

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	Development and Challenges of Metal Halide Perovskite Solar Modules. <i>Solar Rrl</i> , 2022, 6, 2100545.	5.8	34
2	Homogeneous Grain Boundary Passivation in Wideâ€Bandgap Perovskite Films Enables Fabrication of Monolithic Perovskite/Organic Tandem Solar Cells with over 21% Efficiency. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	42
3	Understanding the role of interconnecting layer on determining monolithic perovskite/organic tandem device carrier recombination properties. <i>Journal of Energy Chemistry</i> , 2022, 71, 12-19.	12.9	12
4	Plasmonic Local Heating Induced Strain Modulation for Enhanced Efficiency and Stability of Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	18
5	Analytical Review of Spiroâ€OMeTAD Hole Transport Materials: Paths Toward Stable and Efficient Perovskite Solar Cells. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	5.8	53
6	The integration structure enhances performance of perovskite solar cells. <i>Science Bulletin</i> , 2021, 66, 310-313.	9.0	2
7	Suppressing Ion Migration across Perovskite Grain Boundaries by Polymer Additives. <i>Advanced Functional Materials</i> , 2021, 31, 2006802.	14.9	66
8	Encapsulation for perovskite solar cells. <i>Science Bulletin</i> , 2021, 66, 100-102.	9.0	18
9	Perovskite-based tandem solar cells. <i>Science Bulletin</i> , 2021, 66, 621-636.	9.0	91
10	Revealing the Degradation and Selfâ€Healing Mechanisms in Perovskite Solar Cells by Subâ€Bandgap External Quantum Efficiency Spectroscopy. <i>Advanced Materials</i> , 2021, 33, e2006170.	21.0	64
11	Pushing commercialization of perovskite solar cells by improving their intrinsic stability. <i>Energy and Environmental Science</i> , 2021, 14, 3233-3255.	30.8	166
12	Perovskite/Si tandem solar cells: Fundamentals, advances, challenges, and novel applications. <i>SusMat</i> , 2021, 1, 324-344.	14.9	70
13	Structural modulation and assembling of metal halide perovskites for solar cells and lightâ€emitting diodes. <i>InformaÃnÃ-MateriÃly</i> , 2021, 3, 1218-1250.	17.3	7
14	Over 16% efficiency from thick-film organic solar cells. <i>Science Bulletin</i> , 2020, 65, 1979-1982.	9.0	62
15	Full Defects Passivation Enables 21% Efficiency Perovskite Solar Cells Operating in Air. <i>Advanced Energy Materials</i> , 2020, 10, 2001958.	19.5	117
16	Progress of the key materials for organic solar cells. <i>Science China Chemistry</i> , 2020, 63, 758-765.	8.2	158
17	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. <i>Nano Energy</i> , 2020, 71, 104556.	16.0	51
18	High-power bifacial perovskite solar cells with shelf life of over 2000Ãh. <i>Science Bulletin</i> , 2020, 65, 607-610.	9.0	36

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19	Resolving Spectral Mismatch Errors for Perovskite Solar Cells in Commercial Class AAA Solar Simulators. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3782-3788.	4.6	10
20	Improving the conductivity of sol-gel derived NiO _x with a mixed oxide composite to realize over 80% fill factor in inverted planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9578-9586.	10.3	47
21	Porous and Intercrossed Pb ₂ -CsI Nanorod Scaffold for Inverted Planar FA-Cs Mixed-Cation Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 6126-6135.	8.0	32
22	Impact of surface dipole in NiO _x on the crystallization and photovoltaic performance of organometal halide perovskite solar cells. <i>Nano Energy</i> , 2019, 61, 496-504.	16.0	92
23	Progress in air-processed perovskite solar cells: from crystallization to photovoltaic performance. <i>Materials Horizons</i> , 2019, 6, 1611-1624.	12.2	86
24	20.7% highly reproducible inverted planar perovskite solar cells with enhanced fill factor and eliminated hysteresis. <i>Energy and Environmental Science</i> , 2019, 12, 1622-1633.	30.8	193
25	Charge transfer-induced photoluminescence in ZnO nanoparticles. <i>Nanoscale</i> , 2019, 11, 8736-8743.	5.6	48
26	Redox Targeting-Based Vanadium Redox-Flow Battery. <i>ACS Energy Letters</i> , 2019, 4, 3028-3035.	17.4	63
27	A green SPEEK/lignin composite membrane with high ion selectivity for vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2019, 572, 110-118.	8.2	153
28	A low-cost SPEEK-K type membrane for neutral aqueous zinc-iron redox flow battery. <i>Surface and Coatings Technology</i> , 2019, 358, 190-194.	4.8	50
29	Graphene coated carbon felt as a high-performance electrode for all vanadium redox flow batteries. <i>Surface and Coatings Technology</i> , 2019, 358, 153-158.	4.8	86
30	Sub-Band Gap Turn-On Near-Infrared-to-Visible Up-Conversion Device Enabled by an Organic-Inorganic Hybrid Perovskite Photovoltaic Absorber. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 15920-15925.	8.0	30
31	Direct observation of cation-exchange in liquid-to-solid phase transformation in FA _{1-x} MA _x Pb ₃ based perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9081-9088.	10.3	35
32	Evidence on Enhanced Exciton Polarizability in Donor/Acceptor Bulk Heterojunction Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7256-7262.	8.0	6
33	Enhanced performance of perovskite solar cells based on vertical TiO ₂ nanotube arrays with full filling of CH ₃ NH ₃ PbI ₃ . <i>Applied Surface Science</i> , 2018, 451, 250-257.	6.1	32
34	Air-processed mixed-cation Cs _{0.15} FA _{0.85} Pb ₃ planar perovskite solar cells derived from a Pb ₂ -CsI-FAI intermediate complex. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7731-7740.	10.3	75
35	Vertical Organic-Inorganic Hybrid Perovskite Schottky Junction Transistors. <i>Advanced Electronic Materials</i> , 2018, 4, 1800039.	5.1	15
36	Impact of Nonfullerene Molecular Architecture on Charge Generation, Transport, and Morphology in PTB7-Th-Based Organic Solar Cells. <i>Advanced Functional Materials</i> , 2018, 28, 1802702.	14.9	44

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37	Comparison of processing windows and electronic properties between CH ₃ NH ₃ PbI ₃ perovskite fabricated by one-step and two-step solution processes. <i>Organic Electronics</i> , 2018, 63, 159-165.	2.6	28
38	SPEEK Membrane of Ultrahigh Stability Enhanced by Functionalized Carbon Nanotubes for Vanadium Redox Flow Battery. <i>Frontiers in Chemistry</i> , 2018, 6, 286.	3.6	49
39	Using Ultralow Dosages of Electron Acceptor to Reveal the Early Stage Donor-Acceptor Electronic Interactions in Bulk Heterojunction Blends. <i>Advanced Energy Materials</i> , 2017, 7, 1602360.	19.5	64
40	Graphene oxide as an efficient hole-transporting material for high-performance perovskite solar cells with enhanced stability. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9852-9858.	10.3	87
41	Ultraviolet-ozone surface modification for non-wetting hole transport materials based inverted planar perovskite solar cells with efficiency exceeding 18%. <i>Journal of Power Sources</i> , 2017, 360, 157-165.	7.8	106
42	Thick-Film High-Performance Bulk-Heterojunction Solar Cells Retaining 90% PCEs of the Optimized Thin Film Cells. <i>Advanced Electronic Materials</i> , 2017, 3, 1700007.	5.1	33
43	Boosting the photovoltaic thermal stability of fullerene bulk heterojunction solar cells through charge transfer interactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23662-23670.	10.3	15
44	18% High-Efficiency Air-Processed Perovskite Solar Cells Made in a Humid Atmosphere of 70% RH. <i>Solar Rrl</i> , 2017, 1, 1700097.	5.8	97
45	Bulk-heterojunction solar cells with enriched polymer contents. <i>Organic Electronics</i> , 2017, 40, 1-7.	2.6	18
46	Probing the Energy Level Alignment and the Correlation with Open-Circuit Voltage in Solution-Processed Polymeric Bulk Heterojunction Photovoltaic Devices. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 7283-7290.	8.0	14
47	Evidence of Delocalization in Charge-Transfer State Manifold for Donor:Acceptor Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 21798-21805.	8.0	11
48	Low temperature fabrication of formamidinium based perovskite solar cells with enhanced performance by chlorine incorporation. <i>Organic Electronics</i> , 2016, 38, 144-149.	2.6	8
49	On the Study of Exciton Binding Energy with Direct Charge Generation in Photovoltaic Polymers. <i>Advanced Electronic Materials</i> , 2016, 2, 1600200.	5.1	45
50	The detrimental effect of excess mobile ions in planar CH ₃ NH ₃ PbI ₃ perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 12748-12755.	10.3	55
51	Organic Photovoltaics: On the Study of Exciton Binding Energy with Direct Charge Generation in Photovoltaic Polymers (<i>Adv. Electron. Mater.</i> 11/2016). <i>Advanced Electronic Materials</i> , 2016, 2, .	5.1	0
52	Charge-Transfer State Energy and Its Relationship with Open-Circuit Voltage in an Organic Photovoltaic Device. <i>Journal of Physical Chemistry C</i> , 2016, 120, 14059-14068.	3.1	28
53	Spectroscopic study on the impact of methylammonium iodide loading time on the electronic properties in perovskite thin films. <i>Journal of Materials Chemistry A</i> , 2016, 4, 561-567.	10.3	50
54	Locking the morphology with a green, fast and efficient physical cross-linking approach for organic electronic applications. <i>Organic Electronics</i> , 2016, 28, 53-58.	2.6	4

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55	Ag Nanoparticles on Boron Doped Multi-walled Carbon Nanotubes as a Synergistic Catalysts for Oxygen Reduction Reaction in Alkaline Media. <i>Electrochimica Acta</i> , 2015, 174, 919-924.	5.2	30
56	Chlorine Incorporation for Enhanced Performance of Planar Perovskite Solar Cell Based on Lead Acetate Precursor. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 23110-23116.	8.0	118
57	Decomposition of Organometal Halide Perovskite Films on Zinc Oxide Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 19986-19993.	8.0	279
58	Low Temperature Sonochemical Synthesis of Morphology Variable MoO ₃ Nanostructures for Performance Enhanced Lithium Ion Battery Applications. <i>Electrochimica Acta</i> , 2015, 185, 83-89.	5.2	29
59	Sulfonated Poly(Ether Ether Ketone)/Functionalized Carbon Nanotube Composite Membrane for Vanadium Redox Flow Battery Applications. <i>Electrochimica Acta</i> , 2015, 153, 44-48.	5.2	102
60	Boron Doped Multi-walled Carbon Nanotubes as Catalysts for Oxygen Reduction Reaction and Oxygen Evolution Reaction in Alkaline Media. <i>Electrochimica Acta</i> , 2014, 143, 291-296.	5.2	122
61	Modified multi-walled carbon nanotube/Ag nanoparticle composite catalyst for the oxygen reduction reaction in alkaline solution. <i>Electrochimica Acta</i> , 2013, 111, 635-641.	5.2	74
62	Amorphous CdO/n-ZnO Electrode for Perovskite-Based Bifacial and Tandem Photovoltaic Technologies with High Energy Production. <i>Solar Rrl</i> , 0, , 2100809.	5.8	3