Wenkai Zhong

List of Publications by Year
in descending order

66 papers	5,165 citations	218677 26 h-index	106344 65 g-index
66 all docs	66 docs citations	66 times ranked	3117 citing authors

#	Article	IF	Citations
1	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
2	Correlating Electronic Structure and Device Physics with Mixing Region Morphology in Highâ€Efficiency Organic SolarÂCells. Advanced Science, 2022, 9, e2104613.	11.2	10
3	Slotâ€Dieâ€Coated Organic Solar Cells Optimized through Multistep Crystallization Kinetics. Solar Rrl, 2022, 6, .	5.8	7
4	Enabling high-performance, centimeter-scale organic solar cells through three-dimensional charge transport. Cell Reports Physical Science, 2022, , 100761.	5.6	4
5	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
6	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
7	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
8	Manipulating Crystallization Kinetics of Conjugated Polymers in Nonfullerene Photovoltaic Blends toward Refined Morphologies and Higher Performances. Macromolecules, 2021, 54, 4030-4041.	4.8	16
9	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
10	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
11	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
12	Overcoming incompatibility of donors and acceptors by constructing planar heterojunction organic solar cells. Nano Energy, 2021, 85, 105957.	16.0	29
13	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
14	Formation of Vitrified Solid Solution Enables Simultaneously Efficient and Stable Organic Solar Cells. ACS Energy Letters, 2021, 6, 3522-3529.	17.4	27
15	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
16	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
17	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
18	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

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19	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. Joule, 2020, 4, 1575-1593.	24.0	88
20	A Universal Fluorinated Polymer Acceptor Enables All-Polymer Solar Cells with >15% Efficiency. ACS Energy Letters, 2020, 5, 3702-3707.	17.4	152
21	Manipulating Film Morphology of Allâ€Polymer Solar Cells by Incorporating Polymer Compatibilizer. Solar Rrl, 2020, 4, 2000148.	5.8	16
22	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
23	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
24	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
25	Improving the Electroluminescent Performance of Blue Light-Emitting Polymers by Side-Chain Modification. ACS Applied Materials & Interfaces, 2020, 12, 8495-8502.	8.0	10
26	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
27	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
28	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
29	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
30	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
31	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
32	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
33	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
34	High-detectivity organic photodetectors based on a thick-film photoactive layer using a conjugated polymer containing a naphtho[1,2-<i>c</i>:5,6-<i>c</i>]bis[1,2,5]thiadiazole unit. Journal of Materials Chemistry C, 2019, 7, 6070-6076.	5.5	35
35	Achieving over 16% efficiency for single-junction organic solar cells. Science China Chemistry, 2019, 62, 746-752.	8.2	817
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	Improving the electroluminescence performance of blue light-emitting poly(fluorene-<i>co</i>-dibenzothiophene-<i>S</i>,<i>S</i>-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
38	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
39	Low temperature processed high-performance thick film ternary polymer solar cell with enhanced stability. Nano Energy, 2018, 48, 53-62.	16.0	44
40	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
41	Improved performance of non-fullerene polymer solar cells using wide-bandgap random terpolymers. Organic Electronics, 2018, 57, 317-322.	2.6	12
42	Overcoming the morphological and efficiency limit in all-polymer solar cells by designing conjugated random copolymers containing a naphtho[1,2-<i>c</i>:5,6-<i>c</i>â€²]bis([1,2,5]thiadiazole)] moiety. Journal of Materials Chemistry A, 2018, 6, 23295-23300.	10.3	15
43	Fine-tuning of the chemical structure of photoactive materials for highly efficient organic photovoltaics. Nature Energy, 2018, 3, 1051-1058.	39.5	281
44	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
45	Improved Efficiency of Polymer Solar Cells by Modifying the Side Chain of Wide-Band Gap Conjugated Polymers Containing Pyrrolo[3,4-<i>f</i>]benzotriazole-5,7(6<i>H</i>)-dione Moiety. ACS Applied Materials & Interfaces, 2018, 10, 22495-22503.	8.0	22
46	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
47	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
48	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
49	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
50	Improved Performance of Ternary Polymer Solar Cells Based on A Nonfullerene Electron Cascade Acceptor. Advanced Energy Materials, 2017, 7, 1602127.	19.5	108
51	Efficient All-Polymer Solar Cells Based on Conjugated Polymer Containing an Alkoxylated Imide-Functionalized Benzotriazole Unit. Macromolecules, 2017, 50, 8149-8157.	4.8	29
52	Regioisomeric Non-Fullerene Acceptors Containing Fluorobenzo[<i>c</i>][1,2,5]thiadiazole Unit for Polymer Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 37087-37093.	8.0	33
53	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
54	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

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55	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
56	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
57	Effect of Monofluoro Substitution on the Optoelectronic Properties of Benzo[<i>c</i>][1,2,5]thiadiazole Based Organic Semiconductors. Macromolecules, 2016, 49, 5806-5816.	4.8	22
58	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
59	Synthesis and characterization of Ï€-conjugated copolymers based on alkyltriazolyl substituted benzodithiophene. New Journal of Chemistry, 2016, 40, 4727-4734.	2.8	10
60	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
61	Efficient saturated red light-emitting polyfluorenes containing iridium complexes in side chains. New Journal of Chemistry, 2016, 40, 179-186.	2.8	5
62	Effects of flanked units on optoelectronic properties of diketopyrrolopyrrole based Ï€-conjugated polymers. Dyes and Pigments, 2015, 123, 64-71.	3.7	17
63	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
64	Efficient binary white light-emitting polymers grafted with iridium complexes as side groups. RSC Advances, 2015, 5, 89888-89894.	3.6	6
65	The effects of solvent vapor annealing on the performance of blue polymer light-emitting diodes. Organic Electronics, 2015, 27, 1-6.	2.6	17
66	Progress and prospects of the morphology of non-fullerene acceptor based high-efficiency organic solar cells. Energy and Environmental Science, 0, , .	30.8	149