A fluorene-terminated hole-transporting material for h perovskite solar cells

Nature Energy

3, 682-689

DOI: 10.1038/s41560-018-0200-6

Citation Report

#	Article	IF	Citations
1	Improved photovoltaic properties of nominal composition CH₃NH₃Pb₀₉₉Zn₀₀₁I₃ carbon-based perovskite solar cells. Optics Express, 2018, 26, A984.	1.7	17
2	Incorporating deep electron traps into perovskite devices: towards high efficiency solar cells and fast photodetectors. Journal of Materials Chemistry A, 2018, 6, 21039-21046.	5.2	8
3	Synergic effects of upconversion nanoparticles NaYbF₄:Ho³⁺ and ZrO₂ enhanced the efficiency in hole-conductor-free perovskite solar cells. Nanoscale, 2018, 10, 22003-22011.	2.8	35
4	La-doped BaSnO₃ electron transport layer for perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 23071-23077.	5.2	37
5	Automated Virtual Navigation and Monocular Localization of Indoor Spaces from Videos. , 2018, , .		0
6	Efficient ambient-air-stable HTM-free carbon-based perovskite solar cells with hybrid 2Dâ€“3D lead halide photoabsorbers. Journal of Materials Chemistry A, 2018, 6, 22626-22635.	5.2	31
7	Solution evaporation processed high quality perovskite films. Science Bulletin, 2018, 63, 1591-1596.	4.3	34
8	Highly bright and stable all-inorganic perovskite light-emitting diodes with methoxypolyethylene glycols modified CsPbBr3 emission layer. Applied Physics Letters, 2018, 113, .	1.5	26
9	Dopant Control of Electronâ€“Hole Recombination in Cesiumâ€“Titanium Halide Double Perovskite by Time Domain Ab Initio Simulation: Codoping Supersedes Monodoping. Journal of Physical Chemistry Letters, 2018, 9, 6907-6914.	2.1	24
10	Lithium and Silver Co-Doped Nickel Oxide Hole-Transporting Layer Boosting the Efficiency and Stability of Inverted Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 44501-44510.	4.0	73
11	Thick TiO₂-Based Top Electron Transport Layer on Perovskite for Highly Efficient and Stable Solar Cells. ACS Energy Letters, 2018, 3, 2891-2898.	8.8	71
12	Theoretical Insights into Perovskite Compounds MAPb_{1â^'Î±}X_{Î±}I_{3â^'Î²}Y_{Î²} (X = Ge, Sn; Y = Cl, Br): An Exploration for Superior Optical Performance. Journal of Physical Chemistry C, 2018, 122, 27205-27213.	1.5	7
13	Unveiling the Role of tBPâ€“LiTFSI Complexes in Perovskite Solar Cells. Journal of the American Chemical Society, 2018, 140, 16720-16730.	6.6	193
14	Tuning Nucleation Sites to Enable Monolayer Perovskite Films for Highly Efficient Perovskite Solar Cells. Coatings, 2018, 8, 408.	1.2	9
15	Controlled growth of SbSI thin films from amorphous Sb2S3 for low-temperature solution processed chalcohalide solar cells. APL Materials, 2018, 6, .	2.2	29
16	Dual interfacial modification engineering with p-type NiO nanocrystals for preparing efficient planar perovskite solar cells. Journal of Materials Chemistry C, 2018, 6, 13034-13042.	2.7	37
17	Efficiency improvement of planar perovskite solar cells using a phenol additive. Journal of Materials Chemistry C, 2018, 6, 11519-11524.	2.7	20
18	A star-shaped carbazole-based hole-transporting material with triphenylamine side arms for perovskite solar cells. Journal of Materials Chemistry C, 2018, 6, 12912-12918.	2.7	80

#	Article	IF	Citations
19	Investigation on the Overshoot of Transient Open-Circuit Voltage in Methylammonium Lead Iodide Perovskite Solar Cells. Materials, 2018, 11, 2407.	1.3	5
20	Indium Zinc Oxide Electron Transport Layer for High-Performance Planar Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 28491-28496.	1.5	10
21	Robust Stability of Efficient Lead-Free Formamidinium Tin Iodide Perovskite Solar Cells Realized by Structural Regulation. Journal of Physical Chemistry Letters, 2018, 9, 6999-7006.	2.1	117
22	Materials toward the Upscaling of Perovskite Solar Cells: Progress, Challenges, and Strategies. Advanced Functional Materials, 2018, 28, 1803753.	7.8	145
23	Major Impediment to Highly Efficient, Stable and Low-Cost Perovskite Solar Cells. Metals, 2018, 8, 964.	1.0	26
24	High Electrical Conductivity 2D MXene Serves as Additive of Perovskite for Efficient Solar Cells. Small, 2018, 14, e1802738.	5.2	193
25	Polymer assist crystallization and passivation for enhancements of open-circuit voltage and stability in tin-halide perovskite solar cells. Journal Physics D: Applied Physics, 2018, 51, 475102.	1.3	38
26	Ag@SiO2 Core-shell Nanoparticles Embedded in a TiO2 Mesoporous Layer Substantially Improve the Performance of Perovskite Solar Cells. Nanomaterials, 2018, 8, 701.	1.9	35
27	Allâ€Inorganic Perovskite Quantum Dotâ€Monolayer MoS₂ Mixedâ€Dimensional van der Waals Heterostructure for Ultrasensitive Photodetector. Advanced Science, 2018, 5, 1801219.	5.6	157
28	Low-Cost Carbazole-Based Hole-Transporting Materials for Perovskite Solar Cells: Influence of S,N-Heterocycle. Journal of Physical Chemistry C, 2018, 122, 24014-24024.	1.5	41
29	Core@Shell CsPbBr₃@Zeolitic Imidazolate Framework Nanocomposite for Efficient Photocatalytic CO₂ Reduction. ACS Energy Letters, 2018, 3, 2656-2662.	8.8	425
30	The introduction of a perovskite seed layer for high performance perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 20138-20144.	5.2	12
31	Device Simulation of Organicâ€“Inorganic Halide Perovskite/Crystalline Silicon Four-Terminal Tandem Solar Cell With Various Antireflection Materials. IEEE Journal of Photovoltaics, 2018, 8, 1685-1691.	1.5	30
32	Highâ€Performance Flexible Perovskite Solar Cells with Effective Interfacial Optimization Processed at Low Temperatures. ChemSusChem, 2018, 11, 4131-4138.	3.6	21
33	Naphthodiperylenetetraimide-Based Polymer as Electron-Transporting Material for Efficient Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 36549-36555.	4.0	24
34	Solvent Engineering Improves Efficiency of Lead-Free Tin-Based Hybrid Perovskite Solar Cells beyond 9%. ACS Energy Letters, 2018, 3, 2701-2707.	8.8	176
35	Time-Domain ab Initio Analysis Rationalizes the Unusual Temperature Dependence of Charge Carrier Relaxation in Lead Halide Perovskite. ACS Energy Letters, 2018, 3, 2713-2720.	8.8	68
36	Control of Charge Recombination in Perovskites by Oxidation State of Halide Vacancy. Journal of the American Chemical Society, 2018, 140, 15753-15763.	6.6	129

#	Article	IF	Citations
37	Multifunctional molecular modulators for perovskite solar cells with over 20% efficiency and high operational stability. Nature Communications, 2018, 9, 4482.	5.8	266
38	Defect Passivation of CsPbIBr₂ Perovskites for High-Performance Solar Cells with Large Open-Circuit Voltage of 1.28 V. ACS Applied Energy Materials, 2018, 1, 5872-5878.	2.5	62
39	Phase Pure 2D Perovskite for Highâ€Performance 2Dâ€“3D Heterostructured Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805323.	11.1	244
40	Fashioning Fluorous Organic Spacers for Tunable and Stable Layered Hybrid Perovskites. Chemistry of Materials, 2018, 30, 8211-8220.	3.2	35
41	Cadmium and ytterbium Co-doped TiO2 nanorod arrays perovskite solar cells: enhancement of open circuit voltage and short circuit current density. Journal of Materials Science: Materials in Electronics, 2018, 29, 21138-21144.	1.1	10
42	The synergistic effect of dimethyl sulfoxide vapor treatment and C60 electron transporting layer towards enhancing current collection in mixed-ion inverted perovskite solar cells. Journal of Power Sources, 2018, 405, 70-79.	4.0	14
43	Highly Efficient Phenoxazine Core Unit Based Hole Transport Materials for Hysteresis-Free Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 36608-36614.	4.0	41
44	Room-Temperature-Sputtered Nanocrystalline Nickel Oxide as Hole Transport Layer for pâ€“iâ€“n Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6227-6233.	2.5	88
45	SnO₂â€inâ€Polymer Matrix for Highâ€Efficiency Perovskite Solar Cells with Improved Reproducibility and Stability. Advanced Materials, 2018, 30, e1805153.	11.1	185
46	Lead Vacancy Can Explain the Suppressed Nonradiative Electronâ€“Hole Recombination in FAPbI₃ Perovskite under Iodine-Rich Conditions: A Time-Domain Ab Initio Study. Journal of Physical Chemistry Letters, 2018, 9, 6489-6495.	2.1	29
47	Enhancing Stability and Photostability of CsPbI₃ by Reducing Its Dimensionality. Chemistry of Materials, 2018, 30, 8017-8024.	3.2	59
48	HPbI₃ as a Bifunctional Additive for Morphology Control and Grain Boundary Passivation toward Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 38985-38993.	4.0	16
49	A Review of Inorganic Hole Transport Materials for Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800882.	1.9	200
50	Oriented Quasiâ€2D Perovskites for High Performance Optoelectronic Devices. Advanced Materials, 2018, 30, e1804771.	11.1	268
51	Highâ€Performance Flexible Perovskite Solar Cells Enabled by Lowâ€Temperature ALDâ€Assisted Surface Passivation. Advanced Optical Materials, 2018, 6, 1801153.	3.6	33
52	Perovskite Solar Cells Employing Copper Phthalocyanine Hole-Transport Material with an Efficiency over 20% and Excellent Thermal Stability. ACS Energy Letters, 2018, 3, 2441-2448.	8.8	90
53	Plasmon-Enhanced Thin-Film Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 23691-23697.	1.5	25
54	Hysteresis Index: A Figure without Merit for Quantifying Hysteresis in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2472-2476.	8.8	257

#	Article	IF	Citations
55	Dual interfacial modifications by conjugated small-molecules and lanthanides doping for full functional perovskite solar cells. Nano Energy, 2018, 53, 849-862.	8.2	59
56	Inverted Currentâ€“Voltage Hysteresis in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2457-2460.	8.8	84
57	A full overview of international standards assessing the long-term stability of perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 21794-21808.	5.2	134
58	Strategies to obtain stoichiometric perovskite by sequential vapor deposition learned by modeling the diffusion-dominated formation of perovskite films. Applied Physics Express, 2018, 11, 105501.	1.1	10
59	A New Up-conversion Material of Ho3+-Yb3+-Mg2+ Tri-doped TiO2 and Its Applications to Perovskite Solar Cells. Nanoscale Research Letters, 2018, 13, 262.	3.1	13
60	Enhanced efficiency and stability of fully air-processed TiO2 nanorods array based perovskite solar cell using commercial available CuSCN and carbon. Solar Energy, 2018, 173, 7-16.	2.9	22
61	Conductive fullerene surfactants via anion doping as cathode interlayers for efficient organic and perovskite solar cells. Organic Chemistry Frontiers, 2018, 5, 2845-2851.	2.3	38
62	Anchoring Fullerene onto Perovskite Film via Grafting Pyridine toward Enhanced Electron Transport in High-Efficiency Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 32471-32482.	4.0	73
63	From Exceptional Properties to Stability Challenges of Perovskite Solar Cells. Small, 2018, 14, e1802385.	5.2	58
64	Thermo-evaporated pentacene and perylene as hole transport materials for perovskite solar cells. Dyes and Pigments, 2019, 160, 285-291.	2.0	13
65	Improving the stability of metal halide perovskite solar cells from material to structure. Journal of Energy Chemistry, 2019, 33, 90-99.	7.1	33
66	Perovskite-Betavoltaic Cells: A Novel Application of Organicâ€“Inorganic Hybrid Halide Perovskites. ACS Applied Materials & Interfaces, 2019, 11, 32969-32977.	4.0	20
67	Unveiling the Role of Conjugate Bridge in Triphenylamine Hole-Transporting Materials for Inverted and Direct Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1280-1289.	1.5	6
68	Efficiency simulations on perovskite solar cells only using experimentally determined reflectance and transmittance data. Solar Energy Materials and Solar Cells, 2019, 201, 110039.	3.0	6
69	Importance of Functional Groups in Cross-Linking Methoxysilane Additives for High-Efficiency and Stable Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 2192-2200.	8.8	157
70	Thermodynamically stabilized Î²-CsPbI ₃ â€“based perovskite solar cells with efficiencies >18%. Science, 2019, 365, 591-595.	6.0	963
71	The distinctive phase stability and defect physics in CsPbI₂Br perovskite. Journal of Materials Chemistry A, 2019, 7, 20201-20207.	5.2	64
72	Optimizing electron-rich arylamine derivatives in thiophene-fused derivatives as Ï€ bridge-based hole transporting materials for perovskite solar cells. RSC Advances, 2019, 9, 24733-24741.	1.7	12

#	Article	IF	Citations
73	Co-Ni alloy@carbon aerogels for improving the efficiency and air stability of perovskite solar cells and its hysteresis mechanism. Carbon, 2019, 154, 322-329.	5.4	12
74	High-performance CH3NH3PbI3 inverted planar perovskite solar cells via ammonium halide additives. Journal of Industrial and Engineering Chemistry, 2019, 80, 265-272.	2.9	19
75	Multifunctional Chemical Linker Imidazoleacetic Acid Hydrochloride for 21% Efficient and Stable Planar Perovskite Solar Cells. Advanced Materials, 2019, 31, e1902902.	11.1	366
76	Simultaneous Bottomâ€Up Interfacial and Bulk Defect Passivation in Highly Efficient Planar Perovskite Solar Cells using Nonconjugated Smallâ€Molecule Electrolytes. Advanced Materials, 2019, 31, e1903239.	11.1	89
77	Furrowed hole-transport layer using argon plasma in an inverted perovskite solar cell. New Journal of Chemistry, 2019, 43, 14625-14633.	1.4	3
78	Homostructured rutile TiO2 nanotree arrays thin film electrodes with nitrogen doping for enhanced photoelectrochemical performance. Journal of Materials Science: Materials in Electronics, 2019, 30, 16030-16040.	1.1	10
79	Stable lead-free Te-based double perovskites with tunable band gaps: a first-principles study. New Journal of Chemistry, 2019, 43, 14892-14897.	1.4	32
80	Spaceâ€Confined Growth of Individual Wide Bandgap Single Crystal CsPbCl₃ Microplatelet for Nearâ€Ultraviolet Photodetection. Small, 2019, 15, e1902618.	5.2	77
81	Grain Boundary Healing of Organicâ€“Inorganic Halide Perovskites for Moisture Stability. Nano Letters, 2019, 19, 6498-6505.	4.5	24
82	Sodium Ion Modifying In Situ Fabricated CsPbBr₃ Nanoparticles for Efficient Perovskite Light Emitting Diodes. Advanced Optical Materials, 2019, 7, 1900747.	3.6	59
83	Giant Electric Biasâ€Induced Tunability of Photoluminescence and Photoresistance in Hybrid Perovskite Films on Ferroelectric Substrates. Advanced Optical Materials, 2019, 7, 1901092.	3.6	8
84	Efficient Semitransparent CsPbI₃ Quantum Dots Photovoltaics Using a Graphene Electrode. Small Methods, 2019, 3, 1900449.	4.6	49
85	Tailored electronic properties of Zr-doped SnO2 nanoparticles for efficient planar perovskite solar cells with marginal hysteresis. Nano Energy, 2019, 65, 104014.	8.2	74
86	Butyldithiocarbamate acid solution processing: its fundamentals and applications in chalcogenide thin film solar cells. Journal of Materials Chemistry C, 2019, 7, 11068-11084.	2.7	31
87	Influence of dimethoxytriphenylamine groups on carbazole-based hole transporting materials for perovskite solar cells. Solar Energy, 2019, 190, 361-366.	2.9	12
88	Efficient and stable perovskite solar cells based on perfluorinated polymers. Polymer Chemistry, 2019, 10, 5726-5736.	1.9	20
89	The efficient and non-hysteresis inverted non-fullerenes/CH3NH3PbI3 planar solar cells. Solar Energy, 2019, 189, 307-313.	2.9	16
90	3D asymmetric carbozole hole transporting materials for perovskite solar cells. Solar Energy, 2019, 189, 404-411.	2.9	14

#	Article	IF	Citations
91	Ion-migration and carrier-recombination inhibition by the cation-Ï€ interaction in planar perovskite solar cells. Organic Electronics, 2019, 75, 105387.	1.4	17
92	Perovskite/polyethylene oxide composites: Toward perovskite solar cells without anti-solvent treatment. Ceramics International, 2019, 45, 23399-23405.	2.3	9
93	Bulk Heterojunction Perovskite Solar Cells Incorporated with Zn₂SnO₄ Nanoparticles as the Electron Acceptors. ACS Applied Materials & Interfaces, 2019, 11, 34020-34029.	4.0	38
94	Ultrafast Carrier Dynamics and Terahertz Photoconductivity of Mixed-Cation and Lead Mixed-Halide Hybrid Perovskites. Chinese Physics Letters, 2019, 36, 028401.	1.3	2
95	Fullerene Derivative-Modified SnO₂ Electron Transport Layer for Highly Efficient Perovskite Solar Cells with Efficiency over 21%. ACS Applied Materials & Interfaces, 2019, 11, 33825-33834.	4.0	73
96	Sulfur-annulated perylenediimide as an interfacial material enabling inverted perovskite solar cells with over 20% efficiency and high fill factors exceeding 83%. Journal of Materials Chemistry A, 2019, 7, 21176-21181.	5.2	15
97	Highly efficient CsPbIBr₂ perovskite solar cells with efficiency over 9.8% fabricated using a preheating-assisted spin-coating method. Journal of Materials Chemistry A, 2019, 7, 19008-19016.	5.2	76
98	A dithieno[3,2-b:2â€²,3â€²-d]pyrrole-cored four-arm hole transporting material for over 19% efficiency dopant-free perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 9455-9459.	2.7	23
99	Molecular modulator for stable inverted planar perovskite solar cells with efficiency enhanced by interface engineering. Journal of Materials Chemistry C, 2019, 7, 9735-9742.	2.7	15
100	Highâ€Pressure Bandâ€Gap Engineering and Metallization in the Perovskite Derivative Cs₃Sb₂I₉. ChemSusChem, 2019, 12, 3971-3976.	3.6	28
101	A mixed solvent for rapid fabrication of large-area methylammonium lead iodide layers by one-step coating at room temperature. Journal of Materials Chemistry A, 2019, 7, 18275-18284.	5.2	28
102	On the origin of open-circuit voltage losses in flexible n-i-p perovskite solar cells. Science and Technology of Advanced Materials, 2019, 20, 786-795.	2.8	15
103	LiTFSIâ€Free Spiroâ€OMeTADâ€Based Perovskite Solar Cells with Power Conversion Efficiencies Exceeding 19%. Advanced Energy Materials, 2019, 9, 1901519.	10.2	85
104	Room temperature continuous-wave excited biexciton emission in perovskite nanoplatelets via plasmonic nonlinear fano resonance. Communications Physics, 2019, 2, .	2.0	36
105	Surface Plasmonâ€Assisted Transparent Conductive Electrode for Flexible Perovskite Solar Cells. Advanced Optical Materials, 2019, 7, 1900847.	3.6	13
106	Tailored Phase Transformation of CsPbI₂Br Films by Copper(II) Bromide for High-Performance All-Inorganic Perovskite Solar Cells. Nano Letters, 2019, 19, 5176-5184.	4.5	161
107	Synergistic interface and compositional engineering of inverted perovskite solar cells enables highly efficient and stable photovoltaic devices. Chemical Communications, 2019, 55, 9196-9199.	2.2	37
108	Electrochemical approach for preparing conformal methylammonium lead iodide layer. Electrochemistry Communications, 2019, 103, 120-126.	2.3	12

#	Article	IF	Citations
109	Super-flexible perovskite solar cells with high power-per-weight on 17 Î¼ m thick PET substrate utilizing printed Ag nanowires bottom and top electrodes. Flexible and Printed Electronics, 2019, 4, 034002.	1.5	22
110	Beneficial Role of Organolead Halide Perovskite CH₃NH₃PbI₃/SnO₂ Interface: Theoretical and Experimental Study. Advanced Materials Interfaces, 2019, 6, 1900400.	1.9	22
111	Rational Coreâ€“Shell Design of Open Air Low Temperature In Situ Processable CsPbI₃ Quasiâ€Nanocrystals for Stabilized pâ€iâ€n Solar Cells. Advanced Energy Materials, 2019, 9, 1901787.	10.2	53
112	Dithieno[3,2â€b:2â€²,3â€²â€d]pyrrole Cored pâ€Type Semiconductors Enabling 20â€‰% Efficiency Dopantâ€Free Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 13717-13721.	7.2	108
113	The impact of energy alignment and interfacial recombination on the internal and external open-circuit voltage of perovskite solar cells. Energy and Environmental Science, 2019, 12, 2778-2788.	15.6	570
114	Energetic disorder in perovskite/polymer solar cells and its relationship with the interfacial carrier losses. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180315.	1.6	5
115	Dithieno[3,2â€b:2â€²,3â€²â€d]pyrrole Cored pâ€Type Semiconductors Enabling 20â€‰% Efficiency Dopantâ€Free Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 13855-13859.	1.6	16
116	Band engineering at the interface of all-inorganic CsPbI₂Br solar cells. Nanoscale, 2019, 11, 14553-14560.	2.8	48
117	High open-circuit voltages in lead-halide perovskite solar cells: experiment, theory and open questions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180286.	1.6	28
118	Optimization of anti-reflection layer and back contact of Perovskite solar cell. Solar Energy, 2019, 189, 111-119.	2.9	14
119	Carrier-gas assisted vapor deposition for highly tunable morphology of halide perovskite thin films. Sustainable Energy and Fuels, 2019, 3, 2447-2455.	2.5	12
120	Highly Efficient Guanidiniumâ€Based Quasi 2D Perovskite Solar Cells via a Twoâ€Step Postâ€Treatment Process. Small Methods, 2019, 3, 1900375.	4.6	59
121	First-principles insights of electronic and optical properties of Zn-doped CH3NH3PbI3 for photovoltaic applications. Applied Physics Express, 2019, 12, 082011.	1.1	6
122	Gallium Cationic Incorporated Compact TiO2 as an Efficient Electron-Transporting Layer for Stable Perovskite Solar Cells. Matter, 2019, 1, 452-464.	5.0	30
123	Ascorbic Acidâ€Assisted Stabilization of Î±â€Phase CsPbI₃ Perovskite for Efficient and Stable Photovoltaic Devices. Solar Rrl, 2019, 3, 1900287.	3.1	25
124	Electronic structure modifications induced by increased molecular complexity: from triphenylamine to m-MTDATA. Physical Chemistry Chemical Physics, 2019, 21, 17959-17970.	1.3	6
125	Two-dimensional inverted planar perovskite solar cells with efficiency over 15% via solvent and interface engineering. Journal of Materials Chemistry A, 2019, 7, 18980-18986.	5.2	41
126	Ultrafast carrier dynamics in high-performance Î±-bis-PCBM doped organic-inorganic hybrid perovskite solar cell. Organic Electronics, 2019, 75, 105384.	1.4	4

#	Article	IF	Citations
127	Tuning electronic and optical properties of CsPbI3 by applying strain: A first-principles theoretical study. Chemical Physics Letters, 2019, 732, 136642.	1.2	40
128	Concentration-Dependent Impact of Alkali Li Metal Doped Mesoporous TiO₂ Electron Transport Layer on the Performance of CH₃NH₃PbI₃ Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 19376-19384.	1.5	32
129	N-Methyl-2-pyrrolidone as an excellent coordinative additive with a wide operating range for fabricating high-quality perovskite films. Inorganic Chemistry Frontiers, 2019, 6, 2458-2463.	3.0	26
130	Effect of interfacial recombination, bulk recombination and carrier mobility on the Jâ€“V hysteresis behaviors of perovskite solar cells: a drift-diffusion simulation study. Physical Chemistry Chemical Physics, 2019, 21, 17836-17845.	1.3	37
131	Performance enhancement in up-conversion nanoparticle-embedded perovskite solar cells by harvesting near-infrared sunlight. Materials Chemistry Frontiers, 2019, 3, 2058-2065.	3.2	23
132	A dopant-free twisted organic small-molecule hole transport material for inverted planar perovskite solar cells with enhanced efficiency and operational stability. Nano Energy, 2019, 64, 103946.	8.2	49
133	Phase Diagram and Dielectric Properties of MA_{1â€“x}FA_xPbI₃. ACS Energy Letters, 2019, 4, 2045-2051.	8.8	33
134	Asynchronous Photoexcited Electronic and Structural Relaxation in Lead-Free Perovskites. Journal of the American Chemical Society, 2019, 141, 13074-13080.	6.6	39
135	Solvation effect in precursor solution enables over 16% efficiency in thick 2D perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 19423-19429.	5.2	29
136	Sideâ€Chain Engineering on Dopantâ€Free Holeâ€Transporting Polymers toward Highly Efficient Perovskite Solar Cells (20.19%). Advanced Functional Materials, 2019, 29, 1904856.	7.8	69
137	Theoretical Analysis of Twoâ€Terminal and Fourâ€Terminal Perovskite/Copper Indium Gallium Selenide Tandem Solar Cells. Solar Rrl, 2019, 3, 1900303.	3.1	38
138	Editors' Choiceâ€”Stability of Unstable Perovskites: Recent Strategies for Making Stable Perovskite Solar Cells. ECS Journal of Solid State Science and Technology, 2019, 8, Q111-Q117.	0.9	12
139	Ultrasonic spray deposition of TiO2 electron transport layers for reproducible and high efficiency hybrid perovskite solar cells. Solar Energy, 2019, 188, 697-705.	2.9	11
140	Îœethylammonium Chloride: A Key Additive for Highly Efficient, Stable, and Upâ€Scalable Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 79-92.	7.3	79
141	Recent Progress in Highâ€efficiency Planarâ€structure Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 93-106.	7.3	45
142	Modulation of Ni3+ and crystallization of dopant-free NiOx hole transporting layer for efficient p-i-n perovskite solar cells. Electrochimica Acta, 2019, 319, 41-48.	2.6	22
143	Lower symmetric carbazole fused hole-transporting material for stable and efficient perovskite solar cells. Journal of Power Sources, 2019, 435, 226817.	4.0	17
144	Additional Organicâ€Solventâ€Rinsing Process to Enhance Perovskite Photovoltaic Performance. Advanced Electronic Materials, 2019, 5, 1900244.	2.6	10

#	Article	IF	Citations
145	Perovskite Solar Cells Using Surfaceâ€Modified NiO_x Nanoparticles as Hole Transport Materials in nâ€iâ€p Configuration. Solar Rrl, 2019, 3, 1900172.	3.1	32
146	Application of a Tetraâ€TPDâ€Type Holeâ€Transporting Material Fused by a TrÃ¶ger's Base Core in Perovskite SolarÂCells. Solar Rrl, 2019, 3, 1900224.	3.1	4
147	Asymmetric 3D Hole-Transporting Materials Based on Triphenylethylene for Perovskite Solar Cells. Chemistry of Materials, 2019, 31, 5431-5441.	3.2	53
148	Enhancing the Stability of CH₃NH₃PbBr₃ Nanoparticles Using Double Hydrophobic Shells of SiO₂ and Poly(vinylidene fluoride). ACS Applied Materials & Interfaces, 2019, 11, 26384-26391.	4.0	54
149	Improvement of Cs2AgBiBr6 double perovskite solar cell by rubidium doping. Organic Electronics, 2019, 74, 204-210.	1.4	84
150	Formation mechanism of concentric and colorful ring perovskite films. Synthetic Metals, 2019, 255, 116107.	2.1	1
151	Waterâ€Resistant and Flexible Perovskite Solar Cells via a Glued Interfacial Layer. Advanced Functional Materials, 2019, 29, 1902629.	7.8	89
152	Impact of Electrode Materials on Process Environmental Stability of Efficient Perovskite Solar Cells. Joule, 2019, 3, 1977-1985.	11.7	25
153	Perovskite solar cells: short lifetime and hysteresis behaviour of currentâ€“voltage characteristics. Journal of Materials Science: Materials in Electronics, 2019, 30, 12851-12859.	1.1	22
154	An Interlayer with Strong Pb-Cl Bond Delivers Ultraviolet-Filter-Free, Efficient, and Photostable Perovskite Solar Cells. IScience, 2019, 21, 217-227.	1.9	43
155	Simulation of perovskite solar cell temperature under reverse and forward bias conditions. Journal of Applied Physics, 2019, 126, .	1.1	14
156	Efficient and Stable Mesoscopic Perovskite Solar Cells Using PDTITT as a New Hole Transporting Layer. Advanced Functional Materials, 2019, 29, 1905887.	7.8	29
157	Nonradiative Recombination in Perovskite Solar Cells: The Role of Interfaces. Advanced Materials, 2019, 31, e1902762.	11.1	422
158	Review on Recent Progress of Allâ€Inorganic Metal Halide Perovskites and Solar Cells. Advanced Materials, 2019, 31, e1902851.	11.1	309
159	Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. Advanced Materials, 2019, 31, e1903559.	11.1	128
160	Enhanced Lifetime and Photostability with Lowâ€Temperature Mesoporous ZnTiO₃/Compact SnO₂Electrodes in Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 18460-18465.	7.2	33
161	Aminosilaneâ€Modified CuGaO₂ Nanoparticles Incorporated with CuSCN as a Holeâ€Transport Layer for Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1901372.	1.9	43
162	Highly efficient mixed-halide mixed-cation perovskite solar cells based on rGO-TiO2 composite nanofibers. Energy, 2019, 189, 116396.	4.5	37

#	Article	IF	Citations
163	Molecular engineering of a conjugated polymer as a hole transporting layer for versatile pâ€“iâ€“n perovskite solar cells. Materials Today Energy, 2019, 14, 100341.	2.5	12
164	Atomic-Level Microstructure of Efficient Formamidinium-Based Perovskite Solar Cells Stabilized by 5-Ammonium Valeric Acid Iodide Revealed by Multinuclear and Two-Dimensional Solid-State NMR. Journal of the American Chemical Society, 2019, 141, 17659-17669.	6.6	104
165	Preparation of p-type CuSCN thin film by electrochemical method for inverted planar perovskite solar cells. AIP Conference Proceedings, 2019, , .	0.3	3
166	Fluorescence resonance energy transfer effect enhanced high performance of Si quantum Dots/CsPbBr3 inverse opal heterostructure perovskite solar cells. Journal of Power Sources, 2019, 439, 227065.	4.0	29
167	Cyclooctatetrathiophene-Cored Three-Dimensional Hole Transport Material Enabling Over 19% Efficiency of Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 8173-8180.	2.5	22
168	Double-Helicene-Based Hole-Transporter for Perovskite Solar Cells with 22% Efficiency and Operation Durability. ACS Energy Letters, 2019, 4, 2683-2688.	8.8	56
169	Novel antisolvent-washing strategy for highly efficient carbon-based planar CsPbBr3 perovskite solar cells. Journal of Power Sources, 2019, 439, 227092.	4.0	33
170	Characterization and analysis of FAxCs(1â^'x) Pb(IyBr(1â^'y))3 perovskite solar cells with thickness controlled transport layers for performance optimization. AIP Advances, 2019, 9, .	0.6	5
171	Optimal Interfacial Engineering with Different Length of Alkylammonium Halide for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1902740.	10.2	209
172	Engineering Halide Perovskite Crystals through Precursor Chemistry. Small, 2019, 15, e1903613.	5.2	82
173	A Tailored Nickel Oxide Holeâ€Transporting Layer to Improve the Longâ€Term Thermal Stability of Inorganic Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900346.	3.1	30
174	Boosting the ultra-stable unencapsulated perovskite solar cells by using montmorillonite/CH₃NH₃PbI₃ nanocomposite as photoactive layer. Energy and Environmental Science, 2019, 12, 1265-1273.	15.6	53
175	Growing high-quality CsPbBr₃ by using porous CsPb₂Br₅ as an intermediate: a promising light absorber in carbon-based perovskite solar cells. Sustainable Energy and Fuels, 2019, 3, 184-194.	2.5	60
176	A 3D hybrid nanowire/microcuboid optoelectronic electrode for maximised light harvesting in perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 932-939.	5.2	17
177	Solution-Processed Inorganic Perovskite Flexible Photodetectors with High Performance. Nanoscale Research Letters, 2019, 14, 284.	3.1	21
178	Morphology control of organic halide perovskites by adding BiFeO3 nanostructures for efficient solar cell. Scientific Reports, 2019, 9, 15441.	1.6	13
179	Mechanoperovskites for Photovoltaic Applications: Preparation, Characterization, and Device Fabrication. Accounts of Chemical Research, 2019, 52, 3233-3243.	7.6	79
180	Interfacial Passivation for Perovskite Solar Cells: The Effects of the Functional Group in Phenethylammonium Iodide. ACS Energy Letters, 2019, 4, 2913-2921.	8.8	176

#	Article	IF	Citations
181	Efficient, stable solar cells by using inherent bandgap of Î±-phase formamidinium lead iodide. Science, 2019, 366, 749-753.	6.0	936
182	Scientific complications and controversies noted in the field of CdS/CdTe thin film solar cells and the way forward for further development. Journal of Materials Science: Materials in Electronics, 2019, 30, 20330-20344.	1.1	29
183	Existence of Ligands within Solâ€“Gel-Derived ZnO Films and Their Effect on Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 43116-43121.	4.0	28
184	A Potential Hybrid Hole-Transport Material Incorporating a Redox-Active Tetrathiafulvalene Derivative with CuSCN. Inorganic Chemistry, 2019, 58, 15824-15831.	1.9	4
185	Lead Halide Residue as a Source of Light-Induced Reversible Defects in Hybrid Perovskite Layers and Solar Cells. ACS Energy Letters, 2019, 4, 3011-3017.	8.8	57
186	Asymmetric Strainâ€Introduced Interface Effect on the Electronic and Optical Properties of the CsPbI 3 /SnS van der Waals Heterostructure. Advanced Materials Interfaces, 2019, 6, 1901330.	1.9	20
187	Inorganic CuFeO₂ Delafossite Nanoparticles as Effective Hole Transport Materials for Highly Efficient and Long-Term Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 45142-45149.	4.0	53
188	Nanosecond, Time-Resolved Shift of the Photoluminescence Spectra of Organic, Lead-Halide Perovskites Reveals Structural Features Resulting from Excess Organic Ammonium Halide. Journal of Physical Chemistry C, 2019, 123, 29964-29971.	1.5	1
189	Hole transport material based on modified N-annulated perylene for efficient and stable perovskite solar cells. Solar Energy, 2019, 194, 279-285.	2.9	8
190	Semi-Transparent Perovskite Solar Cells with ITO Directly Sputtered on Spiro-OMeTAD for Tandem Applications. ACS Applied Materials & Interfaces, 2019, 11, 45796-45804.	4.0	63
192	Accelerating the Screening of Perovskite Compositions for Photovoltaic Applications through Highâ€Throughput Inkjet Printing. Advanced Functional Materials, 2019, 29, 1905487.	7.8	37
193	Enhanced Lifetime and Photostability with Lowâ€Temperature Mesoporous ZnTiO₃/Compact SnO₂Electrodes in Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 18631-18636.	1.6	13
194	Highâ€Performance Inverted Planar Perovskite Solar Cells Enhanced by Thickness Tuning of New Dopantâ€Free Hole Transporting Layer. Small, 2019, 15, e1904715.	5.2	47
195	Effect of CsCl Additive on the Morphological and Optoelectronic Properties of Formamidinium Lead Iodide Perovskite. Solar Rrl, 2019, 3, 1900294.	3.1	30
196	Self-assembled NiO microspheres for efficient inverted mesoscopic perovskite solar cells. Solar Energy, 2019, 193, 111-117.	2.9	18
197	Anharmonicity Extends Carrier Lifetimes in Lead Halide Perovskites at Elevated Temperatures. Journal of Physical Chemistry Letters, 2019, 10, 6219-6226.	2.1	66
198	Charge Carrier Dynamics in Electron-Transport-Layer-Free Perovskite Solar Cells. ACS Applied Electronic Materials, 2019, 1, 2334-2341.	2.0	11
199	Carboxylic Acid Functionalization at the Meso-Position of the Bodipy Core and Its Influence on Photovoltaic Performance. Nanomaterials, 2019, 9, 1346.	1.9	3

#	Article	IF	Citations
200	Thermally Stable Perovskite Solar Cells by Systematic Molecular Design of the Hole-Transport Layer. ACS Energy Letters, 2019, 4, 473-482.	8.8	66
201	Radiative cooling of solar cells: opto-electro-thermal physics and modeling. Nanoscale, 2019, 11, 17073-17083.	2.8	66
202	A thermally stable, barium-stabilized Î±-CsPbI₃ perovskite for optoelectronic devices. Journal of Materials Chemistry A, 2019, 7, 21740-21746.	5.2	37
203	Effects of Chlorine Addition to TiO₂ Nanorods-Based Perovskite Solar Cells. Nano, 2019, 14, 1950077.	0.5	1
204	Fabrication and characterization of all-inorganic halide perovskite CsPbBr3 films via the twoâ€“step solâ€“gel process: Impact of annealing temperature. Journal of Alloys and Compounds, 2019, 810, 151943.	2.8	11
205	Indeno[1,2â€b]carbazole as Methoxyâ€Free Donor Group: Constructing Efficient and Stable Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 15868-15872.	1.6	15
206	Indeno[1,2â€b]carbazole as Methoxyâ€Free Donor Group: Constructing Efficient and Stable Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 15721-15725.	7.2	94
207	Study of perovskite (CH3NH3)xCs1-xPbBr3 films with nanometer crystallites fabricated via two-step sol-gel process: Impact of CH3NH3+ molar content on microstructure and optical properties. Journal of Alloys and Compounds, 2019, 810, 151947.	2.8	5
208	Cyclopentadithiophene and Fluorene Spiro-Core-Based Hole-Transporting Materials for Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 22767-22774.	1.5	17
209	Electric dipole moment-assisted charge extraction and effective defect passivation in perovskite solar cells by depositing a PCBM:TIPD blend film on a CH₃NH₃PbI₃ layer. Journal of Materials Chemistry C, 2019, 7, 11559-11568.	2.7	13
210	Novel approaches and scalability prospects of copper based hole transporting materials for planar perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 13680-13708.	2.7	50
211	Recent advances in green fabrication of luminescent solar concentrators using nontoxic quantum dots as fluorophores. Journal of Materials Chemistry C, 2019, 7, 12373-12387.	2.7	61
212	NaSbSe2 as a promising light-absorber semiconductor in solar cells: First-principles insights. APL Materials, 2019, 7, 081122.	2.2	11
213	Interfacial Bonding and Electronic Structure between Copper Thiocyanate and Hybrid Organohalide Lead Perovskites for Photovoltaic Application. Journal of Physical Chemistry Letters, 2019, 10, 5609-5616.	2.1	4
214	High-Efficiency and Stable Perovskite Solar Cells Prepared Using Chlorobenzene/Acetonitrile Antisolvent. ACS Applied Materials & Interfaces, 2019, 11, 34989-34996.	4.0	38
215	Poly(vinylpyrrolidone)-doped SnO₂as an electron transport layer for perovskite solar cells with improved performance. Journal of Materials Chemistry C, 2019, 7, 12204-12210.	2.7	28
216	Inverted planar perovskite solar cells based on CsI-doped PEDOT:PSS with efficiency beyond 20% and small energy loss. Journal of Materials Chemistry A, 2019, 7, 21662-21667.	5.2	77
217	Sandwiched Growth of Micron-thick MAPbI₃ Crystals for Waterproof Perovskite Solar Cells. Chemistry Letters, 2019, 48, 690-692.	0.7	1

#	Article	IF	Citations
218	Inorganic perovskite solar cells: an emerging member of the photovoltaic community. Journal of Materials Chemistry A, 2019, 7, 21036-21068.	5.2	137
219	Theoretical insights into the stability of perovskite clusters by studying water adsorption on (CH3NH3)4SnI6. Solar Energy Materials and Solar Cells, 2019, 202, 110126.	3.0	3
220	Highly efficient and stable perovskite solar cellsviabilateral passivation layers. Journal of Materials Chemistry A, 2019, 7, 21730-21739.	5.2	56
221	Precursor Engineering for a Large-Area Perovskite Solar Cell with >19% Efficiency. ACS Energy Letters, 2019, 4, 2393-2401.	8.8	127
222	Facile-Effective Hole-Transporting Materials Based on Dibenzo[a,c]carbazole: The Key Role of Linkage Position to Photovoltaic Performance of Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 2514-2521.	8.8	59
223	Cupric oxide film with a record hole mobility of 48.44â€¯cm2/Vs via directâ€“current reactive magnetron sputtering for perovskite solar cell application. Solar Energy, 2019, 191, 205-209.	2.9	13
224	Influence of Interfacial Traps on the Operating Temperature of Perovskite Solar Cells. Materials, 2019, 12, 2727.	1.3	12
225	The Cesium doping using the nonstoichiometric precursor for improved CH3NH3PbI3 perovskite films and solar cells in ambient air. Thin Solid Films, 2019, 690, 137563.	0.8	8
226	Controlled Redox of Lithium-Ion Endohedral Fullerene for Efficient and Stable Metal Electrode-Free Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 16553-16558.	6.6	61
227	Transferable Approach of Semi-Empirical Modeling of Disordered Mixed-Halide Hybrid Perovskites CH₃NH₃Pb(I_{1â€“x}Br_x)₃: Prediction of Thermodynamic Properties, Phase Stability, and Deviations from Vegardâ€™s Law. Journal of Physical Chemistry C, 2019, 123, 26036-26040.	1.5	12
228	Unraveling the Structureâ€“Property Relationship of Molecular Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 39001-39009.	4.0	39
229	Effect of tantalum doping on SnO2 electron transport layer via low temperature process for perovskite solar cells. Applied Physics Letters, 2019, 115, .	1.5	41
230	Ink-Jet Printing of Polyaniline Layers for Perovskite Solar Cells. Technical Physics Letters, 2019, 45, 858-861.	0.2	6
231	Charge Accumulation, Recombination, and Their Associated Time Scale in Efficient (GUA)_x(MA)_{1â€“x}PbI₃-Based Perovskite Solar Cells. ACS Omega, 2019, 4, 16840-16846.	1.6	25
232	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. Nature Communications, 2019, 10, 4498.	5.8	234
233	Electrical-Field-Driven Tunable Spectral Responses in a Broadband-Absorbing Perovskite Photodiode. ACS Applied Materials & Interfaces, 2019, 11, 39018-39025.	4.0	8
234	Protocol for Quantifying the Doping of Organic Hole-Transport Materials. ACS Energy Letters, 2019, 4, 2547-2551.	8.8	23
235	Organic composition tailored perovskite solar cells and light-emitting diodes: Perspectives and advances. Materials Today Energy, 2019, 14, 100338.	2.5	9

#	Article	IF	Citations
236	Low temperature formation of CH3NH3PbI3 perovskite films in supercritical carbon dioxide. Journal of Supercritical Fluids, 2019, 154, 104604.	1.6	6
237	Perovskite precursor solution chemistry: from fundamentals to photovoltaic applications. Chemical Society Reviews, 2019, 48, 2011-2038.	18.7	526
238	Energy level-modulated non-fullerene small molecule acceptors for improved V_{OC} and efficiency of inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 3336-3343.	5.2	29
239	Pyridine-functionalized fullerene additive enabling coordination interactions with CH₃NH₃PbI₃ perovskite towards highly efficient bulk heterojunction solar cells. Journal of Materials Chemistry A, 2019, 7, 2754-2763.	5.2	83
240	Perfection of Perovskite Grain Boundary Passivation by Eu€Porphyrin Complex for Overall€Stable Perovskite Solar Cells. Advanced Science, 2019, 6, 1802040.	5.6	65
241	Core Structure Engineering in Hole€Transport Materials to Achieve Highly Efficient Perovskite Solar Cells. ChemSusChem, 2019, 12, 1374-1380.	3.6	21
242	Highly efficient prismatic perovskite solar cells. Energy and Environmental Science, 2019, 12, 929-937.	15.6	54
243	Bias-dependent degradation of various solar cells: lessons for stability of perovskite photovoltaics. Energy and Environmental Science, 2019, 12, 550-558.	15.6	84
244	Room-temperature-processed fullerene single-crystalline nanoparticles for high-performance flexible perovskite photovoltaics. Journal of Materials Chemistry A, 2019, 7, 1509-1518.	5.2	25
245	Self-powered behavior based on the light-induced self-poling effect in perovskite-based transport layer-free photodetectors. Journal of Materials Chemistry C, 2019, 7, 609-616.	2.7	29
246	Highly efficient and stable air-processed hole-transport-material free carbon based perovskite solar cells with caesium incorporation. Chemical Communications, 2019, 55, 218-221.	2.2	19
247	Bandgap aligned Cu₁₂Sb₄S₁₃ quantum dots as efficient inorganic hole transport materials in planar perovskite solar cells with enhanced stability. Sustainable Energy and Fuels, 2019, 3, 831-840.	2.5	17
248	All-inorganic lead-free perovskites for optoelectronic applications. Materials Chemistry Frontiers, 2019, 3, 365-375.	3.2	133
249	A Dual€Retarded Reaction Processed Mixed€Cation Perovskite Layer for High€Efficiency Solar Cells. Advanced Functional Materials, 2019, 29, 1807420.	7.8	28
250	Organic€Inorganic Hybrid Perovskite Single Crystals: Crystallization, Molecular Structures, and Bandgap Engineering. ChemNanoMat, 2019, 5, 278-289.	1.5	29
251	Gravure€Printed Flexible Perovskite Solar Cells: Toward Roll€to€Roll Manufacturing. Advanced Science, 2019, 6, 1802094.	5.6	115
252	Bifacial Passivation of Organic Hole Transport Interlayer for NiO_x€Based p€i€n Perovskite Solar Cells. Advanced Science, 2019, 6, 1802163.	5.6	92
253	Bismuth Halide Perovskite€Like Materials: Current Opportunities and Challenges. ChemSusChem, 2019, 12, 1612-1630.	3.6	98

#	Article	IF	Citations
254	Improvement of Csâ€(FAPbI₃)_{0.85}(MAPbBr₃)_{0.15} Quality Via DMSOâ€Moleculeâ€Control to Increase the Efficiency and Boost the Longâ€Term Stability of 1â€‰cm² Sized Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800338.	3.1	21
255	Synthesis, phase composition and magnetic properties of double perovskites of A(FeM)O4-x type (A=Ce;) Tj ETQq1 1 0.784314 rgBT /O	2.3	84
256	Introduction of Hydrophobic Ammonium Salts with Halogen Functional Groups for Highâ€Efficiency and Stable 2D/3D Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807565.	7.8	90
257	Semiâ€Locked Tetrathienylethene as a Building Block for Holeâ€Transporting Materials: Toward Efficient and Stable Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 3824-3829.	1.6	29
258	Semiâ€Locked Tetrathienylethene as a Building Block for Holeâ€Transporting Materials: Toward Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 3784-3789.	7.2	163
259	Band Alignment Strategy for Printable Triple Mesoscopic Perovskite Solar Cells with Enhanced Photovoltage. ACS Applied Energy Materials, 2019, 2, 2034-2042.	2.5	38
260	Flexible quintuple cation perovskite solar cells with high efficiency. Journal of Materials Chemistry A, 2019, 7, 4960-4970.	5.2	93
261	Introduction of carbon nanodots into SnO₂ electron transport layer for efficient and UV stable planar perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 5353-5362.	5.2	67
262	Electronic Traps and Their Correlations to Perovskite Solar Cell Performance via Compositional and Thermal Annealing Controls. ACS Applied Materials & Interfaces, 2019, 11, 6907-6917.	4.0	63
263	An inorganic hole-transport material of CuInSe2 for stable and efficient perovskite solar cells. Organic Electronics, 2019, 67, 168-174.	1.4	39
264	Enhancing charge transport in an organic photoactive layer via vertical component engineering for efficient perovskite/organic integrated solar cells. Nanoscale, 2019, 11, 4035-4043.	2.8	22
265	A Cu₃PS₄ nanoparticle hole selective layer for efficient inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 4604-4610.	5.2	29
266	Organic interfacial materials for perovskite-based optoelectronic devices. Energy and Environmental Science, 2019, 12, 1177-1209.	15.6	185
267	Porous and Intercrossed PbI₂â€“CsI Nanorod Scaffold for Inverted Planar FAâ€“Cs Mixed-Cation Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 6126-6135.	4.0	32
268	Cation influence on carrier dynamics in perovskite solar cells. Nano Energy, 2019, 58, 604-611.	8.2	75
269	Role of carbon nanodots in defect passivation and photo-sensitization of mesoscopic-TiO2 for perovskite solar cells. Carbon, 2019, 146, 388-398.	5.4	33
270	Molecularly engineering of truxene-based dopant-free hole-transporting materials for efficient inverted planar perovskite solar cells. Dyes and Pigments, 2019, 165, 81-89.	2.0	33
271	Critical roles of potassium in charge-carrier balance and diffusion induced defect passivation for efficient inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 5666-5676.	5.2	62

#	Article	IF	Citations
272	Efficient and Stable Perovskite Solar Cell with High Open-Circuit Voltage by Dimensional Interface Modification. ACS Applied Materials & Interfaces, 2019, 11, 9149-9155.	4.0	54
273	Highly oriented GeSe thin film: self-assembly growth via the sandwiching post-annealing treatment and its solar cell performance. Nanoscale, 2019, 11, 3968-3978.	2.8	38
274	Thermal and illumination effects on a PbI₂ nanoplate and its transformation to CH₃NH₃PbI₃ perovskite. CrystEngComm, 2019, 21, 736-740.	1.3	4
275	A revolution of photovoltaics: persistent electricity generation beyond solar irradiation. Dalton Transactions, 2019, 48, 799-805.	1.6	11
276	Low-temperature processed inorganic perovskites for flexible detectors with a broadband photoresponse. Nanoscale, 2019, 11, 2871-2877.	2.8	74
277	Doping strategies for small molecule organic hole-transport materials: impacts on perovskite solar cell performance and stability. Chemical Science, 2019, 10, 1904-1935.	3.7	279
278	Achievable highV_{oc}of carbon based all-inorganic CsPbIBr₂perovskite solar cells through interface engineering. Journal of Materials Chemistry A, 2019, 7, 1227-1232.	5.2	115
279	Enhancing electron transport via graphene quantum dot/SnO₂ composites for efficient and durable flexible perovskite photovoltaics. Journal of Materials Chemistry A, 2019, 7, 1878-1888.	5.2	67
280	Effects of substrate temperature on the crystallization process and properties of mixed-ion perovskite layers. Journal of Materials Chemistry A, 2019, 7, 2804-2811.	5.2	24
281	Multifunctional asymmetrical molecules for high-performance perovskite and organic solar cells. Journal of Materials Chemistry A, 2019, 7, 2412-2420.	5.2	14
282	Functionalization of titanium substrate with multifunctional peptide OGP-NAC for the regulation of osteoimmunology. Biomaterials Science, 2019, 7, 1463-1476.	2.6	29
283	Modification of NiOx hole transport layers with 4-bromobenzylphosphonic acid and its influence on the performance of lead halide perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2019, 30, 9602-9611.	1.1	16
284	Single-Source Vapor Deposition of Quantum-Cutting Yb3+:CsPb(Cl1â€“xBrx)3 and Other Complex Metal-Halide Perovskites. ACS Applied Energy Materials, 2019, 2, 4560-4565.	2.5	44
285	Simulations on photovoltaic conversion in perovskite solar cells by solving hierarchical equations of motion. AIP Advances, 2019, 9, .	0.6	2
286	Quantum Well Energetics of an n = 2 Ruddlesdenâ€“Popper Phase Perovskite. Advanced Energy Materials, 2019, 9, 1901005.	10.2	25
287	Efficiency enhancement of perovskite solar cell by using pre-heat treatment in two-step deposition method. Thin Solid Films, 2019, 684, 9-14.	0.8	6
288	Kinetic Stabilization of the Solâ€“Gel State in Perovskites Enables Facile Processing of Highâ€Efficiency Solar Cells. Advanced Materials, 2019, 31, e1808357.	11.1	76
289	Leadâ€Free Tinâ€Based Perovskite Solar Cells: Strategies Toward High Performance. Solar Rrl, 2019, 3, 1900213.	3.1	44

#	Article	IF	Citations
290	Amphiphilic Fullerenes Employed to Improve the Quality of Perovskite Films and the Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 24782-24788.	4.0	55
291	Bifunctional Ï€-conjugated ligand assisted stable and efficient perovskite solar cell fabrication via interfacial stitching. Journal of Materials Chemistry A, 2019, 7, 16533-16540.	5.2	29
292	Influence of Defects on Excited-State Dynamics in Lead Halide Perovskites: Time-Domain ab Initio Studies. Journal of Physical Chemistry Letters, 2019, 10, 3788-3804.	2.1	66
293	Discrete SnO 2 Nanoparticleâ€Modified Poly(3,4â€Ethylenedioxythiophene):Poly(Styrenesulfonate) for Efficient Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900162.	3.1	13
294	Deepening the Valance Band Edges of NiO_x Contacts by Alkaline Earth Metal Doping for Efficient Perovskite Photovoltaics with High Openâ€Circuit Voltage. Solar Rrl, 2019, 3, 1900192.	3.1	30
295	3D-printed continuous flow reactor for high yield synthesis of CH₃NH₃PbX₃ (X = Br, I) nanocrystals. Journal of Materials Chemistry C, 2019, 7, 9167-9174.	2.7	22
296	First-principles insight on the electronic and optical properties of Ge-based inorganic perovskites. Applied Physics Express, 2019, 12, 071007.	1.1	9
297	Perovskite Bifunctional Device with Improved Electroluminescent and Photovoltaic Performance through Interfacial Energyâ€Band Engineering. Advanced Materials, 2019, 31, e1902543.	11.1	62
298	High-Performance Planar Perovskite Solar Cells with Negligible Hysteresis Using 2,2,2-Trifluoroethanol-Incorporated SnO2. IScience, 2019, 16, 433-441.	1.9	63
299	Controllable Growth of Lead-Free All-Inorganic Perovskite Nanowire Array with Fast and Stable Near-Infrared Photodetection. Journal of Physical Chemistry C, 2019, 123, 17566-17573.	1.5	78
300	14.1% CsPbI₃ Perovskite Quantum Dot Solar Cells via Cesium Cation Passivation. Advanced Energy Materials, 2019, 9, 1900721.	10.2	254
301	Rationalizing the Molecular Design of Holeâ€Selective Contacts to Improve Charge Extraction in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900990.	10.2	56
302	Three-dimensional perovskite modulated by two-dimensional homologue as light-absorbing materials for efficient solar cells. Organic Electronics, 2019, 74, 126-134.	1.4	14
303	Chemical Bath Deposition of Coâ€Doped TiO₂ Electron Transport Layer for Hysteresisâ€Suppressed Highâ€Efficiency Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900176.	3.1	36
304	Efficient NiOx Hole Transporting Layer Obtained by the Oxidation of Metal Nickel Film for Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 4700-4707.	2.5	37
305	Low Hysteresis Perovskite Solar Cells Using an Electron-Beam Evaporated WO_{3â€“x} Thin Film as the Electron Transport Layer. ACS Applied Energy Materials, 2019, 2, 5456-5464.	2.5	58
306	Influence of a Hole-Transport Layer on Light-Induced Degradation of Mixed Organicâ€“Inorganic Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 5039-5049.	2.5	34
307	Beyond efficiency: phenothiazine, a new commercially viable substituent for hole transport materials in perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 8593-8598.	2.7	15

#	Article	IF	Citations
308	Probing effects of molecular conformation on the electronic and charge transport properties in two- and three-dimensional small molecule hole-transporting materials: a theoretical investigation. Physical Chemistry Chemical Physics, 2019, 21, 15206-15214.	1.3	24
309	Stable Dynamics Performance and High Efficiency of ABX₃â€Type Superâ€Alkali Perovskites First Obtained by Introducing H₅O₂ Cation. Advanced Energy Materials, 2019, 9, 1900664.	10.2	113
310	Engineering of the Back Contact between PCBM and Metal Electrode for Planar Perovskite Solar Cells with Enhanced Efficiency and Stability. Advanced Optical Materials, 2019, 7, 1900542.	3.6	24
311	Dopant-free Spiro-OMeTAD as hole transporting layer for stable and efficient perovskite solar cells. Organic Electronics, 2019, 74, 7-12.	1.4	22
312	Reduced methylammonium triple-cation Rb_{0.05}(FAPbI₃)_{0.95}(MAPbBr₃)_{0.05} perovskite solar cells based on a TiO₂/SnO₂ bilayer electron transport layer approaching a stabilized 21% efficiency: the role of antisolvents. Journal of Materials Chemistry A, 2019, 7, 17516-17528.	5.2	37
313	The improvement of inverted perovskite solar cells by the introduction of CTAB into PEDOT:PSS. Solar Energy, 2019, 188, 28-34.	2.9	18
314	Inexpensive Holeâ€Transporting Materials Derived from TrÃ¶ger's Base Afford Efficient and Stable Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 11388.	1.6	5
315	Molecularly Designed Zinc (II) Phthalocyanine Derivative as Dopantâ€Free Holeâ€Transporting Material of Planar Perovskite Solar Cell with Preferential Faceâ€on Orientation. Solar Rrl, 2019, 3, 1900182.	3.1	21
316	Defect passivation of CsPbI2Br perovskites through Zn(II) doping: toward efficient and stable solar cells. Science China Chemistry, 2019, 62, 1044-1050.	4.2	55
317	Toward efficient and air-stable carbon-based all-inorganic perovskite solar cells through substituting CsPbBr3 films with transition metal ions. Chemical Engineering Journal, 2019, 375, 121930.	6.6	82
318	Enhanced power conversion efficiency and preferential orientation of the MAPbI3 perovskite solar cells by introduction of urea as additive. Organic Electronics, 2019, 73, 130-136.	1.4	13
319	Efficient planar perovskite solar cells with low-temperature atomic layer deposited TiO2 electron transport layer and interfacial modifier. Solar Energy, 2019, 188, 239-246.	2.9	24
320	Ruddlesdenâ€“Popper Phases of Methylammonium-Based Two-Dimensional Perovskites with 5-Ammonium Valeric Acid AVA₂MA_nâ€“1</sub>Pb_n</sub>I_{3n+1} with n = 1, 2, and 3. Journal of Physical Chemistry Letters, 2019, 10, 3543-3549.	2.1	35
321	Role of Water in Suppressing Recombination Pathways in CH₃NH₃PbI₃ Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 25474-25482.	4.0	33
322	Molecular design of D-Ï€-D-typed hole-transporting materials for perovskite solar cells based on the Ï€-conjugated cores. Synthetic Metals, 2019, 254, 34-41.	2.1	18
323	Improving the Performance of Planar Perovskite Solar Cells through a Preheated, Delayed Annealing Process To Control Nucleation and Phase Transition of Perovskite Films. Crystal Growth and Design, 2019, 19, 4314-4323.	1.4	7
324	Achieving High Open-Circuit Voltage on Planar Perovskite Solar Cells via Chlorine-Doped Tin Oxide Electron Transport Layers. ACS Applied Materials & Interfaces, 2019, 11, 23152-23159.	4.0	89
325	Improved SnO₂ Electron Transport Layers Solutionâ€Deposited at Near Room Temperature for Rigid or Flexible Perovskite Solar Cells with High Efficiencies. Advanced Energy Materials, 2019, 9, 1900834.	10.2	100

#	Article	IF	Citations
326	Suppressing Charge Recombination and Ultraviolet Light Degradation of Perovskite Solar Cells Using Silicon Oxide Passivation. ChemElectroChem, 2019, 6, 3167-3174.	1.7	75
327	Flexible, UV-responsive perovskite photodetectors with low driving voltage. Journal of Materials Science, 2019, 54, 11556-11563.	1.7	17
328	High Open-Circuit Voltage of 1.134 V for Inverted Planar Perovskite Solar Cells with Sodium Citrate-Doped PEDOT:PSS as a Hole Transport Layer. ACS Applied Materials & Interfaces, 2019, 11, 22021-22027.	4.0	80
329	Twoâ€Terminal Perovskites Tandem Solar Cells: Recent Advances and Perspectives. Solar Rrl, 2019, 3, 1900080.	3.1	55
330	Flexible, stable and indium-free perovskite solar cells using solution-processed transparent graphene electrodes. Journal of Materials Science, 2019, 54, 11564-11573.	1.7	12
331	Plasmonic enhancement for high-efficiency planar heterojunction perovskite solar cells. Journal of Power Sources, 2019, 432, 112-118.	4.0	33
332	Enhanced performance and stability of pâ€“iâ€“n perovskite solar cells by utilizing an AIE-active cathode interlayer. Journal of Materials Chemistry A, 2019, 7, 15662-15672.	5.2	21
333	Coagulated SnO₂ Colloids for Highâ€Performance Planar Perovskite Solar Cells with Negligible Hysteresis and Improved Stability. Angewandte Chemie - International Edition, 2019, 58, 11497-11504.	7.2	159
334	Continuousâ€Wave Pumped Perovskite Lasers. Advanced Optical Materials, 2019, 7, 1900544.	3.6	42
335	Coagulated SnO₂ Colloids for Highâ€Performance Planar Perovskite Solar Cells with Negligible Hysteresis and Improved Stability. Angewandte Chemie, 2019, 131, 11621-11628.	1.6	52
336	Polarized Ferroelectric Polymers for Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2019, 31, e1902222.	11.1	109
337	Inexpensive Holeâ€Transporting Materials Derived from TrÃ¶ger's Base Afford Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 11266-11272.	7.2	37
338	Aryl-Perfluoroaryl Interaction in Two-Dimensional Organicâ€“Inorganic Hybrid Perovskites Boosts Stability and Photovoltaic Efficiency. , 2019, 1, 171-176.		63
339	Single-crystalline lead halide perovskite wafers for high performance photodetectors. Journal of Materials Chemistry C, 2019, 7, 8357-8363.	2.7	33
340	Effect of heterocyclic spacer on property of hole-transporting materials with silafluorene core for perovskite solar cells. Computational and Theoretical Chemistry, 2019, 1161, 10-17.	1.1	18
341	Facile and Controllable Fabrication of Highâ€Performance Methylammonium Lead Triiodide Films Using Lead Acetate Precursor for Lowâ€Threshold Amplified Spontaneous Emission and Distributedâ€Feedback Lasers. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900176.	1.2	3
342	Engineering the mesoporous TiO2 layer by a facile method to improve the performance of perovskite solar cells. Electrochimica Acta, 2019, 318, 83-90.	2.6	9
343	Metal Oxide Charge Transport Layers for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1900455.	7.8	186

#	Article	IF	Citations
344	Shortâ€Term Stability of Perovskite Solar Cells Affected by In Situ Interface Modification. Solar Rrl, 2019, 3, 1900089.	3.1	10
345	Bi³⁺ doped 2D Ruddlesdenâ€“Popper organic lead halide perovskites. Journal of Materials Chemistry A, 2019, 7, 15627-15632.	5.2	10
346	Performance enhancement of hole-transport material free perovskite solar cells with TiO2 nanorods modified with SiO2/NaYF4:Yb,Er@SiO2 for upconversion and charge recombination suppression. Organic Electronics, 2019, 73, 152-158.	1.4	15
347	Reactive-Sputtered Prepared Tin Oxide Thin Film as an Electron Transport Layer for Planar Perovskite Solar Cells. Coatings, 2019, 9, 320.	1.2	5
348	Boosting the power conversion efficiency of perovskite solar cells to 17.7% with an indolo[3,2-b]carbazole dopant-free hole transporting material by improving its spatial configuration. Journal of Materials Chemistry A, 2019, 7, 14835-14841.	5.2	39
349	Flash infrared annealing as a cost-effective and low environmental impact processing method for planar perovskite solar cells. Materials Today, 2019, 31, 39-46.	8.3	65
350	Nanomechanical Approach for Flexibility of Organicâ€“Inorganic Hybrid Perovskite Solar Cells. Nano Letters, 2019, 19, 3707-3715.	4.5	42
351	Impact of Excess Lead Iodide on the Recombination Kinetics in Metal Halide Perovskites. ACS Energy Letters, 2019, 4, 1370-1378.	8.8	71
352	Efficient modulation of photoluminescence by hydrogen bonding interactions between inorganic [MnBr₄]^{2â^'} anions and organic cations. Chemical Communications, 2019, 55, 7303-7306.	2.2	107
353	Constructing moisture-stable hybrid lead iodine semiconductors based on hydrogen-bond-free and dual-iodine strategies. Journal of Materials Chemistry C, 2019, 7, 7700-7707.	2.7	11
354	Triarylphosphine Oxide as Cathode Interfacial Material for Inverted Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1900434.	1.9	16
355	Dopantâ€Free Holeâ€Transporting Layer Based on Isomerâ€Pure Tetraâ€Butylâ€Substituted Zinc(II) Phthalocyanine for Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900119.	3.1	12
356	Fabrication and characterization of perovskite CH3NH3PbI3 films via two-step sol-gel process: Impact of soaking time of PbI2. Thin Solid Films, 2019, 682, 37-43.	0.8	10
357	Analysis of light-induced degradation in inverted perovskite solar cells under short-circuited conditions. Organic Electronics, 2019, 71, 123-130.	1.4	22
358	Study of perovskite solar cells based on mixed-organic-cation FA_xMA_{1â^'x}PbI₃ absorption layer. Physical Chemistry Chemical Physics, 2019, 21, 11822-11828.	1.3	14
359	An Oxa[5]helicene-Based Racemic Semiconducting Glassy Film for Photothermally Stable Perovskite Solar Cells. IScience, 2019, 15, 234-242.	1.9	36
360	Properties of Excitons and Photogenerated Charge Carriers in Metal Halide Perovskites. Advanced Materials, 2019, 31, e1806671.	11.1	134
361	Effect of mono-halogen-substitution on the electron transporting properties of perylene diimides: A density functional theory study. Journal of Molecular Liquids, 2019, 287, 110968.	2.3	4

#	Article	IF	Citations
362	Efficiencyvs.stability: dopant-free hole transporting materials towards stabilized perovskite solar cells. Chemical Science, 2019, 10, 6748-6769.	3.7	191
363	Highly efficient and stable inverted perovskite solar cells using down-shifting quantum dots as a light management layer and moisture-assisted film growth. Journal of Materials Chemistry A, 2019, 7, 14753-14760.	5.2	67
364	One-step fabrication of effective mesoporous layer consisted of self-assembled MgO/TiO₂ core/shell nanoparticles for mesostructured perovskite solar cells. Materials Research Express, 2019, 6, 086440.	0.8	1
365	Plasmonicâ€Enhanced Light Harvesting and Perovskite Solar Cell Performance Using Au Biometric Dimers with Broadband Structural Darkness. Solar Rrl, 2019, 3, 1900138.	3.1	34
366	Compositional, Processing, and Interfacial Engineering of Nanocrystal- and Quantum-Dot-Based Perovskite Solar Cells. Chemistry of Materials, 2019, 31, 6387-6411.	3.2	82
367	Achieving Longâ€Term Operational Stability of Perovskite Solar Cells with a Stabilized Efficiency Exceeding 20% after 1000 h. Advanced Science, 2019, 6, 1900528.	5.6	70
368	Perovskite films with a sacrificial cation for solar cells with enhanced stability based on carbon electrodes. Journal of Alloys and Compounds, 2019, 797, 811-819.	2.8	21
369	Tunable internal quantum well alignment in rationally designed oligomer-based perovskite films deposited by resonant infrared matrix-assisted pulsed laser evaporation. Materials Horizons, 2019, 6, 1707-1716.	6.4	48
370	Liquid metal acetate assisted preparation of high-efficiency and stable inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 14136-14144.	5.2	40
371	Achieving efficient inverted planar perovskite solar cells with nondoped PTAA as a hole transport layer. Organic Electronics, 2019, 71, 106-112.	1.4	84
372	Ruthenium doped mesoporous titanium dioxide for highly efficient, hysteresis-free and stable perovskite solar cells. Solar Energy, 2019, 186, 156-165.	2.9	30
373	Recent progress in inkjet-printed solar cells. Journal of Materials Chemistry A, 2019, 7, 13873-13902.	5.2	102
374	Controlling the transformation of intermediate phase under near-room temperature for improving the performance of perovskite solar cells. Solar Energy, 2019, 186, 225-232.	2.9	10
375	Simulation of innovative high efficiency perovskite solar cell with Bi-HTL: NiO and Si thin films. Solar Energy, 2019, 186, 323-327.	2.9	23
376	Novel 3D hierarchically structured cauliflower-shaped SnO₂ nanospheres as effective photoelectrodes in hybrid photovoltaics. Nanoscale Advances, 2019, 1, 2167-2173.	2.2	1
377	Cost-effective dopant-free star-shaped oligo-aryl amines for high performance perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 14209-14221.	5.2	37
378	Tailoring the Functionality of Organic Spacer Cations for Efficient and Stable Quasiâ€2D Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1900221.	7.8	144
379	Why are Hot Holes Easier to Extract than Hot Electrons from Methylammonium Lead Iodide Perovskite?. Advanced Energy Materials, 2019, 9, 1900084.	10.2	54

#	Article	IF	Citations
380	Solutionâ€Processable Conductive Organics via Anionâ€Induced nâ€Doping and Their Applications in Organic and Perovskite Solar Cells. Macromolecular Chemistry and Physics, 2019, 220, 1900084.	1.1	15
381	Halide Perovskite Nanocrystals for Nextâ€Generation Optoelectronics. Small, 2019, 15, e1900801.	5.2	48
382	Grain boundary regulation of flexible perovskite solar cells via a polymer alloy additive. Organic Electronics, 2019, 70, 205-210.	1.4	19
383	Efficient perovskite solar cells with negligible hysteresis achieved by solâ€“gel-driven spinel nickel cobalt oxide thin films as the hole transport layer. Journal of Materials Chemistry C, 2019, 7, 7288-7298.	2.7	22
384	Modifying morphology and defects of low-dimensional, semi-transparent perovskite thin films via solvent type. RSC Advances, 2019, 9, 12047-12054.	1.7	15
385	Low Temperature Synthesis of Stable Î³â€CsPbI₃ Perovskite Layers for Solar Cells Obtained by High Throughput Experimentation. Advanced Energy Materials, 2019, 9, 1900555.	10.2	108
386	Efficient and Stable CsPbI₃ Solar Cells via Regulating Lattice Distortion with Surface Organic Terminal Groups. Advanced Materials, 2019, 31, e1900605.	11.1	209
387	Saddle-like, Ï€-conjugated, cyclooctatetrathiophene-based, hole-transporting material for perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 6656-6663.	2.7	27
388	Quaternary quantum dots with gradient valence band for all-inorganic perovskite solar cells. Journal of Colloid and Interface Science, 2019, 549, 33-41.	5.0	19
389	DMPA-containing carbazole-based hole transporting materials for perovskite solar cells: Recent advances and perspectives. Synthetic Metals, 2019, 252, 91-106.	2.1	35
390	Direct formed tri-iodide ions stabilizing colloidal precursor solution and promoting the reproducibility of perovskite solar cells by solution process. Electrochimica Acta, 2019, 311, 132-140.	2.6	9
391	Enhancing the performance of inverted perovskite solar cells by inserting a ZnO:TIPD film between PCBM layer and Ag electrode. Solar Energy Materials and Solar Cells, 2019, 198, 11-18.	3.0	21
392	Hydrothermally Treated SnO₂ as the Electron Transport Layer in Highâ€Efficiency Flexible Perovskite Solar Cells with a Certificated Efficiency of 17.3%. Advanced Functional Materials, 2019, 29, 1807604.	7.8	72
393	Simple, Robust, and Going More Efficient: Recent Advance on Electron Transport Layerâ€Free Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900248.	10.2	62
394	SnS Quantum Dots as Hole Transporter of Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 3822-3829.	2.5	26
395	Efficient Methylamine-Containing Antisolvent Strategy to Fabricate High-Efficiency and Stable FA_{0.85}Cs_{0.15}Pb(Br_{0.15}I_{2.85}) Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 18415-18422.	4.0	30
396	Corrosive Behavior of Silver Electrode in Inverted Perovskite Solar Cells Based on Cu:NiO_x. IEEE Journal of Photovoltaics, 2019, 9, 1081-1085.	1.5	17
397	Enhancing High Humidity Stability of Quasiâ€2D Perovskite Thin Films through Mixed Cation Doping and Solvent Engineering. ChemNanoMat, 2019, 5, 1280-1288.	1.5	13

#	Article	IF	Citations
398	Low Temperatureâ€Processed Stable and Efficient Carbonâ€Based CsPbI₂Br Planar Perovskite Solar Cells by In Situ Passivating Grain Boundary and Trap Density. Solar Rrl, 2019, 3, 1900109.	3.1	46
399	Room temperature synthesis of Mn-doped Cs₃Pb_{6.48}Cl₁₆ perovskite nanocrystals with pure dopant emission and temperature-dependent photoluminescence. CrystEngComm, 2019, 21, 3568-3575.	1.3	8
400	Harnessing MOF materials in photovoltaic devices: recent advances, challenges, and perspectives. Journal of Materials Chemistry A, 2019, 7, 17079-17095.	5.2	253
401	Liquid Crystal Molecule as â€œBinding Agentâ€•Enables Superior Stable Perovskite Solar Cells with High Fill Factor. Solar Rrl, 2019, 3, 1900125.	3.1	10
402	Directly imaging the structureâ€“property correlation of perovskites in crystalline microwires. Journal of Materials Chemistry A, 2019, 7, 13305-13314.	5.2	9
403	Inhibition of Inâ€Plane Charge Transport in Hole Transfer Layer to Achieve High Fill Factor for Inverted Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900104.	3.1	25
404	Zwitterionic Polymer: A Facile Interfacial Material Works at Both Anode and Cathode in pâ€iâ€n Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900118.	3.1	24
405	Black Phosphorus Quantum Dots Induced Highâ€Quality Perovskite Film for Efficient and Thermally Stable Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900132.	3.1	49
406	Bandgap alignment of Î±-CsPbI3 perovskites with synergistically enhanced stability and optical performance via B-site minor doping. Nano Energy, 2019, 61, 389-396.	8.2	67
407	Boosting inverted perovskite solar cell performance by using 9,9-bis(4-diphenylaminophenyl)fluorene functionalized with triphenylamine as a dopant-free hole transporting material. Journal of Materials Chemistry A, 2019, 7, 12507-12517.	5.2	62
408	Reverseâ€Graded 2D Ruddlesdenâ€“Popper Perovskites for Efficient Airâ€Stable Solar Cells. Advanced Energy Materials, 2019, 9, 1900612.	10.2	69
409	Steering the crystallization of perovskites for high-performance solar cells in ambient air. Journal of Materials Chemistry A, 2019, 7, 12166-12175.	5.2	65
410	High Efficiency (18.53%) of Flexible Perovskite Solar Cells via the Insertion of Potassium Chloride between SnO₂ and CH₃NH₃PbI₃ Layers. ACS Applied Energy Materials, 2019, 2, 3676-3682.	2.5	60
411	CH₃NH₃PbI_{3âˆ’x}Cl_xâ€“MoO_x bulk heterojunction and its function on carrier separation actions in perovskite solar cells. Materials Research Express, 2019, 6, 075522.	0.8	2
412	Two Heteromorphic Crystals of Antimony-Based Hybrids Showing Tunable Optical Band Gaps and Distinct Photoelectric Responses. Inorganic Chemistry, 2019, 58, 6544-6549.	1.9	17
413	The Influence of Dipole Moments Induced by Organic Molecules and Domain Structures on the Properties of CH₃NH₃PbI₃ Perovskite. Advanced Theory and Simulations, 2019, 2, 1900041.	1.3	5
414	Enhanced performance of mesostructured perovskite solar cells with a composite Sn4+-doped TiO2 electron transport layer. Ionics, 2019, 25, 4509-4516.	1.2	7
415	MAPbBr₃ perovskite solar cells via a two-step deposition process. RSC Advances, 2019, 9, 12906-12912.	1.7	51

#	Article	IF	Citations
416	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	11.7	448
417	Microstructural Evolution of Hybrid Perovskites Promoted by Chlorine and its Impact on the Performance of Solar Cell. Scientific Reports, 2019, 9, 4803.	1.6	61
418	Tuning Optical and Electronic Properties in Low-Toxicity Organicâ€“Inorganic Hybrid (CH₃NH₃)₃Bi₂I₉ under High Pressure. Journal of Physical Chemistry Letters, 2019, 10, 1676-1683.	2.1	35
419	Highly efficient phenothiazine 5,5-dioxide-based hole transport materials for planar perovskite solar cells with a PCE exceeding 20%. Journal of Materials Chemistry A, 2019, 7, 9510-9516.	5.2	60
420	Importance of terminated groups in 9,9-bis(4-methoxyphenyl)-substituted fluorene-based hole transport materials for highly efficient organicâ€“inorganic hybrid and all-inorganic perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 10319-10324.	5.2	38
421	Refractive Index Dispersion of Organicâ€“Inorganic Hybrid Halide Perovskite CH₃NH₃PbX₃ (Xâ•Cl, Br, I) Single Crystals. Crystal Research and Technology, 2019, 54, 1900011.	0.6	31
422	Soluble tetra-methoxyltriphenylamine substituted zinc phthalocyanine as dopant-free hole transporting materials for perovskite solar cells. Organic Electronics, 2019, 69, 248-254.	1.4	22
423	High performance perovskite sub-module with sputtered SnO2 electron transport layer. Solar Energy, 2019, 183, 306-314.	2.9	46
424	A facile green solvent engineering for up-scaling perovskite solar cell modules. Solar Energy, 2019, 183, 386-391.	2.9	41
425	Cerium-Oxide-Modified Anodes for Efficient and UV-Stable ZnO-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 13273-13278.	4.0	50
426	Improving the electron transport performance by changing side chains in sulfur-containing azaacenes: a combined theoretical investigation on free molecules and an adsorption system. New Journal of Chemistry, 2019, 43, 5414-5422.	1.4	3
427	Highly efficient and stable 2Dâ€“3D perovskite solar cells fabricated by interfacial modification. Nanotechnology, 2019, 30, 275202.	1.3	40
428	Uncovering the Mechanism Behind the Improved Stability of 2D Organicâ€“Inorganic Hybrid Perovskites. Small, 2019, 15, e1900462.	5.2	27
429	Toward ultra-thin and omnidirectional perovskite solar cells: Concurrent improvement in conversion efficiency by employing light-trapping and recrystallizing treatment. Nano Energy, 2019, 60, 198-204.	8.2	42
430	Anti-solvent assisted multi-step deposition for efficient and stable carbon-based CsPbI2Br all-inorganic perovskite solar cell. Nano Energy, 2019, 59, 553-559.	8.2	113
431	Room-temperature electrochemical deposition of ultrathin CuOx film as hole transport layer for perovskite solar cells. Scripta Materialia, 2019, 165, 134-139.	2.6	20
432	Efficient Defect Passivation for Perovskite Solar Cells by Controlling the Electron Density Distribution of Donorâ€“Acceptor Molecules. Advanced Energy Materials, 2019, 9, 1803766.	10.2	280
433	(C6H5C2H4NH3)2FAn-1PbnI3n+1: A quasi two-dimensional perovskite with high performance produced via two-step solution method. Journal of Alloys and Compounds, 2019, 788, 954-960.	2.8	11

#	Article	IF	Citations
434	Temperature Dependence of the Urbach Energy in Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1368-1373.	2.1	191
435	Solution-processed electron transport layer of n-doped fullerene for efficient and stable all carbon based perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 7710-7716.	5.2	29
436	Alkyl chain engineering on tetraphenylethylene-diketopyrrolopyrrole-based interfacial materials for efficient inverted perovskite solar cells. Organic Electronics, 2019, 69, 13-19.	1.4	9
437	Mechanosynthesis, Optical, and Morphological Properties of MA, FA, Csâ€SnX₃ (X = I, Br) and Phaseâ€Pure Mixedâ€Halide MASnI_xBr₃_{â€“x} Perovskites. European Journal of Inorganic Chemistry, 2019, 2019, 2680-2684.	1.0	25
438	Nonâ€Planar and Flexible Holeâ€Transporting Materials from Bisâ€Xanthene and Bisâ€Thioxanthene Units for Perovskite Solar Cells. Helvetica Chimica Acta, 2019, 102, e1900056.	1.0	3
439	Efficient Perovskite Solar Cells Based on Dopantâ€Free Spiroâ€OMeTAD Processed With Halogenâ€Free Green Solvent. Solar Rrl, 2019, 3, 1900061.	3.1	38
440	Highly efficient flexible MAPbI₃ solar cells with a fullerene derivative-modified SnO₂ layer as the electron transport layer. Journal of Materials Chemistry A, 2019, 7, 6659-6664.	5.2	77
441	Highly efficient thermally stable perovskite solar cells via Cs:NiO /CuSCN double-inorganic hole extraction layer interface engineering. Materials Today, 2019, 26, 8-18.	8.3	64
442	Similar or different: the same Spiro-core but different alkyl chains with apparently improved device performance of perovskite solar cells. Science China Chemistry, 2019, 62, 739-745.	4.2	27
443	Controllable Perovskite Crystallization via Antisolvent Technique Using Chloride Additives for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803587.	10.2	221
444	Synthesis of Colloidal Halide Perovskite Quantum Dots/Nanocrystals: Progresses and Advances. Israel Journal of Chemistry, 2019, 59, 649-660.	1.0	25
445	Room temperature solution-processed Fe doped NiOx as a novel hole transport layer for high efficient perovskite solar cells. Applied Surface Science, 2019, 481, 588-596.	3.1	48
446	Enhanced performance of planar heterojunction perovskite solar cells by fabrication strategies: Electronic structures and energy-level alignment with a facile method. Materials Letters, 2019, 247, 167-170.	1.3	3
447	Highly crystalline large-grained perovskite films using two additives without an antisolvent for high-efficiency solar cells. Thin Solid Films, 2019, 679, 27-34.	0.8	7
448	Enhanced Efficiency of Planar Heterojunction Perovskite Solar Cells by a Light Soaking Treatment on Tris(pentafluorophenyl)borane-Doped Poly(triarylamine) Solution. ACS Applied Materials & Interfaces, 2019, 11, 14004-14010.	4.0	44
449	Effects of Illumination Direction on the Surface Potential of CH₃NH₃PbI₃ Perovskite Films Probed by Kelvin Probe Force Microscopy. ACS Applied Materials & Interfaces, 2019, 11, 14044-14050.	4.0	34
450	Microfluidic Synthesis of Semiconducting Colloidal Quantum Dots and Their Applications. ACS Applied Nano Materials, 2019, 2, 1773-1790.	2.4	69
451	Distinct green electroluminescence from lead-free CsCuBr₂ halide micro-crosses. Chemical Communications, 2019, 55, 4554-4557.	2.2	52

#	Article	IF	Citations
452	20.7% highly reproducible inverted planar perovskite solar cells with enhanced fill factor and eliminated hysteresis. Energy and Environmental Science, 2019, 12, 1622-1633.	15.6	193
453	Suppressing defect states in CsPbBr₃ perovskite via magnesium substitution for efficient all-inorganic light-emitting diodes. Nanoscale Horizons, 2019, 4, 924-932.	4.1	34
454	A C₆₀/TiO_x bilayer for conformal growth of perovskite films for UV stable perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 11086-11094.	5.2	64
455	Binary organic spacer-based quasi-two-dimensional perovskites with preferable vertical orientation and efficient charge transport for high-performance planar solar cells. Journal of Materials Chemistry A, 2019, 7, 9542-9549.	5.2	50
456	Ultrasonication-assisted synthesis of CsPbBr₃ and Cs₄PbBr₆ perovskite nanocrystals and their reversible transformation. Beilstein Journal of Nanotechnology, 2019, 10, 666-676.	1.5	35
457	Origin and Suppression of the Graded Phase Distribution in Ruddlesdenâ€Popper Perovskite Films for Photovoltaic Application. Solar Rrl, 2019, 3, 1800357.	3.1	27
458	Efficient Inverted Planar Perovskite Solar Cells Using Ultraviolet/Ozoneâ€Treated NiO_x as the Hole Transport Layer. Solar Rrl, 2019, 3, 1900045.	3.1	81
459	Highly efficient and thermal stable guanidinium-based two-dimensional perovskite solar cells via partial substitution with hydrophobic ammonium. Science China Chemistry, 2019, 62, 859-865.	4.2	32
460	Seeding-method-processed anatase TiO2 film at low temperature for efficient planar perovskite solar cell. Chemical Engineering Journal, 2019, 370, 1111-1118.	6.6	20
461	Efficient methylammonium lead trihalide perovskite solar cells with chloroformamidinium chloride (Cl-FACl) as an additive. Journal of Materials Chemistry A, 2019, 7, 8078-8084.	5.2	62
462	Î³-MPTS-SAM modified meso-TiO2 surface to enhance performance in perovskite solar cell. Materials Science in Semiconductor Processing, 2019, 97, 21-28.	1.9	9
463	Chiral 2D Perovskites with a High Degree of Circularly Polarized Photoluminescence. ACS Nano, 2019, 13, 3659-3665.	7.3	334
464	Nanoimprinted Gratingâ€Embedded Perovskite Solar Cells with Improved Light Management. Advanced Functional Materials, 2019, 29, 1900830.	7.8	77
465	Regulated perovskite crystallinity via green mixed antisolvent for efficient perovskite solar cells. Organic Electronics, 2019, 69, 69-76.	1.4	31
466	Current progress in interfacial engineering of carbon-based perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 8690-8699.	5.2	84
467	Nonsiliceous Mesoporous Materials: Design and Applications in Energy Conversion and Storage. Small, 2019, 15, 1805277.	5.2	13
468	Two-dimensional perovskite capping layer for stable and efficient tin-lead perovskite solar cells. Science China Chemistry, 2019, 62, 629-636.	4.2	43
469	Vapor Exchange Deposition of an Air-Stable Lead Iodide Adduct on 19% Efficient 1.8 cm² Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2506-2514.	2.5	19

#	Article	IF	Citations
470	Theoretical Prediction of Chiral 3D Hybrid Organicâ€“Inorganic Perovskites. Advanced Materials, 2019, 31, e1807628.	11.1	64
471	Facile synthesis of composite tin oxide nanostructures for high-performance planar perovskite solar cells. Nano Energy, 2019, 60, 275-284.	8.2	57
472	Band alignment of Pbâ€“Sn mixed triple cation perovskites for inverted solar cells with negligible hysteresis. Journal of Materials Chemistry A, 2019, 7, 9154-9162.	5.2	54
473	Molecular Engineering of Simple Carbazoleâ€Triphenylamine Hole Transporting Materials by Replacing Benzene with Pyridine Unit for Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800337.	3.1	48
474	Applying BaTiO3-coated TiO2 coreâ€“shell nanoparticles films as scaffold layers to optimize interfaces for better-performing perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2019, 30, 7733-7742.	1.1	4
475	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	7.8	149
476	Facile synthesis of simple arylamine-substituted naphthalene derivatives as hole-transporting materials for efficient and stable perovskite solar cells. Journal of Power Sources, 2019, 425, 87-93.	4.0	26
477	A MAPbBr₃:poly(ethylene oxide) composite perovskite quantum dot emission layer: enhanced film stability, coverage and device performance. Nanoscale, 2019, 11, 9103-9114.	2.8	35
478	Rational design of one-dimensional hybrid organicâ€“inorganic perovskites with room-temperature ferroelectricity and strong piezoelectricity. Materials Horizons, 2019, 6, 1463-1473.	6.4	16
479	Interlayer Interaction Enhancement in Ruddlesdenâ€“Popper Perovskite Solar Cells toward High Efficiency and Phase Stability. ACS Energy Letters, 2019, 4, 1025-1033.	8.8	64
480	Ultrafast carrier dynamics of metal halide perovskite nanocrystals and perovskite-composites. Nanoscale, 2019, 11, 9796-9818.	2.8	76
481	Interface modification by a multifunctional ammonium salt for high performance and stable planar perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 11867-11876.	5.2	45
482	Highâ€Efficiency Fiberâ€Shaped Perovskite Solar Cell by Vaporâ€Assisted Deposition with a Record Efficiency of 10.79%. Advanced Materials Technologies, 2019, 4, 1900131.	3.0	50
483	Research progress in lead-less or lead-free three-dimensional perovskite absorber materials for solar cells. International Journal of Minerals, Metallurgy and Materials, 2019, 26, 387-403.	2.4	17
484	Hole Transport Materials Based on 6,12â€Dihydroindeno[1,2â€b]fluorine with Different Periphery Groups: A New Strategy for Dopantâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1901296.	7.8	45
485	Toward Ultrahigh Sensitivity and UVâ€“Visâ€“NIR Broadband Response of Organolead Halide Perovskite/Tinâ€“Phthalocyanine Heterostructured Photodetectors. Journal of Physical Chemistry C, 2019, 123, 11073-11080.	1.5	18
486	Fullerene-based electrode interlayers for bandgap tunable organometal perovskite metalâ€“semiconductorâ€“metal photodetectors. Chinese Physics B, 2019, 28, 047804.	0.7	2
487	Effect of carrier mobility on performance of perovskite solar cells. Chinese Physics B, 2019, 28, 048802.	0.7	24

#	Article	IF	Citations
488	Recent progress in perovskite-based photodetectors: the design of materials and structures. Advances in Physics: X, 2019, 4, 1592709.	1.5	42
489	Leadâ€Free Cs₂BiAgBr₆ Double Perovskiteâ€Based Humidity Sensor with Superfast Recovery Time. Advanced Functional Materials, 2019, 29, 1902234.	7.8	143
490	Investigation of Spiro-OMeTAD Single Crystals toward Optoelectronic Applications. Crystal Growth and Design, 2019, 19, 3272-3278.	1.4	8
491	Stable perovskite solar cells using tin acetylacetonate based electron transporting layers. Energy and Environmental Science, 2019, 12, 1910-1917.	15.6	57
492	Efficient minority carrier detrapping mediating the radiation hardness of triple-cation perovskite solar cells under proton irradiation. Energy and Environmental Science, 2019, 12, 1634-1647.	15.6	89
493	Room-temperature synthesized SnO₂ electron transport layers for efficient perovskite solar cells. RSC Advances, 2019, 9, 9946-9950.	1.7	21
494	Bis[di(4-methoxyphenyl)amino]carbazole-capped indacenodithiophenes as hole transport materials for highly efficient perovskite solar cells: the pronounced positioning effect of a donor group on the cell performance. Journal of Materials Chemistry A, 2019, 7, 10200-10205.	5.2	30
495	Effect of non-stoichiometry of initial reagents on morphological and structural properties of perovskites CH3NH3PbI3. Nanoscale Research Letters, 2019, 14, 4.	3.1	10
496	Interface engineering of low temperature processed all-inorganic CsPbI2Br perovskite solar cells toward PCE exceeding 14%. Nano Energy, 2019, 60, 583-590.	8.2	135
497	Coated and Printed Perovskites for Photovoltaic Applications. Advanced Materials, 2019, 31, e1806702.	11.1	146
498	Flash Surface Treatment of CH₃NH₃PbI₃ Films Using 248â€‰nm KrF Excimer Laser Enhances the Performance of Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900020.	3.1	5
499	Lowâ€Temperature Solutionâ€Processed ZnO Electron Transport Layer for Highly Efficient and Stable Planar Perovskite Solar Cells with Efficiency Over 20%. Solar Rrl, 2019, 3, 1900096.	3.1	66
500	Near-Infrared Light-Sensitive Hole-Transport-Layer Free Perovskite Solar Cells and Photodetectors with Hexagonal NaYF₄:Yb³⁺,Tm³⁺@SiO₂ Upconversion Nanoprism-Modified TiO₂ Scaffold. ACS Sustainable Chemistry and Engineering, 2019, 7, 8236-8244.	3.2	32
501	A facile room temperature solution synthesis of SnO₂quantum dots for perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 10636-10643.	5.2	52
502	Full visible waveband tunable formamidinium halides hybrid perovskite QDs via anion-exchange route and their high luminous efficiency LEDs. Journal of Alloys and Compounds, 2019, 791, 814-821.	2.8	15
503	Ammonia-treated graphene oxide and PEDOT:PSS as hole transport layer for high-performance perovskite solar cells with enhanced stability. Organic Electronics, 2019, 70, 63-70.	1.4	40
504	A â€˜Smart-Bottleâ€™ humidifier-assisted air-processed CuSCN inorganic hole extraction layer towards highly-efficient, large-area and thermally-stable perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 10246-10255.	5.2	21
505	Light Management with Patterned Microâ€and Nanostructure Arrays for Photocatalysis, Photovoltaics, and Optoelectronic and Optical Devices. Advanced Functional Materials, 2019, 29, 1807275.	7.8	115

#	Article	IF	Citations
506	High Efficiency Planar pâ€îâ€n Perovskite Solar Cells Using Lowâ€Cost Fluoreneâ€Based Hole Transporting Material. Advanced Functional Materials, 2019, 29, 1900484.	7.8	59
507	Low-temperature photoluminescence spectroscopy of CH3NH3PbBrxCl3-x perovskite single crystals. Journal of Alloys and Compounds, 2019, 792, 185-190.	2.8	11
508	Amorphous nanoporous WOx modification for stability enhancement and hysteresis reduction in TiO2-based perovskite solar cells. Solar Energy Materials and Solar Cells, 2019, 196, 157-166.	3.0	22
509	Nanophotonic enhancement and improved electron extraction in perovskite solar cells using near-horizontally aligned TiO2 nanorods. Journal of Power Sources, 2019, 417, 176-187.	4.0	17
510	High-Performance Perovskite Solar Cells with a Non-doped Small Molecule Hole Transporting Layer. ACS Applied Energy Materials, 2019, 2, 1634-1641.	2.5	25
511	Fundamental Understanding of Photocurrent Hysteresis in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803017.	10.2	224
512	Progress of Leadâ€Free Halide Double Perovskites. Advanced Energy Materials, 2019, 9, 1803150.	10.2	322
513	Cu₂ZnSnS₄ Quantum Dots as Hole Transport Material for Enhanced Charge Extraction and Stability in Allâ€Inorganic CsPbBr₃ Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800354.	3.1	34
514	Lowâ€Temperature In Situ Amino Functionalization of TiO₂ Nanoparticles Sharpens Electron Management Achieving over 21% Efficient Planar Perovskite Solar Cells. Advanced Materials, 2019, 31, e1806095.	11.1	194
515	Epitaxial Growth of CsPbX₃ (X = Cl, Br, I) Perovskite Quantum Dots via Surface Chemical Conversion of Cs₂GeF₆ Double Perovskites: A Novel Strategy for the Formation of Leadless Hybrid Perovskite Phosphors with Enhanced Stability. Advanced Materials, 2019, 31, e1807592.	11.1	81
516	Influence of Alkoxy Chain Length on the Properties of Twoâ€Dimensionally Expanded Azuleneâ€Coreâ€Based Holeâ€Transporting Materials for Efficient Perovskite Solar Cells. Chemistry - A European Journal, 2019, 25, 6741-6752.	1.7	21
517	Chlorobenzene: A Processing Solvent Enabling the Fabrication of Perovskite Solar Cells with Consecutive Doubleâ€Perovskite and Perovskite/Organic Semiconductor Bulk Heterojunction Layers. Solar Rrl, 2019, 3, 1800325.	3.1	6
518	Molecular engineering of enamine-based small organic compounds as hole-transporting materials for perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 2717-2724.	2.7	19
519	Introduction of Fluorine Into spiro[fluoreneâ€9,9â€²â€xanthene]â€Based Hole Transport Material to Obtain Sensitiveâ€Dopantâ€Free, High Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800352.	3.1	40
520	Facile fabrication of highly efficient ETL-free perovskite solar cells with 20% efficiency by defect passivation and interface engineering. Chemical Communications, 2019, 55, 2777-2780.	2.2	61
521	Improving Performance of Perovskite Solar Cells Using [7]Helicenes with Stable Partial Biradical Characters as the Holeâ€Extraction Layers. Advanced Functional Materials, 2019, 29, 1808625.	7.8	44
522	Surface decorating of CH3NH3PbBr3 nanoparticles with chemically adsorbed porphyrin. Colloid and Polymer Science, 2019, 297, 595-601.	1.0	3
523	Comprehensive understanding of TiCl4 treatment on the compact TiO2 layer in planar perovskite solar cells with efficiencies over 20%. Journal of Alloys and Compounds, 2019, 787, 1082-1088.	2.8	29

#	Article	IF	Citations
524	High efficiency and negligible hysteresis planar perovskite solar cells based on NiO nanocrystals modified TiO2 electron transport layers. Solar Energy, 2019, 181, 293-300.	2.9	16
525	In Situ Backâ€Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1807435.	11.1	143
526	Low temperature solution processable TiO2 nano-sol for electron transporting layer of flexible perovskite solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 1-6.	3.0	30
527	High absorption perovskite solar cell with optical coupling structure. Optics Communications, 2019, 443, 262-267.	1.0	18
528	Engineering of Perovskite Materials Based on Formamidinium and Cesium Hybridization for High-Efficiency Solar Cells. Chemistry of Materials, 2019, 31, 1620-1627.	3.2	99
529	Cyclopenta[hi]aceanthrylene-based dopant-free hole-transport material for organicâ€“inorganic hybrid and all-inorganic perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 5221-5226.	5.2	88
530	Nitrogen-doped graphene quantum dots for 80% photoluminescence quantum yield for inorganic Î³-CsPbI₃ perovskite solar cells with efficiency beyond 16%. Journal of Materials Chemistry A, 2019, 7, 5740-5747.	5.2	113
531	Lead-free double halide perovskite Cs₃BiBr₆ with well-defined crystal structure and high thermal stability for optoelectronics. Journal of Materials Chemistry C, 2019, 7, 3369-3374.	2.7	66
532	CsPbBr3 perovskite nanoparticles as additive for environmentally stable perovskite solar cells with 20.46% efficiency. Nano Energy, 2019, 59, 517-526.	8.2	165
533	Simply designed nonspiro fluorene-based hole-transporting materials for high performance perovskite solar cells. Synthetic Metals, 2019, 250, 42-48.	2.1	11
534	Halide Perovskite Photovoltaics: Background, Status, and Future Prospects. Chemical Reviews, 2019, 119, 3036-3103.	23.0	2,009
535	Minimalist Design of Efficient, Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 12460-12466.	4.0	9
536	Efficient and carbon-based hole transport layer-free CsPbI₂Br planar perovskite solar cells using PMMA modification. Journal of Materials Chemistry C, 2019, 7, 3852-3861.	2.7	102
537	Effects of pressure on the ionic transport and photoelectrical properties of CsPbBr3. Applied Physics Letters, 2019, 114, .	1.5	25
538	Achieving Organic Metal Halide Perovskite into a Conventional Photoelectrode: Outstanding Stability in Aqueous Solution and High-Efficient Photoelectrochemical Water Splitting. ACS Applied Energy Materials, 2019, 2, 1969-1976.	2.5	42
539	Divalent hard Lewis acid doped CsPbBr₃ films for 9.63%-efficiency and ultra-stable all-inorganic perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 6877-6882.	5.2	96
540	Synthesis, crystal structure, absorption properties, photoelectric behavior of organicâ€“inorganic hybrid (CH₃NH₃)₂CoCl₄. Applied Organometallic Chemistry, 2019, 33, e4795.	1.7	15
541	Xanthate-induced sulfur doped all-inorganic perovskite with superior phase stability and enhanced performance. Nano Energy, 2019, 59, 258-267.	8.2	61

#	Article	IF	Citations
542	Influence of A-site cations on the open-circuit voltage of efficient perovskite solar cells: a case of rubidium and guanidinium additives. Journal of Materials Chemistry A, 2019, 7, 8218-8225.	5.2	43
543	Influence of nanobranched growth on photoelectrochemical performance of TiO2 nanotree arrays films. Materials Science in Semiconductor Processing, 2019, 94, 156-163.	1.9	7
544	Surface modification via self-assembling large cations for improved performance and modulated hysteresis of perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 6793-6800.	5.2	48
545	Effect of bidentate and tridentate additives on the photovoltaic performance and stability of perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 4977-4987.	5.2	143
546	Enhancement of open circuit voltage for CuSCN-based perovskite solar cells by controlling the perovskite/CuSCN interface with functional molecules. Journal of Materials Chemistry A, 2019, 7, 6028-6037.	5.2	49
547	Third generation photovoltaic cells based on photonic crystals. Journal of Materials Chemistry C, 2019, 7, 3121-3145.	2.7	51
548	Cobalt-doped nickel oxide nanoparticles as efficient hole transport materials for low-temperature processed perovskite solar cells. Solar Energy, 2019, 181, 243-250.	2.9	37
549	Energy-level engineering of the electron transporting layer for improving open-circuit voltage in dye and perovskite-based solar cells. Energy and Environmental Science, 2019, 12, 958-964.	15.6	116
550	Perovskite Solar Cells. , 2019, , .		1
551	Solvents driven structural, morphological, optical and dielectric properties of lead free perovskite CH₃NH₃SnCl₃ for optoelectronic applications: experimental and DFT study. Materials Research Express, 2019, 6, 125921.	0.8	5
552	The effect of hydroiodic (HI) acid on the optoelectronic properties of CsPbI3 films and their photovoltaic performance. , 2019, , .		0
553	Room Temperature Synthesis of Lead-Free Sn/Ge-Based Perovskite Quantum Dots. , 2019, , .		1
554	Pseudohalide (SCN^{â^'})-doped CsPbI₃ for high-performance solar cells. Journal of Materials Chemistry C, 2019, 7, 13736-13742.	2.7	53
555	Performance data of CH3NH3PbI3 inverted planar perovskite solar cells via ammonium halide additives. Data in Brief, 2019, 27, 104817.	0.5	6
556	Indoor Photovoltaics: Photoactive Material Selection, Greener Ink Formulations, and Slot-Die Coated Active Layers. ACS Applied Materials & Interfaces, 2019, 11, 46017-46025.	4.0	51
557	Effect of Cu2O Content in Electrodeposited CuOx Film on Perovskite Solar Cells. Nano, 2019, 14, 1950126.	0.5	3
558	Constructive molecular configurations for surface-defect passivation of perovskite photovoltaics. Science, 2019, 366, 1509-1513.	6.0	846
559	Introducing fluorene into organic hole transport materials to improve mobility and photovoltage for perovskite solar cells. Chemical Communications, 2019, 55, 13406-13409.	2.2	33

#	Article	IF	Citations
560	Direct emission from quartet excited states triggered by upconversion phenomena in solid-phase synthesized fluorescent lead-free organicâ€“inorganic hybrid compounds. Journal of Materials Chemistry A, 2019, 7, 26504-26512.	5.2	35
561	The synergistic effect of cooperating solvent vapor annealing for high-efficiency planar inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 27267-27277.	5.2	24
562	Crystal and Band-Gap Engineering of One-Dimensional Antimony/Bismuth-Based Organicâ€“Inorganic Hybrids. Inorganic Chemistry, 2019, 58, 16346-16353.	1.9	20
563	Facile Synthesis of Methylammonium Lead Iodide Perovskite with Controllable Morphologies with Enhanced Luminescence Performance. Nanomaterials, 2019, 9, 1660.	1.9	13
564	High Photovoltage Inverted Planar Heterojunction Perovskite Solar Cells with All-Inorganic Selective Contact Layers. ACS Applied Materials & Interfaces, 2019, 11, 46894-46901.	4.0	20
565	Efficient and Stable Low-Bandgap Perovskite Solar Cells Enabled by a CsPbBr₃-Cluster Assisted Bottom-up Crystallization Approach. Journal of the American Chemical Society, 2019, 141, 20537-20546.	6.6	79
566	Influence of Hole Mobility on Charge Separation and Recombination Dynamics at Lead Halide Perovskite and Spiro-OMeTAD Interface. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2019, 32, 727-733.	0.1	3
567	Dopant-free molecular hole transport material that mediates a 20% power conversion efficiency in a perovskite solar cell. Energy and Environmental Science, 2019, 12, 3502-3507.	15.6	90
568	Conformal monolayer contacts with lossless interfaces for perovskite single junction and monolithic tandem solar cells. Energy and Environmental Science, 2019, 12, 3356-3369.	15.6	519
569	Memristive properties of solar cells based on perovskite and polymer composite. Journal of Physics: Conference Series, 2019, 1410, 012087.	0.3	1
570	Er and Mg co-doped TiO2 nanorod arrays and improvement of photovoltaic property in perovskite solar cell. Journal of Alloys and Compounds, 2019, 771, 649-657.	2.8	25
571	CH3NH3PbIxCl(3â^'x) thin film prepared by vapor transfer method for perovskite solar cells. Materials Letters, 2019, 239, 163-166.	1.3	9
572	Elucidating the impact of N-arylanilino substituents of squaraines on their photovoltaic performances. Organic Electronics, 2019, 66, 188-194.	1.4	4
573	Activating Old Materials with New Architecture: Boosting Performance of Perovskite Solar Cells with H₂Oâ€Assisted Hierarchical Electron Transporting Layers. Advanced Science, 2019, 6, 1801170.	5.6	35
574	Reduced Defects of MAPbI₃ Thin Films Treated by FAI for Highâ€Performance Planar Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1805810.	7.8	73
575	Exploring wide bandgap metal oxides for perovskite solar cells. APL Materials, 2019, 7, .	2.2	54
576	Achieving 20% Efficiency for Lowâ€Temperatureâ€Processed Inverted Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807556.	7.8	68
577	Enhancing Efficiency and Stability of Photovoltaic Cells by Using Perovskite/Zrâ€MOF Heterojunction Including Bilayer and Hybrid Structures. Advanced Science, 2019, 6, 1801715.	5.6	159

#	Article	IF	Citations
578	Enhanced Seebeck Effect of a MAPbBr₃ Single Crystal by an Organic and a Metal Modified Layer. Advanced Electronic Materials, 2019, 5, 1800759.	2.6	16
579	Coadditive Engineering with 5-Ammonium Valeric Acid Iodide for Efficient and Stable Sn Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 278-284.	8.8	153
580	Fully Airâ€Processed Carbonâ€Based Efficient Hole Conductor Free Planar Heterojunction Perovskite Solar Cells With High Reproducibility and Stability. Solar Rrl, 2019, 3, 1800297.	3.1	20
581	Recent advancements in and perspectives on flexible hybrid perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 888-900.	5.2	60
582	HxMoO3â^'ynanobelts: an excellent alternative to carbon electrodes for high performance mesoscopic perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 1499-1508.	5.2	8
583	Enhancing the efficiency and stability of perovskite solar cells by incorporating CdS and Cd(SCN₂H₄)₂Cl₂ into the CH₃NH₃PbI₃ active layer. Journal of Materials Chemistry A, 2019, 7, 1124-1137.	5.2	36
584	Colloidal Cu2ZnSn(S1-,Se)4-Au nano-heterostructures for inorganic perovskite photovoltaic applications as photocathode alternative. Journal of Colloid and Interface Science, 2019, 539, 598-608.	5.0	9
585	Highly stable carbon-based perovskite solar cell with a record efficiency of over 18% via hole transport engineering. Journal of Materials Science and Technology, 2019, 35, 987-993.	5.6	123
586	Highly efficient semitransparent CsPbIBr2 perovskite solar cells via low-temperature processed In2S3 as electron-transport-layer. Nano Energy, 2019, 57, 718-727.	8.2	211
587	Low-Temperature Stable Î±-Phase Inorganic Perovskite Compounds via Crystal Cross-Linking. Journal of Physical Chemistry Letters, 2019, 10, 200-205.	2.1	57
588	Enhancing Loading Amount and Performance of Quantum-Dot-Sensitized Solar Cells Based on Direct Adsorption of Quantum Dots from Bicomponent Solvents. Journal of Physical Chemistry Letters, 2019, 10, 229-237.	2.1	21
589	Facet-Dependent Control of PbI₂ Colloids for over 20% Efficient Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 358-367.	8.8	46
590	Highly stable and efficient all-inorganic lead-free perovskite solar cells with native-oxide passivation. Nature Communications, 2019, 10, 16.	5.8	430
591	Efficient and Holeâ€Transportingâ€Layerâ€Free CsPbI₂Br Planar Heterojunction Perovskite Solar Cells through Rubidium Passivation. ChemSusChem, 2019, 12, 983-989.	3.6	79
592	Performance analysis of perovskite solar cells in 2013â€“2018 using machine-learning tools. Nano Energy, 2019, 56, 770-791.	8.2	85
593	P3HT/Phthalocyanine Nanocomposites as Efficient Holeâ€Transporting Materials for Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800264.	3.1	47
594	To Reveal Grain Boundary Induced Thermal Instability of Perovskite Semiconductor Thin Films for Photovoltaic Devices. IEEE Journal of Photovoltaics, 2019, 9, 207-213.	1.5	10
595	Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. Chemical Reviews, 2019, 119, 3418-3451.	23.0	1,131

#	Article	IF	Citations
596	Metal Halide Perovskite Materials for Solar Cells with Longâ€Term Stability. Advanced Energy Materials, 2019, 9, 1802671.	10.2	97
597	Recent Progress in the Design and Synthesis of Nitrides for Mesoscopic and Perovskite Solar Cells. ChemSusChem, 2019, 12, 772-786.	3.6	4
598	Carrier Transfer Behaviors at Perovskite/Contact Layer Heterojunctions in Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1801253.	1.9	27
599	SnO2-based electron transporting layer materials for perovskite solar cells: A review of recent progress. Journal of Energy Chemistry, 2019, 35, 144-167.	7.1	129
600	Melamine Hydroiodide Functionalized MAPbI₃ Perovskite with Enhanced Photovoltaic Performance and Stability in Ambient Atmosphere. Solar Rrl, 2019, 3, 1800275.	3.1	18
601	Mixed-steam annealing treatment for perovskite films to improve solar cells performance. Solar Energy, 2019, 177, 299-305.	2.9	9
602	Tetraâ€ammonium Zinc Phthalocyanine to Construct a Graded 2Dâ€“3D Perovskite Interface for Efficient and Stable Solar Cells. Chinese Journal of Chemistry, 2019, 37, 30-34.	2.6	16
603	Allâ€Inorganic Perovskite Nanocrystalsâ€Based Light Emitting Diodes and Solar Cells. ChemNanoMat, 2019, 5, 266-277.	1.5	18
604	Surface modification of SnO2 blocking layers for hysteresis elimination of MAPbI3 photovoltaics. Applied Surface Science, 2019, 470, 613-621.	3.1	19
605	Dopamine-crosslinked TiO2/perovskite layer for efficient and photostable perovskite solar cells under full spectral continuous illumination. Nano Energy, 2019, 56, 733-740.	8.2	201
606	Scalable Processing of Low-Temperature TiO₂ Nanoparticles for High-Efficiency Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 47-58.	2.5	33
607	Precise Control of Crystal Growth for Highly Efficient CsPbI2Br Perovskite Solar Cells. Joule, 2019, 3, 191-204.	11.7	398
608	Boosting the efficiency of carbon-based planar CsPbBr3 perovskite solar cells by a modified multistep spin-coating technique and interface engineering. Nano Energy, 2019, 56, 184-195.	8.2	257
609	Impact of Organic Spacers on the Carrier Dynamics in 2D Hybrid Lead-Halide Perovskites. ACS Energy Letters, 2019, 4, 17-25.	8.8	44
610	Lead and HTM Free Stable Twoâ€Dimensional Tin Perovskites with Suitable Band Gap for Solar Cell Applications. Angewandte Chemie, 2019, 131, 1084-1088.	1.6	22
611	Lead and HTM Free Stable Twoâ€Dimensional Tin Perovskites with Suitable Band Gap for Solar Cell Applications. Angewandte Chemie - International Edition, 2019, 58, 1072-1076.	7.2	96
612	Ultra-low-cost coal-based carbon electrodes with seamless interfacial contact for effective sandwich-structured perovskite solar cells. Carbon, 2019, 145, 290-296.	5.4	68
613	Uniform Cs2SnI6 Thin Films for Lead-Free and Stable Perovskite Optoelectronics via Hybrid Deposition Approaches. Electronic Materials Letters, 2019, 15, 192-200.	1.0	38

#	Article	IF	Citations
614	New ferrocenyl-containing organic hole-transporting materials for perovskite solar cells in regular (n-i-p) and inverted (p-i-n) architectures. RSC Advances, 2019, 9, 216-223.	1.7	3
615	Impedance Spectroscopy: A Versatile Technique to Understand Solutionâ€Processed Optoelectronic Devices. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800580.	1.2	18
616	Using SnO₂ QDs and CsMBr₃ (Mâ€‰=â€‰Sn, Bi, Cu) QDs as Chargeâ€Transporting Materials for 10.6%â€Efficiency Allâ€Inorganic CsPbBr₃ Perovskite Solar Cells with an Ultrahigh Openâ€Circuit Voltage of 1.610 V. Solar Rrl, 2019, 3, 1800284.	3.1	84
617	Correlating variability of modeling parameters with photovoltaic performance: Monte Carlo simulation of a meso-structured perovskite solar cell. Applied Energy, 2019, 237, 131-144.	5.1	20
618	A fluorinated polythiophene hole-transport material for efficient and stable perovskite solar cells. Dyes and Pigments, 2019, 164, 1-6.	2.0	31
619	Unraveling the light-induced degradation mechanism of CH3NH3PbI3 perovskite films. Organic Electronics, 2019, 67, 19-25.	1.4	44
620	Fe²⁺/Fe³⁺ Doped into MAPbCl₃ Single Crystal: Impact on Crystal Growth and Optical and Photoelectronic Properties. Journal of Physical Chemistry C, 2019, 123, 1669-1676.	1.5	16
621	Improving the Performance and Reproducibility of Inverted Planar Perovskite Solar Cells Using Tetraethyl Orthosilicate as the Antisolvent. ACS Applied Materials & Interfaces, 2019, 11, 3909-3916.	4.0	27
622	Siteâ€selective Synthesis of Î²â€[70]PCBMâ€like Fullerenes: Efficient Application in Perovskite Solar Cells. Chemistry - A European Journal, 2019, 25, 3224-3228.	1.7	37
623	Highâ€Efficient Flexible Perovskite Solar Cells with Low Temperature TiO₂ Layer via UV/Ozone Photoâ€Annealing Treatment. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800669.	0.8	14
624	Enhanced Stability and Optical Absorption in the Perovskiteâ€Based Compounds MA 1â^' x Cs x PbI 3â^' y Br y. ChemPhysChem, 2019, 20, 489-498.	1.0	6
625	Perylene Diimideâ€Based Electronâ€Transporting Material forâ€‰Perovskite Solar Cells with Undoped Poly(3â€hexylthiophene) as Holeâ€Transporting Material. ChemSusChem, 2019, 12, 1155-1161.	3.6	31
626	Copper-copper iodide hybrid nanostructure as hole transport material for efficient and stable inverted perovskite solar cells. Science China Chemistry, 2019, 62, 363-369.	4.2	36
627	Preparation of Perovskite Films under Liquid Nitrogen Atmosphere for High Efficiency Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 3956-3961.	3.2	13
628	Highly stable hole-conductor-free perovskite solar cells based upon ammonium chloride and a carbon electrode. Journal of Colloid and Interface Science, 2019, 540, 315-321.	5.0	22
629	Enhanced efficiency and ambient stability of planar heterojunction perovskite solar cells by using organic-inorganic double layer electron transporting material. Electrochimica Acta, 2019, 294, 337-344.	2.6	23
630	Growth of monolithically grained CH3NH3PbI3 film by a uniform intermediate phase for high performance planar perovskite solar cells. Journal of Alloys and Compounds, 2019, 776, 250-258.	2.8	18
631	Synthetic Approaches for Halide Perovskite Thin Films. Chemical Reviews, 2019, 119, 3193-3295.	23.0	454

#	Article	IF	Citations
632	An overview on enhancing the stability of lead halide perovskite quantum dots and their applications in phosphor-converted LEDs. Chemical Society Reviews, 2019, 48, 310-350.	18.7	845
633	Carbon Nanotube Bridging Method for Hole Transport Layer-Free Paintable Carbon-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 916-923.	4.0	77
634	Polar-Solvent-Free Synthesis of Highly Photoluminescent and Stable CsPbBr₃ Nanocrystals with Controlled Shape and Size by Ultrasonication. Chemistry of Materials, 2019, 31, 365-375.	3.2	67
635	Open-Circuit Voltages Exceeding 1.26 V in Planar Methylammonium Lead Iodide Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 110-117.	8.8	296
636	Antioxidant Grain Passivation for Airâ€Stable Tinâ€Based Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 816-820.	1.6	22
637	Antioxidant Grain Passivation for Airâ€Stable Tinâ€Based Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 806-810.	7.2	369
638	Two-dimensional materials in perovskite solar cells. Materials Today Energy, 2019, 11, 128-158.	2.5	93
639	Recent Advances in Energetics and Stability of Metal Halide Perovskites for Optoelectronic Applications. Advanced Materials Interfaces, 2019, 6, 1801351.	1.9	29
640	Semitransparent FAPbI_{3â€}_xBr_x Perovskite Solar Cells Stable under Simultaneous Damp Heat (85 Â°C/85%) and 1 Sun Light Soaking. Advanced Materials Technologies, 2019, 4, 1800390.	3.0	22
641	A periâ€Xanthenoxanthene Centered Columnarâ€Stacking Organic Semiconductor for Efficient, Photothermally Stable Perovskite Solar Cells. Chemistry - A European Journal, 2019, 25, 945-948.	1.7	21
642	Stability Challenges for Perovskite Solar Cells. ChemNanoMat, 2019, 5, 253-265.	1.5	39
643	Bromide Induced Roomâ€Temperature Formation of Photoactive Formamidiniumâ€Based Perovskite for Highâ€Efficiency, Lowâ€Cost Solar Cells. Solar Rrl, 2019, 3, 1800313.	3.1	7
644	Low temperature processed PEDOT:PSS/VOx bilayer for hysteresis-free and stable perovskite solar cells. Materials Letters, 2019, 236, 16-18.	1.3	21
645	Interface engineering with NiO nanocrystals for highly efficient and stable planar perovskite solar cells. Electrochimica Acta, 2019, 293, 211-219.	2.6	56
646	Integrated Perovskite/Bulkâ€Heterojunction Organic Solar Cells. Advanced Materials, 2020, 32, e1805843.	11.1	61
647	Bleifreie Halogenidâ€Perowskitâ€Nanokristalle: Kristallstrukturen, Synthese, StabilitÃten und optische Eigenschaften. Angewandte Chemie, 2020, 132, 1042-1059.	1.6	22
648	Leadâ€Free Halide Perovskite Nanocrystals: Crystal Structures, Synthesis, Stabilities, and Optical Properties. Angewandte Chemie - International Edition, 2020, 59, 1030-1046.	7.2	320
649	Optical Design in Perovskite Solar Cells. Small Methods, 2020, 4, 1900150.	4.6	32

#	Article	IF	Citations
650	Enhancing the optical, morphological and electronic properties of the solution-processed CsPbIBr2 films by Li doping for efficient carbon-based perovskite solar cells. Applied Surface Science, 2020, 499, 143990.	3.1	56
651	Tin Halide Perovskite (ASnX₃) Solar Cells: A Comprehensive Guide toward the Highest Power Conversion Efficiency. Advanced Energy Materials, 2020, 10, 1902467.	10.2	114
652	A Review on Additives for Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902492.	10.2	240
653	Highly Efficient (110) Orientated FAâ€MA Mixed Cation Perovskite Solar Cells via Functionalized Carbon Nanotube and Methylammonium Chloride Additive. Small Methods, 2020, 4, 1900511.	4.6	25
654	Triphenylamine dibenzofulveneâ€“derived dopantâ€free hole transporting layer induces micrometerâ€sized perovskite grains for highly efficient near 20% for pâ€iâ€n perovskite solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 49-59.	4.4	24
655	Interfacial Energy Level Tuning for Efficient and Thermostable CsPbI₂Br Perovskite Solar Cells. Advanced Science, 2020, 7, 1901952.	5.6	64
656	Recent Progress and Development in Inorganic Halide Perovskite Quantum Dots for Photoelectrochemical Applications. Small, 2020, 16, e1903398.	5.2	120
657	Device characteristics and material developments of indoor photovoltaic devices. Materials Science and Engineering Reports, 2020, 139, 100517.	14.8	108
658	Interface engineering by using TiO2 nanocubic modifier in planar heterojunction perovskite solar cells. Organic Electronics, 2020, 77, 105490.	1.4	1
659	Fluorinated fulleropyrrolidine as universal electron transport material for organic-inorganic and all-inorganic perovskite solar cells. Organic Electronics, 2020, 77, 105492.	1.4	7
660	Effect of double bond conjugation on hole mobility of thiophene-based hole transport materials in perovskite solar cells. Materials Chemistry and Physics, 2020, 240, 122058.	2.0	8
661	First-principles study of structural stability, electronic and optical properties of GA-doped MAPbI3. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 226, 117638.	2.0	9
662	Crystal face dependent charge carrier extraction in TiO2/perovskite heterojunctions. Nano Energy, 2020, 67, 104227.	8.2	19
663	Novel swivel-cruciform 5,5â€²-bibenzothiadiazole based small molecule donors for efficient organic solar cells. Organic Electronics, 2020, 77, 105521.	1.4	3
664	Synthesis and optical properties of novel mixedâ€metal cation CsPb_{1â^'}_xTi_xBr₃â€based perovskite glasses for Wâ€LED. Journal of the American Ceramic Society, 2020, 103, 382-390.	1.9	12
665	Evoking non-bonding S-Ï€ interaction by aryl phosphine sulfide for selectively enhanced electronic property of organic semiconductors. Chemical Engineering Journal, 2020, 380, 122562.	6.6	14
666	To Be Higher and Strongerâ€"Metal Oxide Electron Transport Materials for Perovskite Solar Cells. Small, 2020, 16, e1902579.	5.2	80
667	Influence of Lewis base HMPA on the properties of efficient planar MAPbI3 solar cells fabricated by one-step process assisted by Lewis acid-base adduct approach. Chemical Engineering Journal, 2020, 380, 122436.	6.6	24

#	Article	IF	Citations
668	High-efficiency colorful perovskite solar cells using TiO2 nanobowl arrays as a structured electron transport layer. Science China Materials, 2020, 63, 35-46.	3.5	26
669	On the Electroâ€Optics of Carbon Stack Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900221.	3.1	10
670	FAPb 0.5 Sn 0.5 I 3 : A Narrow Bandgap Perovskite Synthesized through Evaporation Methods for Solar Cell Applications. Solar Rrl, 2020, 4, 1900283.	3.1	24
671	Carbonâ€Electrode Based Perovskite Solar Cells: Effect of Bulk Engineering and Interface Engineering on the Power Conversion Properties. Solar Rrl, 2020, 4, 1900190.	3.1	45
672	Material and Interface Engineering for Highâ€Performance Perovskite Solar Cells: A Personal Journey and Perspective. Chemical Record, 2020, 20, 209-229.	2.9	9
673	The development of all-inorganic CsPbX3 perovskite solar cells. Journal of Materials Science, 2020, 55, 464-479.	1.7	52
674	Highly efficient perovskite solar cells based on symmetric hole transport material constructed with indaceno[1,2-b:5,6-b']dithiophene core building block. Journal of Energy Chemistry, 2020, 43, 98-103.	7.1	31
675	XPS evidence of degradation mechanism in CH₃NH₃PbI₃ hybrid perovskite. Journal of Physics Condensed Matter, 2020, 32, 095501.	0.7	15
676	Efficient Allâ€Solutionâ€Processed Perovskite Lightâ€Emitting Diodes Enabled by Smallâ€Molecule Doped Electron Injection Layers. Advanced Optical Materials, 2020, 8, 1900567.	3.6	25
677	Additive Engineering for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902579.	10.2	477
678	Reversible 3D laser printing of perovskite quantum dots inside a transparent medium. Nature Photonics, 2020, 14, 82-88.	15.6	326
679	Aâ€Site Management for Highly Crystalline Perovskites. Advanced Materials, 2020, 32, e1904702.	11.1	62
680	How to Report Record Openâ€Circuit Voltages in Leadâ€Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902573.	10.2	153
681	Twoâ€terminal Perovskite silicon tandem solar cells with a highâ€Bandgap Perovskite absorber enabling voltages over 1.8ÂV. Progress in Photovoltaics: Research and Applications, 2020, 28, 99-110.	4.4	63
682	In situ construction of gradient heterojunction using organic VOx precursor for efficient and stable inverted perovskite solar cells. Nano Energy, 2020, 67, 104244.	8.2	44
683	Highly Efficient and Stable Perovskite Solar Cells Using an Effective Chelateâ€Assisted Defect Passivation Strategy. ChemSusChem, 2020, 13, 412-418.	3.6	4
684	One-step P2 scribing of organometal halide perovskite solar cells by picosecond laser of visible wavelength. Applied Surface Science, 2020, 505, 144408.	3.1	8
685	Effect of electron donor and acceptor in dithienopyrrolobenzothiadiazole-based organic dyes for efficient quasi-solid-state dye-sensitized solar cells. Dyes and Pigments, 2020, 173, 107999.	2.0	7

#	Article	IF	Citations
686	Effect of Plasmonic Ag Nanoparticles on the Performance of Inverted Perovskite Solar Cells. Advanced Engineering Materials, 2020, 22, 1900976.	1.6	14
687	Dibenzo[b,d]thiopheneâ€Cored Holeâ€Transport Material with Passivation Effect Enabling the Highâ€Efficiency Planar pâ€“iâ€“n Perovskite Solar Cells with 83% Fill Factor. Solar Rrl, 2020, 4, 1900421.	3.1	47
688	(CH3NH3)3Bi2I9 perovskite films fabricated via a two-stage electric-field-assisted reactive deposition method for solar cells application. Electrochimica Acta, 2020, 329, 135173.	2.6	8
689	Vapor-assisted deposition of CsPbIBr2 films for highly efficient and stable carbon-based planar perovskite solar cells with superior Voc. Electrochimica Acta, 2020, 330, 135266.	2.6	36
690	Mechanically tuning spin-orbit coupling effects in organic-inorganic hybrid perovskites. Nano Energy, 2020, 67, 104285.	8.2	6
691	1D Pyrrolidinium Lead Iodide for Efficient and Stable Perovskite Solar Cells. Energy Technology, 2020, 8, 1900918.	1.8	21
692	Promising holeâ€transporting materials for perovskite solar cells: Modulation of the electronâ€deficient units in triphenylamine derivativeâ€based molecules. International Journal of Quantum Chemistry, 2020, 120, e26070.	1.0	7
693	Atomistic understanding on molecular halide perovskite/organic/TiO2 interface with bifunctional interfacial modifier: A case study on halogen bond and carboxylic acid group. Applied Surface Science, 2020, 502, 144274.	3.1	11
694	Atomic Layer Deposition of Functional Layers in Planar Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900332.	3.1	46
695	Impact of Temperatureâ€Dependent Hydration Water on Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900370.	3.1	9
696	Fluorineâ€Substituted Benzotriazole Core Building Blockâ€Based Highly Efficient Holeâ€Transporting Materials for Mesoporous Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900362.	3.1	16
697	Constructing â€œhillocksâ€•like random-textured absorber for efficient planar perovskite solar cells. Chemical Engineering Journal, 2020, 387, 124091.	6.6	12
698	Lanthanide-containing polyoxometalate as luminescent down-conversion material for improved printable perovskite solar cells. Journal of Alloys and Compounds, 2020, 823, 153738.	2.8	24
699	Suppressing recombination in perovskite solar cells via surface engineering of TiO2 ETL. Solar Energy, 2020, 197, 50-57.	2.9	53
700	Band-bending induced passivation: high performance and stable perovskite solar cells using a perhydropoly(silazane) precursor. Energy and Environmental Science, 2020, 13, 1222-1230.	15.6	114
701	It's a trap! On the nature of localised states and charge trapping in lead halide perovskites. Materials Horizons, 2020, 7, 397-410.	6.4	345
702	Star-shaped triarylamine-based hole-transport materials in perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 779-787.	2.5	5
703	Edge functionalized graphene nanoribbons with tunable band edges for carrier transport interlayers in organicâ€“inorganic perovskite solar cells. Physical Chemistry Chemical Physics, 2020, 22, 2955-2962.	1.3	4

#	Article	IF	Citations
704	Pre-crystallisation applied in sequential deposition approaches to improve the photovoltaic performance of perovskite solar cells. Journal of Alloys and Compounds, 2020, 832, 153616.	2.8	4
705	Synthesis, post-synthetic modification and stability of a 2D styryl ammonium lead iodide hybrid material. Dalton Transactions, 2020, 49, 395-403.	1.6	1
706	The mechanism of universal green antisolvents for intermediate phase controlled high-efficiency formamidinium-based perovskite solar cells. Materials Horizons, 2020, 7, 934-942.	6.4	51
707	Liquid-phase growth and optoelectronic properties of two-dimensional hybrid perovskites CH₃NH₃PbX₃ (X = Cl, Br, I). Nanoscale, 2020, 12, 1100-1108.	2.8	20
708	Graphitic carbon nitride doped SnO₂ enabling efficient perovskite solar cells with PCEs exceeding 22%. Journal of Materials Chemistry A, 2020, 8, 2644-2653.	5.2	98
709	Molecular aggregation method for perovskiteâ€“fullerene bulk heterostructure solar cells. Journal of Materials Chemistry A, 2020, 8, 1326-1334.	5.2	15
710	Vertical Orientated Dionâ€“Jacobson Quasiâ€2D Perovskite Film with Improved Photovoltaic Performance and Stability. Small Methods, 2020, 4, 1900831.	4.6	96
711	Efficient mesoscopic perovskite solar cells from emulsion-based bottom-up self-assembled TiO2 microspheres. Journal of Materials Science: Materials in Electronics, 2020, 31, 1969-1975.	1.1	0
712	Dopant-free hole transport materials processed with green solvent for efficient perovskite solar cells. Chemical Engineering Journal, 2020, 385, 123976.	6.6	48
713	Density functional theory analysis of electronic and optical properties of orthorhombic perovskite CH3NH3SnX3 (XÂ=ÂBr, I). Chemical Physics Letters, 2020, 740, 137062.	1.2	5
714	Photovoltaic Effect Related to Methylammonium Cation Orientation and Carrier Transport Properties in High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 3563-3571.	4.0	9
715	Visualizing and Suppressing Nonradiative Losses in High Open-Circuit Voltage n-i-p-Type CsPbI₃ Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 271-279.	8.8	39
716	Doped but Stable: Spirobisacridine Hole Transporting Materials for Hysteresis-Free and Stable Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 1792-1800.	6.6	39
717	Observing Defect Passivation of the Grain Boundary with 2â€Aminoterephthalic Acid for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie, 2020, 132, 4190-4196.	1.6	29
718	Observing Defect Passivation of the Grain Boundary with 2â€Aminoterephthalic Acid for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 4161-4167.	7.2	122
719	Alkaline-earth bis(trifluoromethanesulfonimide) additives for efficient and stable perovskite solar cells. Nano Energy, 2020, 69, 104412.	8.2	54
720	New Strategies for Defect Passivation in Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903090.	10.2	237
721	Chemical Approaches for Stabilizing Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903249.	10.2	132

#	Article	IF	Citations
722	Molecular Aggregation of Naphthalene Diimide(NDI) Derivatives in Electron Transport Layers of Inverted Perovskite Solar Cells and Their Influence on the Device Performance. Chemistry - an Asian Journal, 2020, 15, 112-121.	1.7	20
723	Gradient band gap perovskite films with multiple photoluminescence peaks. Optical Materials, 2020, 99, 109513.	1.7	11
724	Enhancement of Openâ€Circuit Voltage of Perovskite Solar Cells by Interfacial Modification with pâ€Aminobenzoic Acid. Advanced Materials Interfaces, 2020, 7, 1901584.	1.9	21
725	Probing impacts of Ï€-conjugation and multiarm on the performance of two-dimensionally expanded small molecule hole-transporting materials: A theoretical investigation. Synthetic Metals, 2020, 259, 116219.	2.1	13
726	Highly stable and spectrum-selective ultraviolet photodetectors based on lead-free copper-based perovskites. Materials Horizons, 2020, 7, 530-540.	6.4	164
727	Double layer mesoscopic electron contact for efficient perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 843-851.	2.5	22
728	In situtetrafluoroborate-modified MAPbBr₃nanocrystals showing high photoluminescence, stability and self-assembly behavior. Journal of Materials Chemistry C, 2020, 8, 1989-1997.	2.7	8
729	Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 1445-1456.	7.3	115
730	Chlorineâ€modified SnO₂ electron transport layer for highâ€efficiency perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 401-408.	8.5	48
731	Hermetic seal for perovskite solar cells: An improved plasma enhanced atomic layer deposition encapsulation. Nano Energy, 2020, 69, 104375.	8.2	78
732	Passivated Metal Oxide n-Type Contacts for Efficient and Stable Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 1111-1118.	2.5	26
733	Theoretical study of structural stability, electronic and optical properties of MA1â^'x Cs x PbI3 for photovoltaic applications. Applied Physics Express, 2020, 13, 011007.	1.1	3
734	Room-temperature synthesis of ZrSnO4 nanoparticles for electron transport layer in efficient planar hetrojunction perovskite solar cells. Journal of Materials Science and Technology, 2020, 42, 38-45.	5.6	15
735	Wideâ€Bandgap Perovskite/Gallium Arsenide Tandem Solar Cells. Advanced Energy Materials, 2020, 10, 1903085.	10.2	49
736	Impact of electron transport layer material on the performance of CH3NH3PbBr3 perovskite-based photodetectors. Journal of Materials Science, 2020, 55, 4345-4357.	1.7	17
737	Examining the uniform strain effect on elastic, electronic and optical properties of CsPbCl3 through FP-LAPW calculations. Chemical Physics, 2020, 531, 110654.	0.9	8
738	Enhanced Optical Absorption and Interfacial Carrier Separation of CsPbBr₃/Graphene Heterostructure: Experimental and Theoretical Insights. ACS Applied Materials & Interfaces, 2020, 12, 3086-3095.	4.0	23
739	High Efficiency and Stability of Inverted Perovskite Solar Cells Using Phenethyl Ammonium Iodide-Modified Interface of NiO_x and Perovskite Layers. ACS Applied Materials & Interfaces, 2020, 12, 771-779.	4.0	76

#	Article	IF	Citations
740	A review of aspects of additive engineering in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 27-54.	5.2	232
741	Highly Efficient Organic Afterglow from a 2D Layered Lead-Free Metal Halide in Both Crystals and Thin Films under an Air Atmosphere. ACS Applied Materials & Interfaces, 2020, 12, 1419-1426.	4.0	48
742	The balance between efficiency, stability and environmental impacts in perovskite solar cells: a review. JPhys Energy, 2020, 2, 022001.	2.3	76
743	Bifacial, Color-Tunable Semitransparent Perovskite Solar Cells for Building-Integrated Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 484-493.	4.0	80
744	Achieving Reproducible and High-Efficiency (>21%) Perovskite Solar Cells with a Presynthesized FAPbI₃ Powder. ACS Energy Letters, 2020, 5, 360-366.	8.8	139
745	Fabricating an optimal rutile TiO2 electron transport layer by delicately tuning TiCl4 precursor solution for high performance perovskite solar cells. Nano Energy, 2020, 68, 104336.	8.2	33
746	An across-species comparison of the sensitivity of different organisms to Pb-based perovskites used in solar cells. Science of the Total Environment, 2020, 708, 135134.	3.9	18
747	Minimizing non-radiative recombination losses in perovskite solar cells. Nature Reviews Materials, 2020, 5, 44-60.	23.3	754
748	Functional metal oxide ceramics as electron transport medium in photovoltaics and photo-electrocatalysis. , 2020, , 207-273.		4
749	Carbon nanomaterials with sp or/and sp hybridization in energy conversion and storage applications: A review. Energy Storage Materials, 2020, 26, 349-370.	9.5	55
750	Ï€-Conjugated small molecules enable efficient perovskite growth and charge-extraction for high-performance photovoltaic devices. Journal of Power Sources, 2020, 448, 227420.	4.0	18
751	Chemical inhibition of reversible decomposition for efficient and super-stable perovskite solar cells. Nano Energy, 2020, 68, 104315.	8.2	25
752	Carbazole-substituted NP-based derivative as hole transporting material for highly efficient perovskite solar cells. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 228, 117808.	2.0	14
753	Simultaneous Improved Performance and Thermal Stability of Planar Metal Ion Incorporated CsPbI₂Br Allâ€inorganic Perovskite Solar Cells Based on MgZnO Nanocrystalline Electron Transporting Layer. Advanced Energy Materials, 2020, 10, 1902708.	10.2	61
754	Roadmap on halide perovskite and related devices. Nanotechnology, 2020, 31, 152001.	1.3	24
755	Enhancing photovoltaic performance of inverted perovskite solar cells via imidazole and benzoimidazole doping of PC61BM electron transport layer. Organic Electronics, 2020, 78, 105573.	1.4	13
756	Tetrasubstituted Thieno[3,2-b]thiophenes as Hole-Transporting Materials for Perovskite Solar Cells. Journal of Organic Chemistry, 2020, 85, 224-233.	1.7	20
757	Improving and Stabilizing Perovskite Solar Cells with Incorporation of Graphene in the Spiro-OMeTAD Layer: Suppressed Li Ions Migration and Improved Charge Extraction. ACS Applied Energy Materials, 2020, 3, 970-976.	2.5	32

#	Article	IF	Citations
758	Improving the efficiency and stability of inverted perovskite solar cells by CuSCN-doped PEDOT:PSS. Solar Energy Materials and Solar Cells, 2020, 206, 110316.	3.0	62
759	Coordinated Optical Matching of a Texture Interface Made from Demixing Blended Polymers for High-Performance Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 196-203.	7.3	64
760	Semitransparent Perovskite Solar Cells with Dielectric/Metal/Dielectric Top Electrodes. Energy Technology, 2020, 8, 1900868.	1.8	20
761	The donor-dependent methoxy effects on the performance of hole-transporting materials for perovskite solar cells. Journal of Energy Chemistry, 2020, 47, 10-17.	7.1	28
762	Mobile Ion Concentration Measurement and Open-Access Band Diagram Simulation Platform for Halide Perovskite Solar Cells. Joule, 2020, 4, 109-127.	11.7	117
763	High-efficiency planar p-i-n perovskite solar cells based on dopant-free dibenzo[b,d]furan-centred linear hole transporting material. Journal of Power Sources, 2020, 449, 227488.	4.0	18
764	Efficient and stable perovskite solar cells thanks to dual functions of oleyl amine-coated PbSO4(PbO)4 quantum dots: Defect passivation and moisture/oxygen blocking. Nano Energy, 2020, 68, 104313.	8.2	56
765	Device design rules and operation principles of high-power perovskite solar cells for indoor applications. Nano Energy, 2020, 68, 104321.	8.2	70
766	Boost the performance of inverted perovskite solar cells with PEDOT:PSS/Graphene quantum dots composite hole transporting layer. Organic Electronics, 2020, 78, 105575.	1.4	28
767	2017 P.V. Danckwerts Memorial Lecture special issue editorial: Advances in emerging technologies of chemical engineering towards sustainable energy and environment: Solar and biomass. Chemical Engineering Science, 2020, 215, 115384.	1.9	8
768	Effect of NiO Precursor Solution Ageing on the Perovskite Film Formation and Their Integration as Hole Transport Material for Perovskite Solar Cells. Journal of Nanoscience and Nanotechnology, 2020, 20, 3710-3717.	0.9	9
769	The Low-Dimensional Three-Dimensional Tin Halide Perovskite: Film Characterization and Device Performance. Energies, 2020, 13, 2.	1.6	44
770	Interlayer Engineering for Flexible Large-Area Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 777-784.	2.5	13
771	Angle-Resolved Photoemission Study on the Band Structure of Organic Single Crystals. Crystals, 2020, 10, 773.	1.0	5
772	Shallow Iodine Defects Accelerate the Degradation of Î±-Phase Formamidinium Perovskite. Joule, 2020, 4, 2426-2442.	11.7	173
773	Suppressing the Phase Segregation with Potassium for Highly Efficient and Photostable Inverted Wide-Band Gap Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 48458-48466.	4.0	41
774	A data review on certified perovskite solar cells efficiency and I-V metrics: Insights into materials selection and process scaling up. Solar Energy, 2020, 209, 21-29.	2.9	5
775	Roles of Sn content in physical features and charge transportation mechanism of Pb-Sn binary perovskite solar cells. Solar Energy, 2020, 209, 590-601.	2.9	16

#	Article	IF	Citations
776	Highly thermal-stable perylene-bisimide small molecules as efficient electron-transport materials for perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 14773-14781.	2.7	14
777	Room Temperature Formation of Semiconductor Grade Î±-FAPbI3 Films for Efficient Perovskite Solar Cells. Cell Reports Physical Science, 2020, 1, 100205.	2.8	18
778	Alternatives assessment of perovskite solar cell materials and their methods of fabrication. Renewable and Sustainable Energy Reviews, 2020, 133, 110207.	8.2	23
779	Boosting the Stability of Fully-Inorganic Perovskite Solar Cells through Samarium Doped CsPbI₂Br Perovskite. ACS Sustainable Chemistry and Engineering, 2020, 8, 16364-16371.	3.2	32
780	Control of Molecular Orientation of Spiro-OMeTAD on Substrates. ACS Applied Materials & Interfaces, 2020, 12, 50187-50191.	4.0	10
781	Naphthalenediimide Cations Inhibit 2D Perovskite Formation and Facilitate Subpicosecond Electron Transfer. Journal of Physical Chemistry C, 2020, 124, 24379-24390.	1.5	17
782	Perovskite Termination-Dependent Charge Transport Behaviors of the CsPbI₃/Black Phosphorus van der Waals Heterostructure*. Chinese Physics Letters, 2020, 37, 107301.	1.3	8
783	Single Source, Surfactantâ€Free, and Oneâ€Step Solvothermal Route Synthesized TiO₂ Microspheres for Highly Efficient Mesoscopic Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000519.	3.1	7
784	ABX₃-type lead-free perovskites using superatom ions with tunable photovoltaic performances. Journal of Materials Chemistry A, 2020, 8, 21993-22000.	5.2	8
785	Mechanistic Understanding of Cetyltrimethylammonium Bromide-Assisted Durable CH₃NH₃PbI₃ Film for Stable ZnO-Based Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 9856-9865.	2.5	8
786	Formation of Stable Metal Halide Perovskite/Perovskite Heterojunctions. ACS Energy Letters, 2020, 5, 3443-3451.	8.8	35
787	Effect of FA+ Fraction and Dipping Time on Performance of FAxMA1â^'xPbI3 Films and Perovskite Solar Cells. Journal of Electronic Materials, 2020, 49, 7054-7064.	1.0	1
788	Ï€-Extended donor-acceptor conjugated copolymers for use as hole transporting materials in perovskite solar cells. Organic Electronics, 2020, 87, 105943.	1.4	5
789	Toward ideal hole transport materials: a review on recent progress in dopant-free hole transport materials for fabricating efficient and stable perovskite solar cells. Energy and Environmental Science, 2020, 13, 4057-4086.	15.6	241
790	Elucidating the functional form of the recombination losses in a planar perovskite solar cell: A scaling analysis. Journal of Applied Physics, 2020, 128, .	1.1	6
791	Progress, highlights and perspectives on NiO in perovskite photovoltaics. Chemical Science, 2020, 11, 7746-7759.	3.7	119
792	Roomâ€Temperatureâ€Processed Fullerene/TiO₂ Nanocomposite Electron Transporting Layer for Highâ€Efficiency Rigid and Flexible Planar Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000247.	3.1	18
793	Structural Evolution and Optical Property Tunability by Halogen Substitution in [N(CH₃)₄]MX₂ (M = Ga⁺, In⁺, X = Cl, Br): A Family of Organically Templated Metal Halides. Inorganic Chemistry, 2020, 59, 10736-10745.	1.9	6

#	Article	IF	Citations
794	Improved Interfacial Crystallization by Synergic Effects of Precursor Solution Stoichiometry and Conjugated Polyelectrolyte Interlayer for High Open-Circuit Voltage of Perovskite Photovoltaic Diodes. ACS Applied Materials & Interfaces, 2020, 12, 12328-12336.	4.0	17
795	Approaching optimal hole transport layers by an organic monomolecular strategy for efficient inverted perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 16560-16569.	5.2	16
796	An efficient phenylaminecarbazole-based three-dimensional hole-transporting materials for high-stability perovskite solar cells. Dyes and Pigments, 2020, 182, 108663.	2.0	6
797	Vacuum-Deposited Multication Tinâ€“Lead Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 2755-2761.	2.5	16
798	Fluorinated interfacial layers in perovskite solar cells: efficient enhancement of the fill factor. Journal of Materials Chemistry A, 2020, 8, 16527-16533.	5.2	17
799	A Ladderâ€like Dopantâ€free Holeâ€Transporting Polymer for Hysteresisâ€less Highâ€Efficiency Perovskite Solar Cells with High Ambient Stability. ChemSusChem, 2020, 13, 5058-5066.	3.6	12
800	The preparation of all-inorganic CsPbI2â^'xBr1+x perovskite solar cells based on electrodeposited PbO2 film. Solar Energy, 2020, 207, 618-625.	2.9	15
801	Simple 9,10-dihydrophenanthrene based hole-transporting materials for efficient perovskite solar cells. Chemical Engineering Journal, 2020, 402, 126298.	6.6	12
802	Gradient band structure: high performance perovskite solar cells using poly(bisphenol A) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 422 Td (a	5.2	14
803	Low-voltage room-temperature electrochemical deposition of perovskite films for solar cell devices. Solar Energy, 2020, 212, 275-281.	2.9	6
804	Cs₄PbBr₆/CsPbBr₃ Nanocomposites for All-Inorganic Electroluminescent Perovskite Light-Emitting Diodes. ACS Applied Nano Materials, 2020, 3, 11760-11768.	2.4	21
805	Detecting alcohol vapors using two-dimensional copper-based Ruddlesdenâ€“Popper perovskites. Applied Physics Letters, 2020, 117, .	1.5	7
806	Carbon-Based All-Inorganic CsPbI₂Br Perovskite Solar Cells Using TiO₂ Nanorod Arrays: Interface Modification and the Enhanced Photovoltaic Performance. Energy & Fuels, 2020, 34, 11670-11678.	2.5	11
807	Sustainable lead management in halide perovskite solar cells. Nature Sustainability, 2020, 3, 1044-1051.	11.5	87
808	Anatase TiO2 nanorod arrays as high-performance electron transport layers for perovskite solar cells. Journal of Alloys and Compounds, 2020, 849, 156629.	2.8	25
809	Searching for stable perovskite solar cell materials using materials genome techniques and high-throughput calculations. Journal of Materials Chemistry C, 2020, 8, 12012-12035.	2.7	22
810	Asymmetric Sulfonyldibenzene-Based Hole-Transporting Materials for Efficient Perovskite Solar Cells: Inspiration from Organic Thermally-Activated Delayed Fluorescence Molecules. , 2020, 2, 1093-1100.		16
811	Inverted planar perovskite solar cells with efficient and stability via optimized cathode-interfacial layer. Solar Energy, 2020, 207, 1165-1171.	2.9	5

#	Article	IF	Citations
812	Barrier Designs in Perovskite Solar Cells for Longâ€Term Stability. Advanced Energy Materials, 2020, 10, 2001610.	10.2	84
813	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. Solar Rrl, 2020, 4, 2000308.	3.1	31
814	High-Efficiency Perovskite Solar Cells. Chemical Reviews, 2020, 120, 7867-7918.	23.0	1,480
815	Stabilizing Organicâ€“Inorganic Lead Halide Perovskite Solar Cells With Efficiency Beyond 20%. Frontiers in Chemistry, 2020, 8, 592.	1.8	30
816	Interface optimization of hole-conductor free perovskite solar cells using porous carbon materials derived from biomass soybean dregs as a cathode. Journal of Alloys and Compounds, 2020, 842, 155851.	2.8	20
817	Enhanced moisture stability of mixed cation perovskite solar cells enabled by a room-temperature solution-processed organic-inorganic bilayer hole transport layer. Journal of Alloys and Compounds, 2020, 847, 156512.	2.8	16
818	Efficient strategies for improving the performance of EDOT derivatives and TPA derivatives-based hole transport materials for perovskite solar cells. Solar Energy, 2020, 208, 10-19.	2.9	14
819	Understanding the Degradation of Spiroâ€OMeTADâ€Based Perovskite Solar Cells at High Temperature. Solar Rrl, 2020, 4, 2000305.	3.1	53
820	Indium Doping of Lead-Free Perovskite Cs2SnI6. Frontiers in Chemistry, 2020, 8, 564.	1.8	12
821	Inverted Solar Cells with Thermally Evaporated Selenium as an Active Layer. ACS Applied Energy Materials, 2020, 3, 7345-7352.	2.5	13
822	PEAI-Based Interfacial Layer for High-Efficiency and Stable Solar Cells Based on a MACl-Mediated Grown FA_{0.94}MA_{0.06}PbI₃ Perovskite. ACS Applied Materials & Interfaces, 2020, 12, 37197-37207.	4.0	62
823	First-Principles Study on the Photoelectric Properties of CsGeI3 under Hydrostatic Pressure. Applied Sciences (Switzerland), 2020, 10, 5055.	1.3	19
824	A simple fabrication of high efficiency planar perovskite solar cells: controlled film growth with methylammonium iodide and green antisolvent sec-butyl alcohol. Journal of Materials Chemistry C, 2020, 8, 12560-12567.	2.7	15
825	Ultrasmall Blueshift of Near-Infrared Fluorescence in Phase-Stable Cs2SnI6 Thin Films. Physical Review Applied, 2020, 14, .	1.5	10
826	Materials and Methods for Interface Engineering toward Stable and Efficient Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2742-2786.	8.8	307
827	The Stabilization of Formamidinium Lead Triâ€Iodide Perovskite through a Methylammoniumâ€Based Additive for Highâ€Efficiency Solar Cells. Solar Rrl, 2020, 4, 2000348.	3.1	23
828	Boosting the performance of Dâ€“Aâ€“D type hole-transporting materials for perovskite solar cells via tuning the acceptor group. New Journal of Chemistry, 2020, 44, 15244-15250.	1.4	21
829	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	1.1	91

#	Article	IF	Citations
830	Low-temperature fabrication of carbon-electrode based, hole-conductor-free and mesoscopic perovskite solar cells with power conversion efficiency > 12% and storage-stability > 220 days. Applied Physics Letters, 2020, 117, .	1.5	15
831	Artificial Carbon Graphdiyne: Status and Challenges in Nonlinear Photonic and Optoelectronic Applications. ACS Applied Materials & Interfaces, 2020, 12, 49281-49296.	4.0	16
832	Incorporation of Lithium Fluoride Restraining Thermal Degradation and Photodegradation of Organometal Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 50418-50425.	4.0	27
833	Imidazolium Ionic Liquid as Organic Spacer for Tuning the Excitonic Structure of 2D Perovskite Materials. ACS Energy Letters, 2020, 5, 3617-3627.	8.8	24
834	Effect of energetic distribution of trap states on fill factor in perovskite solar cells. Journal of Power Sources, 2020, 479, 229077.	4.0	10
835	Enhancement of 3D/2D Perovskite Solar Cells Using an F4TCNQ Molecular Additive. ACS Applied Energy Materials, 2020, 3, 8205-8215.	2.5	28
836	N-Substituted Phenothiazines as Environmentally Friendly Hole-Transporting Materials for Low-Cost and Highly Stable Halide Perovskite Solar Cells. ACS Omega, 2020, 5, 23334-23342.	1.6	9
837	Efficient Nonlead Double Perovskite Solar Cell with Multiple Hole Transport Layers. ACS Applied Energy Materials, 2020, 3, 9594-9599.	2.5	23
838	A hole-transport material that also passivates perovskite surface defects for solar cells with improved efficiency and stability. Energy and Environmental Science, 2020, 13, 4334-4343.	15.6	147
839	Stable perovskite solar cells with efficiency exceeding 24.8% and 0.3-V voltage loss. Science, 2020, 369, 1615-1620.	6.0	1,122
840	Heteroleptic Tin-Antimony Sulfoiodide for Stable and Lead-free Solar Cells. Matter, 2020, 3, 1701-1713.	5.0	29
841	Facile all-dip-coating deposition of highly efficient (CH₃)₃NPbI_{3â^'x}Cl_x perovskite materials from aqueous non-halide lead precursor. RSC Advances, 2020, 10, 29010-29017.	1.7	63
842	Enhancing the Performance of Two-Terminal All-Perovskite Tandem Solar Cells by the Optical Coupling Layer Beyond the Antireflection Function. IEEE Photonics Journal, 2020, 12, 1-12.	1.0	5
843	Hierarchically Manipulated Charge Recombination for Mitigating Energy Loss in CsPbI2Br Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 41596-41604.	4.0	11
844	Hole transport materials based on a twisted molecular structure with a single aromatic heterocyclic core to boost the performance of conventional perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 13415-13421.	2.7	23
845	Perovskite Quantum Dots. Springer Series in Materials Science, 2020, , .	0.4	4
846	Metal oxide alternatives for efficient electron transport in perovskite solar cells: beyond TiO₂ and SnO₂. Journal of Materials Chemistry A, 2020, 8, 19768-19787.	5.2	60
847	Anti-solvent Engineering for Efficient Perovskite Solar Cell Using PVK as Hole-Transporting Layer. IOP Conference Series: Materials Science and Engineering, 2020, 774, 012129.	0.3	0

#	Article	IF	Citations
848	Bâ€Site Coâ€Alloying with Germanium Improves the Efficiency and Stability of Allâ€Inorganic Tinâ€Based Perovskite Nanocrystal Solar Cells. Angewandte Chemie, 2020, 132, 22301-22309.	1.6	10
849	Quantum-assisted photoelectric gain effects in perovskite solar cells. NPG Asia Materials, 2020, 12, .	3.8	12
850	Fabrication and characterization of inkjet-printed 2D perovskite optoelectronic devices. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	6
851	Interface passivation strategy improves the efficiency and stability of organicâ€“inorganic hybrid metal halide perovskite solar cells. Journal of Materials Research, 2020, 35, 2166-2189.	1.2	4
852	Recent Advances in Organic Hole Transporting Materials for Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000461.	3.1	49
853	Conformational and Compositional Tuning of Phenanthrocarbazole-Based Dopant-Free Hole-Transport Polymers Boosting the Performance of Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 17681-17692.	6.6	83
854	Gold Nanoparticles Functionalized with Fullerene Derivative as an Effective Interface Layer for Improving the Efficiency and Stability of Planar Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2001144.	1.9	14
855	Bipolar Organic Material Assisted Surface and Boundary Defects Passivation for Highly Efficient MAPbI 3 â€Based Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000369.	3.1	5
856	2D layered all-inorganic halide perovskites: recent trends in their structure, synthesis and properties. Nanoscale, 2020, 12, 21094-21117.	2.8	45
857	Precise Control of Perovskite Crystallization Kinetics via Sequential Aâ€Site Doping. Advanced Materials, 2020, 32, e2004630.	11.1	122
858	Atomic Layer Deposition of Metal Oxides in Perovskite Solar Cells: Present and Future. Small Methods, 2020, 4, 2000588.	4.6	21
859	Dual Coordination of Ti and Pb Using Bilinkable Ligands Improves Perovskite Solar Cell Performance and Stability. Advanced Functional Materials, 2020, 30, 2005155.	7.8	33
860	Modification Engineering in SnO₂ Electron Transport Layer toward Perovskite Solar Cells: Efficiency and Stability. Advanced Functional Materials, 2020, 30, 2004209.	7.8	98
861	Towards commercialization: the operational stability of perovskite solar cells. Chemical Society Reviews, 2020, 49, 8235-8286.	18.7	371
862	Yb/Ho Codoped Layered Perovskite Bismuth Titanate Microcrystals with Upconversion Luminescence: Fabrication, Characterization, and Application in Optical Fiber Ratiometric Thermometry. Inorganic Chemistry, 2020, 59, 14229-14235.	1.9	25
863	Bâ€Site Coâ€Alloying with Germanium Improves the Efficiency and Stability of Allâ€Inorganic Tinâ€Based Perovskite Nanocrystal Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 22117-22125.	7.2	75
864	Impacts of carrier trapping and ion migration on charge transport of perovskite solar cells with TiO_x electron transport layer. RSC Advances, 2020, 10, 28083-28089.	1.7	4
865	Critical Role of Functional Groups in Defect Passivation and Energy Band Modulation in Efficient and Stable Inverted Perovskite Solar Cells Exceeding 21% Efficiency. ACS Applied Materials & Interfaces, 2020, 12, 57165-57173.	4.0	24

#	Article	IF	Citations
866	CsPbI₃ nanocrystal films: towards higher stability and efficiency. Journal of Materials Chemistry C, 2020, 8, 17139-17156.	2.7	20
867	Molecular engineer halide perovskite/lead chalcogenide heterostructure toward optoelectronic applications: A case study on CsPbBr3/PbS interface. Applied Surface Science, 2020, 534, 147599.	3.1	4
868	Heat dissipation effects on the stability of planar perovskite solar cells. Energy and Environmental Science, 2020, 13, 5059-5067.	15.6	44
869	A theoretical comparison between CH3NH3PbI3 and CH3NH3SnI3 based solar cells. AIP Conference Proceedings, 2020, , .	0.3	1
870	Anisotropic Performance of High-Quality MAPbBr₃ Single-Crystal Wafers. ACS Applied Materials & Interfaces, 2020, 12, 51616-51627.	4.0	20
871	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
872	Inkjetâ€Printed Wearable Nanosystems for Selfâ€Powered Technologies. Advanced Materials Interfaces, 2020, 7, 2000015.	1.9	41
873	Improving the heterointerface in hybrid organicâ€“inorganic perovskite solar cells by surface engineering: Insights from periodic hybrid density functional theory calculations. Journal of Computational Chemistry, 2020, 41, 1740-1747.	1.5	8
874	A Dopantâ€Free Hole Transporting Layer for Efficient and Stable Planar Perovskite Solar Cells. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000147.	1.2	3
875	ITO and electron transport layer-free planar perovskite solar cells on transparent Nb-doped anatase TiO2-x electrodes. Journal of Alloys and Compounds, 2020, 845, 155531.	2.8	18
876	The effect of p/n junction position on perovskite solar cell efficiency by changing polarity of the perovskite layer. Japanese Journal of Applied Physics, 2020, 59, 061005.	0.8	1
877	Structured Perovskite Light Absorbers for Efficient and Stable Photovoltaics. Advanced Materials, 2020, 32, e1903937.	11.1	69
878	Elucidating the role of TiCl₄ post-treatment on percolation of TiO₂ electron transport layer in perovskite solar cells. Journal Physics D: Applied Physics, 2020, 53, 385501.	1.3	6
879	Improved Crystallization and Stability of Mixed-Cation Tin Iodide for Lead-Free Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5415-5426.	2.5	18
880	Photophysics, Electrochemistry and Efficient Electrochemiluminescence of Trigonal Truxeneâ€Core Dyes. Chemistry - A European Journal, 2020, 26, 8407-8416.	1.7	4
881	Effect of Interfacial Layers on the Device Lifetime of Perovskite Solar Cells. Small Methods, 2020, 4, 2000065.	4.6	22
882	Nonâ€Conjugated Polymer Based on Polyethylene Backbone as Dopantâ€Free Holeâ€Transporting Material for Efficient and Stable Inverted Quasiâ€2D Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000184.	3.1	12
883	Decoupling Contributions of Chargeâ€Transport Interlayers to Lightâ€Induced Degradation of pâ€iâ€n Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000191.	3.1	18

#	Article	IF	Citations
884	Dopant-free hole transporting materials with supramolecular interactions and reverse diffusion for efficient and modular p-i-n perovskite solar cells. Science China Chemistry, 2020, 63, 987-996.	4.2	42
885	Improved Interface Contact for Highly Stable All-Inorganic CsPbI₂Br Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5173-5181.	2.5	16
886	Bilateral Interface Engineering for Efficient and Stable Perovskite Solar Cells Using Phenylethylammonium Iodide. ACS Applied Materials & Interfaces, 2020, 12, 24827-24836.	4.0	27
887	Dual-site mixed layer-structured FA_xCs_{3â^'x}Sb₂I₆Cl₃ Pb-free metal halide perovskite solar cells. RSC Advances, 2020, 10, 17724-17730.	1.7	8
888	Fullerene (C60)-modulated surface evolution in CH3NH3PbI3 and its role in controlling the performance of inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2020, 31, 11150-11158.	1.1	7
889	Colloidal quantum dot hybrids: an emerging class of materials for ambient lighting. Journal of Materials Chemistry C, 2020, 8, 10676-10695.	2.7	46
890	Enhanced near-ultraviolet and visible light absorption of organic-inorganic halide perovskites by co-doping with cesium and barium: Insight from first-principles calculations. Journal of Solid State Chemistry, 2020, 289, 121477.	1.4	4
891	Boosting the power conversion efficiency of perovskite solar cells based on Sn doped TiO2 electron extraction layer via modification the TiO2 phase junction. Solar Energy, 2020, 205, 390-398.	2.9	13
892	Efficient and Stable All-Inorganic Niobium-Incorporated CsPbI₂Br-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 27176-27183.	4.0	33
893	Surface Treatment of Perovskite Layer with Guanidinium Iodide Leads to Enhanced Moisture Stability and Improved Efficiency of Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000105.	1.9	39
894	Perovskite-type SrTiO3 thin film preparation and field emission properties. Vacuum, 2020, 178, 109466.	1.6	8
895	Seedâ€Assisted Growth for Lowâ€Temperatureâ€Processed Allâ€Inorganic CsPbIBr₂ Solar Cells with Efficiency over 10%. Small, 2020, 16, e2001535.	5.2	54
896	Solution-processed perovskite solar cells. Journal of Central South University, 2020, 27, 1104-1133.	1.2	34
898	Progress in Materials Development for the Rapid Efficiency Advancement of Perovskite Solar Cells. Small, 2020, 16, e1907531.	5.2	23
899	Defect suppression and passivation for perovskite solar cells: from the birth to the lifetime operation. EnergyChem, 2020, 2, 100032.	10.1	22
900	Enhanced efficiency and stability of p-i-n perovskite solar cells using PMMA doped PTAA as hole transport layers. Synthetic Metals, 2020, 265, 116428.	2.1	22
901	A Thioxanthenothioxanthene-based Hole Transporter with 2D Molecular Stacking for Efficient and Thermostable Perovskite Solar Cells. , 2020, 2, 691-698.		10
902	Lewis-base containing spiro type hole transporting materials for high-performance perovskite solar cells with efficiency approaching 20%. Nanoscale, 2020, 12, 13157-13164.	2.8	30

#	Article	IF	Citations
903	Blading Phaseâ€Pure Formamidiniumâ€Alloyed Perovskites for Highâ€Efficiency Solar Cells with Low Photovoltage Deficit and Improved Stability. Advanced Materials, 2020, 32, e2000995.	11.1	125
904	Indium doped CsPbI3 films for inorganic perovskite solar cells with efficiency exceeding 17%. Nano Research, 2020, 13, 2203-2208.	5.8	32
905	Research progress on hybrid organicâ€“inorganic perovskites for photo-applications. Chinese Chemical Letters, 2020, 31, 3055-3064.	4.8	52
906	Numerical simulation studies of a fully inorganic Cs2AgBiBr6 perovskite solar device. Optical Materials, 2020, 105, 109957.	1.7	59
907	Lanthanum-Doped Strontium Stannate for Efficient Electron-Transport Layers in Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 6889-6896.	2.5	11
908	The Molybdenum Oxide Interface Limits the High-Temperature Operational Stability of Unencapsulated Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2349-2360.	8.8	49
909	Novel benzo[1,2-b:4,5-b']difuran-based copolymer enables efficient polymer solar cells with small energy loss and high VOC. Nano Energy, 2020, 76, 104964.	8.2	51
910	Enhanced performance of perovskite solar cells using DNA-doped mesoporous-TiO2 as electron transporting layer. Solar Energy, 2020, 206, 855-863.	2.9	16
911	Molecular materials as interfacial layers and additives in perovskite solar cells. Chemical Society Reviews, 2020, 49, 4496-4526.	18.7	130
912	A surface modifier enhances the performance of the all-inorganic CsPbI₂Br perovskite solar cells with efficiencies approaching 15%. Physical Chemistry Chemical Physics, 2020, 22, 17847-17856.	1.3	23
913	Rearâ€Illuminated Perovskite Photorechargeable Lithium Battery. Advanced Functional Materials, 2020, 30, 2001865.	7.8	31
914	Carrier transport composites with suppressed glass-transition for stable planar perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 14106-14113.	5.2	18
915	Rapid synthesis and optical properties of CsPbBr₂Cl perovskite nanolasers. Journal of Physics: Conference Series, 2020, 1461, 012091.	0.3	0
916	Efficient and Stable Tin Perovskite Solar Cells Enabled by Graded Heterostructure of Lightâ€Absorbing Layer. Solar Rrl, 2020, 4, 2000240.	3.1	53
917	Two-phase synthesized Cu2ZnSnS4 nanoparticles as inorganic hole-transporting material of paintable carbon-based perovskite solar cells. Solar Energy, 2020, 201, 547-554.	2.9	5
918	Performance improvement of perovskite solar cells via spiro-OMeTAD pre-crystallization. Journal of Materials Science, 2020, 55, 12264-12273.	1.7	5
919	Carbon-based HTL-free modular perovskite solar cells with improved contact at perovskite/carbon interfaces. Journal of Materials Chemistry C, 2020, 8, 9262-9270.	2.7	38
920	Stable Perovskite Solar Cells Enabled by Simultaneous Surface and Bulk Defects Passivation. Solar Rrl, 2020, 4, 2000224.	3.1	9

#	Article	IF	Citations
921	Directionally Selective Polyhalide Molecular Glue for Stable Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000244.	3.1	4
922	DFT study on tailoring the structural, electronic and optical properties of bilayer graphene through metalloids intercalation. Chemical Physics, 2020, 536, 110828.	0.9	4
923	Stabilizing High Efficiency Perovskite Solar Cells with 3D-2D Heterostructures. Joule, 2020, 4, 975-979.	11.7	37
924	Achieving over 21% efficiency in inverted perovskite solar cells by fluorinating a dopant-free hole transporting material. Journal of Materials Chemistry A, 2020, 8, 6517-6523.	5.2	63
925	Boosting Efficiency and Stability of Planar Inverted (FAPbI 3) x (MAPbBr 3) 1â^' x Solar Cells via FAPbI 3 and MAPbBr 3 Crystal Powders. Solar Rrl, 2020, 4, 2000091.	3.1	19
926	Positive effects in perovskite solar cells achieved using down-conversion NaEuF4 nanoparticles. Applied Physics Letters, 2020, 116, .	1.5	16
927	2D Nanoarchitectonics: Soft Interfacial Media as Playgrounds for Microobjects, Molecular Machines, and Living Cells. Chemistry - A European Journal, 2020, 26, 6461-6472.	1.7	24
928	Solvent Engineering Using a Volatile Solid for Highly Efficient and Stable Perovskite Solar Cells. Advanced Science, 2020, 7, 1903250.	5.6	47
929	Low-Temperature Synthesized Nb-Doped TiO₂ Electron Transport Layer Enabling High-Efficiency Perovskite Solar Cells by Band Alignment Tuning. ACS Applied Materials & Interfaces, 2020, 12, 15175-15182.	4.0	29
930	Highly efficient organic photovoltaics with enhanced stability through the formation of doping-induced stable interfaces. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6391-6397.	3.3	53
931	How To Quantify the Efficiency Potential of Neat Perovskite Films: Perovskite Semiconductors with an Implied Efficiency Exceeding 28%. Advanced Materials, 2020, 32, e2000080.	11.1	134
932	Numerical modeling of lead-free perovskite solar cell using inorganic charge transport materials. Materials Today: Proceedings, 2020, 26, 2574-2581.	0.9	20
933	Charge Carrier Recombination Dynamics of Two-Dimensional Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 2570-2576.	2.1	61
934	Enhancing performance of perovskite solar cells with efficiency exceeding 21% via a graded-index mesoporous aluminum oxide antireflection coating. Nanotechnology, 2020, 31, 275407.	1.3	6
935	Synthesis of a side-chain hole transporting polymer through Mitsunobu post-functionalization for efficient inverted perovskite solar cells. Polymer Chemistry, 2020, 11, 2883-2888.	1.9	5
936	Hydroxymethyl-Functionalized PEDOT-MeOH:PSS for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 17571-17582.	4.0	13
937	In situ study of the film formation mechanism of organicâ€“inorganic hybrid perovskite solar cells: controlling the solvate phase using an additive system. Journal of Materials Chemistry A, 2020, 8, 7695-7703.	5.2	29
938	Transparent Electrodes Consisting of a Surfaceâ€Treated Buffer Layer Based on Tungsten Oxide for Semitransparent Perovskite Solar Cells and Fourâ€Terminal Tandem Applications. Small Methods, 2020, 4, 2000074.	4.6	41

#	Article	IF	Citations
939	Shallow and Deep Trap State Passivation for Low-Temperature Processed Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1396-1403.	8.8	75
940	Efficient perovskite solar cells via surface passivation by a multifunctional small organic ionic compound. Journal of Materials Chemistry A, 2020, 8, 8313-8322.	5.2	68
941	Dual effective dopant based hole transport layer for stable and efficient perovskite solar cells. Nano Energy, 2020, 72, 104673.	8.2	78
942	Alkyl side-chain dependent self-organization of small molecule and its application in high-performance organic and perovskite solar cells. Nano Energy, 2020, 72, 104708.	8.2	20
943	Reducing photovoltage loss at the anode contact of methylammonium-free inverted perovskite solar cells by conjugated polyelectrolyte doping. Journal of Materials Chemistry A, 2020, 8, 7309-7316.	5.2	28
944	Interfacial engineering for organic and perovskite solar cells using molecular materials. Journal Physics D: Applied Physics, 2020, 53, 263001.	1.3	6
945	A Microchannelâ€Confined Crystallization Strategy Enables Blade Coating of Perovskite Single Crystal Arrays for Device Integration. Advanced Materials, 2020, 32, e1908340.	11.1	75
946	Halide perovskite nanotube toward energy applications: A firstâ€principles investigation. International Journal of Energy Research, 2020, 44, 5412-5424.	2.2	5
947	Dopant-free X-shaped D-A type hole-transporting materials for p-i-n perovskite solar cells. Dyes and Pigments, 2020, 178, 108334.	2.0	16
948	Ultrafast and broadband photodetectors based on a perovskite/organic bulk heterojunction for large-dynamic-range imaging. Light: Science and Applications, 2020, 9, 31.	7.7	372
949	Understanding of perovskite crystal growth and film formation in scalable deposition processes. Chemical Society Reviews, 2020, 49, 1653-1687.	18.7	364
950	Back-interface regulation for carbon-based perovskite solar cells. Carbon, 2020, 168, 372-391.	5.4	33
951	Azatruxeneâ€Based, Dumbbellâ€Shaped, Donorâ€“Ïâ€Bridgeâ€“Donor Holeâ€Transporting Materials for Perovskite Solar Cells. Chemistry - A European Journal, 2020, 26, 11039-11047.	1.7	15
952	Designing Hole Transport Materials with High Hole Mobility and Outstanding Interface Properties for Perovskite Solar Cells. ChemPhysChem, 2020, 21, 1866-1872.	1.0	3
953	Chlorine-doped SnO₂ hydrophobic surfaces for large grain perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 11638-11646.	2.7	40
954	22% Efficiency Inverted Perovskite Photovoltaic Cell Using Cationâ€Doped Brookite TiO₂ Top Buffer. Advanced Science, 2020, 7, 2001285.	5.6	43
955	Tailoring of the core structure towards promising small molecule hole-transporting materials for perovskite solar cells: a theoretical study. Physical Chemistry Chemical Physics, 2020, 22, 16359-16367.	1.3	15
956	Intermediate-Controlled Interfacial Engineering for Stable and Highly Efficient Carbon-Based PSCs. ACS Applied Materials & Interfaces, 2020, 12, 34479-34486.	4.0	9

#	Article	IF	Citations
957	Understanding the interplay of stability and efficiency in A-site engineered lead halide perovskites. APL Materials, 2020, 8, .	2.2	57
958	Metal oxides and noble metals application in organic solar cells. Solar Energy, 2020, 207, 347-366.	2.9	24
959	High Performance Quasiâ€2D Perovskite Skyâ€Blue Lightâ€Emitting Diodes Using a Dualâ€Ligand Strategy. Small, 2020, 16, e2002940.	5.2	65
960	TiO2@PbTiO3 core-shell nanoparticles as mesoporous layer to improve electron transport performance in carbon-based perovskite solar cells. Materials Chemistry and Physics, 2020, 254, 123436.	2.0	8
961	How Chloride Suppresses Photoinduced Phase Segregation in Mixed Halide Perovskites. Chemistry of Materials, 2020, 32, 6206-6212.	3.2	58
962	Additive-free, Cost-Effective Hole-Transporting Materials for Perovskite Solar Cells Based on Vinyl Triarylamines. ACS Applied Materials & Interfaces, 2020, 12, 32994-33003.	4.0	17
963	Light-induced degradation and self-healing inside CH3NH3PbI3-based solar cells. Applied Physics Letters, 2020, 116, .	1.5	12
964	Deepâ€Ultraviolet Photoactivationâ€Assisted Contact Engineering Toward Highâ€Efficiency and Stable Allâ€Inorganic CsPbI₂Br Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000001.	3.1	29
965	Alcohol solvent treatment of PEDOT:PSS hole transport layer for optimized inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2020, 31, 12765-12774.	1.1	2
966	Compositional and Interface Engineering of Organic-Inorganic Lead Halide Perovskite Solar Cells. IScience, 2020, 23, 101359.	1.9	105
967	Ligand Control of Room-Temperature Phosphorescence Violating Kashaâ€™s Rule in Hybrid Organicâ€“Inorganic Metal Halides. Chemistry of Materials, 2020, 32, 1454-1460.	3.2	47
968	High-temperature induced iodide and bromide ions filling lattice for high efficient all-inorganic perovskite solar cells. Journal of Alloys and Compounds, 2020, 848, 156247.	2.8	11
969	First-principles study on Sb-doped SnS2 as a low cost and non-toxic absorber for intermediate band solar cell. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126695.	0.9	13
970	Cyclopentadithiophene-Based Hole-Transporting Material for Highly Stable Perovskite Solar Cells with Stabilized Efficiencies Approaching 21%. ACS Applied Energy Materials, 2020, 3, 7456-7463.	2.5	26
971	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. Nano Energy, 2020, 71, 104556.	8.2	51
972	Improving electron extraction ability and suppressing recombination of planar perovskite solar cells with the triple cascade electron transporting layer. Solar Energy Materials and Solar Cells, 2020, 208, 110419.	3.0	5
973	FAPb_{0.5}Sn_{0.5}I₃: A Narrow Bandgap Perovskite Synthesized through Evaporation Methods for Solar Cell Applications. Solar Rrl, 2020, 4, 2070024.	3.1	9
974	First-Principles Study of Zinc Phthalocyanine Molecules Adsorbed on Methylammonium Lead Iodide Surfaces. Journal of Physical Chemistry C, 2020, 124, 5167-5173.	1.5	8

#	Article	IF	Citations
975	Correlation between Charge Transport Length Scales and Dielectric Relaxation Time Constant in Hybrid Halide Perovskite Semiconductors. ACS Energy Letters, 2020, 5, 728-735.	8.8	17
976	Inverted devices are catching up. Nature Energy, 2020, 5, 123-124.	19.8	14
977	Dâ€“Ï€â€“D molecular semiconductors for perovskite solar cells: the superior role of helical versus planar Ï€-linkers. Chemical Science, 2020, 11, 3418-3426.	3.7	30
978	First-principles investigation on the stability and material properties of all-inorganic cesium lead iodide perovskites CsPbI3 polymorphs. Physica B: Condensed Matter, 2020, 585, 412118.	1.3	50
979	Halide Doubleâ€Perovskite Lightâ€Emitting Centers Embedded in Latticeâ€Matched and Coherent Crystalline Matrix. Advanced Functional Materials, 2020, 30, 2000653.	7.8	30
980	Organicâ^'inorganic hybrid perovskites: Game-changing candidates for solar fuel production. Nano Energy, 2020, 71, 104647.	8.2	41
981	Efficient and Stable Ideal Bandgap Perovskite Solar Cell Achieved by a Small Amount of Tin Substituted Methylammonium Lead Iodide. Electronic Materials Letters, 2020, 16, 224-230.	1.0	20
982	Intrinsic and environmental stability issues of perovskite photovoltaics. Progress in Energy, 2020, 2, 022002.	4.6	33
983	Applying neoteric MgTiO3-coated TiO2 nanoparticulate films as scaffold layers in perovskite solar cells based on carbon counter electrode for retarding charge recombination. Electrochimica Acta, 2020, 338, 135884.	2.6	10
984	Highly stable inverted methylammonium lead tri-iodide perovskite solar cells achieved by surface re-crystallization. Energy and Environmental Science, 2020, 13, 840-847.	15.6	44
985	Advances in two-dimensional organicâ€“inorganic hybrid perovskites. Energy and Environmental Science, 2020, 13, 1154-1186.	15.6	420
986	Inkjet-Printed Organohalide 2D Layered Perovskites for High-Speed Photodetectors on Flexible Polyimide Substrates. ACS Applied Materials & Interfaces, 2020, 12, 10809-10819.	4.0	51
987	Effect of reabsorption and photon recycling on photoluminescence spectra and transients in lead-halide perovskite crystals. JPhys Materials, 2020, 3, 025003.	1.8	20
988	Approaches for thermodynamically stabilized CsPbI3 solar cells. Nano Energy, 2020, 71, 104634.	8.2	95
989	TiO₂-Assisted Halide Ion Segregation in Mixed Halide Perovskite Films. Journal of the American Chemical Society, 2020, 142, 5362-5370.	6.6	72
990	Investigating ultrafast carrier dynamics in perovskite solar cells with an extended Ï€-conjugated polymeric diketopyrrolopyrrole layer for hole transportation. RSC Advances, 2020, 10, 6618-6624.	1.7	7
991	Highly Stable Allâ€Inorganic Perovskite Quantum Dots Using a ZnX₂â€Trioctylphosphineâ€Oxide: Application for Highâ€Performance Fullâ€Color Lightâ€Emitting Diode. Advanced Optical Materials, 2020, 8, 1901897.	3.6	37
992	Effect of Sr substitution on the air-stability of perovskite solar cells. Ceramics International, 2020, 46, 14038-14047.	2.3	8

#	Article	IF	Citations
993	Thermal Stability and Performance Enhancement of Perovskite Solar Cells Through Oxalic Acid-Induced Perovskite Formation. ACS Applied Energy Materials, 2020, 3, 2432-2439.	2.5	55
995	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. Advanced Energy Materials, 2020, 10, 1904054.	10.2	256
996	Effect of lithium bis(trifluoromethane)sulfonimide treatment on titanium dioxide-based electron transporting layer of perovskite solar cells. Thin Solid Films, 2020, 700, 137888.	0.8	2
997	Solution-Processed Mixed-Dimensional Hybrid Perovskite/Carbon Nanotube Electronics. ACS Nano, 2020, 14, 3969-3979.	7.3	30
998	Core/Shell Quantum Dots Solar Cells. Advanced Functional Materials, 2020, 30, 1908762.	7.8	98
999	Heterogeneous Supersaturation in Mixed Perovskites. Advanced Science, 2020, 7, 1903166.	5.6	13
1000	Triphenylamine-based hole transporting materials with thiophene-derived bridges for perovskite solar cells. Synthetic Metals, 2020, 261, 116323.	2.1	10
1001	Enhancing Device Performance in Quasi-2D Perovskite ((BA)₂(MA)₃Pb₄I₁₃) Solar Cells Using PbCl₂ Additives. ACS Applied Materials & Interfaces, 2020, 12, 11190-11196.	4.0	35
1002	Suppressed phase transition of a Rb/K incorporated inorganic perovskite with a water-repelling surface. Nanoscale, 2020, 12, 6571-6581.	2.8	8
1003	Temperature-Dependent Dynamic Carrier Process of FAPbI₃ Nanocrystalsâ€™ Film. Journal of Physical Chemistry C, 2020, 124, 5093-5098.	1.5	14
1004	A highly stable hole-conductor-free Cs MA1-PbI3 perovskite solar cell based on carbon counter electrode. Electrochimica Acta, 2020, 335, 135686.	2.6	16
1005	Steering the electron transport properties of pyridine-functionalized fullerene derivatives in inverted perovskite solar cells: the nitrogen site matters. Journal of Materials Chemistry A, 2020, 8, 3872-3881.	5.2	25
1006	Single crystal structure and opto-electronic properties of oxidized Spiro-OMeTAD. Chemical Communications, 2020, 56, 1589-1592.	2.2	24
1007	How far are we from attaining 10-year lifetime for metal halide perovskite solar cells?. Materials Science and Engineering Reports, 2020, 140, 100545.	14.8	67
1008	Ambient Condition Mg²⁺ Doping Producing Highly Luminescent Green- and Violet-Emitting Perovskite Nanocrystals with Reduced Toxicity and Enhanced Stability. Journal of Physical Chemistry Letters, 2020, 11, 1178-1188.	2.1	93
1009	Extending Photoresponse to the Nearâ€Infrared Region for Inverted Perovskite Solar Cells by Using a Lowâ€Bandgap Electron Transporting Material. Solar Rrl, 2020, 4, 1900565.	3.1	10
1010	Research Frontiers in Energyâ€Related Materials and Applications for 2020â€“2030. Advanced Sustainable Systems, 2020, 4, 1900145.	2.7	30
1011	Dopant-free methoxy substituted copper(II) phthalocyanine for highly efficient and stable perovskite solar cells. Chemical Engineering Journal, 2020, 387, 124130.	6.6	34

#	Article	IF	Citations
1012	Three-Terminal Perovskite/Silicon Tandem Solar Cells with Top and Interdigitated Rear Contacts. ACS Applied Energy Materials, 2020, 3, 1381-1392.	2.5	63
1013	Large-Scale Synthesis of Uniform PbI₂(DMSO) Complex Powder by Solvent Extraction Method for Efficient Metal Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 8233-8239.	4.0	22
1014	Efficient CsSnI₃-based inorganic perovskite solar cells based on a mesoscopic metal oxide framework via incorporating a donor element. Journal of Materials Chemistry A, 2020, 8, 4118-4124.	5.2	75
1015	1000 h Operational Lifetime Perovskite Solar Cells by Ambient Melting Encapsulation. Advanced Energy Materials, 2020, 10, 1902472.	10.2	98
1016	Development of Dopantâ€Free Organic Hole Transporting Materials for Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903326.	10.2	202
1017	2-Methylimidazole as an interlayer for the enhancement of the open-circuit voltage in perovskite solar cells. Journal of Power Sources, 2020, 450, 227714.	4.0	9
1018	Solvent Engineering of a Dopant-Free Spiro-OMeTAD Hole-Transport Layer for Centimeter-Scale Perovskite Solar Cells with High Efficiency and Thermal Stability. ACS Applied Materials & Interfaces, 2020, 12, 8260-8270.	4.0	42
1019	Three-Dimensional Laser-Assisted Patterning of Blue-Emissive Metal Halide Perovskite Nanocrystals inside a Glass with Switchable Photoluminescence. ACS Nano, 2020, 14, 3150-3158.	7.3	102
1020	Hole Transport Materials in Conventional Structural (nâ€“iâ€“p) Perovskite Solar Cells: From Past to the Future. Advanced Energy Materials, 2020, 10, 1903403.	10.2	192
1021	Highâ€Efficiency Lowâ€Temperatureâ€Processed Mesoscopic Perovskite Solar Cells from SnO₂ Nanorod Selfâ€Assembled Microspheres. Solar Rrl, 2020, 4, 1900558.	3.1	21
1022	Intelligent Nanoarchitectonics for Selfâ€Assembling Systems. Advanced Intelligent Systems, 2020, 2, 1900157.	3.3	14
1023	Alkali Cation Doping for Improving the Structural Stability of 2D Perovskite in 3D/2D PSCs. Nano Letters, 2020, 20, 1240-1251.	4.5	68
1024	Biological impact of lead from halide perovskites reveals the risk of introducing a safe threshold. Nature Communications, 2020, 11, 310.	5.8	313
1025	Efficient and Spectrally Stable Blue Perovskite Lightâ€Emitting Diodes Based on Potassium Passivated Nanocrystals. Advanced Functional Materials, 2020, 30, 1908760.	7.8	134
1026	High crystallinity and photovoltaic performance of CsPbI3 film enabled by secondary dimension. Journal of Energy Chemistry, 2020, 48, 181-186.	7.1	13
1027	Novel approach toward hole-transporting layer doped by hydrophobic Lewis acid through infiltrated diffusion doping for perovskite solar cells. Nano Energy, 2020, 70, 104509.	8.2	67
1028	Superior Textured Film and Process Tolerance Enabled by Intermediateâ€State Engineering for Highâ€Efficiency Perovskite Solar Cells. Advanced Science, 2020, 7, 1903009.	5.6	22
1029	Nonaromatic Greenâ€Solventâ€Processable, Dopantâ€Free, and Leadâ€Capturable Hole Transport Polymers in Perovskite Solar Cells with High Efficiency. Advanced Energy Materials, 2020, 10, 1902662.	10.2	141

#	Article	IF	Citations
1030	Graded Bandgap Perovskite with Intrinsic nâ€“p Homojunction Expands Photon Harvesting Range and Enables All Transport Layerâ€Free Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903347.	10.2	50
1031	Recent progress in perovskite solar cells: the perovskite layer. Beilstein Journal of Nanotechnology, 2020, 11, 51-60.	1.5	35
1032	Enhanced performance of perovskite photodetectors fabricated by two-step spin coating approach. Materials Science in Semiconductor Processing, 2020, 109, 104916.	1.9	18
1033	Transition Dipole Moments of n = 1, 2, and 3 Perovskite Quantum Wells from the Optical Stark Effect and Many-Body Perturbation Theory. Journal of Physical Chemistry Letters, 2020, 11, 716-723.	2.1	24
1034	Self-augmented ion blocking of sandwiched 2D/1D/2D electrode for solution processed high efficiency semitransparent perovskite solar cell. Nano Energy, 2020, 71, 104567.	8.2	35
1035	Kirigami-Based Highly Stretchable Thin Film Solar Cells That Are Mechanically Stable for More than 1000 Cycles. ACS Nano, 2020, 14, 1560-1568.	7.3	43
1036	Metaâ€Stable Molecular Configuration Enables Thermally Stable and Solution Processable Organic Charge Transporting Materials. Advanced Functional Materials, 2020, 30, 2000729.	7.8	3
1037	Towards Efficient Integrated Perovskite/Organic Bulk Heterojunction Solar Cells: Interfacial Energetic Requirement to Reduce Charge Carrier Recombination Losses. Advanced Functional Materials, 2020, 30, 2001482.	7.8	43
1038	In-Situ Electropolymerized Polyamines as Dopant-Free Hole-Transporting Materials for Efficient and Stable Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5058-5066.	2.5	26
1039	Nanoscale spatial mapping of charge carrier dynamics in perovskite solar cells. Nano Today, 2020, 33, 100874.	6.2	21
1040	Amine-passivated ZnO electron transport layer for thermal stability-enhanced perovskite solar cells. Solar Energy, 2020, 204, 223-230.	2.9	21
1041	A Thermally Induced Perovskite Crystal Control Strategy for Efficient and Photostable Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000033.	3.1	22
1042	Ambient air-processed mesoscopic solar cells based on methylammonium and phenethylammonium quasi-2D/3D perovskites. Applied Nanoscience (Switzerland), 2020, 10, 2165-2175.	1.6	1
1043	Halogen-containing semiconductors: From artificial photosynthesis to unconventional computing. Coordination Chemistry Reviews, 2020, 415, 213316.	9.5	21
1044	RbF modified FTO electrode enable energy-level matching for efficient electron transport layer-free perovskite solar cells. Chemical Engineering Journal, 2020, 394, 125024.	6.6	23
1045	Insights on the opto-electronic structure of the inorganic mixed halide perovskites Î³-CsPb(I1-xBrx)3 with low symmetry black phase. Journal of Alloys and Compounds, 2020, 832, 154847.	2.8	17
1046	Application of perovskite nanocrystals (NCs)/quantum dots (QDs) in solar cells. Nano Energy, 2020, 73, 104757.	8.2	77
1047	Growth control and defect passivation toward efficient and low-temperature processed carbon based CsPbIBr2 solar cell. Organic Electronics, 2020, 83, 105731.	1.4	24

#	Article	IF	Citations
1048	Enhanced Thermoelectric Performance in Lead-Free Inorganic CsSn_{1â€“x}Ge_xI₃ Perovskite Semiconductors. Journal of Physical Chemistry C, 2020, 124, 11749-11753.	1.5	45
1049	Tetraphenylbutadiene-Based Symmetric 3D Hole-Transporting Materials for Perovskite Solar Cells: A Trial Trade-off between Charge Mobility and Film Morphology. ACS Applied Materials & Interfaces, 2020, 12, 21088-21099.	4.0	35
1050	Carbazole-Terminated Isomeric Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 19710-19717.	4.0	28
1051	Aged sol-gel solution-processed texture tin oxide for high-efficient perovskite solar cells. Nanotechnology, 2020, 31, 315205.	1.3	8
1052	Ambient-Processed, Additive-Assisted CsPbBr3 Perovskite Light-Emitting Diodes with Colloidal NiOx Nanoparticles for Efficient Hole Transporting. Coatings, 2020, 10, 336.	1.2	10
1053	The growth of methylammonium lead iodide perovskites by close space vapor transport. RSC Advances, 2020, 10, 16125-16131.	1.7	11
1054	Synthesis, optoelectronic properties and applications of halide perovskites. Chemical Society Reviews, 2020, 49, 2869-2885.	18.7	282
1055	Highâ€Efficiency Perovskite Solar Cells Enabled by Anatase TiO₂ Nanopyramid Arrays with an Oriented Electric Field. Angewandte Chemie - International Edition, 2020, 59, 11969-11976.	7.2	76
1056	Highâ€Efficiency CsPbI₂Br Perovskite Solar Cells with Dopantâ€Free Poly(3â€hexylthiophene) Hole Transporting Layers. Advanced Energy Materials, 2020, 10, 2000501.	10.2	69
1057	Additiveâ€Assisted Hotâ€Casting Free Fabrication of Dionâ€“Jacobson 2D Perovskite Solar Cell with Efficiency Beyond 16%. Solar Rrl, 2020, 4, 2000087.	3.1	49
1058	Review on recent advances of core-shell structured lead halide perovskites quantum dots. Journal of Alloys and Compounds, 2020, 834, 155246.	2.8	28
1059	Highâ€Efficiency Perovskite Solar Cells Enabled by Anatase TiO₂ Nanopyramid Arrays with an Oriented Electric Field. Angewandte Chemie, 2020, 132, 12067-12074.	1.6	15
1060	Charge-transport layer engineering in perovskite solar cells. Science Bulletin, 2020, 65, 1237-1241.	4.3	115
1061	Tailoring the Dimension of Halide Perovskites Enables Quantum Wires with Enhanced Visible Light Absorption. Journal of Physical Chemistry C, 2020, 124, 11124-11131.	1.5	1
1062	Zwitterion-Stabilizing Scalable Bladed Î±-Phase Cs_{0.1}FA_{0.9}PbI₃ Films for Efficient Inverted Planar Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2020, 8, 7020-7030.	3.2	27
1063	Accurately Stoichiometric Regulating Oxidation States in Hole Transporting Material to Enhance the Hole Mobility of Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000127.	3.1	5
1064	High charge carrier mobility in solution processed one-dimensional lead halide perovskite single crystals and their application as photodetectors. Nanoscale, 2020, 12, 9688-9695.	2.8	37
1065	Groups-dependent phosphines as the organic redox for point defects elimination in hybrid perovskite solar cells. Journal of Energy Chemistry, 2021, 54, 23-29.	7.1	18

#	Article	IF	Citations
1066	All-inorganic Cs2AgBiBr6/CuSCN-based photodetectors for weak light imaging. Science China Materials, 2021, 64, 198-208.	3.5	37
1067	Stable and Efficient Methylammoniumâ€, Cesiumâ€, and Bromideâ€Free Perovskite Solar Cells by Inâ€Situ Interlayer Formation. Advanced Functional Materials, 2021, 31, 2007520.	7.8	34
1068	Improving Moisture/Thermal Stability and Efficiency of CH 3 NH 3 PbI 3 â€Based Perovskite Solar Cells via Gentle Butyl Acrylate Additive Strategy. Solar Rrl, 2021, 5, 2000621.	3.1	20
1069	Developing Dâ€“Ï€â€“D hole-transport materials for perovskite solar cells: the effect of the Ï€-bridge on device performance. Materials Chemistry Frontiers, 2021, 5, 876-884.	3.2	33
1070	Perovskite Passivation Strategies for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, .	3.1	23
1071	Simple hole-transporting materials containing twin-carbazole moiety and unconjugated flexible linker for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2021, 405, 126434.	6.6	21
1072	Hot Debate on Perovskite Solar Cells: Stability, Toxicity, High-Efficiency and Low Cost. Journal of Energy Chemistry, 2021, 53, 407-411.	7.1	9
1073	Enhanced fill factor for normal nâ€iâ€p planar heterojunction and mesoscopic perovskite solar cells using rutheniumâ€doped TiO 2 electron transporting layer. Progress in Photovoltaics: Research and Applications, 2021, 29, 159-171.	4.4	4
1074	Minimizing Voltage Losses in Perovskite Solar Cells. Small Structures, 2021, 2, 2000050.	6.9	43
1075	Compositional effect on water adsorption on metal halide perovskites. Applied Surface Science, 2021, 538, 148058.	3.1	30
1076	A sulfur-rich small molecule as a bifunctional interfacial layer for stable perovskite solar cells with efficiencies exceeding 22%. Nano Energy, 2021, 79, 105462.	8.2	72
1077	Perovskite Nanocrystalsâ€Based Heterostructures: Synthesis Strategies, Interfacial Effects, and Photocatalytic Applications. Solar Rrl, 2021, 5, 2000419.	3.1	20
1078	Facile synthesized fluorine substituted benzothiadiazole based dopant-free hole transport material for high efficiency perovskite solar cell. Dyes and Pigments, 2021, 184, 108786.	2.0	15
1079	Laser writing of CsPbBr3 nanocrystals mediated by closely-packed Au nanoislands. Applied Surface Science, 2021, 538, 148143.	3.1	9
1080	Engineering of dendritic dopant-free hole transport molecules: enabling ultrahigh fill factor in perovskite solar cells with optimized dendron construction. Science China Chemistry, 2021, 64, 41-51.	4.2	55
1081	Simultaneous defect passivation and hole mobility enhancement of perovskite solar cells by incorporating anionic metal-organic framework into hole transport materials. Chemical Engineering Journal, 2021, 408, 127328.	6.6	26
1082	A charge-separated interfacial hole transport semiconductor for efficient and stable perovskite solar cells. Organic Electronics, 2021, 88, 105988.	1.4	4
1083	Dearomatizing [4+1] Spiroannulation of Naphthols: Discovery of Thermally Activated Delayed Fluorescent Materials. Angewandte Chemie - International Edition, 2021, 60, 3493-3497.	7.2	29

#	Article	IF	Citations
1084	Spatial configuration engineering of perylenediimide-based non-fullerene electron transport materials for efficient inverted perovskite solar cells. Journal of Energy Chemistry, 2021, 56, 374-382.	7.1	20
1085	Pyrene-Cored Hole-Transporting Materials for Efficient and Stable Perovskite Solar Cells. Bulletin of the Chemical Society of Japan, 2021, 94, 632-640.	2.0	5
1086	Is the strain responsible to instability of inorganic perovskites and their photovoltaic devices?. Materials Today Energy, 2021, 19, 100601.	2.5	17
1087	Recent progress of minimal voltage losses for high-performance perovskite photovoltaics. Nano Energy, 2021, 81, 105634.	8.2	48
1088	Construction of simple and low-cost acceptors for efficient non-fullerene organic solar cells. Organic Electronics, 2021, 89, 106026.	1.4	9
1089	FAPbBr3â^'xIx perovskite quantum dots red Light-Emitting diodes with double confinement layer structure. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 264, 114969.	1.7	4
1090	Mn²⁺â€Doped Metal Halide Perovskites: Structure, Photoluminescence, and Application. Laser and Photonics Reviews, 2021, 15, .	4.4	167
1091	Light Stability Enhancement of Perovskite Solar Cells Using 1H,1H,2H,2Hâ€Perfluorooctyltriethoxysilane Passivation. Solar Rrl, 2021, 5, 2000650.	3.1	7
1092	Compositionally Designed 2D Ruddlesdenâ€“Popper Perovskites for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2000661.	3.1	8
1093	A spiro-OMeTAD based semiconductor composite with over 100ÂÂ°C glass transition temperature for durable perovskite solar cells. Nano Energy, 2021, 81, 105655.	8.2	41
1095	A Review on Scaling Up Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2008621.	7.8	143
1096	Preparation and properties of optoelectronic conversion films of perovskite modified by octadecyl-trichloro silane. Organic Electronics, 2021, 88, 106028.	1.4	1
1097	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2002326.	10.2	118
1098	Facile star-shaped tetraphenylethylene-based molecules with fused ring-terminated diarylamine as interfacial hole transporting materials for inverted perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 1373-1387.	3.2	11
1099	Inserting an intermediate band in Cu- and Ag-based Kesterite compounds by Sb doping: A first-principles study. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 264, 114937.	1.7	9
1100	Effects of A site doping on the crystallization of perovskite films. Journal of Materials Chemistry A, 2021, 9, 1372-1394.	5.2	43
1101	Efficient designing of triphenylamine-based hole transport materials with outstanding photovoltaic characteristics for organic solar cells. Journal of Materials Science, 2021, 56, 5113-5131.	1.7	86
1102	Copper Oxide Buffer Layers by Pulsedâ€Chemical Vapor Deposition for Semitransparent Perovskite Solar Cells. Advanced Materials Interfaces, 2021, 8, .	1.9	23

#	Article	IF	Citations
1103	Molecular design of dibenzo[g,p]chrysene-based hole-transporting materials for perovskite solar cells: A theoretical study. Synthetic Metals, 2021, 271, 116631.	2.1	13
1104	Development of an extremely concentrated solar energy delivery system using silica optical fiber bundle for deployment of solar energy: Daylighting to photocatalytic wastewater treatment. Solar Energy, 2021, 214, 93-100.	2.9	13
1105	Photovoltaic Performance Enhancement of Allâ€inorganic CsPbBr 3 Perovskite Solar Cells Using In 2 S 3 as Electron Transport Layer via Facile Refluxâ€Condensation Process. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000665.	0.8	4
1106	Beyond 17% stable perovskite solar module via polaron arrangement of tuned polymeric hole transport layer. Nano Energy, 2021, 82, 105685.	8.2	28
1107	9.7%-efficient Sb₂(S,Se)₃ solar cells with a dithieno[3,2-b:2â€²,3â€²-d]pyrrole-cored hole transporting material. Energy and Environmental Science, 2021, 14, 359-364.	15.6	70
1108	Dopant-free dicyanofluoranthene-based hole transporting material with low cost enables efficient flexible perovskite solar cells. Nano Energy, 2021, 82, 105701.	8.2	68
1109	Review and perspective of materials for flexible solar cells. Materials Reports Energy, 2021, 1, 100001.	1.7	54
1110	A Scalable Integrated Dopantâ€Free Heterostructure to Stabilize Perovskite Solar Cell Modules. Advanced Energy Materials, 2021, 11, 2003301.	10.2	43
1111	Liquid metal technology in solar power generation - Basics and applications. Solar Energy Materials and Solar Cells, 2021, 222, 110925.	3.0	33
1112	Low-Cost Dopant Additive-Free Hole-Transporting Material for a Robust Perovskite Solar Cell with Efficiency Exceeding 21%. ACS Energy Letters, 2021, 6, 208-215.	8.8	67
1113	Evidence of improved power conversion efficiency in lead-free CsGeI3 based perovskite solar cell heterostructure via <scp>scaps</scp> simulation. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	0.6	75
1114	Design of Low Crystallinity Spiro-Typed Hole Transporting Material for Planar Perovskite Solar Cells to Achieve 21.76% Efficiency. Chemistry of Materials, 2021, 33, 285-297.	3.2	57
1115	Conjugated copolymers as doping- and annealing-free hole transport materials for highly stable and efficient pâ€“iâ€“n perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 2269-2275.	5.2	15
1116	Low-temperature-deposited SnO2 films for efficient planar CH3NH3PbI3 photovoltaics. Journal of Materials Science, 2021, 56, 677-690.	1.7	4
1117	Dearomatizing [4+1] Spiroannulation of Naphthols: Discovery of Thermally Activated Delayed Fluorescent Materials. Angewandte Chemie, 2021, 133, 3535-3539.	1.6	5
1118	A synchronous defect passivation strategy for constructing high-performance and stable planar perovskite solar cells. Chemical Engineering Journal, 2021, 413, 127387.	6.6	40
1119	Enhanced optical reflectivity and electrical properties in perovskite functional ceramics by inhibiting oxygen vacancy formation. Ceramics International, 2021, 47, 5549-5558.	2.3	15
1120	Hybrid perovskite photovoltaic devices: Architecture and fabrication methods based on solution-processed metal oxide transport layers. , 2021, , 291-313.		5

#	Article	IF	Citations
1121	Reducing Openâ€Circuit Voltage Deficit in Perovskite Solar Cells via Surface Passivation with Phenylhydroxylammonium Halide Salts. Small Methods, 2021, 5, e2000441.	4.6	15
1122	ZurÃ¼ckziehung: Quantitative Synthesis of Temperatureâ€responsive Polymersomes by Multiblock Polymerization. Angewandte Chemie, 2021, 133, 15814-15814.	1.6	0
1123	Improving the Efficiency and Stability of Organic-Inorganic Hybrid Perovskite Solar Cells by Absorption Layer Ion Doping. Wuli Xuebao/Acta Physica Sinica, 2021, .	0.2	0
1124	A reduced-dimensional polar hybrid perovskite for self-powered broad-spectrum photodetection. Chemical Science, 2021, 12, 3050-3054.	3.7	20
1125	In situ growth of an opal-like TiO2 electron transport layer by atomic layer deposition for perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 880-885.	2.5	5
1126	Stabilizing TiO₂/CH₃NH₃PbI₃ heterostructure and enhancing interface trap passivation for efficient and stable perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 9982-9989.	2.7	3
1127	Preparation and Properties of Films of Organic-Inorganic Perovskites MAPbX3 (MA = CH3NH3; X = Cl,) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.2	5
1128	Carbon-based electrodes for perovskite solar cells. Materials Advances, 2021, 2, 5560-5579.	2.6	49
1129	Ab initio nonadiabatic molecular dynamics of charge carriers in metal halide perovskites. Nanoscale, 2021, 13, 10239-10265.	2.8	70
1130	A pâ€p⁺ Homojunctionâ€Enhanced Hole Transfer in Inverted Planar Perovskite Solar Cells. ChemSusChem, 2021, 14, 1396-1403.	3.6	20
1131	Tuning interfacial chemical interaction for high-performance perovskite solar cell with PEDOT:PSS as hole transporting layer. Journal of Materials Chemistry A, 2021, 9, 14920-14927.	5.2	23
1132	First-principles study of photoelectric properties of CsSnBr₃ under hydrostatic pressure. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 158801.	0.2	4
1133	Low-Cost, High-Performance Organic Small Molecular Hole-Transporting Materials for Perovskite Solar Cells. Chinese Journal of Organic Chemistry, 2021, 41, 1447.	0.6	5
1134	Freestanding CH₃NH₃PbBr₃ single-crystal microwires for optoelectronic applications synthesized with a predefined lattice framework. Journal of Materials Chemistry C, 2021, 9, 4771-4781.	2.7	7
1135	A new perspective for evaluating the photoelectric performance of organicâ€“inorganic hybrid perovskites based on the DFT calculations of excited states. Physical Chemistry Chemical Physics, 2021, 23, 11548-11556.	1.3	23
1136	Intact 2D/3D halide junction perovskite solar cells via solid-phase in-plane growth. Nature Energy, 2021, 6, 63-71.	19.8	365
1137	Synthesis of spirodithienogermole with triphenylamine units as a dopant-free hole-transporting material for perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 2001-2007.	2.7	7
1138	Facile fluorene-based hole-transporting materials and their dual application toward inverted and regular perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 5548-5556.	2.5	5

#	Article	IF	Citations
1139	Constructing deep-blue bis-tridentate Ir(<scp>iii</scp>) phosphors with fluorene-based dianionic chelates. Journal of Materials Chemistry C, 2021, 9, 1318-1325.	2.7	16
1140	Graphdiyne oxide doped SnO₂electron transport layer for high performance perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 6913-6922.	3.2	7
1141	Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953.	15.6	170
1142	The impact of molecular orientation on carrier transfer characteristics at a phthalocyanine and halide perovskite interface. RSC Advances, 2021, 11, 31776-31782.	1.7	6
1143	Recent progress in tin-based perovskite solar cells. Energy and Environmental Science, 2021, 14, 1286-1325.	15.6	257
1144	Tin halide perovskites for efficient lead-free solar cells. , 2021, , 259-285.		0
1145	Bi-functional interfaces by poly(ionic liquid) treatment in efficient pin and nip perovskite solar cells. Energy and Environmental Science, 2021, 14, 4508-4522.	15.6	76
1146	High-Performance Perovskite Solar Cells Fabricated by a Hybrid Physicalâ€“Chemical Vapor Deposition. Journal of Solar Energy Engineering, Transactions of the ASME, 2021, 143, .	1.1	3
1147	Vapor incubation of FASnI₃ films for efficient and stable lead-free inverted perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 16943-16951.	5.2	20
1148	Tetra-indole core as a dual agent: a hole selective layer that passivates defects in perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 7074-7082.	2.7	8
1149	Core Fusion Engineering of Hole-Transporting Materials for Efficient Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 1250-1258.	2.5	9
1150	Scalable Fabrication of >90 cm² Perovskite Solar Modules with >1000 h Operational Stability Based on the Intermediate Phase Strategy. Advanced Energy Materials, 2021, 11, 2003712.	10.2	76
1151	Preserving a robust CsPbI3 perovskite phase via pressure-directed octahedral tilt. Nature Communications, 2021, 12, 461.	5.8	90
1152	Arm modulation of triarylamines to fine-tune the properties of linear Dâ€“Ïâ€“D HTMs for robust higher performance perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 4604-4614.	3.2	10
1153	Microscopic (Dis)order and Dynamics of Cations in Mixed FA/MA Lead Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 1742-1753.	1.5	28
1154	A Lab-to-Fab Study toward Roll-to-Roll Fabrication of Reproducible Perovskite Solar Cells under Ambient Room Conditions. Cell Reports Physical Science, 2021, 2, 100293.	2.8	39
1155	Effect of SnO₂ Annealing Temperature on the Performance of Perovskite Solar Cells. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2021, 36, 168.	0.6	4
1156	Mechanochemical synthesis of pure phase mixed-cation/anion (FAPbI₃)_x(MAPbBr₃)_{1â^'x}hybrid perovskite materials: compositional engineering and photovoltaic performance. RSC Advances, 2021, 11, 5874-5884.	1.7	8

#	Article	IF	Citations
1157	The triple Ï€-bridge strategy for tailoring indeno[2,1-b]carbazole-based HTMs enables perovskite solar cells with efficiency exceeding 21%. Journal of Materials Chemistry A, 2021, 9, 8598-8606.	5.2	24
1158	Highly stable and efficient cathode-buffer-layer-free inverted perovskite solar cells. Nanoscale, 2021, 13, 5652-5659.	2.8	7
1159	Perovskite solar cells. , 2021, , 249-281.		5
1160	Advances in SnO₂-based perovskite solar cells: from preparation to photovoltaic applications. Journal of Materials Chemistry A, 2021, 9, 19554-19588.	5.2	88
1161	Zwitterions: promising interfacial/doping materials for organic/perovskite solar cells. New Journal of Chemistry, 2021, 45, 15118-15130.	1.4	15
1162	Hierarchical computational screening of layered lead-free metal halide perovskites for optoelectronic applications. Journal of Materials Chemistry A, 2021, 9, 6476-6486.	5.2	15
1163	A saddle-shaped o-tetraphenylene based molecular semiconductor with a high glass transition temperature for perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 9927-9936.	5.2	6
1165	Stabilizing Fullerene for Burnâ€inâ€Free and Stable Perovskite Solar Cells under Ultraviolet Preconditioning and Light Soaking. Advanced Materials, 2021, 33, e2006910.	11.1	52
1166	Mechanistic Understanding of Efficient Photocatalytic H₂ Evolution on Twoâ€Dimensional Layered Lead Iodide Hybrid Perovskites. Angewandte Chemie - International Edition, 2021, 60, 7376-7381.	7.2	48
1167	Dualâ€Interface Modification of CsPbIBr₂ Solar Cells with Improved Efficiency and Stability. Advanced Materials Interfaces, 2021, 8, 2001994.	1.9	12
1168	The Impact of PbI 2 :KI Alloys on the Performance of Sequentially Deposited Perovskite Solar Cells. European Journal of Inorganic Chemistry, 2021, 2021, 821-830.	1.0	5
1169	Plasmon nanoparticle effect to improve optical properties of perovskite thin film. Photonics and Nanostructures - Fundamentals and Applications, 2021, 43, 100888.	1.0	8
1170	Recent Advances and Opportunities of Lead-Free Perovskite Nanocrystal for Optoelectronic Application. Energy Material Advances, 2021, 2021, .	4.7	43
1171	Implementing Dopant-Free Hole-Transporting Layers and Metal-Incorporated CsPbI₂Br for Stable All-Inorganic Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 778-788.	8.8	71
1172	Antisolvent engineering on low-temperature processed CsPbI₃ inorganic perovskites for improved performances of solar cells. Nanotechnology, 2021, 32, 185402.	1.3	11
1173	Mechanistic Understanding of Efficient Photocatalytic H₂ Evolution on Twoâ€Dimensional Layered Lead Iodide Hybrid Perovskites. Angewandte Chemie, 2021, 133, 7452-7457.	1.6	9
1174	Atomistic Mechanism of Passivation of Halide Vacancies in Lead Halide Perovskites by Alkali Ions. Chemistry of Materials, 2021, 33, 1285-1292.	3.2	26
1175	Influence of Fluorinated Components on Perovskite Solar Cells Performance and Stability. Small, 2021, 17, e2004081.	5.2	29

#	Article	IF	Citations
1176	Effects of Allâ€Organic Interlayer Surface Modifiers on the Efficiency and Stability of Perovskite Solar Cells. ChemSusChem, 2021, 14, 1524-1533.	3.6	5
1177	Near-Ultraviolet Transparent Organic Hole-Transporting Materials Containing Partially Oxygen-Bridged Triphenylamine Skeletons for Efficient Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 1484-1495.	2.5	11
1178	Low-Toxicity Antisolvent as a Polar Auxiliary Agent for High-Performance Perovskite Photodetectors. Journal of Physical Chemistry C, 2021, 125, 2850-2859.	1.5	8
1179	Fully Air-Processed Dynamic Hot-Air-Assisted M:CsPbI2Br (M: Eu2+, In3+) for Stable Inorganic Perovskite Solar Cells. Matter, 2021, 4, 635-653.	5.0	109
1180	A Triple Axial Chirality, Racemic Molecular Semiconductor Based on Thiahelicene and Ethylenedioxythiophene for Perovskite Solar Cells: Microscopic Insights on Performance Enhancement. Advanced Functional Materials, 2021, 31, 2009854.	7.8	23
1181	Excellent Intrinsic Longâ€Term Thermal Stability of Coâ€Evaporated MAPbI₃ Solar Cells at 85 Â°C. Advanced Functional Materials, 2021, 31, 2100557.	7.8	36
1182	Introducing an Organic Hole Transporting Material as a Bilayer to Improve the Efficiency and Stability of Perovskite Solar Cells. Macromolecular Research, 2021, 29, 149-156.	1.0	8
1183	Rapid Microwave-Assisted Synthesis of SnO₂ Quantum Dots for Efficient Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 1887-1893.	2.5	37
1184	Advances to Highâ€Performance Blackâ€Phase FAPbI₃ Perovskite for Efficient and Stable Photovoltaics. Small Structures, 2021, 2, 2000130.	6.9	81
1185	Boosting efficiency up to 25% for HTL-free carbon-based perovskite solar cells by gradient doping using SCAPS simulation. Solar Energy, 2021, 215, 328-334.	2.9	53
1186	Stability Improvement of Perovskite Solar Cells by Compositional and Interfacial Engineering. Chemistry of Materials, 2021, 33, 1540-1570.	3.2	65
1187	Enhanced Efficiency and Mechanical Robustness of Flexible Perovskite Solar Cells by Using HPbI₃ Additive. Solar Rrl, 2021, 5, 2000821.	3.1	29
1188	First-Principles Study of Electronic Properties of SnO2/CsPbI2Br Interface. Journal of Electronic Materials, 2021, 50, 2129-2136.	1.0	4
1189	Black phosphorus doped Poly(triarylamine) as hole transport layer for highly efficient perovskite solar cells. Organic Electronics, 2021, 89, 106052.	1.4	15
1190	Dualâ€function interface engineering for efficient perovskite solar cells. EcoMat, 2021, 3, e12092.	6.8	32
1191	Large-Grain Double Cation Perovskites with 18 Î¼s Lifetime and High Luminescence Yield for Efficient Inverted Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 1045-1054.	8.8	54
1192	Side-Chain Engineering of Diketopyrrolopyrrole-Based Hole-Transport Materials to Realize High-Efficiency Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 7405-7415.	4.0	27
1193	Highly In-Plane Polarization-Sensitive Photodetection in CsPbBr3 Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 1904-1910.	2.1	24

#	Article	IF	Citations
1194	Single-Layer ZnO Hollow Hemispheres Enable High-Performance Self-Powered Perovskite Photodetector for Optical Communication. Nano-Micro Letters, 2021, 13, 70.	14.4	56
1195	Halogen Functionalization in the 2D Material Flatland: Strategies, Properties, and Applications. Small, 2021, 17, e2005640.	5.2	20
1196	Influence of donor units on spiro[fluorene-9,9â€²-xanthene]-based dopant-free hole transporting materials for perovskite solar cells. Solar Energy, 2021, 216, 180-187.	2.9	18
1197	SnO₂/TiO₂ Electron Transporting Bilayers: A Route to Light Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 3424-3430.	2.5	32
1198	Suppression of hysteresis in all-inorganic perovskite solar cells by the incorporation of PCBM. Applied Physics Letters, 2021, 118, .	1.5	18
1199	Strategies for High-Performance Large-Area Perovskite Solar Cells toward Commercialization. Crystals, 2021, 11, 295.	1.0	23
1200	Precise Nucleation Regulation and Defect Passivation for Highly Efficient and Stable Carbon-Based CsPbI₂Br Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 3508-3517.	2.5	12
1201	Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr3. Nature Materials, 2021, 20, 977-983.	13.3	89
1202	Tetraphenylethylene-Arylamine Derivatives as Hole Transporting Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 12322-12330.	4.0	21
1203	Bulk Passivation and Interfacial Passivation for Perovskite Solar Cells: Which One is More Effective?. Advanced Materials Interfaces, 2021, 8, 2002078.	1.9	34
1204	A Simple Cu(II) Polyelectrolyte as a Method to Increase the Work Function of Electrodes and Form Effective pâ€Type Contacts in Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2009246.	7.8	16
1205	Colorful Efficient MoirÃ©â€Perovskite Solar Cells. Advanced Materials, 2021, 33, e2008091.	11.1	37
1206	A Coadditive Strategy for Blocking Ionic Mobility in Methylammoniumâ€Free Perovskite Solar Cells and Highâ€Stability Achievement. Solar Rrl, 2021, 5, 2100010.	3.1	26
1207	Oneâ€Source Strategy Boosting Dopantâ€Free Hole Transporting Layers for Highly Efficient and Stable CsPbI₂Br Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2010696.	7.8	50
1208	Efficient strategies to improve the performance of 6,12-dihydroindeno[1,2-b]fluorine core based hole transport materials. Solar Energy, 2021, 217, 93-104.	2.9	5
1209	Orientationâ€Engineered Smallâ€Molecule Semiconductors as Dopantâ€Free Hole Transporting Materials for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2011270.	7.8	41
1210	Diluted-CdS Quantum Dot-Assisted SnO₂ Electron Transport Layer with Excellent Conductivity and Suitable Band Alignment for High-Performance Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 16326-16335.	4.0	27
1211	Metalâ€Free Phthalocyanine as a Hole Transporting Material and a Surface Passivator for Efficient and Stable Perovskite Solar Cells. Small Methods, 2021, 5, e2001248.	4.6	33

#	Article	IF	Citations
1212	Ambient Stable and Efficient Monolithic Tandem Perovskite/PbS Quantum Dots Solar Cells via Surface Passivation and Light Management Strategies. Advanced Functional Materials, 2021, 31, 2010623.	7.8	44
1213	Effects of CsSnxPb1â^'xI3 Quantum Dots as Interfacial Layer on Photovoltaic Performance of Carbon-Based Perovskite Solar Cells. Nanoscale Research Letters, 2021, 16, 74.	3.1	8
1214	Balancing Charge Extraction for Efficient Backâ€Contact Perovskite Solar Cells by Using an Embedded Mesoscopic Architecture. Advanced Energy Materials, 2021, 11, 2100053.	10.2	19
1215	Isomeric Carbazole-Based Hole-Transporting Materials: Role of the Linkage Position on the Photovoltaic Performance of Perovskite Solar Cells. Chemistry of Materials, 2021, 33, 3286-3296.	3.2	25
1216	Adsorption and Diffusion of Halogen Gas Molecules on CH3NH3PbI3 Halide Perovskite Surfaces. Russian Journal of Physical Chemistry A, 2021, 95, 792-798.	0.1	0
1217	Boosted Perovskite Photodetector Performance Using Graphene as Transparent Electrode. Transactions on Electrical and Electronic Materials, 2022, 23, 113-121.	1.0	2
1219	Poling effect on the electrostrictive and piezoelectric response in CH3NH3PbI3 single crystals. Applied Physics Letters, 2021, 118, .	1.5	4
1220	Progresses on Novel Bâ€Site Perovskite Nanocrystals. Advanced Optical Materials, 2021, 9, 2100261.	3.6	10
1221	Inâ€Depth Comparative Study of Cathode Interfacial Layer for Stable Inverted Perovskite Solar Cell. ChemSusChem, 2021, 14, 2393-2400.	3.6	3
1222	Effect of Halogenâ€Doping on Properties of Bismuth Iodide (BiI 3) Optical Absorption Layer. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000740.	0.8	2
1223	Synthesis of 0D Manganeseâ€Based Organicâ€“Inorganic Hybrid Perovskite and Its Application in Leadâ€Free Red Lightâ€Emitting Diode. Advanced Functional Materials, 2021, 31, 2100855.	7.8	98
1224	Dopant-free dithieno[3â€²,2':3,4;2â€³,3'':5,6]benzo[1,2-d]imidazole-based hole-transporting materials for efficient perovskite solar cells. Dyes and Pigments, 2021, 188, 109241.	2.0	8
1225	Molecular Engineering of Polymeric Hole-Transporting Materials for Efficient and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 3526-3534.	2.5	5
1226	Low-Cost Hole-Transporting Materials Based on Carbohelicene for High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 20051-20059.	4.0	16
1227	Two-dimensional nanomaterials with engineered bandgap: Synthesis, properties, applications. Nano Today, 2021, 37, 101059.	6.2	82
1228	A Helicene-Based Molecular Semiconductor Enables 85 Â°C Stable Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 1764-1772.	8.8	31
1229	Fully Inorganic CsSnI₃ Mesoporous Perovskite Solar Cells with High Efficiency and Stability via Coadditive Engineering. Solar Rrl, 2021, 5, 2100069.	3.1	29
1230	Gradient 1D/3D Perovskite Bilayer using 4â€tertâ€Butylpyridinium Cation for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000791.	3.1	10

#	Article	IF	Citations
1231	Interfacial versus Bulk Properties of Hole-Transporting Materials for Perovskite Solar Cells: Isomeric Triphenylamine-Based Enamines versus Spiro-OMeTAD. ACS Applied Materials & Interfaces, 2021, 13, 21320-21330.	4.0	8
1232	Enhanced Efficiency and Stability of NiOx-Based Perovskite Solar Cells Using [6,6]-Phenyl-C₆₁-butyric Acid Methyl-Doped Poly(9-vinylcarbazole)-Modified Layer. ACS Applied Energy Materials, 2021, 4, 3812-3821.	2.5	10
1233	Passivation functionalized phenothiazine-based hole transport material for highly efficient perovskite solar cell with efficiency exceeding 22%. Chemical Engineering Journal, 2021, 410, 128328.	6.6	83
1234	Perpendicularly Oriented Dual Organosuperelasticity Correlated with Molecular Symmetry. Crystal Growth and Design, 2021, 21, 3902-3907.	1.4	6
1235	The Role of Pioneering Hole Transporting Materials in New Generation Perovskite Solar Cells. European Journal of Inorganic Chemistry, 2021, 2021, 4251-4264.	1.0	5
1236	A Review of Integrated Systems Based on Perovskite Solar Cells and Energy Storage Units: Fundamental, Progresses, Challenges, and Perspectives. Advanced Science, 2021, 8, 2100552.	5.6	19
1237	Synergistic Defect Passivation for Highly Efficient and Stable Perovskite Solar Cells Using Sodium Dodecyl Benzene Sulfonate. ACS Applied Energy Materials, 2021, 4, 4910-4918.	2.5	14
1238	Pseudohalide substitution and potassium doping in FA0.98K0.02Pb(SCN)2I for high-stability hole-conductor-free perovskite solar cells. Journal of Power Sources, 2021, 494, 229781.	4.0	19
1239	Strain-relaxed tetragonal MAPbI3 results in efficient mesoporous solar cells. Nano Energy, 2021, 83, 105788.	8.2	29
1240	Understanding the Effects of Fluorine Substitution in Lithium Salt on Photovoltaic Properties and Stability of Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 2218-2228.	8.8	51
1241	Dimethylformamide-free synthesis and fabrication of lead halide perovskite solar cells from electrodeposited PbS precursor films. Chemical Engineering Journal, 2021, 411, 128460.	6.6	15
1242	Increasing Stability of SnO₂-Based Perovskite Solar Cells by Introducing an Anionic Conjugated Polyelectrolyte for Interfacial Adjustment. ACS Applied Materials & Interfaces, 2021, 13, 24575-24581.	4.0	12
1243	A brief review of hole transporting materials commonly used in perovskite solar cells. Rare Metals, 2021, 40, 2712-2729.	3.6	138
1244	Comparative Study on TiO2 and C60 Electron Transport Layers for Efficient Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 5543-5553.	2.5	4
1245	Substrate dependence on (Sb4Se6)n ribbon orientations of antimony selenide thin films: Morphology, carrier transport and photovoltaic performance. Journal of Alloys and Compounds, 2021, 862, 158703.	2.8	40
1246	Synergistic Engineering of Conduction Band, Conductivity, and Interface of Bilayered Electron Transport Layers with Scalable TiO₂ and SnO₂ Nanoparticles for High-Efficiency Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 23606-23615.	4.0	17
1247	Perovskite single crystals: Synthesis, properties, and applications. Journal of Electronic Science and Technology, 2021, 19, 100081.	2.0	41
1248	Performance Comparison between the Nanoporous NiO_x Layer and NiO_x Thin Film for Inverted Perovskite Solar Cells with Long-Term Stability. ACS Omega, 2021, 6, 15855-15866.	1.6	6

#	Article	IF	Citations
1249	Heteroatom effect on linear-shaped dopant-free hole transporting materials for perovskite solar cells. Solar Energy, 2021, 221, 323-331.	2.9	18
1250	Advanced Applications of Atomic Layer Deposition in Perovskiteâ€Based Solar Cells. Advanced Photonics Research, 2021, 2, 2100011.	1.7	6
1251	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 17805-17811.	1.6	22
1252	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 17664-17670.	7.2	69
1253	Design of small molecular hole-transporting materials for stable and high-performance perovskite solar cells. Chemical Physics Reviews, 2021, 2, .	2.6	22
1254	A Pyrrole-Bridged Bis(oxa[5]helicene)-Based Molecular Semiconductor for Efficient and Durable Perovskite Solar Cells: Microscopic Insights. , 2021, 3, 947-955.		11
1255	Reduced Defects and Enhanced Performance of (FAPbI₃)_{0.97}(MAPbBr₃)_{0.03}-Based Perovskite Solar Cells by Trimesic Acid Additives. ACS Omega, 2021, 6, 16151-16158.	1.6	7
1256	Palladium-Catalyzed Cascade Dearomative Spirocyclization and Câ^'H Annulation of Aromatic Halides with Alkynes. Organic Letters, 2021, 23, 5203-5207.	2.4	5
1257	Highâ€Performance ITOâ€Free Perovskite Solar Cells Enabled by Singleâ€Walled Carbon Nanotube Films. Advanced Functional Materials, 2021, 31, 2104396.	7.8	30
1258	Improving UV stability of perovskite solar cells without sacrificing efficiency through light trapping regulated spectral modification. Science Bulletin, 2021, 66, 2362-2368.	4.3	14
1259	Cyclopentadieneâ€Based Holeâ€Transport Material for Costâ€Reduced Stabilized Perovskite Solar Cells with Power Conversion Efficiencies Over 23%. Advanced Energy Materials, 2021, 11, 2003953.	10.2	24
1260	Stable Perovskite Solar Cells Using Molecularly Engineered Functionalized Oligothiophenes as Lowâ€Cost Holeâ€Transporting Materials. Small, 2021, 17, e2100783.	5.2	19
1261	Interfacial Defect Passivation and Stress Release via Multi-Active-Site Ligand Anchoring Enables Efficient and Stable Methylammonium-Free Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 2526-2538.	8.8	170
1262	Large-area CsPbBr3 perovskite films grown with effective one-step RF-magnetron sputtering. Journal of Applied Physics, 2021, 129, .	1.1	9
1263	Hole-Transporting Materials for Perovskite Solar Cells Employing an Anthradithiophene Core. ACS Applied Materials & Interfaces, 2021, 13, 28214-28221.	4.0	30
1264	Advances in Conversion Efficiency and Thermal Stability of the Perovskite-Based Solar Cell: Review. TH Wildau Engineering and Natural Sciences Proceedings, 0, 1, .	0.0	0
1265	Tailored Key Parameters of Perovskite for High-Performance Photovoltaics. Accounts of Materials Research, 2021, 2, 447-457.	5.9	5
1266	Long-term stable and hysteresis-free planar perovskite solar cells using green antisolvent strategy. Journal of Materials Science, 2021, 56, 15205-15214.	1.7	44

#	Article	IF	Citations
1267	Recent Progress on Formamidiumâ€Dominated Perovskite Photovoltaics. Advanced Energy Materials, 2022, 12, 2100690.	10.2	45
1268	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovoltaics. Advanced Optical Materials, 2021, 9, 2100390.	3.6	15
1269	Water-Repellent Perovskites Induced by a Blend of Organic Halide Salts for Efficient and Stable Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 33172-33181.	4.0	7
1270	Up-Scalable Fabrication of SnO2 with Multifunctional Interface for High Performance Perovskite Solar Modules. Nano-Micro Letters, 2021, 13, 155.	14.4	40
1271	Perovskite crystals redissolution strategy for affordable, reproducible, efficient and stable perovskite photovoltaics. Materials Today, 2021, 50, 199-223.	8.3	43
1272	Understanding the Mechanism of PbCl₂ Additive for MAPbI₃â€Based Perovskite Solar Cells. Advanced Photonics Research, 2021, 2, 2100012.	1.7	4
1273	Effect of the hole transporting layers on the inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2021, 32, 21579-21589.	1.1	1
1274	Selenopheneâ€Based Holeâ€Transporting Materials for Perovskite Solar Cells. ChemPlusChem, 2021, 86, 1006-1013.	1.3	7
1275	Liquid medium annealing for fabricating durable perovskite solar cells with improved reproducibility. Science, 2021, 373, 561-567.	6.0	227
1276	Interfacial Molecular Doping and Energy Level Alignment Regulation for Perovskite Solar Cells with Efficiency Exceeding 23%. ACS Energy Letters, 2021, 6, 2690-2696.	8.8	96
1277	Constructing CdS-Based Electron Transporting Layers With Efficient Electron Extraction for Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 1014-1021.	1.5	6
1278	Cut from the Same Cloth: Enamine-Derived Spirobifluorenes as Hole Transporters for Perovskite Solar Cells. Chemistry of Materials, 2021, 33, 6059-6067.	3.2	7
1279	Unraveling the surface state of photovoltaic perovskite thin film. Matter, 2021, 4, 2417-2428.	5.0	22
1280	Stable and low-photovoltage-loss perovskite solar cells by multifunctional passivation. Nature Photonics, 2021, 15, 681-689.	15.6	255
1281	Molecular engineering of phenothiazine-based monomer and dimer hole transport materials and their photovoltaic performance. Dyes and Pigments, 2021, 191, 109340.	2.0	7
1282	Simultaneous passivation of bulk and interface defects through synergistic effect of anion and cation toward efficient and stable planar perovskite solar cells. Journal of Energy Chemistry, 2021, 63, 452-460.	7.1	105
1283	Flexible Perovskite Solar Cells with High Power-Per-Weight: Progress, Application, and Perspectives. ACS Energy Letters, 2021, 6, 2917-2943.	8.8	100
1284	Nanostructured bilayer CuSCN@CuI thin films as efficient inorganic hole transport material for inverted perovskite solar cells. Ceramics International, 2021, 47, 17883-17894.	2.3	6

#	Article	IF	Citations
1285	Incorporation of Two-Dimensional WSe₂ into MAPbI₃ Perovskite for Efficient and Stable Photovoltaics. Journal of Physical Chemistry Letters, 2021, 12, 6883-6888.	2.1	12
1286	Newfangled progressions in the charge transport layers impacting the stability and efficiency of perovskite solar cells. Reviews in Inorganic Chemistry, 2022, 42, 137-159.	1.8	8
1287	Tailoring of a Phenothiazine Core for Electrical Conductivity and Thermal Stability: Hole-Selective Layers in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 33311-33320.	4.0	20
1288	Thermal Management Enables More Efficient and Stable Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3029-3036.	8.8	26
1289	Up-conversion hybrid nanomaterials for light- and heat-driven applications. Progress in Materials Science, 2021, 121, 100838.	16.0	34
1291	Colloidal SnO₂â€Assisted CdS Electron Transport Layer Enables Efficient Electron Extraction for Planar Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100494.	3.1	20
1292	Amorphous TiO₂ Coatings Stabilize Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3332-3341.	8.8	38
1293	Apparent Defect Densities in Halide Perovskite Thin Films and Single Crystals. ACS Energy Letters, 2021, 6, 3244-3251.	8.8	73
1294	Development of a hybrid photodetector device between pyruvic acid (CH₃COCOOH) and silicon. Semiconductor Science and Technology, 2021, 36, 105004.	1.0	9
1295	Electronic and optical properties of the SnO2/CsPbI3 interface: Using first principles calculations. Catalysis Today, 2021, 374, 208-213.	2.2	12
1296	Azatriphenylene-based D-A-D-typed hole-transporting materials for perovskite solar cells with tunable energy levels and high mobility. Solar Energy, 2021, 224, 491-499.	2.9	23
1297	Highly efficient Cesium Titanium (IV) Bromide perovskite solar cell and its point defect investigation: A computational study. Superlattices and Microstructures, 2021, 156, 106946.	1.4	13
1298	Charge transfer modification of inverted planar perovskite solar cells by NiO_x/Sr:NiO_x bilayer hole transport layer. Chinese Physics B, 2022, 31, 038801.	0.7	7
1299	Multifunctional Molecule Engineered SnO₂ for Perovskite Solar Cells with High Efficiency and Reduced Lead Leakage. Solar Rrl, 2021, 5, 2100464.	3.1	26
1300	UV soaking for enhancing the photocurrent and response speed of Cs2AgBiBr6-based all-inorganic perovskite photodetectors. Science China Materials, 2022, 65, 442-450.	3.5	7
1301	Copper nanoparticle-decorated RGO electrodes as hole transport layer of perovskite solar cells enhancing efficiency and shelf stability. Journal of Materials Research and Technology, 2021, 14, 631-638.	2.6	8
1302	Improving Stability and Colloidal Dispersity of CsPbBr3@SiO2 Nanoparticles Based on In-Situ Synthesis in Entropy Ligands Functionalized SiO2 Nanoreactor. Crystals, 2021, 11, 1165.	1.0	1
1303	Polycyclic Arenes Dihydrodinaphthopentaceneâ€based Holeâ€Transporting Materials for Perovskite Solar Cells Application. Chemistry - an Asian Journal, 2021, 16, 3719-3728.	1.7	6

#	Article	IF	Citations
1304	Numerical study of lead free CsSn0.5Ge0.5I3 perovskite solar cell by SCAPS-1D. Optik, 2021, 248, 168060.	1.4	53
1305	Boosting charge separation and photocatalytic CO2 reduction of CsPbBr3 perovskite quantum dots by hybridizing with P3HT. Chemical Engineering Journal, 2021, 419, 129543.	6.6	58
1306	Hole-transporting materials based on diarylfluorene compounds containing different substituents: DFT simulation, spectroscopic characterization and applications in organic light emitting diodes. Optical Materials, 2021, 119, 111345.	1.7	0
1307	TADF Molecule as an Interfacial Layer with Cascade Energy Alignment Enabling High Open-Circuit Voltage for 3D/2D Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 11112-11120.	2.5	4
1308	Removal of residual compositions by powder engineering for high efficiency formamidinium-based perovskite solar cells with operation lifetime over 2000Âh. Nano Energy, 2021, 87, 106152.	8.2	41
1309	Mini-Review on Efficiency and Stability of Perovskite Solar Cells with Spiro-OMeTAD Hole Transport Layer: Recent Progress and Perspectives. Energy & Fuels, 2021, 35, 18915-18927.	2.5	45
1310	Structural, electrical, optical properties and stability of Cs2InBr5-yXyÂ·H2O (XÂ=ÂCl, I, yÂ=Â0, 1, 2, 3, 4, 5) perovskites: the first principles investigation. Thin Solid Films, 2021, 733, 138805.	0.8	2
1311	Towards environmental friendly multi-step processing of efficient mixed-cation mixed halide perovskite solar cells from chemically bath deposited lead sulphide. Scientific Reports, 2021, 11, 18561.	1.6	7
1312	Printable Commercial Carbon Based Mesoscopic Perovskite Solar Cell Using NiO/Graphene as Hole-Transport Materials. ECS Journal of Solid State Science and Technology, 2021, 10, 105003.	0.9	4
1313	Additive-Assisted Defect Passivation for Minimization of Open-Circuit Voltage Loss and Improved Perovskite Solar Cell Performance. ACS Applied Energy Materials, 2021, 4, 10468-10476.	2.5	21
1314	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	8.2	28
1315	Effect of chlorobenzene on the optical and structural properties of CH3NH3PbI3:DMF perovskite films. Journal of Materials Research and Technology, 2021, 14, 287-297.	2.6	5
1316	Stability Issues of Perovskite Solar Cells: A Critical Review. Energy Technology, 2021, 9, 2100560.	1.8	31
1317	Favorable grain growth of thermally stable formamidinium-methylammonium perovskite solar cells by hydrazine chloride. Chemical Engineering Journal, 2022, 430, 132730.	6.6	21
1318	A review on perovskite solar cells (PSCs), materials and applications. Journal of Materiomics, 2021, 7, 940-956.	2.8	111
1319	Interfacial-engineering enhanced performance and stability of ZnO nanowire-based perovskite solar cells. Nanotechnology, 2021, 32, 475204.	1.3	18
1320	A hole-transporting material with substituted fluorene as end groups for high-performance perovskite solar cells. Organic Electronics, 2022, 100, 106325.	1.4	8
1321	Optimum silver contact sputtering parameters for efficient perovskite solar cell fabrication. Solar Energy Materials and Solar Cells, 2021, 230, 111185.	3.0	5

#	Article	IF	Citations
1322	Perspective: approaches for layers above the absorber in perovskite solar cells for semitransparent and tandem applications. Materials Today Energy, 2021, 21, 100729.	2.5	5
1323	Efficiency enhancement of perovskite solar cells by using Ag- or Ag-Cu composite-doped surface passivation of the electron transport layer. Applied Surface Science, 2021, 562, 150147.	3.1	7
1324	Coplanar phenanthro[9,10-d]imidazole based hole-transporting material enabling over 19%/21% efficiency in inverted/regular perovskite solar cells. Chemical Engineering Journal, 2021, 421, 129823.	6.6	25
1325	Ultrafast photo-induced carrier dynamics of FAPbI3-MAPbBr3 perovskite films fabricated with additives and a hole transport material. Chemical Physics Letters, 2021, 784, 139100.	1.2	4
1326	Interface Engineering for Allâ€inorganic CsPbIBr₂ Perovskite Solar Cells with Enhanced Power Conversion Efficiency over 11%. Energy Technology, 2021, 9, 2100562.	1.8	18
1327	Side-chain tailoring of benzodithiophene derivatives as hole-transporting materials for stable perovskite solar cells. Dyes and Pigments, 2021, 195, 109718.	2.0	3
1328	The effect of defects in tin-based perovskites and their photovoltaic devices. Materials Today Physics, 2021, 21, 100513.	2.9	17
1329	CsCl-induced defect control of CsPbI2Br thin films for achieving open-circuit voltage of 1.33ÂV in all-inorganic perovskite solar cells. Journal of Power Sources, 2021, 512, 230481.	4.0	16
1330	Decorating hole transport material withÂâ^'CF3 groups for highly efficient and stable perovskite solar cells. Journal of Energy Chemistry, 2021, 62, 523-531.	7.1	15
1331	NaCl-passivated and Na+-doped tin oxide electron transport layers enable highly efficient planar perovskite solar cells. Journal of Physics and Chemistry of Solids, 2021, 158, 110250.	1.9	8
1332	Molecular spectroscopy of hybrid organicâ€"inorganic perovskites and related compounds. Coordination Chemistry Reviews, 2021, 448, 214180.	9.5	37
1333	Construct efficient CsPbI2Br solar cells by minimizing the open-circuit voltage loss through controlling the peripheral substituents of hole-transport materials. Chemical Engineering Journal, 2021, 425, 131675.	6.6	34
1334	Methylammonium- and bromide-free perovskites enable efficient and stable photovoltaics. Journal of Energy Chemistry, 2021, 63, 12-24.	7.1	1
1335	Reducing carrier transport barrier in anode interface enables efficient and stable inverted mesoscopic methylammonium-free perovskite solar cells. Chemical Engineering Journal, 2021, 425, 131499.	6.6	17
1336	Controlling phase and morphology of all-dip-coating processed HC(NH2)2PbI3 perovskite layers from an aqueous halide-free lead precursor. Journal of Physics and Chemistry of Solids, 2022, 160, 110374.	1.9	26
1337	Simultaneously enhanced efficiency and ambient stability of inorganic perovskite solar cells by employing tetramethylammonium chloride additive in CsPbI2Br. Journal of Materials Science and Technology, 2022, 102, 224-231.	5.6	22
1338	In situ preparation of Mn-doped perovskite nanocrystalline films and application to white light emitting devices. Journal of Colloid and Interface Science, 2022, 606, 1163-1169.	5.0	16
1339	High-performance perovskite solar cells based on dopant-free hole-transporting material fabricated by a thermal-assisted blade-coating method with efficiency exceeding 21%. Chemical Engineering Journal, 2022, 427, 131609.	6.6	37

#	Article	IF	Citations
1340	A strategic review on processing routes towards scalable fabrication of perovskite solar cells. Journal of Energy Chemistry, 2022, 64, 538-560.	7.1	33
1341	Effects of Co2+doping and magnetic field actions on the stability and efficiency of perovskite solar cells and their mechanisms. Journal of Alloys and Compounds, 2022, 891, 161910.	2.8	3
1342	Fluorene-terminated hole transporting materials with a spiro[fluorene-9,9â€²-xanthene] core for perovskite solar cells. New Journal of Chemistry, 2021, 45, 5497-5502.	1.4	7
1343	A new strategy for constructing a dispiro-based dopant-free hole-transporting material: spatial configuration of spiro-bifluorene changes from a perpendicular to parallel arrangement. Chemical Science, 2021, 12, 8548-8555.	3.7	14
1344	Interfaces in metal halide perovskites probed by solid-state NMR spectroscopy. Journal of Materials Chemistry A, 2021, 9, 19206-19244.	5.2	28
1345	Strategies of modifying spiro-OMeTAD materials for perovskite solar cells: a review. Journal of Materials Chemistry A, 2021, 9, 4589-4625.	5.2	149
1346	Spontaneous interface engineering for dopant-free poly(3-hexylthiophene) perovskite solar cells with efficiency over 24%. Energy and Environmental Science, 2021, 14, 2419-2428.	15.6	152
1347	Transparent Electrode Techniques for Semitransparent and Tandem Perovskite Solar Cells. Electronic Materials Letters, 2021, 17, 18-32.	1.0	22
1348	Low-cost, universal light-harvesting coating layer for thin film solar cells by employing micro-prism films. Applied Physics Letters, 2021, 118, 023301.	1.5	1
1349	Future perspectives of perovskite solar cells: Metal oxide-based inorganic hole-transporting materials. , 2021, , 181-219.		5
1350	Engineering electrodes and metal halide perovskite materials for flexible/stretchable perovskite solar cells and light-emitting diodes. Energy and Environmental Science, 2021, 14, 2009-2035.	15.6	46
1351	Homogeneous doping of entire perovskite solar cells via alkali cation diffusion from the hole transport layer. Journal of Materials Chemistry A, 2021, 9, 9266-9271.	5.2	8
1352	Water-assisted synthesis of highly stable CsPbX₃ perovskite quantum dots embedded in zeolite-Y. RSC Advances, 2021, 11, 2866-2871.	1.7	10
1353	Lead-Free Perovskite Materials for Solar Cells. Nano-Micro Letters, 2021, 13, 62.	14.4	175
1354	Tunable transition metal complexes as hole transport materials for stable perovskite solar cells. Chemical Communications, 2021, 57, 2093-2096.	2.2	4
1355	Recent Advances and Perspectives on Powderâ€Based Halide Perovskite Film Processing. Advanced Functional Materials, 2021, 31, 2007350.	7.8	33
1356	A new metric to control nucleation and grain size distribution in hybrid organicâ€“inorganic perovskites by tuning the dielectric constant of the antisolvent. Journal of Materials Chemistry A, 2021, 9, 3668-3676.	5.2	10
1357	Towards Simplifying the Device Structure of Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000863.	7.8	67

#	Article	IF	Citations
1358	Local Defects in Colloidal Quantum Dot Thin Films Measured via Spatially Resolved Multiâ€Modal Optoelectronic Spectroscopy. Advanced Materials, 2020, 32, 1906602.	11.1	7
1359	Tenâ€Gramâ€Scale Synthesis of FAPbX₃ Perovskite Nanocrystals by a Highâ€Power Roomâ€Temperature Ultrasonicâ€Assisted Strategy and Their Electroluminescence. Advanced Materials Technologies, 2020, 5, 1901089.	3.0	16
1360	Precursor Engineering of the Electron Transport Layer for Application in Highâ€Performance Perovskite Solar Cells. Advanced Science, 2021, 8, e2102845.	5.6	62
1361	Air Stable, Highâ€Efficiency, Ptâ€Based Halide Perovskite Solar Cells with Long Carrier Lifetimes. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000182.	1.2	39
1362	Doped Bilayer Tin(IV) Oxide Electron Transport Layer for High Openâ€Circuit Voltage Planar Perovskite Solar Cells with Reduced Hysteresis. Small, 2021, 17, e2005671.	5.2	34
1363	Recent Advances in Solar Cells. , 2020, , 79-122.		7
1364	A universal tactic of using Lewis-base polymer-CNTs composites as additives for high performance cm2-sized and flexible perovskite solar cells. Science China Chemistry, 2021, 64, 281-292.	4.2	12
1365	Fabrication and characterization of perovskite (CH3NH3PbI3) solar cells. SN Applied Sciences, 2020, 2, 1.	1.5	13
1366	Role of various transport layer and electrode materials in enhancing performance of stable environment-friendly Cs2TiBr6 solar cell. Optik, 2020, 217, 164805.	1.4	27
1367	Ultra-high Photovoltage (2.45 V) Forming in Graphene Heterojunction via Quasi-Fermi Level Splitting Enhanced Effect. IScience, 2020, 23, 100818.	1.9	33
1368	How to fabricate efficient perovskite solar mini-modules in lab. Journal of Power Sources, 2020, 466, 228321.	4.0	21
1369	Efficient and stable perovskite solar cells through e-beam preparation of cerium doped TiO2 electron transport layer, ultraviolet conversion layer CsPbBr3 and the encapsulation layer Al2O3. Solar Energy, 2020, 198, 187-193.	2.9	21
1370	Resolving Spectral Mismatch Errors for Perovskite Solar Cells in Commercial Class AAA Solar Simulators. Journal of Physical Chemistry Letters, 2020, 11, 3782-3788.	2.1	10
1371	Potassium-Induced Passivation of Deep Traps in Bismuth-Doped Hybrid Lead Bromide Perovskite Nanocrystals: Massive Amplification of Photoluminescence Quantum Yield. Journal of Physical Chemistry Letters, 2021, 12, 546-551.	2.1	10
1372	Scalable fabrication and coating methods for perovskite solar cells and solar modules. Nature Reviews Materials, 2020, 5, 333-350.	23.3	568
1373	Hysteresis-less and stable perovskite solar cells with a self-assembled monolayer. Communications Materials, 2020, 1, .	2.9	91
1374	A thiourea additive-based quadruple cation lead halide perovskite with an ultra-large grain size for efficient perovskite solar cells. Nanoscale, 2019, 11, 21824-21833.	2.8	53
1375	Modifying perovskite solar cells with l(+)-cysteine at the interface between mesoporous TiO2 and perovskite. Sustainable Energy and Fuels, 2020, 4, 878-883.	2.5	8

#	Article	IF	Citations
1376	Advances in design engineering and merits of electron transporting layers in perovskite solar cells. Materials Horizons, 2020, 7, 2276-2291.	6.4	66
1377	Study of compositional stability and related optical properties of perovskite CH₃NH₃PbBr₃ films fabricated via two-step sol-gel process using weakly coordinating isopropanol solvent. Physica Scripta, 2020, 95, 105705.	1.2	2
1378	Theoretical investigation of halide perovskites for solar cell and optoelectronic applications*. Chinese Physics B, 2020, 29, 108401.	0.7	15
1379	Prediction and observation of defect-induced room-temperature ferromagnetism in halide perovskites. Journal of Semiconductors, 2020, 41, 122501.	2.0	5
1380	Physical properties of bulk, defective, 2D and 0D metal halide perovskite semiconductors from a symmetry perspective. JPhys Materials, 2020, 3, 042001.	1.8	29
1382	Impact of strain relaxation on performance of Î±-formamidinium lead iodide perovskite solar cells. Science, 2020, 370, 108-112.	6.0	932
1383	Quantum dot-modified titanium dioxide nanoparticles as an energy-band tunable electron-transporting layer for open air-fabricated planar perovskite solar cells. Nanomaterials and Nanotechnology, 2020, 10, 184798042096163.	1.2	10
1384	Ultrafast carrier dynamics in all-inorganic CsPbBr₃ perovskite across the pressure-induced phase transition. Optics Express, 2019, 27, A995.	1.7	29
1385	Optimization of Light Management Layers for Light Harvest of Perovskite Solar Cells. Optics Express, 2019, 27, A1004.	1.7	12
1386	Growth and optoelectronic application of CsPbBr₃ thin films deposited by pulsed-laser deposition. Optics Letters, 2019, 44, 1908.	1.7	22
1387	Design and simulation of perovskite solar cells with Gaussian structured gradient-index optics. Optics Letters, 2019, 44, 4865.	1.7	8
1388	Research progress in large-area perovskite solar cells. Photonics Research, 2020, 8, A1.	3.4	37
1389	2D organic-inorganic hybrid perovskite materials for nonlinear optics. Nanophotonics, 2020, 9, 1787-1810.	2.9	60
1390	Lead and Iodide Fixation by Thiol Copper(II) Porphyrin for Stable and Environmental-Friendly Perovskite Solar Cells. CCS Chemistry, 0, , 25-36.	4.6	2
1391	Recent Advancements in Crystalline Pb-Free Halide Double Perovskites. Crystals, 2020, 10, 62.	1.0	41
1392	Interfacial Modification of Mesoporous TiO2 Films with PbI2-Ethanolamine-Dimethyl Sulfoxide Solution for CsPbIBr2 Perovskite Solar Cells. Nanomaterials, 2020, 10, 962.	1.9	5
1393	Preparation and performance of high-efficient hole-transport-material-free carbon based perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 228801.	0.2	3
1394	A Novel Prediction Model of Bandgap in Organic-Inorganic Hybrid PerovskitesÂBased on a Simple Cluster Model Database. SSRN Electronic Journal, 0, , .	0.4	0

#	Article	IF	Citations
1395	Electronic structure of Li⁺@C₆₀ adsorbed on methyl-ammonium lead iodide perovskite CH₃NH₃PbI₃ surfaces. Materials Advances, 2022, 3, 290-299.	2.6	2
1396	An organic hole-transporting material spiro-OMeTAD doped with a Mn complex for efficient perovskite solar cells with high conversion efficiency. RSC Advances, 2021, 11, 32730-32739.	1.7	5
1397	High-performance perovskite memristor by integrating a tip-shape contact. Journal of Materials Chemistry C, 2021, 9, 15435-15444.	2.7	14
1398	Designs from single junctions, heterojunctions to multijunctions for high-performance perovskite solar cells. Chemical Society Reviews, 2021, 50, 13090-13128.	18.7	91
1399	Research Progress of Hole Transport Materials Based on Spiro Aromatic-Skeleton in Perovskite Solar Cells. Acta Chimica Sinica, 2021, 79, 1181.	0.5	5
1401	A Synergy Effect of Coadditives for Vertical Orientation of Two-Dimensional Perovskite Solar Cells Based on Butylammonium Iodide with Improved Efficiency. ACS Applied Energy Materials, 2021, 4, 13216-13225.	2.5	7
1402	Unveiling the Effect of Potassium Treatment on the Mesoporous TiO₂/ Perovskite Interface in Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 11488-11495.	2.5	13
1403	A Peryleneâ€Based Conjugated Polymer Endows Perovskite Solar Cells with 85ÂÂ°C Durability: The Control of Gas Permeation. Advanced Functional Materials, 2022, 32, 2108855.	7.8	19
1404	Improving interfacial charge transfer by multi-functional additive for high-performance carbon-based perovskite solar cells. Applied Physics Letters, 2021, 119, .	1.5	11
1405	Energy materials for energy conversion and storage: focus on research conducted in Korea. Journal of the Korean Ceramic Society, 2021, 58, 645-661.	1.1	7
1406	Allâ€Inorganic CsPbI₂Br Perovskite Solar Cells: Recent Developments and Challenges. Energy Technology, 2021, 9, 2100691.	1.8	11
1407	Hydrophobic Fluorinated Conjugated Polymer as a Multifunctional Interlayer for High-Performance Perovskite Solar Cells. ACS Photonics, 2021, 8, 3185-3192.	3.2	17
1408	Computational investigation on the photovoltaic performance of an efficient GeSe-based dual-heterojunction thin film solar cell. Semiconductor Science and Technology, 2022, 37, 015008.	1.0	17
1409	Improving the Longâ€Term Stability of Doped Spiroâ€Type Holeâ€Transporting Materials in Planar Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100650.	3.1	6
1410	Flexible perovskite solar cells: Materials and devices. Journal of Semiconductors, 2021, 42, 101606.	2.0	12
1411	Optimal Interfacial Band Bending Achieved by Fine Energy Level Tuning in Mixed-Halide Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3970-3981.	8.8	18
1412	H _xMoO _{3-Y} Nanobelts: An Excellent Alternative to Carbon Electrode for High Performance Mesoscopic Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
1413	The Relationship between Corporate Social Responsibility and Financial Performance of Iraqi Corporations: A Literature Review. Journal of Modern Accounting and Auditing, 2019, 15, .	0.1	0

#	Article	IF	Citations
1414	Passivation optimization and performance improvement of planar a-Si:H/c-Si heterojunction cells in perovskite/silicon tandem solar cells. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 028101.	0.2	2
1415	Single-source flash sublimation of metal-halide semiconductors. , 2019, , .		3
1416	YÃ¼ksek Verimli ve Uzun DÃ¶nem KararlÄ± Perovskit GÃ¼neÅŸ HÃ¼crelerinin Ãœretimi iÃ§in Perovskit/Spiro-OMeTAD ArayÃ¼zeyinin Thiol MolekÃ¼lleri ile Modifikasyonu. European Journal of Science and Technology, 0, , 727-735.	0.5	0
1417	Effect of Urea Addition on the Photovoltaic Performance of Perovskite Solar Cells. Hans Journal of Nanotechnology, 2020, 10, 34-42.	0.1	0
1418	Additive assisted hot-casting free fabrication of Dion-Jacobson 2D perovskite solar cell with efficiency beyond 16%. , 2020, , .		0
1419	Analysis of the hysteresis effect in Perovskite solar cells for the traditional and inverted architectures. , 2020, , .		1
1420	Inorganic charge transport materials for high reliable perovskite solar cells. Ceramist, 2020, 23, 145-165.	0.0	1
1421	Thermally Stable Inorganic Perovskite Solar Cells. , 2020, , .		2
1422	Strategies for Largeâ€Scale Fabrication of Perovskite Films for Solar Cells. Solar Rrl, 2022, 6, 2100683.	3.1	10
1424	Heteroatom engineering on spiro-type hole transporting materials for perovskite solar cells. Journal of Energy Chemistry, 2022, 67, 19-26.	7.1	22
1425	PTB7 as additive in Anti-solvent to enhance perovskite film surface crystallinity for solar cells with efficiency over 21%. Applied Surface Science, 2022, 575, 151737.	3.1	5
1427	Full color emission of all-bromide inorganic perovskite nanocrystals. Applied Physics Letters, 2020, 117, .	1.5	3
1428	Optimization of Charge Transport Layer Thickness for Efficient Perovskite Solar Cell. Lecture Notes in Electrical Engineering, 2021, , 193-202.	0.3	1
1429	The Promise of Perovskite Solar Cells. , 2022, , 388-404.		3
1430	Nonlinear dynamic investigation of the perovskite solar cell with GPLR-FGP stiffeners under blast impact. International Journal of Mechanical Sciences, 2022, 213, 106866.	3.6	19
1431	Few-layer fluorine-functionalized graphene hole-selective contacts for efficient inverted perovskite solar cells. Chemical Engineering Journal, 2022, 430, 132831.	6.6	13
1432	A tailored spacer molecule in 2D/3D heterojunction for ultralow-voltage-loss and stable perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 26829-26838.	5.2	10
1433	Strategies Towards Improving the Stability of All-Inorganic Perovskite Quantum Dots. Springer Series in Materials Science, 2020, , 347-372.	0.4	0

#	Article	IF	Citations
1434	Research on Preparation and Application of Electron Transport Layer Based on SnO₂ Colloid. Applied Physics, 2020, 10, 381-390.	0.0	0
1435	Deciphering the effect of replacing thiophene with selenophene in diketopyrrolopyrrole (DPP)-based low cost hole transport materials on the performance of perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 5994-6003.	2.5	6
1439	Upscaling of perovskite solar modules: The synergy of fully evaporated layer fabrication and allâ€laserâ€scribed interconnections. Progress in Photovoltaics: Research and Applications, 2022, 30, 360-373.	4.4	35
1440	Effect of Air-Flow and Solvent Annealing on Fabrication of Perovskite Active Layer and Photovoltaic Properties of Cells with the Active Layer. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2020, 33, 399-404.	0.1	4
1441	Covalent nanosynthesis of fluorene-based macrocycles and organic nanogrids. Organic and Biomolecular Chemistry, 2021, 20, 73-97.	1.5	6
1442	First Principles Calculation of Electrical and Optical Properties of Cu₃AsO₄: Promising Thin-Film Solar Cell Absorber from Nonferrous Metal Manufacturing By-Products. Materials Transactions, 2021, , .	0.4	0
1443	A review on the emerging applications of 4-cyano-4â€²-alkylbiphenyl (nCB) liquid crystals beyond display. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 275, 115522.	1.7	9
1444	Construction of nanostructured CH3NH3PbI3 layer for high-performance perovskite solar cells by Ar plasma etching. Materials Research Bulletin, 2022, 147, 111666.	2.7	7
1445	Synthesis, Structure, and Optical Properties of Large FAPbBr3 Perovskite Single Crystals. Integrated Ferroelectrics, 2021, 220, 46-55.	0.3	0
1446	Updated Progresses in Perovskite Solar Cells. Chinese Physics Letters, 2021, 38, 107801.	1.3	11
1447	Pressureâ€Treated Engineering to Harvest Enhanced Green Emission in Mnâ€Based Organicâ€“Inorganic Metal Halides at Ambient Conditions. Advanced Functional Materials, 2022, 32, 2109277.	7.8	35
1448	Structural, Electronic Structure, and Photovoltaic Studies of MgO/TiO2/ITO Heterostructures. Journal of Electronic Materials, 2022, 51, 314-320.	1.0	2
1449	Methodologies for >30% Efficient Perovskite Solar Cells via Enhancement of Voltage and Fill Factor. Solar Rrl, 2022, 6, 2100767.	3.1	21
1450	A-Site Mixing to Adjust the Photovoltaic Performance of a Double-Cation Perovskite: It Is Not Always the Simple Way. Journal of Physical Chemistry Letters, 2021, 12, 11206-11213.	2.1	2
1451	Low-cost and efficient hole transport materials based on 9-phenyl-9H-carbazole branch for perovskite solar cells. Surfaces and Interfaces, 2022, 28, 101598.	1.5	2
1452	A Comparison of Charge Carrier Dynamics in Organic and Perovskite Solar Cells. Advanced Materials, 2022, 34, e2101833.	11.1	55
1453	Starburst Carbazole Derivatives as Efficient Hole Transporting Materials for Perovskite Solar Cells. Solar Rrl, 2022, 6, 2100877.	3.1	6
1454	Dopant Free Triphenylamineâ€Based Hole Transport Materials with Excellent Photovoltaic Properties for Highâ€Performance Perovskite Solar Cells. Energy Technology, 2022, 10, 2100838.	1.8	34

#	Article	IF	Citations
1455	Lowâ€Temperature Atomic Layer Deposited Electron Transport Layers for Coâ€Evaporated Perovskite Solar Cells. Solar Rrl, 2022, 6, 2100842.	3.1	16
1456	Corannulene-based hole-transporting material for efficient and stable perovskite solar cells. Cell Reports Physical Science, 2021, 2, 100662.	2.8	13
1458	A Helical Polycycle Molecular Semiconductor for Durable and Efficient Perovskite Solar Cells. , 2022, 4, 11-20.		12
1459	Mitigating voltage loss in efficient CsPbI2Br all-inorganic perovskite solar cells via metal ion-doped ZnO electron transport layer. Applied Physics Letters, 2021, 119, .	1.5	10
1460	Efficient n-i-p Monolithic Perovskite/Silicon Tandem Solar Cells with Tin Oxide via a Chemical Bath Deposition Method. Energies, 2021, 14, 7614.	1.6	7
1461	Investigation on the Stability and Efficiency of MAPbI₃ and MASnI₃ Thin Films for Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	17
1462	Unlocking Voltage Potentials of Mixedâ€Halide Perovskite Solar Cells via Phase Segregation Suppression. Advanced Functional Materials, 2022, 32, 2110698.	7.8	30
1463	Directed ortho and Remote Metalationâ€“Suzukiâ€“Miyaura Cross Coupling Route to Azafluorenol Core Liquid Crystals. Journal of Organic Chemistry, 2021, , .	1.7	1
1464	Charge Transport Layers in Halide Perovskite Photonic Devices. , 2021, , 1-32.		0
1465	Bulk Heterojunction Perovskite Solar Cells Incorporated with P-Type Low Optical Gap Conjugated Polymers. SSRN Electronic Journal, 0, , .	0.4	0
1466	Cooperative Effects of Dopant-Free Hole-Transporting Materials and Polycarbonate Film for Sustainable Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
1467	Effective surface passivation with 4-bromo-benzonitrile to enhance the performance of perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 17089-17098.	2.7	7
1468	Excited-State Dynamics in Metal Halide Perovskites: A Theoretical Perspective. , 2021, , 1-54.		0
1469	Study on bandgap predications of ABX3-type perovskites by machine learning. Organic Electronics, 2022, 101, 106426.	1.4	21
1470	Bulk heterojunction perovskite solar cells incorporated with p-type low optical gap conjugated polymers. Nano Energy, 2022, 93, 106907.	8.2	12
1471	Recent progress in perovskite solar cells: challenges from efficiency to stability. Materials Today Chemistry, 2022, 23, 100686.	1.7	26
1472	A universal co-solvent dilution strategy enables facile and cost-effective fabrication of perovskite photovoltaics. Nature Communications, 2022, 13, 89.	5.8	77
1473	Methylthiophene terminated Dâ€“Ïâ€“D molecular semiconductors as multifunctional interfacial materials for high performance perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 1862-1869.	2.7	4

#	Article	IF	Citations
1474	Fabrication and characterization of CH₃NH₃PbI₃ solar cells with added guanidinium and inserted with decaphenylpentasilane. Japanese Journal of Applied Physics, 2022, 61, SB1024.	0.8	23
1475	Plasmonicâ€“perovskite solar cells, light emitters, and sensors. Microsystems and Nanoengineering, 2022, 8, 5.	3.4	41
1476	Quantifying Efficiency Limitations in Allâ€Inorganic Halide Perovskite Solar Cells. Advanced Materials, 2022, 34, e2108132.	11.1	44
1477	Large-area perovskite solar cells employing spiro-Naph hole transport material. Nature Photonics, 2022, 16, 119-125.	15.6	123
1478	Numerical analysis of a novel HTL-free perovskite solar cell with gradient doping and a WSâ„ interlayer. Superlattices and Microstructures, 2022, 163, 107149.	1.4	5
1479	Challenges for Thermally Stable Spiro-MeOTAD toward the Market Entry of Highly Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 34220-34227.	4.0	17
1480	Effect of chlorine vacancy on the electronic and optical properties of CsSnCl3 perovskites for optoelectronic applications. Chemical Physics Letters, 2022, 794, 139397.	1.2	5
1481	Conjugated polyelectrolytes for stable perovskite solar cells based on methylammonium lead triiodide. Journal of Materials Chemistry A, 2022, 10, 3321-3329.	5.2	1
1482	Multifunctional Compoundâ€Regulated SnO₂ for Highâ€Efficiency and Stable Perovskite Solar Cells under Ambient Air. ChemElectroChem, 2022, 9, .	1.7	6
1483	Promising applications of wide bandgap inorganic perovskites in underwater photovoltaic cells. Solar Energy, 2022, 233, 489-493.	2.9	15
1484	Dual Modification Engineering via Lanthanideâ€Based Halide Quantum Dots and Black Phosphorus Enabled Efficient Perovskite Solar Cells with High Openâ€Voltage of 1.235ÂV. Advanced Functional Materials, 2022, 32, .	7.8	22
1485	In Situ Methylammonium Chloride-Assisted Perovskite Crystallization Strategy for High-Performance Solar Cells. , 2022, 4, 448-456.		13
1486	2D materials for organic and perovskite photovoltaics. Nano Energy, 2022, 94, 106833.	8.2	20
1487	Phenylfluorenamine-functionalized poly(N-vinylcarbazole)s as dopant-free polymer hole-transporting materials for inverted quasi-2D perovskite solar cells. Journal of Energy Chemistry, 2022, 69, 123-131.	7.1	7
1488	Enhanced Photoresponse Performance of Selfâ€Powered PTAA/GaN Microwire Heterojunction Ultraviolet Photodetector Based on Piezoâ€Phototronic Effect. Advanced Materials Interfaces, 2022, 9, .	1.9	5
1489	Cooperative effects of Dopant-Free Hole-Transporting materials and polycarbonate film for sustainable perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135197.	6.6	13
1490	Guanidinium-assisted crystallization modulation and reduction of open-circuit voltage deficit for efficient planar FAPbBr3 perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135181.	6.6	15
1491	Phase segregation induced efficiency degradation and variability in mixed halide perovskite solar cells. Journal of Applied Physics, 2021, 130, .	1.1	12

#	Article	IF	Citations
1492	All Green Solvent Engineering of Organic-Inorganic Hybrid Perovskite Layer for High-Performance Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
1494	Advancements in organic small molecule hole-transporting materials for perovskite solar cells: past and future. Journal of Materials Chemistry A, 2022, 10, 5044-5081.	5.2	69
1495	A triple helicene based molecular semiconductor characteristic of a fully fused conjugated backbone for perovskite solar cells. Energy and Environmental Science, 2022, 15, 1630-1637.	15.6	28
1496	Peptization Induced Wo3@Sno2 to Enable Perovskite Solar Cell with Record Fill-Factor Approaching the Shockleyâ€“Queisser Limit. SSRN Electronic Journal, 0, , .	0.4	0
1497	Effect of low energy proton and He particle irradiation on CsPbBr3 material. Digest Journal of Nanomaterials and Biostructures, 2022, 17, 39-46.	0.3	0
1498	Rethinking the A cation in halide perovskites. Science, 2022, 375, eabj1186.	6.0	207
1499	Ab initiononadiabatic dynamics of semiconductor materials via surface hopping method. Chinese Journal of Chemical Physics, 2022, 35, 16-37.	0.6	1
1500	Mechanically and operationally stable flexible inverted perovskite solar cells with 20.32% efficiency by a simple oligomer cross-linking method. Science Bulletin, 2022, 67, 794-802.	4.3	13
1501	Multifunctional Two-Dimensional Polymers for Perovskite Solar Cells with Efficiency Exceeding 24%. ACS Energy Letters, 2022, 7, 1128-1136.	8.8	60
1502	Transition-Metal-Catalyzed Câ€“C Bond-Forming Reactions via Câ€“H Activation for the Development of Fluorescent Materials with Practical Value. ACS Catalysis, 2022, 12, 2796-2820.	5.5	28
1503	Molecularly Engineered Low-Cost Organic Hole-Transporting Materials for Perovskite Solar Cells: The Substituent Effect on Non-fused Three-Dimensional Systems. ACS Applied Energy Materials, 2022, 5, 3156-3165.	2.5	2
1504	Molecular Engineering of Fluoreneâ€Based Holeâ€Transporting Materials for Efficient Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	6
1505	Construction of Stable Donorâ€“Acceptor Type Covalent Organic Frameworks as Functional Platform for Effective Perovskite Solar Cell Enhancement. Advanced Functional Materials, 2022, 32, .	7.8	46
1506	Passivating the interface between halide perovskite and SnO2 by capsaicin to accelerate charge transfer and retard recombination. Applied Physics Letters, 2022, 120, .	1.5	4
1507	A General Lowâ€Temperature Strategy to Prepare Highâ€Quality Metal Sulfides Chargeâ€Transporting Layers for Allâ€Inorganic CsPbI₂Br Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
1508	Lowâ€temperature crystallization and growth of <scp> CsPbIBr ₂ </scp> films through <scp> PbX ₂ â€DMSO </scp> adduct towards stable and efficient carbonâ€based <scp>allâ€inorganic</scp> perovskite solar cells. International Journal of Energy Research, 2022, 46, 9310-9322.	2.2	7
1509	Hybrid Organicâ€“Inorganic Perovskite Halide Materials for Photovoltaics towards Their Commercialization. Polymers, 2022, 14, 1059.	2.0	18
1510	PTB7 as an Ink-Additive for Spin-Coated Versus Inkjet-Printed Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 4085-4095.	2.5	10

#	Article	IF	Citations
1511	Carrier lifetime measurement of perovskite films by differential microwave photoconductivity decay. Japanese Journal of Applied Physics, 2022, 61, 068001.	0.8	2
1512	Simple-Structured Low-Cost Dopant-Free Hole-Transporting Polymers for High-Stability CsPbI₂Br Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 13400-13409.	4.0	5
1513	Reveal the large open-circuit voltage deficit of all-inorganic CsPbIBr₂ perovskite solar cells. Chinese Physics B, 2022, 31, 038804.	0.7	1
1514	Boosting the efficiency of inverted perovskite solar cells via ethanolamine doped PEDOT:PSS as hole transport layer. Chinese Physics B, 0, , .	0.7	4
1515	Low-temperature processed nickel oxide hole-transporting layer for perovskite solar cell. Journal of the Korean Physical Society, 2022, 80, 981-985.	0.3	1
1516	Controlling the Decomposition of Hybrid Perovskite by a Dithienopyrrole-Based Hole Transport Layer toward Thermostable Solar Cells. , 2022, 4, 600-608.		1
1518	Water-Stable CsPbBr₃/Cs₄PbBr₆ Nanocrystals with a Mixed Fluoropolymer Shell for Optical Temperature Sensing. ACS Applied Nano Materials, 2022, 5, 5025-5034.	2.4	8
1519	Crowning Lithium Ions in Holeâ€Transport Layer toward Stable Perovskite Solar Cells. Advanced Materials, 2022, 34, e2200978.	11.1	39
1520	Attributes of High-Performance Electron Transport Layers for Perovskite Solar Cells on Flexible PET versus on Glass. ACS Applied Energy Materials, 2022, 5, 4096-4107.	2.5	22
1521	Role of Terminal Group Position in Triphenylamine-Based Self-Assembled Hole-Selective Molecules in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 17461-17469.	4.0	15
1522	New insights in construction of three-dimensional donor/acceptor interface for high performance perovskite solar cells -- the preparation of wolf tooth stick-like TiO2. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, , 128958.	2.3	4
1523	Design Strategies of Hole Transport Materials by Electronic and Steric Controls for nâ€iâ€p Perovskite Solar Cells. ChemSusChem, 2022, , .	3.6	5
1524	Breakthrough in the Application of a Small Molecule as Dopant-Free Hole-Transport Material in p-i-n Perovskite Solar Cells. Journal of Physical Chemistry C, 2022, 126, 6147-6152.	1.5	2
1525	A facile strategy for high performance air-processed perovskite solar cells with dopant-free poly(3-hexylthiophene) hole transporter. Solar Energy, 2022, 237, 153-160.	2.9	2
1526	Carbazole-based hole-transport materials for efficient Perovskite solar cells. A computational study. Optik, 2022, 257, 168793.	1.4	4
1527	Electronic and optical properties of the lead free halide double perovskites <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si28.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="italic">Cs</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mi mathvariant="italic">AgBiX</mml:mi></mml:mrow><mml:mrow><mml:mn>6</mml:mn></mml:mrow></mml:msub><mml:mo		

#	Article	IF	Citations
1530	Greenâ€Chemistryâ€Inspired Synthesis of Cyclobutaneâ€Based Holeâ€Selective Materials for Highly Efficient Perovskite Solar Cells and Modules. Angewandte Chemie, 2022, 134, .	1.6	4
1531	A Trifluoroethoxyl Functionalized Spiroâ€Based Holeâ€Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	12
1532	Polymethyl Methacrylate as an Interlayer Between the Halide Perovskite and Copper Phthalocyanine Layers for Stable and Efficient Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	30
1533	Greenâ€Chemistryâ€Inspired Synthesis of Cyclobutaneâ€Based Holeâ€Selective Materials for Highly Efficient Perovskite Solar Cells and Modules. Angewandte Chemie - International Edition, 2022, 61, .	7.2	23
1534	Dual-function of the ZnO nano-sheets as light absorber scaffold and electron transport material in perovskite solar cells. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2021, 12, 045004.	0.7	0
1535	Recent Progress of Critical Interface Engineering for Highly Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	78
1536	Perovskite fiber-shaped optoelectronic devices for wearable applications. Journal of Materials Chemistry C, 2022, 10, 6957-6991.	2.7	18
1537	Inorganic Perovskite Solar Cells with High Voltage and Excellent Thermal and Environmental Stability. ACS Applied Energy Materials, 0, , .	2.5	1
1538	Defect physics of the quasi-two-dimensional photovoltaic semiconductor GeSe. Chinese Physics B, 2022, 31, 116103.	0.7	2
1539	Broadband absorption enhancement in carbon-based perovskite solar cell with a composite light trapping structure. , 2022, 166, 207227.		3
1541	A dopant-free donorâ€“acceptor type semi-crystalline polymeric hole transporting material for superdurable perovskite solar cells. Journal of Materials Chemistry A, 2022, 10, 12187-12195.	5.2	10
1542	Structureâ€“property relationships of diketopyrrolopyrrole- and thienoacene-based Aâ€“Dâ€“A type hole transport materials for efficient perovskite solar cells. New Journal of Chemistry, 0, , .	1.4	0
1543	Robust hole transport material with interface anchors enhances the efficiency and stability of inverted formamidiniumâ€“cesium perovskite solar cells with a certified efficiency of 22.3%. Energy and Environmental Science, 2022, 15, 2567-2580.	15.6	46
1544	Effects of guanidinium addition to CH₃NH₃PbI<sub>3</sub& perovskite solar cells inserted with decaphenylpentasilane. , 0, , .		
1545	Progress of defect and defect passivation in perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 166801.	0.2	1
1546	Numerical Simulation of 30% Efficient Lead-Free Perovskite CsSnGeI3-Based Solar Cells. Materials, 2022, 15, 3229.	1.3	25
1547	Excellent Stability of Perovskite Solar Cells Encapsulated With Paraffin/Ethylene-Vinyl Acetate/Paraffin Composite Layer. Frontiers in Materials, 2022, 9, .	1.2	5
1548	Formation of a Secondary Phase in Thermally Evaporated MAPbI₃ and Its Effects on Solar Cell Performance. ACS Applied Materials & Interfaces, 2022, 14, 34269-34280.	4.0	5

#	Article	IF	Citations
1549	Triarylamine-Functionalized Imidazolyl-Capped Bithiophene Hole Transporting Material for Cost-Effective Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 22053-22060.	4.0	8
1550	A Novel 4,4â€™-Bipiperidine-Based Organic Salt for Efficient and Stable 2D-3D Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 22324-22331.	4.0	6
1551	A Doped Hole Transport Layer Qualified for 100ÂÂ°Câ€Tolerant Perovskite Solar Cells. Advanced Optical Materials, 0, , 2200515.	3.6	0
1552	Inorganic cesium lead mixed halide based perovskite solar materials modified with functional silver iodide. Scientific Reports, 2022, 12, 7794.	1.6	9
1553	An efficient solution-processable hybridized local and charge-transfer (HLCT)-based deep-red fluorescent emitter for simple structured non-doped OLED. Journal of Luminescence, 2022, 248, 118921.	1.5	12
1554	Recent development in MOFs for perovskite-based solar cells. , 2022, , 507-534.		1
1555	Analytical Review of Spiroâ€OMeTAD Hole Transport Materials: Paths Toward Stable and Efficient Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	53
1556	Enhanced Charge Transport by Regulating the Electronic Structure in 2D Tin-Based Perovskite Solar Cells. Journal of Physical Chemistry C, 2022, 126, 9425-9436.	1.5	6
1557	Characterization of interfaces: Lessons from the past for the future of perovskite solar cells. Journal of Semiconductors, 2022, 43, 051202.	2.0	6
1558	Above 23% Efficiency by Binary Surface Passivation of Perovskite Solar Cells Using Guanidinium and Octylammonium Spacer Cations. Solar Rrl, 2022, 6, .	3.1	22
1559	Nonlinear dynamic instability of the perovskite solar cell under biaxial mechanical impacts. Engineering Failure Analysis, 2022, 139, 106444.	1.8	11
1560	X-ray diffraction of photovoltaic perovskites: Principles and applications. Applied Physics Reviews, 2022, 9, .	5.5	28
1561	Numerical simulation of novel designed HTL-free perovskite solar cells to realize over 25% efficiency based on CH3NH3PbI3/CH3NH3PbI2Br cascade structure. Optical Materials, 2022, 129, 112496.	1.7	7
1562	Machine learning enabled development of unexplored perovskite solar cells with high efficiency. Nano Energy, 2022, 99, 107394.	8.2	27
1564	Toward Efficient Perovskite Solar Cells: Progress, Strategies, and Perspectives. ACS Energy Letters, 2022, 7, 2084-2091.	8.8	68
1565	Band gap engineering to stimulate the optoelectronic performance of lead-free halide perovskites RbGeX3 (Xâ€‰=â€‰Cl, Br) under pressure. Journal of Materials Science: Materials in Electronics, 2022, 33, 13860-13875.	1.1	13
1566	One-step precipitation of stable perovskite CsPbBr₃ quantum dots in silicate glass by picosecond laser pulses. Optical Materials Express, 2022, 12, 2260.	1.6	6
1567	Intrinsic and extrinsic stability of triple-cation perovskite solar cells through synergistic influence of organic additive. Cell Reports Physical Science, 2022, 3, 100906.	2.8	7

#	Article	IF	Citations
1568	Progress toward understanding the fullerene-related chemical interactions in perovskite solar cells. Nano Research, 2022, 15, 7139-7153.	5.8	12
1569	The Evolution of Classical Spiro-OMeTAD: Synthesis of Arylamine Endcapped Indenone Spirofluorene. Frontiers in Chemistry, 2022, 10, .	1.8	1
1570	Ionic liquid-mediated reconstruction of perovskite surface for highly efficient photovoltaics. Chemical Engineering Journal, 2022, 446, 137351.	6.6	5
1571	D-Ï€-D hole transport materials based on dioctylfluorene for highly efficient and stable perovskite solar cells without pre-oxidation. Dyes and Pigments, 2022, 204, 110452.	2.0	6
1572	The Role of Position and Orientation of Organic Fa Central Cation in Physical Properties of Formamidinium Lead Chloride Perovskite. SSRN Electronic Journal, 0, , .	0.4	0
1574	Enhanced Performance of Perovskite Solar Cells Based on Zn2+ Doped Nico2o4 Nws Hole Transport Layers. SSRN Electronic Journal, 0, , .	0.4	0
1575	The high open-circuit voltage of perovskite solar cells: a review. Energy and Environmental Science, 2022, 15, 3171-3222.	15.6	181
1576	Impact of Alkyl Chain Length on the Properties of Fluorenyl-Based Linear Hole-Transport Materials in p-i-n Perovskites Solar Cells. ACS Applied Energy Materials, 2022, 5, 7988-7996.	2.5	6
1577	Geometrically nonlinear dynamic analysis of the stiffened perovskite solar cell subjected to biaxial velocity impacts. Nonlinear Dynamics, 2022, 110, 281-311.	2.7	8
1578	Improving the Electrical Properties and Hole Extraction Efficiency of Inverted Perovskite Solar Cells with AuCl₃ Interfacial Modification Layer. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	4
1579	Fluorene-Modified Zinc Porphyrin as Low-Cost Hole-Transporting Material for Efficient Perovskite Solar Cells. Organic Materials, 2022, 4, 28-35.	1.0	3
1580	Efficient and Lessâ€Toxic Indiumâ€Doped MAPbI₃ Perovskite Solar Cells Prepared by Metal Alloying Technique. Solar Rrl, 2022, 6, .	3.1	6
1582	Visualizing the Surface Photocurrent Distribution in Perovskite Photovoltaics. Small, 2022, 18, .	5.2	12
1583	Formamidinium lead triiodide perovskites with improved structural stabilities and photovoltaic properties obtained by ultratrace dimethylamine substitution. NPG Asia Materials, 2022, 14, .	3.8	13
1584	A Singleâ€Dot Perovskite Spectrometer. Advanced Materials, 2022, 34, .	11.1	26
1586	In-situ peptization of WO3 in alkaline SnO2 colloid for stable perovskite solar cells with record fill-factor approaching the shockleyâ€“queisser limit. Nano Energy, 2022, 100, 107468.	8.2	29
1587	Synergistic bonding stabilized interface for perovskite solar cells with over 24% efficiency. Nano Energy, 2022, 100, 107518.	8.2	18
1588	Recent Progress in Mixed Aâ€Site Cation Halide Perovskite Thinâ€Films and Nanocrystals for Solar Cells and Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	3.6	47

#	Article	IF	Citations
1589	Modulating Donor Assemblies of D-Î-D Type Hole Transport Materials for Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
1590	Rational design of small molecule hole-transporting materials with a linear Ï€-bridge for highly efficient perovskite solar cells. Physical Chemistry Chemical Physics, 2022, 24, 18793-18804.	1.3	2
1591	Dibenzo heterocyclic-terminated spiro-type hole transporting materials for perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 10988-10994.	2.7	10
1592	Molecular Engineering of Peripheral Substitutions to Construct Efficient Acridine Core Based Hole Transport Materials for Perovskite Solar Cell. SSRN Electronic Journal, 0, , .	0.4	0
1593	Sum frequency generation vibrational spectra of perovskite nanocrystals at the single-nanocrystal and ensemble levels. Chinese Journal of Chemical Physics, 2022, 35, 738-746.	0.6	6
1594	Polyhydroxy Compound Modifying Sno2 for High-Performance and Stable Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
1595	Molecular design for perovskite solar cells. International Journal of Energy Research, 2022, 46, 14740-14765.	2.2	3
1596	Highâ€Performance MAPbI₃/PM6:Y6 Perovskite/Organic Hybrid Photodetectors with a Broadband Response. Advanced Optical Materials, 2022, 10, .	3.6	9
1597	Sustainable Pb Management in Perovskite Solar Cells toward Ecoâ€Friendly Development. Advanced Energy Materials, 2022, 12, .	10.2	38
1598	Structural Engineering of FDT toward Promising Spiro-Typed Hole-Transporting Materials: Promoting the Hole Transport and Stabilizing the HOMO Levels. Journal of Physical Chemistry C, 2022, 126, 11529-11536.	1.5	11
1599	Surface modified NiOx as an efficient hole transport layer in inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 18522-18532.	1.1	2
1600	Interfacial Dipole poly(2-ethyl-2-oxazoline) Modification Triggers Simultaneous Band Alignment and Passivation for Air-Stable Perovskite Solar Cells. Polymers, 2022, 14, 2748.	2.0	2
1601	Isomeric Dâ€Ï€â€Ð Dopantâ€Free Hole Transport Materials: Effect of the Substitution Position and Heteroatom on the Performance of Perovskite Solar Cells. ChemistrySelect, 2022, 7, .	0.7	2
1602	Future Research Directions in Perovskite Solar Cells: Exquisite Photon Management and Thermodynamic Phase Stability. Advanced Materials, 2023, 35, .	11.1	7
1603	Stability of perovskite materials and devices. Materials Today, 2022, 58, 275-296.	8.3	35
1604	Facile and Stable Fluorene Based Organic Hole Transporting Materials for Efficient Perovskite Solar Cells. Macromolecular Research, 2022, 30, 745-750.	1.0	7
1605	Optical properties of CsFAMA-based perovskite film and its application in the inverted solar cells with poly(methyl methacrylate) passivation layer. Optical Materials Express, 2022, 12, 3262.	1.6	5
1606	Progress and challenges of halide perovskite-based solar cell- a brief review. Materials Science in Semiconductor Processing, 2022, 150, 106953.	1.9	22

#	Article	IF	Citations
1607	Thermally Stable D2h Symmetric Donorâ€Ïâ€Donor Porphyrins as Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie, 0, , .	1.6	3
1608	A Conductive Molecular Semiconductor Composite with Over 160ÂÂ°C Glass Transition Temperature for Heatâ€Resistant Perovskite Solar Cells. Advanced Electronic Materials, 0, , 2200425.	2.6	2
1609	Oxidation of Spiro-OMeTAD in High-Efficiency Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 34303-34327.	4.0	34
1610	Structural stability, electronic, optical, and thermoelectric properties of layered perovskite Bi₂LaO₄I. RSC Advances, 2022, 12, 24156-24162.	1.7	3
1611	Novel Prediction Model of Band Gap in Organicâ€“Inorganic Hybrid Perovskites Based on a Simple Cluster Model Database. Journal of Physical Chemistry C, 2022, 126, 13409-13415.	1.5	6
1612	Conjugation Engineering of Spiro-Based Hole Transport Materials for Efficient and Stable Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 2667-2676.	8.8	37
1613	Constructing Conductive Network in Hybrid Perovskite for a Highly Efficient Microwave Absorption System. Advanced Functional Materials, 2022, 32, .	7.8	48
1614	Recent Progress on the Phase Stabilization of FAPbI₃ for Highâ€Performance Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	25
1615	Fill Factor Losses and Deviations from the Superposition Principle in Lead Halide Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	22
1616	Manufacture of High-Efficiency and Stable Lead-Free Solar Cells through Antisolvent Quenching Engineering. Nanomaterials, 2022, 12, 2901.	1.9	25
1617	Nanoscale color control of perovskite solar cells using Fano resonances of aluminum arsenide nanoarrays. AIP Advances, 2022, 12, .	0.6	1
1618	Dâ€Aâ€Ïâ€Aâ€D Type Based Benzoâ€dithiophene as Core moiety a New Class Hole Transporting Materials for Efficient Perovskite Solar Cells. ChemPhotoChem, 0, , .	1.5	1
1619	Thermally StableD_{2h}Symmetric Donorâ€Ïâ€Donor Porphyrins as Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	25
1620	Synergistic Effects of Bipolar Additives on Grain Boundary-Mediated Charge Transport for Efficient Carbon-Based Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 38963-38971.	4.0	3
1621	Efficient Perovskite Solar Cells with a CuI-Modified Polymer Hole-Transport Layer. ACS Applied Energy Materials, 2022, 5, 11034-11041.	2.5	5
1622	A Novel Method to Control the Crystallographicâ€Preferred Orientation of Lead Iodide Toward Highly Efficient and Largeâ€Area Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	3
1623	PVDF-directed synthesis, stability and anion exchange of cesium lead bromide nanocrystals. Methods and Applications in Fluorescence, 2022, 10, 044005.	1.1	4
1624	One-step constructed dual interfacial layers for stable perovskite solar cells. Materials Today Physics, 2022, 27, 100796.	2.9	3

#	Article	IF	Citations
1625	Fabrication and Modification Strategies of Metal Halide Perovskite Absorbers. Journal of Renewable Materials, 2023, 11, 61-77.	1.1	1
1626	Periphery group engineering in hole transport materials for efficient perovskite solar cells. Dyes and Pigments, 2022, 206, 110671.	2.0	6
1627	Low-cost planar organic small molecules as hole transport materials for high efficient perovskite solar cells. Surfaces and Interfaces, 2022, 34, 102307.	1.5	3
1628	Hole transport free carbon-based high thermal stability CsPbI_{1.2}Br_{1.8} solar cells with an amorphous InGaZnO₄ electron transport layer. Physical Chemistry Chemical Physics, 2022, 24, 18896-18904.	1.3	2
1629	Photovoltaic properties of hole transport materials for organic solar cell (OSC) applications: physiochemical insight and in silico designing. Australian Journal of Chemistry, 2022, 75, 399-411.	0.5	4
1630	Interface-engineering studies on the photoelectric properties and stability of the CsSnI₃â€“SnS heterostructure. Physical Chemistry Chemical Physics, 2022, 24, 24123-24129.	1.3	1
1631	A synergistic co-passivation strategy for high-performance perovskite solar cells with large open circuit voltage. Journal of Materials Chemistry C, 2022, 10, 12699-12707.	2.7	13
1632	Dynamic Electrical Models of Perovskite Solar Cells Considering Hysteresis and Charge Accumulations Effects by Using Equilibrium Optimizer. IEEE Access, 2022, 10, 104111-104122.	2.6	5
1633	High efficiency (>20%) and stable inverted perovskite solar cells: current progress and future challenges. Journal of Materials Chemistry C, 2022, 10, 12908-12928.	2.7	10
1634	Roles of Inorganic Oxide Based HTMs towards Highly Efficient and Long-Term Stable PSCâ€”A Review. Nanomaterials, 2022, 12, 3003.	1.9	6
1635	Lead-Free Cs₂TeX₆ (X = Cl, Br, and I) Perovskite Microcrystals with High Stability for Efficient Photocatalytic CO₂ Reduction. Inorganic Chemistry, 2022, 61, 14447-14454.	1.9	18
1636	Configurable Organic Charge Carriers toward Stable Perovskite Photovoltaics. Chemical Reviews, 2022, 122, 14954-14986.	23.0	26
1637	Ultraviolet-to-infrared broadband photodetector and imaging application based on a perovskite single crystal. Optics Express, 2022, 30, 40611.	1.7	3
1638	Molecular Engineering of Peripheral Substitutions to Construct Efficient Acridine Core-Based Hole Transport Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 44450-44459.	4.0	5
1639	A Nâ€Ethylcarbazoleâ€Terminated Spiroâ€Type Holeâ€Transporting Material for Efficient and Stable Perovskite Solar Cells. ChemSusChem, 2022, 15, .	3.6	6
1640	Green-Solvent-Processable Low-Cost Fluorinated Hole Contacts with Optimized Buried Interface for Highly Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 43547-43557.	4.0	14
1641	BT-MA_{0.6}FA_{0.4}PbI_{3â€“x}Cl_x Unsymmetrical Perovskite for Solar Cells with Superior Stability and PCE over 23%. ACS Applied Energy Materials, 2022, 5, 11058-11066.	2.5	5
1642	Transporting holes stably under iodide invasion in efficient perovskite solar cells. Science, 2022, 377, 1227-1232.	6.0	75

#	Article	IF	Citations
1643	Perovskites: Emergence of highly efficient thirdâ€generation solar cells. International Journal of Energy Research, 2022, 46, 21856-21883.	2.2	13
1644	Optimal Nb ⁵⁺ doping for enhanced optical reflectivity and improved thermophysical properties of La _{0.9} Sr _{0.1} Ti _{1â^'} _x Nb _x O ₃₊ _{Î´} . Journal of the American Ceramic Society, 0, , .	1.9	0
1645	Spiroâ€OMeTADâ€Based Hole Transport Layer Engineering toward Stable Perovskite Solar Cells. Small Methods, 2022, 6, .	4.6	21
1646	Defect Passivation by a Sulfurâ€Containing Lewis Base for Efficient Printable Mesoscopic Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
1647	Interfacial Engineering for Highâ€Performance PTAAâ€Based Inverted 3D Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
1648	Probing the photodegradation of MAPI perovskite with concentrated sunlight. Optical Materials, 2022, 133, 113012.	1.7	3
1649	Organic-inorganic hybrid electron transport layer of PVP-doped SnO2 for high-efficiency stable perovskite solar cells. Solar Energy Materials and Solar Cells, 2022, 248, 112032.	3.0	6
1650	Controllable synthesis of Cu-based quantum dots/nanocrystals and application in white light-emitting diodes. Dalton Transactions, 2022, 51, 17883-17894.	1.6	5
1651	Impact of fluorination on the energy level alignment of an F_nZnPc/MAPbI₃ interface. Nanoscale Advances, 2022, 4, 5070-5076.	2.2	4
1652	Unveiling Ultrafast Carrier Extraction in Highly Efficient 2D/3D Bilayer Perovskite Solar Cells. ACS Photonics, 2022, 9, 3584-3591.	3.2	5
1653	Constructing Efficient Hole Transport Material through Ï€-Conjunction Extension for Perovskite Solar Cell. ACS Applied Energy Materials, 2022, 5, 13261-13268.	2.5	5
1654	Quantumâ€Confined Dodecahedron CsPbBr₃ Quantum Dots by A Sequential Postâ€Treatment Strategy for Efficient Blue PeLEDs. Advanced Functional Materials, 2022, 32, .	7.8	6
1655	Theoretical design and prediction of novel fluorene-based non-fullerene acceptors for environmentally friendly organic solar cell. Arabian Journal of Chemistry, 2023, 16, 104374.	2.3	2
1656	Active Manipulation of Luminescent Dynamics via Au NPsâ€CsPbBr₃ Interfacial Engineering. Laser and Photonics Reviews, 2023, 17, .	4.4	6
1657	Preparation of Perovskite Solar Cells in the Air: Degradation Mechanism and Prospects on <scp>Largeâ€Area</scp> Fabrication^{â€}. Chinese Journal of Chemistry, 2023, 41, 599-617.	2.6	11
1658	Elucidating the Origins of High Preferential Crystal Orientation in Quasiâ€2D Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	8
1659	Opportunities and Challenges for Perovskite Solar Cells Based on Vacuum Thermal Evaporation. Advanced Materials Technologies, 2023, 8, .	3.0	10
1660	Water-Repelling Dopant-Free Hole-Transporting Materials for Stable and Efficient Planar Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2022, 10, 14948-14954.	3.2	7

#	Article	IF	Citations
1661	Facile synthesis of spiro-core-based hole-transporting material for high-performance and stable perovskite solar cells. Chemical Engineering Journal, 2023, 454, 139926.	6.6	11
1662	Modulating donor assemblies of D-Ï€-D type hole transport materials for perovskite solar cells. Journal of Power Sources, 2022, 551, 232199.	4.0	4
1663	Thiophene-based molecules as hole transport materials for efficient perovskite solar cells or as donors for organic solar cells. Materials Chemistry and Physics, 2023, 293, 126851.	2.0	9
1664	Polyhydroxy compound modifying SnO2 for high-performance and stable perovskite solar cells. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 656, 130318.	2.3	3
1665	Synergistic dual-interface modification strategy for highly reproducible and efficient PTAA-based inverted perovskite solar cells. Chemical Engineering Journal, 2023, 453, 139988.	6.6	11
1666	Improving carrier separation at the TiO₂/CsPbIBr₂ interface by gradient Sn-doping. Physical Chemistry Chemical Physics, 2022, 24, 28429-28435.	1.3	1
1667	Recent progress in perovskite solar cells: from device to commercialization. Science China Chemistry, 2022, 65, 2369-2416.	4.2	53
1668	Surface Versus Bulk State Transitions in Inkjet-Printed All-Inorganic Perovskite Quantum Dot Films. Nanomaterials, 2022, 12, 3956.	1.9	1
1669	Efficient Perovskite Solar Cells with Cesium Acetate-Modified TiO₂ Electron Transport Layer. Journal of Physical Chemistry C, 2022, 126, 19963-19970.	1.5	3
1670	Efficient vertical charge transport in polycrystalline halide perovskites revealed by four-dimensional tracking of charge carriers. Nature Materials, 2022, 21, 1388-1395.	13.3	17
1671	Method to Inhibit Perovskite Solution Aging: Induced by Perovskite Microcrystals. ACS Applied Materials & Interfaces, 2022, 14, 52960-52970.	4.0	4
1672	Perovskite Dual-function Passivator: Room Temperature Ionic Liquid Obtained from Mechanochemical Preparation. Acta Chimica Sinica, 2022, 80, 1469.	0.5	0
1673	Perovskite solar cells: Thermal and chemical stability improvement, and economic analysis. Materials Today Chemistry, 2023, 27, 101284.	1.7	5
1674	Polar Side-Chain Tuning of Perylene Diimide and Fluorene-Based Cathode Interfacial Material for High-Performance Inverted Perovskite Solar Cells. Materials Chemistry Frontiers, 0, , .	3.2	2
1675	Study of molybdenum oxide optimized hole carrier transport in perovskite solar cells. Organic Electronics, 2023, 113, 106697.	1.4	4
1676	Dispersion-correction density functional theory (DFT+D) and spin-orbit coupling (SOC) method into the structural, electronic, optical and mechanical properties of CH3NH3PbI3. Computational Condensed Matter, 2023, 34, e00777.	0.9	5
1677	Utilization of Zinc-doped Nickel Oxide Hole Transporting Materials to Improve Efficiency and Stability of Perovskite Solar Cells. , 2022, 9, 71-78.		0
1678	Thienothiopheneâ€Assisted Property Optimization for Dopantâ€Free Ïâ€Conjugation Polymeric Hole Transport Material Achieving Over 23% Efficiency in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	18

#	Article	IF	Citations
1679	Improving intrinsic stability for perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	7
1680	Comparative study of hole transporting layers commonly used in high-efficiency perovskite solar cells. Journal of Materials Science, 2022, 57, 21172-21191.	1.7	5
1681	Electrically Reliable Perovskite Photovoltaic Cells Against Instantaneous Kilovolt Stress. Advanced Energy Materials, 2023, 13, .	10.2	4
1682	Nexuses Between the Chemical Design and Performance of Small Molecule Dopantâ€Free Hole Transporting Materials in Perovskite Solar Cells. Small, 2023, 19, .	5.2	19
1683	METAL OXIDE ELECTRON TRANSPORT MATERIALS IN PEROVSKITE SOLAR CELLS: A REVIEW. European Journal of Materials Science and Engineering, 2022, 7, 225-260.	0.3	0
1684	Improving Stability and Performance of Cesium Mixed Lead Halides for Photovoltaic Applications. Jom, 0, , .	0.9	0
1685	Perovskite solar cells based on spiro-OMeTAD stabilized with an alkylthiol additive. Nature Photonics, 2023, 17, 96-105.	15.6	48
1686	Environmental and health risks of perovskite solar modules: Case for better test standards and risk mitigation solutions. IScience, 2023, 26, 105807.	1.9	6
1687	Greenâ€solvent Processable Dopantâ€free Hole Transporting Materials for Inverted Perovskite Solar Cells. Angewandte Chemie, 2023, 135, .	1.6	0
1688	TiO2/SnO2 Bilayer Electron Transport Layer for High Efficiency Perovskite Solar Cells. Nanomaterials, 2023, 13, 249.	1.9	3
1689	Greenâ€solvent Processable Dopantâ€free Hole Transporting Materials for Inverted Perovskite Solar Cells. Angewandte Chemie - International Edition, 2023, 62, .	7.2	24
1690	Designing and Theoretical Study of Dibenzocarbazole Derivatives Based Hole Transport Materials: Application for Perovskite Solar Cells. Journal of Fluorescence, 2023, 33, 1201-1216.	1.3	3
1691	Nonlinear dynamic analysis of the perovskite solar cell under blast impacts based on the modified strain gradient theory. Acta Mechanica, 0, , .	1.1	0
1692	Revealing the mechanism between ion migration and the oxidation of hole-transporting layers in high-efficiency perovskite solar cells. Materials Science in Semiconductor Processing, 2023, 157, 107310.	1.9	1
1693	Lead, tin, bismuth or organics: Assessment of potential environmental and human health hazards originating from mature perovskite PV technology. Solar Energy Materials and Solar Cells, 2023, 252, 112177.	3.0	4
1694	Recent Advances and Challenges toward Efficient Perovskite/Organic Integrated Solar Cells. Energies, 2023, 16, 266.	1.6	6
1695	Effects of Overnight Oxidation on Perovskite Solar Cells with Co(III)TFSI Co-Doped Spiro-OMeTAD. Energies, 2023, 16, 354.	1.6	2
1696	The Future of Spirobifluoreneâ€Based Molecules as Holeâ€Transporting Materials for Solar Cells. Solar Rrl, 2023, 7, .	3.1	7

#	Article	IF	Citations
1697	Numerical simulation to optimize the efficiency of HTM-free perovskite solar cells by ETM engineering. Solar Energy, 2023, 250, 108-118.	2.9	10
1698	Synthesis techniques of metal halide perovskites. , 2023, , 91-151.		1
1699	Reducing surficial and interfacial defects by thiocyanate ionic liquid additive and ammonium formate passivator for efficient and stable perovskite solar cells. Nano Research, 2023, 16, 6849-6858.	5.8	10
1700	Improving Ultraviolet Stability of Perovskite Solar Cells via Singlet Fission ‹scp›Downâ€Conversion‹/scp›‹sup›â€‹/sup›. Chinese Journal of Chemistry, 2023, 41, 1057-1065.	2.6	7
1701	Enhancing Photoluminescence of CsPb(ClxBr1â^'x)3 Perovskite Nanocrystals by Fe2+ Doping. Nanomaterials, 2023, 13, 533.	1.9	3
1702	Alkylammonium bis(trifluoromethylsulfonyl)imide as a dopant in the hole-transporting layer for efficient and stable perovskite solar cells. Energy and Environmental Science, 2023, 16, 2226-2238.	15.6	12
1703	Experimental investigation of additive free-low-cost vinyl triarylamines based hole transport material for FAPbI‹sub›3‹/sub›-based perovskite solar cells to enhance efficiency and stability. Materials Research Express, 2023, 10, 044003.	0.8	2
1704	Symmetric acridine bridging hole transport material for perovskite solar cell. Dyes and Pigments, 2023, 213, 111158.	2.0	0
1705	Synchrotron based transient x-ray absorption spectroscopy for emerging solid-state energy materials. Chemical Physics Reviews, 2023, 4, .	2.6	1
1706	Fine tuning the optoelectronic properties of Dibenzo[b,d]Furan-Centered linear hole transporting materials for perovskite solar cells. Journal of Physics and Chemistry of Solids, 2023, 178, 111337.	1.9	11
1707	Recent advances of two-dimensional material additives in hybrid perovskite solar cells. Nanotechnology, 2023, 34, 172001.	1.3	5
1708	Unraveling the effects of a GeSe BSF layer on the performance of a CuInSe‹sub›2‹/sub› thin film solar cell: a computational analysis. , 2023, 2, 428.		10
1709	Enhanced stability of carbon-based perovskite solar cells by using n-butylamine to assemble 2D capping layer. Organic Electronics, 2023, 115, 106757.	1.4	1
1710	Certified high-efficiency â€œlarge-areaâ€•perovskite solar module for Fresnel lens-based concentrated photovoltaics. IScience, 2023, 26, 106079.	1.9	3
1711	Direct Benzylic Câ€“H Functionalization with Fluorenones under Visible-Light Irradiation. Journal of Organic Chemistry, 2023, 88, 2612-2620.	1.7	5
1712	Development for Highly Efficient Organometal Halide Perovskite Solar Cells and Modules. Vacuum and Surface Science, 2023, 66, 103-108.	0.0	0
1713	Perovskite-loaded plasmonic gold nanorod composites enhanced solar cell performance. Advanced Composites and Hybrid Materials, 2023, 6, .	9.9	4
1714	Investigations of Coherence in Perovskite Quantum Dots with Classical and Quantum Light. Journal of Physical Chemistry C, 2023, 127, 3579-3593.	1.5	2

#	Article	IF	Citations
1715	Controlled growth of perovskite layers with volatile alkylammonium chlorides. Nature, 2023, 616, 724-730.	13.7	610
1716	Accelerating defect analysis of solar cells via machine learning of the modulated transient photovoltage. Fundamental Research, 2023, , .	1.6	2
1717	Halogenated Holeâ€Transport Molecules with Enhanced Isotropic Coordination Capability Enable Improved Interface and Light Stability of Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	14
1718	Enhanced Circularly Polarized Photoluminescence of Chiral Perovskite Films by Surface Passivation with Chiral Amines. Journal of Physical Chemistry Letters, 2023, 14, 2317-2322.	2.1	3
1719	Numerical Analysis of High-Efficiency CH3NH3PbI3 Perovskite Solar Cell with PEDOT:PSS Hole Transport Material Using SCAPS 1D Simulator. Journal of Electronic Materials, 2023, 52, 4338-4350.	1.0	4
1720	State-of-the-Art Techniques on Asymmetrical Perylene Diimide Derivatives: Efficient Electron-Transport Materials for Perovskite Solar Cells. Journal of Physical Chemistry C, 2023, 127, 5114-5124.	1.5	1
1721	Efficient Perovskite Solar Cells with Iodineâ€Doped Spiroâ€OMeTAD Hole Transport Layer via Fast Oxidation. Solar Rrl, 2023, 7, .	3.1	6
1722	Importance of Low Humidity and Selection of Halide Ions of Octylammonium Halide in 2Dâ€“3D Perovskite Solar Cells Fabricated in Air. Advanced Materials Interfaces, 2023, 10, .	1.9	2
1723	Machine learning and density functional theory simulation of the electronic structural properties for novel quaternary semiconductors. Physical Chemistry Chemical Physics, 2023, 25, 9123-9130.	1.3	4
1724	Modifying SnO₂ with ammonium polyacrylate to enhance the performance of perovskite solar cells. New Journal of Chemistry, 2023, 47, 6789-6795.	1.4	1
1725	Low-cost and LiTFSI-free diphenylamine-substituted hole transporting materials for highly efficient perovskite solar cells and modules. Materials Chemistry Frontiers, 2023, 7, 2241-2250.	3.2	2
1726	Surface Passivation of CsPbI ₃ Films for Efficient and Stable Hole-Transporting Layer-Free Carbon-Based Perovskite Solar Cells. ACS Applied Energy Materials, 2023, 6, 3495-3503.	2.5	2
1727	Multifunctional Organicâ€“Inorganic Hybrid Perovskite Microcrystalline Engineering and Electromagnetic Response Switching Multiâ€Band Devices. Advanced Materials, 2023, 35, .	11.1	70
1728	Recent Progress in Perovskite Solar Cells: Status and Future. Coatings, 2023, 13, 644.	1.2	8
1729	A low-symmetry monothiatruxene-based hole transport material for planar nâ€“iâ€“p perovskite solar cells with 18.9% efficiency. Journal of Materials Chemistry C, 2023, 11, 8214-8222.	2.7	3
1730	Development of Software for the Analysis of the Currentâ€“Voltage Characteristics of Perovskite Solar Cells based on One- and Two-Diode Models. Applied Solar Energy (English Translation of) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.2	0
1731	Kineticâ€Controlled Crystallization of Î±â€FAPbI₃ Inducing Preferred Crystallographic Orientation Enhances Photovoltaic Performance. Advanced Science, 2023, 10, .	5.6	8
1732	Perovskite solar cells approaching 25% PCE using side chain terminated hole transport materials with low concentration in a non-halogenated solvent process. Journal of Materials Chemistry A, 2023, 11, 9608-9615.	5.2	5

#	Article	IF	Citations
1733	Direct Integration of Perovskite Solar Cells with Carbon Fibre Substrates. Advanced Materials, 0, , .	11.1	0
1734	Transport Layer Material and Thickness Optimization of Csâ„TiBrâ‚ƒ Based Solar Cell. , 2022, , .		0
1735	Perovskite Materials for Photovoltaics: A Review. EPJ Applied Physics, 0, , .	0.3	0
1736	Perovskite solar cells using NaF additive with enhanced stability under air environment. Electrochimica Acta, 2023, 456, 142409.	2.6	2
1737	Preparation and performance of CsPbBr3 nanocrystals in a fluorophosphate glass matrix. Journal of Nanoparticle Research, 2023, 25, .	0.8	1
1738	Moistureâ€Resilient Perovskite Solar Cells for Enhanced Stability. Advanced Materials, 0, , .	11.1	12
1739	â€œMetal Halide Perovskite Solar Modules: The Challenge of Upscaling and Commercializing This Technologyâ€• , 2023, , 297-321.		0
1748	Direct Observation of Intragrain Defect Elimination in FAPbI₃ Perovskite Solar Cells by Two-Dimensional PEA₂PbI₄. ACS Energy Letters, 2023, 8, 2620-2629.	8.8	5
1757	Green solvents, materials, and lead-free semiconductors for sustainable fabrication of perovskite solar cells. RSC Advances, 2023, 13, 18165-18206.	1.7	7
1772	The enhanced operational stability of perovskite solar cell through low-temperature processed NiO hole transporting layer and GPE passivation. AIP Conference Proceedings, 2023, , .	0.3	0
1791	Design of perovskite light-emitting diodes based on FAPbBr3 nanocrystals synthesized by ultrasonic crushing method. , 2023, , .		0
1796	Numerical Study to Improve the Performance Parameters of Quantum Dot Perovskite Solar Cell. , 2023, , .		0
1797	Three-dimensional lead iodide perovskites based on complex ions. Materials Advances, 0, , .	2.6	0
1803	Modeling and Analysis of a Novel HTL-Free CsGeI₃ Inorganic Perovskite Solar Cell Structure. , 2023, , .		0
1822	A route to carbon-sp³ bridging spiro-molecules: synthetic methods and optoelectronic applications. Organic Chemistry Frontiers, 0, , .	2.3	0