Lianjie Zhang

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Low Bandâ€Gap Conjugated Polymers with Strong Interchain Aggregation and Very High Hole Mobility Towards Highly Efficient Thickâ€Film Polymer Solar Cells. Advanced Materials, 2014, 26, 2586-2591.	11.1	375
2	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
3	Bulk-Heterojunction Solar Cells with Benzotriazole-Based Copolymers as Electron Donors: Largely Improved Photovoltaic Parameters by Using PFN/Al Bilayer Cathode. Macromolecules, 2010, 43, 9771-9778.	2.2	143
4	Low band gap conjugated polymers combining siloxane-terminated side chains and alkyl side chains: side-chain engineering achieving a large active layer processing window for PCE > 10% in polymer solar cells. Journal of Materials Chemistry A, 2017, 5, 17619-17631.	5.2	116
5	High Efficiency and High <i>V</i>_{oc} Inverted Polymer Solar Cells Based on a Low-Lying HOMO Polycarbazole Donor and a Hydrophilic Polycarbazole Interlayer on ITO Cathode. Journal of Physical Chemistry C, 2012, 116, 14188-14198.	1.5	105
6	<i>para</i>-Azaquinodimethane: A Compact Quinodimethane Variant as an Ambient Stable Building Block for High-Performance Low Band Gap Polymers. Journal of the American Chemical Society, 2017, 139, 8355-8363.	6.6	65
7	Unraveling the Main Chain and Side Chain Effects on Thin Film Morphology and Charge Transport in Quinoidal Conjugated Polymers. Advanced Functional Materials, 2018, 28, 1801874.	7.8	53
8	Introduction of Siloxane-Terminated Side Chains into Semiconducting Polymers To Tune Phase Separation with Nonfullerene Acceptor for Polymer Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 4659-4672.	4.0	52
9	Siloxane-Terminated Side Chain Engineering of Acceptor Polymers Leading to Over 7% Power Conversion Efficiencies in All-Polymer Solar Cells. ACS Macro Letters, 2017, 6, 1310-1314.	2.3	51
10	Hydrophilic poly(triphenylamines) with phosphonate groups on the side chains: synthesis and photovoltaic applications. Journal of Materials Chemistry, 2012, 22, 4329.	6.7	46
11	Using <i>o</i>â€Chlorobenzaldehyde as a Fast Removable Solvent Additive during Spinâ€Coating PTB7â€Based Active Layers: High Efficiency Thickâ€Film Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1601344.	10.2	45
12	A ligand-free direct heteroarylation approach for benzodithiophenedione-based simple small molecular acceptors toward high efficiency polymer solar cells. Journal of Materials Chemistry A, 2021, 9, 3314-3321.	5.2	41
13	Impact of the Siloxane-Terminated Side Chain on Photovoltaic Performances of the Dithienylbenzodithiopheneâ€“Difluorobenzotriazole-Based Wide Band Gap Polymer Donor in Non-Fullerene Polymer Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 29094-29104.	4.0	39
14	Improved Average Figureâ€ofâ€Merit of Highâ€Efficiency Nonfullerene Solar Cells via Minor Combinatory Side Chain Approach. Solar Rrl, 2020, 4, 2000062.	3.1	38
15	A Highly Crystalline Wide-Band-Gap Conjugated Polymer toward High-Performance As-Cast Nonfullerene Polymer Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 36061-36069.	4.0	34
16	An extended Ï€-conjugated area of electron-donating units in Dâ€“A structured polymers towards high-mobility field-effect transistors and highly efficient polymer solar cells. Journal of Materials Chemistry C, 2017, 5, 2786-2793.	2.7	32
17	Significantly enhanced electron transport of a nonfullerene acceptor in a blend film with a high hole mobility polymer of high molecular weight: thick-film nonfullerene polymer solar cells showing a high fill factor. Journal of Materials Chemistry A, 2020, 8, 7765-7774.	5.2	28
18	Cross-Linkable and Alcohol-Soluble Pyridine-Incorporated Polyfluorene Derivative as a Cathode Interface Layer for High-Efficiency and Stable Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 12296-12304.	4.0	28

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19	Binary non-fullerene-based polymer solar cells with a 430 nm thick active layer showing 15.39% efficiency and 73.38% fill factor. Journal of Materials Chemistry A, 2021, 9, 7129-7136.	5.2	28
20	Blade-coated organic solar cells from non-halogenated solvent offer 17% efficiency. Journal of Semiconductors, 2021, 42, 030502.	2.0	27
21	D-A copolymers based on 5,6-difluorobenzotriazole and oligothiophenes: Synthesis, field effect transistors, and polymer solar cells. Polymer, 2014, 55, 1707-1715.	1.8	26
22	Organic Solar Cells Based on High Hole Mobility Conjugated Polymer and Nonfullerene Acceptor with Comparable Bandgaps and Suitable Energy Level Offsets Showing Significant Suppression of <i>J</i>_{sc}â€“<i>V</i>_{oc} Tradeâ€Off. Solar Rrl, 2019, 3, 1900079.	3.1	25
23	Dithienobenzothiadiazoleâ€Based Conjugated Polymer: Processing Solventâ€Relied Interchain Aggregation and Device Performances in Fieldâ€Effect Transistors and Polymer Solar Cells. Macromolecular Rapid Communications, 2014, 35, 1960-1967.	2.0	24
24	Introducing Siloxane-Terminated Side Chains in Small Molecular Donors for All-Small-Molecule Organic Solar Cells: Modulated Molecular Orientation and Enhanced Efficiency. ACS Applied Materials & Interfaces, 2021, 13, 36080-36088.	4.0	24
25	Silaindacenodithiopheneâ€Based Fusedâ€Ring Nonâ€Fullerene Electron Acceptor for Efficient Polymer Solar Cells. Chinese Journal of Chemistry, 2018, 36, 495-501.	2.6	20
26	An unprecedented quinoidâ€“donorâ€“acceptor strategy to boost the carrier mobilities of semiconducting polymers for organic field-effect transistors. Journal of Materials Chemistry A, 2021, 9, 23497-23505.	5.2	20
27	Face-on oriented hydrophobic conjugated polymers as dopant-free hole-transport materials for efficient and stable perovskite solar cells with a fill factor approaching 85%. Journal of Materials Chemistry A, 2022, 10, 3409-3417.	5.2	19
28	1D/2A ternary blend active layer enables as-cast polymer solar cells with higher efficiency, better thickness tolerance, and higher thermal stability. Organic Electronics, 2018, 61, 359-365.	1.4	18
29	Synthesis and photovoltaic performance of a non-fullerene acceptor comprising siloxane-terminated alkoxyl side chain. Organic Electronics, 2021, 91, 106087.	1.4	13
30	Replacing alkyl side chain of non-fullerene acceptor with siloxane-terminated side chain enables lower surface energy towards optimizing bulk-heterojunction morphology and high photovoltaic performance. Science China Chemistry, 2021, 64, 1208-1218.	4.2	13
31	Low bandâ€gap Dâ€“A conjugated copolymers based on anthradithiophene and diketopyrrolopyrrole for polymer solar cells and fieldâ€effect transistors. Journal of Polymer Science Part A, 2014, 52, 1652-1661.	2.5	12
32	Dramatically different photovoltaic effect induced by siloxane-terminated combinatory side chain in polymer solar cells. Synthetic Metals, 2019, 256, 116116.	2.1	12
33	Simultaneous improvement of three parameters using a binary processing solvent system approach in as-cast non-fullerene solar cells. Journal of Materials Chemistry A, 2019, 7, 25978-25984.	5.2	12
34	Dithienobenzoxadiazole-based wide bandgap donor polymers with strong aggregation properties for the preparation of efficient as-cast non-fullerene polymer solar cells processed using a non-halogenated solvent. Journal of Materials Chemistry C, 2021, 9, 249-259.	2.7	12
35	Hydrogen Evolution Prediction for Alternating Conjugated Copolymers Enabled by Machine Learning with Multidimension Fragmentation Descriptors. ACS Applied Materials & Interfaces, 2021, 13, 34033-34042.	4.0	12
36	A dithienobenzothiadiazole-quaterthiophene wide bandgap polymer enables non-fullerene based polymer solar cells with over 15% efficiency. Polymer, 2021, 233, 124193.	1.8	12

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37	Delicately Controlled Polymer Orientation for High-Performance Non-Fullerene Solar Cells with Halogen-Free Solvent Processing. ACS Applied Materials & Interfaces, 2021, 13, 57654-57663.	4.0	12
38	Alternating dithienobenzoxadiazole-based conjugated polymers for field-effect transistors and polymer solar cells. Organic Electronics, 2016, 31, 1-10.	1.4	11
39	A Simple Fusedâ€Ring Acceptor toward Highâ€Sensitivity Binary Nearâ€Infrared Photodetector. Advanced Optical Materials, 2022, 10, .	3.6	11
40	Unravelling the Role of Electron Acceptors for the Universal Enhancement of Charge Transport in Quinoidâ€Donorâ€Acceptor Polymers for Highâ€Performance Transistors. Advanced Functional Materials, 2022, 32, .	7.8	11
41	5,6-Difluorobenzothiazole-Based Conjugated Polymers with Large Band Gaps and Deep Highest Occupied Molecular Orbital Levels. ACS Applied Materials & Interfaces, 2018, 10, 11094-11100.	4.0	10
42	Synthesis, characterization and device application of a novel blue-emitting copolymer incorporating fluorene and benzothiazole backbone units. Optical Materials, 2019, 98, 109443.	1.7	10
43	Donorâ€"acceptor copolymers based on phenanthrene as electronâ€donating unit: Synthesis and photovoltaic performances. Journal of Polymer Science Part A, 2013, 51, 4966-4974.	2.5	9
44	Using 3.0ÂeV Large Bandgap Conjugated Polymer as Host Donor to Construct Ternary Semiâ€Transparent Polymer Solar Cells: Increased Average Visible Transmittance and Modified Color Temperature. Macromolecular Rapid Communications, 2022, 43, e2200199.	2.0	9
45	Low band-gap benzodithiophene-thienothiophenecopolymers: the effect of dual two-dimensional substitutions on optoelectronic properties. Science China Chemistry, 2015, 58, 267-275.	4.2	8
46	Benzoxadiazole and Benzoselenadiazole as Ï€â€Bridges in Nonfullerene Acceptors for Efficient Polymer Solar Cells. Asian Journal of Organic Chemistry, 2018, 7, 2285-2293.	1.3	7
47	Investigation of halogen-free solvents towards high-performance additive-free non-fullerene organic solar cells. Organic Electronics, 2020, 85, 105871.	1.4	6
48	In Situ Construction of CeO₂-Incorporated Hybrid Covalent Organic Frameworks for Highly Efficient Lithiumâ€"Sulfur Batteries. ACS Applied Energy Materials, 2022, 5, 8554-8562.	2.5	5
49	Fineâ€Tuning of Siloxane Pendant Distance for Achieving Highly Efficient Ecoâ€Friendly Nonfullerene Solar Cells. ChemSusChem, 2022, 15, .	3.6	4
50	Alkyl side chain engineering for difluorinated benzothiadiazole flanked non-fullerene acceptors toward efficient polymer solar cells. Journal of Materials Science: Materials in Electronics, 2021, 32, 219-231.	1.1	3
51	A comparison of the positional effect of difluorination and the synergistic effect of siloxane-terminated side chains on benzodithiophene-based conjugated polymers for efficient photovoltaic application. Journal of Materials Chemistry C, 2022, 10, 7189-7200.	2.7	3
52	2D/1A ternary blend system enables non-fused ring electron acceptor based polymer solar cells with improved photovoltaic parameters. Organic Electronics, 2022, 107, 106562.	1.4	0