

Kai Zhang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

71
papers

5,435
citations

33
h-index

73
g-index

73
ext. papers

6,446
ext. citations

14.9
avg, IF

6.02
L-index

#	Paper	IF	Citations
71	In-situ self-organized anode interlayer enables organic solar cells with simultaneously simplified processing and greatly improved efficiency to 17.8%. <i>Nano Energy</i> , 2022 , 93, 106814	17.1	8
70	Process-aid solid engineering triggers delicately modulation of Y-series non-fullerene acceptor for efficient organic solar cells.. <i>Advanced Materials</i> , 2022 , e2200907	24	11
69	Fine-Tuning Batch Factors of Polymer Acceptors Enables a Binary All-Polymer Solar Cell with High Efficiency of 16.11%. <i>Advanced Energy Materials</i> , 2022 , 12, 2103193	21.8	8
68	Anion-Doped Thickness-Insensitive Electron Transport Layer for Efficient Organic Solar Cell.. <i>Macromolecular Rapid Communications</i> , 2022 , e2200190	4.8	
67	Extended Conjugated Polymer Acceptor Containing ThienyleneVinyleneThienylene Unit for High-Performance Thick-Film All-Polymer Solar Cells with Superior Long-Term Stability. <i>Advanced Energy Materials</i> , 2021 , 11, 2102559	21.8	23
66	Synchronously regulating the alkyl side-chain and regioisomer of polymerized small molecule acceptor enabling highly efficient all-polymer solar cells processed with non-halogenated solvent. <i>Chemical Engineering Journal</i> , 2021 , 133575	14.7	1
65	High-Performance Elastomer from Trans-1,4 Copolymerization of Ethylene and Butadiene. <i>Macromolecules</i> , 2021 , 54, 9445-9451	5.5	0
64	Spiropyran based recognitions of amines: UV-Vis spectra and mechanisms. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021 , 250, 119385	4.4	6
63	Nonhalogenated-Solvent-Processed High-Performance All-Polymer Solar Cell with Efficiency over 14%. <i>Solar Rrl</i> , 2021 , 5, 2100076	7.1	10
62	High-performance polymer solar cells with efficiency over 18% enabled by asymmetric side chain engineering of non-fullerene acceptors. <i>Science China Chemistry</i> , 2021 , 64, 1192-1199	7.9	65
61	Tandem Organic Solar Cells with 18.7% Efficiency Enabled by Suppressing the Charge Recombination in Front Sub-Cell. <i>Advanced Functional Materials</i> , 2021 , 31, 2103283	15.6	42
60	A Near-infrared Non-fullerene Acceptor with Thienopyrrole-expanded Benzo[1,2-b:4,5-b']dithiophene Core for Polymer Solar Cells. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2021 , 39, 35-42	3.5	8
59	Highly Efficient Nonfullerene Organic Solar Cells with a Self-Doped Water-Soluble Neutral Polyaniline as Hole Transport Layer. <i>Solar Rrl</i> , 2021 , 5, 2000625	7.1	7
58	All-polymer solar cells with efficiency approaching 16% enabled using a dithieno[3,2':3,4;2'',3'':5,6]benzo[1,2-c][1,2,5]thiadiazole (fDTBT)-based polymer donor. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 8975-8983	13	27
57	Phylogenetic Relationships and Adaptation in Deep-Sea Mussels: Insights from Mitochondrial Genomes. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	3
56	Improving the fill factor of N2200-based all polymer solar cells by introducing EPPDI as a solid additive. <i>Organic Electronics</i> , 2021 , 99, 106319	3.5	2
55	Heptacyclic S,N-Heteroacene-Based Near-Infrared Nonfullerene Acceptor Enables High-Performance Organic Solar Cells with Small Highest Occupied Molecular Orbital Offsets. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 51776-51784	9.5	9

54	Self-filtering narrowband high performance organic photodetectors enabled by manipulating localized Frenkel exciton dissociation. <i>Nature Communications</i> , 2020 , 11, 2871	17.4	55
53	14.4% efficiency all-polymer solar cell with broad absorption and low energy loss enabled by a novel polymer acceptor. <i>Nano Energy</i> , 2020 , 72, 104718	17.1	177
52	Semitransparent Organic Solar Cells Enabled by a Sequentially Deposited Bilayer Structure. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 18473-18481	9.5	33
51	Polymer Pre-Aggregation Enables Optimal Morphology and High Performance in All-Polymer Solar Cells. <i>Solar Rrl</i> , 2020 , 4, 1900385	7.1	25
50	Chlorinated Fused Nonacyclic Non-Fullerene Acceptor Enables Efficient Large-Area Polymer Solar Cells with High Scalability. <i>Chemistry of Materials</i> , 2020 , 32, 1022-1030	9.6	20
49	Improving the all-polymer solar cell performance by adding a narrow bandgap polymer as the second donor.. <i>RSC Advances</i> , 2020 , 10, 38344-38350	3.7	3
48	The regioisomeric bromination effects of fused-ring electron acceptors: modulation of the optoelectronic property and miscibility endowing the polymer solar cells with 15% efficiency. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 25101-25108	13	10
47	Single-Component Non-halogen Solvent-Processed High-Performance Organic Solar Cell Module with Efficiency over 14%. <i>Joule</i> , 2020 , 4, 2004-2016	27.8	99
46	Toward Efficient Tandem Organic Solar Cells: From Materials to Device Engineering. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 39937-39947	9.5	11
45	Visible-to-near-infrared organic photodiodes with performance comparable to commercial silicon-based detectors. <i>Applied Physics Letters</i> , 2020 , 117, 093302	3.4	20
44	15% Efficiency Tandem Organic Solar Cell Based on a Novel Highly Efficient Wide-Bandgap Nonfullerene Acceptor with Low Energy Loss. <i>Advanced Energy Materials</i> , 2019 , 9, 1803657	21.8	120
43	Improving the efficiency and stability of non-fullerene polymer solar cells by using N2200 as the Additive. <i>Nano Energy</i> , 2019 , 58, 724-731	17.1	36
42	High-performance inverted polymer solar cells without an electron extraction layer via a one-step coating of cathode buffer and active layer. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 1429-1434	13	15
41	Temperature-Dependent Aggregation Donor Polymers Enable Highly Efficient Sequentially Processed Organic Photovoltaics Without the Need of Orthogonal Solvents. <i>Advanced Functional Materials</i> , 2019 , 29, 1902478	15.6	23
40	An efficient binary cathode interlayer for large-bandgap non-fullerene organic solar cells. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 12426-12433	13	15
39	High-performance non-fullerene polymer solar cells based on naphthobistriazole wide bandgap donor copolymers. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 4709-4715	7.1	0
38	Semiconductive Polymer-Doped PEDOT with High Work Function, Conductivity, Reversible Dispersion, and Application in Organic Solar Cells. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 8206-8214	8.3	15
37	Highly smooth, stable and reflective Ag-paper electrode enabled by silver mirror reaction for organic optoelectronics. <i>Chemical Engineering Journal</i> , 2019 , 370, 1048-1056	14.7	22

36	Suppressing the excessive aggregation of nonfullerene acceptor in blade-coated active layer by using n-type polymer additive to achieve large-area printed organic solar cells with efficiency over 15%. <i>EcoMat</i> , 2019 , 1, e12006	9.4	28
35	Efficient organic-inorganic hybrid cathode interfacial layer enabled by polymeric dopant and its application in large-area polymer solar cells. <i>Science China Chemistry</i> , 2019 , 62, 67-73	7.9	14
34	High-Performance Large-Area Organic Solar Cells Enabled by Sequential Bilayer Processing via Nonhalogenated Solvents. <i>Advanced Energy Materials</i> , 2019 , 9, 1802832	21.8	100
33	Low temperature processed high-performance thick film ternary polymer solar cell with enhanced stability. <i>Nano Energy</i> , 2018 , 48, 53-62	17.1	36
32	Highly Efficient Tandem Organic Solar Cell Enabled by Environmentally Friendly Solvent Processed Polymeric Interconnecting Layer. <i>Advanced Energy Materials</i> , 2018 , 8, 1703180	21.8	36
31	Alkali Salt-Doped Highly Transparent and Thickness-Insensitive Electron-Transport Layer for High-Performance Polymer Solar Cell. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 1939-1947	9.5	16
30	11.2% All-Polymer Tandem Solar Cells with Simultaneously Improved Efficiency and Stability. <i>Advanced Materials</i> , 2018 , 30, e1803166	24	78
29	High-Performance Ternary Nonfullerene Polymer Solar Cells with Both Improved Photon Harvesting and Device Stability. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 25594-25603	9.5	30
28	A high dielectric constant non-fullerene acceptor for efficient bulk-heterojunction organic solar cells. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 395-403	13	173
27	Efficient Large Area Organic Solar Cells Processed by Blade-Coating With Single-Component Green Solvent. <i>Solar Rrl</i> , 2018 , 2, 1700169	7.1	68
26	A Shockley-Type Polymer: Fullerene Solar Cell. <i>Advanced Energy Materials</i> , 2018 , 8, 1701450	21.8	29
25	High-Performance Ternary Organic Solar Cell Enabled by a Thick Active Layer Containing a Liquid Crystalline Small Molecule Donor. <i>Journal of the American Chemical Society</i> , 2017 , 139, 2387-2395	16.4	351
24	MoS ₂ /Ni ₃ S ₂ Heteronanorods as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <i>ACS Catalysis</i> , 2017 , 7, 2357-2366	13.1	705
23	Electrostatically self-assembled chitosan derivatives working as efficient cathode interlayers for organic solar cells. <i>Nano Energy</i> , 2017 , 34, 164-171	17.1	28
22	Cross-Linkable and Dual Functional Hybrid Polymeric Electron Transporting Layer for High-Performance Inverted Polymer Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1701507	24	32
21	Interface design for high-efficiency non-fullerene polymer solar cells. <i>Energy and Environmental Science</i> , 2017 , 10, 1784-1791	35.4	149
20	High-Performance Nonfullerene Polymer Solar Cells based on Imide-Functionalized Wide-Bandgap Polymers. <i>Advanced Materials</i> , 2017 , 29, 1606396	24	135
19	High-performance fullerene-free polymer solar cells with solution-processed conjugated polymers as anode interfacial layer. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2017 , 35, 219-229	3.5	33

18	Toward Solution-Processed High-Performance Polymer Solar Cells: from Material Design to Device Engineering. <i>Chemistry of Materials</i> , 2017 , 29, 141-148	9.6	115
17	Design and Synthesis of a Low Bandgap Small Molecule Acceptor for Efficient Polymer Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 8283-8287	24	373
16	High-Performance Polymer Tandem Solar Cells Employing a New n-Type Conjugated Polymer as an Interconnecting Layer. <i>Advanced Materials</i> , 2016 , 28, 4817-23	24	137
15	Crosslinkable Amino-Functionalized Conjugated Polymer as Cathode Interlayer for Efficient Inverted Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2016 , 6, 1502563	21.8	51
14	Water/alcohol soluble conjugated polymers for the interface engineering of highly efficient polymer light-emitting diodes and polymer solar cells. <i>Chemical Communications</i> , 2015 , 51, 5572-85	5.8	140
13	One-step coating inverted polymer solar cells using a conjugated polymer as an electron extraction additive. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 20500-20507	13	22
12	High-Performance Polymer Solar Cells with Electrostatic Layer-by-Layer Self-Assembled Conjugated Polyelectrolytes as the Cathode Interlayer. <i>Advanced Materials</i> , 2015 , 27, 3607-13	24	99
11	High-efficiency all-polymer solar cells based on a pair of crystalline low-bandgap polymers. <i>Advanced Materials</i> , 2014 , 26, 7224-30	24	218
10	Highly efficient inverted polymer solar cells based on a cross-linkable water-/alcohol-soluble conjugated polymer interlayer. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 10429-35	9.5	144
9	High-Performance Inverted Organic Photovoltaics with Over 1- μ m Thick Active Layers. <i>Advanced Energy Materials</i> , 2014 , 4, 1400378	21.8	76
8	Toward green solvent processable photovoltaic materials for polymer solar cells: the role of highly polar pendant groups in charge carrier transport and photovoltaic behavior. <i>Energy and Environmental Science</i> , 2013 , 6, 3022	35.4	142
7	Recent advances in water/alcohol-soluble conjugated materials: new materials and growing applications in solar cells. <i>Chemical Society Reviews</i> , 2013 , 42, 9071-104	58.5	400
6	High-efficiency polymer solar cells via the incorporation of an amino-functionalized conjugated metallopolymer as a cathode interlayer. <i>Journal of the American Chemical Society</i> , 2013 , 135, 15326-9	16.4	301
5	Plasmonic Electrically Functionalized TiO ₂ for High-Performance Organic Solar Cells. <i>Advanced Functional Materials</i> , 2013 , 23, 4255-4261	15.6	124
4	Amino N-Oxide Functionalized Conjugated Polymers and their Amino-Functionalized Precursors: New Cathode Interlayers for High-Performance Optoelectronic Devices. <i>Advanced Functional Materials</i> , 2012 , 22, 2846-2854	15.6	97
3	Non-fullerene electron acceptors with benzotrithiophene with extension terminal groups for the development of high-efficiency organic solar cells. <i>Journal of Materials Chemistry C</i> ,	7.1	3
2	Layer-by-Layer Processed PM6:Y6-Based Stable Ternary Polymer Solar Cells with Improved Efficiency over 18% by Incorporating an Asymmetric Thieno[3,2-b]indole-Based Acceptor. <i>Advanced Functional Materials</i> , 2200629	15.6	8
1	Semitransparent Organic Solar Cells with Efficiency Surpassing 15%. <i>Advanced Energy Materials</i> , 2200453	21.8	10

