Zhicai He

List of Publications by Year
in descending order

30 papers	8,916 citations	516215 16 h-index	476904 29 g-index
31 all docs	31 docs citations	31 times ranked	7947 citing authors

#	Article	IF	Citations
1	Enhanced power-conversion efficiency in polymer solar cells using an inverted device structure. Nature Photonics, 2012, 6, 591-595.	15.6	3,583
2	Simultaneous Enhancement of Openâ€Circuit Voltage, Shortâ€Circuit Current Density, and Fill Factor in Polymer Solar Cells. Advanced Materials, 2011, 23, 4636-4643.	11.1	2,000
3	Single-junction polymer solar cells with high efficiency and photovoltage. Nature Photonics, 2015, 9, 174-179.	15.6	1,595
4	High-efficiency organic solar cells with low non-radiative recombination loss and low energetic disorder. Nature Photonics, 2020, 14, 300-305.	15.6	713
5	Largely Enhanced Efficiency with a PFN/Al Bilayer Cathode in High Efficiency Bulk Heterojunction Photovoltaic Cells with a Low Bandgap Polycarbazole Donor. Advanced Materials, 2011, 23, 3086-3089.	11.1	238
6	High-efficiency ITO-free polymer solar cells using highly conductive PEDOT:PSS/surfactant bilayer transparent anodes. Energy and Environmental Science, 2013, 6, 1956.	15.6	207
7	Dopamine Semiquinone Radical Doped PEDOT:PSS: Enhanced Conductivity, Work Function and Performance in Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2000743.	10.2	97
8	A donor polymer based on 3-cyanothiophene with superior batch-to-batch reproducibility for high-efficiency organic solar cells. Energy and Environmental Science, 2021, 14, 5530-5540.	15.6	66
9	High-Performance Fullerene-Free Polymer Solar Cells Featuring Efficient Photocurrent Generation from Dual Pathways and Low Nonradiative Recombination Loss. ACS Energy Letters, 2019, 4, 8-16.	8.8	62
10	Optimizing the conjugated side chains of quinoxaline based polymers for nonfullerene solar cells with 10.5% efficiency. Journal of Materials Chemistry A, 2018, 6, 3074-3083.	5.2	61
11	Efficiency enhancement in solution-processed organic small molecule: Fullerene solar cells via solvent vapor annealing. Applied Physics Letters, 2015, 106, .	1.5	48
12	3,4â€Dicyanothiopheneâ€”a Versatile Building Block for Efficient Nonfullerene Polymer Solar Cells. Advanced Energy Materials, 2020, 10, 1904247.	10.2	48
13	Formation Mechanism of PFN Dipole Interlayer in Organic Solar Cells. Solar Rrl, 2021, 5, 2000753.	3.1	34
14	Influence of the acceptor crystallinity on the open-circuit voltage in PTB7-Th: ITIC organic solar cells. Journal of Materials Chemistry C, 2019, 7, 14861-14866.	2.7	24
15	Organic photodetectors with high detectivity for broadband detection covering UV-vis-NIR. Journal of Materials Chemistry C, 2022, 10, 5787-5796.	2.7	23
16	Dibenzothiophene-S,S-dioxide and Bispyridinium-Based Cationic Polyfluorene Derivative as an Efficient Cathode Modifier for Polymer Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 4778-4787.	4.0	21
17	High-quality WS₂ film as a hole transport layer in high-efficiency non-fullerene organic solar cells. Nanoscale, 2021, 13, 16589-16597.	2.8	15
18	Origin of the Additiveâ€Induced V_{OC} Change in Nonâ€Fullerene Organic Solar Cells. Small, 2022, 18, e2107106.	5.2	15

#	Article	IF	Citations
19	Pyridine-incorporated alcohol-soluble neutral polyfluorene derivatives as efficient cathode-modifying layers for polymer solar cells. Polymer Chemistry, 2017, 8, 6720-6732.	1.9	10
20	Indacenodifuran-Based Non-Fullerene Electron Acceptors for Efficient Polymer Solar Cells. ACS Applied Energy Materials, 2020, 3, 6133-6138.	2.5	10
21	Molecular Engineering on Bis(benzothiophene-S,S-dioxide)-Based Large-Band Gap Polymers for Interfacial Modifications in Polymer Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 45969-45978.	4.0	9
22	Mechanism of the Alcohol-Soluble Ionic Organic Interlayer in Organic Solar Cells. Langmuir, 2021, 37, 4347-4354.	1.6	9
23	Water- and alcohol-soluble cationic phenanthroline derivatives as efficient cathode interfacial layers for bulk-heterojunction polymer solar cells. Journal of Materials Chemistry C, 2017, 5, 4858-4866.	2.7	6
24	An environmentally friendly natural polymer as a universal interfacial modifier for fullerene and non-fullerene polymer solar cells. Sustainable Energy and Fuels, 2020, 4, 1234-1241.	2.5	6
25	Efficient Interface Engineering Enhances Photovoltaic Performance of a Bulk-Heterojunction PCDTBT:PC₇₁BM System. IEEE Journal of Photovoltaics, 2019, 9, 1258-1265.	1.5	5
26	Accelerating charge transfer via nonconjugated polyelectrolyte interlayers toward efficient versatile photoredox catalysis. Communications Chemistry, 2021, 4, .	2.0	5
27	The role of balanced dual charge generation pathways in ternary organic solar cells. Journal of Materials Chemistry C, 0, , .	2.7	3
28	Trifluoromethyl-Substituted Large Band-Gap Polytriphenylamines for Polymer Solar Cells with High Open-Circuit Voltages. Polymers, 2018, 10, 52.	2.0	1
29	Molecular Engineering Enhances the Charge Carriers Transport in Wide Band-Gap Polymer Donors Based Polymer Solar Cells. Molecules, 2020, 25, 4101.	1.7	1
30	Stable dinitrile end-capped closed-shell non-quinodimethane as a donor, an acceptor and an additive for organic solar cells. Materials Advances, 2022, 3, 1759-1766.	2.6	1