# CITATION REPORT List of articles citing

Lead iodide perovskite sensitized all-solid-state submicron thin film mesoscopic solar cell with efficiency exceeding 9%

DOI: 10.1038/srep00591 Scientific Reports, 2012, 2, 591.

**Source:** https://exaly.com/paper-pdf/53676041/citation-report.pdf

Version: 2024-04-20

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

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

#	Paper IF		Citations
2225	Mesoscopic CH3NH3PbI3/TiO2 heterojunction solar cells. <b>2012</b> , 134, 17396-9		1623
2224	Energy Level Shifts in Spiro-OMeTAD Molecular Thin Films When Adding Li-TFSI. <b>2012</b> , 116, 26300-26305		108
2223	Dye-sensitized solar cells incorporating novel Co(II/III) based-redox electrolytes solidified by silica nanoparticles. <b>2012</b> , 22, 24430		28
2222	Sixfold enhancement of photocurrent by surface charge controlled high density quantum dot coating. <b>2013</b> , 49, 6448-50		19
2221	Nanostructured TiO2/CH3NH3PbI3 heterojunction solar cells employing spiro-OMeTAD/Co-complex as hole-transporting material. <b>2013</b> , 1, 11842		253
2220	Nanochemistry and nanomaterials for photovoltaics. <b>2013</b> , 42, 8304-38		225
2219	Hierarchical oriented anatase TiO2 nanostructure arrays on flexible substrate for efficient dye-sensitized solar cells. <i>Scientific Reports</i> , <b>2013</b> , 3, 1892	9	105
2218	The Swift Surge of Perovskite Photovoltaics. <b>2013</b> , 4, 2597-2598		75
2217	Observing Charge Dynamics in Surface Reactions by Time-Resolved Stark Effects. <b>2013</b> , 117, 9171-9177		13
2216	Co(III) Complexes as p-Dopants in Solid-State Dye-Sensitized Solar Cells. 2013, 25, 2986-2990		136
2215	Sequential deposition as a route to high-performance perovskite-sensitized solar cells. <b>2013</b> , 499, 316-9		7488
2214	Organometal Perovskite Light Absorbers Toward a 20% Efficiency Low-Cost Solid-State Mesoscopic Solar Cell. <b>2013</b> , 4, 2423-2429		1104
2213	Post modification of perovskite sensitized solar cells by aluminum oxide for enhanced performance. <b>2013</b> , 1, 11735		88
2212	Using a two-step deposition technique to prepare perovskite (CH3NH3PbI3) for thin film solar cells based on ZrO2 and TiO2 mesostructures. <b>2013</b> , 3, 18762		369
2211	Ionic liquid redox electrolytes based on binary mixtures of 1-alkyl-methylimidazolium tricyanomethanide with 1-methyl-3-propylimidazolium iodide and implication in dye-sensitized solar cells. <b>2013</b> , 1, 10474		20
2210	Mechanism of carrier accumulation in perovskite thin-absorber solar cells. <b>2013</b> , 4, 2242		702
2209	Monolithic all-solid-state dye-sensitized solar cells. <b>2013</b> , 6, 359-372		8

# (2013-2013)

2208	Photo-induced dipoles: a new method to convert photons into photovoltage in quantum dot sensitized solar cells. <b>2013</b> , 13, 4456-61	26
2207	Enhancement of perovskite-based solar cells employing core-shell metal nanoparticles. <b>2013</b> , 13, 4505-10	447
2206	Importance of SpinDrbit Coupling in Hybrid Organic/Inorganic Perovskites for Photovoltaic Applications. <b>2013</b> , 4, 2999-3005	853
2205	Charge Transport and Recombination in Perovskite (CH3NH3)PbI3 Sensitized TiO2 Solar Cells. <b>2013</b> , 4, 2880-2884	255
2204	Depleted hole conductor-free lead halide iodide heterojunction solar cells. <b>2013</b> , 6, 3249	626
2203	Efficient and stable CH3NH3PbI3-sensitized ZnO nanorod array solid-state solar cells. <b>2013</b> , 5, 11686-91	253
2202	Resonant-size spherical bottom scatterers for dye-sensitized solar cells. <b>2013</b> , 3, 25417	11
2201	Efficient solid state dye-sensitized solar cells based on an oligomer hole transport material and an organic dye. <b>2013</b> , 1, 14467	62
2200	Flexible, low-temperature, solution processed ZnO-based perovskite solid state solar cells. <b>2013</b> , 49, 11089-91	481
2199	Perovskites: The Emergence of a New Era for Low-Cost, High-Efficiency Solar Cells. <b>2013</b> , 4, 3623-3630	2120
2198	Core/shell colloidal quantum dot exciplex states for the development of highly efficient quantum-dot-sensitized solar cells. <b>2013</b> , 135, 15913-22	379
2197	Efficient organometal trihalide perovskite planar-heterojunction solar cells on flexible polymer substrates. <b>2013</b> , 4, 2761	1371
2196	Neutral, Polaron, and Bipolaron States in PEDOT Prepared by Photoelectrochemical Polymerization and the Effect on Charge Generation Mechanism in the Solid-State Dye-Sensitized Solar Cell. <b>2013</b> , 117, 22484-22491	49
2195	A perspective of mesoscopic solar cells based on metal chalcogenide quantum dots and organometal-halide perovskites. <b>2013</b> , 5, e68-e68	129
2194	Device modeling of dye-sensitized solar cells. <b>2014</b> , 352, 325-95	22
2193	Small Photocarrier Effective Masses Featuring Ambipolar Transport in Methylammonium Lead Iodide Perovskite: A Density Functional Analysis. <b>2013</b> , 4, 4213-6	543
2192	Structural and electronic properties of hybrid perovskites for high-efficiency thin-film photovoltaics from first-principles. <b>2013</b> , 1, 042111	462
2191	Overcoming ultraviolet light instability of sensitized TiOlwith meso-superstructured organometal tri-halide perovskite solar cells. <b>2013</b> , 4, 2885	1367

2190	Electron-hole diffusion lengths exceeding 1 micrometer in an organometal trihalide perovskite absorber. <b>2013</b> , 342, 341-4	7280
2189	Long-range balanced electron- and hole-transport lengths in organic-inorganic CH3NH3PbI3. <b>2013</b> , 342, 344-7	5214
2188	Recent developments in sensitizers for mesoporous sensitized solar cells. <b>2013</b> , 6, 373-385	5
2187	Recent progress and the status of dye-sensitised solar cell (DSSC) technology with state-of-the-art conversion efficiencies. <b>2013</b> , 119, 291-295	112
2186	Efficient planar heterojunction perovskite solar cells by vapour deposition. <b>2013</b> , 501, 395-8	6183
2185	One-dimensional hierarchical nanostructures of TiO(2) nanosheets on SnO(2) nanotubes for high efficiency solid-state dye-sensitized solar cells. <b>2013</b> , 25, 4893-7	74
2184	Copper-indium-selenide quantum dot-sensitized solar cells. <b>2013</b> , 15, 20517-25	54
2183	Effects of oxygen defects on structure and properties of Sm0.5Sr0.5CoO3-lannealed in different atmospheres. <b>2013</b> , 31, 1183-1190	15
2182	Nano-Enabled Photovoltaics. Progress in Materials and Methodologies. <b>2013</b> , 4, 1051-2	7
2181	Recent trends in mesoscopic solar cells based on molecular and nanopigment light harvesters. <b>2013</b> , 16, 11-18	108
2180	Quantum Dot Solar Cells. The Next Big Thing in Photovoltaics. <b>2013</b> , 4, 908-18	665
2179	New donor-Eacceptor sensitizers containing 5H-[1,2,5]thiadiazolo [3,4-f]isoindole-5,7(6H)-dione and 6H-pyrrolo[3,4-g]quinoxaline-6,8(7H)-dione units. <b>2013</b> , 49, 2409-11	39
2178	Tunable localized surface plasmon-enabled broadband light-harvesting enhancement for high-efficiency panchromatic dye-sensitized solar cells. <b>2013</b> , 13, 637-42	147
2177	Improvement of dye-sensitized solar cells toward the broader light harvesting of the solar spectrum. <b>2013</b> , 49, 1471-87	139
2176	The importance of the TiO2/averture data interfere in the according to	
	The importance of the TiO2/quantum dots interface in the recombination processes of quantum dot sensitized solar cells. <b>2013</b> , 15, 3841-5	91
2175		91 425
2175 2174	dot sensitized solar cells. <b>2013</b> , 15, 3841-5  Effect of Different Hole Transport Materials on Recombination in CH3NH3PbI3	

# (2013-2013)

2172	Synthesis and optical characterisation of triphenylamine-based hole extractor materials for CdSe quantum dots. <b>2013</b> , 15, 7679-84		7
2171	Bragg stack-functionalized counter electrode for solid-state dye-sensitized solar cells. <b>2013</b> , 6, 856-64		19
2170	Zinc porphyrins with a pyridine-ring-anchoring group for dye-sensitized solar cells. <b>2013</b> , 8, 956-62		64
2169	Matfiaux de transport de trous □base de petites molūules organiques pour cellules photovoltaūues hybrides solides. <b>2013</b> , 101, 102		6
2168	Efficient panchromatic inorganic-organic heterojunction solar cells with consecutive charge transport tunnels in hole transport material. <b>2013</b> , 49, 7277-9		86
2167	Low-temperature processed meso-superstructured to thin-film perovskite solar cells. <b>2013</b> , 6, 1739		1380
2166	Efficient monolithic solid-state dye-sensitized solar cell with a low-cost mesoscopic carbon based screen printable counter electrode. <b>2013</b> , 14, 628-634		23
2165	Efficient inorganicBrganic hybrid heterojunction solar cells containing perovskite compound and polymeric hole conductors. <b>2013</b> , 7, 486-491		2185
2164	Quantum-dot-sensitized solar cell with unprecedentedly high photocurrent. <i>Scientific Reports</i> , <b>2013</b> , 3, 1050	4.9	220
2163	Honeycomb-Like Organized TiO2 Photoanodes with Dual Pores for Solid-State Dye-Sensitized Solar Cells. <b>2013</b> , 23, 3901-3908		43
2162	First-Principles Modeling of Mixed Halide Organometal Perovskites for Photovoltaic Applications. <b>2013</b> , 117, 13902-13913		767
2161	High-performance perovskite-polymer hybrid solar cells via electronic coupling with fullerene monolayers. <b>2013</b> , 13, 3124-8		545
2160	Hybrid electrolytes prepared from ionic liquid-grafted alumina for high-efficiency quasi-solid-state dye-sensitized solar cells. <b>2013</b> , 5, 5341-8		35
2159	All-solid-state hybrid solar cells based on a new organometal halide perovskite sensitizer and one-dimensional TiO2 nanowire arrays. <b>2013</b> , 5, 3245-8		375
2158	Hydrothermal fabrication of hierarchically anatase TiO2 nanowire arrays on FTO glass for dye-sensitized solar cells. <i>Scientific Reports</i> , <b>2013</b> , 3, 1352	4.9	272
2157	Determining the Conductivities of the Two Charge Transport Phases in Solid-State Dye-Sensitized Solar Cells by Impedance Spectroscopy. <b>2013</b> , 117, 10980-10989		8
2156	Near infrared absorption of CdSe(x)Te(1-x) alloyed quantum dot sensitized solar cells with more than 6% efficiency and high stability. <b>2013</b> , 7, 5215-22		344
2155	Influence of crystallinity and energetics on charge separation in polymer-inorganic nanocomposite films for solar cells. <i>Scientific Reports</i> , <b>2013</b> , 3, 1531	4.9	81

2154	Micron-thick, worm-like, organized TiO2 films prepared using polystyrene-b-poly(2-vinyl pyridine) block copolymer and preformed TiO2 for solid-state dye-sensitized solar cells. <b>2013</b> , 105, 15-22	4
2153	Semiconductor Nanocrystals as Light Harvesters in Solar Cells. <b>2013</b> , 6, 445-459	60
2152	Synthesis and crystal chemistry of the hybrid perovskite (CH3NH3)PbI3 for solid-state sensitised solar cell applications. <b>2013</b> , 1, 5628	1972
2151	High performance hybrid solar cells sensitized by organolead halide perovskites. <b>2013</b> , 6, 1480	491
2150	High efficiency solid-state sensitized solar cell-based on submicrometer rutile TiO2 nanorod and CH3NH3PbI3 perovskite sensitizer. <b>2013</b> , 13, 2412-7	825
2149	A quasi-quantum well sensitized solar cell with accelerated charge separation and collection. <b>2013</b> , 135, 9531-9	101
2148	Recent advances in small molecular, non-polymeric organic hole transporting materials for solid-state DSSC. <b>2013</b> , 4, 40402	20
2147	EFFECT OF THE CHROMOPHORES STRUCTURES ON THE PERFORMANCE OF SOLID-STATE DYE SENSITIZED SOLAR CELLS. <b>2014</b> , 09, 1440005	5
2146	Controlling coverage of solution cast materials with unfavourable surface interactions. <b>2014</b> , 104, 091602	33
2145	GW quasiparticle band gap of the hybrid organic-inorganic perovskite CH3NH3PbI3: Effect of spin-orbit interaction, semicore electrons, and self-consistency. <b>2014</b> , 90,	101
2144	Random lasing in organo-lead halide perovskite microcrystal networks. <b>2014</b> , 105, 151112	112
2143	Exfoliation of self-assembled 2D organic-inorganic perovskite semiconductors. <b>2014</b> , 104, 171111	112
2142	Steric engineering of metal-halide perovskites with tunable optical band gaps. <b>2014</b> , 5, 5757	605
2141	An applied light-beam induced current study of dye-sensitised solar cells: Photocurrent uniformity mapping and true photoactive area evaluation. <b>2014</b> , 116, 043104	6
2140	A Model for the Operation of Perovskite Based Hybrid Solar Cells: Formulation, Analysis, and Comparison to Experiment. <b>2014</b> , 74, 1935-1966	45
2139	Integrating Perovskite Solar Cells into a Flexible Fiber. <b>2014</b> , 126, 10593-10596	16
2138	Perovskite-based low-cost and high-efficiency hybrid halide solar cells. <b>2014</b> , 2, 111	72
2137	Fully crystalline perovskite-perylene hybrid photovoltaic cell capable of 1.2 V output with a minimized voltage lossa). <b>2014</b> , 2, 091102	35

2136	Chloride in Lead Chloride-Derived Organo-Metal Halides for Perovskite-Absorber Solar Cells. <b>2014</b> , 26, 7158-7165	230
2135	Moisture assisted perovskite film growth for high performance solar cells. <b>2014</b> , 105, 183902	598
2134	Magnetron sputtered zinc oxide nanorods as thickness-insensitive cathode interlayer for perovskite planar-heterojunction solar cells. <b>2014</b> , 6, 20585-9	57
2133	Reproducible One-Step Fabrication of Compact MAPbI3\(\mathbb{U}\)Clx Thin Films Derived from Mixed-Lead-Halide Precursors. <b>2014</b> , 26, 7145-7150	76
2132	Extraction of Schottky barrier at the F-doped SnO2/TiO2 interface in Dye Sensitized solar cells. <b>2014</b> , 6, 013142	10
2131	Parameters influencing the deposition of methylammonium lead halide iodide in hole conductor free perovskite-based solar cells. <b>2014</b> , 2, 081502	91
2130	Microstructures and photovoltaic properties of perovskite-type CH3NH3PbI3compounds. <b>2014</b> , 7, 121601	73
2129	Structure and properties of complex hydride perovskite materials. <b>2014</b> , 5, 5706	143
2128	Comparative studies on rigid linker-based organic dyes: structure-property relationships and photovoltaic performance. <b>2014</b> , 7, 3396-406	6
2127	□(p-Carboxyaminophenyl)porphyrin derivatives: new dyes for TiO2 dye-sensitized solar cells. <b>2014</b> , 16, 1	6
2126	Impact of the organic halide salt on final perovskite composition for photovoltaic applications. <b>2014</b> , 2, 081802	47
2125	Diffraction-Grating-Embedded Dye-Sensitized Solar Cells with Good Light Harvesting. <b>2014</b> , 4, 1300978	16
2124	Theoretical insights into multibandgap hybrid perovskites for photovoltaic applications. 2014,	8
2123	Perovskite based solar cells: A milestone towards cheaper PV technology. <b>2014</b> ,	1
2122	Efficient perovskite solar cells based on low-temperature solution-processed (CH3NH3)PbI3 perovskite/CuInS2 planar heterojunctions. <b>2014</b> , 9, 457	15
2121	On the degradation mechanism of functioning solar cells based on organic-inorganic perovskites. <b>2014</b> , 50, 255-259	12
2120	Reproducible Fabrication of Efficient Perovskite-based Solar Cells: X-ray Crystallographic Studies on the Formation of CH3NH3PbI3 Layers. <b>2014</b> , 43, 711-713	235
2119	Bifunctional Moth-Eye Nanopatterned Dye-Sensitized Solar Cells: Light-Harvesting and Self-Cleaning Effects. <b>2014</b> , 4, 1300632	66

2118	Compact TiO2 Film Photoanode for Investigating the Interlayer of Alternating Assembly Structure in Dye-sensitized Solar Cells. <b>2014</b> , 129, 85-92	1
2117	Blocking recombination in Ru(II) complex-sensitized solar cells by incorporating co-adsorbents as additives in the Co(II)/(III)-based redox electrolytes. <b>2014</b> , 82, 109-115	10
2116	High Efficiency Solid-State Dye-Sensitized Solar Cells Assembled with Hierarchical Anatase Pine Tree-like TiO2 Nanotubes. <b>2014</b> , 24, 379-386	98
2115	Two Channels of Charge Generation in Perylene Monoimide Solid-State Dye-Sensitized Solar Cells. <b>2014</b> , 4, 1300640	18
2114	Morphological Control for High Performance, Solution-Processed Planar Heterojunction Perovskite Solar Cells. <b>2014</b> , 24, 151-157	1639
2113	A maskless synthesis of TiO2-nanofiber-based hierarchical structures for solid-state dye-sensitized solar cells with improved performance. <b>2014</b> , 9, 14	22
2112	Low-temperature solution-processed wavelength-tunable perovskites for lasing. <b>2014</b> , 13, 476-80	2291
2111	A dual functional additive for the HTM layer in perovskite solar cells. <b>2014</b> , 50, 5020-2	93
<b>2</b> 110	3-D TiO2 nanoparticle/ITO nanowire nanocomposite antenna for efficient charge collection in solid state dye-sensitized solar cells. <b>2014</b> , 6, 6127-32	29
2109	Interface energetics in organo-metal halide perovskite-based photovoltaic cells. <b>2014</b> , 7, 1377	554
2108	Highly connected hierarchical textured TiO2 spheres as photoanodes for dye-sensitized solar cells. <b>2014</b> , 2, 8902-8909	52
2107	Atomic and electronic structures of interfaces in dye-sensitized, nanostructured solar cells. <b>2014</b> , 15, 1006-17	19
2106	Hybrid perovskites for photovoltaics: Insights from first principles. <b>2014</b> , 89,	168
2105	Excitons versus free charges in organo-lead tri-halide perovskites. <b>2014</b> , 5, 3586	1231
2104	Perovskite as light harvester: a game changer in photovoltaics. <b>2014</b> , 53, 2812-24	783
2103	High charge carrier mobilities and lifetimes in organolead trihalide perovskites. <b>2014</b> , 26, 1584-9	2282
2102	Investigating charge dynamics in halide perovskite-sensitized mesostructured solar cells. <b>2014</b> , 7, 1889-1894	137
2101	A swivel-cruciform thiophene based hole-transporting material for efficient perovskite solar cells. <b>2014</b> , 2, 6305-6309	156

# (2014-2014)

2100	Elucidating the charge carrier separation and working mechanism of CH3NH3PbI(3-x)Cl(x) perovskite solar cells. <b>2014</b> , 5, 3461	461
2099	11% Efficient Perovskite Solar Cell Based on ZnO Nanorods: An Effective Charge Collection System. <b>2014</b> , 118, 16567-16573	519
2098	Carbon-double-bond-free printed solar cells from TiO//CHNHPbI//CuSCN/Au: structural control and photoaging effects. <b>2014</b> , 15, 1194-200	132
2097	High Photoluminescence Efficiency and Optically Pumped Lasing in Solution-Processed Mixed Halide Perovskite Semiconductors. <b>2014</b> , 5, 1421-6	1292
2096	Mixed-Organic-Cation Perovskite Photovoltaics for Enhanced Solar-Light Harvesting. <b>2014</b> , 126, 3215-3221	112
2095	Novel meso-superstructured solar cells with a high efficiency exceeding 12%. <b>2014</b> , 26, 2102-4	27
2094	Sol-gel titanium dioxide blocking layers for dye-sensitized solar cells: electrochemical characterization. <b>2014</b> , 15, 1056-61	34
2093	A simple 3,4-ethylenedioxythiophene based hole-transporting material for perovskite solar cells. <b>2014</b> , 53, 4085-8	345
2092	Control of charge dynamics through a charge-separation interface for all-solid perovskite-sensitized solar cells. <b>2014</b> , 15, 1062-9	65
2091	Study on the stability of CH3NH3PbI3 films and the effect of post-modification by aluminum oxide in all-solid-state hybrid solar cells. <b>2014</b> , 2, 705-710	861
2090	Additive enhanced crystallization of solution-processed perovskite for highly efficient planar-heterojunction solar cells. <b>2014</b> , 26, 3748-54	1242
2089	New light on an old story: perovskites go solar. <b>2014</b> , 53, 635-7	151
2088	Electrodeposition of ZnO Nanorod Arrays on Transparent Conducting Substrates Review. <b>2014</b> , 127, 467-488	155
2087	Effects of cyclodextrin complexes acting as barriers on TiO2 nanoparticles in DSSCs. <b>2014</b> , 283, 17-21	2
2086	Solid-state perovskite-sensitized p-type mesoporous nickel oxide solar cells. <b>2014</b> , 7, 2150-3	66
2085	Highly ordered mesoporous carbon for mesoscopic CH3NH3PbI3/TiO2 heterojunction solar cell. <b>2014</b> , 2, 8607	80
2084	A metallocene molecular complex as visible-light absorber for high-voltage organic-inorganic hybrid photovoltaic cells. <b>2014</b> , 15, 1028-32	10
2083	Atomistic origins of high-performance in hybrid halide perovskite solar cells. <b>2014</b> , 14, 2584-90	1756

2082	Supramolecular halogen bond passivation of organic-inorganic halide perovskite solar cells. <b>2014</b> , 14, 3247-54	527
2081	Lead-free solid-state organicIhorganic halide perovskite solar cells. <b>2014</b> , 8, 489-494	1966
2080	Organohalide lead perovskites for photovoltaic applications. <b>2014</b> , 7, 2448-2463	1049
2079	Electrical characterization of TiO2/CH3NH3PbI3 heterojunction solar cells. <b>2014</b> , 2, 10244-10249	70
2078	Rutile TiO2-based perovskite solar cells. <b>2014</b> , 2, 9251	166
2077	Depletion region effect of highly efficient hole conductor free CH3NH3PbI3 perovskite solar cells. <b>2014</b> , 16, 10512-8	232
2076	Titanium dioxide nanomaterials for photovoltaic applications. <b>2014</b> , 114, 10095-130	567
2075	o-Methoxy substituents in spiro-OMeTAD for efficient inorganic-organic hybrid perovskite solar cells. <b>2014</b> , 136, 7837-40	597
2074	Modified two-step deposition method for high-efficiency TiO2/CH3NH3PbI3 heterojunction solar cells. <b>2014</b> , 6, 9711-8	153
2073	Cobalt dopant with deep redox potential for organometal halide hybrid solar cells. <b>2014</b> , 7, 1909-14	43
2073	Cobalt dopant with deep redox potential for organometal halide hybrid solar cells. <b>2014</b> , 7, 1909-14  Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. <b>2014</b> , 14, 2591-6	43 35 <sup>2</sup>
, ,	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed	
2072	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. <b>2014</b> , 14, 2591-6  Modeling materials and processes in hybrid/organic photovoltaics: from dye-sensitized to	352
2072	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. 2014, 14, 2591-6  Modeling materials and processes in hybrid/organic photovoltaics: from dye-sensitized to perovskite solar cells. 2014, 47, 3349-60  Enhancement of the photovoltaic performance of CHNHPbliperovskite solar cells through a	352
2072 2071 2070	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. 2014, 14, 2591-6  Modeling materials and processes in hybrid/organic photovoltaics: from dye-sensitized to perovskite solar cells. 2014, 47, 3349-60  Enhancement of the photovoltaic performance of CHNHPbliperovskite solar cells through a dichlorobenzene-functionalized hole-transporting material. 2014, 15, 2595-603  Anomalous band gap behavior in mixed Sn and Pb perovskites enables broadening of absorption	352 104 42
2072 2071 2070 2069 2068	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. 2014, 14, 2591-6  Modeling materials and processes in hybrid/organic photovoltaics: from dye-sensitized to perovskite solar cells. 2014, 47, 3349-60  Enhancement of the photovoltaic performance of CHNHPbliperovskite solar cells through a dichlorobenzene-functionalized hole-transporting material. 2014, 15, 2595-603  Anomalous band gap behavior in mixed Sn and Pb perovskites enables broadening of absorption spectrum in solar cells. 2014, 136, 8094-9  CH3NH3Cl-Assisted One-Step Solution Growth of CH3NH3Pbl3: Structure, Charge-Carrier	352 104 42 1010
2072 2071 2070 2069 2068	Nanocrystalline rutile electron extraction layer enables low-temperature solution processed perovskite photovoltaics with 13.7% efficiency. 2014, 14, 2591-6  Modeling materials and processes in hybrid/organic photovoltaics: from dye-sensitized to perovskite solar cells. 2014, 47, 3349-60  Enhancement of the photovoltaic performance of CHNHPbliperovskite solar cells through a dichlorobenzene-functionalized hole-transporting material. 2014, 15, 2595-603  Anomalous band gap behavior in mixed Sn and Pb perovskites enables broadening of absorption spectrum in solar cells. 2014, 136, 8094-9  CH3NH3Cl-Assisted One-Step Solution Growth of CH3NH3Pbl3: Structure, Charge-Carrier Dynamics, and Photovoltaic Properties of Perovskite Solar Cells. 2014, 118, 9412-9418	352 104 42 1010 461

2064	Mesoscopic TiO2/CH3NH3PbI3 perovskite solar cells with new hole-transporting materials containing butadiene derivatives. <b>2014</b> , 50, 6931-4	157
2063	Insight into the liquid state of organo-lead halide perovskites and their new roles in dye-sensitized solar cells. <b>2014</b> , 2, 10355	8
2062	Advancements in perovskite solar cells: photophysics behind the photovoltaics. <b>2014</b> , 7, 2518-2534	605
2061	Cation-induced band-gap tuning in organohalide perovskites: interplay of spin-orbit coupling and octahedra tilting. <b>2014</b> , 14, 3608-16	837
2060	Inorganic hole conductor-based lead halide perovskite solar cells with 12.4% conversion efficiency. <b>2014</b> , 5, 3834	670
2059	Unique properties of halide perovskites as possible origins of the superior solar cell performance. <b>2014</b> , 26, 4653-8	1321
2058	All-Solid Perovskite Solar Cells with HOCO-R-NH3+IIAnchor-Group Inserted between Porous Titania and Perovskite. <b>2014</b> , 118, 16651-16659	162
2057	Analysis of Multivalley and Multibandgap Absorption and Enhancement of Free Carriers Related to Exciton Screening in Hybrid Perovskites. <b>2014</b> , 118, 11566-11572	404
2056	Solution Deposition-Conversion for Planar Heterojunction Mixed Halide Perovskite Solar Cells. <b>2014</b> , 4, 1400355	305
2055	Near-band-edge optical responses of solution-processed organic[horganic hybrid perovskite CH3NH3PbI3on mesoporous TiO2electrodes. <b>2014</b> , 7, 032302	239
2054	Homogeneous Emission Line Broadening in the Organo Lead Halide Perovskite CH3NH3PbI3-xClx. <b>2014</b> , 5, 1300-6	286
2053	Carbazole based A-ED-EA dyes with double electron acceptor for dye-sensitized solar cell. <b>2014</b> , 15, 266-275	58
2052	Low-temperature processed electron collection layers of graphene/TiO2 nanocomposites in thin film perovskite solar cells. <b>2014</b> , 14, 724-30	917
2051	Perovskite solar cells employing organic charge-transport layers. <b>2014</b> , 8, 128-132	1196
2050	Planar heterojunction perovskite solar cells via vapor-assisted solution process. <b>2014</b> , 136, 622-5	1921
2049	Structure of methylammonium lead iodide within mesoporous titanium dioxide: active material in high-performance perovskite solar cells. <b>2014</b> , 14, 127-33	258
2048	High efficiency perovskite solar cells: from complex nanostructure to planar heterojunction. <b>2014</b> , 2, 5994-6003	237
2047	DFT and k 🗓 p modelling of the phase transitions of lead and tin halide perovskites for photovoltaic cells. <b>2014</b> , 8, 31-35	158

2046	ZnO(N)-Spiro-MeOTAD hybrid photodiode: an efficient self-powered fast-response UV (visible) photosensor. <b>2014</b> , 6, 503-13	140
2045	Flexible high efficiency perovskite solar cells. <b>2014</b> , 7, 994	357
2044	Yttrium-substituted nanocrystalline TiOlphotoanodes for perovskite based heterojunction solar cells. <b>2014</b> , 6, 1508-14	151
2043	High efficiency electrospun TiOlhanofiber based hybrid organic-inorganic perovskite solar cell. <b>2014</b> , 6, 1675-9	163
2042	Unravelling the mechanism of photoinduced charge transfer processes in lead iodide perovskite solar cells. <b>2014</b> , 8, 250-255	567
2041	Impedance spectroscopic analysis of lead iodide perovskite-sensitized solid-state solar cells. <b>2014</b> , 8, 362-73	617
2040	Solid-State Mesostructured Perovskite CH3NH3PbI3 Solar Cells: Charge Transport, Recombination, and Diffusion Length. <b>2014</b> , 5, 490-4	244
2039	NH2CH?NH2PbI3: An Alternative Organolead Iodide Perovskite Sensitizer for Mesoscopic Solar Cells. <b>2014</b> , 26, 1485-1491	447
2038	Electronic Structure of TiO2/CH3NH3PbI3 Perovskite Solar Cell Interfaces. <b>2014</b> , 5, 648-53	384
2027	Poriferous microtablet of anatase TiO2 growth on an ITO surface for high-efficiency dye-sensitized	
2037	solar cells. <b>2014</b> , 122, 174-182	34
		125
2036	solar cells. <b>2014</b> , 122, 174-182	
2036	solar cells. <b>2014</b> , 122, 174-182  Perovskite cells roll forward. <b>2014</b> , 8, 87-88	125
2036	Perovskite cells roll forward. 2014, 8, 87-88  Organolead Halide Perovskite: New Horizons in Solar Cell Research. 2014, 118, 5615-5625  A diketopyrrolopyrrole-containing hole transporting conjugated polymer for use in efficient stable	125 549
2036 2035 2034	Perovskite cells roll forward. 2014, 8, 87-88  Organolead Halide Perovskite: New Horizons in Solar Cell Research. 2014, 118, 5615-5625  A diketopyrrolopyrrole-containing hole transporting conjugated polymer for use in efficient stable organicihorganic hybrid solar cells based on a perovskite. 2014, 7, 1454	<ul><li>125</li><li>549</li><li>337</li></ul>
2036 2035 2034 2033	Perovskite cells roll forward. 2014, 8, 87-88  Organolead Halide Perovskite: New Horizons in Solar Cell Research. 2014, 118, 5615-5625  A diketopyrrolopyrrole-containing hole transporting conjugated polymer for use in efficient stable organicihorganic hybrid solar cells based on a perovskite. 2014, 7, 1454  Role of the Selective Contacts in the Performance of Lead Halide Perovskite Solar Cells. 2014, 5, 680-5  High voltage and efficient bilayer heterojunction solar cells based on an organic-inorganic hybrid	<ul><li>125</li><li>549</li><li>337</li><li>527</li></ul>
2036 2035 2034 2033 2032	Perovskite cells roll forward. 2014, 8, 87-88  Organolead Halide Perovskite: New Horizons in Solar Cell Research. 2014, 118, 5615-5625  A diketopyrrolopyrrole-containing hole transporting conjugated polymer for use in efficient stable organicfhorganic hybrid solar cells based on a perovskite. 2014, 7, 1454  Role of the Selective Contacts in the Performance of Lead Halide Perovskite Solar Cells. 2014, 5, 680-5  High voltage and efficient bilayer heterojunction solar cells based on an organic-inorganic hybrid perovskite absorber with a low-cost flexible substrate. 2014, 16, 6033-40  Why lead methylammonium tri-iodide perovskite-based solar cells require a mesoporous electron	<ul><li>125</li><li>549</li><li>337</li><li>527</li><li>79</li></ul>

2028	Perovskite solar cells with a planar heterojunction structure prepared using room-temperature solution processing techniques. <b>2014</b> , 8, 133-138	2165
2027	Theory of Impedance Spectroscopy of Ambipolar Solar Cells with Trap-Mediated Recombination. <b>2014</b> , 118, 16574-16580	24
2026	Density functional theory analysis of structural and electronic properties of orthorhombic perovskite CH3NH3PbI3. <b>2014</b> , 16, 1424-9	284
2025	Low-temperature solution-processed perovskite solar cells with high efficiency and flexibility. <b>2014</b> , 8, 1674-80	1216
2024	Solid-state solar modules based on mesoscopic organometal halide perovskite: a route towards the up-scaling process. <b>2014</b> , 16, 3918-23	145
2023	Nontemplate synthesis of CH3NH3PbBr3 perovskite nanoparticles. <b>2014</b> , 136, 850-3	937
2022	Sub-150 °C processed meso-superstructured perovskite solar cells with enhanced efficiency. <b>2014</b> , 7, 1142-1147	511
2021	General working principles of CH3NH3PbX3 perovskite solar cells. <b>2014</b> , 14, 888-93	696
2020	Electrochemical Characterization of TiO2 Blocking Layers for Dye-Sensitized Solar Cells. <b>2014</b> , 118, 16408-164	<b>1<u>6</u>8</b> 1
2019	Organometal halide perovskites as useful materials in sensitized solar cells. <b>2014</b> , 43, 5247-51	57
2018	Chloride Inclusion and Hole Transport Material Doping to Improve Methyl Ammonium Lead Bromide Perovskite-Based High Open-Circuit Voltage Solar Cells. <b>2014</b> , 5, 429-33	309
2017	Interface Engineering in Inorganic-Absorber Nanostructured Solar Cells. <b>2014</b> , 5, 348-60	45
2016	Tuning the near-gap electronic structure of tin-halide and lead-halide perovskites via changes in atomic layering. <b>2014</b> , 90,	34
2015	Improved morphology control using a modified two-step method for efficient perovskite solar cells. <b>2014</b> , 6, 18751-7	54
2014	Cesium carbonate as a surface modification material for organicIhorganic hybrid perovskite solar cells with enhanced performance. <b>2014</b> , 4, 60131-60134	29
2013	Effect of CH3NH3PbI3 thickness on device efficiency in planar heterojunction perovskite solar cells. <b>2014</b> , 2, 19873-19881	264
2012	Water-repellent perovskite solar cell. <b>2014</b> , 2, 20017-20021	55
2011	Perovskite processing for photovoltaics: a spectro-thermal evaluation. <b>2014</b> , 2, 19338-19346	86

2010	Polyfluorene Derivatives are High-Performance Organic Hole-Transporting Materials for Inorganic Drganic Hybrid Perovskite Solar Cells. <b>2014</b> , 24, 7357-7365	150
2009	Room-Temperature Optical Tunability and Inhomogeneous Broadening in 2D-Layered Organic-Inorganic Perovskite Pseudobinary Alloys. <b>2014</b> , 5, 3958-63	71
2008	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. <b>2014</b> , 5, 4207-12	126
2007	Lattice dynamics in perovskite halides CsSnX3 with X=I, Br, Cl. <b>2014</b> , 90,	54
2006	Controllable perovskite crystallization at a gas-solid interface for hole conductor-free solar cells with steady power conversion efficiency over 10%. <b>2014</b> , 136, 16411-9	340
2005	Perovskite Oxide SrTiO3 as an Efficient Electron Transporter for Hybrid Perovskite Solar Cells. <b>2014</b> , 118, 28494-28501	209
2004	Research Update: Physical and electrical characteristics of lead halide perovskites for solar cell applications. <b>2014</b> , 2, 040701	114
2003	Reduced ultraviolet light induced degradation and enhanced light harvesting using YVO4:Eu3+ down-shifting nano-phosphor layer in organometal halide perovskite solar cells. <b>2014</b> , 105, 033904	123
2002	Remnant PbI2, an unforeseen necessity in high-efficiency hybrid perovskite-based solar cells?a). <b>2014</b> , 2, 091101	238
2001	Heterojunction modification for highly efficient organic-inorganic perovskite solar cells. <b>2014</b> , 8, 12701-9	546
2000	Sn-doped TiO2 nanorod arrays and application in perovskite solar cells. <b>2014</b> , 4, 64001-64005	80
1999	Efficient perovskite solar cells with 13.63 % efficiency based on planar triphenylamine hole conductors. <b>2014</b> , 20, 10894-9	122
1998	Electrochemical Doping of Compact TiO2 Thin Layers. <b>2014</b> , 118, 25970-25977	23
1997	Nanowires of methylammonium lead iodide (CH3NH3PbI3) prepared by low temperature solution-mediated crystallization. <b>2014</b> , 14, 6761-6	221
1996	Surface Effects and Adsorption of Methoxy Anchors on Hybrid Lead Iodide Perovskites: Insights for Spiro-MeOTAD Attachment. <b>2014</b> , 118, 26947-26954	95
1995	Nickel cobalt sulfide nanoneedle array as an effective alternative to Pt as a counter electrode in dye sensitized solar cells. <b>2014</b> , 4, 8289	75
1994	Power from the sun: Perovskite solar cells. <b>2014</b> ,	4
1993	Predictions for p-Type CH3NH3Pbl3 Perovskites. <b>2014</b> , 118, 25350-25354	59

# (2014-2014)

1992	perovskite solar cells. <b>2014</b> , 2, 19616-19622	117
1991	An all-carbon counter electrode for highly efficient hole-conductor-free organo-metal perovskite solar cells. <b>2014</b> , 4, 52825-52830	158
1990	Low temperature TiOx compact layer by chemical bath deposition method for vapor deposited perovskite solar cells. <b>2014</b> ,	2
1989	Third-generation solar cells: a review and comparison of polymer:fullerene, hybrid polymer and perovskite solar cells. <b>2014</b> , 4, 43286-43314	182
1988	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al2O3 and NiO Nanoparticles. <b>2014</b> , 126, 9493-9496	29
1987	Surface Photovoltage Spectroscopy Study of Organo-Lead Perovskite Solar Cells. <b>2014</b> , 5, 2408-13	75
1986	Double functions of porous TiO2 electrodes on CH3NH3PbI3 perovskite solar cells: Enhancement of perovskite crystal transformation and prohibition of short circuiting. <b>2014</b> , 2, 081511	47
1985	Enhancing the efficiency of TiO2perovskite heterojunction solar cell via evaporating Cs2CO3 on TiO2. <b>2014</b> , 8, 912-916	11
1984	Cost-efficient clamping solar cells using candle soot for hole extraction from ambipolar perovskites. <b>2014</b> , 7, 3326-3333	234
1983	High performance perovskite solar cells by hybrid chemical vapor deposition. <b>2014</b> , 2, 18742-18745	233
1982	The photophysics of perovskite solar cells. <b>2014</b> ,	
1981	Low-temperature processed high-performance flexible perovskite solar cells via rationally optimized solvent washing treatments. <b>2014</b> , 4, 62971-62977	160
1980	Recombination Kinetics in Organic-Inorganic Perovskites: Excitons, Free Charge, and Subgap States. <b>2014</b> , 2,	874
1979	Energy level alignment at the methylammonium lead iodide/copper phthalocyanine interface. <b>2014</b> , 2, 081512	70
1978	MODULATING CH3NH3Pbi3 PEROVSKITE CRYSTALLIZATION BEHAVIOR THROUGH PRECURSOR CONCENTRATION. <b>2014</b> , 09, 1440003	8
1977	Investigation regarding the role of chloride in organic-inorganic halide perovskites obtained from chloride containing precursors. <b>2014</b> , 14, 6991-6	176
1976	All-solid Sn/Pb halide perovskite sensitized solar cells. <b>2014</b> ,	
1975	Improved External Quantum Efficiency from Solution-Processed (CH3NH3)PbI3 Perovskite/PC71BM Planar Heterojunction for High Efficiency Hybrid Solar Cells. <b>2014</b> , 118, 25899-25905	37

1974	Strong Photocurrent Amplification in Perovskite Solar Cells with a Porous TiO2 Blocking Layer under Reverse Bias. <b>2014</b> , 5, 3931-6	96
1973	Optimized Organometal Halide Perovskite Planar Hybrid Solar Cells via Control of Solvent Evaporation Rate. <b>2014</b> , 118, 26513-26520	57
1972	Energy level tuning of TPB-based hole-transporting materials for highly efficient perovskite solar cells. <b>2014</b> , 50, 15239-42	128
1971	Highly improved photocurrents of dye-sensitized solar cells containing ultrathin 3D inverse opal electrodes sensitized with a dithienothiophene-based organic dye. <b>2014</b> , 4, 40980-40984	6
1970	Improved electron transfer and plasmonic effect in dye-sensitized solar cells with bi-functional Nb-doped TiO2/Ag ternary nanostructures. <b>2014</b> , 6, 2718-29	33
1969	Luminescent hybrid perovskite nanoparticles as a new platform for selective detection of 2,4,6-trinitrophenol. <b>2014</b> , 4, 55908-55911	61
1968	New iridium complex as additive to the spiro-OMeTAD in perovskite solar cells with enhanced stability. <b>2014</b> , 2, 081507	55
1967	Planar CH3NH3PbBr3 hybrid solar cells with 10.4% power conversion efficiency, fabricated by controlled crystallization in the spin-coating process. <b>2014</b> , 26, 8179-83	410
1966	CHNHPbI(3-x)(BF)x: molecular ion substituted hybrid perovskite. 2014, 50, 9741-4	75
1965	ORGANOMETAL HALIDE PEROVSKITE PHOTOVOLTAICS: A DIAMOND IN THE ROUGH. <b>2014</b> , 09, 1440002	23
1964	The Impact of the Crystallization Processes on the Structural and Optical Properties of Hybrid Perovskite Films for Photovoltaics. <b>2014</b> , 5, 3836-42	218
1963	Understanding quantum confinement of charge carriers in layered 2D hybrid perovskites. <b>2014</b> , 15, 3733-41	175
1962	Photocurrent induced by conducting channels of hole transporting layer to adjacent photoactive perovskite sensitized TiO2 thin film: solar cell paradigm. <b>2014</b> , 30, 12786-94	32
1961	Role of chloride in the morphological evolution of organo-lead halide perovskite thin films. <b>2014</b> , 8, 10640-54	328
1960	Efficient dye-sensitized solar cells employing highly environmentally-friendly ubiquinone 10 based I2-free electrolyte inspired by photosynthesis. <b>2014</b> , 2, 9007-9010	13
1959	Composition-dependent photoluminescence intensity and prolonged recombination lifetime of perovskite CH3NH3PbBr(3-x)Cl(x) films. <b>2014</b> , 50, 11727-30	200
1958	Controlling the surface nanostructure of ZnO and Al-doped ZnO thin films using electrostatic spraying for their application in 12% efficient perovskite solar cells. <b>2014</b> , 6, 9127-38	136
1957	Inkjet Printing and Instant Chemical Transformation of a CH3NH3PbI3/Nanocarbon Electrode and Interface for Planar Perovskite Solar Cells. <b>2014</b> , 126, 13455-13459	98

19	56	A hydrophobic hole transporting oligothiophene for planar perovskite solar cells with improved stability. <b>2014</b> , 50, 11196-9	235
19	55	A fast deposition-crystallization procedure for highly efficient lead iodide perovskite thin-film solar cells. <b>2014</b> , 53, 9898-903	1104
19	54	Self-Alignment of the Methylammonium Cations in Thin-Film Organometal Perovskites. <b>2014</b> , 5, 2863-7	14
19	53	Anomalous Alloy Properties in Mixed Halide Perovskites. <b>2014</b> , 5, 3625-31	188
19	52	Femtosecond excitonic relaxation dynamics of perovskite on mesoporous films of AlDIand NiO nanoparticles. <b>2014</b> , 53, 9339-42	54
19	51	Temperature-dependent excitonic photoluminescence of hybrid organometal halide perovskite films. <b>2014</b> , 16, 22476-81	360
19	50	Perovskite solar cell with an efficient TiOlcompact film. <b>2014</b> , 6, 15959-65	258
19	49	The Redox Pair Chemical Environment Influence on the Recombination Loss in Dye-Sensitized Solar Cells. <b>2014</b> , 118, 3878-3889	27
19	48	Understanding the formation and evolution of interdiffusion grown organolead halide perovskite thin films by thermal annealing. <b>2014</b> , 2, 18508-18514	238
19	47	First-Principles Hybrid Functional Study of the OrganicIhorganic Perovskites CH3NH3SnBr3 and CH3NH3SnI3. <b>2014</b> , 118, 24383-24388	104
19	46	Solid-state D102 dye sensitized/poly(3-hexylthiophene) hybrid solar cells on flexible Ti substrate. <b>2014</b> , 72, 22-28	3
19	45	Photovoltaics. Interface engineering of highly efficient perovskite solar cells. <b>2014</b> , 345, 542-6	5272
19	44	Plasmon-enhanced dye-sensitized solar cells using SiO2 spheres decorated with tightly assembled silver nanoparticles. <b>2014</b> , 4, 19851	15
19	43	Bright light-emitting diodes based on organometal halide perovskite. <b>2014</b> , 9, 687-92	2958
19	42	Liquid phase deposition of TiO2 nanolayer affords CH3NH3PbI3/nanocarbon solar cells with high open-circuit voltage. <b>2014</b> , 176, 271-86	47
19	41	Effective Masses and Electronic and Optical Properties of Nontoxic MASnX3 (X = Cl, Br, and I) Perovskite Structures as Solar Cell Absorber: A Theoretical Study Using HSE06. <b>2014</b> , 118, 19655-19660	141
19	40	Electrospun lead-doped titanium dioxide nanofibers and the in situ preparation of perovskite-sensitized photoanodes for use in high performance perovskite solar cells. <b>2014</b> , 2, 16856-16862	73
19	39	Perowskit als Lichtabsorptionsmaterial: ein Durchbruch in der Photovoltaik. <b>2014</b> , 126, 2854-2867	85

1938	Efficient and uniform planar-type perovskite solar cells by simple sequential vacuum deposition. <b>2014</b> , 26, 6647-52	383
1937	Preface: Special Topic on Perovskite Solar Cells. <b>2014</b> , 2, 081201	5
1936	Efficient hole-conductor-free, fully printable mesoscopic perovskite solar cells with a broad light harvester NH2CHNH2PbI3. <b>2014</b> , 2, 17115-17121	158
1935	High-performance planar heterojunction perovskite solar cells: Preserving long charge carrier diffusion lengths and interfacial engineering. <b>2014</b> , 7, 1749-1758	180
1934	Low-temperature sputtered nickel oxide compact thin film as effective electron blocking layer for mesoscopic NiO/CH3NH3PbI3 perovskite heterojunction solar cells. <b>2014</b> , 6, 11851-8	270
1933	The light and shade of perovskite solar cells. <b>2014</b> , 13, 838-42	1600
1932	Perovskite solar cells: Continuing to soar. <b>2014</b> , 13, 845-6	183
1931	Charge carrier recombination channels in the low-temperature phase of organic-inorganic lead halide perovskite thin films. <b>2014</b> , 2, 081513	170
1930	Size-controlled SiO2 nanoparticles as scaffold layers in thin-film perovskite solar cells. <b>2014</b> , 2, 16429-16433	67
1929	Influence of compact TiO2 layer on the photovoltaic characteristics of the organometal halide perovskite-based solar cells. <b>2014</b> , 27, 569-576	25
1928	Termination Dependence of Tetragonal CH3NH3PbI3 Surfaces for Perovskite Solar Cells. <b>2014</b> , 5, 2903-9	272
1927	Binary-metal perovskites toward high-performance planar-heterojunction hybrid solar cells. <b>2014</b> , 26, 6454-60	259
1926	Parameters Affecting I-V Hysteresis of CH3NH3PbI3 Perovskite Solar Cells: Effects of Perovskite Crystal Size and Mesoporous TiO2 Layer. <b>2014</b> , 5, 2927-34	885
1925	Band filling with free charge carriers in organometal halide perovskites. <b>2014</b> , 8, 737-743	772
1924	Environmentally responsible fabrication of efficient perovskite solar cells from recycled car batteries. <b>2014</b> , 7, 3659-3665	79
1923	Theory of Impedance and Capacitance Spectroscopy of Solar Cells with Dielectric Relaxation, Drift-Diffusion Transport, and Recombination. <b>2014</b> , 118, 18983-18991	160
1922	Extremely Slow Photoconductivity Response of CH3NH3PbI3 Perovskites Suggesting Structural Changes under Working Conditions. <b>2014</b> , 5, 2662-9	277
1921	Carbazole-based hole-transport materials for efficient solid-state dye-sensitized solar cells and perovskite solar cells. <b>2014</b> , 26, 6629-34	320

1920	Star-shaped hole transporting materials with a triazine unit for efficient perovskite solar cells. <b>2014</b> , 50, 10971-4	131
1919	Multifunctional perovskite capping layers in hybrid solar cells. <b>2014</b> , 2, 14973	55
1918	Influence of Fluorine Plasma Treatment of TiO2 Films on the Behavior of Dye Solar Cells Employing the Co(II)/(III) Redox Couple. <b>2014</b> , 118, 16760-16775	16
1917	Performance and Stability Enhancement of Dye-Sensitized and Perovskite Solar Cells by Al Doping of TiO2. <b>2014</b> , 24, 6046-6055	294
1916	Integrating perovskite solar cells into a flexible fiber. <b>2014</b> , 53, 10425-8	219
1915	Effective hole extraction using MoOx-Al contact in perovskite CH3NH3PbI3 solar cells. <b>2014</b> , 104, 213906	126
1914	Improved light absorption and charge transport for perovskite solar cells with rough interfaces by sequential deposition. <b>2014</b> , 6, 8171-6	160
1913	A Fast Deposition-Crystallization Procedure for Highly Efficient Lead Iodide Perovskite Thin-Film Solar Cells. <b>2014</b> , 126, 10056-10061	630
1912	Photocarrier recombination dynamics in perovskite CH3NH3PbI3 for solar cell applications. <b>2014</b> , 136, 11610-3	612
1911	Novel ruthenium sensitizers having different numbers of carboxyl groups for dye-sensitized solar cells: effects of the adsorption manner at the TiOl3urface on the solar cell performance. <b>2014</b> , 53, 9375-84	21
1910	Fabrication of semi-transparent perovskite films with centimeter-scale superior uniformity by the hybrid deposition method. <b>2014</b> , 7, 3989-3993	193
1909	Lead methylammonium triiodide perovskite-based solar cells: an interfacial charge-transfer investigation. <b>2014</b> , 7, 3088-94	47
1908	14.8% perovskite solar cells employing carbazole derivatives as hole transporting materials. <b>2014</b> , 50, 14161-3	141
1907	First-Principles Study of Lead Iodide Perovskite Tetragonal and Orthorhombic Phases for Photovoltaics. <b>2014</b> , 118, 19565-19571	196
1906	Photoanode Based on (001)-Oriented Anatase Nanoplatelets for OrganicIhorganic Lead Iodide Perovskite Solar Cell. <b>2014</b> , 26, 4675-4678	38
1905	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
1904	Engineering of electron-selective contact for perovskite solar cells with efficiency exceeding 15%. <b>2014</b> , 8, 10161-7	209
1903	Growth of CH3NH3PbI3 cuboids with controlled size for high-efficiency perovskite solar cells. <b>2014</b> , 9, 927-32	1442

1902	Photoinduced Giant Dielectric Constant in Lead Halide Perovskite Solar Cells. 2014, 5, 2390-4	551
1901	Hysteresis and transient behavior in current⊠oltage measurements of hybrid-perovskite absorber solar cells. <b>2014</b> , 7, 3690-3698	1006
1900	Femtosecond time-resolved transient absorption spectroscopy of CH3NH3PbI3 perovskite films: evidence for passivation effect of PbI2. <b>2014</b> , 136, 12205-8	417
1899	Recent Research Developments of Perovskite Solar Cells. <b>2014</b> , 32, 957-963	31
1898	OrganicInorganic Halide Perovskites: Perspectives for Silicon-Based Tandem Solar Cells. <b>2014</b> , 4, 1545-1551	100
1897	Correlated electron-hole plasma in organometal perovskites. <b>2014</b> , 5, 5049	437
1896	Charge Transport and Recombination in TiO2 Brookite-Based Photoelectrodes. <b>2014</b> , 118, 23459-23467	33
1895	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
1894	Water photolysis at 12.3% efficiency via perovskite photovoltaics and Earth-abundant catalysts. <b>2014</b> , 345, 1593-6	1920
1893	Charge transfer and recombination at the metal oxide/CH3NH3PbClI2/spiro-OMeTAD interfaces: uncovering the detailed mechanism behind high efficiency solar cells. <b>2014</b> , 16, 19984-92	78
1892	Carbon nanotube/polymer composites as a highly stable hole collection layer in perovskite solar cells. <b>2014</b> , 14, 5561-8	944
1891	Computed and Experimental Absorption Spectra of the Perovskite CH3NH3PbI3. <b>2014</b> , 5, 3061-5	80
1890	Inkjet printing and instant chemical transformation of a CH3NH3PbI3/nanocarbon electrode and interface for planar perovskite solar cells. <b>2014</b> , 53, 13239-43	300
1889	Electrochemical Design of Nanostructured ZnO Charge Carrier Layers for Efficient Solid-State Perovskite-Sensitized Solar Cells. <b>2014</b> , 4, 1400932	105
1888	Efficient organic-inorganic hybrid perovskite solar cells processed in air. <b>2014</b> , 16, 24691-6	56
1887	Monitoring the Phase Formation of Coevaporated Lead Halide Perovskite Thin Films by in Situ X-ray Diffraction. <b>2014</b> , 5, 3308-12	81
1886	Plasmonic light harvesting of dye sensitized solar cells by Au-nanoparticle loaded TiO2 nanofibers. <b>2014</b> , 2, 975-984	81
1885	AgTFSI as p-type dopant for efficient and stable solid-state dye-sensitized and perovskite solar cells. <b>2014</b> , 7, 3252-6	97

1884	Performance and stability of lead perovskite/TiO2, polymer/PCBM, and dye sensitized solar cells at light intensities up to 70 suns. <b>2014</b> , 26, 6268-73	92
1883	Zn2SnO4-Based Photoelectrodes for Organolead Halide Perovskite Solar Cells. <b>2014</b> , 118, 22991-22994	76
1882	Perovskite photovoltaics: a high-efficiency newcomer to the solar cell family. <b>2014</b> , 6, 12287-97	104
1881	Incorporation of Cl into sequentially deposited lead halide perovskite films for highly efficient mesoporous solar cells. <b>2014</b> , 6, 13854-60	70
1880	Highly efficient fullerene/perovskite planar heterojunction solar cells via cathode modification with an amino-functionalized polymer interlayer. <b>2014</b> , 2, 19598-19603	174
1879	Efficient star-shaped hole transporting materials with diphenylethenyl side arms for an efficient perovskite solar cell. <b>2014</b> , 2, 19136-19140	107
1878	The emergence of perovskite solar cells. <b>2014</b> , 8, 506-514	4538
1877	Efficient planar heterojunction perovskite solar cells employing graphene oxide as hole conductor. <b>2014</b> , 6, 10505-10	315
1876	Efficient planar heterojunction mixed-halide perovskite solar cells deposited via spray-deposition. <b>2014</b> , 7, 2944-2950	568
1875	A hole-conductor-free, fully printable mesoscopic perovskite solar cell with high stability. <b>2014</b> , 345, 295-8	2374
1874	Retarding the crystallization of PbI2 for highly reproducible planar-structured perovskite solar cells via sequential deposition. <b>2014</b> , 7, 2934-2938	728
1873	A dopant-free hole-transporting material for efficient and stable perovskite solar cells. <b>2014</b> , 7, 2963-2967	593
1872	A hybrid lead iodide perovskite and lead sulfide QD heterojunction solar cell to obtain a panchromatic response. <b>2014</b> , 2, 11586-11590	64
1871	Hole-conductor-free perovskite organic lead iodide heterojunction thin-film solar cells: High efficiency and junction property. <b>2014</b> , 104, 063901	401
1870	Photovoltaic performance improvement of dye-sensitized solar cells through introducing In-doped TiO2 film at conducting glass and mesoporous TiO2 interface as an efficient compact layer. <b>2014</b> , 129, 276-282	20
1869	Formamidinium-Containing Metal-Halide: An Alternative Material for Near-IR Absorption Perovskite Solar Cells. <b>2014</b> , 118, 16458-16462	554
1868	Lessons learned: from dye-sensitized solar cells to all-solid-state hybrid devices. <b>2014</b> , 26, 4013-30	133
1867	Solvent engineering for high-performance inorganic-organic hybrid perovskite solar cells. <b>2014</b> , 13, 897-903	4981

1866	Highly conjugated electron rich thiophene antennas on phenothiazine and phenoxazine-based sensitizers for dye sensitized solar cells. <b>2014</b> , 195, 208-216	29
1865	Preparation of Single-Phase Films of CH3NH3Pb(I1-xBrx)3 with Sharp Optical Band Edges. <b>2014</b> , 5, 2501-5	347
1864	Charge-carrier dynamics in vapour-deposited films of the organolead halide perovskite CH3NH3PbI3MClx. <b>2014</b> , 7, 2269-2275	378
1863	Lead-iodide nanowire perovskite with methylviologen showing interfacial charge-transfer absorption: a DFT analysis. <b>2014</b> , 16, 17955-9	20
1862	One-step, solution-processed formamidinium lead trihalide (FAPbI(3-x)Cl(x)) for mesoscopic perovskite-polymer solar cells. <b>2014</b> , 16, 19206-11	113
1861	Controllable self-induced passivation of hybrid lead iodide perovskites toward high performance solar cells. <b>2014</b> , 14, 4158-63	1143
1860	Organo-metal halide perovskite-based solar cells with CuSCN as the inorganic hole selective contact. <b>2014</b> , 2, 12754-12760	157
1859	Boosting the photocurrent density of p-type solar cells based on organometal halide perovskite-sensitized mesoporous NiO photocathodes. <b>2014</b> , 6, 12609-17	45
1858	Relativistic quasiparticle self-consistent electronic structure of hybrid halide perovskite photovoltaic absorbers. <b>2014</b> , 89,	514
1857	Organo-metal perovskite based solar cells: sensitized versus planar architecture. <b>2014</b> , 4, 29012-29021	51
1856	Organohalide lead perovskite based photodetectors with much enhanced performance. <b>2014</b> , 50, 13695-7	176
1855	Mesoporous perovskite solar cells: material composition, charge-carrier dynamics, and device characteristics. <b>2014</b> , 176, 301-12	103
1854	A thin pristine non-triarylamine hole-transporting material layer for efficient CH3NH3PbI3 perovskite solar cells. <b>2014</b> , 4, 32918	35
1853	Morphology-photovoltaic property correlation in perovskite solar cells: One-step versus two-step deposition of CH3NH3PbI3. <b>2014</b> , 2, 081510	337
1852	CH3NH3PbI3/poly-3-hexylthiophen perovskite mesoscopic solar cells: Performance enhancement by Li-assisted hole conduction. <b>2014</b> , 8, 816-821	60
1851	Enhanced Crystallinity in OrganicIhorganic Lead Halide Perovskites on Mesoporous TiO2 via DisorderDrder Phase Transition. <b>2014</b> , 26, 4466-4471	110
1850	Structural control of hierarchically-ordered TiO2 films by water for dye-sensitized solar cells. <b>2014</b> , 15, 1841-8	2
1849	Role of the crystallization substrate on the photoluminescence properties of organo-lead mixed halides perovskites. <b>2014</b> , 2, 081509	83

### (2014-2014)

1848	Hole-transporting small molecules based on thiophene cores for high efficiency perovskite solar cells. <b>2014</b> , 7, 3420-5	122
1847	Unraveling the nanoscale morphologies of mesoporous perovskite solar cells and their correlation to device performance. <b>2014</b> , 14, 2735-40	49
1846	Cation Role in Structural and Electronic Properties of 3D OrganicIhorganic Halide Perovskites: A DFT Analysis. <b>2014</b> , 118, 12176-12183	143
1845	Influence of Thermal Processing Protocol upon the Crystallization and Photovoltaic Performance of OrganicInorganic Lead Trihalide Perovskites. <b>2014</b> , 118, 17171-17177	214
1844	Visible light-harvesting of TiO2 nanotubes array by pulsed laser deposited CdS. <b>2014</b> , 309, 225-230	24
1843	The effect of oxygen functional groups on the electrical transport behavior of a single piece multi-layered graphene oxide. <b>2014</b> , 191, 1-5	21
1842	Slow Dynamic Processes in Lead Halide Perovskite Solar Cells. Characteristic Times and Hysteresis. <b>2014</b> , 5, 2357-63	556
1841	Fabrication of planar heterojunction perovskite solar cells. <b>2014</b> ,	1
1840	A highly efficient mesoscopic solar cell based on CHNHPbI(3-x)Cl(x) fabricated via sequential solution deposition. <b>2014</b> , 50, 12458-61	79
1839	Efficient Ternary CdSSe Quantum-Dot-Sensitized Solar Cells based on MgO-coated TiO2 Nanoparticles. <b>2014</b> , 2, 526-530	7
1838	Mixed-organic-cation perovskite photovoltaics for enhanced solar-light harvesting. <b>2014</b> , 53, 3151-7	960
1837	Metal-Oxide-Free Methylammonium Lead Iodide Perovskite-Based Solar Cells: the Influence of Organic Charge Transport Layers. <b>2014</b> , 4, 1400345	148
1836	High-efficiency perovskite solar cells based on the black polymorph of HC(NH2)2 Pbi3. <b>2014</b> , 26, 4991-8	732
1835	Thermally induced structural evolution and performance of mesoporous block copolymer-directed alumina perovskite solar cells. <b>2014</b> , 8, 4730-9	241
1834	Effects of Surface Blocking Layer of Sb2S3 on Nanocrystalline TiO2 for CH3NH3PbI3 Perovskite Solar Cells. <b>2014</b> , 118, 16995-17000	456
1833	Thermally Activated Exciton Dissociation and Recombination Control the Carrier Dynamics in Organometal Halide Perovskite. <b>2014</b> , 5, 2189-94	399
1832	Organolead halide perovskites: a family of promising semiconductor materials for solar cells. <b>2014</b> , 59, 2092-2101	15
1831	Multi-functionality of macroporous TiO2 spheres in dye-sensitized and hybrid heterojunction solar cells. <b>2014</b> , 30, 3010-8	35

1830	Laminated carbon nanotube networks for metal electrode-free efficient perovskite solar cells. <b>2014</b> , 8, 6797-804	371
1829	Highly compact TiO2layer for efficient hole-blocking in perovskite solar cells. <b>2014</b> , 7, 052301	181
1828	Composite ZnSe-CdSe Quantum Dot Sensitizers of Solid-State Solar Cells and the Beneficial Effect of Added Na2S. <b>2014</b> , 118, 16547-16551	24
1827	CH3NH3SnxPb(1-x)I3 Perovskite Solar Cells Covering up to 1060 nm. <b>2014</b> , 5, 1004-11	734
1826	Enhanced photovoltaic performance of perovskite CHNHPbllsolar cells with freestanding TiOII nanotube array films. <b>2014</b> , 50, 6368-71	142
1825	Hole-Conductor-Free Mesoscopic TiO2/CH3NH3PbI3 Heterojunction Solar Cells Based on Anatase Nanosheets and Carbon Counter Electrodes. <b>2014</b> , 5, 2160-4	211
1824	An all-solid-state perovskite-sensitized solar cell based on the dual function polyaniline as the sensitizer and p-type hole-transporting material. <b>2014</b> , 267, 1-8	113
1823	Electrodeposition of antimony selenide thin films and application in semiconductor sensitized solar cells. <b>2014</b> , 6, 2836-41	96
1822	Inhomogeneous Deactivation with UV Excitation in Submicron Grains of Lead Iodide Perovskite-based Solar Cell as Revealed by Femtosecond Transient Absorption Microscopy. <b>2014</b> , 43, 1656-1658	14
1821	Fabrication and Characterization of TiO2/CH3NH3PbI3-based Photovoltaic Devices. <b>2014</b> , 43, 916-918	34
1820	Fabrication of Lead Halide Perovskite Film by Controlling Reactivity at Room Temperature in Mixed Solvents. <b>2014</b> , 43, 1722-1724	15
1819	Ein Klassiker im neuen Gewand: Perowskit-Solarzellen. <b>2014</b> , 126, 647-649	19
1818	A Simple 3,4-Ethylenedioxythiophene Based Hole-Transporting Material for Perovskite Solar Cells. <b>2014</b> , 126, 4169-4172	61
1817	Two-step deposition method for high-efficiency perovskite solar cells. <b>2015</b> , 40, 654-659	38
1816	Methylammonium lead triiodide perovskite solar cells: A new paradigm in photovoltaics. <b>2015</b> , 40, 641-645	34
1815	Photovoltaic devices employing vacuum-deposited perovskite layers. <b>2015</b> , 40, 660-666	44
1814	Vapor-assisted solution process for perovskite materials and solar cells. <b>2015</b> , 40, 667-673	32
1813	Steps toward efficient inorganicBrganic hybrid perovskite solar cells. <b>2015</b> , 40, 648-653	28

1812 Anodized aluminum on transparent substrates as scaffold for perovskite growth. 2015,

Modeling and optimization of two-terminal Perovskite/Si tandem solar cells: A theoretical study. <b>2015</b> ,	
1810 Charge-Carrier Dynamics and Mobilities in Formamidinium Lead Mixed-Halide Perovskites. <b>2015</b> , 27, 7938-44 27	<u>2</u> 76
1809 Temperature-Dependent Charge-Carrier Dynamics in CH3NH3PbI3 Perovskite Thin Films. <b>2015</b> , 25, 6218-6227 <i>6</i> ,	645
Multifunctional Inverse Opal-Like TiO Electron Transport Layer for Efficient Hybrid Perovskite Solar Cells. <b>2015</b> , 2, 1500105	54
Local Versus Long-Range Diffusion Effects of Photoexcited States on Radiative Recombination in Organic-Inorganic Lead Halide Perovskites. <b>2015</b> , 2, 1500136	<del>1</del> 7
Control of Emission Color of High Quantum Yield CHNHPbBr Perovskite Quantum Dots by Precipitation Temperature. <b>2015</b> , 2, 1500194	<b>1</b> 55
Effects of Niobium Addition into TiO2 Layers on CH3NH3PbI3-based Photovoltaic Devices. <b>2015</b> , 44, 1033-1035	20
Improving the Stability of a Liquid-type Perovskite Solar Cell by Capping Spiro-OMeTAD Layer onto CH3NH3PbI3/TiO2 Film. <b>2015</b> , 44, 1446-1448	Ĺ
1803 Quantifying Losses in Open-Circuit Voltage in Solution-Processable Solar Cells. <b>2015</b> , 4,	373
Image excitons and plasmon-exciton strong coupling in two-dimensional perovskite semiconductors. <b>2015</b> , 91,	24
Excitonic emissions and above-band-gap luminescence in the single-crystal perovskite semiconductors CsPbBr3 and CsPbCl3. <b>2015</b> , 92,	194
Surface Engineering of ZnO Thin Film for High Efficiency Planar Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2015</b> , 5, 13211	128
Direct Conversion of CH3NH3PbI3 from Electrodeposited PbO for Highly Efficient Planar  1799 Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2015</b> , 5, 15889  4.9 7-	72
Electrodeposited Ultrathin TiO2 Blocking Layers for Efficient Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2015</b> , 5, 16098	Во
1797 Organometal Halide Perovskites for Photovoltaic Applications. <b>2015</b> , 535-566	7
High-Performance Planar-Type Photodetector on (100) Facet of MAPbI3 Single Crystal. <i>Scientific Reports</i> , <b>2015</b> , 5, 16563	222
Substrate-preheating Effects on PbI2Spin Coating for Perovskite Solar Cells via Sequential  Deposition. <b>2015</b> , 44, 849-851	20

1794	Enhanced Photovoltaic Performance of Perovskite Solar Cells via Modification of Surface Characteristics Using a Fullerene Interlayer. <b>2015</b> , 44, 1735-1737	25
1793	An Effective TiO2 Blocking Layer for Perovskite Solar Cells with Enhanced Performance. <b>2015</b> , 44, 624-626	33
1792	Determination of Chloride Content in Planar CH3NH3PbI3MClx Solar Cells by Chemical Analysis. <b>2015</b> , 44, 1089-1091	29
1791	Perovskite Photovoltaics: Rare Functions of Organo Lead Halide in Solar Cells and Optoelectronic Devices. <b>2015</b> , 44, 720-729	194
1790	Conversion efficiency improvement of inverted CH3NH3PbI3 perovskite solar cells with room temperature sputtered ZnO by adding the C60 interlayer. <b>2015</b> , 107, 253301	34
1789	Effects of Different Solvents on the Planar Hetero-junction Perovskite Solar Cells. <b>2015</b> , 22, 05002	6
1788	Electronic structure and optical properties of Cs2AX2?X4 (A=Ge,Sn,Pb; X?,X=Cl,Br,I). <b>2015</b> , 5, 127224	17
1787	Self-regulation of charged defect compensation and formation energy pinning in semiconductors.  Scientific Reports, <b>2015</b> , 5, 16977  4.9	33
1786	Intrinsic slow charge response in the perovskite solar cells: Electron and ion transport. <b>2015</b> , 107, 163901	33
1785	Bandgap tuning of MAPbI3kBrx thin film perovskites for photovoltaic applications. 2015,	2
1784	Role of halide anion on exciton binding energy and disorder in hybrid perovskite semiconductors. <b>2015</b> ,	5
1783	Organic Charge Carriers for Perovskite Solar Cells. <b>2015</b> , 8, 3012-28	101
1782	Stable and Efficient Perovskite Solar Cells Based on Titania Nanotube Arrays. <b>2015</b> , 11, 5533-9	69
1781	Improving the Extraction of Photogenerated Electrons with SnO2 Nanocolloids for Efficient Planar Perovskite Solar Cells. <b>2015</b> , 25, 7200-7207	163
1780	Efficient Perovskite Hybrid Solar Cells via Ionomer Interfacial Engineering. 2015, 25, 6875-6884	48
1779	High-Quality Mixed-Organic-Cation Perovskites from a Phase-Pure Non-stoichiometric Intermediate (FAI)1-x-PbI2 for Solar Cells. <b>2015</b> , 27, 4918-23	132
1778	Square-Centimeter Solution-Processed Planar CH3NH3PbI3 Perovskite Solar Cells with Efficiency Exceeding 15. <b>2015</b> , 27, 6363-70	272
1777	Polymer/Perovskite Amplifying Waveguides for Active Hybrid Silicon Photonics. <b>2015</b> , 27, 6157-62	67

1776	Light-Induced Self-Poling Effect on Organometal Trihalide Perovskite Solar Cells for Increased Device Efficiency and Stability. <b>2015</b> , 5, 1500721	182
1775	Beyond Efficiency: the Challenge of Stability in Mesoscopic Perovskite Solar Cells. <b>2015</b> , 5, 1501066	335
1774	Plasmonic-Induced Photon Recycling in Metal Halide Perovskite Solar Cells. <b>2015</b> , 25, 5038-5046	167
1773	Copper(I) lodide as Hole-Conductor in Planar Perovskite Solar Cells: Probing the Origin of J <b>W</b> Hysteresis. <b>2015</b> , 25, 5650-5661	224
1772	Working Principles of Perovskite Photodetectors: Analyzing the Interplay Between Photoconductivity and Voltage-Driven Energy-Level Alignment. <b>2015</b> , 25, 6936-6947	114
1771	Organisch-anorganische Perowskit-D\(\text{D}\)nfilme f\(\text{B}\)hocheffiziente Solarzellen. <b>2015</b> , 127, 3288-3297	25
1770	Understanding the Outstanding Power Conversion Efficiency of Perovskite-Based Solar Cells. <b>2015</b> , 54, 9757-9	93
1769	Controllable Perovskite Crystallization by Water Additive for High-Performance Solar Cells. <b>2015</b> , 25, 6671-6678	282
1768	Tin- and Lead-Based Perovskite Solar Cells under Scrutiny: An Environmental Perspective. <b>2015</b> , 5, 1501119	157
1767	Methylamine-Gas-Induced Defect-Healing Behavior of CH3NH3PbI3 Thin Films for Perovskite Solar Cells. <b>2015</b> , 54, 9705-9	326
1766	Charge Accumulation and Hysteresis in Perovskite-Based Solar Cells: An Electro-Optical Analysis. <b>2015</b> , 5, 1500829	196
1765	The Significance of Ion Conduction in a Hybrid OrganicIhorganic Lead-Iodide-Based Perovskite Photosensitizer. <b>2015</b> , 127, 8016-8021	122
1764	Facile Synthesis of a Furan-Arylamine Hole-Transporting Material for High-Efficiency, Mesoscopic Perovskite Solar Cells. <b>2015</b> , 21, 15113-7	45
1763	Photoluminescence and electroluminescence imaging of perovskite solar cells. <b>2015</b> , 23, 1697-1705	57
1762	A promising unisource thermal evaporation for in situ fabrication of organolead halide perovskite CH3NH3PbI3 thin film. <b>2015</b> , 23, 1901-1907	27
1761	Solar Rechargeable Batteries Based on Lead©rganohalide Electrolyte. <b>2015</b> , 5, 1501418	28
1760	Selective Deposition of Insulating Metal Oxide in Perovskite Solar Cells with Enhanced Device Performance. <b>2015</b> , 8, 2625-9	9
1759	Efficiency Records in Mesoscopic Dye-Sensitized Solar Cells. <b>2015</b> , 15, 803-28	36

1758	Understanding the Impact of Bromide on the Photovoltaic Performance of CH3 NH3 PbI3 Solar Cells. <b>2015</b> , 27, 7221-8	70
1757	Methylamine-Gas-Induced Defect-Healing Behavior of CH3NH3PbI3 Thin Films for Perovskite Solar Cells. <b>2015</b> , 127, 9841-9845	35
1756	One-Dimensional Self-Standing TiO Nanotube Array Layers Designed for Perovskite Solar Cell Applications. <b>2015</b> , 16, 2836-2841	26
1755	Hierarchically Structured Hole Transport Layers of Spiro-OMeTAD and Multiwalled Carbon Nanotubes for Perovskite Solar Cells. <b>2015</b> , 8, 2358-62	54
1754	Controlled growth of PbI2 nanoplates for rapid preparation of CH3NH3PbI3 in planar perovskite solar cells. <b>2015</b> , 212, 2708-2717	55
1753	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
1752	Unraveling the Reasons for Efficiency Loss in Perovskite Solar Cells. <b>2015</b> , 25, 3925-3933	114
1751	High-Performance Planar Solar Cells Based On CH3NH3PbI3-xClx Perovskites with Determined Chlorine Mole Fraction. <b>2015</b> , 25, 4867-4873	89
1750	Bismuth Based Hybrid Perovskites A3Bi2 I9 (A: Methylammonium or Cesium) for Solar Cell Application. <b>2015</b> , 27, 6806-13	807
1749	16.1% Efficient Hysteresis-Free Mesostructured Perovskite Solar Cells Based on Synergistically Improved ZnO Nanorod Arrays. <b>2015</b> , 5, 1500568	194
1748	Low-Temperature and Hysteresis-Free Electron-Transporting Layers for Efficient, Regular, and Planar Structure Perovskite Solar Cells. <b>2015</b> , 5, 1501056	62
1747	Formamidinium and Cesium Hybridization for Photo- and Moisture-Stable Perovskite Solar Cell. <b>2015</b> , 5, 1501310	1085
1746	Mechanically Recoverable and Highly Efficient Perovskite Solar Cells: Investigation of Intrinsic Flexibility of OrganicIhorganic Perovskite. <b>2015</b> , 5, 1501406	106
1745	Fabrication and Characterization of a Perovskite-Type Solar Cell with a Substrate Size of 70 mm. <b>2015</b> , 5, 646-655	18
1744	Bifunctional Alkyl Chain Barriers for Efficient Perovskite Solar Cells. <b>2015</b> ,	
1743	Fabrication of CHNHPbl/PVP Composite Fibers via Electrospinning and Deposition. 2015, 8, 5467-5478	19
1742	A density functional tight binding study of acetic acid adsorption on crystalline and amorphous surfaces of titania. <b>2015</b> , 20, 3371-88	33
1741	Material Exchange Property of Organo Lead Halide Perovskite with Hole-Transporting Materials. <b>2015</b> , 2, 1043-1053	16

	Current-Voltage Measurements. <b>2015</b> , 2, 1101-1115	13
1739	Stability Issues on Perovskite Solar Cells. <b>2015</b> , 2, 1139-1151	158
1738	Hybrid Organic-Inorganic Perovskites Open a New Era for Low-Cost, High Efficiency Solar Cells. <b>2015</b> , 2015, 1-10	14
1737	Perovskite Solar Cells: Potentials, Challenges, and Opportunities. <b>2015</b> , 2015, 1-13	47
1736	Spectra and Charge Transport of Polar Molecular Photoactive Layers Used for Solar Cells. <b>2015</b> , 2015, 1-10	2
1735	Development and Prospect of Nanoarchitectured Solar Cells. 2015, 2015, 1-11	4
1734	Atomistic origins of CH3NH3PbI3 degradation to PbI2 in vacuum. <b>2015</b> , 106, 131904	141
1733	Perovskite Quantum Dots Modeled Using ab Initio and Replica Exchange Molecular Dynamics. <b>2015</b> , 119, 13965-13971	25
1732	Modulation of photovoltage in mesoscopic perovskite solar cell by controlled interfacial electron injection. <b>2015</b> , 5, 47334-47340	23
1731	Surface modification of semiconductor photoelectrodes. <b>2015</b> , 17, 15655-74	110
1730	Fiber Channel Description Collected   2015 07 115	
15	Fiber-Shaped Perovskite Solar Cell. <b>2015</b> , 97-115	1
1729	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. 2015, 140, 396-404	57
	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport	
1729	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. <b>2015</b> , 140, 396-404  Low-temperature solution-processed tin oxide as an alternative electron transporting layer for	57
1729 1728	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. 2015, 140, 396-404  Low-temperature solution-processed tin oxide as an alternative electron transporting layer for efficient perovskite solar cells. 2015, 137, 6730-3	57 8 <sub>33</sub>
1729 1728 1727	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. 2015, 140, 396-404  Low-temperature solution-processed tin oxide as an alternative electron transporting layer for efficient perovskite solar cells. 2015, 137, 6730-3  Solution-Processed Planar Perovskite Solar Cell Without a Hole Transport Layer. 2015, 7, 12015-21  Solvent engineering towards controlled grain growth in perovskite planar heterojunction solar	57 8 <sub>33</sub> 39
1729 1728 1727 1726	Novel planar heterostructure perovskite solar cells with CdS nanorods array as electron transport layer. 2015, 140, 396-404  Low-temperature solution-processed tin oxide as an alternative electron transporting layer for efficient perovskite solar cells. 2015, 137, 6730-3  Solution-Processed Planar Perovskite Solar Cell Without a Hole Transport Layer. 2015, 7, 12015-21  Solvent engineering towards controlled grain growth in perovskite planar heterojunction solar cells. 2015, 7, 10595-9  SOLAR CELLS. High-performance photovoltaic perovskite layers fabricated through intramolecular	57 8 <sub>33</sub> 39 2 <sub>51</sub>

1722	Efficiency Enhancement of Inverted Structure Perovskite Solar Cells via Oleamide Doping of PCBM Electron Transport Layer. <b>2015</b> , 7, 13659-65		108
1721	Solid state transformation of the crystalline monohydrate (CH3NH3)PbI3(H2O) to the (CH3NH3)PbI3 perovskite. <b>2015</b> , 51, 11290-2		40
1720	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
1719	Pinhole-free hole transport layers significantly improve the stability of MAPbI3-based perovskite solar cells under operating conditions. <b>2015</b> , 3, 15451-15456		101
1718	Performance enhancement of perovskite solar cells with Mg-doped TiO2 compact film as the hole-blocking layer. <b>2015</b> , 106, 121104		146
1717	Critical parameters in TiO2/ZrO2/Carbon-based mesoscopic perovskite solar cell. <b>2015</b> , 293, 533-538		93
1716	The efficiency limit of CH3NH3PbI3 perovskite solar cells. <b>2015</b> , 106, 221104		374
1715	Growth of large CH3NH3PbX3 (X=I, Br) single crystals in solution. <b>2015</b> , 422, 75-79		46
1714	Halide-Dependent Electronic Structure of Organolead Perovskite Materials. <b>2015</b> , 27, 4405-4412		251
1713	Substantial improvement of perovskite solar cells stability by pinhole-free hole transport layer with doping engineering. <i>Scientific Reports</i> , <b>2015</b> , 5, 9863	<b>ļ</b> .9	101
1712	Elucidating the reaction pathways in the synthesis of organolead trihalide perovskite for high-performance solar cells. <i>Scientific Reports</i> , <b>2015</b> , 5, 10557	<b>ļ</b> .9	45
1711	Improving efficiency of planar hybrid CH 3 NH 3 PbI 3lk Cl x perovskite solar cells by isopropanol solvent treatment. <b>2015</b> , 24, 205-211		38
1710	Origin of the Thermal Instability in CH3NH3PbI3 Thin Films Deposited on ZnO. <b>2015</b> , 27, 4229-4236		448
1709	Free-standing flexible carbon electrode for highly efficient hole-conductor-free perovskite solar cells. <b>2015</b> , 93, 861-868		158
1708	Smooth perovskite thin films and efficient perovskite solar cells prepared by the hybrid deposition method. <b>2015</b> , 3, 14631-14641		108
1707	Temperature-assisted controlling morphology and charge transport property for highly efficient perovskite solar cells. <b>2015</b> , 15, 540-548		73
1706	Rational design of triazatruxene-based hole conductors for perovskite solar cells. <b>2015</b> , 5, 53426-53432		57
1705	Defect migration in methylammonium lead iodide and its role in perovskite solar cell operation. <b>2015</b> , 8, 2118-2127		1003

1704	2D Homologous Perovskites as Light-Absorbing Materials for Solar Cell Applications. <b>2015</b> , 137, 7843-50	1464
1703	An up-scalable approach to CH3NH3PbI3 compact films for high-performance perovskite solar cells. <b>2015</b> , 15, 670-678	67
1702	Functionalized graphene and other two-dimensional materials for photovoltaic devices: device design and processing. <b>2015</b> , 44, 5638-79	238
1701	Inverted planar NH2CH=NH2PbI3 perovskite solar cells with 13.56% efficiency via low temperature processing. <b>2015</b> , 17, 19745-50	65
1700	Effects of Oxide Contact Layer on the Preparation and Properties of CH3NH3PbI3 for Perovskite Solar Cell Application. <b>2015</b> , 119, 14919-14928	74
1699	Zero-dipole molecular organic cations in mixed organic-inorganic halide perovskites: possible chemical solution for the reported anomalous hysteresis in the current-voltage curve measurements. <b>2015</b> , 26, 442001	33
1698	Fast Crystallization and Improved Stability of Perovskite Solar Cells with Zn2SnO4 Electron Transporting Layer: Interface Matters. <b>2015</b> , 7, 28404-11	94
1697	Kesterite Cu2ZnSnS4 as a Low-Cost Inorganic Hole-Transporting Material for High-Efficiency Perovskite Solar Cells. <b>2015</b> , 7, 28466-73	120
1696	Enhanced amplified spontaneous emission from morphology-controlled organicIhorganic halide perovskite films. <b>2015</b> , 5, 103674-103679	23
1695	Mechanism of Charge Transfer and Recombination Dynamics in Organo Metal Halide Perovskites and Organic Electrodes, PCBM, and Spiro-OMeTAD: Role of Dark Carriers. <b>2015</b> , 137, 16043-8	85
1694	Real-Space Imaging of the Atomic Structure of Organic-Inorganic Perovskite. <b>2015</b> , 137, 16049-54	131
1693	Perovskites: Solar cells & engineering applications [materials and device developments. 2015, 122, 678-699	90
1692	Exploring the performance limiting parameters of perovskite solar cell through experimental analysis and device simulation. <b>2015</b> , 122, 773-782	32
1691	Annealing effects on high-performance CH3NH3PbI3 perovskite solar cells prepared by solution-process. <b>2015</b> , 122, 1047-1051	50
1690	New Hybrid Hole Extraction Layer of Perovskite Solar Cells with a Planar p <b>II</b> Geometry. <b>2015</b> , 119, 27285-27290	68
1689	Microstructures of Organometal Trihalide Perovskites for Solar Cells: Their Evolution from Solutions and Characterization. <b>2015</b> , 6, 4827-39	283
1688	Open circuit potential build-up in perovskite solar cells from dark conditions to 1 sun. <b>2015</b> , 6, 4640-5	44
1687	Impact of Capacitive Effect and Ion Migration on the Hysteretic Behavior of Perovskite Solar Cells. <b>2015</b> , 6, 4693-700	285

1686	Comparison of Recombination Dynamics in CH3NH3PbBr3 and CH3NH3PbI3 Perovskite Films: Influence of Exciton Binding Energy. <b>2015</b> , 6, 4688-92	284
1685	TiO2 quantum dots as superb compact block layers for high-performance CH3NH3PbI3 perovskite solar cells with an efficiency of 16.97. <b>2015</b> , 7, 20539-46	76
1684	Effects of nanostructure on clean energy: big solutions gained from small features. <b>2015</b> , 60, 2083-2090	29
1683	Characterization and analysis of structural and optical properties of perovskite thin films. 2015,	1
1682	Spatially resolved characterization of solution processed perovskite solar cells using the LBIC technique. <b>2015</b> ,	3
1681	Thermodynamic regulation of CH3NH3PbI3 crystal growth and its effect on photovoltaic performance of perovskite solar cells. <b>2015</b> , 3, 19901-19906	78
1680	Novel low cost hole transporting materials for efficient organic-inorganic perovskite solar cells. <b>2015</b> ,	1
1679	Effect of ferroelectric nanodomains in perovskite solar cells. 2015,	
1678	Spray PEDOT:PSS coated perovskite with a transparent conducting electrode for low cost scalable photovoltaic devices. <b>2015</b> , 19, 482-487	9
1677	Microstructure evolution and energy band alignment at the interface of a Si-rich amorphous silicon carbide/c-Si heterostructure. <b>2015</b> , 48, 455307	2
1676	Shell-in-Shell TiO2 hollow microspheres and optimized application in light-trapping perovskite solar cells. <b>2015</b> , 40, 60-66	16
1675	Electronic and optical properties of mixed SnPb organohalide perovskites: a first principles investigation. <b>2015</b> , 3, 9208-9215	156
1674	Chalcogenide perovskites for photovoltaics. <b>2015</b> , 15, 581-5	160
1673	Phenoxazine-Based Small Molecule Material for Efficient Perovskite Solar Cells and Bulk Heterojunction Organic Solar Cells. <b>2015</b> , 5, 1401720	97
1672	Compositional engineering of perovskite materials for high-performance solar cells. <b>2015</b> , 517, 476-80	4611
1671	Flexible Perovskite Photovoltaic Modules and Solar Cells Based on Atomic Layer Deposited Compact Layers and UV-Irradiated TiO2 Scaffolds on Plastic Substrates. <b>2015</b> , 5, 1401808	216
1670	HPbI3: A New Precursor Compound for Highly Efficient Solution-Processed Perovskite Solar Cells. <b>2015</b> , 25, 1120-1126	263
1669	Advancements in all-solid-state hybrid solar cells based on organometal halide perovskites. <b>2015</b> , 2, 378-405	102

1668	nanowire architectures. <b>2015</b> , 9, 564-72	113
1667	Understanding the rate-dependent JN hysteresis, slow time component, and aging in CH3NH3PbI3 perovskite solar cells: the role of a compensated electric field. <b>2015</b> , 8, 995-1004	998
1666	Vacuum-assisted thermal annealing of CH3NH3PbI3 for highly stable and efficient perovskite solar cells. <b>2015</b> , 9, 639-46	282
1665	Structure and function relationships in alkylammonium lead(II) iodide solar cells. <b>2015</b> , 3, 9201-9207	52
1664	Air-Exposure Induced Dopant Redistribution and Energy Level Shifts in Spin-Coated Spiro-MeOTAD Films. <b>2015</b> , 27, 562-569	289
1663	Lead-Halide Perovskite Solar Cells by CH3NH3I Dripping on PbI2-CH3NH3I-DMSO Precursor Layer for Planar and Porous Structures Using CuSCN Hole-Transporting Material. <b>2015</b> , 6, 881-6	73
1662	Complete structure and cation orientation in the perovskite photovoltaic methylammonium lead iodide between 100 and 352 K. <b>2015</b> , 51, 4180-4183	444
1661	Superior Photovoltaic Properties of Lead Halide Perovskites: Insights from First-Principles Theory. <b>2015</b> , 119, 5253-5264	186
1660	Nanocarbons for mesoscopic perovskite solar cells. <b>2015</b> , 3, 9020-9031	88
1659	Organometal Halide Perovskites: Bulk Low-Dimension Materials and Nanoparticles. <b>2015</b> , 32, 709-720	111
1658	Chemical and Electronic Structure Characterization of Lead Halide Perovskites and Stability Behavior under Different Exposures Photoelectron Spectroscopy Investigation. <b>2015</b> , 27, 1720-1731	305
1657	Anomalously large interface charge in polarity-switchable photovoltaic devices: an indication of mobile ions in organicIhorganic halide perovskites. <b>2015</b> , 8, 1256-1260	186
1656	Insights into Planar CH3NH3PbI3 Perovskite Solar Cells Using Impedance Spectroscopy. <b>2015</b> , 119, 4444-4453	137
1655	Shape evolution and single particle luminescence of organometal halide perovskite nanocrystals. <b>2015</b> , 9, 2948-59	219
1654	Tuning perovskite morphology by polymer additive for high efficiency solar cell. <b>2015</b> , 7, 4955-61	254
1653	Photophysics of OrganicIhorganic Hybrid Lead Iodide Perovskite Single Crystals. <b>2015</b> , 25, 2378-2385	277
1652	Interfaces in perovskite solar cells. <b>2015</b> , 11, 2472-86	293
1651	Effect of capping ligands and TiO2 supporting on the optical properties of a (CdSe)13 cluster. <b>2015</b> , 119, 1218-27	14

1650	Functional tuning of organic dyes containing 2,7-carbazole and other electron-rich segments in the conjugation pathway. <b>2015</b> , 5, 17953-17966	18
1649	OrganicIhorganic halide perovskite based solar cells Irevolutionary progress in photovoltaics. <b>2015</b> , 2, 315-335	55
1648	Formation of thin films of organic-inorganic perovskites for high-efficiency solar cells. <b>2015</b> , 54, 3240-8	214
1647	Resonance Raman and excitation energy dependent charge transfer mechanism in halide-substituted hybrid perovskite solar cells. <b>2015</b> , 9, 2088-101	124
1646	Control of organic[horganic halide perovskites in solid-state solar cells: a perspective. <b>2015</b> , 60, 405-418	37
1645	Efficient Perovskite Hybrid Solar Cells Through a Homogeneous High-Quality Organolead Iodide Layer. <b>2015</b> , 11, 3369-76	40
1644	Pathways for solar photovoltaics. <b>2015</b> , 8, 1200-1219	293
1643	Exclusion of metal oxide by an RF sputtered Ti layer in flexible perovskite solar cells: energetic interface between a Ti layer and an organic charge transporting layer. <b>2015</b> , 44, 6439-48	27
1642	Crystallization kinetics of organic-inorganic trihalide perovskites and the role of the lead anion in crystal growth. <b>2015</b> , 137, 2350-8	266
1641	Zr Incorporation into TiO2 Electrodes Reduces Hysteresis and Improves Performance in Hybrid Perovskite Solar Cells while Increasing Carrier Lifetimes. <b>2015</b> , 6, 669-75	91
1640	Electrolytes in dye-sensitized solar cells. <b>2015</b> , 115, 2136-73	744
1639	Solar cells. High-efficiency solution-processed perovskite solar cells with millimeter-scale grains. <b>2015</b> , 347, 522-5	2602
1638	Ultrasmooth organic-inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. <b>2015</b> , 6, 6142	695
1637	Growth, patterning and alignment of organolead iodide perovskite nanowires for optoelectronic devices. <b>2015</b> , 7, 4163-70	149
1636	Trap states in lead iodide perovskites. <b>2015</b> , 137, 2089-96	672
1635	Characterization of Planar Lead Halide Perovskite Solar Cells by Impedance Spectroscopy, Open-Circuit Photovoltage Decay, and Intensity-Modulated Photovoltage/Photocurrent Spectroscopy. <b>2015</b> , 119, 3456-3465	310
1634	Dye-Sensitised Solar Cells. <b>2015</b> , 67-79	
1633	A facile and low-cost fabrication of TiO2 compact layer for efficient perovskite solar cells. <b>2015</b> , 15, 574-579	29

1632	Atmospheric effects on the photovoltaic performance of hybrid perovskite solar cells. <b>2015</b> , 137, 6-14	101
1631	Investigation on regeneration kinetics at perovskite/oxide interface with scanning electrochemical microscopy. <b>2015</b> , 3, 9216-9222	17
1630	A power pack based on organometallic perovskite solar cell and supercapacitor. <b>2015</b> , 9, 1782-7	167
1629	Efficient CH3NH3PbI3 Perovskite Solar Cells Based on Graphdiyne (GD)-Modified P3HT Hole-Transporting Material. <b>2015</b> , 5, 1401943	241
1628	Introducing Perovskite Solar Cells to Undergraduates. <b>2015</b> , 6, 251-5	21
1627	High-performance graphene-based hole conductor-free perovskite solar cells: Schottky junction enhanced hole extraction and electron blocking. <b>2015</b> , 11, 2269-74	206
1626	Control of charge transport in the perovskite CH3 NH3 PbI3 thin film. <b>2015</b> , 16, 842-7	35
1625	Perovskite thin-film solar cell: excitation in photovoltaic science. <b>2015</b> , 58, 221-238	54
1624	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
1623	Upconversion enhancement of lanthanide-doped NaYF4 for quantum dot-sensitized solar cells. <b>2015</b> , 155, 357-363	30
1622	High efficiency solar cells combining a perovskite and a silicon heterojunction solar cells via an optical splitting system. <b>2015</b> , 106, 013506	100
1621	Electronic Structure of CH3NH3PbX3 Perovskites: Dependence on the Halide Moiety. <b>2015</b> , 119, 1818-1825	105
1620	The theoretical investigation on the 4-(4-phenyl-4-haphthylbutadieny)-triphenylamine derivatives as hole transporting materials for perovskite-type solar cells. <b>2015</b> , 17, 5991-8	60
1619	Spontaneous Defect Annihilation in CH3NH3PbI3 Thin Films at Room Temperature Revealed by Time-Resolved Photoluminescence Spectroscopy. <b>2015</b> , 6, 482-6	72
1618	Facile preparation of organometallic perovskite films and high-efficiency solar cells using solid-state chemistry. <b>2015</b> , 8, 263-270	30
1617	Pressure-assisted CH3NH3PbI3 morphology reconstruction to improve the high performance of perovskite solar cells. <b>2015</b> , 3, 5289-5293	66
1616	Improving the Long-Term Stability of Perovskite Solar Cells with a Porous Al2O3 Buffer Layer. <b>2015</b> , 6, 432-7	301
1615	Flexible organo-metal halide perovskite solar cells on a Ti metal substrate. <b>2015</b> , 3, 4129-4133	77

1614	Distinct exciton dissociation behavior of organolead trihalide perovskite and excitonic semiconductors studied in the same system. <b>2015</b> , 11, 2164-9	68
1613	Photoelectronic Responses in Solution-Processed Perovskite CH\$_{bf 3}\$ NH\$_{bf 3}\$PbI \$_{bf 3}\$ Solar Cells Studied by Photoluminescence and Photoabsorption Spectroscopy. <b>2015</b> , 5, 401-405	151
1612	Fabrication of Planar Heterojunction Perovskite Solar Cells by Controlled Low-Pressure Vapor Annealing. <b>2015</b> , 6, 493-9	103
1611	Fast and low temperature growth of electron transport layers for efficient perovskite solar cells. <b>2015</b> , 3, 4909-4915	89
1610	Comparative study of vapor- and solution-crystallized perovskite for planar heterojunction solar cells. <b>2015</b> , 7, 3382-8	54
1609	Energy Level Offsets at Lead Halide Perovskite/Organic Hybrid Interfaces and Their Impacts on Charge Separation. <b>2015</b> , 2, 1400528	108
1608	New insights into organic-inorganic hybrid perovskite CHNHPblhanoparticles. An experimental and theoretical study of doping in Pbl+ sites with Snl+, Srl+, Cdl+ and Cal+. <b>2015</b> , 7, 6216-29	176
1607	First-principles calculations of phonons and Raman spectra in monoclinic CsSnCl3. <b>2015</b> , 91,	9
1606	Thermal Effects on CH3NH3PbI3 Perovskite from Ab Initio Molecular Dynamics Simulations. <b>2015</b> , 119, 8991-8997	101
1605	Structural and electronic properties of organo-halide hybrid perovskites from ab initio molecular dynamics. <b>2015</b> , 17, 9394-409	116
1604	Morphology control of the perovskite films for efficient solar cells. <b>2015</b> , 44, 10582-93	136
1603	Rapid processing of perovskite solar cells in under 2.5 seconds. <b>2015</b> , 3, 9123-9127	54
1602	Formation of organicihorganic mixed halide perovskite films by thermal evaporation of PbCl2 and CH3NH3I compounds. <b>2015</b> , 5, 26175-26180	44
1601	Efficient mesoscopic perovskite solar cells based on the CH3NH3PbI2Br light absorber. <b>2015</b> , 3, 9116-9122	61
1600	Efficient and balanced charge transport revealed in planar perovskite solar cells. 2015, 7, 4471-5	105
1599	Solidification of ionic liquid redox electrolytes using agarose biopolymer for highly performing dye-sensitized solar cells. <b>2015</b> , 179, 228-236	23
1598	Spatially separated charge densities of electrons and holes in organic-inorganic halide perovskites. <b>2015</b> , 117, 074901	12
1597	Giant photoluminescence blinking of perovskite nanocrystals reveals single-trap control of luminescence. <b>2015</b> , 15, 1603-8	159

1596	Organic Solar Cells and Perovskite Solar Cells. <b>2015</b> , 27, 1808-1814	91
1595	Non-Thermal Annealing Fabrication of Efficient Planar Perovskite Solar Cells with Inclusion of NH4Cl. <b>2015</b> , 27, 1448-1451	114
1594	Electroluminescence from Organometallic Lead Halide Perovskite-Conjugated Polymer Diodes. <b>2015</b> , 1, 1500008	55
1593	Atmospheric influence upon crystallization and electronic disorder and its impact on the photophysical properties of organic-inorganic perovskite solar cells. <b>2015</b> , 9, 2311-20	152
1592	Enhancement of photovoltaic properties of CH3NH3PbBr3 heterojunction solar cells by modifying mesoporous TiO2 surfaces with carboxyl groups. <b>2015</b> , 3, 9264-9270	65
1591	Efficiencies of perovskite hybrid solar cells influenced by film thickness and morphology of CH3NH3PbI3⊠Clx layer. <b>2015</b> , 21, 19-26	49
1590	Roles of Fullerene-Based Interlayers in Enhancing the Performance of Organometal Perovskite Thin-Film Solar Cells. <b>2015</b> , 5, 1402321	255
1589	Perovskite solar cells: film formation and properties. <b>2015</b> , 3, 9032-9050	327
1588	Mesoporous SnO2 nanoparticle films as electron-transporting material in perovskite solar cells. <b>2015</b> , 5, 28424-28429	124
1587	Navigating Organo-Lead Halide Perovskite Phase Space via Nucleation Kinetics toward a Deeper Understanding of Perovskite Phase Transformations and Structure-Property Relationships. <b>2015</b> , 11, 3088-96	47
1586	Room-temperature crystallization of hybrid-perovskite thin films via solventBolvent extraction for high-performance solar cells. <b>2015</b> , 3, 8178-8184	336
1585	Hot-Electron Injection in a Sandwiched TiOxAuIIiOx Structure for High-Performance Planar Perovskite Solar Cells. <b>2015</b> , 5, 1500038	100
1584	Triple cathode buffer layers composed of PCBM, C60, and LiF for high-performance planar perovskite solar cells. <b>2015</b> , 7, 6230-7	114
1583	Many-body interactions in photo-excited lead iodide perovskite. <b>2015</b> , 3, 9285-9290	112
1582	Bifunctional alkyl chain barriers for efficient perovskite solar cells. <b>2015</b> , 51, 7047-50	119
1581	15.76% efficiency perovskite solar cells prepared under high relative humidity: importance of PbI2 morphology in two-step deposition of CH3NH3PbI3. <b>2015</b> , 3, 8808-8815	267
1580	Enhanced performance in hybrid perovskite solar cell by modification with spinel lithium titanate. <b>2015</b> , 3, 8882-8889	19
1579	Enhancing the photocurrent of perovskite solar cells via modification of the TiO2/CH3NH3PbI3 heterojunction interface with amino acid. <b>2015</b> , 3, 9133-9136	85

1578	Magnetic field effects in hybrid perovskite devices. <b>2015</b> , 11, 427-434	176
1577	Degradation observations of encapsulated planar CH3NH3PbI3 perovskite solar cells at high temperatures and humidity. <b>2015</b> , 3, 8139-8147	739
1576	Indolocarbazole based small molecules: an efficient hole transporting material for perovskite solar cells. <b>2015</b> , 5, 55321-55327	37
1575	AgAl alloy electrode for efficient perovskite solar cells. <b>2015</b> , 5, 56037-56044	19
1574	Bulk intermixing-type perovskite CHNHPbI/TiO[hanorod hybrid solar cells. 2015, 7, 14532-7	15
1573	Thickness effects of ZnO thin film on the performance of tri-iodide perovskite absorber based photovoltaics. <b>2015</b> , 120, 117-122	35
1572	Light stability tests of methylammonium and formamidinium Pb-halide perovskites for solar cell applications. <b>2015</b> , 54, 08KF08	47
1571	Mechanical properties of organic halide perovskites, CH3NH3PbX3 ( $X = I$ , Br and Cl), by nanoindentation. <b>2015</b> , 3, 18450-18455	139
1570	Optimizing Composition and Morphology for Large-Grain Perovskite Solar Cells via Chemical Control. <b>2015</b> , 27, 5570-5576	78
1569	Efficient and low-temperature processed perovskite solar cells based on a cross-linkable hybrid interlayer. <b>2015</b> , 3, 18483-18491	50
1568	Uncovering the Veil of the Degradation in Perovskite CH3NH3PbI3 upon Humidity Exposure: A First-Principles Study. <b>2015</b> , 6, 3289-3295	147
1567	Controllable Grain Morphology of Perovskite Absorber Film by Molecular Self-Assembly toward Efficient Solar Cell Exceeding 17%. <b>2015</b> , 137, 10399-405	314
1566	Three-step approach for computing band offsets and its application to inorganic ABX3 halide perovskites. <b>2015</b> , 92,	21
1565	Efficient planar perovskite solar cells with large fill factor and excellent stability. <b>2015</b> , 297, 53-58	51
1564	Effect of surface composition on electronic properties of methylammonium lead iodide perovskite. <b>2015</b> , 1, 213-220	42
1563	Efficient electron-blocking layer-free planar heterojunction perovskite solar cells with a high open-circuit voltage. <b>2015</b> , 26, 265-272	77
1562	Solvent-assisted growth of organic[horganic hybrid perovskites with enhanced photovoltaic performances. <b>2015</b> , 143, 360-368	14
1561	Exploring Thermochromic Behavior of Hydrated Hybrid Perovskites in Solar Cells. <b>2015</b> , 6, 3180-3184	76

1560	<b>2015</b> , 7, 16907-12	22
1559	Elucidating the role of disorder and free-carrier recombination kinetics in CH3NH3PbI3 perovskite films. <b>2015</b> , 6, 7903	112
1558	Interface engineering for high-performance perovskite hybrid solar cells. <b>2015</b> , 3, 19205-19217	127
1557	Additive regulated crystallization and film formation of CH3NH3PbI3\(\mathbb{B}\)Brx for highly efficient planar-heterojunction solar cells. <b>2015</b> , 3, 18514-18520	44
1556	A tubular perovskite solar cell: improvement of charge separation at the perovskite/HTM interface. <b>2015</b> , 51, 14076-9	15
1555	Energetics and dynamics in organic-inorganic halide perovskite photovoltaics and light emitters. <b>2015</b> , 26, 342001	61
1554	In-situ fabricated transparent conducting nanofiber-shape polyaniline/coral-like TiO2 thin film: Application in bifacial dye-sensitized solar cells. <b>2015</b> , 143, 284-295	22
1553	Blue-Green Color Tunable Solution Processable Organolead Chloride-Bromide Mixed Halide Perovskites for Optoelectronic Applications. <b>2015</b> , 15, 6095-101	369
1552	PbI2-Based Dipping-Controlled Material Conversion for Compact Layer Free Perovskite Solar Cells. <b>2015</b> , 7, 18156-62	60
1551	Photovoltaic performance and the energy landscape of CH3NH3PbI3. <b>2015</b> , 17, 22604-15	29
1550	First-Principles Design and Analysis of an Efficient, Pb-Free Ferroelectric Photovoltaic Absorber Derived from ZnSnO3. <b>2015</b> , 27, 5899-5906	16
1549	Ultrafast photoinduced dynamics of the organolead trihalide perovskite CH3NH3PbI3 on mesoporous TiO2 scaffolds in the 320-920 nm range. <b>2015</b> , 17, 19238-46	46
1548	Formamidinium tin-based perovskite with low Eg for photovoltaic applications. <b>2015</b> , 3, 14996-15000	338
1547	Hole-transport-material-free perovskite solar cells based on nanoporous gold back electrode. <b>2015</b> , 5, 58543-58548	18
1546	Recent advances in flexible perovskite solar cells. <b>2015</b> , 51, 14696-707	71
1545	A mesoporous nickel counter electrode for printable and reusable perovskite solar cells. <b>2015</b> , 7, 13363-8	51
1544	Perovskite solar cell using a two-dimensional titania nanosheet thin film as the compact layer. <b>2015</b> , 7, 15117-22	17
1543	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

1542	Transparent conducting oxide free backside illuminated perovskite solar cells. 2015, 107, 013901	8
1541	Core-shell heterostructured metal oxide arrays enable superior light-harvesting and hysteresis-free mesoscopic perovskite solar cells. <b>2015</b> , 7, 12812-9	41
1540	Ionic transport in hybrid lead iodide perovskite solar cells. <b>2015</b> , 6, 7497	1649
1539	CH3NH3PbI3 and CH3NH3PbI3\(\text{\textit{Z}}\)Clx in Planar or Mesoporous Perovskite Solar Cells: Comprehensive Insight into the Dependence of Performance on Architecture. <b>2015</b> , 119, 15868-15873	59
1538	High-Efficiency Polycrystalline Thin Film Tandem Solar Cells. <b>2015</b> , 6, 2676-81	147
1537	Heterogeneous Charge Carrier Dynamics in Organic-Inorganic Hybrid Materials: Nanoscale Lateral and Depth-Dependent Variation of Recombination Rates in Methylammonium Lead Halide Perovskite Thin Films. <b>2015</b> , 15, 4799-807	119
1536	Efficient fiber-shaped perovskite photovoltaics using silver nanowires as top electrode. <b>2015</b> , 3, 19310-19313	59
1535	Temperature dependent energy levels of methylammonium lead iodide perovskite. <b>2015</b> , 106, 243904	133
1534	High efficiency perovskite solar cells using a PCBM/ZnO double electron transport layer and a short air-aging step. <b>2015</b> , 26, 30-35	73
1533	Enhancing Stability of Perovskite Solar Cells to Moisture by the Facile Hydrophobic Passivation. <b>2015</b> , 7, 17330-6	249
1532	Hole transporting material-free and annealing-free thermal evaporated planar perovskite solar cells with an ultra-thin CH3NH3PbI3⊠ClX layer. <b>2015</b> , 26, 104-108	14
1531	Colloidal CuInS2 Quantum Dots as Inorganic Hole-Transporting Material in Perovskite Solar Cells. <b>2015</b> , 7, 17482-8	99
1530	Spatial Localization of Excitons and Charge Carriers in Hybrid Perovskite Thin Films. 2015, 6, 3041-7	54
1529	Excitons in ultrathin organic-inorganic perovskite crystals. <b>2015</b> , 92,	206
1528	Semitransparent Fully Air Processed Perovskite Solar Cells. <b>2015</b> , 7, 17776-81	65
1527	Suppressing Charge Recombination in ZnO-Nanorod-Based Perovskite Solar Cells with Atomic-Layer-Deposition TiO 2. <b>2015</b> , 32, 078401	17
1526	Perovskite solar cells: Brighter pieces of the puzzle. <b>2015</b> , 7, 616-7	13
1525	ADA-type S,N-heteropentacene-based hole transport materials for dopant-free perovskite solar cells. <b>2015</b> , 3, 17738-17746	94

1524	Highly porous Zinc Stannate (Zn2SnO4) nanofibers scaffold photoelectrodes for efficient methyl ammonium halide perovskite solar cells. <i>Scientific Reports</i> , <b>2015</b> , 5, 11424	4.9	87
1523	Study of planar heterojunction perovskite photovoltaic cells using compact titanium oxide by chemical bath deposition. <b>2015</b> , 54, 08KF02		5
1522	18.5% efficient graphene/GaAs van der Waals heterostructure solar cell. <b>2015</b> , 16, 310-319		145
1521	Perovskites for photovoltaics: a combined review of organicIhorganic halide perovskites and ferroelectric oxide perovskites. <b>2015</b> , 3, 18809-18828		186
1520	Exciton Binding Energy and the Nature of Emissive States in Organometal Halide Perovskites. <b>2015</b> , 6, 2969-75		171
1519	Ferroelectric Graphene-Perovskite Interfaces. <b>2015</b> , 6, 2496-502		60
1518	Towards design of metal oxide free perovskite solar cell paradigm: Materials processing and enhanced device performance. <b>2015</b> , 281, 599-605		6
1517	Under the spotlight: The organicihorganic hybrid halide perovskite for optoelectronic applications. <b>2015</b> , 10, 355-396		700
1516	Enhanced Amplified Spontaneous Emission in Perovskites Using a Flexible Cholesteric Liquid Crystal Reflector. <b>2015</b> , 15, 4935-41		97
1515	The optoelectronic role of chlorine in CH3NH3PbI3(Cl)-based perovskite solar cells. <b>2015</b> , 6, 7269		354
1514	Direct measurement of the exciton binding energy and effective masses for charge carriers in organicIhorganic tri-halide perovskites. <b>2015</b> , 11, 582-587		1282
1513	Recent progress in efficient hybrid lead halide perovskite solar cells. <b>2015</b> , 16, 036004		<del>72</del>
1512	Direct insight into crystallization and stability of hybrid perovskite CH3NH3PbI3via solvothermal synthesis. <b>2015</b> , 3, 15854-15857		20
1511	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
1510	Facile route to freestanding CH3NH3PbI3 crystals using inverse solubility. <i>Scientific Reports</i> , <b>2015</b> , 5, 11654	4.9	93
1509	Thermal Fluctuations on FEster Resonance Energy Transfer in Dyadic Solar Cell Sensitizers: A Combined Ab Initio Molecular Dynamics and TDDFT Investigation. <b>2015</b> , 119, 16490-16499		6
1508	Facile Synthesis and High Performance of a New Carbazole-Based Hole-Transporting Material for Hybrid Perovskite Solar Cells. <b>2015</b> , 2, 849-855		91
1507	Lead Iodide Thin Film Crystallization Control for High-Performance and Stable Solution-Processed Perovskite Solar Cells. <b>2015</b> , 7, 14614-9		65

1506	Effect of Spectral Irradiance Variations on the Performance of Highly Efficient Environment-Friendly Solar Cells. <b>2015</b> , 5, 1150-1157	11
1505	Spatial and temporal imaging of long-range charge transport in perovskite thin films by ultrafast microscopy. <b>2015</b> , 6, 7471	225
1504	Enhanced efficiency of planar-heterojunction perovskite solar cells through a thermal gradient annealing process. <b>2015</b> , 5, 58041-58045	10
1503	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
1502	Perovskite solar cells based on small molecule hole transporting materials. <b>2015</b> , 3, 18329-18344	78
1501	Precipitation of CH3NH3PbCl3 in CH3NH3PbI3 and Its Impact on Modulated Charge Separation. <b>2015</b> , 119, 9926-9933	41
1500	Low-temperature, solution processed metal sulfide as an electron transport layer for efficient planar perovskite solar cells. <b>2015</b> , 3, 11750-11755	108
1499	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 JIV curves. <b>2015</b> , 3, 12443-12451	57
1498	Stable and efficient hole transporting materials with a dimethylfluorenylamino moiety for perovskite solar cells. <b>2015</b> , 51, 9305-8	60
1497	Improved hole interfacial layer for planar perovskite solar cells with efficiency exceeding 15%. <b>2015</b> , 7, 9645-51	108
1496	Hybrid Perovskite Films by a New Variant of Pulsed Excimer Laser Deposition: A Room-Temperature Dry Process. <b>2015</b> , 119, 9177-9185	55
1495	Unipolar self-doping behavior in perovskite CH3NH3PbBr3. <b>2015</b> , 106, 103902	145
1494	A Switchable High-Sensitivity Photodetecting and Photovoltaic Device with Perovskite Absorber. <b>2015</b> , 6, 1773-9	66
1493	Planar CH3NH3PbI3 Perovskite Solar Cells with Constant 17.2% Average Power Conversion Efficiency Irrespective of the Scan Rate. <b>2015</b> , 27, 3424-30	401
1492	Efficient inorganic solid solar cells composed of perovskite and PbS quantum dots. 2015, 7, 9902-7	66
1491	A dopant-free organic hole transport material for efficient planar heterojunction perovskite solar cells. <b>2015</b> , 3, 11940-11947	182
1490	High-performance perovskite photoanode enabled by Ni passivation and catalysis. <b>2015</b> , 15, 3452-7	93
1489	Efficient perovskite/fullerene planar heterojunction solar cells with enhanced charge extraction and suppressed charge recombination. <b>2015</b> , 7, 9771-8	93

1488	Effects of Seed Layer on Growth of ZnO Nanorod and Performance of Perovskite Solar Cell. <b>2015</b> , 119, 10321-10328	130
1487	An Insight into Atmospheric Plasma Jet Modified ZnO Quantum Dots Thin Film for Flexible Perovskite Solar Cell: Optoelectronic Transient and Charge Trapping Studies. <b>2015</b> , 119, 10379-10390	62
1486	Mechanism of charge recombination in meso-structured organic-inorganic hybrid perovskite solar cells: A macroscopic perspective. <b>2015</b> , 117, 155504	15
1485	Efficient and stable planar heterojunction perovskite solar cells with an MoO3/PEDOT:PSS hole transporting layer. <b>2015</b> , 7, 9427-32	182
1484	Direct monitoring of ultrafast electron and hole dynamics in perovskite solar cells. <b>2015</b> , 17, 14674-84	124
1483	High-Performance Fully Printable Perovskite Solar Cells via Blade-Coating Technique under the Ambient Condition. <b>2015</b> , 5, 1500328	257
1482	Solution growth of single crystal methylammonium lead halide perovskite nanostructures for optoelectronic and photovoltaic applications. <b>2015</b> , 137, 5810-8	323
1481	A simple spiro-type hole transporting material for efficient perovskite solar cells. <b>2015</b> , 8, 1986-1991	184
1480	Insight into Perovskite Solar Cells Based on SnO2 Compact Electron-Selective Layer. <b>2015</b> , 119, 10212-10217	179
1479	Ferroelectric Polarization in CH3NH3PbI3 Perovskite. <b>2015</b> , 6, 1729-35	165
., -	Ferroelectric Polarization in CH3NH3PbI3 Perovskite. 2015, 6, 1729-35  Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. 2015, 8, 1953-1968	<ul><li>165</li><li>355</li></ul>
., -		
1478	Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. <b>2015</b> , 8, 1953-1968  Non-aggregated Zn(ii)octa(2,6-diphenylphenoxy) phthalocyanine as a hole transporting material for	355 76
1478	Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. <b>2015</b> , 8, 1953-1968  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	355 76
1478 1477 1476	Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. <b>2015</b> , 8, 1953-1968  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  Nonvolatile chlorinated additives adversely influence CH3NH3PbI3 based planar solar cells. <b>2015</b> , 3, 9137-914	355 76 0 <sub>32</sub>
1478 1477 1476	Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. 2015, 8, 1953-1968  Non-aggregated Zn(ii)octa(2,6-diphenylphenoxy) phthalocyanine as a hole transporting material for efficient perovskite solar cells. 2015, 44, 10847-51  Nonvolatile chlorinated additives adversely influence CH3NH3PbI3 based planar solar cells. 2015, 3, 9137-914  On the Role of Interfaces in Planar-Structured HC(NH2)2 PbI3 Perovskite Solar Cells. 2015, 8, 2414-9  Use of Anodic TiO2 Nanotube Layers as Mesoporous Scaffolds for Fabricating CH3NH3PbI3	355 76 0 <sub>32</sub> 56
1478 1477 1476 1475	Perovskite photovoltaics: life-cycle assessment of energy and environmental impacts. 2015, 8, 1953-1968  Non-aggregated Zn(ii)octa(2,6-diphenylphenoxy) phthalocyanine as a hole transporting material for efficient perovskite solar cells. 2015, 44, 10847-51  Nonvolatile chlorinated additives adversely influence CH3NH3PbI3 based planar solar cells. 2015, 3, 9137-914  On the Role of Interfaces in Planar-Structured HC(NH2) 2 PbI3 Perovskite Solar Cells. 2015, 8, 2414-9  Use of Anodic TiO2 Nanotube Layers as Mesoporous Scaffolds for Fabricating CH3NH3PbI3 Perovskite-Based Solid-State Solar Cells. 2015, 2, 824-828  Niobium Doping Effects on TiO2 Mesoscopic Electron Transport Layer-Based Perovskite Solar Cells.	355 76 0 <sub>32</sub> 56

1470	Employing PEDOT as the p-Type Charge Collection Layer in Regular Organic-Inorganic Perovskite Solar Cells. <b>2015</b> , 6, 1666-73	81
1469	Nanocolumnar 1-dimensional TiO2 photoanodes deposited by PVD-OAD for perovskite solar cell fabrication. <b>2015</b> , 3, 13291-13298	24
1468	Electronic structure evolution of fullerene on CH3NH3PbI3. <b>2015</b> , 106, 111603	43
1467	Impact of Processing Temperature and Composition on the Formation of Methylammonium Lead Iodide Perovskites. <b>2015</b> , 27, 4612-4619	184
1466	High Efficiency and Robust Performance of Organo Lead Perovskite Solar Cells with Large Grain Absorbers Prepared in Ambient Air Conditions. <b>2015</b> , 44, 321-323	28
1465	Chemical decoration of CH3NH3PbI3 perovskites with graphene oxides for photodetector applications. <b>2015</b> , 51, 9659-61	95
1464	Research progress of perovskite materials in photocatalysis- and photovoltaics-related energy conversion and environmental treatment. <b>2015</b> , 44, 5371-408	580
1463	Origin of the high open circuit voltage in planar heterojunction perovskite solar cells: Role of the reduced bimolecular recombination. <b>2015</b> , 117, 095502	63
1462	Efficient Semitransparent Perovskite Solar Cells with Graphene Electrodes. 2015, 27, 3632-8	387
1461	Fine-tuning optical and electronic properties of graphene oxide for highly efficient perovskite solar cells. <b>2015</b> , 7, 10708-18	66
1460	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
1459	Controlled thickness and morphology for highly efficient inverted planar heterojunction perovskite solar cells. <b>2015</b> , 7, 10699-707	20
1458	Exciton versus free carrier photogeneration in organometal trihalide perovskites probed by broadband ultrafast polarization memory dynamics. <b>2015</b> , 114, 116601	103
1457	Unraveling the Effect of PbI2 Concentration on Charge Recombination Kinetics in Perovskite Solar Cells. <b>2015</b> , 2, 589-594	86
1456	Optoelectronic Studies of Methylammonium Lead Iodide Perovskite Solar Cells with Mesoporous TiOESeparation of Electronic and Chemical Charge Storage, Understanding Two Recombination Lifetimes, and the Evolution of Band Offsets during J-V Hysteresis. <b>2015</b> , 137, 5087-99	227
1455	Efficient hole-blocking layer-free planar halide perovskite thin-film solar cells. <b>2015</b> , 6, 6700	314
1454	Crown-ether functionalized fullerene as a solution-processable cathode buffer layer for high performance perovskite and polymer solar cells. <b>2015</b> , 3, 9278-9284	59
1453	Highly efficient, flexible, indium-free perovskite solar cells employing metallic substrates. <b>2015</b> , 3, 9141-9145	119

1452	solar cells and their relationships to photovoltaic performances. <b>2015</b> , 3, 9308-9316	74
1451	Hole selective NiO contact for efficient perovskite solar cells with carbon electrode. <b>2015</b> , 15, 2402-8	357
1450	Completely transparent conducting oxide-free and flexible dye-sensitized solar cells fabricated on plastic substrates. <b>2015</b> , 9, 3760-71	86
1449	Surface analytical investigation on organometal triiodide perovskite. <b>2015</b> , 33, 032401	38
1448	The effect of carbon black in carbon counter electrode for CH3NH3PbI3/TiO2 heterojunction solar cells. <b>2015</b> , 5, 30192-30196	34
1447	CH3NH3PbI3 from non-iodide lead salts for perovskite solar cells via the formation of PbI2. <b>2015</b> , 17, 10369-72	20
1446	Improved environmental stability of organic lead trihalide perovskite-based photoactive-layers in the presence of mesoporous TiO2. <b>2015</b> , 3, 7219-7223	99
1445	Towards high efficiency air-processed near-infrared responsive photovoltaics: bulk heterojunction solar cells based on PbS/CdS core-shell quantum dots and TiO2 nanorod arrays. <b>2015</b> , 7, 10039-49	37
1444	A scalable electrodeposition route to the low-cost, versatile and controllable fabrication of perovskite solar cells. <b>2015</b> , 15, 216-226	160
1443	Tin perovskite/fullerene planar layer photovoltaics: improving the efficiency and stability of lead-free devices. <b>2015</b> , 3, 11631-11640	156
1442	Calculated optical absorption of different perovskite phases. <b>2015</b> , 3, 12343-12349	29
1441	Enhancing Thermal Stability and Lifetime of Solid-State Dye-Sensitized Solar Cells via Molecular Engineering of the Hole-Transporting Material Spiro-OMeTAD. <b>2015</b> , 7, 11107-16	229
1440	Recent Progress of Innovative Perovskite Hybrid Solar Cells. <b>2015</b> , 55, 966-977	30
1439	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
1438	Nanophotonic front electrodes for perovskite solar cells. <b>2015</b> , 106, 173101	45
1437	Highly efficient and stable planar heterojunction perovskite solar cells via a low temperature solution process. <b>2015</b> , 3, 12133-12138	81
1436	Metal-halide perovskites for photovoltaic and light-emitting devices. <b>2015</b> , 10, 391-402	2083
1435	Polarization Switching and Light-Enhanced Piezoelectricity in Lead Halide Perovskites. <b>2015</b> , 6, 1408-13	165

1434	Interfacial Charge Transfer Anisotropy in Polycrystalline Lead Iodide Perovskite Films. <b>2015</b> , 6, 1396-402	112
1433	Thermally-activated recombination in one component of (CH3NH3)PbI3/TiO2 observed by photocurrent spectroscopy. <b>2015</b> , 51, 7309-12	3
1432	Alternating precursor layer deposition for highly stable perovskite films towards efficient solar cells using vacuum deposition. <b>2015</b> , 3, 9401-9405	121
1431	Hysteresis-less inverted CH3NH3PbI3 planar perovskite hybrid solar cells with 18.1% power conversion efficiency. <b>2015</b> , 8, 1602-1608	973
1430	Enhancement of solar cell efficiency using perovskite dyes deposited via a two-step process. <b>2015</b> , 5, 33515-33523	6
1429	Radically grown obelisk-like ZnO arrays for perovskite solar cell fibers and fabrics through a mild solution process. <b>2015</b> , 3, 9406-9410	62
1428	The expanding world of hybrid perovskites: materials properties and emerging applications. <b>2015</b> , 5, 7-26	105
1427	Hybrid halide perovskite solar cell precursors: colloidal chemistry and coordination engineering behind device processing for high efficiency. <b>2015</b> , 137, 4460-8	481
1426	Interfacial Electron Transfer Barrier at Compact TiO2 /CH3 NH3 Pbl3 Heterojunction. 2015, 11, 3606-13	168
1425	Performance enhancement of perovskite-sensitized mesoscopic solar cells using Nb-doped TiO2 compact layer. <b>2015</b> , 8, 1997-2003	88
1424	Effect of Mesostructured Layer upon Crystalline Properties and Device Performance on Perovskite Solar Cells. <b>2015</b> , 6, 1628-37	69
1423	Low-temperature SnO2-based electron selective contact for efficient and stable perovskite solar cells. <b>2015</b> , 3, 10837-10844	272
1422	A two-step route to planar perovskite cells exhibiting reduced hysteresis. <b>2015</b> , 106, 143902	74
1421	Multifunctional MgO Layer in Perovskite Solar Cells. <b>2015</b> , 16, 1727-32	60
1420	Perovskite-Based Solar Cells With Nickel-Oxidized Nickel Oxide Hole Transfer Layer. <b>2015</b> , 62, 1590-1595	23
1419	Hierarchical ip and in porous heterojunction in planar perovskite solar cells. <b>2015</b> , 3, 10526-10535	13
1418	Interface engineering of perovskite solar cells with PEO for improved performance. <b>2015</b> , 3, 9999-10004	47
1417	Hysteretic Behavior upon Light Soaking in Perovskite Solar Cells Prepared via Modified Vapor-Assisted Solution Process. <b>2015</b> , 7, 9066-71	73

1416	50 nm sized spherical TiO2 nanocrystals for highly efficient mesoscopic perovskite solar cells. <b>2015</b> , 7, 8898-906	62
1415	Transition from the Tetragonal to Cubic Phase of Organohalide Perovskite: The Role of Chlorine in Crystal Formation of CH3NH3PbI3 on TiO2 Substrates. <b>2015</b> , 6, 4379-84	79
1414	Light-induced pyroelectric effect as an effective approach for ultrafast ultraviolet nanosensing. <b>2015</b> , 6, 8401	180
1413	Hot-carrier cooling and photoinduced refractive index changes in organic-inorganic lead halide perovskites. <b>2015</b> , 6, 8420	373
1412	Graphene-covered perovskites: an effective strategy to enhance light absorption and resist moisture degradation. <b>2015</b> , 5, 82346-82350	40
1411	Theoretical Investigation of Hole Transporter Materials for Energy Devices. <b>2015</b> , 119, 23890-23898	37
1410	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
1409	Metal electrode-free perovskite solar cells with transfer-laminated conducting polymer electrode. <b>2015</b> , 23, A83-91	47
1408	Degradation by Exposure of Coevaporated CH3NH3PbI3 Thin Films. 2015, 119, 23996-24002	95
1407	Minimizing energy losses in perovskite solar cells using plasma-treated transparent conducting layers. <b>2015</b> , 593, 10-16	16
1406	Fast-growing procedure for perovskite films in planar heterojunction perovskite solar cells. <b>2015</b> , 26, 1518-1521	16
1405	Additive-Modulated Evolution of HC(NH2)2PbI3 Black Polymorph for Mesoscopic Perovskite Solar Cells. <b>2015</b> , 27, 7149-7155	164
1404	High efficiency flexible perovskite solar cells using superior low temperature TiO2. <b>2015</b> , 8, 3208-3214	457
1403	Working Mechanism for Flexible Perovskite Solar Cells with Simplified Architecture. <b>2015</b> , 15, 6514-20	82
1402	Room-temperature, solution-processable organic electron extraction layer for high-performance planar heterojunction perovskite solar cells. <b>2015</b> , 7, 17343-9	62
1401	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
1400	Superior Optical Properties of Perovskite Nanocrystals as Single Photon Emitters. <b>2015</b> , 9, 12410-6	234
1399	TiO2 nanoparticle-based electron transport layer with improved wettability for efficient planar-heterojunction perovskite solar cell. <b>2015</b> , 24, 717-721	13

1398	A repeated interdiffusion method for efficient planar formamidinium perovskite solar cells. <b>2015</b> , 24, 707-711	17
1397	A novel phenoxazine-based hole transport material for efficient perovskite solar cell. <b>2015</b> , 24, 698-706	20
1396	Vibrational Properties of the OrganicIhorganic Halide Perovskite CH3NH3PbI3 from Theory and Experiment: Factor Group Analysis, First-Principles Calculations, and Low-Temperature Infrared Spectra. <b>2015</b> , 119, 25703-25718	220
1395	Mesoporous scaffolds based on TiO2 nanorods and nanoparticles for efficient hybrid perovskite solar cells. <b>2015</b> , 3, 24315-24321	22
1394	Improving the interfacial contact between CH3NH3PbI3⊠Clx and Au by LiTFSI solution treatment for efficient photoelectric devices. <b>2015</b> , 24, 693-697	11
1393	A general fabrication procedure for efficient and stable planar perovskite solar cells: Morphological and interfacial control by in-situ-generated layered perovskite. <b>2015</b> , 18, 165-175	73
1392	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. <b>2015</b> , 51, 17658-61	266
1391	Theoretical limit of power conversion efficiency for organic and hybrid halide perovskite photovoltaics. <b>2015</b> , 54, 08KF04	12
1390	Effects of annealing temperature of tin oxide electron selective layers on the performance of perovskite solar cells. <b>2015</b> , 3, 24163-24168	154
1389	Engineering of hole-selective contact for low temperature-processed carbon counter electrode-based perovskite solar cells. <b>2015</b> , 3, 24272-24280	68
1388	Efficient fully-vacuum-processed perovskite solar cells using copper phthalocyanine as hole selective layers. <b>2015</b> , 3, 23888-23894	136
1387	A [2,2]paracyclophane triarylamine-based hole-transporting material for high performance perovskite solar cells. <b>2015</b> , 3, 24215-24220	76
1386	Improving the efficiency of perovskite solar cells through optimization of the CH3NH3PbI3 film growth in solution process method. <b>2015</b> , 359, 560-566	36
1385	Goldschmidt Rules and Strontium Replacement in Lead Halogen Perovskite Solar Cells: Theory and Preliminary Experiments on CH3NH3SrI3. <b>2015</b> , 119, 25673-25683	169
1384	Functional p-Type, Polymerized Organic Electrode Interlayer in CHNHPbIIPerovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. <b>2015</b> , 7, 24973-81	30
1383	Band alignment and charge transfer in rutile-TiO2/CH3NH3PbI3-xClx interfaces. <b>2015</b> , 17, 30417-23	12
1382	High-performance perovskite solar cells fabricated by vapor deposition with optimized PbI2 precursor films. <b>2015</b> , 5, 95847-95853	15
1381	Band alignments at interface of ZnO/FAPbI3 heterojunction by X-ray photoelectron spectroscopy. <b>2015</b> , 357, 1743-1746	8

Spectrum-Dependent Spiro-OMeTAD Oxidization Mechanism in Perovskite Solar Cells. <b>2015</b> , 7, 24791-8	127
Improvement of CHNHPbllFormation for Efficient and Better Reproducible Mesoscopic Perovskite Solar Cells. <b>2015</b> , 7, 24726-32	42
Synthesis, Optical Properties, and Exciton Dynamics of Organolead Bromide Perovskite Nanocrystals. <b>2015</b> , 119, 26672-26682	83
Chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. <b>2015</b> , 27, 7240-7243	78
Strong Photocurrent from Two-Dimensional Excitons in Solution-Processed Stacked Perovskite Semiconductor Sheets. <b>2015</b> , 7, 25227-36	76
Texture of MAPbI3 Layers Assisted by Chloride on Flat TiO2 Substrates. <b>2015</b> , 119, 19808-19816	32
First-Principles Study of Ion Diffusion in Perovskite Solar Cell Sensitizers. <b>2015</b> , 137, 10048-51	456
Exciton and Free Charge Dynamics of Methylammonium Lead Iodide Perovskites Are Different in the Tetragonal and Orthorhombic Phases. <b>2015</b> , 119, 19590-19595	60
Infrared Colloidal Quantum Dot Photovoltaics via Coupling Enhancement and Agglomeration Suppression. <b>2015</b> , 9, 8833-42	73
Hole-conductor-free planar perovskite solar cells with 16.0% efficiency. <b>2015</b> , 3, 18389-18394	73
Subphthalocyanine as hole transporting material for perovskite solar cells. <b>2015</b> , 5, 69813-69818	40
The impact of precursor water content on solution-processed organometal halide perovskite films and solar cells. <b>2015</b> , 3, 19123-19128	51
The influence of different mask aperture on the open-circuit voltage measurement of perovskite solar cells. <b>2015</b> , 7, 043104	12
Dependence of device performance on the thickness of compact TiO2 layer in perovskite/TiO2 planar heterojunction solar cells. <b>2015</b> , 7, 043105	26
Dynamic Optical Properties of CHMHPbllsingle Crystals As Revealed by One- and Two-Photon Excited Photoluminescence Measurements. <b>2015</b> , 137, 10456-9	270
Stable semi-transparent CH3NH3PbI3 planar sandwich solar cells. <b>2015</b> , 8, 2922-2927	94
Organic Solar Cells. <b>2015</b> , 75-100	
GW Band Structures and Carrier Effective Masses of CH3NH3PbI3 and Hypothetical Perovskites of the Type APbI3: A = NH4, PH4, AsH4, and SbH4. <b>2015</b> , 119, 25209-25219	113
III S	mprovement of CHBIHBblFormation for Efficient and Better Reproducible Mesoscopic Perovskite Solar Cells. 2015, 7, 24726-32 (whichesis, Optical Properties, and Exciton Dynamics of Organolead Bromide Perovskite Janocrystals. 2015, 119, 26672-26682 (chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. 2015, 27, 7240-7243 (chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. 2015, 27, 7240-7243 (chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. 2015, 27, 7240-7243 (chlorine in PbCl2-Derived Hybrid-Perovskite Solar Cells Solation-Processed Stacked Perovskite Sircong Photocurrent from Two-Dimensional Excitons in Solution-Processed Stacked Perovskite Semiconductor Sheets. 2015, 7, 25227-36 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 119, 19808-19816 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 137, 10048-51 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 137, 10048-51 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 137, 10048-51 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 137, 10048-51 (cexture of MAPbi3 Layers Assisted by Chloride on Flat TiO2 Substrates. 2015, 137, 10048-51 (cexture of MAPbi3 Layers Assisted Perovskite Solar Cell Semistizers. 2015, 13, 18389-18394 (cexture of MAPbi3 Layers) (certure of MAPbi3 Layers) (cert

1362	The Significance of Ion Conduction in a Hybrid Organic-Inorganic Lead-Iodide-Based Perovskite Photosensitizer. <b>2015</b> , 54, 7905-10	372
1361	Copper iodide as inorganic hole conductor for perovskite solar cells with different thickness of mesoporous layer and hole transport layer. <b>2015</b> , 357, 2234-2240	46
1360	In-situ fabrication of dual porous titanium dioxide films as anode for carbon cathode based perovskite solar cell. <b>2015</b> , 24, 736-743	21
1359	Effect of temperature on the efficiency of organometallic perovskite solar cells. <b>2015</b> , 24, 729-735	42
1358	Lead-free germanium iodide perovskite materials for photovoltaic applications. <b>2015</b> , 3, 23829-23832	569
1357	Reduced Graphene Oxide/Mesoporous TiO2 Nanocomposite Based Perovskite Solar Cells. <b>2015</b> , 7, 23521-6	153
1356	Fabrication and integration of quasi-one-dimensional hierarchical TiO2 nanotubes for dye-sensitized solar cells. <b>2015</b> , 17, 8327-8331	9
1355	Interfacial charge-transfer transitions in a TiO2-benzenedithiol complex with Ti-S-C linkages. <b>2015</b> , 17, 29867-73	26
1354	Probing Photocurrent Generation, Charge Transport, and Recombination Mechanisms in Mesostructured Hybrid Perovskite through Photoconductivity Measurements. <b>2015</b> , 6, 4259-64	25
1353	Rashba Spin-Orbit Coupling Enhanced Carrier Lifetime in CHNHPbII2015, 15, 7794-800	363
1352	Multiscale morphology design of hybrid halide perovskites through a polymeric template. <b>2015</b> , 7, 18956-63	67
1351	The simulation of physical mechanism for HTM-free perovskite organic lead iodide planar heterojunction solar cells. <b>2015</b> , 17, 105904	20
1351	The simulation of physical mechanism for HTM-free perovskite organic lead iodide planar heterojunction solar cells. <b>2015</b> , 17, 105904  Visible-light activation of TiO2 photocatalysts: Advances in theory and experiments. <b>2015</b> , 25, 1-29	20 679
	heterojunction solar cells. <b>2015</b> , 17, 105904	
1350	heterojunction solar cells. <b>2015</b> , 17, 105904  Visible-light activation of TiO2 photocatalysts: Advances in theory and experiments. <b>2015</b> , 25, 1-29	679
1350 1349	heterojunction solar cells. 2015, 17, 105904  Visible-light activation of TiO2 photocatalysts: Advances in theory and experiments. 2015, 25, 1-29  Doping of TiO2 for sensitized solar cells. 2015, 44, 8326-49  Solvent engineering of spin-coating solutions for planar-structured high-efficiency perovskite solar	679
1350 1349 1348	Nisible-light activation of TiO2 photocatalysts: Advances in theory and experiments. 2015, 25, 1-29  Doping of TiO2 for sensitized solar cells. 2015, 44, 8326-49  Solvent engineering of spin-coating solutions for planar-structured high-efficiency perovskite solar cells. 2015, 36, 1183-1190	679 268 37

1344	Pseudohalide (SCN(-))-Doped MAPbI3 Perovskites: A Few Surprises. <b>2015</b> , 6, 3483-9	93
1343	Antagonism between Spin-Orbit Coupling and Steric Effects Causes Anomalous Band Gap Evolution in the Perovskite Photovoltaic Materials CH3NH3Sn1-xPbxI3. <b>2015</b> , 6, 3503-9	160
1342	Decomposition of Organometal Halide Perovskite Films on Zinc Oxide Nanoparticles. <b>2015</b> , 7, 19986-93	235
1341	Pressure-Induced Phase Transformation, Reversible Amorphization, and Anomalous Visible Light Response in Organolead Bromide Perovskite. <b>2015</b> , 137, 11144-9	226
1340	Well-Defined Thiolated Nanographene as Hole-Transporting Material for Efficient and Stable Perovskite Solar Cells. <b>2015</b> , 137, 10914-7	198
1339	Efficient charge-transport in hybrid lead iodide perovskite solar cells. <b>2015</b> , 44, 16914-22	17
1338	Low-cost solution-processed copper iodide as an alternative to PEDOT:PSS hole transport layer for efficient and stable inverted planar heterojunction perovskite solar cells. <b>2015</b> , 3, 19353-19359	191
1337	Improved charge transport and injection in a meso-superstructured solar cell by a tractable pre-spin-coating process. <b>2015</b> , 17, 24092-7	12
1336	Temperature-Dependent Polarization in Field-Effect Transport and Photovoltaic Measurements of Methylammonium Lead Iodide. <b>2015</b> , 6, 3565-71	89
1335	Consecutive Morphology Controlling Operations for Highly Reproducible Mesostructured Perovskite Solar Cells. <b>2015</b> , 7, 20707-13	39
1334	Reduced surface defects of organometallic perovskite by thermal annealing for highly efficient perovskite solar cells. <b>2015</b> , 5, 75622-75629	58
1333	Smooth CH3NH3PbI3 from controlled solidgas reaction for photovoltaic applications. <b>2015</b> , 5, 73760-73766	16
1332	Effect of solvents on the growth of TiO2 nanorods and their perovskite solar cells. <b>2015</b> , 3, 19476-19482	59
1331	Efficient Perovskite Hybrid Solar Cells via Controllable Crystallization Film Morphology. <b>2015</b> , 5, 1402-1407	4
1330	Highly efficient perovskite solar cells based on mechanically durable molybdenum cathode. <b>2015</b> , 17, 131-139	35
1329	Cupric bromide hybrid perovskite heterojunction solar cells. <b>2015</b> , 209, 247-250	75
1328	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid Emmonium chlorides. <b>2015</b> , 7, 703-11	898
1327	Revealing the role of Pb(2+) in the stability of organic-inorganic hybrid perovskite CH3NH3Pb1-xCdxI3: an experimental and theoretical study. <b>2015</b> , 17, 23886-96	33

1326	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
1325	Ionic Charge Transfer Complex Induced Visible Light Harvesting and Photocharge Generation in Perovskite. <b>2015</b> , 7, 20280-4	17
1324	Efficient, symmetric oligomer hole transporting materials with different cores for high performance perovskite solar cells. <b>2015</b> , 51, 15506-9	23
1323	Screening effect on photovoltaic performance in ferroelectric CH3NH3PbI3 perovskite thin films. <b>2015</b> , 3, 20352-20358	21
1322	A simple approach for the fabrication of perovskite solar cells in air. <b>2015</b> , 297, 504-510	55
1321	A resistance change effect in perovskite CH3NH3PbI3 films induced by ammonia. <b>2015</b> , 51, 15426-9	69
1320	Highly efficient planar perovskite solar cells with a TiO2/ZnO electron transport bilayer. <b>2015</b> , 3, 19288-19293	118
1319	A crosslinked fullerene matrix doped with an ionic fullerene as a cathodic buffer layer toward high-performance and thermally stable polymer and organic metallohalide perovskite solar cells. <b>2015</b> , 3, 20382-20388	34
1318	The Renaissance of Halide Perovskites and Their Evolution as Emerging Semiconductors. <b>2015</b> , 48, 2791-802	476
1317	Novel Carbazole-Based Hole-Transporting Materials with Star-Shaped Chemical Structures for Perovskite-Sensitized Solar Cells. <b>2015</b> , 7, 22213-7	93
1316	Synthesis and characterization of anatase TiO 2 nanosheet arrays on FTO substrate. <b>2015</b> , 24, 626-631	15
1315	Synthesis and optical properties of tetragonal CH3NH3PbIxBr3⊠ thin films. <b>2015</b> , 161, 484-487	5
1314	In-situ synthesis of metal nanoparticle-polymer composites and their application as efficient interfacial materials for both polymer and planar heterojunction perovskite solar cells. <b>2015</b> , 27, 46-52	18
1313	CH3NH3SnxPb1-xBr3 hybrid perovskite solid solution: synthesis, structure, and optical properties. <b>2015</b> , 54, 8893-5	41
1312	High reproducibility of perovskite solar cells via a complete spin-coating sequential solution deposition process. <b>2015</b> , 122, 97-103	38
1311	Ambipolar solution-processed hybrid perovskite phototransistors. <b>2015</b> , 6, 8238	447
1310	A simple, low-cost CVD route to high-quality CH3NH3PbI3 perovskite thin films. <b>2015</b> , 17, 7486-7489	23
1309	Titanate and titania nanostructured materials for environmental and energy applications: a review. <b>2015</b> , 5, 79479-79510	209

1308	Simple planar perovskite solar cells with a dopant-free benzodithiophene conjugated polymer as hole transporting material. <b>2015</b> , 3, 10070-10073	54
1307	Charge Transfer Dynamics from Organometal Halide Perovskite to Polymeric Hole Transport Materials in Hybrid Solar Cells. <b>2015</b> , 6, 3675-81	52
1306	Investigation on thermal evaporated CH3NH3PbI3 thin films. <b>2015</b> , 5, 097111	38
1305	Real-Time Observation of Organic Cation Reorientation in Methylammonium Lead Iodide Perovskites. <b>2015</b> , 6, 3663-9	281
1304	Artifacts in Absorption Measurements of Organometal Halide Perovskite Materials: What Are the Real Spectra?. <b>2015</b> , 6, 3466-70	79
1303	Mechanistic insights into perovskite photoluminescence enhancement: light curing with oxygen can boost yield thousandfold. <b>2015</b> , 17, 24978-87	272
1302	Structural investigation of co-evaporated methyl ammonium lead halide perovskite films during growth and thermal decomposition using different PbX2 ( $X = I$ , Cl) precursors. <b>2015</b> , 3, 19842-19849	33
1301	CH3NH3PbCl3 Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. <b>2015</b> , 6, 3781-6	507
1300	Controlled reaction for improved CH3NH3PbI3 transition in perovskite solar cells. <b>2015</b> , 44, 17841-9	12
1299	Efficient screen printed perovskite solar cells based on mesoscopic TiO2/Al2O3/NiO/carbon architecture. <b>2015</b> , 17, 171-179	225
1298	Controlling the conduction band offset for highly efficient ZnO nanorods based perovskite solar cell. <b>2015</b> , 107, 073507	52
1297	Simple fabrication of perovskite solar cells using lead acetate as lead source at low temperature. <b>2015</b> , 27, 12-17	31
1296	Polymer-Assisted Construction of Mesoporous TiO2 Layers for Improving Perovskite Solar Cell Performance. <b>2015</b> , 119, 22847-22854	25
1295	A solution-processed bathocuproine cathode interfacial layer for high-performance bromine-iodine perovskite solar cells. <b>2015</b> , 17, 26653-8	89
1294	Core/Shell Structured TiO2/CdS Electrode to Enhance the Light Stability of Perovskite Solar Cells. <b>2015</b> , 7, 27863-70	73
1293	Triazatruxene-Based Hole Transporting Materials for Highly Efficient Perovskite Solar Cells. <b>2015</b> , 137, 16172-8	268
1292	Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. <b>2015</b> , 6, 10030	492
1291	Degradation mechanism of perovskite CH3NH3PbI3 diode devices studied by electroluminescence and photoluminescence imaging spectroscopy. <b>2015</b> , 8, 102302	19

1290	Multifunctional Fullerene Derivative for Interface Engineering in Perovskite Solar Cells. <b>2015</b> , 137, 15540-7	433
1289	Bifunctional Polymer Nanocomposites as Hole-Transport Layers for Efficient Light Harvesting: Application to Perovskite Solar Cells. <b>2015</b> , 7, 27676-84	35
1288	Modulating the Electron-Hole Interaction in a Hybrid Lead Halide Perovskite with an Electric Field. <b>2015</b> , 137, 15451-9	51
1287	Electro-spray deposition of a mesoporous TiO2 charge collection layer: toward large scale and continuous production of high efficiency perovskite solar cells. <b>2015</b> , 7, 20725-33	33
1286	Solid state perovskite solar modules by vacuum-vapor assisted sequential deposition on Nd:YVOI laser patterned rutile TiOIhanorods. <b>2015</b> , 26, 494002	23
1285	WITHDRAWN: Efficient inorganic@rganic hybrid heterojunction solar cells containing perovskite compound. <b>2015</b> ,	1
1284	Spectral splitting photovoltaics using perovskite and wideband dye-sensitized solar cells. <b>2015</b> , 6, 8834	95
1283	Control of I-V hysteresis in CH3NH3PbI3 perovskite solar cell. <b>2015</b> , 6, 4633-9	379
1282	Highly efficient and stable planar perovskite solar cells with reduced graphene oxide nanosheets as electrode interlayer. <b>2015</b> , 12, 96-104	287
1281	Low temperature processing of flexible planar perovskite solar cells with efficiency over 10%. <b>2015</b> , 278, 325-331	77
1280	First-Principles Calculation of the Bulk Photovoltaic Effect in CH3NH3PbI3 and CH3NH3PbI(3-x)Cl(x). <b>2015</b> , 6, 31-7	155
1279	Inkjet printing of CH3NH3PbI3 on a mesoscopic TiO2 film for highly efficient perovskite solar cells. <b>2015</b> , 3, 9092-9097	175
1278	Emergence of Hysteresis and Transient Ferroelectric Response in Organo-Lead Halide Perovskite Solar Cells. <b>2015</b> , 6, 164-9	256
1277	Schottky junction solar cells based on non-stoichiometric PbOxfilms. <b>2015</b> , 48, 025102	4
1276	The essential role of the poly(3-hexylthiophene) hole transport layer in perovskite solar cells. <b>2015</b> , 274, 1224-1230	72
1275	Effects of interfacial characteristics on photovoltaic performance in CH 3 NH 3 PbBr 3 -based bulk perovskite solar cells with core/shell nanoarray as electron transporter. <b>2015</b> , 12, 59-68	51
1274	The combination of a new organic DA dye with different organic hole-transport materials for efficient solid-state dye-sensitized solar cells. <b>2015</b> , 3, 4420-4427	35
1273	Integrated perovskite/bulk-heterojunction toward efficient solar cells. <b>2015</b> , 15, 662-8	129

1272	Metal oxide semiconductors for dye- and quantum-dot-sensitized solar cells. <b>2015</b> , 11, 1744-74	97
1271	TiO2 nanotube arrays based flexible perovskite solar cells with transparent carbon nanotube electrode. <b>2015</b> , 11, 728-735	249
1270	Nanoscale charge localization induced by random orientations of organic molecules in hybrid perovskite CH3NH3PbI3. <b>2015</b> , 15, 248-53	211
1269	Optical properties and limiting photocurrent of thin-film perovskite solar cells. <b>2015</b> , 8, 602-609	335
1268	Density Functional Studies of Stoichiometric Surfaces of Orthorhombic Hybrid Perovskite CH3NH3PbI3. <b>2015</b> , 119, 1136-1145	64
1267	Perovskite-based solar cells: impact of morphology and device architecture on device performance. <b>2015</b> , 3, 8943-8969	465
1266	Recent advances in dye-sensitized photoelectrochemical cells for solar hydrogen production based on molecular components. <b>2015</b> , 8, 760-775	326
1265	Giant switchable photovoltaic effect in organometal trihalide perovskite devices. <b>2015</b> , 14, 193-8	1144
1264	Effect of different lead precursors on perovskite solar cell performance and stability. <b>2015</b> , 3, 9194-9200	121
1263	Perovskite solar cells: Switchable photovoltaics. <b>2015</b> , 14, 140-1	37
	Perovskite solar cells: Switchable photovoltaics. 2015, 14, 140-1  Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. 2015, 5, 3786-3791	37 126
1262		
1262	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. <b>2015</b> , 5, 3786-3791	126
1262 1261	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. <b>2015</b> , 5, 3786-3791  Perovskite solar cells: from materials to devices. <b>2015</b> , 11, 10-25  Enhancing efficiency of perovskite solar cell via surface microstructuring: Superior grain growth	126 967
1262 1261 1260	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. <b>2015</b> , 5, 3786-3791  Perovskite solar cells: from materials to devices. <b>2015</b> , 11, 10-25  Enhancing efficiency of perovskite solar cell via surface microstructuring: Superior grain growth and light harvesting effect. <b>2015</b> , 112, 12-19  Study of perovskite solar cells synthesized under ambient conditions and of the performance of	126 967 29
1262 1261 1260 1259	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. 2015, 5, 3786-3791  Perovskite solar cells: from materials to devices. 2015, 11, 10-25  Enhancing efficiency of perovskite solar cell via surface microstructuring: Superior grain growth and light harvesting effect. 2015, 112, 12-19  Study of perovskite solar cells synthesized under ambient conditions and of the performance of small cell modules. 2015, 134, 60-63	126 967 29 47
1262 1261 1260 1259 1258	Perovskite solar cell with low cost Cu-phthalocyanine as hole transporting material. 2015, 5, 3786-3791  Perovskite solar cells: from materials to devices. 2015, 11, 10-25  Enhancing efficiency of perovskite solar cell via surface microstructuring: Superior grain growth and light harvesting effect. 2015, 112, 12-19  Study of perovskite solar cells synthesized under ambient conditions and of the performance of small cell modules. 2015, 134, 60-63  Review of recent progress in chemical stability of perovskite solar cells. 2015, 3, 8970-8980	126 967 29 47 1337

1254	Optical Description of Mesostructured Organic-Inorganic Halide Perovskite Solar Cells. <b>2015</b> , 6, 48-53		51
1253	Electrodeposition of PbO and its in situ conversion to CH3NH3PbI3 for mesoscopic perovskite solar cells. <b>2015</b> , 51, 1457-60		51
1252	An acid-free medium growth of rutile TiO2 nanorods arrays and their application in perovskite solar cells. <b>2015</b> , 3, 729-733		45
1251	Metallohalide perovskitepolymer composite film for hybrid planar heterojunction solar cells. <b>2015</b> , 5, 775-783		64
1250	Bulk crystal growth of hybrid perovskite material CH3NH3Pbl3. <b>2015</b> , 17, 665-670		390
1249	p-type Mesoscopic nickel oxide/organometallic perovskite heterojunction solar cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 4756	4.9	333
1248	Printable solar cells. <b>2015</b> , 4, 51-73		10
1247	Relativistic GW calculations on CH3NH3PbI3 and CH3NH3SnI3 perovskites for solar cell applications. <i>Scientific Reports</i> , <b>2014</b> , 4, 4467	4.9	910
1246	Enhanced Environmental Stability of Planar Heterojunction Perovskite Solar Cells Based on Blade-Coating. <b>2015</b> , 5, 1401229		278
1245	Band alignment of the hybrid halide perovskites CH3NH3PbCl3, CH3NH3PbBr3 and CH3NH3PbI3. <b>2015</b> , 2, 228-231		198
1244	Efficient CH3NH3PbI3 perovskite solar cells with 2TPA-n-DP hole-transporting layers. <b>2015</b> , 8, 1116-112	.7	60
1243	Electronic structures at the interface between Au and CH3NH3PbI3. <b>2015</b> , 17, 896-902		72
1242	Thermal assisted oxygen annealing for high efficiency planar CHNHPblDerovskite solar cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 6752	4.9	88
1241	CH3NH3PbI3 Perovskite Sensitized Solar Cells Using a D-A Copolymer as Hole Transport Material. <b>2015</b> , 151, 21-26		50
1240	OrganicIhorganic halide perovskites: an ambipolar class of materials with enhanced photovoltaic performances. <b>2015</b> , 3, 8981-8991		89
1239	Stable and low-cost mesoscopic CH3NH3PbI2 Br perovskite solar cells by using a thin poly(3-hexylthiophene) layer as a hole transporter. <b>2015</b> , 21, 434-9		92
1238	3D Printer Based Slot-Die Coater as a Lab-to-Fab Translation Tool for Solution-Processed Solar Cells. <b>2015</b> , 5, 1401539		159
1237	Reversible photo-induced trap formation in mixed-halide hybrid perovskites for photovoltaics. <b>2015</b> , 6, 613-617		1266

1236	Temperature induced structural, electrical and optical changes in solution processed perovskite material: Application in photovoltaics. <b>2015</b> , 132, 615-622	54
1235	Efficiency enhancement of planar perovskite solar cells by adding zwitterion/LiF double interlayers for electron collection. <b>2015</b> , 7, 896-900	119
1234	Effects of spectral coupling on perovskite solar cells under diverse climatic conditions. <b>2015</b> , 133, 92-98	38
1233	Recent progress in organicIhorganic halide perovskite solar cells: mechanisms and material design. <b>2015</b> , 3, 8992-9010	133
1232	Synthesis of oriented TiO2 nanocones with fast charge transfer for perovskite solar cells. <b>2015</b> , 11, 409-418	157
1231	Opto-electronic properties of TiO2 nanohelices with embedded HC(NH2)2PbI3 perovskite solar cells. <b>2015</b> , 3, 9179-9186	60
1230	Planar heterojunction perovskite solar cells with superior reproducibility. <i>Scientific Reports</i> , <b>2014</b> , 4, 695 <b>3</b> .9	190
1229	Organic-inorganic halide perovskite/crystalline silicon four-terminal tandem solar cells. <b>2015</b> , 17, 1619-29	257
1228	Energy barrier at the N719-dye/CsSnIIInterface for photogenerated holes in dye-sensitized solar cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 6954	74
1227	The identification and characterization of defect states in hybrid organic-inorganic perovskite photovoltaics. <b>2015</b> , 17, 112-6	285
1226	Scalable route to CH3NH3PbI3 perovskite thin films by aerosol assisted chemical vapour deposition. <b>2015</b> , 3, 9071-9073	67
1225	Halide perovskite materials for solar cells: a theoretical review. <b>2015</b> , 3, 8926-8942	882
1224	Radiative efficiency of lead iodide based perovskite solar cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 6071 4.9	224
1223	High-Performance Planar-Heterojunction Solar Cells Based on Ternary Halide Large-Band-Gap Perovskites. <b>2015</b> , 5, 1400960	108
1222	Recent advances in dye-sensitized solar cells: from photoanodes, sensitizers and electrolytes to counter electrodes. <b>2015</b> , 18, 155-162	511
1221	The effect of carbon counter electrodes on fully printable mesoscopic perovskite solar cells. <b>2015</b> , 3, 9165-9170	179
1220	Perovskite solar cells: an emerging photovoltaic technology. <b>2015</b> , 18, 65-72	1073
1219	Retarding charge recombination in perovskite solar cells using ultrathin MgO-coated TiO2 nanoparticulate films. <b>2015</b> , 3, 9160-9164	142

1218	Highly efficient and bending durable perovskite solar cells: toward a wearable power source. <b>2015</b> , 8, 916-921	518
1217	High efficiency photovoltaic module based on mesoscopic organometal halide perovskite. <b>2016</b> , 24, 436-445	99
1216	Structural and Quantitative Investigation of Perovskite Pore Filling in Mesoporous Metal Oxides. <b>2016</b> , 6, 149	6
1215	Thermal treatment of solution-processed nano-sized thin films of molybdenum oxide. <b>2016</b> , 764, 012011	3
1214	Effect of Perovskite Film Preparation on Performance of Solar Cells. <b>2016</b> , 2016, 1-10	5
1213	Study of Electrical Transport Properties of Thin Films Used as HTL and as Active Layer in Organic Solar Cells, through Impedance Spectroscopy Measurements. <b>2016</b> , 2016, 1-7	2
1212	Characterization and Photovoltaic Properties of BiFeO3 Thin Films. <b>2016</b> , 6, 68	11
1211	Thin Films for Advanced Glazing Applications. <b>2016</b> , 6, 37	23
<b>121</b> 0	Inorganic p-Type Semiconductors: Their Applications and Progress in Dye-Sensitized Solar Cells and Perovskite Solar Cells. <b>2016</b> , 9, 331	57
1209	Perovskite Solar Cells: Progress and Advancements. <b>2016</b> , 9, 861	71
	Perovskite Solar Cells: Progress and Advancements. <b>2016</b> , 9, 861  Crystal Structure Formation of CHNHPbICl Perovskite. <b>2016</b> , 9,	71 72
1208		
1208	Crystal Structure Formation of CHNHPbICl Perovskite. 2016, 9,	72
1208 1207 1206	Crystal Structure Formation of CHINHIP bICl Perovskite. 2016, 9,  EConjugated Materials as the Hole-Transporting Layer in Perovskite Solar Cells. 2016, 6, 21	7 <sup>2</sup> 35
1208 1207 1206	Crystal Structure Formation of CHNHPbICl Perovskite. 2016, 9,  EConjugated Materials as the Hole-Transporting Layer in Perovskite Solar Cells. 2016, 6, 21  Effects of Cl Addition to Sb-Doped Perovskite-Type CH3NH3PbI3 Photovoltaic Devices. 2016, 6, 147	7 <sup>2</sup> 35 37
1208 1207 1206 1205	Crystal Structure Formation of CHNHPbICl Perovskite. 2016, 9,  EConjugated Materials as the Hole-Transporting Layer in Perovskite Solar Cells. 2016, 6, 21  Effects of Cl Addition to Sb-Doped Perovskite-Type CH3NH3PbI3 Photovoltaic Devices. 2016, 6, 147  Neutral- and Multi-Colored Semitransparent Perovskite Solar Cells. 2016, 21, 475  Highly Efficient Reproducible Perovskite Solar Cells Prepared by Low-Temperature Processing.	7 <sup>2</sup> 35 37 46
1208 1207 1206 1205	Crystal Structure Formation of CHNHPblCl Perovskite. 2016, 9,  EConjugated Materials as the Hole-Transporting Layer in Perovskite Solar Cells. 2016, 6, 21  Effects of Cl Addition to Sb-Doped Perovskite-Type CH3NH3Pbl3 Photovoltaic Devices. 2016, 6, 147  Neutral- and Multi-Colored Semitransparent Perovskite Solar Cells. 2016, 21, 475  Highly Efficient Reproducible Perovskite Solar Cells Prepared by Low-Temperature Processing. 2016, 21, 542  Recent Advances in Interface Engineering for Planar Heterojunction Perovskite Solar Cells. 2016,	72 35 37 46

# (2016-2016)

1200	A Simple Route to Reduced Graphene Oxide-Draped Nanocomposites with Markedly Enhanced Visible-Light Photocatalytic Performance. <b>2016</b> , 12, 4077-85	29
1199	Probing the Photovoltage and Photocurrent in Perovskite Solar Cells with Nanoscale Resolution. <b>2016</b> , 26, 3048-3058	64
1198	Enhanced Stability of Perovskite Solar Cells with Low-Temperature Hydrothermally Grown SnO2 Electron Transport Layers. <b>2016</b> , 26, 6069-6075	128
1197	CH3 NH3 PbBr3 -CH3 NH3 PbI3 Perovskite-Perovskite Tandem Solar Cells with Exceeding 2.2 V Open Circuit Voltage. <b>2016</b> , 28, 5121-5	164
1196	Fast and Sensitive Solution-Processed Visible-Blind Perovskite UV Photodetectors. <b>2016</b> , 28, 7264-8	192
1195	Moisture and Oxygen Enhance Conductivity of LiTFSI-Doped Spiro-MeOTAD Hole Transport Layer in Perovskite Solar Cells. <b>2016</b> , 3, 1600117	88
1194	Mesoporous PbI2 Scaffold for High-Performance Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 6, 1501890	102
1193	Inverted Perovskite Solar Cells: Progresses and Perspectives. <b>2016</b> , 6, 1600457	294
1192	The Progress of Interface Design in Perovskite-Based Solar Cells. <b>2016</b> , 6, 1600460	121
1191	Stability issues of the next generation solar cells. <b>2016</b> , 10, 281-299	54
1190	Effects of a Molecular Monolayer Modification of NiO Nanocrystal Layer Surfaces on Perovskite Crystallization and Interface Contact toward Faster Hole Extraction and Higher Photovoltaic Performance. <b>2016</b> , 26, 2950-2958	239
1189		
)	Understanding Interface Engineering for High-Performance Fullerene/Perovskite Planar Heterojunction Solar Cells. <b>2016</b> , 6, 1501606	156
1188		156
	Heterojunction Solar Cells. <b>2016</b> , 6, 1501606  Implementation and Validation of Fully Relativistic GW Calculations: Spin-Orbit Coupling in	
1188	Heterojunction Solar Cells. <b>2016</b> , 6, 1501606  Implementation and Validation of Fully Relativistic GW Calculations: Spin-Orbit Coupling in Molecules, Nanocrystals, and Solids. <b>2016</b> , 12, 3523-44  A close examination of the structure and dynamics of HC(NH)PbI by MD simulations and group	105
1188	Implementation and Validation of Fully Relativistic GW Calculations: Spin-Orbit Coupling in Molecules, Nanocrystals, and Solids. 2016, 12, 3523-44  A close examination of the structure and dynamics of HC(NH)PbI by MD simulations and group theory. 2016, 18, 27109-27118  Light stability tests of CHNHPbI perovskite solar cells using porous carbon counter electrodes.	105
1188 1187 1186	Implementation and Validation of Fully Relativistic GW Calculations: Spin-Orbit Coupling in Molecules, Nanocrystals, and Solids. 2016, 12, 3523-44  A close examination of the structure and dynamics of HC(NH)PbI by MD simulations and group theory. 2016, 18, 27109-27118  Light stability tests of CHNHPbI perovskite solar cells using porous carbon counter electrodes. 2016, 18, 27102-27108  High-Efficiency Perovskite Solar Cells Employing a S,N-Heteropentacene-based D-A Hole-Transport	105 41 36

1182	Stable OrganicIhorganic Perovskite Solar Cells without Hole-Conductor Layer Achieved via Cell Structure Design and Contact Engineering. <b>2016</b> , 26, 4866-4873	70
1181	Improving Performance and Stability of Flexible Planar-Heterojunction Perovskite Solar Cells Using Polymeric Hole-Transport Material. <b>2016</b> , 26, 4464-4471	120
1180	Identifying Fundamental Limitations in Halide Perovskite Solar Cells. <b>2016</b> , 28, 2439-45	103
1179	Ion Migration and the Role of Preconditioning Cycles in the Stabilization of the Jl Characteristics of Inverted Hybrid Perovskite Solar Cells. <b>2016</b> , 6, 1501453	139
1178	Empowering Semi-Transparent Solar Cells with Thermal-Mirror Functionality. <b>2016</b> , 6, 1502466	49
1177	Impact of Monovalent Cation Halide Additives on the Structural and Optoelectronic Properties of CH3NH3PbI3 Perovskite. <b>2016</b> , 6, 1502472	171
1176	Highly Efficient Perovskite Solar Cells Employing an Easily Attainable Bifluorenylidene-Based Hole-Transporting Material. <b>2016</b> , 128, 7590-7594	28
1175	Benzotrithiophene-Based Hole-Transporting Materials for 18.2 % Perovskite Solar Cells. <b>2016</b> , 55, 6270-4	165
1174	Highly Efficient Perovskite Solar Cells Employing an Easily Attainable Bifluorenylidene-Based Hole-Transporting Material. <b>2016</b> , 55, 7464-8	141
1173	Interfacial Engineering for Quantum-Dot-Sensitized Solar Cells. <b>2016</b> , 11, 1183-93	17
1172	N-phenylindole-diketopyrrolopyrrole-containing narrow band-gap materials for dopant-free hole transporting layer of perovskite solar cell. <b>2016</b> , 37, 134-140	34
1171	Low Cost and Solution Processed Interfacial Layer Based on Poly(2-ethyl-2-oxazoline) Nanodots for Inverted Perovskite Solar Cells. <b>2016</b> , 28, 4879-4883	40
1170	Electric-Field-Driven Reversible Conversion Between Methylammonium Lead Triiodide Perovskites and Lead Iodide at Elevated Temperatures. <b>2016</b> , 6, 1501803	228
1169	Nanostructuring Mixed-Dimensional Perovskites: A Route Toward Tunable, Efficient Photovoltaics. <b>2016</b> , 28, 3653-61	201
1168	Improve Hole Collection by Interfacial Chemical Redox Reaction at a Mesoscopic NiO/CH3NH3PbI3 Heterojunction for Efficient Photovoltaic Cells. <b>2016</b> , 3, 1600135	14
1167	A Solution-Processed Organometal Halide Perovskite Hole Transport Layer for Highly Efficient Organic Light-Emitting Diodes. <b>2016</b> , 2, 1600165	22
1166	Hole-Transporting Materials for Perovskite-Sensitized Solar Cells. <b>2016</b> , 4, 891-938	42
1165	Highly luminescent and stable layered perovskite as the emitter for light emitting diodes. <b>2016</b> , 213, 2727-2732	28

1164	Thermodynamic stability of mixed Pb:Sn methyl-ammonium halide perovskites. <b>2016</b> , 253, 1907-1915	17
1163	Effective Improvement of the Photovoltaic Performance of Carbon-Based Perovskite Solar Cells by Additional Solvents. <b>2016</b> , 8, 347-357	63
1162	Local Time-Dependent Charging in a Perovskite Solar Cell. <b>2016</b> , 8, 19402-9	95
1161	Effective control of crystal grain size in CH3NH3PbI3 perovskite solar cells with a pseudohalide Pb(SCN)2 additive. <b>2016</b> , 18, 6090-6095	71
1160	An efficient perovskite solar cell with symmetrical Zn(ii) phthalocyanine infiltrated buffering porous AlO as the hybrid interfacial hole-transporting layer. <b>2016</b> , 18, 27083-27089	31
1159	Triangular lasing modes in hexagonal perovskite microplates with balanced gain and loss. <b>2016</b> , 6, 64589-6459	944
1158	Optical analysis of CHNHSn Pb I absorbers: a roadmap for perovskite-on-perovskite tandem solar cells. <b>2016</b> , 4, 11214-11221	87
1157	Vapour-assisted multi-functional perovskite thin films for solar cells and photodetectors. <b>2016</b> , 4, 7415-7419	18
1156	Unraveling the Role of Monovalent Halides in Mixed-Halide Organic-Inorganic Perovskites. <b>2016</b> , 17, 913-20	13
1155	Mixed-Halide CH3 NH3 PbI3-x Xx (X=Cl, Br, I) Perovskites: Vapor-Assisted Solution Deposition and Application as Solar Cell Absorbers. <b>2016</b> , 17, 2382-8	36
1154	A New 1,3,4-Oxadiazole-Based Hole-Transport Material for Efficient CH3 NH3 PbBr3 Perovskite Solar Cells. <b>2016</b> , 9, 657-61	29
1153	Efficiency and Stability Enhancement in Perovskite Solar Cells by Inserting Lithium-Neutralized Graphene Oxide as Electron Transporting Layer. <b>2016</b> , 26, 2686-2694	154
1152	Enhanced Charge Collection with Passivation Layers in Perovskite Solar Cells. <b>2016</b> , 28, 3966-72	140
1151	The In-Gap Electronic State Spectrum of Methylammonium Lead Iodide Single-Crystal Perovskites. <b>2016</b> , 28, 3406-10	151
1150	Copper-Doped Chromium Oxide Hole-Transporting Layer for Perovskite Solar Cells: Interface Engineering and Performance Improvement. <b>2016</b> , 3, 1500799	52
1149	Recent Advances in Improving the Stability of Perovskite Solar Cells. <b>2016</b> , 6, 1501420	251
1148	Transparent Conductive Oxide-Free Graphene-Based Perovskite Solar Cells with over 17% Efficiency. <b>2016</b> , 6, 1501873	161
1147	Hole-Conductor-Free Fully Printable Mesoscopic Solar Cell with Mixed-Anion Perovskite CH3NH3PbI(3☑)(BF4)x. <b>2016</b> , 6, 1502009	132

1146	Solvent Engineering Boosts the Efficiency of Paintable Carbon-Based Perovskite Solar Cells to Beyond 14%. <b>2016</b> , 6, 1502087		262
1145	Improved Efficiency in Inverted Perovskite Solar Cells Employing a Novel Diarylamino-Substituted Molecule as PEDOT:PSS Replacement. <b>2016</b> , 6, 1502101		63
1144	Performance Improvement of CH3NH3PbI3 Perovskite Solar Cell by CH3SH Doping. <b>2016</b> , 6, 24		6
1143	Effects of Processing Parameters on Zinc Oxide Thin Films Prepared by Single Solution Deposition. <b>2016</b> , 1, 3199-3205		
1142	Evaluation of band offset at amorphous-Si/BaSi2 interfaces by hard x-ray photoelectron spectroscopy. <b>2016</b> , 119, 165304		23
1141	Semitransparent Solar Cells with Ultrasmooth and Low-Scattering Perovskite Thin Films. <b>2016</b> , 120, 2893	33-28	9 <b>38</b>
1140	Bismuth Iodide Perovskite Materials for Solar Cell Applications: Electronic Structure, Optical Transitions, and Directional Charge Transport. <b>2016</b> , 120, 29039-29046		96
1139	UV Degradation and Recovery of Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2016</b> , 6, 38150	4.9	195
1138	Temperature Dependence of the Energy Levels of Methylammonium Lead Iodide Perovskite from First-Principles. <b>2016</b> , 7, 5247-5252		69
1137	Iodine Migration and Degradation of Perovskite Solar Cells Enhanced by Metallic Electrodes. <b>2016</b> , 7, 5168-5175		157
1136	Fulleropyrrolidinium Iodide As an Efficient Electron Transport Layer for Air-Stable Planar Perovskite Solar Cells. <b>2016</b> , 8, 34612-34619		21
1135	Effects of chlorine addition to perovskite-type CH3NH3PbI3 photovoltaic devices. <b>2016</b> , 124, 234-238		29
1134	Fabrication and characterization of bismuth ferrite as an electron transport layer in perovskite photovoltaic devices. <b>2016</b> , 124, 602-605		3
1133	Purcell effect in an organic-inorganic halide perovskite semiconductor microcavity system. <b>2016</b> , 108, 022103		28
1132	Research Update: The electronic structure of hybrid perovskite layers and their energetic alignment in devices. <b>2016</b> , 4, 091502		48
1131	Photoelectric characteristics of CH3NH3PbI3/p-Si heterojunction. <b>2016</b> , 37, 053002		4
1130	The physics of photon induced degradation of perovskite solar cells. <b>2016</b> , 6, 115114		39
1129	Efficient thermal conductance in organometallic perovskite CH3NH3PbI3 films. <b>2016</b> , 108, 081902		21

1128	Research Update: Hybrid organic-inorganic perovskite (HOIP) thin films and solar cells by vapor phase reaction. <b>2016</b> , 4, 091509	26
1127	Research Update: Behind the high efficiency of hybrid perovskite solar cells. <b>2016</b> , 4, 091505	36
1126	Observation of lower defect density in CH3NH3Pb(I,Cl)3 solar cells by admittance spectroscopy. <b>2016</b> , 108, 243501	19
1125	CH3NH3Cd0.875Pb0.125I3 perovskite as potential photovoltaic materials. <b>2016</b> , 6, 115208	4
1124	Near IR sensitive Sn based perovskite solar cells with high current density reaching 30mA/cm2. <b>2016</b> ,	1
1123	Degradation mechanism for planar heterojunction perovskite solar cells. <b>2016</b> , 55, 04ES07	8
1122	Solution-processed perovskite for direct X-ray detection. <b>2016</b> ,	2
1121	~3-nm ZnO Nanoislands Deposition and Application in Charge Trapping Memory Grown by Single ALD Step. <i>Scientific Reports</i> , <b>2016</b> , 6, 38712	22
<b>112</b> 0	Fabrication and characteristics of CH3NH3PbI3 perovskite solar cells with molybdenum-selenide hole-transport layer. <b>2016</b> , 9, 122301	11
1119	Quantitative determination of optical and recombination losses in thin-film photovoltaic devices based on external quantum efficiency analysis. <b>2016</b> , 120, 064505	81
1118	Research Update: Overview of progress about efficiency and stability on perovskite solar cells. <b>2016</b> , 4, 091504	23
1117	Electronic and optical properties of mixed perovskites CsSnxPb(1☑)I3. <b>2016</b> , 6, 065213	10
1116	Nature of the cubic to tetragonal phase transition in methylammonium lead iodide perovskite. <b>2016</b> , 145, 144702	41
1115	Optical approaches to improving perovskite/Si tandem cells. <b>2016</b> , 1, 901-910	3
1114	Perovskite FA1-xMAxPbI3 for Solar Cells: Films Formation and Properties. <b>2016</b> , 102, 87-95	42
1113	Fine-tuning the metallic core-shell nanostructures for plasmonic perovskite solar cells. <b>2016</b> , 109, 183901	28
1112	Lattice thermal conductivity of organic-inorganic hybrid perovskite CH3NH3PbI3. <b>2016</b> , 108, 063902	84
1111	Research Update: Challenges for high-efficiency hybrid lead-halide perovskite LEDs and the path towards electrically pumped lasing. <b>2016</b> , 4, 091507	48

1110	Characterization of perovskite solar cells: Towards a reliable measurement protocol. <b>2016</b> , 4, 091901		79
1109	Room-temperature electroluminescence from two-dimensional lead halide perovskites. <b>2016</b> , 109, 1511	01	58
1108	Phosphor coated NiO-based planar inverted organometallic halide perovskite solar cells with enhanced efficiency and stability. <b>2016</b> , 109, 171103		22
1107	On Mott-Schottky analysis interpretation of capacitance measurements in organometal perovskite solar cells. <b>2016</b> , 109, 173903		211
1106	Improving the photovoltaic performance of perovskite solar cells with acetate. <i>Scientific Reports</i> , <b>2016</b> , 6, 38670	4.9	41
1105	FAMASnPbI Hybrid Perovskite Solid Solution: Toward Environmentally Friendly, Stable, and Near-IR Absorbing Materials. <b>2016</b> , 55, 12752-12757		8
1104	Room-Temperature Atomic Layer Deposition of Al O : Impact on Efficiency, Stability and Surface Properties in Perovskite Solar Cells. <b>2016</b> , 9, 3401-3406		72
1103	High Consistency Perovskite Solar Cell with a Consecutive Compact and Mesoporous TiO Film by One-Step Spin-Coating. <b>2016</b> , 8, 35440-35446		25
1102	The nature of free-carrier transport in organometal halide perovskites. <i>Scientific Reports</i> , <b>2016</b> , 6, 19599	4.9	35
1101	The nature of hydrogen-bonding interaction in the prototypic hybrid halide perovskite, tetragonal CH3NH3PbI3. <i>Scientific Reports</i> , <b>2016</b> , 6, 21687	4.9	95
1100	Oxygen influencing the photocarriers lifetime of CH3NH3PbI3\(\mathbb{I}\)Clx film grown by two-step interdiffusion method and its photovoltaic performance. <b>2016</b> , 108, 033904		23
1099	Tunable bandgap in hybrid perovskite CH3NH3Pb(Br3ŪXy) single crystals and photodetector applications. <b>2016</b> , 6, 045115		50
1098	Polymer nanocomposite for improving light harvesting of perovskite solar cells. <b>2016</b> ,		
1097	Energy yield potential of perovskite-silicon tandem devices. 2016,		8
1096	Density functional theory + U modeling of polarons in organohalide lead perovskites. <b>2016</b> , 6, 125037		17
1095	Solar Electricity and Solar Fuels: Status and Perspectives in the Context of the Energy Transition. <b>2016</b> , 22, 32-57		239
1094	Effects of UV-ozone irradiation on copper doped nickel acetate and its applicability to perovskite solar cells. <b>2016</b> , 8, 9284-92		34
1093	Facile synthesized organic hole transporting material for perovskite solar cell with efficiency of 19.8%. <b>2016</b> , 23, 138-144		213

# (2016-2016)

1092	One-Step Facile Synthesis of a Simple Hole Transport Material for Efficient Perovskite Solar Cells. <b>2016</b> , 28, 2515-2518	45
1091	Synergistic effects of three-dimensional orchid-like TiO2 nanowire networks and plasmonic nanoparticles for highly efficient mesoscopic perovskite solar cells. <b>2016</b> , 4, 7322-7329	26
1090	Laser Processing in the Manufacture of Dye-Sensitized and Perovskite Solar Cell Technologies. <b>2016</b> , 3, 9-30	48
1089	Silver Nanowire Top Electrodes in Flexible Perovskite Solar Cells using Titanium Metal as Substrate. <b>2016</b> , 9, 31-5	73
1088	The Effect of Humidity upon the Crystallization Process of Two-Step Spin-Coated Organic-Inorganic Perovskites. <b>2016</b> , 17, 112-8	26
1087	Perovskites as new radical photoinitiators for radical and cationic polymerizations. <b>2016</b> , 72, 7686-7690	15
1086	The Effects of the Organic-Inorganic Interactions on the Thermal Transport Properties of CH3NH3PbI3. <b>2016</b> , 16, 2749-53	80
1085	Perovskite Solar Cells: Influence of Hole Transporting Materials on Power Conversion Efficiency. <b>2016</b> , 9, 10-27	237
1084	Low-temperature solution-processed p-type vanadium oxide for perovskite solar cells. <b>2016</b> , 52, 8099-102	55
1083	Large Grained Perovskite Solar Cells Derived from Single-Crystal Perovskite Powders with Enhanced Ambient Stability. <b>2016</b> , 8, 14513-20	54
1082	Hysteresis-free low-temperature-processed planar perovskite solar cells with 19.1% efficiency. <b>2016</b> , 9, 2262-2266	232
1081	Improving performance and reducing hysteresis in perovskite solar cells by using F8BT as electron transporting layer. <b>2016</b> , 157, 79-84	23
1080	Enhanced TiO2/MAPbI3 Electronic Coupling by Interface Modification with PbI2. <b>2016</b> , 28, 3612-3615	54
1079	RETRACTED: Enhance the stability and efficiency of perovskite solar cell via gel-type polyurethane. <b>2016</b> , 97, 196-204	7
1078	Efficiency Enhancement of Perovskite Solar Cells by Pumping Away the Solvent of Precursor Film Before Annealing. <b>2016</b> , 11, 248	9
1077	Synthesis, structural and optical characterization of APbX3 (A=methylammonium, dimethylammonium, trimethylammonium; X=I, Br, Cl) hybrid organic-inorganic materials. <b>2016</b> , 240, 55-60	56
1076	Well-Defined Nanostructured, Single-Crystalline TiO2 Electron Transport Layer for Efficient Planar Perovskite Solar Cells. <b>2016</b> , 10, 6029-36	161
1075	Ultrafast charge carrier dynamics in CH3NH3PbI3: evidence for hot hole injection into spiro-OMeTAD. <b>2016</b> , 4, 5922-5931	29

1074	Nanostructured Materials for High Efficiency Perovskite Solar Cells. <b>2016</b> , 1-39	3
1073	Suppressed hysteresis and improved stability in perovskite solar cells with conductive organic network. <b>2016</b> , 26, 139-147	83
1072	Enhancement of photovoltaic performance of perovskite solar cells by modification of the interface between the perovskite and mesoporous TiO2 film. <b>2016</b> , 155, 101-107	46
1071	Thiocyanate assisted performance enhancement of formamidinium based planar perovskite solar cells through a single one-step solution process. <b>2016</b> , 4, 9430-9436	97
1070	Chlorobenzene vapor assistant annealing method for fabricating high quality perovskite films. <b>2016</b> , 34, 97-103	37
1069	Hydrophobic Hole-Transporting Materials Incorporating Multiple Thiophene Cores with Long Alkyl Chains for Efficient Perovskite Solar Cells. <b>2016</b> , 209, 529-540	26
1068	Ammonium-iodide-salt additives induced photovoltaic performance enhancement in one-step solution process for perovskite solar cells. <b>2016</b> , 684, 84-90	49
1067	Application of phenonaphthazine derivatives as hole-transporting materials for perovskite solar cells. <b>2016</b> , 25, 702-708	18
1066	Crystalline Mixed Halide Halobismuthates and Their Induced Second Harmonic Generation. <b>2016</b> , 28, 4421-4431	30
1065	Mobile Ions in Organohalide Perovskites: Interplay of Electronic Structure and Dynamics. <b>2016</b> , 1, 182-188	143
1065 1064	Donor-Fdonor type hole transporting materials: marked Fbridge effects on optoelectronic	143 71
	Donor-Edonor type hole transporting materials: marked Ebridge effects on optoelectronic	
1064	Donor-Edonor type hole transporting materials: marked Ebridge effects on optoelectronic properties, solid-state structure, and perovskite solar cell efficiency. <b>2016</b> , 7, 6068-6075  Controllable growth of bulk cubic-phase CH3NH3PbI3 single crystal with exciting	71
1064	Donor-Edonor type hole transporting materials: marked Ebridge effects on optoelectronic properties, solid-state structure, and perovskite solar cell efficiency. 2016, 7, 6068-6075  Controllable growth of bulk cubic-phase CH3NH3PbI3 single crystal with exciting room-temperature stability. 2016, 18, 5257-5261  Degradation of Co-Evaporated Perovskite Thin Films. 2016, 1, 923-929	71 39
1064 1063 1062 1061	Donor-Edonor type hole transporting materials: marked Ebridge effects on optoelectronic properties, solid-state structure, and perovskite solar cell efficiency. 2016, 7, 6068-6075  Controllable growth of bulk cubic-phase CH3NH3PbI3 single crystal with exciting room-temperature stability. 2016, 18, 5257-5261  Degradation of Co-Evaporated Perovskite Thin Films. 2016, 1, 923-929  3D Graphene Frameworks with Uniformly Dispersed CuS as an Efficient Catalytic Electrode for	71 39 3
1064 1063 1062 1061	Donor-Edonor type hole transporting materials: marked Ebridge effects on optoelectronic properties, solid-state structure, and perovskite solar cell efficiency. 2016, 7, 6068-6075  Controllable growth of bulk cubic-phase CH3NH3PbI3 single crystal with exciting room-temperature stability. 2016, 18, 5257-5261  Degradation of Co-Evaporated Perovskite Thin Films. 2016, 1, 923-929  3D Graphene Frameworks with Uniformly Dispersed CuS as an Efficient Catalytic Electrode for Quantum Dot-Sensitized Solar Cells. 2016, 208, 288-295	71 39 3
1064 1063 1062 1061	Donor-Etlonor type hole transporting materials: marked Ebridge effects on optoelectronic properties, solid-state structure, and perovskite solar cell efficiency. 2016, 7, 6068-6075  Controllable growth of bulk cubic-phase CH3NH3Pbl3 single crystal with exciting room-temperature stability. 2016, 18, 5257-5261  Degradation of Co-Evaporated Perovskite Thin Films. 2016, 1, 923-929  3D Graphene Frameworks with Uniformly Dispersed CuS as an Efficient Catalytic Electrode for Quantum Dot-Sensitized Solar Cells. 2016, 208, 288-295  Organo-Metal Lead Halide Perovskite Properties. 2016, 1-4  The Evolution of Perovskite Solar Cells Structures. 2016, 5-8	71 39 3

1056	The effect of porous lead iodide precursor film on perovskite film formation and its photovoltaic property after an effective pretreatment. <b>2016</b> , 94, 196-203	4
1055	A modified two-step sequential deposition method for preparing perovskite CH3NH3PbI3 solar cells. <b>2016</b> , 6, 42377-42381	21
1054	Low-Temperature TiOx Compact Layer for Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 8, 11076-83	91
1053	Mechanism of biphasic charge recombination and accumulation in TiO2 mesoporous structured perovskite solar cells. <b>2016</b> , 18, 12128-34	24
1052	Light and oxygen induced degradation limits the operational stability of methylammonium lead triiodide perovskite solar cells. <b>2016</b> , 9, 1655-1660	621
1051	Two-dimensional modeling of TiO2 nanowire based organicIhorganic hybrid perovskite solar cells. <b>2016</b> , 152, 111-117	35
1050	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
1049	Ruddlesden <b>B</b> opper Hybrid Lead Iodide Perovskite 2D Homologous Semiconductors. <b>2016</b> , 28, 2852-2867	1166
1048	Atomically thin two-dimensional materials as hole extraction layers in organolead halide perovskite photovoltaic cells. <b>2016</b> , 319, 1-8	78
1047	The benefits of graphene for hybrid perovskite solar cells. <b>2016</b> , 222, 3-16	42
.,	The benefits of graphene for hybrid perovskite solar cells. <b>2016</b> , 222, 3-16  Organolead trihalide perovskite materials for efficient light emitting diodes. <b>2016</b> , 59, 653-658	4 <sup>2</sup> 8
.,		
1046	Organolead trihalide perovskite materials for efficient light emitting diodes. <b>2016</b> , 59, 653-658  Well-Organized Mesoporous TiO2 Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. <b>2016</b> , 120, 9619-9627  CH3NH3Pbl3 planar perovskite solar cells with antireflection and self-cleaning function layers.	8
1046	Organolead trihalide perovskite materials for efficient light emitting diodes. <b>2016</b> , 59, 653-658  Well-Organized Mesoporous TiO2 Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. <b>2016</b> , 120, 9619-9627  CH3NH3PbI3 planar perovskite solar cells with antireflection and self-cleaning function layers.	8
1046 1045 1044	Organolead trihalide perovskite materials for efficient light emitting diodes. <b>2016</b> , 59, 653-658  Well-Organized Mesoporous TiO2 Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. <b>2016</b> , 120, 9619-9627  CH3NH3PbI3 planar perovskite solar cells with antireflection and self-cleaning function layers. <b>2016</b> , 4, 7573-7579  Pathways toward high-performance perovskite solar cells: review of recent advances in	8 41 62
1046 1045 1044 1043	Organolead trihalide perovskite materials for efficient light emitting diodes. 2016, 59, 653-658  Well-Organized Mesoporous TiO2 Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. 2016, 120, 9619-9627  CH3NH3Pbl3 planar perovskite solar cells with antireflection and self-cleaning function layers. 2016, 4, 7573-7579  Pathways toward high-performance perovskite solar cells: review of recent advances in organo-metal halide perovskites for photovoltaic applications. 2016, 6, 022001  Two Dimensional Organometal Halide Perovskite Nanorods with Tunable Optical Properties. 2016,	8 41 62 170
1046 1045 1044 1043	Organolead trihalide perovskite materials for efficient light emitting diodes. 2016, 59, 653-658  Well-Organized Mesoporous TiO2 Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. 2016, 120, 9619-9627  CH3NH3Pbl3 planar perovskite solar cells with antireflection and self-cleaning function layers. 2016, 4, 7573-7579  Pathways toward high-performance perovskite solar cells: review of recent advances in organo-metal halide perovskites for photovoltaic applications. 2016, 6, 022001  Two Dimensional Organometal Halide Perovskite Nanorods with Tunable Optical Properties. 2016, 16, 3230-5  Exceptional Morphology-Preserving Evolution of Formamidinium Lead Triiodide Perovskite Thin Films via Organic-Cation Displacement. 2016, 138, 5535-8	8 41 62 170

1038	Growth temperature-dependent performance of planar CH3NH3PbI3 solar cells fabricated by a two-step subliming vapor method below 120 °C. <b>2016</b> , 6, 47459-47467	6
1037	High Open-Circuit Voltage: Fabrication of Formamidinium Lead Bromide Perovskite Solar Cells Using FluoreneDithiophene Derivatives as Hole-Transporting Materials. <b>2016</b> , 1, 107-112	92
1036	Grain growth study of perovskite thin films prepared by flash evaporation and its effect on solar cell performance. <b>2016</b> , 6, 48851-48857	21
1035	Perovskite photonic sources. <b>2016</b> , 10, 295-302	1079
1034	State and prospects of solar cells based on perovskites. <b>2016</b> , 52, 5-15	6
1033	ZnO nanowalls grown at low-temperature for electron collection in high-efficiency perovskite solar cells. <b>2016</b> , 154, 18-22	37
1032	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. <b>2016</b> , 1, 32-37	551
1031	Electronic structures of TiO2IICNE, IICNQ, and II,6-TCNAQ surface complexes studied by ionization potential measurements and DFT calculations: Mechanism of the shift of interfacial charge-transfer bands. <b>2016</b> , 653, 11-16	12
1030	Stable and durable CH3NH3PbI3 perovskite solar cells at ambient conditions. <b>2016</b> , 27, 235404	50
1029	Optical characterization of voltage-accelerated degradation in CH3NH3PbI3 perovskite solar cells. <b>2016</b> , 24, A917-24	18
1028	Coordination engineering toward high performance organicIhorganic hybrid perovskites. <b>2016</b> , 320-321, 53-65	30
1027	All solid-state solar cells based on CH3NH3PbI3-sensitized TiO2 nanotube arrays. <b>2016</b> , 83, 322-328	4
1026	Facile synthesis of a hole transporting material with a silafluorene core for efficient mesoscopic CH3NH3PbI3 perovskite solar cells. <b>2016</b> , 4, 8750-8754	34
1025	Highly stable, luminescent core-shell type methylammonium-octylammonium lead bromide layered perovskite nanoparticles. <b>2016</b> , 52, 7118-21	105
1024	Structural and chemical evolution of methylammonium lead halide perovskites during thermal processing from solution. <b>2016</b> , 9, 2072-2082	153
1023	A rapid annealing technique for efficient perovskite solar cells fabricated in air condition under high humidity. <b>2016</b> , 34, 84-90	16
1022	Super-Resolution Luminescence Microspectroscopy Reveals the Mechanism of Photoinduced Degradation in CH3NH3PbI3 Perovskite Nanocrystals. <b>2016</b> , 120, 10711-10719	105
1021	Mapping the Photoresponse of CH3NH3PbI3 Hybrid Perovskite Thin Films at the Nanoscale. <b>2016</b> , 16, 3434-41	101

1020	characterization and understanding of the mechanism. <b>2016</b> , 4, 8374-8383	122
1019	Compact layer influence on hysteresis effect in organicIhorganic hybrid perovskite solar cells. <b>2016</b> , 68, 40-44	18
1018	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
1017	Dopant-free polymeric hole transport materials for highly efficient and stable perovskite solar cells. <b>2016</b> , 9, 2326-2333	265
1016	High-performance inverted planar heterojunction perovskite solar cells based on a solution-processed CuOx hole transport layer. <b>2016</b> , 8, 10806-13	161
1015	Efficient perovskite solar cell fabricated in ambient air using one-step spin-coating. <b>2016</b> , 6, 43299-43303	40
1014	Graphene oxide/poly(3,4-ethylenedioxythiophene):polystyrenesulfonate layers on silver nanowire working electrodes enhance the power conversion efficiencies of dye-sensitized solar cells in a low temperature process. <b>2016</b> , 6, 47185-47191	7
1013	Room Temperature as a Goldilocks Environment for CH3NH3PbI3 Perovskite Solar Cells: The Importance of Temperature on Device Performance. <b>2016</b> , 120, 11382-11393	50
1012	Blending of n-type Semiconducting Polymer and PC61BM for an Efficient Electron-Selective Material to Boost the Performance of the Planar Perovskite Solar Cell. <b>2016</b> , 8, 12822-9	27
1011	Facile synthesis of fluorene-based hole transport materials for highly efficient perovskite solar cells and solid-state dye-sensitized solar cells. <b>2016</b> , 26, 108-113	89
1010	Interfacial Charge-Carrier Trapping in CH3NH3PbI3-Based Heterolayered Structures Revealed by Time-Resolved Photoluminescence Spectroscopy. <b>2016</b> , 7, 1972-7	49
1009	Wavelength-dependent optical transition mechanisms for light-harvesting of perovskite MAPbI3 solar cells using first-principles calculations. <b>2016</b> , 4, 5248-5254	9
1008	Optimal Design and Simulation of High-Performance Organic-Metal Halide Perovskite Solar Cells. <b>2016</b> , 52, 1-6	23
1007	Efficient planar heterojunction perovskite solar cells fabricated via roller-coating. <b>2016</b> , 155, 14-19	14
1006	Correlating structure and electronic band-edge properties in organolead halide perovskites nanoparticles. <b>2016</b> , 18, 14933-40	28
1005	Third-order nonlinear optical properties of methylammonium lead halide perovskite films. <b>2016</b> , 4, 4847-4852	36
1004	Photostability and Moisture Stability of CH NH PbI -based Solar Cells by Ethyl Cellulose. <b>2016</b> , 81, 1292-1298	17
1003	Influence of N,N-Dimethylformamide Annealing on the Local Electrical Properties of Organometal Halide Perovskite Solar Cells: an Atomic Force Microscopy Investigation. <b>2016</b> , 8, 26002-26007	29

1002	Physical chemistry of hybrid perovskite solar cells. <b>2016</b> , 18, 27024-27025	6
1001	Hydrophobic hole-transporting layer induced porous PbI2 film for stable and efficient perovskite solar cells in 50% humidity. <b>2016</b> , 157, 989-995	14
1000	Effects of Postsynthesis Thermal Conditions on Methylammonium Lead Halide Perovskite: Band Bending at Grain Boundaries and Its Impacts on Solar Cell Performance. <b>2016</b> , 120, 21330-21335	21
999	A review of organic small molecule-based hole-transporting materials for meso-structured organicIhorganic perovskite solar cells. <b>2016</b> , 4, 15788-15822	120
998	A tailored TiO2 electron selective layer for high-performance flexible perovskite solar cells via low temperature UV process. <b>2016</b> , 28, 380-389	100
997	Amorphous TiO2 Compact Layers via ALD for Planar Halide Perovskite Photovoltaics. <b>2016</b> , 8, 24310-4	52
996	Elastic Constants, Optical Phonons, and Molecular Relaxations in the High Temperature Plastic Phase of the CHNHPbBr Hybrid Perovskite. <b>2016</b> , 7, 3776-3784	75
995	Diketopyrrolopyrrole or benzodithiophene-arylamine small-molecule hole transporting materials for stable perovskite solar cells. <b>2016</b> , 6, 87454-87460	26
994	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
993	Progress, challenges and perspectives in flexible perovskite solar cells. <b>2016</b> , 9, 3007-3035	278
992	Recent progress on stability issues of organicIhorganic hybrid lead perovskite-based solar cells. <b>2016</b> , 6, 89356-89366	57
991	First-principles investigation of a novel organic-inorganic strontium halide perovskites and CH3NH3Pb1-xSrxI3 solid solution. <b>2016</b> , 175, 193-201	1
990	Perspectives on organolead halide perovskite photovoltaics. <b>2016</b> , 6, 032001	4
989	Printable Solar Cells from Advanced Solution-Processible Materials. <b>2016</b> , 1, 197-219	50
988	A perspective on the recent progress in solution-processed methods for highly efficient perovskite solar cells. <b>2016</b> , 17, 650-658	26
987	Hole-Transport Materials for Perovskite Solar Cells. <b>2016</b> , 55, 14522-14545	601
986	Low-temperature prepared carbon electrodes for hole-conductor-free mesoscopic perovskite solar cells. <b>2016</b> , 218, 84-90	25
985	Mesoscopic Perovskite Light-Emitting Diodes. <b>2016</b> , 8, 26989-26997	38

# (2016-2016)

984	Observation of Quantum Confinement in Monodisperse Methylammonium Lead Halide Perovskite Nanocrystals Embedded in Mesoporous Silica. <b>2016</b> , 138, 13874-13881	242
983	Boosting the optimization process of perovskite solar cells by partial sampling and kriging method. <b>2016</b> , 6, 98052-98058	4
982	Enhanced electronic properties in CH3NH3PbI3via LiCl mixing for hole-conductor-free printable perovskite solar cells. <b>2016</b> , 4, 16731-16736	72
981	Surface Passivation of Perovskite Film by Small Molecule Infiltration for Improved Efficiency of Perovskite Solar Cells. <b>2016</b> , 8, 1-7	6
980	Structural diversity in substituted-pyridinium iodo- and bromoplumbates: a matter of halide and temperature. <b>2016</b> , 18, 8207-8219	20
979	Efficiency enhancement of semi-transparent sandwich type CH3NH3PbI3 perovskite solar cells with island morphology perovskite film by introduction of polystyrene passivation layer. <b>2016</b> , 4, 16324-16329	39
978	Hysteresis dependence on CH3NH3PbI3 deposition method in perovskite solar cells. 2016,	1
977	Efficient Compact-Layer-Free, Hole-Conductor-Free, Fully Printable Mesoscopic Perovskite Solar Cell. <b>2016</b> , 7, 4142-4146	29
976	Improving efficiency and stability of perovskite solar cells with photocurable fluoropolymers. <b>2016</b> , 354, 203-206	599
975	N-type metal-oxide electron transport layer for mesoscopic perovskite solar cells. <b>2016</b> , 59, 757-768	2
974	Optical Properties of Heterojunction between Hybrid Halide Perovskite and Charge Transport Materials: Exciplex Emission and Large Polaron. <b>2016</b> , 120, 23299-23303	6
973	Coloration of tyrosine by organic-semiconductor interfacial charge-transfer transitions. <b>2016</b> , 664, 178-183	19
972	Optical Probe Ion and Carrier Dynamics at the CH3NH3PbI3 Interface with Electron and Hole Transport Materials. <b>2016</b> , 3, 1600467	18
971	Role of Organic Counterion in Lead- and Tin-Based Two-Dimensional Semiconducting Iodide Perovskites and Application in Planar Solar Cells. <b>2016</b> , 28, 7781-7792	189
970	Synthesis, properties, and optical applications of low-dimensional perovskites. <b>2016</b> , 52, 13637-13655	212
969	Formulation engineering for optimizing ternary electron acceptors exemplified by isomeric PC71BM in planar perovskite solar cells. <b>2016</b> , 4, 18776-18782	22
968	The Additive Coordination Effect on Hybrids Perovskite Crystallization and High-Performance Solar Cell. <b>2016</b> , 28, 9862-9868	235
967	Molecular structure simplification of the most common hole transport materials in perovskite solar cells. <b>2016</b> , 6, 96990-96996	10

966	Comparing the Effect of Mesoporous and Planar Metal Oxides on the Stability of Methylammonium Lead Iodide Thin Films. <b>2016</b> , 28, 7344-7352	38
965	Recent Development of Transparent Conducting Oxide-Free Flexible Thin-Film Solar Cells. <b>2016</b> , 26, 8855-8884	72
964	Effect of polyelectrolyte interlayer on efficiency and stability of p-i-n perovskite solar cells. <b>2016</b> , 139, 190-198	22
963	PbI-HMPA Complex Pretreatment for Highly Reproducible and Efficient CHNHPbI Perovskite Solar Cells. <b>2016</b> , 138, 14380-14387	83
962	Elucidating the charge carrier transport and extraction in planar heterojunction perovskite solar cells by Kelvin probe force microscopy. <b>2016</b> , 4, 17464-17472	38
961	Constructing water-resistant CH3NH3PbI3 perovskite films via coordination interaction. <b>2016</b> , 4, 17018-1702	4 69
960	Addictive-assisted construction of all-inorganic CsSnIBr2 mesoscopic perovskite solar cells with superior thermal stability up to 473 K. <b>2016</b> , 4, 17104-17110	186
959	Controllable design of solid-state perovskite solar cells by SCAPS device simulation. <b>2016</b> , 126, 75-80	76
958	Modulating Hysteresis of Perovskite Solar Cells by a Poling Voltage. <b>2016</b> , 120, 22784-22792	25
957	Interfacial Electronic Structure of Methylammonium Lead Iodide Grown on a Mesoporous TiO2 Layer on F-Doped Tin Oxide Substrate. <b>2016</b> , 120, 22460-22465	10
956	Anomalous Growth and Coalescence Dynamics of Hybrid Perovskite Nanoparticles Observed by Liquid-Cell Transmission Electron Microscopy. <b>2016</b> , 10, 9787-9793	32
955	Simple biphenyl or carbazole derivatives with four di(anisyl)amino substituents as efficient hole-transporting materials for perovskite solar cells. <b>2016</b> , 6, 92213-92217	7
954	Ambient air-processed mixed-ion perovskites for high-efficiency solar cells. <b>2016</b> , 4, 16536-16545	44
953	Nano-structured CuO-Cu2O Complex Thin Film for Application in CH3NH3PbI3 Perovskite Solar Cells. <b>2016</b> , 11, 402	50
952	Methylammonium lead iodide grain boundaries exhibit depth-dependent electrical properties. <b>2016</b> , 9, 3642-3649	42
951	. <b>2016</b> , 6, 1530-1536	16
950	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
949	Efficient inverted planar formamidinium lead iodide perovskite solar cells via a post improved perovskite layer. <b>2016</b> , 6, 79952-79957	23

948	Highly compact and uniform CH 3 NH 3 Sn 0.5 Pb 0.5 I 3 films for efficient panchromatic planar perovskite solar cells. <b>2016</b> , 61, 1558-1562	23
947	Enhancing current density of perovskite solar cells using TiO2-ZrO2 composite scaffold layer. <b>2016</b> , 56, 29-36	27
946	Quantifying Hole Transfer Yield from Perovskite to Polymer Layer: Statistical Correlation of Solar Cell Outputs with Kinetic and Energetic Properties. <b>2016</b> , 3, 1678-1688	44
945	Charge Injection at the Heterointerface in Perovskite CH3NH3PbI3 Solar Cells Studied by Simultaneous Microscopic Photoluminescence and Photocurrent Imaging Spectroscopy. <b>2016</b> , 7, 3186-91	29
944	Solar Energy Conversion in Photoelectrochemical Systems. <b>2016</b> , 67-143	4
943	Identification and Mitigation of a Critical Interfacial Instability in Perovskite Solar Cells Employing Copper Thiocyanate Hole-Transporter. <b>2016</b> , 3, 1600571	80
942	Ambient Engineering for High-Performance Organic-Inorganic Perovskite Hybrid Solar Cells. <b>2016</b> , 8, 21505-11	24
941	Post-annealing of MAPbI3 perovskite films with methylamine for efficient perovskite solar cells. <b>2016</b> , 3, 548-555	109
940	Ultrafast Spectroscopy of Photoexcitations in Organometal Trihalide Perovskites. <b>2016</b> , 26, 1617-1627	30
939	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
938	Novel insight into the function of PC61BM in efficient planar perovskite solar cells. <b>2016</b> , 27, 561-568	12
937	Effect of Chlorine Substitution on Lattice Distortion and Ferroelectricity of CH3NH3PbI3. <b>2016</b> , 120, 17972-17977	20
936	Observation of Enhanced Hole Extraction in Br Concentration Gradient Perovskite Materials. <b>2016</b> , 16, 5756-63	80
935	Encapsulation of Perovskite Solar Cells for High Humidity Conditions. <b>2016</b> , 9, 2597-2603	113
934	Interface studies of the planar heterojunction perovskite solar cells. <b>2016</b> , 157, 783-790	38
933	Hybrid Perovskite Nanoparticles for High-Performance Resistive Random Access Memory Devices: Control of Operational Parameters through Chloride Doping. <b>2016</b> , 3, 1600092	52
932	Microscopic Charge Transport and Recombination Processes behind the Photoelectric Hysteresis in Perovskite Solar Cells. <b>2016</b> , 12, 5288-5294	25
931	Indium tin oxide (ITO)-free, top-illuminated, flexible perovskite solar cells. <b>2016</b> , 4, 14017-14024	47

930	Enhanced Structural Stability and Photo Responsiveness of CH NH SnI Perovskite via Pressure-Induced Amorphization and Recrystallization. <b>2016</b> , 28, 8663-8668	134
929	Enhancing Efficiency of Perovskite Solar Cells via N-doped Graphene: Crystal Modification and Surface Passivation. <b>2016</b> , 28, 8681-8686	228
928	Effective and reproducible method for preparing low defects perovskite film toward highly photoelectric properties with large fill factor by shaping capping layer. <b>2016</b> , 136, 505-514	16
927	Compact nanostructured TiO2 deposited by aerosol spray pyrolysis for the hole-blocking layer in a CH3NH3PbI3 perovskite solar cell. <b>2016</b> , 136, 515-524	36
926	Role of the Dopants on the Morphological and Transport Properties of Spiro-MeOTAD Hole Transport Layer. <b>2016</b> , 28, 5702-5709	134
925	Electric-Field-Induced Degradation of Methylammonium Lead Iodide Perovskite Solar Cells. <b>2016</b> , 7, 3091-6	123
924	Fast self-diffusion of ions in CH3NH3PbI3: the interstiticaly mechanism versus vacancy-assisted mechanism. <b>2016</b> , 4, 13105-13112	53
923	High Performance Perovskite Solar Cells. <b>2016</b> , 3, 1500201	88
922	Efficient Perovskite Solar Cells Employing Inorganic Interlayers. <b>2016</b> , 2, 182-188	41
921	Preparation and characterization of methylammonium tin iodide layers as photovoltaic absorbers. <b>2016</b> , 213, 975-981	40
920	Rapid thickness reading of CH3NH3PbI3 nanowire thin films from color maps. <b>2016</b> , 213, 2017-2023	5
919	Inverted Planar Structure of Perovskite Solar Cells. <b>2016</b> , 307-324	1
918	Inorganic Hole-Transporting Materials for Perovskite Solar Cell. <b>2016</b> , 343-366	2
917	First-Principles Modeling of Organohalide Thin Films and Interfaces. <b>2016</b> , 19-52	4
916	Defect Physics of CH3NH3PbX3 (X = I, Br, Cl) Perovskites. <b>2016</b> , 79-105	17
915	Ionic Conductivity of OrganicIhorganic Perovskites: Relevance for Long-Time and Low Frequency Behavior. <b>2016</b> , 107-135	5
914	APbI3 (A = CH3NH3 and HC(NH2)2) Perovskite Solar Cells: From Sensitization to Planar Heterojunction. <b>2016</b> , 223-253	3
913	Two-step ultrasonic spray deposition of CH3NH3PbI3 for efficient and large-area perovskite solar cell. <b>2016</b> , 27, 352-358	159

912	Hexadecafluorophthalocyaninatocopper as an electron conductor for high-efficiency fullerene-free planar perovskite solar cells. <b>2016</b> , 157, 510-516	7
911	Hexagonal []-NaYF4:Yb(3+), Er(3+) Nanoprism-Incorporated Upconverting Layer in Perovskite Solar Cells for Near-Infrared Sunlight Harvesting. <b>2016</b> , 8, 19847-52	82
910	Methodologies for high efficiency perovskite solar cells. <b>2016</b> , 3, 15	65
909	Solution processed inorganic V2O x as interfacial function materials for inverted planar-heterojunction perovskite solar cells with enhanced efficiency. <b>2016</b> , 9, 2960-2971	66
908	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
907	Sub-100 °C solution processed amorphous titania nanowire thin films for high-performance perovskite solar cells. <b>2016</b> , 329, 17-22	12
906	Lead-Free Inverted Planar Formamidinium Tin Triiodide Perovskite Solar Cells Achieving Power Conversion Efficiencies up to 6.22. <b>2016</b> , 28, 9333-9340	480
905	Advances in the Application of Atomic Layer Deposition for Organometal Halide Perovskite Solar Cells. <b>2016</b> , 3, 1600505	18
904	Architecture of the Interface between the Perovskite and Hole-Transport Layers in Perovskite Solar Cells. <b>2016</b> , 9, 2634-2639	23
903	Evolution of Diffusion Length and Trap State Induced by Chloride in Perovskite Solar Cell. <b>2016</b> , 120, 21248-21253	55
902	Efficient perovskite solar cells via simple interfacial modification toward a mesoporous TiO2 electron transportation layer. <b>2016</b> , 6, 82282-82288	27
901	Distinction between Capacitive and Noncapacitive Hysteretic Currents in Operation and Degradation of Perovskite Solar Cells. <b>2016</b> , 1, 683-688	70
900	Dynamic Stereochemical Activity of the Sn(2+) Lone Pair in Perovskite CsSnBr3. <b>2016</b> , 138, 11820-32	158
899	Interplay of structural and compositional effects on carrier recombination in mixed-halide perovskites. <b>2016</b> , 6, 86947-86954	16
898	Spontaneous configurational evolution induced by an in situ self-formed p-type CuI interface layer in perovskite solar cells. <b>2016</b> , 6, 82759-82762	7
897	A co-sensitized approach to efficiently fill the absorption valley, avoid dye aggregation and reduce the charge recombination. <b>2016</b> , 215, 506-514	33
896	Ultrathin and flexible perovskite solar cells with graphene transparent electrodes. <b>2016</b> , 28, 151-157	158
895	Cu2O particles mediated growth of perovskite for high efficient hole-transporting-layer free solar cells in ambient conditions. <b>2016</b> , 157, 937-942	29

894	Surface coverage enhancement of a mixed halide perovskite film by using an UV-ozone treatment. <b>2016</b> , 69, 406-411	14
893	Nonradiative Relaxation in Real-Time Electronic Dynamics OSCF2: Organolead Triiodide Perovskite. <b>2016</b> , 120, 6880-7	13
892	Efficiency-Enhanced Planar Perovskite Solar Cells via an Isopropanol/Ethanol Mixed Solvent Process. <b>2016</b> , 8, 23837-43	48
891	Redox Chemistry Dominates the Degradation and Decomposition of Metal Halide Perovskite Optoelectronic Devices. <b>2016</b> , 1, 595-602	151
890	Electron Transport Layer-Free Solar Cells Based on Perovskite-Fullerene Blend Films with Enhanced Performance and Stability. <b>2016</b> , 9, 2679-2685	54
889	Extending the Lifetime of Perovskite Solar Cells using a Perfluorinated Dopant. <b>2016</b> , 9, 2708-2714	50
888	Surface engineering of ZnO electron transporting layer via Al doping for high efficiency planar perovskite solar cells. <b>2016</b> , 28, 311-318	113
887	Impact of Conformality and Crystallinity for Ultrathin 4 nm Compact TiO2 Layers in Perovskite Solar Cells. <b>2016</b> , 3, 1600580	18
886	2D/3D perovskite hybrids as moisture-tolerant and efficient light absorbers for solar cells. <b>2016</b> , 8, 18309-1	831 <del>4</del> 72
885	Antiferroelectric-to-Ferroelectric Switching in CH3NH3PbI3 Perovskite and Its Potential Role in Effective Charge Separation in Perovskite Solar Cells. <b>2016</b> , 6,	23
88 <sub>5</sub>		23 7
	Effective Charge Separation in Perovskite Solar Cells. <b>2016</b> , 6,	
884	Effective Charge Separation in Perovskite Solar Cells. <b>2016</b> , 6,  Synthesis of hybrid organic-inorganic perovskite platelets by vacuum impregnation. <b>2016</b> , 61, 116-120  Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. <b>2016</b>	7
884	Effective Charge Separation in Perovskite Solar Cells. 2016, 6,  Synthesis of hybrid organic-inorganic perovskite platelets by vacuum impregnation. 2016, 61, 116-120  Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. 2016, 9, 3071-3078  Efficient planar perovskite solar cells prepared via a low-pressure vapor-assisted solution process	7 691
884 883 882	Effective Charge Separation in Perovskite Solar Cells. 2016, 6,  Synthesis of hybrid organic-inorganic perovskite platelets by vacuum impregnation. 2016, 61, 116-120  Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. 2016, 9, 3071-3078  Efficient planar perovskite solar cells prepared via a low-pressure vapor-assisted solution process with fullerene/TiO2 as an electron collection bilayer. 2016, 6, 78585-78594	7 691 27
884 883 882	Effective Charge Separation in Perovskite Solar Cells. 2016, 6,  Synthesis of hybrid organic-inorganic perovskite platelets by vacuum impregnation. 2016, 61, 116-120  Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. 2016, 9, 3071-3078  Efficient planar perovskite solar cells prepared via a low-pressure vapor-assisted solution process with fullerene/TiO2 as an electron collection bilayer. 2016, 6, 78585-78594  Potentials and challenges towards application of perovskite solar cells. 2016, 59, 769-778  Dynamics of Photocarrier Separation in MAPbI3 Perovskite Multigrain Films under a Quasistatic	7 691 27
884 883 882 881	Effective Charge Separation in Perovskite Solar Cells. 2016, 6,  Synthesis of hybrid organic-inorganic perovskite platelets by vacuum impregnation. 2016, 61, 116-120  Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. 2016, 9, 3071-3078  Efficient planar perovskite solar cells prepared via a low-pressure vapor-assisted solution process with fullerene/TiO2 as an electron collection bilayer. 2016, 6, 78585-78594  Potentials and challenges towards application of perovskite solar cells. 2016, 59, 769-778  Dynamics of Photocarrier Separation in MAPbi3 Perovskite Multigrain Films under a Quasistatic Electric Field. 2016, 120, 19595-19602	7 691 27 13

876	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. <b>2016</b> , 4, 14276-14283	178
875	Characteristics of Perovskite Solar Cells under Low-Illuminance Conditions. <b>2016</b> , 120, 18986-18990	33
874	Extended Photo-Conversion Spectrum in Low-Toxic Bismuth Halide Perovskite Solar Cells. <b>2016</b> , 7, 3467-71	146
873	Mechanism of Pressure-Induced Phase Transitions, Amorphization, and Absorption-Edge Shift in Photovoltaic Methylammonium Lead Iodide. <b>2016</b> , 7, 3458-66	134
872	Cross-Linkable Fullerene Derivatives for Solution-Processed n <b>[]</b> Perovskite Solar Cells. <b>2016</b> , 1, 648-653	60
871	Across the Board: Nam-Gyu Park. <b>2016</b> , 9, 2525-2527	
870	All-Inorganic Perovskite Solar Cells. <b>2016</b> , 138, 15829-15832	700
869	Thermal flow air post-treatment under high relative humidity for efficient and reproducible planar CH3NH3PbI3⊠Clx based perovskite solar cells. <b>2016</b> , 48, 1	1
868	Impact of Selective Contacts on Long-Term Stability of CH3NH3PbI3 Perovskite Solar Cells. <b>2016</b> , 120, 27840-27848	40
867	Carbon-Based CsPbBr Perovskite Solar Cells: All-Ambient Processes and High Thermal Stability. <b>2016</b> , 8, 33649-33655	208
866	Flame-made ultra-porous TiO layers for perovskite solar cells. <b>2016</b> , 27, 505403	9
865	Crystal structure, stability, and optoelectronic properties of the organic-inorganic wide-band-gap perovskite CH3NH3Bal3: Candidate for transparent conductor applications. <b>2016</b> , 94,	40
864	Efficient Colorful Perovskite Solar Cells Using a Top Polymer Electrode Simultaneously as Spectrally Selective Antireflection Coating. <b>2016</b> , 16, 7829-7835	100
863	Decoupling Interfacial Charge Transfer from Bulk Diffusion Unravels Its Intrinsic Role for Efficient Charge Extraction in Perovskite Solar Cells. <b>2016</b> , 7, 5056-5061	40
862	100 °C Thermal Stability of Printable Perovskite Solar Cells Using Porous Carbon Counter Electrodes. <b>2016</b> , 9, 2604-2608	88
861	Graphene-Perovskite Solar Cells Exceed 18 % Efficiency: A Stability Study. <b>2016</b> , 9, 2609-2619	133
860	Publishing Hybrid/Organic Photovoltaics Papers in ACS Energy Letters. <b>2016</b> , 1, 646-647	1
859	Room Temperature Phase Transition in Methylammonium Lead Iodide Perovskite Thin Films Induced by Hydrohalic Acid Additives. <b>2016</b> , 9, 2656-2665	43

858	Elemental Mapping of Perovskite Solar Cells by Using Multivariate Analysis: An Insight into Degradation Processes. <b>2016</b> , 9, 2673-2678	19
857	Dopant-Free Zinc Chlorophyll Aggregates as an Efficient Biocompatible Hole Transporter for Perovskite Solar Cells. <b>2016</b> , 9, 2862-2869	52
856	Symmetry-Based Tight Binding Modeling of Halide Perovskite Semiconductors. <b>2016</b> , 7, 3833-3840	40
855	Tuning PbI2 layers by n-butanol additive for improving CH3NH3PbI3 light harvesters of perovskite solar cells. <b>2016</b> , 6, 89609-89613	12
854	Layered 2D alkyldiammonium lead iodide perovskites: synthesis, characterization, and use in solar cells. <b>2016</b> , 4, 15638-15646	134
853	Distribution of bromine in mixed iodideBromide organolead perovskites and its impact on photovoltaic performance. <b>2016</b> , 4, 16191-16197	24
852	Induced Infiltration of Hole-Transporting Polymer into Photocatalyst for Staunch Polymer-Metal Oxide Hybrid Solar Cells. <b>2016</b> , 8, 25915-25922	4
851	Mg-doped TiO2 boosts the efficiency of planar perovskite solar cells to exceed 19%. <b>2016</b> , 4, 15383-15389	116
850	The influence of morphology on charge transport/recombination dynamics in planar perovskite solar cells. <b>2016</b> , 662, 257-262	12
849	Formation Mechanism and Control of Perovskite Films from Solution to Crystalline Phase Studied by in Situ Synchrotron Scattering. <b>2016</b> , 8, 26712-26721	49
848	Highly stabilized perovskite solar cell prepared using vacuum deposition. <b>2016</b> , 6, 93525-93531	9
847	Domain-dependent electronic structure and optical absorption property in hybrid organic-inorganic perovskite. <b>2016</b> , 18, 27358-27365	9
846	Tuning the Fermi-level of TiO mesoporous layer by lanthanum doping towards efficient perovskite solar cells. <b>2016</b> , 8, 16881-16885	75
845	Strategic improvement of the long-term stability of perovskite materials and perovskite solar cells. <b>2016</b> , 18, 27026-27050	116
844	Advances in Perovskite Solar Cells. <b>2016</b> , 3, 1500324	397
843	Highly Efficient and Stable Perovskite Solar Cells based on a Low-Cost Carbon Cloth. <b>2016</b> , 6, 1601116	91
842	New advances in small molecule hole-transporting materials for perovskite solar cells. <b>2016</b> , 27, 1293-1303	16
841	Exploring the Electronic Band Structure of Organometal Halide Perovskite via Photoluminescence Anisotropy of Individual Nanocrystals. <b>2016</b> , 16, 5087-94	39

840	The effect of moisture on the structures and properties of lead halide perovskites: a first-principles theoretical investigation. <b>2016</b> , 18, 23174-83	71
839	Rejuvenation of perovskite solar cells. <b>2016</b> , 4, 7595-7600	12
838	A Strategy to Achieve High-Efficiency Organolead Trihalide Perovskite Solar Cells. <b>2016</b> , 45, 5746-5755	5
837	High quality perovskite films fabricated from Lewis acidBase adduct through molecular exchange. <b>2016</b> , 6, 70925-70931	39
836	Room-temperature processed, air-stable and highly efficient graphene/silicon solar cells with an organic interlayer. <b>2016</b> , 4, 11284-11291	13
835	Atomic structure of metal-halide perovskites from first principles: The chicken-and-egg paradox of the organic-inorganic interaction. <b>2016</b> , 94,	53
834	Enhanced Electron Collection in Perovskite Solar Cells Employing Thermoelectric NaCo O /TiO Coaxial Nanofibers. <b>2016</b> , 12, 5146-5152	15
833	Unreacted PbI2 as a Double-Edged Sword for Enhancing the Performance of Perovskite Solar Cells. <b>2016</b> , 138, 10331-43	537
832	Influences of bulk and surface recombinations on the power conversion efficiency of perovskite solar cells. <b>2016</b> , 49, 275106	1
831	Active-layer evolution and efficiency improvement of (CH3NH3 3Bi2I9-based solar cell on TiO2-deposited ITO substrate. <b>2016</b> , 9, 2921-2930	78
830	Enhanced short-circuit current density of perovskite solar cells using Zn-doped TiO2 as electron transport layer. <b>2016</b> , 157, 447-453	75
829	Simultaneous band-gap narrowing and carrier-lifetime prolongation of organic-inorganic trihalide perovskites. <b>2016</b> , 113, 8910-5	199
828	Forthcoming perspectives of photoelectrochromic devices: a critical review. <b>2016</b> , 9, 2682-2719	103
827	Recent advances in phenothiazine-based dyes for dye-sensitized solar cells. <b>2016</b> , 27, 1304-1318	50
826	Enhanced Light Harvesting in Mesoscopic Solar Cells by Multilevel Multiscale Patterned Photoelectrodes with Superpositioned Optical Properties. <b>2016</b> , 26, 6584-6592	15
825	Solution-Processed Tin-Based Perovskite for Near-Infrared Lasing. <b>2016</b> , 28, 8191-8196	174
824	Room-Temperature, Hydrochloride-Assisted, One-Step Deposition for Highly Efficient and Air-Stable Perovskite Solar Cells. <b>2016</b> , 28, 8309-8314	85
823	Inverted Currentl⁄oltage Hysteresis in Mixed Perovskite Solar Cells: Polarization, Energy Barriers, and Defect Recombination. <b>2016</b> , 6, 1600396	174

822	Unveiling the Low-Temperature Pseudodegradation of Photovoltaic Performance in Planar Perovskite Solar Cell by Optoelectronic Observation. <b>2016</b> , 6, 1600814	19
821	Two-Step Physical Deposition of a Compact Cul Hole-Transport Layer and the Formation of an Interfacial Species in Perovskite Solar Cells. <b>2016</b> , 9, 1929-37	48
820	Lead-free mesoscopic Cs2SnI6 perovskite solar cells using different nanostructured ZnO nanorods as electron transport layers. <b>2016</b> , 10, 587-591	96
819	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. <b>2016</b> , 28, 8144-8149	206
818	Hierarchical Dual-Scaffolds Enhance Charge Separation and Collection for High Efficiency Semitransparent Perovskite Solar Cells. <b>2016</b> , 3, 1600484	34
817	First Fiber-Shaped Non-Volatile Memory Device Based on Hybrid OrganicIhorganic Perovskite. <b>2016</b> , 2, 1600160	42
816	Highly Efficient, Reproducible, Uniform (CH3 NH3 )PbI3 Layer by Processing Additive Dripping for Solution-Processed Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 11, 2399-405	5
815	Using elemental Pb surface as a precursor to fabricate large area CH3NH3PbI3 perovskite solar cells. <b>2016</b> , 389, 540-546	26
814	Identifying the Molecular Structures of Intermediates for Optimizing the Fabrication of High-Quality Perovskite Films. <b>2016</b> , 138, 9919-26	203
813	The detrimental effect of excess mobile ions in planar CH3NH3PbI3 perovskite solar cells. <b>2016</b> , 4, 12748-127	75542
812	Effect of metal cation replacement on the electronic structure of metalorganic halide perovskites: Replacement of lead with alkaline-earth metals. <b>2016</b> , 93,	115
811	High Performance of Perovskite Solar Cells via Catalytic Treatment in Two-Step Process: The Case of Solvent Engineering. <b>2016</b> , 8, 30107-30115	20
810	Room-temperature water-vapor annealing for high-performance planar perovskite solar cells. <b>2016</b> , 4, 17267-17273	51
809	Designing new fullerene derivatives as electron transporting materials for efficient perovskite solar cells with improved moisture resistance. <b>2016</b> , 30, 341-346	60
808	Ternary Oxides in the TiO-ZnO System as Efficient Electron-Transport Layers for Perovskite Solar Cells with Efficiency over 15. <b>2016</b> , 8, 29580-29587	38
807	Colloidal Precursor-Induced Growth of Ultra-Even CHNHPbI for High-Performance Paintable Carbon-Based Perovskite Solar Cells. <b>2016</b> , 8, 30184-30192	47
806	Zinc Porphyrin <b>E</b> thynylaniline Conjugates as Novel Hole-Transporting Materials for Perovskite Solar Cells with Power Conversion Efficiency of 16.6%. <b>2016</b> , 1, 956-962	73
805	Monitoring a Silent Phase Transition in CH3NH3PbI3 Solar Cells via Operando X-ray Diffraction. <b>2016</b> , 1, 1007-1012	43

804	Functionalization of perovskite thin films with moisture-tolerant molecules. <b>2016</b> , 1,	369
803	Polymer-templated nucleation and crystal growth of perovskite films for solar cells with efficiency greater than 21%. <b>2016</b> , 1,	1422
802	Perovskite solar cells with 18.21% efficiency and area over 1 cm2 fabricated by heterojunction engineering. <b>2016</b> , 1,	482
801	Towards stable and commercially available perovskite solar cells. <b>2016</b> , 1,	763
800	Metal halide perovskites for energy applications. <b>2016</b> , 1,	528
799	Self-formed grain boundary healing layer for highly efficient CH3NH3PbI3 perovskite solar cells. <b>2016</b> , 1,	757
798	Molecularly Engineered Organic-Inorganic Hybrid Perovskite with Multiple Quantum Well Structure for Multicolored Light-Emitting Diodes. <i>Scientific Reports</i> , <b>2016</b> , 6, 33546	83
797	Frustrated Lewis pair-mediated recrystallization of CH3NH3PbI3 for improved optoelectronic quality and high voltage planar perovskite solar cells. <b>2016</b> , 9, 3770-3782	101
796	Extended carrier lifetimes and diffusion in hybrid perovskites revealed by Hall effect and photoconductivity measurements. <b>2016</b> , 7, 12253	279
795	Nonstoichiometric acid-base reaction as reliable synthetic route to highly stable CHNHPbI perovskite film. <b>2016</b> , 7, 13503	87
794	A study of trap and recombination centers in MAPbI perovskites. <b>2016</b> , 18, 32862-32867	19
793	Highly Efficient Integrated Perovskite Solar Cells Containing a Small Molecule-PC70BM Bulk Heterojunction Layer with an Extended Photovoltaic Response Up to 900 nm. <b>2016</b> , 28, 8631-8639	35
792	Triarylamine: Versatile Platform for Organic, Dye-Sensitized, and Perovskite Solar Cells. <b>2016</b> , 116, 14675-147	<b>725</b> 19
791	Morphology Evolution of High Efficiency Perovskite Solar Cells via Vapor Induced Intermediate Phases. <b>2016</b> , 138, 15710-15716	91
790	Colloidal lead halide perovskite nanocrystals: synthesis, optical properties and applications. <b>2016</b> , 8, e328-e328	304
7 <sup>8</sup> 9	Electronic structure of organometal halide perovskite CHNHBiI and optical absorption extending to infrared region. <i>Scientific Reports</i> , <b>2016</b> , 6, 37425	25
788	High coverage solution-processed planar perovskite solar cell grown based on the Stranski <b>K</b> rastanov mechanism at low temperature and short time. <b>2016</b> , 6, 112677-112685	13
787	CHNHPb(BF) and (CHNH)Pb(BF) Family of 3D and 2D Perovskites without and with Iodide and Bromide Ions Substitution. <b>2016</b> , 7, 4757-4762	23

786	Crystal Engineering for Low Defect Density and High Efficiency Hybrid Chemical Vapor Deposition Grown Perovskite Solar Cells. <b>2016</b> , 8, 32805-32814	61
785	Facet-Dependent Property of Sequentially Deposited Perovskite Thin Films: Chemical Origin and Self-Annihilation. <b>2016</b> , 8, 32366-32375	17
784	Simple Approach to Improving the Amplified Spontaneous Emission Properties of Perovskite Films. <b>2016</b> , 8, 32978-32983	40
783	High Excitation Intensity Opens a New Trapping Channel in OrganicIhorganic Hybrid Perovskite Nanoparticles. <b>2016</b> , 1, 1154-1161	65
782	A large area (70 cm2) monolithic perovskite solar module with a high efficiency and stability. <b>2016</b> , 9, 3687-3692	187
781	Efficient Perovskite Solar Cells Based on Multilayer Transparent Electrodes through Morphology Control. <b>2016</b> , 120, 26703-26709	10
780	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. <b>2016</b> , 7, 13407	140
779	Trapped charge-driven degradation of perovskite solar cells. <b>2016</b> , 7, 13422	390
778	Giant photostriction in organic-inorganic lead halide perovskites. <b>2016</b> , 7, 11193	119
777	A novel dual function acetic acid vapor-assisted thermal annealing process for high-performance TiO2 nanorods-based perovskite solar cells. <b>2016</b> , 222, 933-937	9
776	Toward Lead-Free Perovskite Solar Cells. <b>2016</b> , 1, 1233-1240	636
775	Multipass inkjet printed planar methylammonium lead iodide perovskite solar cells. <b>2016</b> , 4, 19207-19213	87
774	Progression towards high efficiency perovskite solar cells via optimisation of the front electrode and blocking layer. <b>2016</b> , 4, 11269-11277	14
773	Intrinsic and Extrinsic Stability of Formamidinium Lead Bromide Perovskite Solar Cells Yielding High Photovoltage. <b>2016</b> , 16, 7155-7162	87
77 <sup>2</sup>	PCBM doped with fluorene-based polyelectrolytes as electron transporting layers for improving the performance of planar heterojunction perovskite solar cells. <b>2016</b> , 52, 13572-13575	19
771	FAPbCl3 Perovskite as Alternative Interfacial Layer for Highly Efficient and Stable Polymer Solar Cells. <b>2016</b> , 2, 1600329	21
770	Improving the Performance of Formamidinium and Cesium Lead Triiodide Perovskite Solar Cells using Lead Thiocyanate Additives. <b>2016</b> , 9, 3288-3297	143
769	Efficient inverted-type perovskite solar cells using UV-ozone treated MoOx and WOx as hole transporting layers. <b>2016</b> , 139, 484-488	73

768	Cs+ incorporation into CH3NH3PbI3 perovskite: substitution limit and stability enhancement. <b>2016</b> , 4, 17819-17827	78
767	Doping and alloying for improved perovskite solar cells. <b>2016</b> , 4, 17623-17635	126
766	Enhanced performance and light soaking stability of planar perovskite solar cells using an amine-based fullerene interfacial modifier. <b>2016</b> , 4, 18509-18515	57
765	Pinhole-Free Perovskite Films by Methylamine Iodide Solution-Assisted Repair for High-Efficiency Photovoltaics under Ambient Conditions. <b>2016</b> , 8, 30920-30925	12
764	Mesoporous SnO2 electron selective contact enables UV-stable perovskite solar cells. <b>2016</b> , 30, 517-522	165
763	Silver nanoparticle plasmonic effects on hole-transport material-free mesoporous heterojunction perovskite solar cells. <b>2016</b> , 139, 475-483	28
762	Surface and Interface Aspects of Organometal Halide Perovskite Materials and Solar Cells. <b>2016</b> , 7, 4764-479	4 147
761	Direct Experimental Evidence for Photoinduced Strong-Coupling Polarons in Organolead Halide Perovskite Nanoparticles. <b>2016</b> , 7, 4535-4539	44
760	Crystallization of HC(NH2)2PbI3 Black Polymorph by Solvent Intercalation for Low Temperature Solution Processing of Perovskite Solar Cells. <b>2016</b> , 120, 26710-26719	22
759	Organic Dye-Sensitized CHNHPbI Hybrid Flexible Photodetector with Bulk Heterojunction Architectures. <b>2016</b> , 8, 31289-31294	34
758	The Role of Trap-assisted Recombination in Luminescent Properties of Organometal Halide CH3NH3PbBr3 Perovskite Films and Quantum Dots. <i>Scientific Reports</i> , <b>2016</b> , 6, 27286	74
757	Low cost and solution-processable zinc phthalocyanine as alternative hole transport material for perovskite solar cells. <b>2016</b> , 6, 107723-107731	17
756	High-performance perovskite CH3NH3PbI3 thin films for solar cells prepared by single-source physical vapour deposition. <i>Scientific Reports</i> , <b>2016</b> , 6, 29910	103
755	Enhanced performance of perovskite solar cells by modulating the Lewis acid-base reaction. <b>2016</b> , 8, 19804-19810	56
754	Concentration gradient-controlled growth of large-grain CH3NH3PbI3 films and enhanced photovoltaic performance of solar cells under ambient conditions. <b>2016</b> , 18, 9243-9251	10
753	First-principles hybrid functional study of the electronic structure and charge carrier mobility in perovskite CH 3 NH 3 SnI 3. <b>2016</b> , 25, 107202	42
752	A Universal Deposition Protocol for Planar Heterojunction Solar Cells with High Efficiency Based on Hybrid Lead Halide Perovskite Families. <b>2016</b> , 28, 10701-10709	89
751	Facile fabrication of large-grain CH3NH3PbI3-xBrx films for high-efficiency solar cells via CH3NH3Br-selective Ostwald ripening. <b>2016</b> , 7, 12305	358

750	Enhancing stability and efficiency of perovskite solar cells with crosslinkable silane-functionalized and doped fullerene. <b>2016</b> , 7, 12806		293
749	Structural engineering using rubidium iodide as a dopant under excess lead iodide conditions for high efficiency and stable perovskites. <b>2016</b> , 30, 330-340		106
748	Band Gap Tuning and Defect Tolerance of Atomically Thin Two-Dimensional Organic-Inorganic Halide Perovskites. <b>2016</b> , 7, 4346-4352		78
747	Polyethyleneimine High-Energy Hydrophilic Surface Interfacial Treatment toward Efficient and Stable Perovskite Solar Cells. <b>2016</b> , 8, 32574-32580		41
746	Light and Thermally Induced Evolutional Charge Transport in CH3NH3PbI3 Perovskite Solar Cells. <b>2016</b> , 1, 1000-1006		20
745	Efficient and stable perovskite solar cells prepared in ambient air irrespective of the humidity. <b>2016</b> , 7, 11105		389
744	Novel Solvent-free Perovskite Deposition in Fabrication of Normal and Inverted Architectures of Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2016</b> , 6, 33649	4.9	21
743	Thin-Film Transformation of NH PbI to CH NH PbI Perovskite: A Methylamine-Induced Conversion-Healing Process. <b>2016</b> , 55, 14723-14727		74
742	Role of Isopropyl Alcohol Solvent in the Synthesis of OrganicIhorganic Halide CH(NH2)2PbIxBr3 Perovskite Thin Films by a Two-Step Method. <b>2016</b> , 120, 25371-25377		7
741	Improved Performance and Stability of Inverted Planar Perovskite Solar Cells Using Fulleropyrrolidine Layers. <b>2016</b> , 8, 31426-31432		52
740	Advances and Promises of Layered Halide Hybrid Perovskite Semiconductors. <b>2016</b> , 10, 9776-9786		276
739	Selective dissolution of halide perovskites as a step towards recycling solar cells. <b>2016</b> , 7, 11735		92
738	Controlled growth of CH3NH3PbI3 nanowires in arrays of open nanofluidic channels. <i>Scientific Reports</i> , <b>2016</b> , 6, 19834	4.9	75
737	Structures and Electronic Properties of Different CH3NH3PbI3/TiO2 Interface: A First-Principles Study. <i>Scientific Reports</i> , <b>2016</b> , 6, 20131	4.9	60
736	Investigation of the Hydrolysis of Perovskite Organometallic Halide CH3NH3PbI3 in Humidity Environment. <i>Scientific Reports</i> , <b>2016</b> , 6, 21976	4.9	90
735	Comprehensive design of omnidirectional high-performance perovskite solar cells. <i>Scientific Reports</i> , <b>2016</b> , 6, 29705	4.9	10
734	Antiferroelectric Nature of CH3NH3PbI3-xClx Perovskite and Its Implication for Charge Separation in Perovskite Solar Cells. <i>Scientific Reports</i> , <b>2016</b> , 6, 30680	4.9	35
733	Efficiency Enhancement of Hybrid Perovskite Solar Cells with MEH-PPV Hole-Transporting Layers. <i>Scientific Reports</i> , <b>2016</b> , 6, 34319	4.9	63

Influence of the substrate on the bulk properties of hybrid lead halide perovskite films. 2016, 4, 18153-18163 42 732 A highly hindered bithiophene-functionalized dispiro-oxepine derivative as an efficient hole 58 731 transporting material for perovskite solar cells. 2016, 4, 18259-18264 Thin-Film Transformation of NH4PbI3 to CH3NH3PbI3 Perovskite: A Methylamine-Induced 730 15 Conversion Healing Process. 2016, 128, 14943-14947 AcceptorDonorAcceptor type ionic molecule materials for efficient perovskite solar cells and 66 729 organic solar cells. 2016, 30, 387-397 Stark Spectroscopy of Absorption and Emission of Indoline Sensitizers: A Correlation with the 728 23 Performance of Photovoltaic Cells. 2016, 120, 26206-26216 Analysis of the Hysteresis Behavior of Perovskite Solar Cells with Interfacial Fullerene 60 Self-Assembled Monolayers. 2016, 7, 4622-4628 Interface Optoelectronics Engineering for Mechanically Stacked Tandem Solar Cells Based on 726 30 Perovskite and Silicon. 2016, 8, 33553-33561 Design of dopant-free small molecular hole transport materials for perovskite solar cells: a 9 725 viewpoint from defect passivation. The impact of annealing process on the grain morphology and performance of mesoporous n-i-p 724 1 carbon-based perovskite solar cells. 2022, 12, 015007 The Influence of CsBr on Crystal Orientation and Optoelectronic Properties of MAPbI-Based Solar 723 4 Cells.. 2022, Developments on Perovskite Solar Cells (PSCs): A Critical Review. 2022, 12, 672 722 2 Mixing halogens improves the passivation effects of amine halide on perovskite. 2022, 405, 139782 721 Role of bi-layered CuSCN based hole transport films to realize highly efficient and stable perovskite 720 1 solar cells. 2022, 28, 101657 Impact of fluorine substitution in organic functional materials for perovskite solar cell. 2022, 198, 110029 719 Enhancing the performance of perovskite solar cells through simple bilateral active site molecule 718 2 assisted surface defect passivation. 2022, 432, 134223 DFT study on the crystal structure, optoelectronic, and thermoelectric properties of lead-free 717 inorganic A2PdBr6 (A = K, Rb, and Cs) perovskites. 2022, 30, 103061 Transferable transparent electrodes of liquid metals for bifacial perovskite solar cells and heaters. 716 5 2022, 93, 106857 Recent progress in perovskite solar cells: challenges from efficiency to stability. 2022, 23, 100686 6 715

714	Perovskite solar cells based self-charging power packs: Fundamentals, applications and challenges. <b>2022</b> , 94, 106910	8
713	A short review on progress in perovskite solar cells. <b>2022</b> , 149, 111700	6
712	Interfacial engineering from material to solvent: A mechanistic understanding on stabilizing Formamidinium lead triiodide perovskite photovoltaics. <b>2022</b> , 94, 106924	3
711	Quasi-Zero Dimensional Halide Perovskite Derivates: Synthesis, Status, and Opportunity. 2,	O
710	Structural Dynamics of Metal Halide Perovskites during Photoinduced Halide Segregation 2022,	3
709	Suppressing Residual Lead Iodide and Defects în Sequential-Deposited Perovskite Solar Cell via Bidentate Potassium Dichloroacetate Ligand <b>2022</b> ,	3
708	Quasi-Two-Dimensional Perovskite Solar Cells with Efficiency Exceeding 22%. <b>2022</b> , 7, 757-765	22
707	Effect of Fluorine Substitution in a Hole Dopant on the Photovoltaic Performance of Perovskite Solar Cells. <b>2022</b> , 7, 741-748	4
706	Organic compound passivation for perovskite solar cells with improving stability and photoelectric performance. <b>2022</b> , 231, 414-419	2
705	A universal co-solvent dilution strategy enables facile and cost-effective fabrication of perovskite photovoltaics <b>2022</b> , 13, 89	14
704	The study of electronic and optical properties of perovskites CH3NH3PbCl3 and CH3NH3PbBr3 using first-principle. <b>2022</b> , 336, 00015	O
703	Constructing Monolithic Perovskite/Organic Tandem Solar Cell with Efficiency of 22.0% via Reduced Open-circuit Voltage Loss and Broadened Absorption Spectra <b>2022</b> , e2108829	11
702	Development of formamidinium lead iodide-based perovskite solar cells: efficiency and stability <b>2022</b> , 13, 2167-2183	5
701	On the optical anisotropy in 2D metal-halide perovskites <b>2021</b> ,	3
700	Recent Development and Directions in Printed Perovskite Solar Cells. 2100629	2
699	Fabrication and characterization of CH3NH3PbI3 solar cells with added guanidinium and inserted with decaphenylpentasilane. <b>2022</b> , 61, SB1024	2
698	An Acetylene-Linked 9,9?-Bicarbazole-Based Hole-Transporting Material for Efficient Perovskite Solar Cells.	1
697	Face-on oriented hydrophobic conjugated polymers as dopant-free hole-transport materials for efficient and stable perovskite solar cells with a fill factor approaching 85%.	3

696	Oxide free materials for perovskite solar cells. <b>2022</b> , 287-306		1
695	A high-efficiency and stable perovskite solar cell fabricated in ambient air using a polyaniline passivation layer <i>Scientific Reports</i> , <b>2022</b> , 12, 697	4.9	1
694	Plasmonic-perovskite solar cells, light emitters, and sensors <b>2022</b> , 8, 5		4
693	Fully Scalable and Stable CsPbIBr Solar Cells Realized by an All-Spray-Coating Process 2022,		4
692	Controlled crystal orientation of two-dimensional Ruddlesden Popper halide perovskite films for solar cells. <b>2022</b> , 29, 49-58		2
691	Deeper Insight into the Role of Organic Ammonium Cations in Reducing Surface Defects of the Perovskite Film <b>2022</b> ,		3
690	Germanium ion doping of CsPbI3 to obtain inorganic perovskite solar cells with low temperature processing. <b>2022</b> , 61, 020904		0
689	Deeper Insight into the Role of Organic Ammonium Cations in Reducing Surface Defects of the Perovskite Film.		О
688	Quantifying Efficiency Limitations in All-Inorganic Halide Perovskite Solar Cells <b>2022</b> , e2108132		5
687	Organometal halide perovskite photovoltaics. <b>2022</b> , 273-317		Ο
686	Large-area perovskite solar cells employing spiro-Naph hole transport material. <b>2022</b> , 16, 119-125		31
685	Several Triazine-Based Small Molecules Assisted in the Preparation of High-Performance and Stable Perovskite Solar Cells by Trap Passivation and Heterojunction Engineering <b>2022</b> , 14, 6625-6637		7
684	Challenges for Thermally Stable Spiro-MeOTAD toward the Market Entry of Highly Efficient Perovskite Solar Cells <b>2022</b> ,		2
683	Achieving a Carbon Neutral Future through Advanced Functional Materials and Technologies. <b>2022</b> , 95, 73-103		3
682	The halogen chemistry of halide perovskites. <b>2022</b> ,		1
681	Surface Passivation Using Two Dimensional Perovskites Towards Efficient and Stable Perovskite Solar Cells. <b>2021</b> , e2105635		35
680	Synergy Effect of a Econjugated Ionic Compound: Dual Interfacial Energy Level Regulation and Passivation to Promote VOC and Stability of Planar Perovskite Solar Cells <b>2022</b> ,		6
679	Methylammonium Compensation Effects in MAPbI Perovskite Solar Cells for High-Quality Inorganic CuSCN Hole Transport Layers <b>2022</b> ,		4

678	Introduction to organic-inorganic hybrid solar cells. <b>2022</b> , 187-193	O
677	Green solvent engineering for enhanced performance and reproducibility in printed carbon-based mesoscopic perovskite solar cells and modules. <b>2022</b> , 3, 1125-1138	6
676	A comprehensive analysis of PV cell parameters with varying halides stoichiometry in mixed halide perovskite solar cells. <b>2022</b> , 123, 111905	2
675	Molecular modeling and simulation for the design of dye sensitizers with mono- and di-substituted donor moieties. <b>2022</b> , 21, 52	O
674	Electronic and optical properties of inorganic lead-free perovskite Cs3Bi2I9. 2022, 71, 017101	
673	Synergy Effect of a Econjugated Ionic Compound: Dual Interfacial Energy Level Regulation and Passivation to Promote V oc and Stability of Planar Perovskite Solar Cells.	O
672	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
671	Multifunctional Compound-Regulated SnO 2 for High-Efficiency and Stable Perovskite Solar Cells under Ambient Air. <b>2022</b> , 9,	1
670	Optimized CH3NH3PbI3-XClX based perovskite solar cell with theoretical efficiency exceeding 30%. <b>2022</b> , 124, 112044	1
669	A hypothesis on optoelectronic behavior of CH3NH3SnIxBr3☑ perovskite: Density functional theory approach. <b>2022</b> , 233, 11-17	O
668	Chemo-thermal surface dedoping for high-performance tin perovskite solar cells. <b>2022</b> , 5, 683-693	23
667	Decomposition of Organic Perovskite Precursors on MoO: Role of Halogen and Surface Defects <b>2022</b> ,	1
666	Review on efficiency improvement effort of perovskite solar cell. <b>2022</b> , 233, 421-434	4
665	The joint effect of spinBrbit coupling and atomistic disorder on bandgap evolution in inorganic CsSn1☑PbxI3 mixed perovskite. <b>2022</b> , 131, 055107	
664	Improving power conversion efficiency by Light-Assisted annealing of triple cation perovskite layer in solar cell applications. <b>2022</b> , 234, 1-8	1
663	How do gold nanoparticles boost the performance of perovskite solar cells?. <b>2022</b> , 94, 106934	3
662	PbS/CdS heterojunction thin layer affords high-performance carbon-based all-inorganic solar cells. <b>2022</b> , 95, 106973	11
661	A simple, low-cost modified drop-casting method to develop high-quality CH3NH3PbI3 perovskite thin films. <b>2022</b> , 630, 413678	2

660	Are the emission quantum yields of cesium plumbobromide perovskite nanocrystals reliable metrics for their quality?. <b>2022</b> , 10, 100109	1
659	Comparison on Critical Performance Characteristics of Perovskite-Based Flexible Solar Cells. <b>2022</b> , 47-64	
658	A New OrganicIhorganic Hybrid Compound: Synthesis, crystal structure, Hirshfeld surface analysis, vibrational, optical, magnetic properties and theoretical study. <b>2022</b> , 115717	1
657	Analysis of Light-Enhanced Capacitance Dispersion in Perovskite Solar Cells. 2102275	1
656	Flexible Perovskite Solar Cells with Enhanced Performance Based on a Void-Free Imbedded Interface via a Thin Layer of Mesoporous TiO2.	1
655	Spacer Engineering of Thiophene-Based Two-Dimensional/Three-Dimensional Hybrid Perovskites for Stable and Efficient Solar Cells.	2
654	Antiseptic Povidone-Iodine Heals the Grain Boundary of Perovskite Solar Cells 2022,	9
653	Collaborative strengthening by multi-functional molecule 3-thiophenboric acid for efficient and stable planar perovskite solar cells. <b>2022</b> , 135134	4
652	Inverted Perovskite Solar Cells: The Emergence of a Highly Stable and Efficient Architecture. 2100952	2
651	Improved device efficiency and lifetime of perovskite light-emitting diodes by size-controlled polyvinylpyrrolidone-capped gold nanoparticles with dipole formation <i>Scientific Reports</i> , <b>2022</b> , 12, 2300 <sup>1.9</sup>	O
650	Exploring Structural Nuances in Germanium Halide Perovskites Using Solid-State Ge and Cs NMR Spectroscopy <b>2022</b> , 1687-1696	3
649	Modulation of Planarity on Carbazole Derivatives-Based Hole Transport Materials for Perovskite Solar Cells: A Theoretical and Experimental Research. <b>2022</b> , 51, 1778	О
648	Exploration of the Defect Passivation in Perovskite Materials Using Organic Spacer Cations. 2102253	1
647	A theoretical perspective of the ultrafast transient absorption dynamics of CsPbBr 2022,	1
646	Efficient Energy Level Modulation via Electrophilic KBF4 for High-Performance Inverted Planar Perovskite Solar Cells with Superior Stability.	О
645	Belf-trapping[In solar cell hybrid inorganic-organic perovskite absorbers. <b>2022</b> , 26, 101380	O
644	Design and simulation of efficient tin based perovskite solar cells through optimization of selective layers: Theoretical insights. <b>2022</b> , 125, 112057	3
643	Inclusion of triphenylamine unit in dopant-free hole transport material for enhanced interfacial interaction in perovskite photovoltaics. <b>2022</b> , 200, 110162	5

642	Efficiency and Stability Enhancement of Perovskite Solar Cells Utilizing a Thiol Ligand and MoS2 (100) Nanosheet Surface Modification. <b>2021</b> , 4, 14080-14092	1
641	Theoretical exploration of mechanical, electronic structure and optical properties of aluminium based double halide perovskite <b>2022</b> , 12, 10209-10218	
640	Experimental and theoretical study of europium-doped organometal halide perovskite nanoplatelets for UV photodetection with high responsivity and fast response <b>2022</b> ,	1
639	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency.	2
638	Recent Advances in Hybrid OrganicIhorganic Perovskite Solar Cells with Different Halides and Their Combinations. <b>2022</b> , 21-29	
637	Advancements in organic small molecule hole-transporting materials for perovskite solar cells: past and future. <b>2022</b> , 10, 5044-5081	6
636	A review of graphene derivative enhancers for perovskite solar cells.	О
635	A Review of Three-Dimensional Tin Halide Perovskites as Solar Cell Materials. 25,	2
634	Selection of the ultimate perovskite solar cell materials and fabrication processes towards its industrialization: A review.	2
633	Effect of Chlorine Addition on the Performance and Stability of Electrodeposited Mixed Perovskite Solar Cells. <b>2022</b> , 34, 2218-2230	2
632	Preparation of High-Purity Tin Dichloride. <b>2022</b> , 58, 177-182	О
631	Rethinking the A cation in halide perovskites <b>2022</b> , 375, eabj1186	29
630	CeTaN3 and CeNbN3: Prospective Nitride Perovskites with Optimal Photovoltaic Band Gaps. <b>2022</b> , 34, 2107-2122	2
629	Halide Segregation in Mixed Halide Perovskites: Visualization and Mechanisms. 2022, 11, 700	2
628	Controlling the Formation Process of Methylammonium-Free Halide Perovskite Films for a Homogeneous Incorporation of Alkali Metal Cations Beneficial to Solar Cell Performance. <b>2022</b> , 12, 2103618	7
627	Microwave-Assisted Non-aqueous and Low-Temperature Synthesis of Titania and Niobium-Doped Titania Nanocrystals and Their Application in Halide Perovskite Solar Cells as Electron Transport Layers <b>2022</b> , 7, 6616-6626	O
626	Current advances in perovskite oxides supported on graphene-based materials as interfacial layers of perovskite solar cells. 1-20	1
625	Sustainable Green Process for Environmentally Viable Perovskite Solar Cells. <b>2022</b> , 7, 1154-1177	5

624	Construction of Stable DonorAcceptor Type Covalent Organic Frameworks as Functional Platform for Effective Perovskite Solar Cell Enhancement. 2112553	13
623	Optical Characterization and Prediction with Neural Network Modeling of Various Stoichiometries of Perovskite Materials Using a Hyperregression Method <b>2022</b> , 12,	
622	Recent Developments in Upscalable Printing Techniques for Perovskite Solar Cells 2022, e2200308	4
621	High-Performance Planar-Type Photodetector Based on Hot-Pressed CsPbBr Wafer <b>2022</b> , 3008-3015	2
620	Combining Perovskites and Quantum Dots: Synthesis, Characterization, and Applications in Solar Cells, LEDs, and Photodetectors. 2102566	7
619	Reaction Mechanism of Photocatalytic Hydrogen Production at Water/Tin Halide Perovskite Interfaces. <b>2022</b> , 7, 1308-1315	5
618	Recent Advances on Tin Oxide Electron Transport Layer for High-Performance Perovskite Solar Cells. <b>2022</b> , 25, 31-51	
617	2D Materials for Wearable Energy Harvesting. 2101623	1
616	2D Pb-Halide Perovskites Can Self-Heal Photodamage Better than 3D Ones. 2113354	1
615	Tin perovskite solar cells with >1,300 h of operational stability in N2 through a synergistic chemical engineering approach. <b>2022</b> ,	19
615		19 5
	chemical engineering approach. 2022,	
614	chemical engineering approach. 2022,  Multifunctional EConjugated Additives for Halide Perovskite 2022, e2105307  Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite	5
614	Chemical engineering approach. 2022,  Multifunctional EConjugated Additives for Halide Perovskite 2022, e2105307  Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells.	5
614 613 612	chemical engineering approach. 2022,  Multifunctional EConjugated Additives for Halide Perovskite 2022, e2105307  Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells.  Low-cost and Stable SFX-based Semiconductor Materials in Organic Optoelectronics. 2022,  Accelerating Photogenerated Hole Tunneling through Passivation Layers Reducing Interplanar	5
614 613 612	Chemical engineering approach. 2022,  Multifunctional EConjugated Additives for Halide Perovskite 2022, e2105307  Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells.  Low-cost and Stable SFX-based Semiconductor Materials in Organic Optoelectronics. 2022,  Accelerating Photogenerated Hole Tunneling through Passivation Layers Reducing Interplanar Spacing for Efficient and Stable Perovskite Solar Cells 2022,  Pyrene-Based Dopant-Free Hole-Transport Polymers with Fluorine Induced Favorable Molecular	5 O
614 613 612 611	chemical engineering approach. 2022,  Multifunctional EConjugated Additives for Halide Perovskite 2022, e2105307  Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells.  Low-cost and Stable SFX-based Semiconductor Materials in Organic Optoelectronics. 2022,  Accelerating Photogenerated Hole Tunneling through Passivation Layers Reducing Interplanar Spacing for Efficient and Stable Perovskite Solar Cells 2022,  Pyrene-Based Dopant-Free Hole-Transport Polymers with Fluorine Induced Favorable Molecular Stacking Enable Efficient Perovskite Solar Cells.  Hybrid Organic-Inorganic Perovskite Halide Materials for Photovoltaics towards Their	5 O

606	Crystal Growth Regulation of 2D/3D Perovskite Films for Solar Cells with Both High Efficiency and Stability <b>2022</b> , e2200705	11
605	Theoretical modelling of high-efficiency perovskite solar cells and reduction of internal heat generation using hot-electron extraction. <b>2022</b> , 54, 1	
604	Polyacrylic Acid Grafted Carbon Nanotubes for Immobilization of Lead(II) in Perovskite Solar Cell. 1577-1585	4
603	Efficient and stable TiO2 nanorod array structured perovskite solar cells in air: Co-passivation and synergistic mechanism. <b>2022</b> ,	1
602	Suppressing charge recombination in planar perovskite solar cells by using SnO2/TiO2 nanocomposite as electron transfer layer. <b>2022</b> , 120, 103502	1
601	Accelerated Design of High-Efficiency Lead-Free Tin Perovskite Solar Cells via Machine Learning. 1	O
600	NH 4 Br-Assisted Two-Step-Processing of Guanidinium-Rich Perovskite Films for Extremely Stable Carbon-Based Perovskite Solar Cells in Ambient Air. 2101103	О
599	Manipulating Crystallization Kinetics in High-Performance Blade-Coated Perovskite Solar Cells via Cosolvent-Assisted Phase Transition <b>2022</b> , e2200276	11
598	Boosting the efficiency of inverted perovskite solar cells via ethanolamine doped PEDOT:PSS as hole transport layer.	1
597	Low-temperature processed nickel oxide hole-transporting layer for perovskite solar cell. 1	
596	Hysteresis-free Planar Perovskite Solar Module with 19.1% Efficiency by Interfacial Defects Passivation.	1
595	Growth of Hybrid Perovskite Films via Single-Source Perovskite Nanoparticle Evaporation 2022,	1
594	Pyrene-Based Dopant-Free Hole-Transport Polymers with Fluorine Induced Favorable Molecular Stacking Enable Efficient Perovskite Solar Cells <b>2022</b> ,	2
593	Progress in Nanostructured Perovskite Photovoltaics. <b>2022</b> , 317-344	
592	Reducing Energy Disorder in Perovskite Solar Cells by Chelation 2022,	12
591	Construction of Charge Transport Channels at the NiO/Perovskite Interface through Moderate Dipoles toward Highly Efficient Inverted Solar Cells <b>2022</b> ,	4
590	Lattice strain suppresses point defect formation in halide perovskites. 1	5
589	Insights from scalable fabrication to operational stability and industrial opportunities for perovskite solar cells and modules. <b>2022</b> , 100827	3

588	Protective Coating Interfaces for Perovskite Solar Cell Materials: A First-Principles Study 2022,	1
587	Prediction of structural, electronic, mechanical, thermal, and thermoelectric properties in PbMO3 (M = Sb, Bi) perovskite compounds: a DFT study. <b>2022</b> , 137, 1	Ο
586	Advances in SnO for Efficient and Stable n-i-p Perovskite Solar Cells <b>2022</b> , e2110438	25
585	Formation of Metal Cation/Oxidized Pyridine Complexes-Based Bifunctional Interfacial Layer for Fabrication of Highly Efficient and Reproducible Perovskite Solar Cells.	O
584	Investigation on the Mechanism of Radical Intermediate Formation and Moderate Oxidation of Spiro-OMeTAD by the Synergistic Effect of Multisubstituted Polyoxometalates in Perovskite Solar Cells <b>2022</b> ,	O
583	Plasmonic Local Heating Induced Strain Modulation for Enhanced Efficiency and Stability of Perovskite Solar Cells. 2200186	1
582	Recent Progress in Understanding the Structural, Optoelectronic, and Photophysical Properties of Lead Based Dion Dacobson Perovskites as Well as Their Application in Solar Cells. 891-917	Ο
581	Lasing from Laminated Quasi-2D/3D Perovskite Planar Heterostructures. 2200772	2
580	Improved water repellency and environmental stability of perovskite solar cells by encapsulating with paraffin wax. <b>2022</b> , 282, 125954	О
579	2D Graphene-Like Pb-Free Perovskite Semiconductor CsSb(BrI) with Quasi-linear Electronic Dispersion and Direct Bandgap Close to Germanium <b>2022</b> ,	O
578	Design Strategies of Hole Transport Materials by Electronic and Steric Controls for n-i-p Perovskite Solar Cells <b>2022</b> ,	0
577	Effective surface passivation via intermolecular interactions for high-performance perovskite solar cells.	1
576	Narrow Bandgap Metal Halide Perovskites: Synthesis, Characterization, and Optoelectronic Applications. 2102661	Ο
575	Fabrication, characterization and simulation analysis of perovskite solar cells with dopant-free solution-processible C6PcH2 hole transporting material. <b>2022</b> , 54, 1	
574	Temperature-Reliable Low-Dimensional Perovskites Passivated Black-Phase CsPbI 3 toward Stable and Efficient Photovoltaics.	3
573	Temperature-Reliable Low-Dimensional Perovskites Passivated Black-phase CsPbI3 toward Stable and Efficient Photovoltaics <b>2022</b> ,	17
572	Thick-Layer Lead Iodide Perovskites with Bifunctional Organic Spacers Allylammonium and Iodopropylammonium Exhibiting Trap-State Emission <b>2022</b> ,	3
571	Encapsulation of commercial and emerging solar cells with focus on perovskite solar cells. <b>2022</b> , 237, 264-283	5

57°	Carbazole-based hole-transport materials for efficient Perovskite solar cells. A computational study. <b>2022</b> , 257, 168793	O
569	Electronic and optical properties of the lead free halide double perovskites Cs2AgBiX6(X. <b>2022</b> , 140, 109395	O
568	TCO-free perovskite solar cells in taking advantage of SWCNT/TiO2 core/shell sponge. <b>2022</b> , 7, 100440	
567	Rational design of phenothiazine-based hole transport material with fluorene-containing asymmetric peripheral donor group for perovskite solar cells. <b>2022</b> , 202, 110279	O
566	Tartaric acid additive to enhance perovskite multiple preferential orientations for high-performance solar cells. <b>2022</b> , 69, 406-413	1
565	Chemical welding of polymer networks. <b>2022</b> , 24, 100803	O
564	Recent progress of perovskite devices fabricated using thermal evaporation method: Perspective and outlook. <b>2022</b> , 14, 100232	4
563	Performance investigation of experimentally fabricated lead iodide perovskite solar cell via numerical analysis. <b>2022</b> , 151, 111802	2
562	Self-Formed Multifunctional Grain Boundary Passivation Layer Achieving 22.4% Efficient and Stable Perovskite Solar Cells. <b>2022</b> , 6, 2100893	0
561	Correlating carrier lifetime with device design and photovoltaic performance of perovskite solar cells. <b>2021</b> , 119, 232101	
560	Interfacial defect passivation by novel phosphonium salts yields 22% efficiency perovskite solar cells: Experimental and theoretical evidence. <b>2022</b> , 4,	7
559	Fabrication of Large-Area Uniform Nanometer-Thick Functional Layers and Their Stacks for Flexible Quantum Dot Light-Emitting Diodes <b>2022</b> , 6, e2101030	O
558	Investigation of Threshold Carrier Densities in the Optically Pumped Amplified Spontaneous Emission of Formamidinium Lead Bromide Perovskite Using Different Excitation Wavelengths. <b>2022</b> , 9, 4	1
557	Aiming at the industrialization of perovskite solar cells: Coping with stability challenge. <b>2021</b> , 119, 250503	1
556	Solid-State Ligand-Capped Metal Oxide Electron-Transporting Layer for Efficient and Stable Fullerene-Free Perovskite Solar Cells. <b>2022</b> , 6, 2100671	
555	Effect of treatment condition on perovskite film for perovskite solar cell application. <b>2021</b> , 81-86	
554	Efficient and Stable Wide-Bandgap Perovskite Solar Cells Derived from a Thermodynamic Phase-Pure Intermediate. <b>2022</b> , 6, 2100906	4
553	Critical Role of Organoamines in the Irreversible Degradation of a Metal Halide Perovskite Precursor Colloid: Mechanism and Inhibiting Strategy. <b>2022</b> , 7, 481-489	4

552	Degradation of Perovskite Thin Films and Solar Cells with Candle Soot C/Ag Electrode Exposed in a Control Ambient <b>2021</b> , 11,	(	)
551	Photoinduced Energy-Level Realignment at Interfaces between Organic Semiconductors and Metal-Halide Perovskites <b>2021</b> , 127, 246401	1	ſ
550	A Review on the Development of Metal Grids for the Upscaling of Perovskite Solar Cells and Modules. 2100865	2	2
549	Improved Air Processability of Organic Photovoltaics Using a Stabilizing Antioxidant to Prevent Thermal Oxidation. <b>2022</b> , 126, 22-29		
548	Machine Learning-Assisted Development of Organic Solar Cell Materials: Issues, Analyses, and Outlooks <b>2021</b> , 12, 12391-12401	6	6
547	Dimensional Optimization of TiO2 Nanodisk Photonic Crystals on Lead Iodide (MAPbI3) Perovskite Solar Cells by Using FDTD Simulations. <b>2022</b> , 12, 351	3	3
546	Research progress on preparation methods and photoelectric properties of perovskite solar cell. <b>2021</b> ,		
545	Dual-function of the ZnO nano-sheets as light absorber scaffold and electron transport material in perovskite solar cells. <b>2021</b> , 12, 045004		
544	Decreased surface defects and non-radiative recombination the passivation of the halide perovskite film by 2-thiophenecarboxylic acid in triple-cation perovskite solar cells <b>2022</b> ,	(	o 
543	Dicyclopentadithienothiophene (DCDTT)-based Organic Semiconductor Assisted Grain Boundary Passivation for Highly Efficient and Stable Perovskite Solar Cells.	1	1
542	Interface compatibility: how to outperform classical Spiro-OMeTAD in Perovskite Solar Cells with carbazole derivatives.	1	í
541	Homogeneously Miscible Fullerene inducing Vertical Gradient in Perovskite Thin-Film toward Highly Efficient Solar Cells. 2200877	2	2
540	Perovskite microcells fabricated using swelling-induced crack propagation for colored solar windows <b>2022</b> , 13, 1946	3	3
539	Managing interfacial properties of planar perovskite solar cells using Y3N@C80 endohedral metallofullerene. 1	(	O
538	Photoelectrocaloric effect in ferroelectric oxide Scientific Reports, 2022, 12, 6390	4.9	
537	Employing 2D-Perovskite as an Electron Blocking Layer in Highly Efficient (18.5%) Perovskite Solar Cells with Printable Low Temperature Carbon Electrode. 2200837	Ç	9
536	In-situ characterization for understanding the degradation in perovskite solar cells.	3	3
535	Influence of the Halide Ion on the A-Site Dynamics in FAPbX3 (X = Br and Cl).	1	1

534	Tunable lanthanum doping in double perovskite films for read-only memory. 2022,	1
533	Optical simulation and investigation of different coating methods CdS&TiO2 for buffer layer in CIGS solar cell efficiency. <b>2022</b> , 128,	
532	Identifying the potentials for charge transport layers free n-p homojunction-based perovskite solar cells. <b>2022</b> , 238, 69-77	2
531	CHAPTER 9. Hybrid Solar Cells. 298-340	
530	Data_Sheet_1.DOC. <b>2018</b> ,	
529	Table_1.DOCX. <b>2019</b> ,	
528	Modeling and Balancing the Solvent Evaporation of Thermal Annealing Process for Metal Halide Perovskites and Solar Cells <b>2022</b> , e2200161	0
527	In Situ Polymer Network in Perovskite Solar Cells Enabled Superior Moisture and Thermal Resistance <b>2022</b> , 3754-3762	1
526	Quantum mechanical simulation of various phases of KVF\$_3\$ perovskite <b>2022</b> ,	
525	Recent developments in perovskites-based precursor inks for scalable architectures of perovskite solar cell technology	Ο
524	Solution-processable perylene diimide-based electron transport materials as non-fullerene alternatives for inverted perovskite solar cells.	2
523	Surface Fluoride Management for Enhanced Stability and Efficiency of Halide Perovskite Solar Cells via Thermal Evaporation Method.	1
522	Effects of guanidinium addition to CH>NH <sub>3</sub> PbI< perovskite solar cells inserted with decaphenylpentasilane.	;sub>3
521	Performance Analysis of Lead-Free Perovskite Solar Cells. <b>2022</b> , 629-638	O
520	Electron transport layer assisted by nickel chloride hexahydrate for open-circuit voltage improvement in MAPbI perovskite solar cells <b>2022</b> , 12, 13820-13825	
519	Progress on defect and defect passivation in perovskite solar cells. 2022,	
518	Synthesis of SOT-OH and its application as a building block for the synthesis of new dimeric and trimeric Spiro-OMeTAD materials.	0
517	Synthetic Powder-Based Thin (<0.1 fb) Cs3Bi2Br9 Perovskite Films for Air-Stable and Viable Resistive Switching Memory.	1

Could two dimensional perovskites fundamentally solve the instability of perovskite photovoltaics?.

515	Recent review on electron transport layers in perovskite solar cells.	3
514	Effect of doping titanium ions on semi-conducting behavior, photovoltaic, and thermoelectric perovskite-type oxides VSc 1₪ Ti x O 3 : Ab-inito study.	1
513	Rational selection of the polymeric structure for interface engineering of perovskite solar cells. <b>2022</b> ,	15
512	Entropy Stabilization Effects and Ion Migration in 3D "Hollow" Halide Perovskites 2022,	1
511	Perovskite Single-Crystal Solar Cells: Advances and Challenges.	3
510	Constructing Efficient Hole-Transporting Materials by Tuning Fluorine Substitution for Inverted Perovskite Solar Cells with Efficiency Exceeding 20%.	1
509	Effect of Stability of Two-Dimensional (2D) Aminoethyl Methacrylate Perovskite Using Lead-Based Materials for Ammonia Gas Sensor Application <b>2022</b> , 14,	0
508	Prospect of SnO2 Electron Transport Layer Deposited by Ultrasonic Spraying. 2022, 15, 3211	0
507	In Situ Solution-Grown Halide Perovskite Single Crystals with Epitaxial Heterojunction Structures for Efficient Photodetection.	2
506	Basic understanding of perovskite solar cells and passivation mechanism. 2022, 12, 055307	1
505	Strategies for high-performance perovskite solar cells from materials, film engineering to carrier dynamics and photon management.	4
504	Optoelectronic Properties of Mixed Iodide-Bromide Perovskites from First-Principles Computational Modeling and Experiment <b>2022</b> , 4184-4192	2
503	PTAA as Efficient Hole Transport Materials in Perovskite Solar Cells: A Review.	11
502	Inhibition of AmineMater Proton Exchange Stabilizes Perovskite Ink for Scalable Solar Cell Fabrication.	1
501	Precursor formula engineering enabling high quality solution processed C60 films for efficient and stable inverted perovskite solar cells. <b>2022</b> , 136897	O
500	Suppressing Glass-transition and Lithium-ions Migration in Hole Transport Layer by V 2 O 5 Decorated Graphite Carbon Nitride Nanosheets for Thermally Stable Perovskite Solar Cells.	1
499	Exploration of structural, electronic, optical, mechanical, thermoelectric, and thermodynamic properties of XInO 3 ( $X'='As$ , Sb) compounds for energy harvesting applications.	

498	Multivariate Analysis of Mixed Ternary and Quaternary A-Site Organic Cations in Tin Iodide Perovskite Solar Cells. 1124-1131	1
497	First-principles study on the electronic structures and optical properties of Cs2XInCl6 (X= Ag, Na). <b>2022</b> , 114812	1
496	Improving Heat Transfer Enables Durable Perovskite Solar Cells. 2200869	2
495	Flexible perovskite solar cells: Material selection and structure design. <b>2022</b> , 9, 021307	4
494	Perovskite solar cells by vapor deposition based and assisted methods. <b>2022</b> , 9, 021305	9
493	Interfacial passivation by polylactic acid in perovskite solar cells. <b>2022</b> , 106, 106543	
492	Boosted performances of mesoscopic perovskite solar cells using LaFeO3 inorganic perovskite nanomaterial. <b>2022</b> , 916, 116376	0
491	Efficient perovskite solar cells with low J-V hysteretic behavior based on mesoporous Sn-doped TiO2 electron extraction layer. <b>2022</b> , 445, 136761	1
490	Analytical Review of Spiro-OMeTAD Hole Transport Materials: Paths Toward Stable and Efficient Perovskite Solar Cells. 2200045	1
489	Fabrication of perovskite solar cells by reaction between spin-coated precursor films and CH 3 NH 3 I vapor. <b>2017</b> , 14, 1600192	
488	Photoactivated p-Doping of Organic Interlayer Enables Efficient Perovskite/Silicon Tandem Solar Cells. 1987-1993	4
487	Highly Efficient Dopant-Free Cyano-Substituted Spiro-Type Hole-Transporting Materials for Perovskite Solar Cells.	1
486	A review on high performance photovoltaic cells and strategies for improving their efficiency.	1
485	Microstrain and Urbach Energy Relaxation in FAPbI-Based Solar Cells through Powder Engineering and Perfluoroalkyl Phosphate Ionic Liquid Additives <b>2022</b> ,	О
484	Ionic Dopant-Free Polymer Alloy Hole Transport Materials for High-Performance Perovskite Solar Cells <b>2022</b> ,	8
483	A Perspective on Perovskite Solar Cells: Emergence, Progress, and Commercialization <b>2022</b> , 10, 802890	3
482	Sulfonyl passivation through synergistic hydrogen bonding and coordination interactions for efficient and stable perovskite solar cells.	2
481	Exploration of charge transport materials to improve the radiation tolerance of lead halide perovskite solar cells.	1

480	Small Practical Cluster Models for Perovskites Based on the Similarity Criterion of Central Location Environment and Their Applications.	О
479	Charge Carrier Dynamics in Co-evaporated MAPbI3 with a Gradient in Composition.	О
478	Ultrafast charge transfer enhanced nonlinear optical properties of CH3NH3PbBr3 perovskite quantum dots grown from graphene. <b>2022</b> ,	O
477	Solar Perovskite Technologies. <b>2022</b> ,	
476	Review on defect engineering of perovskite in photovoltaic application.	О
475	Electrical and Optical Investigation of 2T-Perovskite/u-CIGS Tandem Solar Cells With ~30% Efficiency. <b>2022</b> , 1-9	2
474	In situ growth of graphene on both sides of a Cu ${ m I\!N}$ i alloy electrode for perovskite solar cells with improved stability.	9
473	Recent Progress on Perovskite-Based Solar Cells. <b>2022</b> , 147-165	
472	Effects of Various Additives to CH 3 NH 3 PbI 3 Perovskite Solar Cells. <b>2022</b> , 257-316	
471	Band gap engineering to stimulate the optoelectronic performance of lead-free halide perovskites RbGeX3 ( $X = Cl$ , Br) under pressure.	O
470	A Thiophene Based Dopant-Free Hole-Transport Polymer for Efficient and Stable Perovskite Solar Cells.	1
469	2,3-Diphenylthieno[3,4-b]pyrazines as Hole-Transporting Materials for Stable, High-Performance Perovskite Solar Cells. 2118-2127	4
468	Efficient plasmon-enhanced perovskite solar cells by molecularly isolated gold nanorods. 2022,	О
467	Perovskite Materials and Devices.	
466	Domain controlling and defect passivation for efficient quasi-2D perovskite LEDs. <b>2022</b> , 43, 050201	0
465	Progress toward understanding the fullerene-related chemical interactions in perovskite solar cells.	3
464	Combinatorial Physical Vapor Deposition : A New Methodology for Exploring Eco-friendly Composition for Halide-based Resistive Switching Memory. 2200662	
463	Fundamentals of Perovskite Solar Cells. <b>2022</b> , 37-57	

462	Vacuum assisted laminating preparation for carbon film electrode in perovskite solar cells.	1
461	Quantitative Modeling of Electron Dynamics and the Effect of Diffusion in Photosensitized Semiconductor Nanocomposites.	
460	Ionic Liquid-Assisted Crystallization and Defect Passivation for Efficient Perovskite Solar Cells with Enhanced Open-Circuit Voltage.	O
459	Morphology modulated brookite TiO2 and BaSnO3 as alternative electron transport materials for enhanced performance of carbon perovskite solar cells. <b>2022</b> , 137378	1
458	Efficient Perovskite Solar Cells with Enhanced Thermal Stability by Sulfide Treatment.	O
457	Stable Pure Iodide MA0.95Cs0.05PbI3 Perovskite toward Efficient 1.6 eV Bandgap Photovoltaics. 5088-5093	1
456	Two-dimensional Dion-Jacobson halide perovskites as new-generation light absorbers for perovskite solar cells. <b>2022</b> , 166, 112614	1
455	Dye-Sensitized Solar Cells. <b>2022</b> , 1137-1214	
454	Screening of Excitons by Organic Cations in Quasi-Two-Dimensional OrganicIhorganic Lead-Halide Perovskites. <b>2022</b> , 22, 4870-4878	4
453	Evolution of the Electronic Traps in Perovskite Photovoltaics during 1000 h at 85 °C.	1
452	Semitransparent Perovskites for Solar Cells and Smart Windows. <b>2022</b> , 349-377	
451	Transient Suppression of Carrier Mobility Due to Hot Optical Phonons in Lead Bromide Perovskites. <b>2022</b> , 13, 5488-5494	
450	Metal Halide Perovskites for Coherent Light Emission. <b>2022</b> , 527-553	
449	Low-Temperature Hydrothermal Growth of ZnO Nanowires on AZO Substrates for FACsPb(IBr)3 Perovskite Solar Cells. <b>2022</b> , 12, 2093	O
448	A Heat-Liquefiable Solid Precursor for Ambient Growth of Perovskites with High Tunability, Performance and Stability. 2200384	О
447	Photoelectric Properties of Planar and Mesoporous Structured Perovskite Solar Cells. <b>2022</b> , 15, 4300	2
446	Configuration of Methylammonium Lead Iodide Perovskite Solar Cell and its Effect on the Device's Performance: A Review. 2200042	1
445	Understanding the Electronic Structure and Optical Properties of Vacancy-Ordered Double Perovskite A2BX6 for Optoelectronic Applications.	O

444	Interface modification by Fmoc-Met-OH molecule for high-efficient perovskite solar cells.		О
443	Flexible Optoelectronic Devices Based on Hybrid Perovskites. <b>2022</b> , 379-431		O
442	Large-area Perovskite Optoelectronic Devices and the Fabrication Techniques. 2022, 433-477		1
441	Molecular Engineering of Organic Charge Transport Materials for Efficient Perovskite Solar Cell. <b>2022</b> , 173-206		
440	Pb-free halide perovskites for solar cells, light-emitting diodes, and photocatalysts. <b>2022</b> , 10, 060902		1
439	Ion migration suppression mechanism via 4-sulfobenzoic acid monopotassium salt for 22.7% stable perovskite solar cells.		5
438	GIWAXS Analysis on Preferred Orientation in Metal Halide Perovskite Films Via Alkylamines.		1
437	Grain Boundary Chemical Anchoring via Bidirectional Active Site Additive Enables Efficient and Stable Perovskite Solar Cells. 2200904		2
436	Review of technology-specific degradation in c-Si, CdTe, CIGS, dye sensitised, organic and perovskite solar cells in photovoltaic modules: Understanding how reliability improvements in mature technologies can enhance emerging technologies.		2
435	2D Material and Perovskite Heterostructure for Optoelectronic Applications. <b>2022</b> , 12, 2100		4
434	Thermal Stability of K-Doped Organometal Halide Perovskite for Photovoltaic Materials.		
433	Estimation of annual energy generation of perovskite/crystalline Si tandem solar cells with different configurations in central part of Japan. <b>2022</b> ,		
432	The role of Nb2O5 deposition process on perovskite solar cells.		О
431	Photon echo from free excitons in a CH3NH3PbI3 halide perovskite single crystal. <b>2022</b> , 105,		2
430	Thermally-induced drift of A-site cations at solidBolid interface in physically paired lead halide perovskites. <i>Scientific Reports</i> , <b>2022</b> , 12,	4.9	O
429	Construction of Efficient and Stable FAPbI 3 Perovskite Solar Cells through Bifunctional Ionic Liquid-Assisted Crystallization and Defect Passivation. 2200364		O
428	Lansoprazole, a Cure-Four, Enables Perovskite Solar Cells Efficiency Exceeding 24%. <b>2022</b> , 137416		2
427	Stability of Perovskite Materials and Devices. <b>2022</b> , 479-526		

426	Recent advancements and future insight of lead-free non-toxic perovskite solar cells for sustainable and clean energy production: A review. <b>2022</b> , 53, 102433	1
425	The evolution of triphenylamine hole transport materials for efficient perovskite solar cells. <b>2022</b> , 51, 5974-6064	2
424	Suppression of Sn2+ oxidation and formation of large-size crystal grains with multifunctional chloride salt for perovskite solar cell applications.	0
423	The dibenzo heterocyclic-terminated spiro-typed hole transporting materials for perovskite solar cells.	2
422	Recent advances in dopant-free organic hole-transporting materials for efficient, stable and low-cost perovskite solar cells.	8
421	Schottky analysis of formamidinium lead halide perovskite nanocrystalsIdevices with enhanced stability.	O
420	Effect of distributed Bragg reflectors on photoluminescence properties of CH3NH3PbI3 film.  Scientific Reports, 2022, 12,  4.9	
419	Excellent Long-Range Charge-Carrier Mobility in 2D Perovskites. 2203064	O
418	Organic Hole Transport Layers for Efficient, Stable and Scalable Inverted Perovskite Solar Cells. 2203794	13
417	Numerical Investigation of Perovskite and u-CIGS Based Tandem Solar Cells Using Silvaco TCAD Simulation.	
416	Preparation of CuCr 1tk Ga x O 2 (0 tk tl) nanocrystals for inorganic hole conductor of inverted.	1
415	A comparative study of different materials used for solar photovoltaics technology. 2022,	O
414	In Situ Grown Nanocrystalline Si Recombination Junction Layers for Efficient PerovskiteBi Monolithic Tandem Solar Cells: Toward a Simpler Multijunction Architecture.	1
413	Prepared high quality Cs x FA 1 lk PbI 3 based perovskite solar cells with template-assisted technique.	
412	Amplified Spontaneous Emission from Thermally Evaporated High-Quality Thin Films of CsPb(Br1 $\square$ Yx)3 (Y = I, Cl) Perovskites. <b>2022</b> , 38, 8607-8613	1
411	Decoupling engineering of formamidinium-cesium perovskites for efficient photovoltaics.	4
410	Developments in Perovskite materials based Solar Cells: In Pursuit of Hysteresis Effect, Stability issues and Lead-Free based perovskite materials. <b>2022</b> , 12,	
409	Modifying SnO2 with Polyacrylamide to Enhance the Performance of Perovskite Solar Cells.	2

408	Future Research Directions in Perovskite Solar Cells: Exquisite Photon Management and Thermodynamic Phase Stability. 2204807	1
407	Solution Processable Benzotrithiophene (BTT)-Based Organic Semiconductors: Recent Advances and Review. 2200473	1
406	Aspects of optical and thermal performances in flexible perovskite solar cells made of nanomaterials with potential for development of vehicle-integrated photovoltaics. <b>2022</b> ,	1
405	Semi-transparent Perovskite Solar Cells for Four-Terminal Perovskite/CIGS Tandem Solar Cells.	3
404	Synergistic Effect of Anti-Solvent and Component Engineering for Effective Passivation to Attain Highly Stable Perovskite Solar Cells. 2200418	3
403	Understanding the optoelectronic properties of interface between Cs2TiBr6 and TiO2 for solar cell applications. <b>2022</b> , 32, 103963	
402	Passivation strategies of Perovskite film defects for solar cells by bifunctional amides with various molecular structures. <b>2022</b> , 108, 106597	
401	Structural phase transition, optical and electrical properties of the hybrid material [(C2H5)4N]2ZnI4. <b>2022</b> , 314, 123357	
400	Investigation of carrier transport behavior for cubic CH3NH3SnX3 and CH3NH3PbX3 (X=Br and I) using Boltzmann transport equation. <b>2022</b> , 213, 111609	О
399	Progress and challenges of halide perovskite-based solar cell- a brief review. <b>2022</b> , 150, 106953	1
398	Whether organic spacer cations induced 2D/3D or quasi-2D/3D mixed dimensional perovskites?. <b>2022</b> , 450, 137887	1
397	Recent Criterion on Stability Enhancement of Perovskite Solar Cells. <b>2022</b> , 10, 1408	0
396	Synergistic Effect of Guanidinium Tetrafluoroborate Boosting Photovoltaic Performance of Perovskite Solar Cells. <b>2022</b> , 154362	О
395	Oxidation of Spiro-OMeTAD in High-Efficiency Perovskite Solar Cells.	2
394	Enhanced Piezoelectricity in Lead-free Halide Perovskite Nanocomposite for Self-Powered Wireless Electronics. <b>2022</b> , 107631	
393	Slot-die coating of a formamidinium-cesium mixed-cation perovskite for roll-to-roll fabrication of perovskite solar cells under ambient laboratory conditions. <b>2022</b> , 246, 111884	1
392	Surface treatment of the perovskite via self-assembled dipole layer enabling enhanced efficiency and stability for perovskite solar cells. <b>2022</b> , 602, 154365	О
391	Recent Advances in Modeling of Perovskite Solar Cells Using SCAPS-1D: Effect of Absorber and ETM Thickness. <b>2021</b> , 5-17	O

390	Recent advancement in efficient metal oxide-based flexible perovskite solar cells: a short review.	1
389	Multistrategy Preparation of Efficient and Stable Environment-Friendly Lead-Based Perovskite Solar Cells. <b>2022</b> , 14, 35513-35521	1
388	Recent Advances in Nanostructured Inorganic Hole-Transporting Materials for Perovskite Solar Cells. <b>2022</b> , 12, 2592	О
387	Analysis of Perovskite Solar Cell Degradation over Time Using NIR Spectroscopy A Novel Approach. <b>2022</b> , 15, 5397	
386	Optically and Mechanically Engineered Anti-Reflective Film for Highly Efficient Rigid and Flexible Perovskite Solar Cells. 2201520	1
385	High-throughput screening of stable and efficient double inorganic halide perovskite materials by DFT. <b>2022</b> , 12,	O
384	On the Morphology of Nanostructured TiO2 for Energy Applications: The Shape of the Ubiquitous Nanomaterial. <b>2022</b> , 12, 2608	2
383	Excess PbI 2 Management via Multimode Supramolecular Complex Engineering Enables High-Performance Perovskite Solar Cells. 2201663	4
382	Simultaneously Suppressing Charge Recombination and Decomposition of Perovskite Solar Cells by Conjugated Covalent Organic Frameworks. 2200480	4
381	Tuning of band gap by anion variation of Ga2TiX6 (X´=´Cl, Br, I) for solar cells and renewable energy. <b>2022</b> , 97, 085815	О
380	Design of a Flexible Thin-Film Encapsulant with Sandwich Structures of Perhydropolysilazane Layers. <b>2022</b> , 14, 34678-34685	1
379	Effects of Different Anti-Solvents and Annealing Temperatures on Perovskite Thin Films. <b>2022</b> , 12, 1074	
378	2,2?-Dihydroxy-4,4?-dimethoxy-benzophenon as Bifunctional Additives for Passivated Defects and Improved Photostability of Efficient Perovskite Photovoltaics. <b>2022</b> , 14, 36602-36610	
377	Management of Donor and Acceptor Building Blocks in Dopant-Free Polymer Hole Transport Materials for High-Performance Perovskite Solar Cells.	5
376	Ultraviolet-Assisted Perovskite Crystallization for High-Performance Solar Cells. 2200591	О
375	Dually-passivated planar SnO2 based perovskite solar cells with ?2,700h ambient stability: Facile fabrication, high performance and mechanism. <b>2022</b> ,	
374	Cesium Lead Iodide Perovskites: Optically Active Crystal Phase Stability to Surface Engineering. <b>2022</b> , 13, 1318	0
373	Low-Dimensional Metal-Halide Perovskites as High-Performance Materials for Memory Applications. 2203311	4

372	Unraveling the Formation Mechanism of the 2D/3D Perovskite Heterostructure for Perovskite Solar Cells Using Multi-Method Characterization. <b>2022</b> , 126, 13527-13538	
371	Spontaneous Hybrid Cross-Linked Network Induced by Multifunctional Copolymer toward Mechanically Resilient Perovskite Solar Cells. 2207142	7
370	Stabilized perovskite photovoltaics via Supramolecules composed of carbon/graphene quantum dots and Triiso-Propylsilylethynyl agents.	
369	Overview and Outlook on Graphene and Carbon Nanotubes in Perovskite Photovoltaics from Single-Junction to Tandem Applications. 2204594	1
368	Progress of Solution-Processed Metal Oxides as Charge Transport Layers towards Efficient and Stable Perovskite Solar Cells and Modules. <b>2022</b> , 100252	0
367	Phase-Pure ECsPbI3 for Efficient Inorganic Perovskite Solar Cells. 2911-2918	4
366	Management of Donor and Acceptor Building Blocks in Dopant-Free Polymer Hole Transport Materials for High-Performance Perovskite Solar Cells.	
365	Chemical Strain Engineering of MAPbI 3 Perovskite Films. 2202442	3
364	A roadmap for the commercialization of perovskite light emitters.	11
363	Charge Transport and Photoconductivity in a Hybrid Uranium(IV) Halide Perovskite.	
363 362	Charge Transport and Photoconductivity in a Hybrid Uranium(IV) Halide Perovskite.  Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X´=´Cl, Br, I) for solar cells, and renewable energy. 2022, 97, 095801	
	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X´=´Cl, Br, I) for solar cells, and	5
362	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X´=´Cl, Br, I) for solar cells, and renewable energy. <b>2022</b> , 97, 095801	5
362	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X´=´Cl, Br, I) for solar cells, and renewable energy. 2022, 97, 095801  Integrated Ideal-Bandgap Perovskite/Bulk-Heterojunction Solar Cells with Efficiencies > 24%. 2205809  Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar	
362 361 360	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X´=´Cl, Br, I) for solar cells, and renewable energy. 2022, 97, 095801  Integrated Ideal-Bandgap Perovskite/Bulk-Heterojunction Solar Cells with Efficiencies > 24%. 2205809  Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar Cells. 1684-1715  D-A-EA-D Type Based Benzo-dithiophene as Core moiety a New Class Hole Transporting Materials	
362 361 360 359	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X'='Cl, Br, I) for solar cells, and renewable energy. 2022, 97, 095801  Integrated Ideal-Bandgap Perovskite/Bulk-Heterojunction Solar Cells with Efficiencies > 24%. 2205809  Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar Cells. 1684-1715  D-A-EA-D Type Based Benzo-dithiophene as Core moiety a New Class Hole Transporting Materials for Efficient Perovskite Solar Cells.  Dopant-free Small Molecule Hole Transport Materials Based on Triphenylamine Derivatives for	
362 361 360 359 358	Study of lead-free vacancy ordered double perovskites Cs2TeX6 (X'='Cl, Br, I) for solar cells, and renewable energy. 2022, 97, 095801  Integrated Ideal-Bandgap Perovskite/Bulk-Heterojunction Solar Cells with Efficiencies > 24%. 2205809  Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar Cells. 1684-1715  D-A-FA-D Type Based Benzo-dithiophene as Core moiety a New Class Hole Transporting Materials for Efficient Perovskite Solar Cells.  Dopant-free Small Molecule Hole Transport Materials Based on Triphenylamine Derivatives for Perovskite Solar Cells. 2022,	4

354	Growth of (100)-orientation-preferred Bil3 nanoplate films by vapor transport deposition for photovoltaic application.	О
353	Charge Transfer Dynamics of Two-Dimensional Ruddlesden Popper Perovskite in the Presence of Short-Chain Aromatic Thiol Ligands.	О
352	National Policies, Recent Research Hotspots, and Application of Sustainable Energy: Case of China, USA, and European Countries. <b>2022</b> , 14, 10014	O
351	Photovoltaic Cell Generations and Current Research Directions for Their Development. <b>2022</b> , 15, 5542	6
350	Study of elastic, structural, thermoelectric and optoelectronics characteristics of Na2YCuX6(X=Br, Cl) halide double perovskites.	1
349	Human- and machine-centred designs of molecules and materials for sustainability and decarbonization.	2
348	Improving electrochromic performance of panchromatic all-in-one devices by retarding interfacial molecular aggregation/degradation in anode electrode. <b>2022</b> , 246, 111924	0
347	Mixed perovskite (MAPbI3-xClx) solar cells using light-emitting conjugated polymer DMP end-capped MDMO-PPV as a hole transport material. <b>2022</b> , 34, 102262	
346	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	
345	Synchronous regulation of bulk and interfacial defects by an ionic liquid for efficient and stable perovskite solar cells. <b>2022</b> , 603, 154410	2
344	An introduction to perovskites for solar cells and their characterisation. 2022, 8, 89-106	
343	Systematic study of optoelectronic and thermoelectric properties of new lead-free halide double perovskites A2KGaI6(A´=´Cs, Rb) for solar cell applications via ab-initio calculations. <b>2022</b> , 285, 115957	O
342	Simple harmonic oscillation model explaining MA torsional locking in surface passivated MAPbI3 crystal. <b>2022</b> , 806, 139967	1
341	Constructing 2D passivation layer on perovskites based on 3-chlorobenzylamine enables efficient and stable perovskite solar cells. <b>2022</b> , 926, 166891	o
340	Stability strategies of perovskite quantum dots and their extended applications in extreme environment: A review. <b>2022</b> , 156, 111987	2
339	3-Chloroperoxybenzoic acid doping spiroOMeTAD for improving the performance of perovskite solar cells. <b>2022</b> , 450, 138313	4
338	Estimation of performance limit for bifacial single-junction solar cell. 2022, 156, 108500	
337	Probing Chemical-Composition-Induced Heterostructures and Interfaces in Lead Halide Perovskites.	1

336	Azulene-based Hole Transport Materials with Proper Electronic Properties for Perovskite Solar Cells.	0
335	Review of nanomaterials impact on improving the performance of dye-sensitized and perovskite solar cells. <b>2022</b> , 54,	Ο
334	Prevention of Noise Current Generation in Tin-Based Lead-Free Perovskites for Highly Sensitive Photodetection. 2207713	1
333	Carbazole-Based Hole Transport Polymer for Methylammonium-Free Tinllead Perovskite Solar Cells with Enhanced Efficiency and Stability. 3353-3361	4
332	Recent insights into heterometal-doped copper oxide nanostructure-based catalysts for renewable energy conversion and generation. <b>2022</b> , 168, 112887	0
331	Impacts of 0D Cs4PbI6 phase in all-inorganic CsPbI3 perovskites on their physical, optical properties and photovoltaic performances. <b>2022</b> , 759, 139485	O
330	Narrow linewidth CsPbBr3 perovskite quantum dots microsphere lasers. <b>2022</b> , 133, 112907	0
329	Enhancement in power conversion efficiency and stability of perovskite solar cell by reducing trap states using trichloroacetic acid additive in anti-solvent. <b>2022</b> , 34, 102341	О
328	Surface passivation of perovskite with organic hole transport materials for highly efficient and stable perovskite solar cells. <b>2022</b> , 16, 100300	3
327	Constructing hole transporting highway for high-efficiency perovskite solar cells. <b>2022</b> , 291, 117174	O
326	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
325	Performance improvement approach of all inorganic perovskite solar cell with numerical simulation. <b>2022</b> , 33, 104364	Ο
324	Study on the structural, electronic and optical properties of double-perovskite halides Cs2AgSbX6 (X=I, Br, Cl) based on first-principles. <b>2022</b> , 152, 107077	О
323	Solvent engineering for two-dimensional perovskite of guanidium lead iodide. <b>2022</b> , 291, 117175	Ο
322	Anion-exchange assisted sequential deposition for stable and efficient FAPbI3-based perovskite solar cells. <b>2023</b> , 452, 139326	1
321	Hole transport free carbon-based high thermal stability CsPbI1.2Br1.8 solar cells with an amorphous InGaZnO4 electron transport layer. <b>2022</b> , 24, 18896-18904	O
320	Understanding the role of inorganic carriers transport layer materials and interfaces in emerging perovskites solar cells.	О
319	A comparative study of the mechanical stability, electronic, optical and photocatalytic properties of CsPbX3 ( $X = Cl, Br, I$ ) by DFT calculations for optoelectronic applications. <b>2022</b> , 12, 23704-23717	O

318	Experimental evidence of ion migration in aged inorganic perovskite solar cells using non-destructive RBS depth profiling.	0
317	Recent advances in the interfacial engineering of organicihorganic hybrid perovskite solar cells: a materials perspective. <b>2022</b> , 10, 13611-13645	О
316	Carbazolyl phenylacetone-based asymmetric hole transport material enables high-performance perovskite solar cells.	O
315	Hybrid organicIhorganic perovskites as microwave radiation switches.	O
314	Biexciton dynamics in halide perovskite nanocrystals. <b>2022</b> , 24, 22405-22425	1
313	Perovskite Solar Cells: Concepts and Prospects. <b>2022</b> , 97-133	O
312	High efficiency (>20%) and stable inverted perovskite solar cells: current progress and future challenges. <b>2022</b> , 10, 12908-12928	О
311	BODIPY Dyes in Solar Energy. <b>2022</b> , 119-142	O
310	Investigation of the Surface Coating, Humidity Degradation, and Recovery of Perovskite Film Phase for Solar-Cell Applications. <b>2022</b> , 12, 3027	О
309	Roles of Inorganic Oxide Based HTMs towards Highly Efficient and Long-Term Stable PSCA Review. <b>2022</b> , 12, 3003	3
308	Compositional engineering for lead halide perovskite solar cells. <b>2022</b> , 43, 080202	1
307	First-Principles Study of Cu-Based Inorganic Hole Transport Materials for Solar Cell Applications. <b>2022</b> , 15, 5703	1
306	Facet Engineering for Stable, Efficient Perovskite Solar Cells. <b>2022</b> , 7, 3120-3128	4
305	Design of OrganicIhorganic Hybrid Heterostructured Semiconductors via High-Throughput Materials Screening for Optoelectronic Applications. <b>2022</b> , 144, 16656-16666	2
304	Domain Size, Temperature, and Time Dependence of Photodegradation in MAPbI3 Probed by Raman Spectroscopy. <b>2022</b> , 7, 3095-3103	О
303	A Review of Metal-Free Organic Halide Perovskite: Future Directions for the Next Generation of Solar Cells. <b>2022</b> , 36, 10702-10720	4
302	Recent Progress on Heterojunction Engineering in Perovskite Solar Cells. 2201436	О
301	Accurately Determining the Phase Transition Temperature of CsPbI3 via Random-Phase Approximation Calculations and Phase-Transferable Machine Learning Potentials.	O

300	Machine-Learning Modeling for Ultra-Stable High-Efficiency Perovskite Solar Cells. 2201463	2
299	Configurable Organic Charge Carriers toward Stable Perovskite Photovoltaics. <b>2022</b> , 122, 14954-14986	2
298	Molecular Self-Assembly Regulated Dopant-Free Hole Transport Materials for Efficient and Stable n-i-p Perovskite Solar Cells and Scalable Modules.	10
297	Density Functional Theory Study of Two-Dimensional Post-Transition Metal Chalcogenides and Halides for Interfacial Charge Transport in Perovskite Solar Cells.	1
296	Hybrid Germanium Bromide Perovskites with Tunable Second Harmonic Generation.	О
295	Strain Control Toward Stability in Perovskite Solar Cells.	O
294	Strain Control Toward Stability in Perovskite Solar Cells.	1
293	Formation of a nanoporous PbI 2 layer framework via 4-tBP additive to improve the performance and stability of two-step prepared hybrid perovskite solar cells under ambient conditions.	О
292	CsPbI 3 lead and CsSnI 3 lead-free perovskite materials for solar cell device.	О
291	Stabilization of Perovskite Solar Cells: Recent Developments and Future Perspectives. 2204380	7
290	Effect of orientation of the cation CH3NH3 on exciton® mobility in CH3NH3PbI3. <b>2022</b> ,	О
289	Novel C3N4-Assisted Bilateral Interface Engineering for Efficient and Stable Perovskite Solar Cells.	О
288	Jahn Teller Distortion-Stabilized Halide Double Perovskites with Unusual Rock-Salt-type Ordering of Divalent B-Site Cations. <b>2022</b> , 34, 8207-8212	2
287	Single-Crystal Hybrid Lead Halide Perovskites: Growth, Properties, and Device Integration for Solar Cell Application. <b>2022</b> , 22, 6338-6362	O
286	Molecular Engineering of Peripheral Substitutions to Construct Efficient Acridine Core-Based Hole Transport Materials for Perovskite Solar Cells. <b>2022</b> , 14, 44450-44459	О
285	Perovskite Solar Cells. <b>2022</b> , 15, 6399	O
284	A Way to Reach 10% Efficiency with Carbon-Based Electrodeposited Mixed Perovskite Solar Cells. 2200777	1
283	Ionic Liquids for Efficient and Stable Perovskite Solar Cells. 2201292	1

282	What are Methylammonium and Solvent Fates upon Halide Perovskite Thin-Film Preparation and Thermal Aging?. 2201436	1
281	F-doping-Enhanced Carrier Transport in the SnO2/Perovskite Interface for High-Performance Perovskite Solar Cells. <b>2022</b> , 14, 42093-42101	1
280	How to Make 20% Efficient Perovskite Solar Cells in Ambient Air and Encapsulate Them for 500 h of Operational Stability. <b>2022</b> , 34, 8112-8118	0
279	Recent Development of Lead-Free Perovskite Solar Cells.	O
278	Lead Halide Perovskite Quantum Dots for Photovoltaics and Photocatalysis: A Review.	2
277	Design and Synthesis of Carbazole-Cyclopentathiophene Alternating Copolymers for Inhibiting Phase Separation of Cs 0.15 FA 0.85 PbI 3. 2206030	O
276	Combining Quantum Dot and Perovskite Photovoltaic Cells for Efficient Photon to Electricity Conversion in Energy Storage Devices. <b>2022</b> , 10, 2200598	Ο
275	Impeded degradation of perovskite solar cells via the dual interfacial modification of siloxane.	O
274	Modulating preferred crystal orientation for efficient and stable perovskite solar cells Irom progress to perspectives.	O
273	Hybrid Germanium Bromide Perovskites with Tunable Second Harmonic Generation.	O
272	Electric Power and Current Collection in Semiconductor Devices with Suppressed ElectronHole Recombination. 3557-3563	О
271	Improvement Strategies for Stability and Efficiency of Perovskite Solar Cells. <b>2022</b> , 12, 3295	O
270	Guidelines for Fabricating Highly Efficient Perovskite Solar Cells with Cu2O as the Hole Transport Material. <b>2022</b> , 12, 3315	2
269	Molecular Self-Assembly Regulated Dopant-Free Hole Transport Materials for Efficient and Stable n-i-p Perovskite Solar Cells and Scalable Modules.	O
268	Dielectric effects, crystal field, and shape anisotropy tuning of the exciton fine structure of halide perovskite nanocrystals. <b>2022</b> , 6,	О
267	Lateral Heterostructured VisNIR Photodetectors with Multimodal Detection for Rapid and Precise Classification of Glioma.	O
266	Dual-Site Synergistic Passivation for Highly Efficient and Stable Perovskite Solar Cells. 2202189	1
265	APPLICATION OF POROCITIES IN THE TRANSPARENTELECTRODE LAYER OF A PEROVSKITE SOLAR CELLFOR PERFORMANCE ENHANCEMENT.	O

264	Rationalizing the Effect of Polymer-Controlled Growth of Perovskite Single Crystals on Optoelectronic Properties.	0
263	Degenerate Lattice-Instability-Driven Amorphization under Compression in Metal Halide Perovskite CsPbI3. 9449-9455	O
262	Chlorobenzene solvent annealing of perovskite thin films for improving efficiency and reproducibility of perovskite solar cells.	0
261	Interfacial Engineering for High Performance PTAA Based Inverted 3D Perovskite Solar Cells.	Ο
<b>2</b> 60	Theoretical investigation of efficient perovskite solar cells employing simple carbazole as hole transporting materials. <b>2022</b> , 1217, 113875	1
259	Strain regulating mechanical stability and photoelectric properties of CH3NH3PbI3 containing the asymmetric CH3NH3 cations. <b>2022</b> , 33, 104527	Ο
258	Impact of loss mechanisms on performances of perovskite solar cells. <b>2022</b> , 647, 414363	Ο
257	Solution preparation of CsPbBr3/Cs4PbBr6 polycrystalline composites. 2022, 647, 414378	Ο
256	Fluorinated Spacers: An Effective Strategy to Tailor Optoelectronic Properties and Stabilities of Metal-Halide Perovskites for Photovoltaic Applications.	1
255	A practical guide to 3D halide perovskites: Structure, synthesis, and measurement. <b>2022</b> ,	Ο
254	OrganicIhorganic Hybrid DevicesPerovskite-Based Devices. <b>2022</b> , 283-307	0
253	Rapid scalable fabrication of roll-to-roll slot-die coated flexible perovskite solar cells using intense pulse light annealing.	Ο
252	From 3.8% to over 23.8% Power Conversion Efficiency: Commercial Perovskite Solar Cells, Significant Manufacturing Techniques, and Future Prospects. <b>2022</b> ,	0
251	Polarity and moisture induced trans-grain-boundaries 2D/3D coupling structure for flexible perovskite solar cells with high mechanical reliability and efficiency.	4
250	Lead-Free All Inorganic Halide Double Perovskite Materials for Optoelectronic Applications: Progress, Performance and Design.	0
249	Effects of Ammonium and Alkali Metal Additives on Anisotropic Photoconductivities and Solar Cell Efficiencies of Two-Dimensional Lead Halide Perovskites. <b>2022</b> , 126, 17894-17903	O
248	Direct In Situ Conversion of Lead Iodide to a Highly Oriented and Crystallized Perovskite Thin Film via Sequential Deposition for 23.48% Efficient and Stable Photovoltaic Devices.	0
247	Chemical conversion of electrodeposited PbO2 to the all-inorganic cesium lead halide perovskites CsPbBr3 and CsPbCl3. <b>2022</b> , 143, 107381	Ο

246	Recent development in electron transport layers for efficient tin-based perovskite solar cells. <b>2022</b> , 1258, 012015	0
245	What Can Glow Discharge Optical Emission Spectroscopy (GD-OES) Technique Tell Us about Perovskite Solar Cells?. 2200633	O
244	Compositional Engineering in <del>E</del> CsPbI3 toward the Efficiency and Stability Enhancement of All Inorganic Perovskite Solar Cells. <b>2022</b> , 5, 12099-12108	0
243	Fullerene-Based Inverted Perovskite Solar Cell: A Key to Achieve Promising, Stable, and Efficient Photovoltaics. 2201438	5
242	Interface Engineering via Amino Acid for Efficient and Stable Perovskite Solar Cells. 2201641	2
241	Synchrotron-based characterization of metal halide perovskites: Advances and prospects from Brazilian Synchrotron Light Laboratory sources.	1
240	Ethylammonium Bromide- and Potassium-Added CH3NH3PbI3 Perovskite Solar Cells. <b>2022</b> , 9, 791	1
239	Passivating Defects at the Bottom Interface of Perovskite by Ethylammonium to Improve the Performance of Perovskite Solar Cells. 2203536	O
238	Hard and Soft Acid and Base (HSAB) Engineering for Efficient and Stable Sn-Pb Perovskite Solar Cells. 2202496	2
237	Low-Temperature Processed Brookite Interfacial Modification for Perovskite Solar Cells with Improved Performance. <b>2022</b> , 12, 3653	O
236	Exciton Photoluminescence of Strongly Quantum-Confined Formamidinium Lead Bromide (FAPbBr3) Quantum Dots. <b>2022</b> , 126, 18366-18373	1
235	Manipulating the Migration of Iodine Ions via Reverse-Biasing for Boosting Photovoltaic Performance of Perovskite Solar Cells. 2204163	1
234	Defect Pair Formation in FAPbI3 Perovskite Solar Cell Absorbers. <b>2022</b> , 13, 9718-9724	O
233	Sn-Based Perovskites for Photovoltaic Applications. <b>2023</b> , 303-310	O
232	Efficient tin (II) fluoride-free formamidinium tin triiodide perovskite solar cells via composition and additive engineering.	O
231	Band gaps of halide perovskites from a Wannier-localized optimally tuned screened range-separated hybrid functional. <b>2022</b> , 6,	1
230	Molecular Electronic Study of Spiro-[cyclopenta[1,2-b:5,4-b?]dithiophene-4,9?-fluorene] Derivatives: Route to Decent Hole-Transporting Materials. <b>2022</b> , 126, 18238-18250	0
229	Photovoltaically top-performing perovskite crystal facets. <b>2022</b> ,	4

228	The Impact of Backbone Fluorination and Side-Chain Position in Thiophene-Benzothiadiazole-Based Hole-Transport Materials on the Performance and Stability of Perovskite Solar Cells. <b>2022</b> , 23, 13375	Ο
227	Increasing the efficiency of perovskite solar cells using Cs4CuSb2Cl12 quantum dots as an interface layer: A numerical study. 095440892211343	O
226	Oriented Crystal Growth during Perovskite Surface Reconstruction.	Ο
225	Recent progress in improving strategies of inorganic electron transport layers for perovskite solar cells. <b>2022</b> , 104, 107918	1
224	Stable and highly efficient all-inorganic CsPbBr3 perovskite solar cells by interface engineering with NiO NCs modification. <b>2022</b> , 435, 141392	0
223	Develop a molecular dynamics approach to simulate the single-/multi-layer CsGeX3 (X´=1, Cl, and Br) perovskite stress-strain structure at different temperatures and pressures for solar cell in building energy management. <b>2022</b> , 145, 396-403	O
222	Sprayed and mechanical-modified graphite layer as transferred electrode for high-efficiency perovskite solar cells. <b>2023</b> , 202, 161-166	O
221	Defect control based on interfacial passivation via post-treatment of 1-ethylpyridine hydrobromide for achieving efficient and stable perovskite solar cells. <b>2023</b> , 608, 155042	1
220	Defect passivation via incorporation of sodium thiocyanate for achieving high-performance MAPbI3-based perovskite solar cells with enhanced stability. <b>2023</b> , 933, 167583	О
219	Regulating microstructure of organic ammonium cations enables interface defect management and stability improvement in 2D/3D perovskite solar cells. <b>2023</b> , 610, 155450	Ο
218	Optoelectronic investigation and simulation study of zinc and cobalt doped lead halide perovskite nanocrystals. <b>2022</b> , 247, 553-563	0
217	Compositional engineering of perovskites with machine learning. <b>2022</b> , 6,	Ο
216	Recent progress in perovskite solar cells: from device to commercialization.	4
215	Formation of Highly Efficient Perovskite Solar Cells by Applying Li-Doped CuSCN Hole Conductor and Interface Treatment. <b>2022</b> , 12, 3969	Ο
214	Dual-Phase Stabilized Perovskite Nanowires for Reduced Defects and Longer Carrier Lifetime. 2210155	0
213	Molecular engineering of contact interfaces for high-performance perovskite solar cells.	5
212	Simulation and Investigation of 26% Efficient and Robust Inverted Planar Perovskite Solar Cells Based on GA0.2FA0.78SnI3-1%EDAI2 Films. <b>2022</b> , 12, 3885	1
211	Construction of a Highly Anisotropic Supramolecular Assembly Assisted by a Dimensional Confinement Space: Toward Perovskite Solar Cells.	O

210	Progress and challenges in energy harvesting for electrical skin: a review.	0
209	The Device Simulation of MXene-added Hole-Transport Free Perovskite Solar Cells.	O
208	Temperature optimization of NiO hole transport layer prepared by using atomic layer deposition. <b>2022</b> , 111674	О
207	Crystal structure thermal evolution and novel orthorhombic phase of methylammonium lead bromide, CH3NH3PbBr3. <b>2022</b> , 12,	o
206	Solvent choice enables 2D:3D bilayers toward stable perovskite solar cells. <b>2022</b> , 6, 2454-2457	0
205	Towards sustainability with self-healing and recyclable perovskite solar cells. 2022,	1
204	Exceeding 20% Efficiency for Highly Efficient and Stable Inverted Perovskite Solar Cells via Sodium Borohydride Induced Interface Engineering.	0
203	Control of perovskite film crystallization and growth direction to target homogeneous monolithic structures. <b>2022</b> , 13,	О
202	Defect engineering of metal halide perovskite optoelectronic devices. <b>2022</b> , 100438	0
201	Ultrafast laser spectroscopy uncovers mechanisms of light energy conversion in photosynthesis and sustainable energy materials. <b>2022</b> , 3, 041303	1
200	Recent progress of scalable perovskite solar cells and modules. <b>2022</b> , 1, 100010	1
199	Highly efficient and stable hole-transport-layer-free inverted perovskite solar cells achieved 22% efficiency through p-type molecular synergistic doping. <b>2022</b> , 104, 107988	2
198	Defect Passivation of Low-Temperature-Sputtered Tin Oxide Electron Transport Layers through Magnesium Doping for Perovskite Solar Cells.	O
197	Synergistic enhancement of efficiency and stability of perovskite solar cells via dual interface modification. <b>2023</b> , 611, 155745	O
196	Bifunctional additive 2-amino-3-hydroxypyridine for stable and high-efficiency tinlead perovskite solar cells. <b>2022</b> , 11, 151-160	О
195	Low-intensity low-temperature analysis of perovskite solar cells for deep space applications.	o
194	Ethylene glycol-containing ammonium salt for developing highly compatible interfaces in perovskite solar cells. <b>2023</b> , 455, 140833	О
193	The Role of B-site Doping in All-inorganic CsPbIxBr3N Absorbers on the Performance and Stability of Perovskite Photovoltaics.	0

192	Tiny Spots to Light the Future: Advances in Synthesis and Application of Perovskite Nanocrystals in Solar Cells[]	O
191	A numerical study of CsSnIxBr3-x perovskite material as an electron transport layer (ETL), in the perovskite solar cell of a photovoltaic system by molecular dynamics method with LAMMPS software: The effects of external convective heat transfer. <b>2023</b> , 147, 51-58	0
190	Environmental impact of metal halide perovskite solar cells and potential mitigation strategies: A critical review. <b>2023</b> , 219, 115066	0
189	Water dopant control of structural stability and charge recombination of perovskite solar cells: A first-principles study. <b>2023</b> , 612, 155794	O
188	Additive-associated antisolvent engineering of perovskite films for highly stable and efficient p <b>IB</b> perovskite solar cells. <b>2022</b> , 10, 18303-18311	O
187	2D Nanomaterials for Flexible Solar Cells. <b>2022</b> , 1-29	O
186	The Study of Adding Anti-Solvent to Improve the Efficiency of Perovskite Solar Cells. 2022,	0
185	Acetylene Black as Counter Electrode on Monolithic Perovskite Solar Cell. 2022,	O
184	Surface Regulation through Dipolar Molecule Boosting the Efficiency of Mixed 2D/3D Perovskite Solar Cell to 24%. 2209921	1
183	Innovative PV Technologies for reducing electricity costs. <b>2022</b> , 1265, 012002	O
182	Degradation evaluation of titanium dioxide under stress factors.	0
181	Deciphering the Nature of Temperature-Induced Phases of MAPbBr3 by Ab Initio Molecular Dynamics. <b>2022</b> , 34, 10459-10469	0
180	Boosting radiation of stacked halide layer for perovskite solar cells with efficiency over 25%. <b>2022</b> ,	0
179	Comparative study of hole transporting layers commonly used in high-efficiency perovskite solar cells. <b>2022</b> , 57, 21172-21191	O
178	Electrically Reliable Perovskite Photovoltaic Cells Against Instantaneous Kilovolt Stress. 2203012	0
177	Optoelectronic Techniques Boost the Investigation on Hysteresis and Ion Migration in Perovskite Photovoltaics. <b>2022</b> , 2386, 012050	0
176	Nexuses Between the Chemical Design and Performance of Small Molecule Dopant-Free Hole Transporting Materials in Perovskite Solar Cells. 2205926	2
175	Efficient Planar Perovskite Solar Cells with ZnO Electron Transport Layer. <b>2022</b> , 12, 1981	Ο

174	Defect Passivation by Pyridine-Carbazole Molecules for Efficient and Stable Perovskite Solar Cells. <b>2022</b> , 5, 15819-15827	Ο
173	Iodine-doped g-C3N4 modified zinc titanate electron transporting layer for highly efficient perovskite solar cells. <b>2022</b> ,	1
172	Improving the Stability of Halide Perovskite Solar Cells Using Nanoparticles of Tungsten Disulfide. <b>2022</b> , 12, 4454	Ο
171	Recent advances in polymer and perovskite based third-generation solar cell devices. 2022,	О
170	Modulating Residual Lead Iodide via Functionalized Buried Interface for Efficient and Stable Perovskite Solar Cells. 666-676	1
169	An Overview of Current Printing Technologies for Large-Scale Perovskite Solar Cell Development. <b>2023</b> , 16, 190	1
168	Planar Perovskite Solar Cells Using Perovskite CsPbI3 Quantum Dots as Efficient Hole Transporting Layers. <b>2022</b> , 15, 8902	О
167	Cinnamate-Functionalized Cellulose Nanocrystals as Interfacial Layers for Efficient and Stable Perovskite Solar Cells.	О
166	Reconstructing the amorphous and defective surface for efficient and stable perovskite solar cells.	O
165	Engineering Stable Lead-free Tin Halide Perovskite Solar Cells: Lessons from Materials Chemistry. 2206684	O
164	Structural, elastic, mechanical, and thermodynamic characteristic of NaReO3 and KReO3 perovskite oxides from first principles study. <b>2022</b> , 137,	1
163	Recent progress in perovskite solar cells: material science.	1
162	Theoretical and Experimental Study of Methyl Ammonium Antimony Iodide-Based Lead-Free Perovskite Solar Cells. <b>2023</b> , 16, 236	O
161	Revisiting the Nature of Chemical Bonding in Chalcogenides to Explain and Design their Properties. 2208485	1
160	Big data driven perovskite solar cell stability analysis. <b>2022</b> , 13,	1
159	Intermediate-phase engineering via dimethylammonium cation additive for stable perovskite solar cells.	2
158	Nanomaterials in 2-dimensions for flexible solar cell applications 🗈 review. <b>2022</b> , 9,	0
157	Printable high-efficiency organic ionic photovoltaic materials discovered by high-throughput first-principle calculations. <b>2022</b> , 25, 105639	О

156	Optoelectronic Resistive Memory Based on Lead-Free Cs 2 AgBiBr 6 Double Perovskite for Artificial Self-Storage Visual Sensors. 2200657	1
155	Ligands in Lead Halide Perovskite Nanocrystals: From Synthesis to Optoelectronic Applications. 2205950	1
154	Acetylacetone-TiO 2 Promoted Large Area Compatible Cascade Electron Transport Bilayer for Efficient Perovskite Solar Cells.	О
153	Bifunctional Dimethyldichlorosilane Assisted Air-Processed Perovskite Solar Cell with Enhanced Stability and Low Voltage Loss. 2201067	O
152	Construction of ultrathin perovskite solar cells by different periodic structures. 2023, 34,	O
151	Improving the Performance of Lead-Free FASnI 3 -Based Perovskite Solar Cell with Nb 2 O 5 as an Electron Transport Layer. 2200652	O
150	Effect of Humidity on Crystal Growth of CuSCN for Perovskite Solar Cell Applications.	O
149	Recent Strategies for High-Performing Indoor Perovskite Photovoltaics. <b>2023</b> , 13, 259	O
148	A DFT engineering of double halide type perovskites Cs2SiCl6, Cs2GeCl6, Cs2SnCl6 for optoelectronic applications. <b>2023</b> , 115064	O
147	Enhancing Crystallization in Hybrid Perovskite Solar Cells Using Thermally Conductive 2D Boron Nitride Nanosheet Additive. 2207092	O
146	Perovskite Solar Cells: Li-TFSI and t-BP based Chemical Dopant Engineering in Spiro-OMeTAD.	О
145	Upscaling of Carbon-Based Perovskite Solar Module. <b>2023</b> , 13, 313	O
144	Improved Defect Tolerance and Charge Carrier Lifetime in Tinlead Mixed Perovskites: Ab Initio Quantum Dynamics. 499-507	2
143	Simultaneous passivation on both A and X sites of halogen perovskite with magnesium benzoate. <b>2023</b> , 13, 2411-2417	O
142	Phase Equilibria in Ternary System CsBr-AgBr-InBr3. <b>2023</b> , 16, 559	О
141	Recent Progress of Helicene Type Hole-Transporting Materials for Perovskite Solar Cells. <b>2023</b> , 28, 510	O
140	Synthesis and Applications of Halide Perovskite Nanocrystals in Optoelectronics. 2023, 11, 39	O
139	Improved photovoltaic performance and stability of perovskite solar cells with device structure of (ITO/SnO2/CH3NH3PbI3/rGO+spiro-MeOTAD/Au). <b>2023</b> , 289, 116227	1

138	Revealing the mechanism between ion migration and the oxidation of hole-transporting layers in high-efficiency perovskite solar cells. <b>2023</b> , 157, 107310	O
137	Organic fluorine-based trifluoroethyl methacrylate as effective defect passivators enabling high-efficiency and stable perovskite solar cells. <b>2023</b> , 28, 101362	O
136	Novel Materials and Processes for Photovoltaic Technology. <b>2023</b> , 16, 425	О
135	Importance of precursor complexation for green solvent-processed perovskite crystals.	O
134	Optimization of Photovoltaic Performance of Pb-Free Perovskite Solar Cells via Numerical Simulation. <b>2023</b> , 28, 224	1
133	Self-Trapped Excitons Mediated Energy Transfer to Sm3+ in Cs2AgIn(1☑)SmxCl6:Bi Double Perovskite Nanocrystals. <b>2023</b> , 127, 468-475	1
132	Triazine: An Important Building Block of Organic Materials for Solar Cell Application. 2023, 28, 257	1
131	Recent Advances and Challenges toward Efficient Perovskite/Organic Integrated Solar Cells. <b>2023</b> , 16, 266	1
130	Dopant-Free Two-Dimensional Hole Transport Small Molecules Enable Efficient Perovskite Solar Cells. 2203756	O
129	Phosphine oxide additives for perovskite light-emitting diodes and solar cells. 2023,	O
129 128	Phosphine oxide additives for perovskite light-emitting diodes and solar cells. 2023,  Recycling of halide perovskites. 2023, 385-446	0
128	Recycling of halide perovskites. <b>2023</b> , 385-446	О
128	Recycling of halide perovskites. 2023, 385-446  Potential of AMnO3 (A = Ca, Sr, Ba, La) as Active Layer in Inorganic Perovskite Solar Cells.  Atomic layer deposition of SnO2 using hydrogen peroxide improves efficiency and stability of	0
128 127 126	Recycling of halide perovskites. 2023, 385-446  Potential of AMnO3 (A = Ca, Sr, Ba, La) as 'Active Layer in Inorganic Perovskite Solar Cells.  Atomic layer deposition of SnO2 using hydrogen peroxide improves efficiency and stability of perovskite solar cell.  Surface Passivation of Lead Halide Perovskite Solar Cells by a Bifacial DonorDonor Molecule.	0 0
128 127 126	Recycling of halide perovskites. 2023, 385-446  Potential of AMnO3 (A = Ca, Sr, Ba, La) as 'Active Layer in Inorganic Perovskite Solar Cells.  Atomic layer deposition of SnO2 using hydrogen peroxide improves efficiency and stability of perovskite solar cell.  Surface Passivation of Lead Halide Perovskite Solar Cells by a Bifacial Donor Donor Molecule. 2023, 15, 6708-6715  Cs 2 XI 2 Cl 2 (X = Pb, Sn) All-Inorganic Layered Ruddlesden Popper Mixed Halide Perovskite Single Junction and Tandem Solar Cells: Ultra-High Carrier Mobility and Excellent Power Conversion	0 0
128 127 126 125	Recycling of halide perovskites. 2023, 385-446  Potential of AMnO3 (A = Ca, Sr, Ba, La) as 'Active Layer in Inorganic Perovskite Solar Cells.  Atomic layer deposition of SnO2 using hydrogen peroxide improves efficiency and stability of perovskite solar cell.  Surface Passivation of Lead Halide Perovskite Solar Cells by a Bifacial Donor Donor Molecule. 2023, 15, 6708-6715  Cs 2 XI 2 Cl 2 (X = Pb, Sn) All-Inorganic Layered Ruddlesden Popper Mixed Halide Perovskite Single Junction and Tandem Solar Cells: Ultra-High Carrier Mobility and Excellent Power Conversion Efficiency. 2201050  Exploration of B-site alloying in partially reducing Pb toxicity and regulating thermodynamic	O O O

120	Multifunctional Regulation of Highly Orientated Tinlead Alloyed Perovskite Solar Cells. 2023, 8, 1068-1075	1
119	The Cuprate Ln2CuO4 (Ln: Rare Earth): Synthesis, Crystallography, and Applications.	O
118	Reducing surficial and interfacial defects by thiocyanate ionic liquid additive and ammonium formate passivator for efficient and stable perovskite solar cells.	О
117	Performance analysis and optimization of all-inorganic CsPbI3-based perovskite solar cell.	O
116	Perovskite solar cells. <b>2023</b> , 129-156	0
115	Polymer-based nano-inks for solar cells. <b>2023</b> , 359-388	O
114	Investigation of thickness dependent efficiency of CsPbX3 ( $X = I$ , $Br$ ) absorber layer for perovskite solar cells. <b>2023</b> , 176, 111264	О
113	Slot-die coating fabrication of perovskite solar cells toward commercialization. <b>2023</b> , 942, 169104	О
112	Selective Control of Novel TiO2 Nanorods: Excellent Building Blocks for the Electron Transport Layer of Mesoscopic Perovskite Solar Cells.	O
111	High-efficiency perovskite photovoltaic system performance by molecular dynamics method: Optimizing electron transport thicknesses, hole transport, and anti-reflector layers of the sustainable energy materials. <b>2023</b> , 150, 120-126	O
110	Effects of Cesium/Formamidinium Co-Addition to Perovskite Solar Cells.	0
109	Crystal structures for flexible photovoltaic application. <b>2023</b> , 493-525	О
108	Single-Crystal Nanowire Cesium Tin Triiodide Perovskite Solar Cell. 2208062	О
107	Mechanochemical Synthesis of Lead-Free Perovskite-Like MA 3 Bi 2 I 9 for Photo-Catalytic Hydrogen Production.	O
106	Less Is More: Simplified Fluorene-Based Dopant-Free Hole Transport Materials Promote the Long-Term Ambient Stability of Perovskite Solar Cells. <b>2023</b> , 35, 2975-2987	0
105	Mitigating lattice strain and phase segregation of mixed-halide perovskite films via dual chloride additive strategy toward highly efficient and stable perovskite solar cells. <b>2023</b> , 561, 232753	O
104	Device Structures of Perovskite Solar Cells: A Critical Review.	0
103	Simple approach for crystallizing growth of MAPbI3 perovskite nanorod without thermal annealing for Next-Generation optoelectronic applications. <b>2023</b> , 298, 127423	1

102	Mxene regulates the stress of perovskite and improves interface contact for high-efficiency carbon-based all-inorganic solar cells. <b>2023</b> , 461, 141895	1
101	Alkyl Chain Length-Dependent Amine-Induced Crystallization for Efficient Interface Passivation of Perovskite Solar Cells.	O
100	Designing Donor-Acceptor-Donor (D-A-D) Type Molecules for Efficient Hole-Transporting in Perovskite Solar Cells 🖪 DFT Study. <b>2023</b> , 8,	0
99	Symmetric acridine bridging hole transport material for perovskite solar cell. <b>2023</b> , 213, 111158	O
98	Cl-terminated Ti3C2 MXene-modulated carbon/CsPbIBr2 interface boosting efficiency and stability of all-inorganic perovskite solar cells. <b>2023</b> , 619, 156674	O
97	Polarization dependent light-induced phase segregation in inorganic CsPb(BrxI1☑)3 perovskite microcrystals. <b>2023</b> , 944, 169257	O
96	Carboxylated carbon nanotubes as efficient additive to enhance the performance of different types of perovskite solar cells. <b>2023</b> , 38, 102768	O
95	Effect of Cu doping on structural, electronic and thermoelectric properties of double perovskite Cs2NaVCl6. <b>2023</b> , 35, e00803	O
94	Numerical investigation of toxic free perovskite solar cells for achieving high efficiency. 2023, 35, 105893	0
93	Reviewing perovskite oxide sites influence on electrocatalytic reactions for high energy density devices. <b>2023</b> , 81, 1-19	O
92	Machine learning assisted classification of post-treatment amines for increasing the stability of organic-inorganic hybrid perovskites. <b>2023</b> , 35, 105902	O
91	Efficiency Approaching 26% in Triple Cation Mixed Halide Perovskite Solar Cells by Numerical Simulation. <b>2023</b> , 13, 242-249	O
90	Cs 1lk DMA x PbI 3 versus CsPbI 3 for Perovskite Solar Cells. <b>2023</b> , 7,	0
89	Can Alternative Module Design Help to Overcome Stability Problems of Perovskite Photovoltaics?. <b>2023</b> , 8, 1147-1151	O
88	Perovskite solar cells: Recent development and perspectives. <b>2022</b> , 77, 667-679	0
87	Dual-interface modification strategy via tautomeric UV absorber for efficient and UV stable planar perovskite solar cells. <b>2023</b> , 115, 106762	O
86	Navigating the Site-Distinct Energy Conversion Properties of Perovskite Quantum Wells. <b>2023</b> , 8, 1236-1265	0
85	Phonon dynamics in lead free perovskite $(1-x)$ KNN-xBAN $(x = 0.0D.1)$ : a temperature dependent raman study. <b>2023</b> , 98, 035711	O

84	Polarons in perovskite solar cells: effects on photovoltaic performance and stability. 2023, 5, 024002	O
83	Study of Optoelectronic Features in Polar and Nonpolar Polymorphs of the Oxynitride Tin-Based Semiconductor InSnO2N. <b>2023</b> , 14, 1548-1555	1
82	Functional Layers of Inverted Flexible Perovskite Solar Cells and Effective Technologies for Device Commercialization. 2200338	1
81	Molecular Modulation by ©conjugated Spacer Enables Efficient Ultraviolet/Deep-Blue Emissive Organic Light-Emitting Diodes. <b>2023</b> , 127, 3849-3860	O
80	Manipulating Crystallographic Orientation via Cross-Linkable Ligand for Efficient and Stable Perovskite Solar Cells. 2207189	О
79	Preparation of High-Efficiency (>14%) HTL-Free Carbon-Based All-Inorganic Perovskite Solar Cells by Passivation with PABr Derivatives.	O
78	Slow Spontaneous Efficiency Enhancement of Single-Crystal Perovskite Solar Cells Due to Trapped Solvent. <b>2023</b> , 6, 2257-2264	0
77	An extensive study on multiple ETL and HTL layers to design and simulation of high-performance lead-free CsSnCl3-based perovskite solar cells. <b>2023</b> , 13,	5
76	Ethylenediamine Vapors-Assisted Surface Passivation of Perovskite Films for Efficient Inverted Solar Cells. 2201092	Ο
75	Additive engineering for highly efficient and stable perovskite solar cells. 2023, 10, 011308	1
74	All-Printed Roll-to-Roll Perovskite Photovoltaics Enabled by Solution-Processed Carbon Electrode. <b>2023</b> , 35,	О
73	Design Perspective, Fabrication, and Performance Analysis of Formamidinium Tin Halide Perovskite Solar Cell. <b>2023</b> , 13, 404-410	Ο
72	Recent advances in carbon-based materials for high-performance perovskite solar cells: gaps, challenges and fulfillment. <b>2023</b> , 5, 1492-1526	0
71	Nanoengineering TripletIIriplet Annihilation Upconversion: From Materials to Real-World Applications. <b>2023</b> , 17, 3259-3288	1
70	Design and Simulation of Cs2BiAgI6 Double Perovskite Solar Cells with Different Electron Transport Layers for Efficiency Enhancement. <b>2023</b> , 37, 3957-3979	3
69	Bidirectional Targeted Therapy Enables Efficient, Stable, and Eco-Friendly Perovskite Solar Cells. 2214714	O
68	Toward high-efficiency perovskite solar cells with one-dimensional oriented nanostructured electron transport materials. <b>2023</b> , 82, 66-87	О
67	Cubic or Not Cubic? Combined Experimental and Computational Investigation of the Short-Range Order of Tin Halide Perovskites. <b>2023</b> , 14, 2178-2186	O

66	Probing proton diffusion as a guide to environmental stability in powder-engineered FAPbI3 and CsFAPbI3 perovskites. <b>2023</b> , 4, 101304	O
65	A promising scalable bar coating approach using a single crystal-derived precursor ink for high-performance large-area perovskite solar cells. <b>2023</b> , 29, 101415	O
64	Oriented Attachment of Tin Halide Perovskites for Photovoltaic Applications. 2023, 8, 1590-1596	1
63	Improving the Performance of a Triboelectric Nanogenerator by Using an Asymmetric TiO2/PDMS Composite Layer. <b>2023</b> , 13, 832	1
62	Tetramethylammonium hexafluorophosphate interface modification for high-efficiency perovskite solar cells. <b>2023</b> , 56, 145101	О
61	Inverted hysteresis as a diagnostic tool for perovskite solar cells: Insights from the drift-diffusion model. <b>2023</b> , 133, 095001	O
60	Passivation Engineering Using Ultrahydrophobic Donor Acceptor Organic Dye with Machine Learning Insights for Efficient and Stable Perovskite Solar Cells. 2201016	0
59	Multifunctional Green Solvent for Efficient Perovskite Solar Cells.	O
58	Precise Control of Crystallization and Phase-Transition with Green Anti-Solvent in Wide-Bandgap Perovskite Solar Cells with Open-Circuit Voltage Exceeding 1.25 V. 2208289	0
57	Inhibited Degradation of OrganicIhorganic Perovskite-Based Quantum Dot Films via Rapid Annealing Temperatures. <b>2023</b> , 13, 452	O
56	Effect of novel graphitic carbon/NiO hole transporting electrode on the photovoltaic and optical performance of semi-transparent perovskite solar cells. <b>2023</b> , 13, 7380-7384	0
55	Deciphering the Roles of MA-Based Volatile Additives for 于APbI3 to Enable Efficient Inverted Perovskite Solar Cells. <b>2023</b> , 145, 5920-5929	O
54	Advancing Lead-Free Cs2AgBiBr6 perovskite solar cells: Challenges and strategies. <b>2023</b> , 253, 563-583	0
53	High-quality perovskite toward planar MA0.6FA0.4PbI3-xClx-IPNaYF4:Yb/Er of strong responsivity in photodetector application. <b>2023</b> , 138, 113655	O
52	Divalent organic cations as a novel protective layer for perovskite materials.	0
51	Enlightening the temperature coefficient of triple mesoscopic CH3NH3PbI3I Cl x /NiO and double mesoscopic CsFAMAPbI3I Br x /CuSCN carbon perovskite solar cells. <b>2023</b> , 5, 025006	O
50	Can two-dimensional graphdiyne-based materials be novel materials for perovskite solar cell applications?. <b>2023</b> , 2, 027501	О
49	Facile Fabrication of Mixed©ation FA1&CsXPbI3 Perovskites Thin Films for Photodetector Applications. <b>2023</b> , 10, 312	O

48	Atomic Model for Alkali Metal-Doped Tinlead Mixed Perovskites: Insight from Quantum Dynamics. <b>2023</b> , 14, 2878-2885	О
47	Suppressed Voltage Deficit and Degradation of Perovskite Solar Cells by Regulating the Mineralization of Lead Iodide. 2207817	O
46	Dimensional Tuning of Perylene Diimide-Based Polymers for Perovskite Solar Cells with Over 24% Efficiency. 2301175	О
45	Iodoethylammonium (IEA+)-based lead- and iodide- deficient halide perovskites (d-HPs) for solar cells. <b>2023</b> ,	O
44	Modeling the Electronic and Optical Properties of Lead-Based Perovskite Materials: Insights from Density Functional Theory and Electrostatic Embedding. <b>2023</b> , 127, 5968-5981	О
43	Review on Carbazole-Based Hole Transporting Materials for Perovskite Solar Cell. <b>2023</b> , 6, 3635-3664	O
42	Distinguishing Electron Diffusion and Extraction in Methylammonium Lead Iodide. 2023, 14, 3007-3013	О
41	A low-symmetry monothiatruxene-based hole transport material for planar n $oldsymbol{\Phi}$ perovskite solar cells with 18.9% efficiency.	O
40	Upcycled synthesis and extraction of carbon-encapsulated iron carbide nanoparticles for gap Plasmon applications in perovskite solar cells.	О
39	Facile Handling of 3D Two-Photon Polymerized Microstructures by Ultra-Conformable Freestanding Polymeric Membranes. 2214409	1
38	Influence of Elinker on pyrone-based hole transporting materials in perovskite solar cells. 2023, 49, 701-710	О
37	Characterization of Large-Energy-Bandgap Methylammonium Lead Tribromide (MAPbBr3) Perovskite Solar Cells. <b>2023</b> , 13, 1152	O
36	An Overview of Lead, Tin, and Mixed Tinllead-Based ABI 3 Perovskite Solar Cells. 2200160	О
35	Stabilization of methylammonium lead iodide via SiO2 coating for photodetectors. <b>2023</b> , 38, 1941-1951	O
34	Chemical Chelation-Assisted Highly Oriented Perovskite Solar Cells with Reduced Non-radiative Loss. <b>2023</b> , 11, 5589-5596	О
33	Inkjet-Printed Organic Solar Cells and Perovskite Solar Cells: Progress, Challenges, and Prospect.	Ο
32	Buried interface passivation strategies for high-performance perovskite solar cells.	О
31	Controlling Molecular Orientation of Small Molecular Dopant-Free Hole-Transport Materials: Toward Efficient and Stable Perovskite Solar Cells. <b>2023</b> , 28, 3076	О

30	Optimal Enhancement of Power Conversion Efficiency of Monolithic Perovskite Solar Cells by Effect of Methylammonium (MAI). 77, 135-143	O
29	Highly Efficient 2D/3D Mixed-Dimensional Cs2PbI2Cl2/CsPbI2.5Br0.5 Perovskite Solar Cells Prepared by Methanol/Isopropanol Treatment. <b>2023</b> , 13, 1239	O
28	Phase Control of Organometal Halide Perovskites for Development of Highly Efficient Solar Cells.	O
27	Exploring Solar Cells Based on Lead- and Iodide-Deficient Halide Perovskite (d-HP) Thin Films. <b>2023</b> , 13, 1245	O
26	Review on Chemical Stability of Lead Halide Perovskite Solar Cells. 2023, 15,	O
25	Exploring, Identifying, and Removing the Efficiency-Limiting Factor of Mixed-Dimensional 2D/3D Perovskite Solar Cells. <b>2023</b> , 56, 959-970	O
24	Brief Introduction on Manufacturing and Characterization of Metallic Electrode and Corresponding Modified Materials. <b>2023</b> , 13, 703	О
23	Enhanced Performance and Stability of Fully Printed Perovskite Solar Cells and Modules by Ternary Additives under High Humidity. <b>2023</b> , 37, 6049-6061	O
22	Ferroelectricity in Hybrid Perovskites. <b>2023</b> , 14, 3535-3552	O
21	Organic ligands/dyes as photon-downshifting materials for clean energy. <b>2023</b> , 265-280	O
20	Advances in the large-scale production, fabrication, stability, and lifetime considerations of electronic materials for clean energy applications. <b>2023</b> , 27-60	O
19	Performance enhancement by an embedded microlens array in perovskite solar cells.	O
18	The role of different dopants of Spiro-OMeTAD hole transport material on the stability of perovskite solar cells: A mini review. <b>2023</b> , 112076	O
17	Effect of Residual Chloride in FAPbI3 Film on Photovoltaic Performance and Stability of Perovskite Solar Cell. 2122-2129	O
16	Efficient and stable perovskite solar cells by build-in Ecolumns and ionic interfaces in covalent organic frameworks.	O
15	Investigating the Effect of Nonideal Conditions on the Performance of a Planar Sb2Se3-Based Solar Cell through SCAPS-1D Simulation.	O
14	Recent progress in chalcogenide perovskites: toward low-temperature solution processing. <b>2023</b> , 26, 17-31	О
13	Bifunctional hole-shuttle molecule for improved interfacial energy level alignment and defect passivation in perovskite solar cells.	O

## CITATION REPORT

12	Nanographene Coupled with Interfacial Pyrene Derivatives for Thermally Stable Perovskite Solar Cells. 2267-2275	О
11	Selectively localized growth of two-dimensional perovskites at grain boundaries for efficient and stable CsPbI3 perovskite solar cells. <b>2023</b> , 34, 101088	О
10	Self-healing perovskite solar cells based on copolymer-templated TiO2 electron transport layer. <b>2023</b> , 13,	О
9	Unraveling Optical and Electrical Gains of Perovskite Solar Cells with an Antireflective and Energetic Cascade Electron Transport Layer.	O
8	Uncovering the Role of Electronic Doping in Lead-free Perovskite (CH 3 NH 3 ) 2 CuCl 4- $\times$ Br $\times$ and Solar Cells Fabrication.	О
7	The FAPbI3 perovskite memristor with a PMMA passivation layer as an artificial synapse. <b>2023</b> , 129,	Ο
6	Hybrid composites for optoelectronics. <b>2023</b> , 253-276	О
5	Hybrid composites for optoelectronics. <b>2023</b> , 253-276  Spontaneous Hybrid Nano-Domain Behavior of the OrganicIhorganic Hybrid Perovskites.	0
5	Spontaneous Hybrid Nano-Domain Behavior of the OrganicIhorganic Hybrid Perovskites.	O
5	Spontaneous Hybrid Nano-Domain Behavior of the OrganicIhorganic Hybrid Perovskites.  Machine learning for perovskite solar cell design. 2023, 226, 112215  Hole-Transport Management Enables 23%-Efficient and Stable Inverted Perovskite Solar Cells with	0