Yuanhang Cheng

List of Publications by Year
in descending order

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62 papers	3,648 citations	109321 35 h-index	133252 59 g-index
65 all docs	65 docs citations	65 times ranked	5027 citing authors

#	Article	IF	Citations
1	Decomposition of Organometal Halide Perovskite Films on Zinc Oxide Nanoparticles. ACS Applied Materials & Interfaces, 2015, 7, 19986-19993.	8.0	279
2	20.7% highly reproducible inverted planar perovskite solar cells with enhanced fill factor and eliminated hysteresis. Energy and Environmental Science, 2019, 12, 1622-1633.	30.8	193
3	Pushing commercialization of perovskite solar cells by improving their intrinsic stability. Energy and Environmental Science, 2021, 14, 3233-3255.	30.8	166
4	Progress of the key materials for organic solar cells. Science China Chemistry, 2020, 63, 758-765.	8.2	158
5	A green SPEEK/lignin composite membrane with high ion selectivity for vanadium redox flow battery. Journal of Membrane Science, 2019, 572, 110-118.	8.2	153
6	Boron Doped Multi-walled Carbon Nanotubes as Catalysts for Oxygen Reduction Reaction and Oxygen Evolution Reactionin in Alkaline Media. Electrochimica Acta, 2014, 143, 291-296.	5.2	122
7	Chlorine Incorporation for Enhanced Performance of Planar Perovskite Solar Cell Based on Lead Acetate Precursor. ACS Applied Materials & Interfaces, 2015, 7, 23110-23116.	8.0	118
8	Full Defects Passivation Enables 21% Efficiency Perovskite Solar Cells Operating in Air. Advanced Energy Materials, 2020, 10, 2001958.	19.5	117
9	Ultraviolet-ozone surface modification for non-wetting hole transport materials based inverted planar perovskite solar cells with efficiency exceeding 18%. Journal of Power Sources, 2017, 360, 157-165.	7.8	106
10	Sulfonated Poly(Ether Ether Ketone)/Functionalized Carbon Nanotube Composite Membrane for Vanadium Redox Flow Battery Applications. Electrochimica Acta, 2015, 153, 44-48.	5.2	102
11	18% High-Efficiency Air-Processed Perovskite Solar Cells Made in a Humid Atmosphere of 70% RH. Solar Rrl, 2017, 1, 1700097.	5.8	97
12	Impact of surface dipole in NiOx on the crystallization and photovoltaic performance of organometal halide perovskite solar cells. Nano Energy, 2019, 61, 496-504.	16.0	92
13	Perovskite-based tandem solar cells. Science Bulletin, 2021, 66, 621-636.	9.0	91
14	Graphene oxide as an efficient hole-transporting material for high-performance perovskite solar cells with enhanced stability. Journal of Materials Chemistry A, 2017, 5, 9852-9858.	10.3	87
15	Progress in air-processed perovskite solar cells: from crystallization to photovoltaic performance. Materials Horizons, 2019, 6, 1611-1624.	12.2	86
16	Graphene coated carbon felt as a high-performance electrode for all vanadium redox flow batteries. Surface and Coatings Technology, 2019, 358, 153-158.	4.8	86
17	Air-processed mixed-cation Cs_{0.15}FA_{0.85}PbI₃ planar perovskite solar cells derived from a PbI₂â€“CsIâ€“FAI intermediate complex. Journal of Materials Chemistry A, 2018, 6, 7731-7740.	10.3	75
18	Modified multi-walled carbon nanotube/Ag nanoparticle composite catalyst for the oxygen reduction reaction in alkaline solution. Electrochimica Acta, 2013, 111, 635-641.	5.2	74

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19	Perovskite/Si tandem solar cells: Fundamentals, advances, challenges, and novel applications. SusMat, 2021, 1, 324-344.	14.9	70
20	Suppressing Ion Migration across Perovskite Grain Boundaries by Polymer Additives. Advanced Functional Materials, 2021, 31, 2006802.	14.9	66
21	Using Ultralow Dosages of Electron Acceptor to Reveal the Early Stage Donorâ€“Acceptor Electronic Interactions in Bulk Heterojunction Blends. Advanced Energy Materials, 2017, 7, 1602360.	19.5	64
22	Revealing the Degradation and Selfâ€Healing Mechanisms in Perovskite Solar Cells by Subâ€Bandgap External Quantum Efficiency Spectroscopy. Advanced Materials, 2021, 33, e2006170.	21.0	64
23	Redox Targeting-Based Vanadium Redox-Flow Battery. ACS Energy Letters, 2019, 4, 3028-3035.	17.4	63
24	Over 16% efficiency from thick-film organic solar cells. Science Bulletin, 2020, 65, 1979-1982.	9.0	62
25	The detrimental effect of excess mobile ions in planar CH₃NH₃PbI₃ perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 12748-12755.	10.3	55
26	Analytical Review of Spiroâ€OMeTAD Hole Transport Materials: Paths Toward Stable and Efficient Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	53
27	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. Nano Energy, 2020, 71, 104556.	16.0	51
28	Spectroscopic study on the impact of methylammonium iodide loading time on the electronic properties in perovskite thin films. Journal of Materials Chemistry A, 2016, 4, 561-567.	10.3	50
29	A low-cost SPEEK-K type membrane for neutral aqueous zinc-iron redox flow battery. Surface and Coatings Technology, 2019, 358, 190-194.	4.8	50
30	SPEEK Membrane of Ultrahigh Stability Enhanced by Functionalized Carbon Nanotubes for Vanadium Redox Flow Battery. Frontiers in Chemistry, 2018, 6, 286.	3.6	49
31	Charge transfer-induced photoluminescence in ZnO nanoparticles. Nanoscale, 2019, 11, 8736-8743.	5.6	48
32	Improving the conductivity of solâ€“gel derived NiO_x with a mixed oxide composite to realize over 80% fill factor in inverted planar perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 9578-9586.	10.3	47
33	On the Study of Exciton Binding Energy with Direct Charge Generation in Photovoltaic Polymers. Advanced Electronic Materials, 2016, 2, 1600200.	5.1	45
34	Impact of Nonfullerene Molecular Architecture on Charge Generation, Transport, and Morphology in PTB7â€Thâ€Based Organic Solar Cells. Advanced Functional Materials, 2018, 28, 1802702.	14.9	44
35	Homogeneous Grain Boundary Passivation in Wideâ€Bandgap Perovskite Films Enables Fabrication of Monolithic Perovskite/Organic Tandem Solar Cells with over 21% Efficiency. Advanced Functional Materials, 2022, 32, .	14.9	42
36	High-power bifacial perovskite solar cells with shelf life of over 2000Âh. Science Bulletin, 2020, 65, 607-610.	9.0	36

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37	Direct observation of cation-exchange in liquid-to-solid phase transformation in FA_{1â^'x}MA_xPbI₃ based perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 9081-9088.	10.3	35
38	Development and Challenges of Metal Halide Perovskite Solar Modules. Solar Rrl, 2022, 6, 2100545.	5.8	34
39	Thickâ€Film Highâ€Performance Bulkâ€Heterojunction Solar Cells Retaining 90% PCEs of the Optimized Thin Film Cells. Advanced Electronic Materials, 2017, 3, 1700007.	5.1	33
40	Enhanced performance of perovskite solar cells based on vertical TiO 2 nanotube arrays with full filling of CH 3 NH 3 PbI 3. Applied Surface Science, 2018, 451, 250-257.	6.1	32
41	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.	8.0	32
42	Ag Nanoparticles on Boron Doped Multi-walled Carbon Nanotubes as a Synergistic Catalysts for Oxygen Reduction Reaction in Alkaline Media. Electrochimica Acta, 2015, 174, 919-924.	5.2	30
43	Sub-Band Gap Turn-On Near-Infrared-to-Visible Up-Conversion Device Enabled by an Organicâ€“Inorganic Hybrid Perovskite Photovoltaic Absorber. ACS Applied Materials & Interfaces, 2018, 10, 15920-15925.	8.0	30
44	Low Temperature Sonochemical Synthesis of Morphology Variable MoO3 Nanostructures for Performance Enhanced Lithium Ion Battery Applications. Electrochimica Acta, 2015, 185, 83-89.	5.2	29
45	Charge-Transfer State Energy and Its Relationship with Open-Circuit Voltage in an Organic Photovoltaic Device. Journal of Physical Chemistry C, 2016, 120, 14059-14068.	3.1	28
46	Comparison of processing windows and electronic properties between CH3NH3PbI3 perovskite fabricated by one-step and two-step solution processes. Organic Electronics, 2018, 63, 159-165.	2.6	28
47	Bulk-heterojunction solar cells with enriched polymer contents. Organic Electronics, 2017, 40, 1-7.	2.6	18
48	Encapsulation for perovskite solar cells. Science Bulletin, 2021, 66, 100-102.	9.0	18
49	Plasmonic Local Heating Induced Strain Modulation for Enhanced Efficiency and Stability of Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	19.5	18
50	Boosting the photovoltaic thermal stability of fullerene bulk heterojunction solar cells through charge transfer interactions. Journal of Materials Chemistry A, 2017, 5, 23662-23670.	10.3	15
51	Vertical Organicâ€“Inorganic Hybrid Perovskite Schottky Junction Transistors. Advanced Electronic Materials, 2018, 4, 1800039.	5.1	15
52	Probing the Energy Level Alignment and the Correlation with Open-Circuit Voltage in Solution-Processed Polymeric Bulk Heterojunction Photovoltaic Devices. ACS Applied Materials & Interfaces, 2016, 8, 7283-7290.	8.0	14
53	Understanding the role of interconnecting layer on determining monolithic perovskite/organic tandem device carrier recombination properties. Journal of Energy Chemistry, 2022, 71, 12-19.	12.9	12
54	Evidence of Delocalization in Charge-Transfer State Manifold for Donor:Acceptor Organic Photovoltaics. ACS Applied Materials & Interfaces, 2016, 8, 21798-21805.	8.0	11

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55	Resolving Spectral Mismatch Errors for Perovskite Solar Cells in Commercial Class AAA Solar Simulators. Journal of Physical Chemistry Letters, 2020, 11, 3782-3788.	4.6	10
56	Low temperature fabrication of formamidinium based perovskite solar cells with enhanced performance by chlorine incorporation. Organic Electronics, 2016, 38, 144-149.	2.6	8
57	Structural modulation and assembling of metal halide perovskites for solar cells and lightâ€emitting diodes. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 1218-1250.	17.3	7
58	Evidence on Enhanced Exciton Polarizability in Donor/Acceptor Bulk Heterojunction Organic Photovoltaics. ACS Applied Materials & Interfaces, 2018, 10, 7256-7262.	8.0	6
59	Locking the morphology with a green, fast and efficient physical cross-linking approach for organic electronic applications. Organic Electronics, 2016, 28, 53-58.	2.6	4
60	Amorphous CdOâ€In 2 O 3 Electrode for Perovskiteâ€Based Bifacial and Tandem Photovoltaic Technologies with High Energy Production. Solar Rrl, 0, , 2100809.	5.8	3
61	The integration structure enhances performance of perovskite solar cells. Science Bulletin, 2021, 66, 310-313.	9.0	2
62	Organic Photovoltaics: On the Study of Exciton Binding Energy with Direct Charge Generation in Photovoltaic Polymers (Adv. Electron. Mater. 11/2016). Advanced Electronic Materials, 2016, 2, .	5.1	0