 11, 3773-3781	9
572	Investigation of the Effects of Various Organic Solvents on the PCBM Electron Transport Layer of Perovskite Solar Cells. <b>2020</b> , 10, 237	4

571	Fabrication and TCAD validation of ambient air-processed ZnO NRs/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /spiro-OMeTAD solar cells. <b>2020</b> , 143, 106540	5
570	Poly(3-hexylthiophene)/Gold Nanorod Composites as Efficient Hole-Transporting Materials for Perovskite Solar Cells. <b>2020</b> , 4, 2000109	3
569	Electrochemical Deposition of Organometallic Halide Perovskite Single-Crystal Particles with Density Gradients and Their Stability, Fluorescence, and Photoelectrochemical Properties. <b>2020</b> , 124, 10659-10668	6
568	17% efficient perovskite solar mini-module via hexamethylphosphoramide (HMPA)-adduct-based large-area D-bar coating. <b>2020</b> , 8, 9345-9354	31
567	Effect of UV exposure of ITO/PEDOT:PSS substrates on the performance of inverted-type perovskite solar cells. <b>2020</b> , 31, 7968-7980	6
566	Electronic and optical properties of layered Ruddlesden Popper hybrid X <sub>2</sub> (MA) <sub>n</sub> -1SnI <sub>3n+1</sub> perovskite insight by first principles. <b>2020</b> , 144, 109510	3
565	Enhanced photovoltaic performance and stability of perovskite solar cells by interface engineering with poly(4-vinylpyridine) and Cu <sub>2</sub> ZnSnS <sub>4</sub> &CNT. <b>2020</b> , 201, 908-915	6
564	Synchronous surface and bulk composition management for red-shifted light absorption and suppressed interfacial recombination in perovskite solar cells. <b>2020</b> , 8, 9743-9752	13
563	Current advancements on charge selective contact interfacial layers and electrodes in flexible hybrid perovskite photovoltaics. <b>2021</b> , 54, 151-173	27
562	Evaluation of the optical properties of the lead-free mixed-halide iron perovskite CH <sub>3</sub> NH <sub>3</sub> FeI <sub>2</sub> Br for application in solar cells: A computational study. <b>2021</b> , 26, 101847	0
561	2D Materials as Electron Transport Layer for Low-Temperature Solution-Processed Perovskite Solar Cells. <b>2021</b> , 5, 2000566	7
560	Thin films for planar solar cells of organic-inorganic perovskite composites. <b>2021</b> , 95-115	
559	Advanced Characterization Techniques for Overcoming Challenges of Perovskite Solar Cell Materials. <b>2021</b> , 11, 2001753	13
558	Recent Progress of Quantum Dot-Based Photonic Devices and Systems: A Comprehensive Review of Materials, Devices, and Applications. <b>2021</b> , 2, 2000024	24
557	Emerging perovskite quantum dot solar cells: feasible approaches to boost performance. <b>2021</b> , 14, 224-261	39
556	Solvent evaporation synthesis of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -sensitized TiO <sub>2</sub> nanotubes solar cells. <b>2021</b> , 111, 110602	1
555	Light Stability Enhancement of Perovskite Solar Cells Using 1H,1H,2H,2H-Perfluorooctyltriethoxysilane Passivation. <b>2021</b> , 5, 2000650	4
554	Innovative rapid synthesis design of water-stable solid-state Cs <sub>4</sub> PbBr <sub>6</sub> perovskite luminescence materials for next generation display technology. <b>2021</b> , 542, 148696	5



553	Robust Inorganic Hole Transport Materials for Organic and Perovskite Solar Cells: Insights into Materials Electronic Properties and Device Performance. <b>2021</b> , 5, 2000555	13
552	Solar energy harvesting with ferroelectric materials. <b>2021</b> , 43-84	1
551	Pb[N(CN) <sub>2</sub> ] <sub>2</sub> novel and effective additive provides visual verifications elucidating efficiency enhancement of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2021</b> , 88, 106009	3
550	Low-cost organic-inorganic metal halide perovskite solar cells with enhanced stability. <b>2021</b> , 413-429	
549	Highly efficient and stable perovskite solar cells produced by maximizing additive engineering. <b>2021</b> , 5, 469-477	4
548	Photovoltaic Performance Enhancement of All-Inorganic CsPbBr <sub>3</sub> Perovskite Solar Cells Using In <sub>2</sub> S <sub>3</sub> as Electron Transport Layer via Facile Reflux-Condensation Process. <b>2021</b> , 218, 2000665	2
547	Topological materials and topologically engineered materials: properties, synthesis, and applications for energy conversion and storage. <b>2021</b> , 9, 1297-1313	4
546	Stability and efficiency improved perovskite solar cells through tuning the hydrophobicity of the hole transport layer with an organic semiconductor. <b>2021</b> , 9, 679-686	5
545	Improving the Performance of Carbon-Based Perovskite Solar Modules (70 cm <sup>2</sup> ) by Incorporating Cesium Halide in Mesoporous TiO <sub>2</sub> . <b>2021</b> , 4, 249-258	2
544	A review on power conversion efficiency of lead iodide perovskite-based solar cells. <b>2021</b> , 46, 5570-5574	4
543	Bottom-contact passivation for high-performance perovskite solar cells using TaCl <sub>5</sub> -doped SnO <sub>2</sub> as electron-transporting layer. <b>2021</b> , 88, 105972	11
542	Progress in efficiency and stability of hybrid perovskite photovoltaic devices in high reactive environments. <b>2021</b> , 239-257	1
541	Excitonic Solar Cells Using 2D Perovskite of (BA) <sub>2</sub> (FA) <sub>2</sub> Pb <sub>3</sub> I <sub>10</sub> . <b>2021</b> , 125, 2212-2219	6
540	Studies on Dye-Sensitized Solar Cells Incorporated with Perovskite as Sensitizer Dye. <b>2021</b> , 45-81	
539	Organic Inorganic Perovskites: A Low-Cost-Efficient Photovoltaic Material.	
538	The effect of bromide precursor on the properties of organolead halide perovskite for solar cell fabricated under ambient condition. <b>2021</b> , 32, 3797-3808	
537	Pb in halide perovskites for photovoltaics: reasons for optimism.	4
536	Toward highly efficient and stable Sn <sup>2+</sup> and mixed Pb <sup>2+</sup> /Sn <sup>2+</sup> based halide perovskite solar cells through device engineering. <b>2021</b> , 14, 3256-3300	16

- 535 Electronic properties of metal halide perovskites and their interfaces: the basics. **2021**, 4
- 534 Theoretical study on the electronic and optical properties of strain-tuned CsPb(1-xBrx)3 and CsSn(1-xBrx)3. **2021**, 763, 138219 3
- 533 High length-to-width aspect ratio lead bromide microwires via perovskite-induced local concentration gradient for X-ray detection. **2021**, 23, 2215-2221 2
- 532 Lead-Free Perovskite Solar Cells. **2021**, 3263-3288
- 531 Organic/inorganic hybrid and inorganic halide perovskites: structural and chemical engineering, interfaces and optoelectronic properties. **2021**, 54, 133002 11
- 530 Synergetic effects of DMA cation doping and Cl anion additives induced re-growth of MA1-xDMAxPbI3 perovskites. 2
- 529 Tin halide perovskites for efficient lead-free solar cells. **2021**, 259-285
- 528 Phase stability investigation of CsPbI3 perovskite for solar cell application. **2021**, 0
- 527 A Perspective on Perovskite Solar Cells. **2021**, 55-151 0
- 526 Morphology and surface analyses for CH3NH3PbI perovskite thin films treated with versatile solvent-antisolvent vapors.. **2021**, 11, 17789-17799 3
- 525 Warm white-light emitting silica films prepared using lead-free double perovskite QDs. **2021**, 50, 9804-9811 1
- 524 Investigating the iodide and bromide ion exchange in metal halide perovskite single crystals and thin films. **2021**, 57, 6125-6128 1
- 523 Morphological improvement of CH3NH3PbI3 films using blended solvents for perovskite solar cells. **2021**, 38, 187-194 4
- 522 Colloidal semiconductor nanocrystals: synthesis, optical nonlinearity, and related device applications. 4
- 521 Interfacial engineering for high performance perovskite solar cells. **2021**,
- 520 Mixed lead source precursors for producing light absorption layers of perovskite solar cells.. **2021**, 11, 1976-1983 1
- 519 Recent Progress in All-Inorganic Hybrid Materials for Energy Conversion Applications. **2021**, 41-59
- 518 Improved efficiency and air stability of two-dimensional p-i-n inverted perovskite solar cells by Cs doping.. **2021**, 11, 20200-20206 1

517	Earth-abundant non-toxic perovskite nanocrystals for solution processed solar cells. <b>2021</b> , 2, 4140-4151	1
516	Perovskite solar cells. <b>2021</b> , 249-281	1
515	All-inorganic perovskite quantum dots as light-harvesting, interfacial, and light-converting layers toward solar cells. <b>2021</b> , 9, 18947-18973	2
514	Advances in SnO <sub>2</sub> -based perovskite solar cells: from preparation to photovoltaic applications. <b>2021</b> , 9, 19554-19588	21
513	Improvement in performance of carbon-based perovskite solar cells by adding 1, 8-diiodooctane into hole transport layer 3-hexylthiophene. <b>2021</b> , 70, 198403-198403	
512	Efficiency improvement of perovskite solar cell by modifying structural parameters and using Ag nanoparticles. <b>2021</b> , 127, 1	2
511	Recent Progress in Perovskite Solar Cell: Fabrication, Efficiency, and Stability. <b>2021</b> , 1-32	2
510	Identifying Highly Stable Structures of ABX <sub>3</sub> Compounds: Cases of CaTiO <sub>3</sub> and CsGeCl <sub>3</sub> Perovskites. <b>2021</b> ,	
509	Domain-Size-Dependent Residual Stress Governs the Phase-Transition and Photoluminescence Behavior of Methylammonium Lead Iodide. <b>2021</b> , 31, 2008088	3
508	Capturing Mobile Lithium Ions in a Molecular Hole Transporter Enhances the Thermal Stability of Perovskite Solar Cells. <b>2021</b> , 33, e2007431	28
507	Monte-Carlo Study of Ion-Sputtering Parameters and Ab-Initio Calculations of Selected Perovskites for Solar-Powered Electricity. <b>2021</b> , 655, 012061	
506	Charge Transporting Materials Grown by Atomic Layer Deposition in Perovskite Solar Cells. <b>2021</b> , 14, 1156	0
505	Synthesis of Hybrid Lead Iodide Perovskite Thin Film by Two-Step Method Modified with a Double Dipping Circle to Control Its Crystallization and Morphology to Improve Solar Cells Performance. <b>2021</b> , 2021, 1-7	0
504	Pressure-assisted fabrication of perovskite light emitting devices. <b>2021</b> , 11, 025112	2
503	Tin Halide Perovskites Going Forward: Frost Diagrams Offer Hints. <b>2021</b> , 3, 299-307	21
502	Hysteresis in centrosymmetric CuPbI perovskite halide: apolar dielectric or orientable dielectric?. <b>2021</b> , 33, 155703	2
501	Insights on Desired Fabrication Factors from Modeling Sandwich and Quasi-Interdigitated Back-Contact Perovskite Solar Cells. <b>2021</b> , 4, 1093-1107	8
500	. <b>2021</b> , 68, 618-625	9

499	Influence of donor units on spiro[fluorene-9,9'-xanthene]-based dopant-free hole transporting materials for perovskite solar cells. <b>2021</b> , 216, 180-187	6
498	Thermodynamic limit of tandem solar cells under different solar spectra and their perovskite top solar cell. <b>2021</b> , 113, 110819	3
497	A Review on Emerging Efficient and Stable Perovskite Solar Cells Based on g-CN Nanostructures. <b>2021</b> , 14,	6
496	Investigation of non-Pb all-perovskite 4-T mechanically stacked and 2-T monolithic tandem solar devices utilizing SCAPS simulation. <b>2021</b> , 3, 1	6
495	Modulation of Photoinduced Iodine Expulsion in Mixed Halide Perovskites with Electrochemical Bias. <b>2021</b> , 12, 2615-2621	6
494	How Deep Hole Traps Affect the Charge Dynamics and Collection in Bare and Bilayers of Methylammonium Lead Bromide. <b>2021</b> , 13, 16309-16316	4
493	SnO <sub>2</sub> /TiO <sub>2</sub> Electron Transporting Bilayers: A Route to Light Stable Perovskite Solar Cells. <b>2021</b> , 4, 3424-3430	10
492	Remanent solvent management engineering of perovskite films for PEDOT: PSS-based inverted solar cells. <b>2021</b> , 216, 530-536	1
491	Strain in perovskite solar cells: origins, impacts and regulation. <b>2021</b> , 8, nwab047	40
490	Strategies for High-Performance Large-Area Perovskite Solar Cells toward Commercialization. <b>2021</b> , 11, 295	6
489	Synthesization and optical characterization of photovoltaic materials for perovskite solar cell application. <b>2021</b> , 1120, 012015	
488	Core/Shell Metal Halide Perovskite Nanocrystals for Optoelectronic Applications. <b>2021</b> , 31, 2100438	25
487	Impact of Auger recombination on performance limitation of perovskite solar cell. <b>2021</b> , 217, 342-353	6
486	How antisolvent miscibility affects perovskite film wrinkling and photovoltaic properties. <b>2021</b> , 12, 1554	29
485	Tailoring the Dimensionality of Hybrid Perovskites in Mesoporous Carbon Electrodes for Type-II Band Alignment and Enhanced Performance of Printable Hole-Conductor-Free Perovskite Solar Cells. <b>2021</b> , 11, 2100292	40
484	Acid Dissociation Constant: A Criterion for Selecting Passivation Agents in Perovskite Solar Cells. 1612-1621	43
483	Recent developments in carbon nanotubes-based perovskite solar cells with boosted efficiency and stability. <b>2021</b> ,	6
482	Recent advances and perspective on the synthesis and photocatalytic application of metal halide perovskite nanocrystals. <b>2021</b> , 14, 3773	7

481	Understanding the Molten Salt Synthesis of MAPbI <sub>3</sub> [Characterization of New Lead(II)-Ammine Complexes as Intermediates. <b>2021</b> , 2021, 1490-1497	1
480	Performance enhancement of surface plasmon resonance sensor based on Ag-TiO <sub>2</sub> -MAPbX <sub>3</sub> -graphene for the detection of glucose in water. <b>2021</b> , 53, 1	2
479	Cation Engineering for Resonant Energy Level Alignment in Two-Dimensional Lead Halide Perovskites. <b>2021</b> , 12, 2528-2535	4
478	Recent Development in Copper based Hole Transport Materials for Emerging Inverted Perovskite Solar Cells. <b>2021</b> , 1116, 012066	1
477	Energy vs Charge Transfer in Manganese-Doped Lead Halide Perovskites.. <b>2021</b> , 6, 1869-1878	12
476	Photoemission Studies on the Environmental Stability of Thermal Evaporated MAPbI <sub>3</sub> Thin Films and MAPbBr <sub>3</sub> Single Crystals. <b>2021</b> , 14, 2005	0
475	Perovskite random lasers: a tunable coherent light source for emerging applications. <b>2021</b> , 32,	13
474	Amorphous AlO <sub>6</sub> SnO <sub>2</sub> nanocomposite electron-selective layers yielding over 21% efficiency in ambient-air-processed MAPbI <sub>3</sub> -based planar solar cells. <b>2021</b> , 409, 128215	5
473	Toward Real Setting Applications of Organic and Perovskite Solar Cells: A Comparative Review. <b>2021</b> , 9, 2000901	11
472	Defect Study and Modelling of SnX <sub>3</sub> -Based Perovskite Solar Cells with SCAPS-1D. <b>2021</b> , 11,	12
471	Effect of the structure of lead iodine perovskites on the photovoltaic efficiencies. <b>2021</b> , 152, 109958	0
470	Simulations of Trions and Biexcitons in Layered Hybrid Organic-Inorganic Lead Halide Perovskites. <b>2021</b> , 126, 216402	3
469	Perovskit Çiçel Pilleri ve Kararsız Problemleri Üzerine Bir Araştırma. 158-171	
468	Improving perovskite solar cell performance by compositional engineering via triple-mixed cations. <b>2021</b> , 220, 412-417	4
467	Effect of crystallization on the photovoltaic parameters and stability of perovskite solar cells. <b>2021</b> , 199, 115089	2
466	Understanding the structural, optical, and dielectric characteristics of SrLaLiTeMnO perovskites. <b>2021</b> , 11, 9744	4
465	Large Size CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Microcrystalline with a Capsule-Free Cavity Box Structure Grown by Solvent Thermal Reaction. 1032, 51-56	
464	Self-powered ultraviolet-blue photodetector based on GaN/double halide perovskite/NiO heterostructure. <b>2021</b> , 56, 13633-13645	2

463	Current Status of Emerging PV Technologies: A Comparative Study of Dye-Sensitized, Organic, and Perovskite Solar Cells. <b>2021</b> , 2021, 1-19	8
462	Additive-Assisted Interfacial Engineering for Efficient Carbon-Based Perovskite Solar Cell Incorporated Dopant-Free Polymeric Hole Conductor PBDT(S)-T1. <b>2021</b> , 4, 5821-5829	3
461	Device Architecture Engineering: Progress toward Next Generation Perovskite Solar Cells. <b>2021</b> , 31, 2103121	11
460	Charge-transfer complexes and their applications in optoelectronic devices. <b>2021</b> , 20, 100644	9
459	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/Silver Nanowire Complex with Higher Absorption and Stability. <b>2021</b> , 50, 5177	1
458	Perovskite Quantum Dot Solar Cells: An Overview of the Current Advances and Future Perspectives. <b>2021</b> , 5, 2100205	3
457	Pressure induced mechanical, opto-electronics, and transport properties of ZnHfO <sub>3</sub> oxide for solar cell and energy harvesting devices. <b>2021</b> , 8, 065504	1
456	Investigation of the planar and inverted structure of ((text{Cu}}_2{text{O/CH}}_3{text{NH}}_3{text{PbI}}_3)/(text{PCBM})) perovskite solar cell with and without the CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> layer. <b>2021</b> , 53, 1	0
455	Quantization effects in semiconductor nanostructures and singlet fission in molecular chromophores for photovoltaics and solar fuels. <b>2021</b> , 2, 021305	1
454	State of the Art and Prospects for Halide Perovskite Nanocrystals. <b>2021</b> , 15, 10775-10981	222
453	Ambient Air Temperature Assisted Crystallization for Inorganic CsPbI <sub>3</sub> Perovskite Solar Cells. <b>2021</b> , 26,	1
452	Recent advances on interface engineering of perovskite solar cells. <b>2022</b> , 15, 85	19
451	Laser Processing Methods for Perovskite Solar Cells and Modules. <b>2021</b> , 11, 2101149	9
450	Investigation of the photovoltaic properties of BaHf <sub>1-x</sub> Zr <sub>x</sub> S <sub>3</sub> (x=0) chalcogenide perovskites using first principles calculations. <b>2021</b> , 20, 100689	1
449	Periodic Properties Illustrated by CH <sub>3</sub> NH <sub>3</sub> Pb(1-xBr <sub>x</sub> ) <sub>3</sub> Solid Solution Perovskite Semiconductors. <b>2021</b> , 98, 2392-2397	0
448	Numerical Modeling and Optimization of Lead-Free Hybrid Double Perovskite Solar Cell by Using SCAPS-1D. <b>2021</b> , 2021, 1-12	10
447	Hydrophilic Surface-Driven Crystalline Grain Growth of Perovskites on Metal Oxides. <b>2021</b> , 4, 6923-6932	3
446	Mesoporous Au@Cu <sub>2</sub> S CoreShell Nanoparticles with Double Localized Surface Plasmon Resonance and Ligand Modulation for Hole-Selective Passivation in Perovskite Solar Cells. <b>2021</b> , 5, 2100358	2

445	The Effect of Ethanol Solvent on Characterization of MAPbI <sub>3</sub> Perovskite. 1039, 307-312	0
444	Multiple Electronic Transition-Induced Anomalous Broadband Absorption in a New Class of [Ni-Tpy <sub>2</sub> ]-Based Lead-Free Perovskite Single Crystals. <b>2021</b> , 125, 15579-15589	1
443	Co-Evaporated MAPbI <sub>3</sub> with Graded Fermi Levels Enables Highly Performing, Scalable, and Flexible p-i-n Perovskite Solar Cells. 2103252	15
442	Dipole evoked hole-transporting material p-doping by utilizing organic salt for perovskite solar cells. <b>2021</b> , 85, 106018	15
441	Facet-induced coordination competition for highly ordered CsPbBr <sub>3</sub> nanoplatelets with strong polarized emission. 1	2
440	Ligand-Free MAPbI <sub>3</sub> Quantum Dot Solar Cells Based on Nanostructured Insulating Matrices. <b>2021</b> , 5, 2100204	6
439	DFT Study of Lead-Free Mixed-Halide Materials Cs <sub>2</sub> X <sub>2</sub> Y <sub>2</sub> (X, Y = F, Cl, Br, I) for Optoelectronic Applications. <b>2021</b> , 50, 5647-5655	
438	Fundamentals of Hysteresis in Perovskite Solar Cells: From Structure-Property Relationship to Neoteric Breakthroughs. <b>2021</b> ,	1
437	A mini review: Constructing perovskite P-N homojunction solar cells. <b>2021</b> ,	0
436	A first principle investigation of the non-synthesized cubic perovskite LiGeX <sub>3</sub> (X=I, Br, and Cl). <b>2021</b> , 131, 105858	0
435	Recent Advances in All-Inorganic Lead-Free Three-Dimensional Halide Double Perovskite Nanocrystals.	8
434	Polymer-Based Anti-Solvent Engineering to Fabricate Stable and Efficient Triple-Cation Perovskite Solar Cells. <b>2021</b> , 6, 7254-7261	7
433	Synergistic passivation of MAPbI <sub>3</sub> perovskite solar cells by compositional engineering using acetamidinium bromide additives. <b>2021</b> , 59, 755-762	9
432	Energy Transfer from Blue-Emitting CsPbBr <sub>3</sub> Perovskite Nanocrystals to Green-Emitting CsPbBr <sub>3</sub> Perovskite Nanocrystals. <b>2021</b> , 125, 19368-19373	2
431	Role of Alkali Cations in Stabilizing Mixed-Cation Perovskites to Thermal Stress and Moisture Conditions. <b>2021</b> , 13, 43573-43586	3
430	Thermal Stability of CsPbBr <sub>3</sub> Perovskite Quantum Dots Assembled with SBA-15. <b>2021</b> , 11, 953	0
429	Numerical study of highly efficient tin-based perovskite solar cell with MoS <sub>2</sub> hole transport layer. <b>2021</b> ,	1
428	Chlorides, other Halides, and Pseudo-Halides as Additives for the Fabrication of Efficient and Stable Perovskite Solar Cells. <b>2021</b> , 14, 3665-3692	5

427	Bulky organic cations engineered lead-halide perovskites: a review on dimensionality and optoelectronic applications. <b>2021</b> , 21, 100759	6
426	Interface Passivation Engineering for Hybrid Perovskite Solar Cells. <b>2021</b> , 1, 100060	5
425	Cerium-Doped Perovskite Nanocrystals for Extremely High-Performance Deep-Ultraviolet Photoelectric Detection. <b>2021</b> , 9, 2100423	5
424	Design and optimization of CuSCN/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> perovskite solar cell for efficient performance. <b>2021</b> , 504, 127496	5
423	A Perspective on the Commercial Viability of Perovskite Solar Cells. <b>2021</b> , 5, 2100401	10
422	Experimental study and theoretical modeling of coating-speed-dependent optical properties of TiO <sub>2</sub> -graphene-oxide thin films. <b>2021</b> , 30, 104867	2
421	Efficient Perovskite Nanocrystal-Based Optoelectronic Devices. 2100366	2
420	Applications of carbon nanomaterials in perovskite solar cells for solar energy conversion. <b>2021</b> , 3, 276-290	4
419	Effects of the doping density of charge-transporting layers on regular and inverted perovskite solar cells: numerical simulations. <b>2021</b> , 4, 1146	2
418	Removal of residual compositions by powder engineering for high efficiency formamidinium-based perovskite solar cells with operation lifetime over 2000 h. <b>2021</b> , 87, 106152	16
417	Application of upconversion photoluminescent materials in perovskite solar cells: opportunities and challenges. <b>2021</b> , 21, 100740	1
416	Additive engineering for stable halide perovskite solar cells. <b>2021</b> , 60, 599-634	16
415	Atomic-scale understanding on the physics and control of intrinsic point defects in lead halide perovskites. <b>2021</b> , 8, 031302	15
414	Doublet luminescence due to the coexistence of excitons and electron-hole plasmas in the optically excited CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> single crystal.	1
413	Materials and Methods for High-Efficiency Perovskite Solar Modules. 2100455	20
412	Bifunctional Graphene Oxide Hole-Transporting and Barrier Layers for Transparent Bifacial Flexible Perovskite Solar Cells. <b>2021</b> , 4, 8824-8831	1
411	Graphene oxide as an effective hole transport material for low-cost carbon-based mesoscopic perovskite solar cells. <b>2021</b> , 12, 035001	0
410	DC bias electric field effects on ac electrical conductivity of MAPbI <sub>3</sub> suggesting intrinsic changes on structure and charge carrier dynamics. <b>2021</b> , 33,	



409	Effect of isomeric hole-transporting materials on perovskite solar cell performance. <b>2021</b> , 21, 100780	5
408	Simulation and analysis of the performances of a thin plasmonic-based perovskite absorber by subtracting the parasitic absorption of nano-cylinders. <b>2021</b> , 53, 1	2
407	Current status on synthesis, properties and applications of CsPbX(X = Cl, Br, I) perovskite quantum dots/nanocrystals. <b>2021</b> , 32,	3
406	Effect of Chemical Bonding Nature of Post-Treatment Materials on Photovoltaic Performance of Perovskite Solar Cells. 3435-3442	9
405	Multifunctional quantum dot materials for perovskite solar cells: Charge transport, efficiency and stability. <b>2021</b> , 40, 101286	6
404	Coupling the graphene plasmonic with terahertz emission of truncated conic-shaped InAs/GaAs quantum dots: A passive approach to enhance the intersubband optical properties. <b>2021</b> , 134, 114834	0
403	Molecular engineering strategy of naphthalimide based small donor molecules for high-performance organic solar cells. <b>2021</b> , 1204, 113416	13
402	Enhancing the performance of CsPbIBr <sub>2</sub> solar cells through zinc halides doping. <b>2021</b> , 281, 116918	0
401	The effect of defects in tin-based perovskites and their photovoltaic devices. <b>2021</b> , 21, 100513	3
400	Ambient-air fabrication of stable mixed cation perovskite planar solar cells with efficiencies exceeding 22% using a synergistic mixed antisolvent with complementary properties. <b>2021</b> , 89, 106387	3
399	First-principle calculations to investigate structural, electronic and optical properties of MgHfS <sub>3</sub> . <b>2021</b> , 273, 115405	0
398	Perovskite semiconductor-engineered cascaded molecular energy levels in naturally-sensitized photoanodes. <b>2021</b> , 151, 111606	1
397	Ambient processed perovskite sensitized porous TiO <sub>2</sub> nanorods for highly efficient and stable perovskite solar cells. <b>2021</b> , 884, 161061	3
396	Perovskite Materials in Photovoltaics. <b>2021</b> , 1703-1724	
395	Comparison of I-V Characteristics of the Fabricated SnS/Si and SnS:Ag/Si Heterojunction Solar Cell Under Dark and Illumination. <b>2021</b> , 50, 1177-1188	1
394	A Facile Synthesis of Gadolinium Titanate (GdTiO <sub>3</sub> ) Nanomaterial and Its Effect in Enhanced Current-Voltage Characteristics of Thin Films. <b>2021</b> , 69-78	4
393	Metal Oxides for Perovskite Solar Cells. <b>2021</b> , 197-233	2
392	Characterization CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /TiO <sub>2</sub> nano-based new generation heterojunction organometallic perovskite solar cell using thin-film technology. <b>2021</b> ,	1

391	Recent advances and challenges of inverted lead-free tin-based perovskite solar cells.	18
390	Structural properties of tellurium based double perovskite with small doped of manganese. <b>2021</b> ,	1
389	Transparent Electrode Techniques for Semitransparent and Tandem Perovskite Solar Cells. <b>2021</b> , 17, 18-32	12
388	Electrolytes, Dyes, and Perovskite Materials in Third Generation Photovoltaic Cells. <b>2021</b> , 621-621	1
387	Toward efficient perovskite solar cells by planar imprint for improved perovskite film quality and granted bifunctional barrier. <b>2021</b> , 9, 16178-16186	5
386	Solid-state NMR Studies of Halide Perovskite Materials with Photoconversion Potential. <b>2021</b> ,	2
385	Future perspectives of perovskite solar cells: Metal oxide-based inorganic hole-transporting materials. <b>2021</b> , 181-219	2
384	Organic-inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. <b>2021</b> , 267-289	2
383	Optimization of the perovskite solar cell design to achieve a highly improved efficiency. <b>2021</b> , 111, 110661	10
382	Morphology control of SnO <sub>2</sub> layer by solvent engineering for efficient perovskite solar cells. <b>2021</b> , 214, 280-287	8
381	Advantages of Polymer Electrolytes Towards Dye-sensitized Solar Cells. 121-167	1
380	Perovskite-Based Nanocrystals: Synthesis and Applications beyond Solar Cells. <b>2018</b> , 2, 1700380	108
379	Perovskite Materials in Photovoltaics. <b>2020</b> , 1-22	1
378	Perovskite Photovoltaics: From Laboratory to Industry. <b>2020</b> , 219-255	7
377	Study of pressure induced physical properties of ZnZrO <sub>3</sub> perovskite using density functional theory. <b>2020</b> , 753, 137601	7
376	A functional sulfonic additive for high efficiency and low hysteresis perovskite solar cells. <b>2017</b> , 359, 577-584	21
375	Performance Enhancement of All-Inorganic Perovskite Quantum Dots (CsPbX <sub>3</sub> ) by UV-NIR Laser Irradiation. <b>2019</b> , 123, 4502-4511	17
374	Simulating the Coupled Structural-Electronic Dynamics of Photoexcited Lead Iodide Perovskites. <b>2020</b> , 11, 4448-4455	8

373	Origin of Light-Induced Photophysical Effects in Organic Metal Halide Perovskites in the Presence of Oxygen. <b>2018</b> , 9, 3891-3896	84
372	Scalable fabrication and coating methods for perovskite solar cells and solar modules. <b>2020</b> , 5, 333-350	292
371	Chapter 1:High Efficiency Mesoscopic Organometal Halide Perovskite Solar Cells. <b>2016</b> , 1-31	3
370	Chapter 2:Towards Optimum Solution-processed Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 32-56	4
369	Chapter 3:Characterization of Capacitance, Transport and Recombination Parameters in Hybrid Perovskite and Organic Solar Cells. <b>2016</b> , 57-106	7
368	Chapter 8:First Principles Modeling of Perovskite Solar Cells: Interplay of Structural, Electronic and Dynamical Effects. <b>2016</b> , 234-296	2
367	CHAPTER 4:Halide Perovskites With Ambipolar Transport Properties for Transistor Applications. <b>2020</b> , 41-82	2
366	Low-temperature solution-processed efficient electron-transporting layers based on BF <sub>4</sub> <sup>-</sup> capped TiO <sub>2</sub> nanorods for high-performance planar perovskite solar cells. <b>2018</b> , 6, 334-341	25
365	Advances in design engineering and merits of electron transporting layers in perovskite solar cells. <b>2020</b> , 7, 2276-2291	26
364	Fabrication of organic-inorganic perovskite thin films for planar solar cells via pulsed laser deposition. <b>2016</b> , 6, 015001	25
363	Roadmap on organic/inorganic hybrid perovskite semiconductors and devices. <b>2021</b> , 9, 109202	28
362	Interface modification of SnO <sub>2</sub> layer using p/n junction double layer for efficiency enhancement of perovskite solar cell. <b>2020</b> , 53, 505103	6
361	Study of compositional stability and related optical properties of perovskite CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> films fabricated via two-step sol-gel process using weakly coordinating isopropanol solvent. <b>2020</b> , 95, 105705	2
360	Simultaneously improved dielectric, optical and conductivity properties of SrLa <sub>1-x</sub> Nd <sub>x</sub> LiTeO <sub>6</sub> double perovskites. <b>2020</b> , 7, 086301	7
359	CsPbBr <sub>3</sub> perovskites: Theoretical and experimental investigation on water-assisted transition from nanowire formation to degradation. <b>2018</b> , 2,	45
358	Influence of $\pi$ -conjugated cations and halogen substitution on the optoelectronic and excitonic properties of layered hybrid perovskites. <b>2018</b> , 2,	17
357	Light-harvesting capabilities of dielectric sphere multilayers. <b>2018</b> ,	1
356	First-Principles Study of Structural and Electronic Properties of Perovskite-Type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2016</b> , 06, 281-287	1

355	Stable and enhanced frequency up-converted lasing from CsPbBr quantum dots embedded in silica sphere. <b>2019</b> , 27, 9459-9466	20
354	Radiation-pressure-induced photoluminescence enhancement of all-inorganic perovskite CsPbBr <sub>3</sub> quantum dots. <b>2019</b> , 7, 837	14
353	Crystal structures of perovskite halide compounds used for solar cells. <b>2020</b> , 59, 264-305	37
352	Fabrication and characterization of potassium- and formamidinium-added perovskite solar cells. <b>2020</b> , 128, 805-811	8
351	Progress and Prospect on Stability of Perovskite Photovoltaics. <b>2017</b> , 4, 16-30	7
350	Solar photovoltaics: current state and trends. <b>2016</b> , 186, 801-852	21
349	Review on Dye-Sensitized Solar Cells (DSSCs). <b>2018</b> , 145-150	18
348	Synergism at the Nanoscale. <b>2016</b> , 42-77	3
347	Fabrication of Perovskite-Type Photovoltaic Devices with Polysilane Hole Transport Layers. <b>2017</b> , 08, 209-222	3
346	Perovskite solar cell. <b>2014</b> , 1, 10-13	2
345	Nanostructures in Dye-Sensitized and Perovskite Solar Cells.	3
344	Emergence and Evolution of Organometal Halide Perovskite Solar Cell. <b>2015</b> , 4, 29-30	2
343	Recent advances in planar heterojunction organic-inorganic hybrid perovskite solar cells. <b>2015</b> , 64, 038401	15
342	Key issues in highly efficient perovskite solar cells. <b>2015</b> , 64, 038404	12
341	Recent progress in research on solid organic-inorganic hybrid solar cells. <b>2015</b> , 64, 038405	6
340	progress in electron-transport materials in application of perovskite solar cells. <b>2015</b> , 64, 038802	9
339	A review of the perovskite solar cells. <b>2015</b> , 64, 038805	17
338	Recent research progress in perovskite solar cells. <b>2016</b> , 65, 237902	6

337	Quality management of high-efficiency planar heterojunction organic-inorganic hybrid perovskite solar cells. <b>2018</b> , 67, 158801	3
336	A Novel Prediction Model of Bandgap in Organic-Inorganic Hybrid Perovskites Based on a Simple Cluster Model Database.	
335	Understanding the sensing mechanisms of perovskite materials for gases with different properties: a perspective from the oxidation/reduction states of central metal ions.	
334	Research Progress of Hole Transport Materials Based on Spiro Aromatic-Skeleton in Perovskite Solar Cells. <b>2021</b> , 79, 1181	0
333	Perovskite Nanomaterials: Properties and Applications. <b>2022</b> , 255-267	0
332	A comprehensive review on defect passivation and gradient energy alignment strategies for highly efficient perovskite solar cells. <b>2022</b> , 55, 043001	1
331	Recent progress in electron transport bilayer for efficient and low-cost perovskite solar cells: a review. 1	0
330	Emerging Perovskite Solar Cell Technology: Remedial Actions for the Foremost Challenges. 2101085	11
329	The Future of Hybrid and Inorganic Perovskite Materials: Technology Forecasting. <b>2021</b> , 9, 2100376	1
328	Ambient-environment processed perovskite solar cells: A review. <b>2021</b> , 21, 100557	1
327	Inhibition of iodide ion migration in flexible perovskite solar cells using oxide/metal/oxide transparent electrode. <b>2021</b> , 27, 101546	1
326	A Brief Review of the Role of 2D Mxene Nanosheets toward Solar Cells Efficiency Improvement. <b>2021</b> , 11,	2
325	Lead-Free All-Inorganic Indium Chloride Perovskite Variant Nanocrystals for Efficient Luminescence. 2101344	6
324	A Systematic Review of Metal Halide Perovskite Crystallization and Film Formation Mechanism Unveiled by In Situ GIWAXS. <b>2021</b> , e2105290	21
323	Concave Double-Walled AgAuPd Nanocubes for Surface-Enhanced Raman Spectroscopy Detection and Catalysis Applications. <b>2021</b> , 4, 10103-10115	1
322	Temperature-dependent time response characteristic of photovoltaic performance in planar heterojunction perovskite solar cell. <b>2016</b> , 65, 188801	1
321	Degradation and Stability of Organic-Inorganic Perovskite Solar Cells. <b>2016</b> , 4, 68-79	
320	Chapter 7. Controlling the Photoanode Mesostructure for Dye-sensitized and Perovskite-sensitized Solar Cells. <b>2016</b> , 292-323	

- 319 Technology Development Trends of Cesium Lead Halide Based Light Emitting Diodes. **2016**, 29, 737-749
- 318 First-Principle Study of Electronic Structure and Optical Absorption of Perovskite CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub>. **2017**, 07, 64-71
- 317 Design and Control of Nanostructures and Interfaces for Excitonic Solar Cells. **2017**, 635-679
- 316 Photovoltaic Materials. **2018**, 1-22
- 315 Current state and perspectives for organo-halide perovskite solar cells: Crystal structures and thin film formation, morphology, processing, degradation, stability improvement by carbon nanotube. **2017**, 20, 153-193
- 314 Novel growth techniques for the deposition of high-quality perovskite thin films. **2018**,
- 313 Review on Dye-Sensitized Solar Cells (DSSCs). **2018**, 29-34 2
- 312 Perovskit Güçlümleri ve Kararsızlık Problemleri. 1
- 311 Organic ammonium salt surface treatment stabilizing all-inorganic CsPbI<sub>2</sub>Br perovskite. **2019**, 68, 158805 1
- 310 Impact of Electron Transport Layers (ETLs) and Hole Transport Layer (HTLs) on Perovskite Solar Cells Performance. **2019**, 227-246 1
- 309 Enhance the absorption of organic-inorganic perovskite film by nano-surface engineering. **2019**,
- 308 Inkjet printed perovskite solar cells: progress and prospects. **2019**, 68, 158807 0
- 307 Recent advances in perovskite solar cells: Space potential and optoelectronic conversion mechanism. **2019**, 68, 158401 0
- 306 Organic-inorganic hybrid perovskite photodetectors achieved via brush-coating process. **2019**,
- 305 Quantum Dots Solar Cells in Solar System to Convert Light into Electricity. **2020**, 859-868
- 304 Applications of Chalcogenides as Electron Transport Layers and Doping Materials in Perovskite Solar Cells. **2020**, 173-176
- 303 Microstructure and optical and electrical properties of TiO<sub>2</sub> nanotube thin films prepared by spin-coating method. **2019**, 14, 1208-1212 2
- 302 Preparation of highly efficient carbon-based perovskite solar cells (C-based PSCs) by screen-printing. **2019**,

- 301 Rutile TiO<sub>2</sub> nanorod arrays grown by solution-processed for high efficiency solid-state perovskite solar cells. **2019**,
- 300 PEROVSKITE PHOTOELECTRIC CONVERTERS WITHOUT HOLE-CONDUCTING BUFFER LAYERS. **2019**, 23-29
- 299 FABRICATION OF MIXED HALIDE PEROVSKITE FILMS BY THERMAL CO-EVAPORATION.
- 298 Solar elements based on organic and organo-inorganic materials. **2019**, 11(26), 270-343
- 297 Perovskite Materials in Photovoltaics. **2020**, 175-207 0
- 296 Current Perspectives and Advancements of Perovskite Photovoltaic Cells. **2020**, 83-92
- 295 Effect of the Interaction between Formamidinium Lead Iodine and PbS Quantum Dots in the Black Perovskite Phase Formation and Stability. **2020**,
- 294 2D -Materials Free Heterostructures for Photovoltaic Energy Conversion. **2022**, 429-448
- 293 Propylammonium Chloride Additive for Efficient and Stable FAPbI<sub>3</sub> Perovskite Solar Cells. **2021**, 11, 2102538 29
- 292 Organometal Halide Perovskite-Based Materials and Their Applications in Solar Cell Devices. **2020**, 259-281
- 291 Photon-Responsive Nanomaterials for Solar Cells. **2020**, 1-63
- 290 The Promise of Perovskite Solar Cells. **2021**,
- 289 Naphthalene diimide-based electron transport materials for perovskite solar cells. 2
- 288 Enhanced interfacial characteristics of perovskite solar cell with multi-functional organic hole-selective interlayer. **2022**, 197, 109837 0
- 287 Fabrication and Characterization of Graphene Incorporated Cu Based Perovskite in Application of Perovskite Solar Cell under Ambient Condition. **2020**, 10, 1-16 4
- 286 Lead-Free Perovskite Solar Cells. **2020**, 1-26 1
- 285 Simulation and architectural design for Schottky structure perovskite solar cells. **2020**, 69, 057901 3
- 284 Overview of Hybrid Perovskite Solar Cells. **2021**, 29-64

283 Tin Halide Perovskite Solar Cells. **2021**, 373-409

282 Dopant-Free Mexylaminotriazine Molecular Glass Hole Transport Layer for Perovskite Solar Cells. **2021**, 2

281 Application of Perovskite Quantum Dots as an Absorber in Perovskite Solar Cells. e202112412 **2021**, 1

280 Passivation of Hybrid/Inorganic Perovskite Solar Cells. **2021**, 91-111

279 Flash Infrared Annealing for Processing of Perovskite Solar Cells. **2021**, 33-89

278 Application of Perovskite Quantum Dots as Absorber for Perovskite Solar Cell. **2021**, e202112412 **2021**, 6

277 Low-Temperature and Facile Solution-Processed Two-Dimensional Materials as Electron Transport Layer for Highly Efficient Perovskite Solar Cells. **2021**, 247-271

276 Degradation behaviors of photoelectrical properties of mixed cation perovskite solar cells under equivalent 1 MeV electron irradiation. **2021**, 54, 065103

275 Efficient light harvesting in perovskite layer via three-dimensional TiO<sub>2</sub> nanobranched nanorod scaffold. **2020**, 1, 030017 **2020**, 1

274 Recent Progress in All-Inorganic Hybrid Materials for Energy Conversion Applications. **2021**, 1-19

273 Metal halide perovskites for photocatalysis applications. **2021**, 14

272 A review on the emerging applications of 4-cyano-4'-alkylbiphenyl (nCB) liquid crystals beyond display. **2022**, 275, 115522 **2022**, 1

271 First-principles study on the electronic and optical properties of strain-tuned mixed-halide double perovskites Cs<sub>2</sub>TiI<sub>6</sub>Br<sub>x</sub>. **2022**, 626, 413522 **2022**, 1

270 Tuning optical properties of zinc oxide and methyl ammonium lead iodide by ultrasound assisted method. **2021**, 120, 106649

269 Combined-solvent engineering of HPbI<sub>3</sub> for efficient FAPbI<sub>3</sub> perovskite solar cells. **2021**,

268 Exploring the growth of MAPbI<sub>3</sub> under different preparation methods for mesoporous perovskite solar cells.

267 Updated Progresses in Perovskite Solar Cells. **2021**, 38, 107801 **2021**, 1

266 Research Background and Recent Progress of Perovskite Photovoltaics. **2022**, 1-60 **2022**, 0



265	Preparation and characterization of planar heterojunction perovskite solar cells based on c-TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /HTM/Ag structure. <b>2021</b> , 100, 440-450	0
264	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite with Enhanced Absorption and Stability Using Silver Nanowires and the Anatase Structure of TiO <sub>2</sub> Nanowires. 1	0
263	Role of Phase Nanosegregation in the Photoluminescence Spectra of Halide Perovskites. <b>2021</b> , 12, 11659-11665	
262	Quantum Dots of Halide Perovskite. <b>2022</b> , 321-344	
261	Study of the electronic and opto-electronic properties of the perovskite KPbBr <sub>3</sub> by DFT and TDDFT methods. <b>2021</b> , e00617	1
260	The hybrid halide perovskite: Synthesis strategies, fabrications, and modern applications. <b>2021</b> ,	2
259	The evolution and future of metal halide perovskite-based optoelectronic devices. <b>2021</b> , 4, 3814-3834	6
258	Highly Water-Stable Polymer-Perovskite Nanocomposites. <b>2021</b> ,	1
257	Field-Effect Control in Hole Transport Layer Composed of Li:NiO/NiO for Highly Efficient Inverted Planar Perovskite Solar Cells. 2101562	1
256	Recent advances and emerging trends of rare-earth-ion doped spectral conversion nanomaterials in perovskite solar cells. <b>2021</b> ,	1
255	Room-temperature multiple ligands-tailored SnO quantum dots endow in situ dual-interface binding for upscaling efficient perovskite photovoltaics with high V. <b>2021</b> , 10, 239	10
254	Analysis on down converting Sm <sup>3+</sup> -incorporated TiO <sub>2</sub> mesoporous nanostructures for DSSC applications. 1	
253	Studying the influence of heat treatment on structural and morphological properties of thin CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xCl <sub>x</sub> films prepared by spin coating method. <b>2021</b> ,	
252	Highly Oriented Carbon Nanotube Supercapacitors.	3
251	Recent Development of Optoelectronic Application Based on Metal Halide Perovskite Nanocrystals.. <b>2021</b> , 9, 822106	1
250	Crystallization kinetics modulation and defect suppression of all-inorganic CsPbX <sub>3</sub> perovskite films.	9
249	Electrical properties of carbon-based fully-printed mesoscopic perovskite solar cells with BAI as an additive. <b>2022</b> , 33, 3091	
248	Developments on Perovskite Solar Cells (PSCs): A Critical Review. <b>2022</b> , 12, 672	2

247	Role of bi-layered CuSCN based hole transport films to realize highly efficient and stable perovskite solar cells. <b>2022</b> , 28, 101657	1
246	Impact of fluorine substitution in organic functional materials for perovskite solar cell. <b>2022</b> , 198, 110029	3
245	Recent progress in perovskite solar cells: challenges from efficiency to stability. <b>2022</b> , 23, 100686	6
244	Review of current progress in hole-transporting materials for perovskite solar cells. <b>2022</b> , 68, 330-386	7
243	Dye-sensitized solar cells based on Fe N-heterocyclic carbene photosensitizers with improved rod-like push-pull functionality.. <b>2021</b> , 12, 16035-16053	3
242	Effect of Fluorine Substitution in a Hole Dopant on the Photovoltaic Performance of Perovskite Solar Cells. <b>2022</b> , 7, 741-748	4
241	Effect of Iodine Octahedral Rotations on Dipole Ordering in Organic/Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <b>2022</b> , 126, 779-785	0
240	Ab initio study of structural, electronic, mechanical and optical properties of the tetragonal Cs <sub>2</sub> AgBiBr <sub>6</sub> halide double perovskite. <b>2022</b> , 128, 1	0
239	Vacuum Quenching for Large-Area Perovskite Film Deposition.. <b>2022</b> ,	4
238	Development of formamidinium lead iodide-based perovskite solar cells: efficiency and stability.. <b>2022</b> , 13, 2167-2183	5
237	Microspacing In-Air Sublimation Growth of Thickness-Controllable Lead Halide Crystal and the Morphology Evolution in Conversion to Perovskite.	1
236	A review on two-dimensional (2D) perovskite material-based solar cells to enhance the power conversion efficiency. <b>2021</b> ,	3
235	Enhancement of perovskite solar cell performance by external down-conversion of Eu-complex film.	0
234	Comprehensive Device Modeling and Performance Analysis of Quantum Dot-Perovskite Solar Cells. <b>2022</b> , 51, 1524	0
233	Organometal halide perovskite photovoltaics. <b>2022</b> , 273-317	0
232	A comprehensive analysis of PV cell parameters with varying halides stoichiometry in mixed halide perovskite solar cells. <b>2022</b> , 123, 111905	2
231	Theoretical impacts of single band gap grading of perovskite and valence band offset of perovskite/hole transport layer interface on its solar cell performances. <b>2022</b> , 231, 684-693	1
230	Decomposition of Organic Perovskite Precursors on MoO <sub>3</sub> : Role of Halogen and Surface Defects.. <b>2022</b> ,	1

229	Review on efficiency improvement effort of perovskite solar cell. <b>2022</b> , 233, 421-434	4
228	Illumination-driven energy level re-alignment at buried interfaces between organic charge transport layers and a lead halide perovskite.	1
227	Dual Modification Engineering via Lanthanide-Based Halide Quantum Dots and Black Phosphorus Enabled Efficient Perovskite Solar Cells with High Open-Voltage of 1.235 V. 2112647	6
226	Scalable fabrication for efficient quasi two-dimensional perovskite solar cells via ultrasonic spray-coating method. <b>2022</b> , 102, 106440	0
225	Comparison on Critical Performance Characteristics of Perovskite-Based Flexible Solar Cells. <b>2022</b> , 47-64	
224	Production of PV Modules. <b>2022</b> , 85-130	
223	Analysis of Light-Enhanced Capacitance Dispersion in Perovskite Solar Cells. 2102275	1
222	Flexible dye-sensitized solar cells assisted with lead-free perovskite halide. <b>2022</b> , 37, 866	1
221	Interfacial Electronic Properties and Photocatalytic CO <sub>2</sub> Reduction of a Z-Scheme SnS/(CH <sub>3</sub> NH <sub>3</sub> ) <sub>2</sub> AgBiI <sub>6</sub> Double Perovskite Heterostructure.	2
220	Exploring Structural Nuances in Germanium Halide Perovskites Using Solid-State Ge and Cs NMR Spectroscopy.. <b>2022</b> , 1687-1696	3
219	A theoretical perspective of the ultrafast transient absorption dynamics of CsPbBr <sub>3</sub> . <b>2022</b> ,	1
218	Efficient Energy Level Modulation via Electrophilic KBF <sub>4</sub> for High-Performance Inverted Planar Perovskite Solar Cells with Superior Stability.	0
217	Enhancing the efficiency of Pb-based and Sn-based perovskite solar cell by applying different ETL and HTL using SCAPS-ID. <b>2022</b> , 125, 112036	2
216	Performance Optimization of ZnO Nanorods ETL Based Hybrid Perovskite Solar Cells With Different Seed Layers. <b>2022</b> , 1-6	1
215	Method for studying the photostability of solar cells based on organic-inorganic perovskites using a confocal spectrometer. <b>2022</b> , 88-97	
214	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency.	2
213	Recent Advances in Hybrid Organic-Inorganic Perovskite Solar Cells with Different Halides and Their Combinations. <b>2022</b> , 21-29	
212	Structural Stability, Mechanical and Optoelectronic Properties of Strain-Tuned mixed-Halide Perovskites CsPb <sub>3</sub> A <sub>1</sub> Y <sub>2</sub> .	

211	A Review of Three-Dimensional Tin Halide Perovskites as Solar Cell Materials. 25,	2
210	Highly Efficient Inverted Planar Solar Cell Using Formamidinium-Based Quasi-Two Dimensional Perovskites.	
209	Selection of the ultimate perovskite solar cell materials and fabrication processes towards its industrialization: A review.	2
208	Rethinking the A cation in halide perovskites.. <b>2022</b> , 375, eabj1186	29
207	Tetrabutylammonium (TBA)-Doped Methylammonium Lead Iodide: High Quality and Stable Perovskite Thin Films. <b>2022</b> , 10,	3
206	Low-Temperature Microwave Processed TiO <sub>2</sub> as an Electron Transport Layer for Enhanced Performance and Atmospheric Stability in Planar Perovskite Solar Cells. <b>2022</b> , 5, 2679-2696	3
205	Current advances in perovskite oxides supported on graphene-based materials as interfacial layers of perovskite solar cells. 1-20	1
204	Construction of Stable Donor-Acceptor Type Covalent Organic Frameworks as Functional Platform for Effective Perovskite Solar Cell Enhancement. 2112553	13
203	Optical Characterization and Prediction with Neural Network Modeling of Various Stoichiometries of Perovskite Materials Using a Hyperregression Method.. <b>2022</b> , 12,	
202	Controllable Introduction of Surface Defects on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite.. <b>2022</b> , 12,	
201	2D Materials for Wearable Energy Harvesting. 2101623	1
200	Room Temperature Fabrication of SnO <sub>2</sub> Electrodes Enabling Barrier-Free Electron Extraction for Efficient Flexible Perovskite Photovoltaics. 2200817	11
199	2D Pb-Halide Perovskites Can Self-Heal Photodamage Better than 3D Ones. 2113354	1
198	Accelerated screening of functional atomic impurities in halide perovskites using high-throughput computations and machine learning. 1	1
197	Progress in Nanostructured Perovskite Photovoltaics. <b>2022</b> , 317-344	
196	Protective Coating Interfaces for Perovskite Solar Cell Materials: A First-Principles Study.. <b>2022</b> ,	1
195	Improved water repellency and environmental stability of perovskite solar cells by encapsulating with paraffin wax. <b>2022</b> , 282, 125954	0
194	Beyond efficiency fever: Preventing lead leakage for perovskite solar cells. <b>2022</b> , 5, 1137-1161	7

193	Narrow Bandgap Metal Halide Perovskites: Synthesis, Characterization, and Optoelectronic Applications. 2102661	0
192	Performance investigation of experimentally fabricated lead iodide perovskite solar cell via numerical analysis. <b>2022</b> , 151, 111802	2
191	The emergence of concentrator photovoltaics for perovskite solar cells. <b>2021</b> , 8, 041324	2
190	A quick peek at solar cells and a closer insight at perovskite solar cells. <b>2021</b> , 30, 53-63	
189	Photoinduced Energy-Level Realignment at Interfaces between Organic Semiconductors and Metal-Halide Perovskites.. <b>2021</b> , 127, 246401	1
188	Effect of Deposit Au thin Layer Between Layers of Perovskite Solar Cell on Cell's Performance. <b>2021</b> , 19, 23-32	0
187	Tuning the Emission Wavelength of Lead Halide Perovskite NCs via Size and Shape Control.. <b>2022</b> , 7, 565-577	1
186	Passivation Effect of CsPbI <sub>3</sub> Quantum Dots on the Performance and Stability of Perovskite Solar Cells. <b>2022</b> , 9, 3	1
185	Beyond the Phase Segregation: Probing the Irreversible Phase Reconstruction of Mixed-Halide Perovskites.. <b>2021</b> , e2103948	7
184	Dual-function of the ZnO nano-sheets as light absorber scaffold and electron transport material in perovskite solar cells. <b>2021</b> , 12, 045004	
183	Ionic-Liquid-Perovskite Capping Layer for Stable 24.33%-Efficient Solar Cell. <b>2022</b> , 12, 2103491	19
182	Study on Process Parameters of Ink-Jet Printing Perovskite Solar Cell Film. <b>2022</b> , 200-206	
181	Dicyclopentadithienothiophene (DCDTT)-based Organic Semiconductor Assisted Grain Boundary Passivation for Highly Efficient and Stable Perovskite Solar Cells.	1
180	Perovskite Fiber-Shaped Optoelectronic Devices for Wearable Applications.	3
179	Solution-Processed Ternary Perovskite-Organic Broadband Photodetectors with Ultrahigh Detectivity.. <b>2022</b> ,	4
178	Buried Interface Modification in Perovskite Solar Cells: A Materials Perspective. 2104030	16
177	In-situ characterization for understanding the degradation in perovskite solar cells.	3
176	Machine learning analysis on performance of naturally-sensitized solar cells. <b>2022</b> , 128, 112343	0

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174 Recent developments in perovskites-based precursor inks for scalable architectures of perovskite solar cell technology.. 0

173 Performance Analysis of Lead-Free Perovskite Solar Cells. **2022**, 629-638 0

172 Performance Research Of Perovskite Solar Cell with Light Conversion Electron Transport Layer Utilizing Prism Scattered Lights.

171 Progress on defect and defect passivation in perovskite solar cells. **2022**,

170 Fabrication of Flexible Quasi-Interdigitated Back-Contact Perovskite Solar Cells. **2022**, 15, 3056 1

169 High-Efficiency and Stable Perovskite Photodetectors with an F4-TCNQ-Modified Interface of NiO and Perovskite Layers.. **2022**, 3904-3914 2

168 Transfer-Printed Cuprous Iodide (CuI) Hole Transporting Layer for Low Temperature Processed Perovskite Solar Cells.. **2022**, 12, 0

167 Quantum dots-sensitized solar cells: a review on strategic developments. **2022**, 45, 1

166 Structural stability, mechanical and optoelectronic properties of strain-tuned mixed-halide perovskites CsPbX<sub>3</sub>-aYa. **2022**, 414016

165 A route towards the fabrication of large-scale and high-quality perovskite films for optoelectronic devices.. **2022**, 12, 7411 0

164 Inhibition of Amine-Water Proton Exchange Stabilizes Perovskite Ink for Scalable Solar Cell Fabrication. 1

163 Multifunctional and Transformative Metaphotonics with Emerging Materials.. **2022**, 4

162 Analytical Review of Spiro-OMeTAD Hole Transport Materials: Paths Toward Stable and Efficient Perovskite Solar Cells. 2200045 1

161 Recent advancement in perovskite solar cell with imidazole additive. **2022**, 148, 106788 1

160 A review on high performance photovoltaic cells and strategies for improving their efficiency. 1

159 Charge Carrier Dynamics in Co-evaporated MAPbI<sub>3</sub> with a Gradient in Composition. 0

158 Photoelectrochemical nitrogen reduction: A step toward achieving sustainable ammonia synthesis. **2022**, 43, 1761-1773 1

- 157 Electrical and Optical Investigation of 2T-Perovskite/u-CIGS Tandem Solar Cells With ~30% Efficiency. **2022**, 1-9 2
- 156 Recent Progress on Perovskite-Based Solar Cells. **2022**, 147-165
- 155 Effects of Various Additives to CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Perovskite Solar Cells. **2022**, 257-316
- 154 Review for Rare-Earth-Modified Perovskite Materials and Optoelectronic Applications. **2022**, 12, 1773 0
- 153 The Effect of Lead Halide on Characterization of Methyl Ammonium Iodine MAI<sub>2</sub> Perovskite.
- 152 Ion exchange derived CsPbBr<sub>3</sub>:Mn nanocrystals with stable and bright luminescence towards white light-emitting diodes. **2022**, 153, 111915 2
- 151 Semitransparent Perovskites for Solar Cells and Smart Windows. **2022**, 349-377
- 150 Investigating the Morphology, Optical, and Thermal Properties of Multiphase-TiO<sub>2</sub>/MAPbI<sub>3</sub> Heterogeneous Thin-Films for Solar Cell Applications. **2022**, 7, 39
- 149 Configuration of Methylammonium Lead Iodide Perovskite Solar Cell and its Effect on the Device's Performance: A Review. 2200042 1
- 148 Tailoring electric dipole of hole-transporting material p-dopants for perovskite solar cells. **2022**, 2
- 147 Low-temperature, scalable, reactive deposition of tin oxide for perovskite solar cells..
- 146 Robust Interfacial Modifier for Efficient Perovskite Solar Cells: Reconstruction of Energy Alignment at Buried Interface by Self-Diffusion of Dopants. 2204725 4
- 145 Synthesis and evaluation of composite TiO<sub>2</sub>@ZnO quantum dots on hybrid nanostructure perovskite solar cell. **2022**, 12, 1
- 144 Machine Learning Approach to Delineate the Impact of Material Properties on Solar Cell Device Physics. 1
- 143 Estimation of annual energy generation of perovskite/crystalline Si tandem solar cells with different configurations in central part of Japan. **2022**,
- 142 Tuning the photovoltaic parameters of spiro[fluorenexanthene]-diol (SFX-OH)-based crosslinked donor materials for efficient organic solar cells. **2022**, 1214, 113778
- 141 Recent advancements and future insight of lead-free non-toxic perovskite solar cells for sustainable and clean energy production: A review. **2022**, 53, 102433 1
- 140 The evolution of triphenylamine hole transport materials for efficient perovskite solar cells. **2022**, 51, 5974-6064 2

- 139 Organic Hole Transport Layers for Efficient, Stable and Scalable Inverted Perovskite Solar Cells. 2203794 13
- 138 Inclusion of infrared dielectric screening in the GW method from polaron energies to charge mobilities. **2022**, 8,
- 137 Optical simulation and design of high-absorption thin-film perovskite halide solar cells based on embedded quadrilateral cluster nanoparticles. **2022**, 242, 10-19 0
- 136 First principles prediction of the carrier mobilities and optical properties of strained lead free perovskite Cs<sub>2</sub>SnX<sub>6</sub>(X=Cl, Br). **2022**, 353, 114868
- 135 Progress and challenges of halide perovskite-based solar cell- a brief review. **2022**, 150, 106953 1
- 134 Highly efficient inverted planar solar cell using formamidinium-based quasi-two dimensional perovskites. **2022**, 921, 166139 3
- 133 Chalcogenide perovskites for photovoltaic applications: a review. **2022**, 24, 1
- 132 Novel 3D Printing Encapsulation Strategies for Perovskite Photodetectors. 2200521 0
- 131 Stability assessment of carbon-based hole-transport-layer-free perovskite solar cells under accelerated ageing: A combined experimental and predictive modelling analysis. **2022**, 427, 140905
- 130 Recent advancement in efficient metal oxide-based flexible perovskite solar cells: a short review. 1
- 129 Perovskite solar cells: recent progress and strategies developed for minimizing interfacial recombination. **2022**, 16,
- 128 Novel Prediction Model of Band Gap in OrganicInorganic Hybrid Perovskites Based on a Simple Cluster Model Database. **2022**, 126, 13409-13415 0
- 127 Simultaneously Suppressing Charge Recombination and Decomposition of Perovskite Solar Cells by Conjugated Covalent Organic Frameworks. 2200480 4
- 126 Ferroelasticity Mediated Energy Conversion in Strained Perovskite Films. 2200415 1
- 125 Stability and efficiency issues, solutions and advancements in perovskite solar cells: A review. **2022**, 5
- 124 Role of graphene-oxide and reduced-graphene-oxide on the performance of lead-free double perovskite solar cell. **2022**, 0
- 123 Cesium Lead Iodide Perovskites: Optically Active Crystal Phase Stability to Surface Engineering. **2022**, 13, 1318 0
- 122 Optimizing Black Phosphorus/Halide Perovskite Compositions by Scanning Photoelectrochemical Microscopy.



121	Selection, Preparation and Application of Quantum Dots in Perovskite Solar Cells. <b>2022</b> , 23, 9482	0
120	Short-Chain Acid Additives to Control PbI <sub>2</sub> Crystallization in Hybrid Perovskite Films. <b>2022</b> , 10, 114	1
119	Study of lead-free vacancy ordered double perovskites Cs <sub>2</sub> TeX <sub>6</sub> (X = Cl, Br, I) for solar cells, and renewable energy. <b>2022</b> , 97, 095801	
118	Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar Cells. 1684-1715	4
117	D-A-EA-D Type Based Benzo-dithiophene as Core moiety a New Class Hole Transporting Materials for Efficient Perovskite Solar Cells.	
116	Synthesis of Cesium Copper Bromide Nanorods with Strong Linearly Polarized Emission. 2201031	
115	Gain and loss energy generation of perovskite/sc-Si tandem solar cells with series and parallel configurations compared with sc-Si solar cell under real environmental factors based on detailed balance limit. <b>2022</b> , 132, 112789	
114	An introduction to perovskites for solar cells and their characterisation. <b>2022</b> , 8, 89-106	
113	Estimation of performance limit for bifacial single-junction solar cell. <b>2022</b> , 156, 108500	
112	Review of nanomaterials impact on improving the performance of dye-sensitized and perovskite solar cells. <b>2022</b> , 54,	0
111	Impacts of 0D Cs <sub>4</sub> PbI <sub>6</sub> phase in all-inorganic CsPbI <sub>3</sub> perovskites on their physical, optical properties and photovoltaic performances. <b>2022</b> , 759, 139485	0
110	Correlation between detailed balance limit and actual environmental factors for perovskite/crystalline Si tandem solar cells with different structures. <b>2022</b> , 152, 107085	1
109	Performance improvement approach of all inorganic perovskite solar cell with numerical simulation. <b>2022</b> , 33, 104364	0
108	Application of quantum dots in solar cells. <b>2023</b> , 277-311	0
107	Impact of localized surface plasmon resonance on efficiency of zinc oxide nanowire-based organic/inorganic perovskite solar cells fabricated under ambient conditions. <b>2022</b> , 12, 25163-25171	2
106	Metal oxide charge transporting layers for stable high-performance perovskite solar cells.	0
105	Perovskite Solar Cells: Concepts and Prospects. <b>2022</b> , 97-133	0
104	Photodetector properties of [perovskite - porous silicon] heterojunction. <b>2022</b> ,	0

- 103 High efficiency (>20%) and stable inverted perovskite solar cells: current progress and future challenges. **2022**, 10, 12908-12928 0
- 102 Cu katkıları MAPbI<sub>3</sub> Perovskit İnce Filmlerin Yapısal Özellikleri ve Elektriksel Direncine Etkisi. **2022**, 14, 544-551 0
- 101 Highly effective biosorption capacity of Cladosporium sp. strain F1 to lead phosphate mineral and perovskite solar cell PbI<sub>2</sub>. **2023**, 442, 130106 0
- 100 Investigation of the Surface Coating, Humidity Degradation, and Recovery of Perovskite Film Phase for Solar-Cell Applications. **2022**, 12, 3027 0
- 99 Roles of Inorganic Oxide Based HTMs towards Highly Efficient and Long-Term Stable PSCs: A Review. **2022**, 12, 3003 3
- 98 Recent Progress on Heterojunction Engineering in Perovskite Solar Cells. 2201436 0
- 97 Performance of planar perovskite solar cells based on formamidinium cations: Simulation and fabrication. 0
- 96 Device Modeling and Optimization for an Efficient Two-Terminal Perovskite Tandem Solar Cell. **2022**, 51, 6603-6613 1
- 95 Single-Crystal Hybrid Lead Halide Perovskites: Growth, Properties, and Device Integration for Solar Cell Application. **2022**, 22, 6338-6362 0
- 94 F-doping-Enhanced Carrier Transport in the SnO<sub>2</sub>/Perovskite Interface for High-Performance Perovskite Solar Cells. **2022**, 14, 42093-42101 1
- 93 How to Make 20% Efficient Perovskite Solar Cells in Ambient Air and Encapsulate Them for 500 h of Operational Stability. **2022**, 34, 8112-8118 0
- 92 Lead Halide Perovskite Quantum Dots for Photovoltaics and Photocatalysis: A Review. 2
- 91 Inverse Opal Photonic Nanostructures for Enhanced Light Harvesting in CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Perovskite Solar Cells. **2022**, 5, 13583-13593 1
- 90 Probing Optoelectronic and Thermoelectric Properties of Lead-Free Perovskite SnTiO<sub>3</sub>: HSE06 and Boltzmann Transport Calculations. **2022**, 12, 1317 0
- 89 Influence of layer thickness on the power conversion efficiency of tin halide-based planar heterojunction solar cells. 0
- 88 Two Quasi-interfacial p-n Junctions Observed by a Dual-Irradiation System in Perovskite Solar Cells. 0
- 87 Understanding the Photoelectrochemical Behavior of Metal Nanoclusters: A Perspective. 0
- 86 Improved optoelectronic performance from the internal secondary excitation of MAPbCl<sub>3</sub>-MAPbBr<sub>3</sub> single crystal photodetectors. **2022**, 0

85	Guidelines for Fabricating Highly Efficient Perovskite Solar Cells with Cu <sub>2</sub> O as the Hole Transport Material. <b>2022</b> , 12, 3315	2
84	Methylammonium Chloride Additive in Lead Iodide Optimizing the Crystallization Process for Efficient Perovskite Solar Cells. <b>2022</b> , 2022, 1-8	0
83	Perovskites: Emergence of highly efficient third-generation solar cells.	1
82	Dielectric effects, crystal field, and shape anisotropy tuning of the exciton fine structure of halide perovskite nanocrystals. <b>2022</b> , 6,	0
81	Interfacial Engineering for High Performance PTAA Based Inverted 3D Perovskite Solar Cells.	0
80	Organic/Inorganic Hybrid Devices/Perovskite-Based Devices. <b>2022</b> , 283-307	0
79	Compositional Engineering in $\text{CsPbI}_3$ toward the Efficiency and Stability Enhancement of All Inorganic Perovskite Solar Cells. <b>2022</b> , 5, 12099-12108	0
78	Preparation of Perovskite Solar Cells in the Air: Degradation Mechanism and Prospects on Large-area Fabrication.	1
77	Hard and Soft Acid and Base (HSAB) Engineering for Efficient and Stable Sn-Pb Perovskite Solar Cells. 2202496	2
76	In Situ Tetraalkylammonium Ligand Engineering of Organic/Inorganic Hybrid Perovskite Nanoparticles for Enhancing Long-Term Stability and Optical Tunability.	0
75	Sn-Based Perovskites for Photovoltaic Applications. <b>2023</b> , 303-310	0
74	Transport Layer Optimization Strategy to Prepare High Efficiency Perovskite Photovoltaic Device. <b>2022</b> , 2356, 012020	0
73	A high-performance electrode for supercapacitors: CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/Multiwalled Carbon Nanotube (MAPbI <sub>3</sub> /MWCNT) composites.	0
72	First principles calculations of the inorganic halide perovskite RbSnBr <sub>3</sub> : Optical and thermoelectric properties of its three phases. <b>2022</b> , 33, e00761	0
71	700 keV Au ions beam effect on the structural, optical and photovoltaic properties of MAPbI <sub>3</sub> solar cells. <b>2022</b> ,	0
70	Progress and challenges in energy harvesting for electrical skin: a review.	0
69	The Dissociation of Exciton During the Lasing of a Single CsPbBr <sub>3</sub> Microplate. 10851-10857	0
68	Biomass-Derived Carbon for Dye-Sensitized and Perovskite Solar Cells. <b>2022</b> , 275-291	0

67	Water dopant control of structural stability and charge recombination of perovskite solar cells: A first-principles study. <b>2023</b> , 612, 155794	0
66	Acetylene Black as Counter Electrode on Monolithic Perovskite Solar Cell. <b>2022</b> ,	0
65	Transparent Liquid Crystal Hole-Transporting Material for Stable Perovskite Solar Cells. 2200920	0
64	Innovative PV Technologies for reducing electricity costs. <b>2022</b> , 1265, 012002	0
63	Deciphering the Nature of Temperature-Induced Phases of MAPbBr <sub>3</sub> by Ab Initio Molecular Dynamics. <b>2022</b> , 34, 10459-10469	0
62	Nexuses Between the Chemical Design and Performance of Small Molecule Dopant-Free Hole Transporting Materials in Perovskite Solar Cells. 2205926	2
61	Efficient Planar Perovskite Solar Cells with ZnO Electron Transport Layer. <b>2022</b> , 12, 1981	0
60	Improving Stability and Performance of Cesium Mixed Lead Halides for Photovoltaic Applications.	0
59	Perovskite single crystals: Dimensional control, optoelectronic properties, and applications. <b>2022</b> ,	0
58	Theoretical and Experimental Study of Methyl Ammonium Antimony Iodide-Based Lead-Free Perovskite Solar Cells. <b>2023</b> , 16, 236	0
57	Intermediate-phase engineering via dimethylammonium cation additive for stable perovskite solar cells.	2
56	Continuous Modification of Perovskite Film by a Eu Complex to Fabricate the Thermal and UV-Light-Stable Solar Cells. <b>2022</b> , 14, 55538-55547	1
55	Halide Perovskite: A Promising Candidate for Next-Generation X-Ray Detectors. 2205536	1
54	Construction of ultrathin perovskite solar cells by different periodic structures. <b>2023</b> , 34,	0
53	Interfacial Engineering of Au@Nb <sub>2</sub> CTx-MXene Modulates the Growth Strain, Suppresses the Auger Recombination, and Enables an Open-Circuit Voltage of over 1.2 V in Perovskite Solar Cells.	0
52	Diethanolamine Modified Perovskite-Substrate Interface for Realizing Efficient ESL-Free PSCs. <b>2023</b> , 13, 250	0
51	Synthesis and Applications of Halide Perovskite Nanocrystals in Optoelectronics. <b>2023</b> , 11, 39	0
50	Preparation and Numerical Optimization of TiO <sub>2</sub> :CdS Thin Films in Double Perovskite Solar Cell. <b>2023</b> , 16, 900	0

- 49 Probing the stability of perovskite solar cell under working condition through an ultra-thin silver electrode: Beyond the halide ion diffusion and metal diffusion. **2023**, 458, 141405 ○
- 48 Optimization of Photovoltaic Performance of Pb-Free Perovskite Solar Cells via Numerical Simulation. **2023**, 28, 224 1
- 47 Triazine: An Important Building Block of Organic Materials for Solar Cell Application. **2023**, 28, 257 1
- 46 Potential of AMnO<sub>3</sub> (A = Ca, Sr, Ba, La) as Active Layer in Inorganic Perovskite Solar Cells. ○
- 45 Understanding the structural and optical characteristics in Sr<sub>2</sub>La<sub>2-2x</sub>Li<sub>2x</sub>Te<sub>2-2x</sub>O<sub>6</sub> perovskites. **2023**, ○
- 44 Halide-based perovskites in photonics: From photocatalysts to highly efficient optoelectronic devices. **2023**, 547-600 ○
- 43 Excitons and Their Fine Structure in Lead Halide Perovskite Nanocrystals from Atomistic GW/BSE Calculations. **2023**, 127, 1891-1898 ○
- 42 Performance analysis and optimization of all-inorganic CsPbI<sub>3</sub>-based perovskite solar cell. ○
- 41 Polymer-based nano-inks for solar cells. **2023**, 359-388 ○
- 40 Alkylammonium bis(trifluoromethylsulfonyl)imide as a dopant in the hole-transporting layer for efficient and stable perovskite solar cells. ○
- 39 Tuning Octahedral Tilting by Doping to Prevent Detrimental Phase Transition and Extend Carrier Lifetime in Organometallic Perovskites. **2023**, 145, 5393-5399 1
- 38 Impact of a non-magnetic Sr<sup>2+</sup> ion doping on the magnetic and optical properties of Gd<sub>2-x</sub>Sr<sub>x</sub>NiMnO<sub>6</sub> (x = 0, 0.3, 0.5) double perovskite. **2023**, 571, 170549 ○
- 37 Alkyl Chain Length-Dependent Amine-Induced Crystallization for Efficient Interface Passivation of Perovskite Solar Cells. ○
- 36 Numerical investigation of toxic free perovskite solar cells for achieving high efficiency. **2023**, 35, 105893 ○
- 35 Self-crystallization mechanism of perovskite films for improving performance of perovskite solar cells. **2023**, 162, 112209 ○
- 34 Optimizing inorganic double halide (Cs<sub>2</sub>TiI<sub>6</sub>) perovskite solar cell for different hole transport layers using solar cell capacitance software (SCAPS-ID). **2023**, 35, 105860 ○
- 33 A Review of Transition Metal Sulfides as Counter Electrodes for Dye-Sensitized and Quantum Dot-Sensitized Solar Cells. **2023**, 16, 2881 ○
- 32 Methoxy triphenylamine hexaazatrinaphthylene based small molecules as donor material for photovoltaic applications. **2023**, 122, 108486 ○

- 31 Structural and optical characterization of  $\text{CH}_3\text{NH}_3\text{PbX}_3$  (X= I, Br and Cl) powder as precursor materials for perovskite based optoelectronic devices. **2023**, 301, 127600 ○
- 30 Efficiency Approaching 26% in Triple Cation Mixed Halide Perovskite Solar Cells by Numerical Simulation. **2023**, 13, 242-249 ○
- 29 Passivation effect of theophylline on the surface defects of  $\text{MAPbI}_3$  perovskite. **2023**, 219, 112028 ○
- 28 Enhanced stability of carbon-based perovskite solar cells by using n-butylamine to assemble 2D capping layer. **2023**, 115, 106757 ○
- 27 Perovskite solar cells: Recent development and perspectives. **2022**, 77, 667-679 ○
- 26 Partial Replacement of Dimethylformamide with Less Toxic Solvents in the Fabrication Process of Mixed-Halide Perovskite Films. **2023**, 13, 378 ○
- 25 Perovskite-loaded plasmonic gold nanorod composites enhanced solar cell performance. **2023**, 6, ○
- 24 Slow Spontaneous Efficiency Enhancement of Single-Crystal Perovskite Solar Cells Due to Trapped Solvent. **2023**, 6, 2257-2264 ○
- 23 Additive engineering for highly efficient and stable perovskite solar cells. **2023**, 10, 011308 1
- 22 Boosting the stability and growth of methylammonium lead bromide perovskites film doped with FA for solar cells. **2023**, 137, 113563 ○
- 21 Recent advances in carbon-based materials for high-performance perovskite solar cells: gaps, challenges and fulfillment. **2023**, 5, 1492-1526 ○
- 20 Investigation on guanidinium bromide incorporation in methylammonium lead iodide for enhanced efficiency and stability of perovskite solar cells. **2023**, 253, 1-8 ○
- 19 Bidirectional Targeted Therapy Enables Efficient, Stable, and Eco-Friendly Perovskite Solar Cells. 2214714 ○
- 18 Toward self-organizing low-dimensional organic/inorganic hybrid perovskites: Machine learning-driven co-navigation of chemical and compositional spaces. **2023**, 48, 164-172 ○
- 17 Optoelectronic Study of Polymer Electrolyte Incorporated Perovskite Sensitized Solar Cell. **2023**, 407, ○
- 16 Bright future by enhancing the stability of methylammonium lead triiodide perovskites thin films through Rb, Cs and Li as dopants. **2023**, 163, 112213 ○
- 15 A Comprehensive First-Principles Investigation of  $\text{SnTiO}_3$  Perovskite for Optoelectronic and Thermoelectric Applications. **2023**, 13, 408 1
- 14 Multifunctional anthraquinone-sulfonic potassium salts passivate the buried interface for efficient and stable planar perovskite solar cells. **2023**, 25, 8403-8411 ○

- 13 Predicting Sulfur-Rich Oxysulfide Perovskites for Water-Splitting Applications Using Machine Learning. 2200694 ○
- 12 Interactions of Pyridine-Based Organic Cations as Structure-Determining Factors in Perovskite-Related Compounds  $A_x Pb(II)_y Br_z$ . ○
- 11 Foldable Hole-Transporting Materials for Merging Electronic States between Defective and Perfect Perovskite Sites. 2300720 ○
- 10 Modeling the Electronic and Optical Properties of Lead-Based Perovskite Materials: Insights from Density Functional Theory and Electrostatic Embedding. **2023**, 127, 5968-5981 ○
- 9 Review on Carbazole-Based Hole Transporting Materials for Perovskite Solar Cell. **2023**, 6, 3635-3664 ○
- 8 Van Der Waals Metal Contacts for Electronic and Optoelectronic Devices. ○
- 7 An Overview of Lead, Tin, and Mixed Tin/Lead-Based AB<sub>3</sub> Perovskite Solar Cells. 2200160 ○
- 6 Review on Chemical Stability of Lead Halide Perovskite Solar Cells. **2023**, 15, ○
- 5 Partial replacement of Pb<sup>2+</sup> in MAPbI<sub>2.6</sub>Cl<sub>0.4</sub> perovskite films and their photovoltaic performance. **2023**, 34, ○
- 4 Perovskite solar cells using NaF additive with enhanced stability under air environment. **2023**, 142409 ○
- 3 Improve Efficiency and Reduce Cost of Perovskite-Based Solar Cell. **2022**, ○
- 2 Uncovering the Role of Electronic Doping in Lead-free Perovskite  $(CH_3NH_3)_2CuCl_{4-x}Br_x$  and Solar Cells Fabrication. ○
- 1 Recent progress on efficient perovskite/organic tandem solar cells. **2023**, ○