

Wei Chen

List of Publications by Year in descending order

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81
papers

10,446
citations

57719

44
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60583

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all docs

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docs citations

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times ranked

10795
citing authors

#	ARTICLE	IF	CITATIONS
1	Monolithic perovskite/organic tandem solar cells with 23.6% efficiency enabled by reduced voltage losses and optimized interconnecting layer. <i>Nature Energy</i> , 2022, 7, 229-237.	19.8	137
2	Encapsulation and Stability Testing of Perovskite Solar Cells for Real Life Applications. <i>ACS Materials Au</i> , 2022, 2, 215-236.	2.6	41
3	Rear Electrode Materials for Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	49
4	Methylammonium and Bromide-Free Tin-Based Low Bandgap Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	18
5	Evaporated potassium chloride for double-sided interfacial passivation in inverted planar perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2021, 54, 493-500.	7.1	28
6	Engineering of dendritic dopant-free hole transport molecules: enabling ultrahigh fill factor in perovskite solar cells with optimized dendron construction. <i>Science China Chemistry</i> , 2021, 64, 41-51.	4.2	55
7	Charge-transfer induced multifunctional BCP:Ag complexes for semi-transparent perovskite solar cells with a record fill factor of 80.1%. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12009-12018.	5.2	29
8	A Review on Encapsulation Technology from Organic Light Emitting Diodes to Organic and Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2021, 31, 2100151.	7.8	114
9	Interfacial stabilization for inverted perovskite solar cells with long-term stability. <i>Science Bulletin</i> , 2021, 66, 991-1002.	4.3	45
10	Enhanced Light Emission Performance of Mixed Cation Perovskite Films—The Effect of Solution Stoichiometry on Crystallization. <i>Advanced Optical Materials</i> , 2021, 9, 2100393.	3.6	6
11	The Non-Innocent Role of Hole-Transporting Materials in Perovskite Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2100514.	3.1	18
12	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
13	Efficient Perovskite Solar Cells with a Novel Aggregation-Induced Emission Molecule as Hole-Transport Material. <i>Solar Rrl</i> , 2020, 4, 1900189.	3.1	14
14	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
15	Mixed Spacer Cation Stabilization of Blue-Emitting $n = 2$ Ruddlesden-Popper Organic-Inorganic Halide Perovskite Films. <i>Advanced Optical Materials</i> , 2020, 8, 1901679.	3.6	41
16	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
17	Unraveling the Crystallization Kinetics of 2D Perovskites with Sandwich-Type Structure for High-Performance Photovoltaics. <i>Advanced Materials</i> , 2020, 32, e2002784.	11.1	52
18	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. <i>Joule</i> , 2020, 4, 1575-1593.	11.7	88

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19	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
20	Imide-functionalized acceptor-acceptor copolymers as efficient electron transport layers for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 13754-13762.	5.2	28
21	High Electron Affinity Enables Fast Hole Extraction for Efficient Flexible Inverted Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903487.	10.2	210
22	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
23	A general strategy to prepare high-quality inorganic charge-transporting layers for efficient and stable all-layer-inorganic perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 18603-18611.	5.2	31
24	Dopant-Free Small-Molecule Hole-Transporting Material for Inverted Perovskite Solar Cells with Efficiency Exceeding 21%. Advanced Materials, 2019, 31, e1902781.	11.1	268
25	Dopant-Free Hole Transporting Molecules for Highly Efficient Perovskite Photovoltaic with Strong Interfacial Interaction. Solar Rrl, 2019, 3, 1900319.	3.1	20
26	A New Wide Bandgap Donor Polymer for Efficient Nonfullerene Organic Solar Cells with a Large Open-Circuit Voltage. Advanced Science, 2019, 6, 1901773.	5.6	61
27	A Tailored Nickel Oxide Hole-Transporting Layer to Improve the Long-Term Thermal Stability of Inorganic Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900346.	3.1	30
28	Efficient and Stable FASn ₃ Perovskite Solar Cells with Effective Interface Modulation by Low-Dimensional Perovskite Layer. ChemSusChem, 2019, 12, 5007-5014.	3.6	111
29	High Short-Circuit Current Density via Integrating the Perovskite and Ternary Organic Bulk Heterojunction. ACS Energy Letters, 2019, 4, 2535-2536.	8.8	47
30	A low-temperature-annealed and UV-ozone-enhanced combustion derived nickel oxide hole injection layer for flexible quantum dot light-emitting diodes. Nanoscale, 2019, 11, 1021-1028.	2.8	42
31	Novel Molecular Doping Mechanism for n-Doping of SnO ₂ via Triphenylphosphine Oxide and Its Effect on Perovskite Solar Cells. Advanced Materials, 2019, 31, e1805944.	11.1	152
32	Spontaneous Formation of Nanocrystals in Amorphous Matrix: Alternative Pathway to Bright Emission in Quasi-2D Perovskites. Advanced Optical Materials, 2019, 7, 1900269.	3.6	3
33	Hydrothermally Treated SnO ₂ as the Electron Transport Layer in High-Efficiency Flexible Perovskite Solar Cells with a Certificated Efficiency of 17.3%. Advanced Functional Materials, 2019, 29, 1807604.	7.8	72
34	Conjugated Polymer-Assisted Grain Boundary Passivation for Efficient Inverted Planar Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1808855.	7.8	133
35	Alloy-induced phase transition and enhanced photovoltaic performance: the case of Cs ₃ Bi ₂ I ₉ xBr _x perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 8818-8825.	5.2	87
36	Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803872.	10.2	236

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37	A chemically inert bismuth interlayer enhances long-term stability of inverted perovskite solar cells. <i>Nature Communications</i> , 2019, 10, 1161.	5.8	225
38	Multifunctional atomic force probes for Mn ²⁺ doped perovskite solar cells. <i>Journal of Power Sources</i> , 2019, 425, 130-137.	4.0	11
39	Synergy Effect of Both 2,2,2-Trifluoroethylamine Hydrochloride and SnF ₂ for Highly Stable FASn ₃ Cl Perovskite Solar Cells. <i>Solar Rrl</i> , 2019, 3, 1800290.	3.1	45
40	Side-Chain Engineering of Donor-Acceptor Conjugated Small Molecules As Dopant-Free Hole-Transport Materials for Efficient Normal Planar Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 48556-48563.	4.0	49
41	Eliminating J-V hysteresis in perovskite solar cells via defect controlling. <i>Organic Electronics</i> , 2018, 58, 283-289.	1.4	29
42	Inverted planar organic-inorganic hybrid perovskite solar cells with NiO x hole-transport layers as light-in window. <i>Applied Surface Science</i> , 2018, 451, 325-332.	3.1	15
43	Molecule-Doped Nickel Oxide: Verified Charge Transfer and Planar Inverted Mixed Cation Perovskite Solar Cell. <i>Advanced Materials</i> , 2018, 30, e1800515.	11.1	287
44	Solvent engineering for efficient inverted perovskite solar cells based on inorganic CsPbI ₂ Br light absorber. <i>Materials Today Energy</i> , 2018, 8, 125-133.	2.5	121
45	Understanding the Doping Effect on NiO: Toward High-Performance Inverted Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2018, 8, 1703519.	10.2	286
46	Promising ITO-free perovskite solar cells with WO ₃ -Ag-SnO ₂ as transparent conductive oxide. <i>Journal of Materials Chemistry A</i> , 2018, 6, 19330-19337.	5.2	27
47	Bifunctional Molecular Modification Improving Efficiency and Stability of Inverted Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800645.	1.9	43
48	The Impact of Hybrid Compositional Film/Structure on Organic-Inorganic Perovskite Solar Cells. <i>Nanomaterials</i> , 2018, 8, 356.	1.9	30
49	General Method To Define the Type of Carrier Transport Materials for Perovskite Solar Cells via Kelvin Probes Microscopy. <i>ACS Applied Energy Materials</i> , 2018, 1, 3984-3991.	2.5	15
50	Formamidinium-Based Lead Halide Perovskites: Structure, Properties, and Fabrication Methodologies. <i>Small Methods</i> , 2018, 2, 1700387.	4.6	48
51	Black Phosphorus Quantum Dots for Hole Extraction of Typical Planar Hybrid Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 591-598.	2.1	191
52	SrCl ₂ Derived Perovskite Facilitating a High Efficiency of 16% in Hole-Conductor-Free Fully Printable Mesoscopic Perovskite Solar Cells. <i>Advanced Materials</i> , 2017, 29, 1606608.	11.1	135
53	Metal Acetylacetonate Series in Interface Engineering for Full Low-Temperature-Processed, High-Performance, and Stable Planar Perovskite Solar Cells with Conversion Efficiency over 16% on 1 cm ² Scale. <i>Advanced Materials</i> , 2017, 29, 1603923.	11.1	190
54	Perovskite solar cells - An overview of critical issues. <i>Progress in Quantum Electronics</i> , 2017, 53, 1-37.	3.5	132

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55	Cesium Doped NiO _x as an Efficient Hole Extraction Layer for Inverted Planar Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1700722.	10.2	353
56	Research progress on large-area perovskite thin films and solar modules. <i>Journal of Materiomics</i> , 2017, 3, 231-244.	2.8	75
57	Inverted Planar Perovskite Solar Cells with a High Fill Factor and Negligible Hysteresis by the Dual Effect of NaCl-Doped PEDOT:PSS. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43902-43909.	4.0	149
58	Synthesis of Lead-Free Perovskite Films by Combinatorial Evaporation: Fast Processes for Screening Different Precursor Combinations. <i>Chemistry of Materials</i> , 2017, 29, 9946-9953.	3.2	13
59	Ruthenium acetylacetonate in interface engineering for high performance planar hybrid perovskite solar cells. <i>Optics Express</i> , 2017, 25, A253.	1.7	16
60	Overcoming the Interface Losses in Planar Heterojunction Perovskite-Based Solar Cells. <i>Advanced Materials</i> , 2016, 28, 5112-5120.	11.1	188
61	A Series of Pyrene-Substituted Silicon Phthalocyanines as Near-IR Sensitizers in Organic Ternary Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1502355.	10.2	59
62	Low Cost and Solution Processed Interfacial Layer Based on Poly(2-ethyl-2-oxazoline) Nanodots for Inverted Perovskite Solar Cells. <i>Chemistry of Materials</i> , 2016, 28, 4879-4883.	3.2	45
63	Low temperature processed, high-performance and stable NiO _x based inverted planar perovskite solar cells via a poly(2-ethyl-2-oxazoline) nanodots cathode electron-extraction layer. <i>Materials Today Energy</i> , 2016, 1-2, 1-10.	2.5	30
64	Perovskite solar cells with 18.21% efficiency and Area over 1 m ² fabricated by heterojunction engineering. <i>Nature Energy</i> , 2016, 1, .	19.8	555
65	Overcoming Electrode-Induced Losses in Organic Solar Cells by Tailoring a Quasi-Ohmic Contact to Fullerenes via Solution-Processed Alkali Hydroxide Layers. <i>Advanced Energy Materials</i> , 2016, 6, 1502195.	10.2	29
66	High-Quality Mixed-Organic-Cation Perovskites from a Phase-Pure Non-stoichiometric Intermediate (FAI) _{1-x} Pb _{2-x} for Solar Cells. <i>Advanced Materials</i> , 2015, 27, 4918-4923.	11.1	140
67	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Low-Cost and Water-Free PEDOT Hole-Extraction Layer. <i>Advanced Energy Materials</i> , 2015, 5, 1500543.	10.2	81
68	Low-Temperature and Hysteresis-Free Electron-Transporting Layers for Efficient, Regular, and Planar Structure Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2015, 5, 1501056.	10.2	69
69	Sub-bandgap photon harvesting for organic solar cells via integrating up-conversion nanophosphors. <i>Organic Electronics</i> , 2015, 19, 113-119.	1.4	13
70	Black Phosphorus Quantum Dots. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 3653-3657.	7.2	594
71	Efficient and stable large-area perovskite solar cells with inorganic charge extraction layers. <i>Science</i> , 2015, 350, 944-948.	6.0	2,007
72	Low-Temperature Solution-Processed Kesterite Solar Cell Based on in Situ Deposition of Ultrathin Absorber Layer. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 21100-21106.	4.0	28

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73	Hybrid interfacial layer leads to solid performance improvement of inverted perovskite solar cells. <i>Energy and Environmental Science</i> , 2015, 8, 629-640.	15.6	285
74	Sequential Deposition of $\text{CH}_3\text{NH}_3\text{PbI}_3$ on Planar NiO Film for Efficient Planar Perovskite Solar Cells. <i>ACS Photonics</i> , 2014, 1, 547-553.	3.2	245
75	A dopant-free hole-transporting material for efficient and stable perovskite solar cells. <i>Energy and Environmental Science</i> , 2014, 7, 2963-2967.	15.6	668
76	Boosting the Photocurrent Density of p-Type Solar Cells Based on Organometal Halide Perovskite-Sensitized Mesoporous NiO Photocathodes. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 12609-12617.	4.0	50
77	Morphology characterization in organic and hybrid solar cells. <i>Energy and Environmental Science</i> , 2012, 5, 8045.	15.6	379
78	Mesogen induced self-assembly for hybrid bulk heterojunction solar cells based on a liquid crystal Dâ€‘A copolymer and ZnO nanocrystals. <i>Journal of Materials Chemistry</i> , 2012, 22, 6259.	6.7	25
79	Photovoltaic performance enhancement in P3HT/ZnO hybrid bulk-heterojunction solar cells induced by semiconducting liquid crystal ligands. <i>Organic Electronics</i> , 2012, 13, 2757-2762.	1.4	24
80	Ordered microstructure induced by orientation behavior of liquid-crystal polythiophene for performance improvement of hybrid solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012, 96, 266-275.	3.0	33
81	Enhancement of the ultraviolet emission of ZnO nanorods by terphenyl liquid-crystalline ligands modification. <i>Applied Surface Science</i> , 2011, 257, 8788-8793.	3.1	15