

Molecule-€Doped Nickel Oxide: Verified Charge Transfer Perovskite Solar Cell

Advanced Materials

30, e1800515

DOI: [10.1002/adma.201800515](https://doi.org/10.1002/adma.201800515)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Inverted planar organic-inorganic hybrid perovskite solar cells with NiO x hole-transport layers as light-in window. Applied Surface Science, 2018, 451, 325-332.	3.1	15
2	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
3	Supersmooth Ta ₂ O ₅ /Ag/Polyetherimide Film as the Rear Transparent Electrode for High Performance Semitransparent Perovskite Solar Cells. Advanced Optical Materials, 2019, 7, 1801409.	3.6	13
4	Design of an Inorganic Mesoporous Hole-Transporting Layer for Highly Efficient and Stable Inverted Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805660.	11.1	179
5	Polymeric Surface Modification of NiO _x -Based Inverted Planar Perovskite Solar Cells with Enhanced Performance. ACS Sustainable Chemistry and Engineering, 2018, 6, 16806-16812.	3.2	83
6	Zn _{0.8} Cd _{0.2} S@PCBM Hybrid as an Efficient Electron Transport Layer for Air-Processed Planar Perovskite Solar Cells: Improvement of Interfacial Electron Transfer and Device Stability. Solar Rrl, 2018, 2, 1800222.	3.1	23
7	Inverted CH ₃ NH ₃ PbI ₃ perovskite solar cells based on solution-processed V ₂ O ₅ film combined with P3CT salt as hole transport layer. Materials Today Energy, 2018, 9, 487-495.	2.5	27
8	The Impact of Hybrid Compositional Film/Structure on Organic-Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	1.9	30
9	General Method To Define the Type of Carrier Transport Materials for Perovskite Solar Cells via Kelvin Probes Microscopy. ACS Applied Energy Materials, 2018, 1, 3984-3991.	2.5	15
10	Inorganic p-type semiconductors and carbon materials based hole transport materials for perovskite solar cells. Chinese Chemical Letters, 2018, 29, 1242-1250.	4.8	37
11	Polymer Assisted Small Molecule Hole Transport Layers Toward Highly Efficient Inverted Perovskite Solar Cells. Solar Rrl, 2018, 2, 1800173.	3.1	30
12	Hole Transport Bilayer Structure for Quasi-2D Perovskite Based Blue Light-Emitting Diodes with High Brightness and Good Spectral Stability. Advanced Functional Materials, 2019, 29, 1905339.	7.8	92
13	Cu-doped nickel oxide hole transporting layer via efficient low-temperature spraying combustion method for perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2019, 30, 15627-15635.	1.1	12
14	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
15	Nanoscale Insights into Photovoltaic Hysteresis in Triple-Cation Mixed-Halide Perovskite: Resolving the Role of Polarization and Ionic Migration. Advanced Materials, 2019, 31, e1902870.	11.1	73
16	Pyridine-Terminated Conjugated Organic Molecules as an Interfacial Hole Transfer Bridge for NiO _x -Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 28960-28967.	4.0	49
17	High-Efficiency Perovskite Solar Cell Based on Sequential Doping of PTAA. IEEE Journal of Photovoltaics, 2019, 9, 1025-1030.	1.5	13
18	Molecular doping of CuSCN for hole transporting layers in inverted-type planar perovskite solar cells. Inorganic Chemistry Frontiers, 2019, 6, 2158-2166.	3.0	31

#	ARTICLE	IF	CITATIONS
19	Dopant-Free Small-Molecule Hole-Transporting Material for Inverted Perovskite Solar Cells with Efficiency Exceeding 21%. <i>Advanced Materials</i> , 2019, 31, e1902781.	11.1	268
20	Solution-Processed MoO _x Hole-Transport Layer with F4-TCNQ Modification for Efficient and Stable Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 5862-5870.	2.5	35
21	Achieving high performance and stable inverted planar perovskite solar cells using lithium and cobalt co-doped nickel oxide as hole transport layers. <i>Journal of Materials Chemistry C</i> , 2019, 7, 9270-9277.	2.7	37
22	Inverted perovskite solar cells employing doped NiO hole transport layers: A review. <i>Nano Energy</i> , 2019, 63, 103860.	8.2	155
23	Amide Additives Induced a Fermi Level Shift To Improve the Performance of Hole-Conductor-Free, Printable Mesoscopic Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6865-6872.	2.1	62
24	A Tailored Nickel Oxide Hole-Transporting Layer to Improve the Long-Term Thermal Stability of Inorganic Perovskite Solar Cells. <i>Solar Rrl</i> , 2019, 3, 1900346.	3.1	30
25	A monothiophene unit incorporating both fluoro and ester substitution enabling high-performance donor polymers for non-fullerene solar cells with 16.4% efficiency. <i>Energy and Environmental Science</i> , 2019, 12, 3328-3337.	15.6	337
26	Highly efficient and stable perovskite solar cells via bilateral passivation layers. <i>Journal of Materials Chemistry A</i> , 2019, 7, 21730-21739.	5.2	56
27	Novel Molecular Doping Mechanism for n-Doping of SnO ₂ via Triphenylphosphine Oxide and Its Effect on Perovskite Solar Cells. <i>Advanced Materials</i> , 2019, 31, e1805944.	11.1	152
28	Low-temperature processed yttrium-doped SrSnO ₃ perovskite electron transport layer for planar heterojunction perovskite solar cells with high efficiency. <i>Nano Energy</i> , 2019, 59, 1-9.	8.2	52
29	Enhancement in lifespan of halide perovskite solar cells. <i>Energy and Environmental Science</i> , 2019, 12, 865-886.	15.6	143
30	FAPbI ₃ Flexible Solar Cells with a Record Efficiency of 19.38% Fabricated in Air via Ligand and Additive Synergetic Process. <i>Advanced Functional Materials</i> , 2019, 29, 1902974.	7.8	95
31	Deepening the Valance Band Edges of NiO Contacts by Alkaline Earth Metal Doping for Efficient Perovskite Photovoltaics with High Open-Circuit Voltage. <i>Solar Rrl</i> , 2019, 3, 1900192.	3.1	30
32	Efficient All-Evaporated <i>pin</i> -Perovskite Solar Cells: A Promising Approach Toward Industrial Large-Scale Fabrication. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 1249-1257.	1.5	33
33	Impact of surface dipole in NiOx on the crystallization and photovoltaic performance of organometal halide perovskite solar cells. <i>Nano Energy</i> , 2019, 61, 496-504.	8.2	92
34	p-Doped Conducting Polyelectrolyte as an Anode Interlayer Enables High Efficiency for 1 cm ² Printed Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 20205-20213.	4.0	28
35	Enhanced Open-Circuit Voltage in Perovskite Solar Cells with Open-Cage [60]Fullerene Derivatives as Electron-Transporting Materials. <i>Materials</i> , 2019, 12, 1314.	1.3	13
36	Conjugated Polymer-Assisted Grain Boundary Passivation for Efficient Inverted Planar Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1808855.	7.8	133

#	ARTICLE	IF	CITATIONS
37	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
38	Nickel Oxide as Efficient Hole Transport Materials for Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900001.	3.1	151
39	Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803872.	10.2	236
40	Rapid Aqueous Spray Fabrication of Robust NiO _x : A Simple and Scalable Platform for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803600.	10.2	62
41	Efficient Inverted Planar Perovskite Solar Cells Using Ultraviolet/Ozone-Treated NiO _x as the Hole Transport Layer. Solar Rrl, 2019, 3, 1900045.	3.1	81
42	Chainmail co-catalyst of NiO shell-encapsulated Ni for improving photocatalytic CO ₂ reduction over g-C ₃ N ₄ . Journal of Materials Chemistry A, 2019, 7, 9726-9735.	5.2	112
43	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
44	Multifunctional atomic force probes for Mn ²⁺ doped perovskite solar cells. Journal of Power Sources, 2019, 425, 130-137.	4.0	11
45	Synergy Effect of Both 2,2,2-Trifluoroethylamine Hydrochloride and SnF ₂ for Highly Stable FASn ₃ Cl Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800290.	3.1	45
46	Chlorobenzene: A Processing Solvent Enabling the Fabrication of Perovskite Solar Cells with Consecutive Double Perovskite and Perovskite/Organic Semiconductor Bulk Heterojunction Layers. Solar Rrl, 2019, 3, 1800325.	3.1	6
47	Calculating electrostatic interactions in atomic force microscopy with semiconductor samples. AIP Advances, 2019, 9, .	0.6	5
48	Achieving 20% Efficiency for Low-Temperature-Processed Inverted Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807556.	7.8	68
49	The Role of Lanthanum in a Nickel Oxide-Based Inverted Perovskite Solar Cell for Efficiency and Stability Improvement. ChemSusChem, 2019, 12, 518-526.	3.6	49
50	Solution-Processed Metal Oxide Nanocrystals as Carrier Transport Layers in Organic and Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1804660.	7.8	105
51	Hole-transporting layer based on a conjugated polyelectrolyte with organic cations enables efficient inverted perovskite solar cells. Nano Energy, 2019, 57, 248-255.	8.2	52
52	Characterization of La _{0.6} Sr _{0.4} CoO _{3-δ} oxygen selective hollow fiber made from acetate precursor-derived powder. Ceramics International, 2020, 46, 3744-3749.	2.3	2
53	Efficient Perovskite Solar Cells with a Novel Aggregation-Induced Emission Molecule as Hole-Transport Material. Solar Rrl, 2020, 4, 1900189.	3.1	14
54	Material and Interface Engineering for High-Performance Perovskite Solar Cells: A Personal Journey and Perspective. Chemical Record, 2020, 20, 209-229.	2.9	9

#	ARTICLE	IF	CITATIONS
55	Anodically electrodeposited NiO nanoflakes as hole selective contact in efficient air processed p-i-n perovskite solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2020, 205, 110288.	3.0	27
56	Carbon quantum dot-incorporated nickel oxide for planar p-i-n type perovskite solar cells with enhanced efficiency and stability. <i>Journal of Alloys and Compounds</i> , 2020, 818, 152887.	2.8	30
57	Polyfluorene Copolymers as High-Performance Hole-Transport Materials for Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , 2020, 4, 1900384.	3.1	21
58	NH ₄ F as an interfacial modifier for high performance NiO _x -based inverted perovskite solar cells. <i>Organic Electronics</i> , 2020, 78, 105627.	1.4	13
59	Systematic optimization of perovskite solar cells via green solvent systems. <i>Chemical Engineering Journal</i> , 2020, 387, 123966.	6.6	21
60	³ D NiO Nanowall Hole-Transporting Layer for the Passivation of Interfacial Contact in Inverted Perovskite Solar Cells. <i>ChemSusChem</i> , 2020, 13, 1006-1012.	3.6	30
61	Stabilizing n-type hetero-junctions for NiO _x based inverted planar perovskite solar cells with an efficiency of 21.6%. <i>Journal of Materials Chemistry A</i> , 2020, 8, 1865-1874.	5.2	40
62	Alkaline-earth bis(trifluoromethanesulfonimide) additives for efficient and stable perovskite solar cells. <i>Nano Energy</i> , 2020, 69, 104412.	8.2	54
63	From Pb to Bi: A Promising Family of Pb-Free Optoelectronic Materials and Devices. <i>Advanced Energy Materials</i> , 2020, 10, 1902496.	10.2	108
64	New Strategies for Defect Passivation in High-Efficiency Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 1903090.	10.2	237
65	Mixed Spacer Cation Stabilization of Blue-Emitting <i>n</i> = 2 Ruddlesden-Popper Organic-Inorganic Halide Perovskite Films. <i>Advanced Optical Materials</i> , 2020, 8, 1901679.	3.6	41
66	N-type conjugated polymer as efficient electron transport layer for planar inverted perovskite solar cells with power conversion efficiency of 20.86%. <i>Nano Energy</i> , 2020, 68, 104363.	8.2	58
67	Enhancing the Open-Circuit Voltage of Perovskite Solar Cells by Embedding Molecular Dipoles within Their Hole-Blocking Layer. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 3572-3579.	4.0	30
68	π-Conjugated small molecules enable efficient perovskite growth and charge-extraction for high-performance photovoltaic devices. <i>Journal of Power Sources</i> , 2020, 448, 227420.	4.0	18
69	Polymeric room-temperature molten salt as a multifunctional additive toward highly efficient and stable inverted planar perovskite solar cells. <i>Energy and Environmental Science</i> , 2020, 13, 5068-5079.	15.6	121
70	Progress, highlights and perspectives on NiO in perovskite photovoltaics. <i>Chemical Science</i> , 2020, 11, 7746-7759.	3.7	119
71	Surface Sulfuration of NiO Boosts the Performance of Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , 2020, 4, 2000270.	3.1	31
72	Interdiffusion Stomatal Movement in Efficient Multiple-Cation-Based Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 35105-35112.	4.0	8

#	ARTICLE	IF	CITATIONS
73	Boosting the Efficiency of NiO _x -Based Perovskite Light-Emitting Diodes by Interface Engineering. ACS Applied Materials & Interfaces, 2020, 12, 53528-53536.	4.0	32
74	Solution-combustion-based nickel oxide hole transport layers via fuel regulation in inverted planar perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2020, 31, 15225-15232.	1.1	4
75	Self-doping synthesis of trivalent Ni ₂ O ₃ as a hole transport layer for high fill factor and efficient inverted perovskite solar cells. Dalton Transactions, 2020, 49, 14243-14250.	1.6	20
76	Polymer Modification on the NiO _x Hole Transport Layer Boosts Open-Circuit Voltage to 1.19 V for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 46340-46347.	4.0	67
77	Triple Interface Passivation Strategy Enabled Efficient and Stable Inverted Perovskite Solar Cells. Small Methods, 2020, 4, 2000478.	4.6	44
78	High-Performance Semitransparent and Bifacial Perovskite Solar Cells with MoO _x /Ag/WO _x as the Rear Transparent Electrode. Advanced Materials Interfaces, 2020, 7, 2000591.	1.9	26
79	Flexible Perovskite Solar Modules with Functional Layers Fully Vacuum Deposited. Solar Rrl, 2020, 4, 2000292.	3.1	29
80	Small Molecule Modulator at the Interface for Efficient Perovskite Solar Cells with High Short-Circuit Current Density and Hysteresis Free. Advanced Electronic Materials, 2020, 6, 2000604.	2.6	62
81	Efficiency progress of inverted perovskite solar cells. Energy and Environmental Science, 2020, 13, 3823-3847.	15.6	210
82	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
83	MOF-derived (MoS ₂ , $\hat{3}$ -Fe ₂ O ₃)/graphene Z-scheme photocatalysts with excellent activity for oxygen evolution under visible light irradiation. RSC Advances, 2020, 10, 17154-17162.	1.7	17
84	Ion Migration-Induced Amorphization and Phase Segregation as a Degradation Mechanism in Planar Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000310.	10.2	103
85	Solution-processed perovskite solar cells. Journal of Central South University, 2020, 27, 1104-1133.	1.2	34
86	Interfacial Modification through a Multifunctional Molecule for Inorganic Perovskite Solar Cells with over 18% Efficiency. Solar Rrl, 2020, 4, 2000205.	3.1	38
87	In Situ Formation of NiO _x Interlayer for Efficient n-i-p Inorganic Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5977-5983.	2.5	11
88	Investigation on the role of amines in the liquefaction and recrystallization process of MAPbI ₃ perovskite. Journal of Materials Chemistry A, 2020, 8, 13585-13593.	5.2	11
89	Secondary Ion Mass Spectrometry (SIMS) for Chemical Characterization of Metal Halide Perovskites. Advanced Functional Materials, 2020, 30, 2002201.	7.8	29
90	Fluorinated triphenylamine-based dopant-free hole-transporting material for high-performance inverted perovskite solar cells. Chemical Engineering Journal, 2020, 402, 125923.	6.6	25

#	ARTICLE	IF	CITATIONS
91	Highly efficient bifacial semitransparent perovskite solar cells based on molecular doping of CuSCN hole transport layer*. Chinese Physics B, 2020, 29, 078801.	0.7	12
92	A piperidinium salt stabilizes efficient metal-halide perovskite solar cells. Science, 2020, 369, 96-102.	6.0	461
93	Dipolar hole-blocking layers for inverted perovskite solar cells: effects of aggregation and electron transport levels. JPhys Materials, 2020, 3, 025002.	1.8	8
94	Dopant-Free Organic Hole-Transporting Material for Efficient and Stable Inverted All-Inorganic and Hybrid Perovskite Solar Cells. Advanced Materials, 2020, 32, e1908011.	11.1	195
95	Effects of interfacial energy level alignment on carrier dynamics and photovoltaic performance of inverted perovskite solar cells. Journal of Power Sources, 2020, 452, 227845.	4.0	19
96	Photoelectron Spectroscopy on Polycyclic Hydrocarbon-F ₆ TCNNQ Interfaces. Journal of Physical Chemistry C, 2020, 124, 2961-2967.	1.5	5
97	High Electron Affinity Enables Fast Hole Extraction for Efficient Flexible Inverted Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903487.	10.2	210
98	Dual Role of Amino-Functionalized Graphene Quantum Dots in NiO _x Films for Efficient Inverted Flexible Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 8342-8350.	4.0	56
99	NiO/Perovskite Heterojunction Contact Engineering for Highly Efficient and Stable Perovskite Solar Cells. Advanced Science, 2020, 7, 1903044.	5.6	146
100	Double fullerene cathode buffer layers afford highly efficient and stable inverted planar perovskite solar cells. Organic Electronics, 2020, 82, 105726.	1.4	13
101	Conjugated polyelectrolyte with potassium cations enables inverted perovskite solar cells with an efficiency over 20%. Journal of Materials Chemistry A, 2020, 8, 8238-8243.	5.2	33
102	Boosting the Conversion Efficiency Over 20% in MAPbI ₃ Perovskite Planar Solar Cells by Employing a Solution-Processed Aluminum-Doped Nickel Oxide Hole Collector. ACS Applied Materials & Interfaces, 2020, 12, 22958-22970.	4.0	42
103	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. Nano Energy, 2020, 74, 104846.	8.2	54
104	Nickel oxide for inverted structure perovskite solar cells. Journal of Energy Chemistry, 2021, 52, 393-411.	7.1	132
105	Perovskite Solar Cells with All-Inkjet-Printed Absorber and Charge Transport Layers. Advanced Materials Technologies, 2021, 6, 2000271.	3.0	72
106	Evaporated potassium chloride for double-sided interfacial passivation in inverted planar perovskite solar cells. Journal of Energy Chemistry, 2021, 54, 493-500.	7.1	28
107	F4-TCNQ doped strategy of nickel oxide as high-efficient hole transporting materials for invert perovskite solar cell. Materials Science in Semiconductor Processing, 2021, 121, 105458.	1.9	11
108	Synthesis of well dispersed NiO ink for efficient perovskite solar cells. Journal of Alloys and Compounds, 2021, 860, 157889.	2.8	16

#	ARTICLE	IF	CITATIONS
109	Robust Inorganic Hole Transport Materials for Organic and Perovskite Solar Cells: Insights into Materials Electronic Properties and Device Performance. <i>Solar Rrl</i> , 2021, 5, 2000555.	3.1	34
110	Chloride gradient render carrier extraction of hole transport layer for high V and efficient inverted organometal halide perovskite solar cell. <i>Chemical Engineering Journal</i> , 2021, 409, 128100.	6.6	13
111	Solution-processable nickel-chromium ternary oxide as an efficient hole transport layer for inverted planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21792-21798.	5.2	8
112	A p-n Homojunction-Enhanced Hole Transfer in Inverted Planar Perovskite Solar Cells. <i>ChemSusChem</i> , 2021, 14, 1396-1403.	3.6	20
113	Synthesis of Co-doped NiO/AC photocatalysts and their use in photocatalytic degradation. <i>Journal of the Australian Ceramic Society</i> , 2021, 57, 419-425.	1.1	10
114	A carbon-quantum-dot-hybridized NiO hole-transport layer enables efficient and stable planar p-n perovskite solar cells with high open-circuit voltage. <i>Journal of Materials Chemistry C</i> , 2021, 9, 12213-12223.	2.7	7
115	Inorganic hole transport layers in inverted perovskite solar cells: A review. <i>Nano Select</i> , 2021, 2, 1081-1116.	1.9	65
116	Influence of Fluorinated Components on Perovskite Solar Cells Performance and Stability. <i>Small</i> , 2021, 17, e2004081.	5.2	29
117	Simple and Efficient Perovskite Solar Cells with Multi-Functional Mixed Interfacial Layers. <i>Advanced Materials Interfaces</i> , 2021, 8, 2002007.	1.9	3
118	Close-loop recycling of perovskite solar cells through dissolution-recrystallization of perovskite by butylamine. <i>Cell Reports Physical Science</i> , 2021, 2, 100341.	2.8	32
119	Interfacial engineering of Bi ₂ S ₃ /Ti ₃ C ₂ T _x MXene based on work function for rapid photo-excited bacteria-killing. <i>Nature Communications</i> , 2021, 12, 1224.	5.8	283
120	Coordination Strategy Driving the Formation of Compact CuSCN Hole-Transporting Layers for Efficient Perovskite Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2000777.	3.1	11
121	n-doped inorganic molecular clusters as a new type of hole transport material for efficient organic solar cells. <i>Joule</i> , 2021, 5, 646-658.	11.7	76
122	Perovskite Light-Emitting Devices with Doped Hole Transporting Layer. <i>Molecules</i> , 2021, 26, 1670.	1.7	2
123	Highly Efficient and Super Stable Full-Color Quantum Dots Light-Emitting Diodes with Solution-Processed All-Inorganic Charge Transport Layers. <i>Small</i> , 2021, 17, e2007363.	5.2	32
124	Boric Acid Mediated Formation and Doping of NiO Layers for Perovskite Solar Cells with Efficiency over 21%. <i>Solar Rrl</i> , 2021, 5, 2000810.	3.1	12
125	2D MA ₃ Sb ₂ I ₉ Back Surface Field for Efficient and Stable Perovskite Solar Cells. <i>Small Methods</i> , 2021, 5, e2001090.	4.6	8
126	Insights into the Development of Monolithic Perovskite/Silicon Tandem Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, 2003628.	10.2	72

#	ARTICLE	IF	CITATIONS
127	Interfacial stabilization for inverted perovskite solar cells with long-term stability. <i>Science Bulletin</i> , 2021, 66, 991-1002.	4.3	45
128	Effective carrier transport tuning of CuOx quantum dots hole interfacial layer for high-performance inverted perovskite solar cell. <i>Applied Surface Science</i> , 2021, 547, 149117.	3.1	19
129	Dialkylamines Driven Two-Step Recovery of NiO_x/ITO Substrates for High-Reproducibility Recycling of Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 4735-4741.	2.1	15
130	First Conventional Solution Solâ€“Gel-Prepared Nanoporous Materials of Nickel Oxide for Efficiency Enhancing and Stability Extending MAPbI₃ Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 6486-6499.	2.5	7
131	Efficient carrier transport via dual-function interfacial engineering using cesium iodide for high-performance perovskite solar cells based on NiOx hole transporting materials. <i>Nano Research</i> , 2021, 14, 3864-3872.	5.8	14
132	Current Development toward Commercialization of Metalâ€“Halide Perovskite Photovoltaics. <i>Advanced Optical Materials</i> , 2021, 9, 2100390.	3.6	15
133	Recent Progress on Perovskite Surfaces and Interfaces in Optoelectronic Devices. <i>Advanced Materials</i> , 2021, 33, e2006004.	11.1	86
134	Hydrophilic Surface-Driven Crystalline Grain Growth of Perovskites on Metal Oxides. <i>ACS Applied Energy Materials</i> , 2021, 4, 6923-6932.	2.5	17
135	Effects of N-Positions on Pyridine Carboxylic Acid-Modified Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 6903-6911.	2.5	7
136	Trivalent Ni oxidation controlled through regulating lithium content to minimize perovskite interfacial recombination. <i>Rare Metals</i> , 2022, 41, 96-105.	3.6	12
137	Construction of gâ€“C 3 N 4 â€“Ferrocene Copolymers for Enhanced Visibleâ€“Light Photocatalytic Activity. <i>ChemistrySelect</i> , 2021, 6, 8114-8119.	0.7	1
138	Indoor Perovskite Photovoltaics for the Internet of Thingsâ€“Challenges and Opportunities toward Market Uptake. <i>Advanced Energy Materials</i> , 2021, 11, 2101854.	10.2	52
139	Printable and Homogeneous NiO_x Hole Transport Layers Prepared by a Polymerâ€“Network Gel Method for Largeâ€“Area and Flexible Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2021, 31, 2106495.	7.8	51
140	Formulation of conductive nanocomposites by incorporating silverâ€“doped carbon quantum dots for efficient charge extraction. <i>International Journal of Energy Research</i> , 2021, 45, 21324-21339.	2.2	5
141	The Nonâ€“Innocent Role of Holeâ€“Transporting Materials in Perovskite Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2100514.	3.1	18
142	Chlorides, other Halides, and Pseudoâ€“Halides as Additives for the Fabrication of Efficient and Stable Perovskite Solar Cells. <i>ChemSusChem</i> , 2021, 14, 3665-3692.	3.6	14
143	Linked Nickel Oxide/Perovskite Interface Passivation for Highâ€“Performance Textured Monolithic Tandem Solar Cells. <i>Advanced Energy Materials</i> , 2021, 11, 2101662.	10.2	77
144	Enhancement in charge extraction and moisture stability of perovskite solar cell via infiltration of charge transport material in grain boundaries. <i>Journal of Power Sources</i> , 2021, 506, 230212.	4.0	6

#	ARTICLE	IF	CITATIONS
145	Learning from hole-transporting polymers in regular perovskite solar cells to construct efficient conjugated polyelectrolytes for inverted devices. <i>Chemical Engineering Journal</i> , 2021, 420, 129735.	6.6	8
146	Tailoring the mercaptan ligands for high performance inverted perovskite solar cells with efficiency exceeding 21%. <i>Journal of Energy Chemistry</i> , 2021, 60, 169-177.	7.1	17
147	Zn(O,S) Buffer Layer for in Situ Hydrothermal Sb ₂ S ₃ Planar Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 45726-45735.	4.0	20
148	Enhanced performance of p-i-n perovskite solar cell via defect passivation of nickel oxide/perovskite interface with self-assembled monolayer. <i>Applied Surface Science</i> , 2021, 560, 149973.	3.1	36
149	Design of NiO _x /Carbon Heterostructure Interlayer to Improve Hole Extraction Efficiency of Inverted Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100862.	1.9	8
150	Molecular dopants: Tools to control the electronic structure of metal halide perovskite interfaces. <i>Applied Physics Reviews</i> , 2021, 8, .	5.5	8
151	Obstructing interfacial reaction between NiO _x and perovskite to enable efficient and stable inverted perovskite solar cells. <i>Chemical Engineering Journal</i> , 2021, 426, 131357.	6.6	50
152	Solution-processed NiO _x nanoparticles with a wide pH window as an efficient hole transport material for high performance tin-based perovskite solar cells. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 144002.	1.3	8
153	Future perspectives of perovskite solar cells: Metal oxide-based inorganic hole-transporting materials. , 2021, , 181-219.		5
154	Research Progress of Inverted Planar Perovskite Solar Cells based on Nickel Oxide as Hole Transport Layer. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2021, .	0.2	2
155	Electron-Beam-Evaporated Nickel Oxide Hole Transport Layers for Perovskite-Based Photovoltaics. <i>Advanced Energy Materials</i> , 2019, 9, 1802995.	10.2	122
156	A core-dual-shell nanorod array with a cascading band configuration for enhanced photocatalytic properties and anti-photocorrosion. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3726-3734.	5.2	25
157	Metal oxide charge transport layers in perovskite solar cells”optimising low temperature processing and improving the interfaces towards low temperature processed, efficient and stable devices. <i>JPhys Energy</i> , 2021, 3, 012004.	2.3	11
158	Designs from single junctions, heterojunctions to multijunctions for high-performance perovskite solar cells. <i>Chemical Society Reviews</i> , 2021, 50, 13090-13128.	18.7	91
159	PCBM/Ag interface dipole management in inverted perovskite solar cells. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	10
160	Improving interfacial charge transfer by multi-functional additive for high-performance carbon-based perovskite solar cells. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	11
161	Laser-Assisted Synthesis of Ag ₂ S Quantum Dot in Perovskite Matrix and Its Application in Broadband Photodetectors. <i>Advanced Optical Materials</i> , 2022, 10, 2101535.	3.6	10
162	Photon-Responsive Nanomaterials for Solar Cells. <i>Springer Series in Materials Science</i> , 2020, , 1-63.	0.4	0

#	ARTICLE	IF	CITATIONS
164	Demonstration of Ni/NiOx/I ² -Ga ₂ O ₃ heterojunction diode with F plasma pre-treatment for reducing on-resistance and reverse leakage current. Applied Surface Science, 2022, 578, 152047.	3.1	8
165	Triphenylamine-Based Conjugated Polyelectrolyte as a Hole Transport Layer for Efficient and Scalable Perovskite Solar Cells. Small, 2022, 18, e2104933.	5.2	6
166	Hole transporting materials in inorganic CsPbI ₃ Br solar cells: Fundamentals, criteria and opportunities. Materials Today, 2022, 52, 250-268.	8.3	20
167	D-D molecular layer electronically bridges the NiO hole transport layer and the perovskite layer towards high performance photovoltaics. Journal of Energy Chemistry, 2022, 67, 797-804.	7.1	9
168	Field-Effect Control in Hole Transport Layer Composed of Li:NiO/NiO for Highly Efficient Inverted Planar Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, 2101562.	1.9	12
169	Reducing energy loss via adjusting the anode work function and perovskite layer morphology for the efficient and stable hole transporting layer-free perovskite solar cells. Chemical Engineering Journal, 2022, 431, 133948.	6.6	17
170	Monolithic perovskite/organic tandem solar cells with 23.6% efficiency enabled by reduced voltage losses and optimized interconnecting layer. Nature Energy, 2022, 7, 229-237.	19.8	137
171	Facile Surface Engineering of Composite Electron Transport Layer for Highly Efficient Perovskite Solar Cells with a Fill Factor Exceeding 81%. Advanced Materials Interfaces, 2022, 9, .	1.9	2
172	Molecular Interface Engineering via Triazatruxene-Based Moieties/NiO as Hole-Selective Bilayers in Perovskite Solar Cells for Reliability. Solar Rrl, 2022, 6, .	3.1	6
173	Modulating defect density of NiO hole transport layer via tuning interfacial oxygen stoichiometry in perovskite solar cells. Solar Energy, 2022, 233, 326-336.	2.9	15
174	High-Performance Planar Perovskite Solar Cells with a Reduced Energy Barrier and Enhanced Charge Extraction via a Na ₂ WO ₄ -Modified SnO ₂ Electron Transport Layer. ACS Applied Materials & Interfaces, 2022, 14, 7962-7971.	4.0	17
175	Photoconductive NiOx hole transport layer for efficient perovskite solar cells. Chemical Engineering Journal, 2022, 435, 135140.	6.6	17
176	Enhanced Self-Assembled Monolayer Surface Coverage by ALD NiO in p-i-n Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 2166-2176.	4.0	77
177	Surface Passivation of Sputtered NiO Using a SAM Interface Layer to Enhance the Performance of Perovskite Solar Cells. ACS Omega, 2022, 7, 12147-12157.	1.6	38
178	Critical Role of Removing Impurities in Nickel Oxide on High-Efficiency and Long-Term Stability of Inverted Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	51
179	Critical Role of Removing Impurities in Nickel Oxide on High-Efficiency and Long-Term Stability of Inverted Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	9
180	Construction of Charge Transport Channels at the NiO/Perovskite Interface through Moderate Dipoles toward Highly Efficient Inverted Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 13431-13439.	4.0	22
181	Sulfides as a new class of stable cost-effective materials compared to organic/inorganic hole transport materials for perovskite solar cells. Ceramics International, 2022, , .	2.3	4

#	ARTICLE	IF	CITATIONS
182	Modification of SnO ₂ with Phosphorus-Containing Lewis Acid for High-Performance Planar Perovskite Solar Cells with Negligible Hysteresis. <i>Solar Rrl</i> , 2022, 6, .	3.1	17
183	Recent Progress of Critical Interface Engineering for Highly Efficient and Stable Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	78
184	Origins and influences of metallic lead in perovskite solar cells. <i>Joule</i> , 2022, 6, 816-833.	11.7	163
185	Buried Interface Modification in Perovskite Solar Cells: A Materials Perspective. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	87
186	Improved Stability and Efficiency of Inverted Perovskite Solar Cell by Employing Nickel Oxide Hole Transporting Material Containing Ammonium Salt Stabilizer. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	16
187	Porous Cd ₃ (C ₃ N ₃ S ₃) ₂ /CdS composites with outstanding Cr(VI) photoreduction performance under visible light irradiation. <i>Separation and Purification Technology</i> , 2022, 293, 121077.	3.9	9
188	Thermally-stable and highly-efficient bi-layered NiO _x -based inverted planar perovskite solar cells by employing a p-type organic semiconductor. <i>Chemical Engineering Journal</i> , 2022, 443, 136405.	6.6	15
189	Elimination of Interfacial Lattice Mismatch and Detrimental Reaction by Self-Assembled Layer Dual-Passivation for Efficient and Stable Inverted Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	75
190	High-Efficiency and Stable Perovskite Photodetectors with an F4-TCNQ-Modified Interface of NiO _x and Perovskite Layers. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 3904-3914.	2.1	6
191	Doping Free and Amorphous NiO _x Film via UV Irradiation for Efficient Inverted Perovskite Solar Cells. <i>Advanced Science</i> , 2022, 9, e2201543.	5.6	23
192	Hydrogen Bonds in Precursor Solution: The Origin of the Anomalous J _v Curves in Perovskite Solar Cells. <i>Crystals</i> , 2022, 12, 610.	1.0	1
193	Strategies for high-performance perovskite solar cells from materials, film engineering to carrier dynamics and photon management. <i>Informa-Materially</i> , 2022, 4, .	8.5	27
194	NiO _x Nanocrystals with Tunable Size and Energy Levels for Efficient and UV Stable Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	32
195	Impact of Nickel Oxide/Perovskite Interfacial Contact on the Crystallization and Photovoltaic Performance of Perovskite Solar Cells. <i>Solar Rrl</i> , 2022, 6, .	3.1	10
196	Synergistic Effect between NiO _x and P3HT Enabling Efficient and Stable Hole Transport Pathways for Regular Perovskite Photovoltaics. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	17
197	Morphological, Optical and Electrical Analysis of Ag Polymer-Nickel Low Temperature Top Electrode in Silicon Solar Cell for Tandem Application. <i>Silicon</i> , 2022, 14, 12421-12435.	1.8	4
198	Crack-Free Monolayer Graphene Interlayer for Improving Perovskite Crystallinity and Energy Level Alignment in Efficient Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , 2022, 6, .	3.1	4
199	Efficient and Sustainable in-situ Photo-Fenton Reaction to Remove Phenolic Pollutants by NH ₂ -MIL-101(Fe)/Ti ₃ C ₂ T _x Schottky-Heterojunctions. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	6

#	ARTICLE	IF	CITATIONS
200	Overcome Low Intrinsic Conductivity of NiO _x Through Triazinyl Modification for Highly Efficient and Stable Inverted Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	10
201	Surface redox engineering of vacuum-deposited NiO _x for top-performance perovskite solar cells and modules. Joule, 2022, 6, 1931-1943.	11.7	64
202	Efficient Perovskite Solar Cells Based on Tin Oxide Nanocrystals with Difunctional Modification. Small, 2022, 18, .	5.2	15
203	85Â°C/85%â€Stable nâ€p Perovskite Photovoltaics with NiO _x Hole Transport Layers Promoted By Perovskite Quantum Dots. Advanced Science, 2022, 9, .	5.6	10
204	Progress of Solution-Processed Metal Oxides as Charge Transport Layers towards Efficient and Stable Perovskite Solar Cells and Modules. Materials Today Nano, 2022, , 100252.	2.3	2
205	Inverted Hysteresis in nâ€p and pâ€n Perovskite Solar Cells. Energy Technology, 2022, 10, .	1.8	13
206	NiO _x thickness dependent improvement of NiO _x /Perovskite interface for inverted planar perovskite solar cells. Optical Materials, 2022, 132, 112774.	1.7	4
207	Efficient surface treatment based on an ionic imidazolium hexafluorophosphate for improving the efficiency and stability of perovskite solar cells. Applied Surface Science, 2022, 604, 154486.	3.1	4
208	Surface passivation of perovskite with organic hole transport materials for highly efficient and stable perovskite solar cells. Materials Today Advances, 2022, 16, 100300.	2.5	8
209	Recent Progress on Heterojunction Engineering in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	23
210	Chemical Bath Deposition of NiO _x â€NiSO ₄ Heterostructured Hole Transport Layer for Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	3
211	Fluorinated Interlayer Modulation of NiO _x -Based Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 42071-42077.	4.0	3
212	Suppressing Nickel Oxide/Perovskite Interface Redox Reaction and Defects for Highly Performed and Stable Inverted Perovskite Solar Cells. Small Methods, 2022, 6, .	4.6	15
213	Interfacial Engineering for Highâ€Performance PTAAâ€Based Inverted 3D Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
214	Considering the effectiveness of a unique combined annealing-based postprocessing method on the optoelectronic properties of MAPbBr ₃ -based light emitting diodes. Solid State Communications, 2022, 356, 114965.	0.9	2
215	2D-Antimonene-assisted hetero-epitaxial growth of perovskite films for efficient solar cells. Materials Today, 2022, 61, 54-64.	8.3	7
216	Recent Advances in Inverted Perovskite Solar Cells: Designing and Fabrication. International Journal of Molecular Sciences, 2022, 23, 11792.	1.8	12
217	Interfacial engineering of sputtered NiO _x for enhancing efficiency and stability of inverted perovskite solar cells. Solar Energy, 2022, 248, 128-136.	2.9	5

#	ARTICLE	IF	CITATIONS
218	Simple and robust phenoxazine phosphonic acid molecules as self-assembled hole selective contacts for high-performance inverted perovskite solar cells. <i>Nanoscale</i> , 2023, 15, 1676-1686.	2.8	13
219	Revivification of nickel oxide-perovskite interfaces via nickel nitrate to boost performance in perovskite solar cells. <i>Nano Energy</i> , 2023, 106, 108062.	8.2	12
220	Highly Improved Efficiency and Stability of 2D Perovskite Solar Cells via Bifunctional Inorganic Salt KPF ₆ Modified NiO Hole Transport Layer. <i>Advanced Energy and Sustainability Research</i> , 0, , 2200151.	2.8	2
221	Unlocking the Full Potential of Electron-Acceptor Molecules for Efficient and Stable Hole Injection. <i>Advanced Materials</i> , 2023, 35, .	11.1	5
222	Thermally and Air Stable Perovskite Solar Cells with a Hole Transporting PTAA/NiO Bilayer. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 12888.	1.3	0
223	Recent progress in perovskite solar cells: material science. <i>Science China Chemistry</i> , 2023, 66, 10-64.	4.2	53
224	Review of Inorganic Hole Transport Materials for Perovskite Solar Cells. <i>Energy Technology</i> , 2023, 11, .	1.8	8
225	A Multifunctional "Halide-Equivalent" Anion Enabling Efficient CsPb(Br/I) ₃ Nanocrystals Pure-Red Light-Emitting Diodes with External Quantum Efficiency Exceeding 23%. <i>Advanced Materials</i> , 2023, 35, .	11.1	38
226	Recent progress of inverted organic-inorganic halide perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2023, 79, 168-191.	7.1	8
227	Cation exchange strategy to construct nanopatterned Zn:NiOx electrode with highly conductive interface for efficient inverted perovskite solar cells. <i>Chemical Engineering Journal</i> , 2023, 457, 141358.	6.6	9
228	One-pot synthesis of NiFe nanoarrays under an external magnetic field as an efficient oxygen evolution reaction catalyst. <i>RSC Advances</i> , 2023, 13, 4249-4254.	1.7	1
229	Understanding the dopant of hole-transport polymers for efficient inverted perovskite solar cells with high electroluminescence. <i>Journal of Materials Chemistry A</i> , 2023, 11, 5199-5211.	5.2	5
230	Inkjet-Printed Flexible Semitransparent Solar Cells with Perovskite and Polymeric Pillars. <i>Solar Rrl</i> , 2023, 7, .	3.1	3
231	Solvents incubated " " stacking in hole transport layer for perovskite-silicon 2-terminal tandem solar cells with 27.21% efficiency. <i>Journal of Energy Chemistry</i> , 2023, 82, 25-30.	7.1	2
232	Boosting efficiency and stability with KBr interface modification for NiOx-based inverted perovskite solar cells. <i>Materials Science in Semiconductor Processing</i> , 2023, 160, 107454.	1.9	4
233	Modulating buried interface with multi-fluorine containing organic molecule toward efficient NiO-based inverted perovskite solar cell. <i>Nano Energy</i> , 2023, 111, 108363.	8.2	38
234	Review of Defect Passivation for NiO-Based Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2023, 6, 2098-2121.	2.5	10
235	Regulating the Interplay at the Buried Interface for Efficient and Stable Carbon-Based CsPbI ₂ Br Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 10897-10906.	4.0	4

#	ARTICLE	IF	CITATIONS
236	Opportunities and challenges of hole transport materials for high-performance inverted hybrid perovskite solar cells. <i>Exploration</i> , 2023, 3, .	5.4	8
237	Multifunctional Hybrid Interfacial Layers for High-performance Inverted Perovskite Solar Cells. <i>Advanced Materials</i> , 2023, 35, .	11.1	26
238	Efficient and Stable Perovskite Solar Cells by Tailoring of Interfaces. <i>Advanced Materials</i> , 2023, 35, .	11.1	21
239	Interlayer engineering <i>via</i> alkaline hypophosphates for efficient and air-stable perovskite solar cells. <i>Materials Chemistry Frontiers</i> , 0, , .	3.2	0
240	The Effect of Redox Reactions on the Stability of Perovskite Solar Cells. <i>ChemPhotoChem</i> , 2023, 7, .	1.5	1
248	Recent progress in the development of high-efficiency inverted perovskite solar cells. <i>NPG Asia Materials</i> , 2023, 15, .	3.8	38