Wenkai Zhong

List of Publications by Year
in descending order

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		218677	106344
66	5,165	26	65
papers	citations	h-index	g-index

66	66	66	3117
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Single-junction organic solar cells with over 19% efficiency enabled by a refined double-fibril network morphology. Nature Materials, 2022, 21, 656-663.	27.5	1,214
2	Achieving over 16% efficiency for single-junction organic solar cells. Science China Chemistry, 2019, 62, 746-752.	8.2	817
3	A generic green solvent concept boosting the power conversion efficiency of all-polymer solar cells to 11%. Energy and Environmental Science, 2019, 12, 157-163.	30.8	287
4	Fine-tuning of the chemical structure of photoactive materials for highly efficient organic photovoltaics. Nature Energy, 2018, 3, 1051-1058.	39.5	281
5	14.4% efficiency all-polymer solar cell with broad absorption and low energy loss enabled by a novel polymer acceptor. Nano Energy, 2020, 72, 104718.	16.0	280
6	Aggregationâ€Induced Multilength Scaled Morphology Enabling 11.76% Efficiency in Allâ€Polymer Solar Cells Using Printing Fabrication. Advanced Materials, 2019, 31, e1902899.	21.0	270
7	A Universal Fluorinated Polymer Acceptor Enables All-Polymer Solar Cells with >15% Efficiency. ACS Energy Letters, 2020, 5, 3702-3707.	17.4	152
8	Progress and prospects of the morphology of non-fullerene acceptor based high-efficiency organic solar cells. Energy and Environmental Science, 0, , .	30.8	149
9	15% Efficiency Tandem Organic Solar Cell Based on a Novel Highly Efficient Wideâ€Bandgap Nonfullerene Acceptor with Low Energy Loss. Advanced Energy Materials, 2019, 9, 1803657.	19.5	146
10	Highâ€Performance Thickâ€Film Allâ€Polymer Solar Cells Created Via Ternary Blending of a Novel Wideâ€Bandgap Electronâ€Donating Copolymer. Advanced Energy Materials, 2018, 8, 1703085.	19.5	115
11	Improved Performance of Ternary Polymer Solar Cells Based on A Nonfullerene Electron Cascade Acceptor. Advanced Energy Materials, 2017, 7, 1602127.	19.5	108
12	Tailoring Regioisomeric Structures of Ï€-Conjugated Polymers Containing Monofluorinated Ï€-Bridges for Highly Efficient Polymer Solar Cells. ACS Energy Letters, 2020, 5, 2087-2094.	17.4	101
13	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. Joule, 2020, 4, 1575-1593.	24.0	88
14	Morphology optimization via molecular weight tuning of donor polymer enables all-polymer solar cells with simultaneously improved performance and stability. Nano Energy, 2019, 64, 103931.	16.0	81
15	Enhanced Photovoltaic Performance of Ternary Polymer Solar Cells by Incorporation of a Narrow-Bandgap Nonfullerene Acceptor. Chemistry of Materials, 2017, 29, 8177-8186.	6.7	63
16	Designing ternary blend all-polymer solar cells with an efficiency of over 10% and a fill factor of 78%. Nano Energy, 2018, 51, 434-441.	16.0	61
17	Optimizing Microstructure Morphology and Reducing Electronic Losses in 1 cm² Polymer Solar Cells to Achieve Efficiency over 15%. ACS Energy Letters, 2019, 4, 2466-2472.	17.4	58
18	Improving the efficiency and stability of non-fullerene polymer solar cells by using N2200 as the Additive. Nano Energy, 2019, 58, 724-731.	16.0	49

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19	Suppressing the excessive aggregation of nonfullerene acceptor in bladeâ€coated active layer by using nâ€type polymer additive to achieve largeâ€area printed organic solar cells with efficiency over 15%. EcoMat, 2019, 1, e12006.	11.9	45
20	Low temperature processed high-performance thick film ternary polymer solar cell with enhanced stability. Nano Energy, 2018, 48, 53-62.	16.0	44
21	Chemically Stable Polyarylether-Based Metallophthalocyanine Frameworks with High Carrier Mobilities for Capacitive Energy Storage. Journal of the American Chemical Society, 2021, 143, 17701-17707.	13.7	42
22	High-detectivity organic photodetectors based on a thick-film photoactive layer using a conjugated polymer containing a naphtho[1,2-c:5,6-c]bis[1,2,5]thiadiazole unit. Journal of Materials Chemistry C, 2019, 7, 6070-6076.	5.5	35
23	Wide bandgap dithienobenzodithiophene-based Ï€-conjugated polymers consisting of fluorinated benzotriazole and benzothiadiazole for polymer solar cells. Journal of Materials Chemistry C, 2016, 4, 4719-4727.	5.5	34
24	Regioisomeric Non-Fullerene Acceptors Containing Fluorobenzo[c][1,2,5]thiadiazole Unit for Polymer Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 37087-37093.	8.0	33
25	Efficient All-Polymer Solar Cells Based on Conjugated Polymer Containing an Alkoxylated Imide-Functionalized Benzotriazole Unit. Macromolecules, 2017, 50, 8149-8157.	4.8	29
26	Overcoming incompatibility of donors and acceptors by constructing planar heterojunction organic solar cells. Nano Energy, 2021, 85, 105957.	16.0	29
27	High-Performance Organic Field-Effect Transistors Fabricated Based on a Novel Ternary Ï€-Conjugated Copolymer. ACS Applied Materials & Interfaces, 2017, 9, 7315-7321.	8.0	27
28	Chlorinated Fused Nonacyclic Non-Fullerene Acceptor Enables Efficient Large-Area Polymer Solar Cells with High Scalability. Chemistry of Materials, 2020, 32, 1022-1030.	6.7	27
29	Formation of Vitrified Solid Solution Enables Simultaneously Efficient and Stable Organic Solar Cells. ACS Energy Letters, 2021, 6, 3522-3529.	17.4	27
30	Highâ€Performance Green Solvent Processed Ternary Blended Allâ€Polymer Solar Cells Enabled by Complementary Absorption and Improved Morphology. Solar Rrl, 2018, 2, 1800196.	5.8	26
31	Highly efficient single-layer blue polymer light-emitting diodes based on hole-transporting group substituted poly(fluorene-co-dibenzothiophene-S,S-dioxide). Journal of Materials Chemistry C, 2017, 5, 9680-9686.	5.5	24
32	Introducing cyclic alkyl chains into small-molecule acceptors for efficient polymer solar cells. Journal of Materials Chemistry C, 2018, 6, 7046-7053.	5.5	23
33	Effect of Monofluoro Substitution on the Optoelectronic Properties of Benzo[c][1,2,5]thiadiazole Based Organic Semiconductors. Macromolecules, 2016, 49, 5806-5816.	4.8	22
34	Improved Efficiency of Polymer Solar Cells by Modifying the Side Chain of Wide-Band Gap Conjugated Polymers Containing Pyrrolo[3,4-f]benzotriazole-5,7(6H)-dione Moiety. ACS Applied Materials & Interfaces, 2018, 10, 22495-22503.	8.0	22
35	A Rational Design and Synthesis of Cross-Conjugated Small Molecule Acceptors Approaching High-Performance Fullerene-Free Polymer Solar Cells. Chemistry of Materials, 2018, 30, 4331-4342.	6.7	22
36	In Situ Structure Characterization in Slotâ€Dieâ€Printed Allâ€Polymer Solar Cells with Efficiency Over 9%. Solar Rrl, 2019, 3, 1900032.	5.8	20

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37	Effects of bridge units on the properties of indolo[3,2-b]carbazole-co-difluorobenzo[d][1,2,3]triazole based Ï€-conjugated copolymers. Organic Electronics, 2015, 23, 17-27.	2.6	19
38	Effects of flanked units on optoelectronic properties of diketopyrrolopyrrole based Ï€-conjugated polymers. Dyes and Pigments, 2015, 123, 64-71.	3.7	17
39	The effects of solvent vapor annealing on the performance of blue polymer light-emitting diodes. Organic Electronics, 2015, 27, 1-6.	2.6	17
40	Enhanced performance of P3HT-based non-fullerene polymer solar cells by optimizing film morphology using non-halogenated solvent. Organic Electronics, 2020, 82, 105701.	2.6	17
41	Manipulating Film Morphology of Allâ€Polymer Solar Cells by Incorporating Polymer Compatibilizer. Solar Rrl, 2020, 4, 2000148.	5.8	16
42	Manipulating Crystallization Kinetics of Conjugated Polymers in Nonfullerene Photovoltaic Blends toward Refined Morphologies and Higher Performances. Macromolecules, 2021, 54, 4030-4041.	4.8	16
43	Decoupling Complex Multiâ€Lengthâ€Scale Morphology in Nonâ€Fullerene Photovoltaics with Nitrogen Kâ€Edge Resonant Soft Xâ€ray Scattering. Advanced Materials, 2022, 34, e2107316.	21.0	16
44	Overcoming the morphological and efficiency limit in all-polymer solar cells by designing conjugated random copolymers containing a naphtho[1,2-c:5,6-câ€²]bis([1,2,5]thiadiazole)] moiety. Journal of Materials Chemistry A, 2018, 6, 23295-23300.	10.3	15
45	Improving the efficiencies of small molecule solar cells by solvent vapor annealing to enhance J-aggregation. Journal of Materials Chemistry C, 2019, 7, 9618-9624.	5.5	15
46	Capture the high-efficiency non-fullerene ternary organic solar cells formula by machine-learning-assisted energy-level alignment optimization. Patterns, 2021, 2, 100333.	5.9	14
47	Effects of pyridyl group orientations on the optoelectronic properties of regio-isomeric diketopyrrolopyrrole based Ï€-conjugated polymers. Journal of Materials Chemistry C, 2016, 4, 2470-2479.	5.5	13
48	Improved performance of non-fullerene polymer solar cells using wide-bandgap random terpolymers. Organic Electronics, 2018, 57, 317-322.	2.6	12
49	Optimization of processing solvent and film morphology to achieve efficient non-fullerene polymer solar cells processed in air. Journal of Materials Chemistry C, 2020, 8, 270-275.	5.5	12
50	Improving the electroluminescence performance of blue light-emitting poly(fluorene-co-dibenzothiophene-S,S-dioxide) by tuning the intra-molecular charge transfer effects and temperature-induced orientation of the emissive layer structure. Journal of Materials Chemistry C, 2019, 7, 5630-5638.	5.5	11
51	Synthesis of mediumâ€bandgap Ï€â€Conjugated polymers based on isomers of 5â€Alkylphenanthridinâ€6(5H)â€one and 6â€Alkoxylphenanthridine. Journal of Polymer Science Part A, 2016, 54, 2119-2127.	2.3	10
52	Synthesis and characterization of Ï€-conjugated copolymers based on alkyltriazolyl substituted benzodithiophene. New Journal of Chemistry, 2016, 40, 4727-4734.	2.8	10
53	Improving the Electroluminescent Performance of Blue Light-Emitting Polymers by Side-Chain Modification. ACS Applied Materials & Interfaces, 2020, 12, 8495-8502.	8.0	10
54	Morphology Evolution Induced by Sequential Annealing Enabling Enhanced Efficiency in All-Small Molecule Solar Cells. ACS Applied Energy Materials, 2021, 4, 4234-4241.	5.1	10

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55	Correlating Electronic Structure and Device Physics with Mixing Region Morphology in Highâ€Efficiency Organic SolarÂCells. Advanced Science, 2022, 9, e2104613.	11.2	10
56	Tailoring the side chain of imide-functional benzotriazole based polymers to achieve internal quantum efficiency approaching 100%. Journal of Materials Chemistry A, 2020, 8, 23519-23525.	10.3	9
57	Slotâ€Dieâ€Coated Organic Solar Cells Optimized through Multistep Crystallization Kinetics. Solar Rrl, 2022, 6, .	5.8	7
58	Efficient binary white light-emitting polymers grafted with iridium complexes as side groups. RSC Advances, 2015, 5, 89888-89894.	3.6	6
59	Efficient saturated red light-emitting polyfluorenes containing iridium complexes in side chains. New Journal of Chemistry, 2016, 40, 179-186.	2.8	5
60	Efficient Nonâ€Fullerene Organic Solar Cells Based on a Wideâ€Bandgap Polymer Donor Containing an Alkylthiophenylâ€Substituted Benzodithiophene Moiety. ChemPhysChem, 2019, 20, 2668-2673.	2.1	5
61	Probing morphology and chemistry in complex soft materials with in situ resonant soft x-ray scattering. Journal of Physics Condensed Matter, 2021, 33, 313001.	1.8	5
62	The structure-performance correlation of bulk-heterojunction organic solar cells with multi-length-scale morphology. Science China Chemistry, 2022, 65, 1634-1641.	8.2	5
63	Enabling high-performance, centimeter-scale organic solar cells through three-dimensional charge transport. Cell Reports Physical Science, 2022, , 100761.	5.6	4
64	High molecular weight broad band-gap polymers based on indolo[3,2-b]carbazole and thiazolo[5,4-d]thiazole derivatives for solar cells. Polymer Science - Series B, 2016, 58, 587-593.	0.8	3
65	Effect of alkyl side chain length on the electroluminescent performance of blue light-emitting poly(fluorene-co-dibenzothiophene-S,S-dioxide). Dyes and Pigments, 2021, 187, 109139.	3.7	3
66	Characteristics of Non-Fullerene Acceptor-Based Organic Photovoltaic Active Layers Using X-ray Scattering and Solid-State NMR. Journal of Physical Chemistry C, 2021, 125, 15863-15871.	3.1	2