Jun-Wu Chen

List of Publications by Year in Descending Order

76 papers	4,794 citations	26 h-index	69 g-index
79 ext. papers	5,199 ext. citations	8.9 avg, IF	5.83 L-index

#	Paper	IF	Citations
76	Using 3.0 eV Large Bandgap Conjugated Polymer as Host Donor to Construct Ternary Semi-transparent Polymer Solar Cells: Increased Average Visible Transmittance and Modified Color Temperature.. *Macromolecular Rapid Communications*, **2022**, e2200199	4.8	2
75	2D/1A ternary blend system enables non-fused ring electron acceptor based polymer solar cells with improved photovoltaic parameters. *Organic Electronics*, **2022**, 107, 106562	3.5	
74	Delicately Controlled Polymer Orientation for High-Performance Non-Fullerene Solar Cells with Halogen-Free Solvent Processing. *ACS Applied Materials & Interfaces*, **2021**, 13, 57654-57663	9.5	3
73	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	9.5	8
72	Blade-coated organic solar cells from non-halogenated solvent offer 17% efficiency. *Journal of Semiconductors*, **2021**, 42, 030502	2.3	13
71	Synthesis and photovoltaic performance of a non-fullerene acceptor comprising siloxane-terminated alkoxyl side chain. *Organic Electronics*, **2021**, 91, 106087	3.5	5
70	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	7.9	3
69	Hydrogen Evolution Prediction for Alternating Conjugated Copolymers Enabled by Machine Learning with Multidimension Fragmentation Descriptors. *ACS Applied Materials & Interfaces*, **2021**, 13, 34033-34042	9.5	3
68	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	7.1	5
67	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	13	16
66	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	9.5	9
65	A dithienobenzothiadiazole-quaterthiophene wide bandgap polymer enables non-fullerene based polymer solar cells with over 15% efficiency. *Polymer*, **2021**, 233, 124193	3.9	4
64	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	13	14
63	Improved Average Figure-of-Merit of High-Efficiency Nonfullerene Solar Cells via Minor Combinatory Side Chain Approach. *Solar Rrl*, **2020**, 4, 2000062	7.1	25
62	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	13	23
61	Investigation of halogen-free solvents towards high-performance additive-free non-fullerene organic solar cells. *Organic Electronics*, **2020**, 85, 105871	3.5	3
60	An Ultraviolet-Deposited MoO3 Film as Anode Interlayer for High-Performance Polymer Solar Cells. *Advanced Materials Interfaces*, **2020**, 7, 1901912	4.6	8

59	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	9.5	31
58	Largely improved bulk-heterojunction morphology in organic solar cells based on a conjugated terpolymer donor via a ternary strategy. *Polymer*, **2020**, 186, 122050	3.9	5
57	Singlet Fission in a -Azaquinodimethane-Based Quinoidal Conjugated Polymer. *Journal of the American Chemical Society*, **2020**, 142, 17892-17896	16.4	13
56	Developing low boiling point solvent additives directly based on non-fullerene based active layer: Higher efficiency and better thickness tolerance. *Organic Electronics*, **2020**, 83, 105762	3.5	8
55	Low boiling point solvent additives enable vacuum drying-free processed 230 nm thick PTB7-Th:PC71BM active layers with more than 10% power conversion efficiency. *Journal of Materials Chemistry A*, **2019**, 7, 1861-1869	13	9
54	Comprehensive Investigation and Analysis of Bulk-Heterojunction Microstructure of High-Performance PCE11:PCBM Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 18555-18563	8.5	19
53	Ultrahigh photosensitive organic phototransistors by photoelectric dual control. *Journal of Materials Chemistry C*, **2019**, 7, 4725-4732	7.1	13
52	As-cast ternary polymer solar cells based on a nonfullerene acceptor and its fluorinated counterpart showing improved efficiency and good thickness tolerance. *Journal of Materials Chemistry A*, **2019**, 7, 9798-9806	13	20
51	High Voc ternary nonfullerene polymer solar cells with improved efficiency and good thermal stability. *Organic Electronics*, **2019**, 69, 174-180	3.5	9
50	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 Jsc–Voc Trade-Off. *Solar Rrl*, **2019**, 3, 1900079	7.1	20
49	Dramatically different photovoltaic effect induced by siloxane-terminated combinatory side chain in polymer solar cells. *Synthetic Metals*, **2019**, 256, 116116	3.6	7
48	Impact of the Siloxane-Terminated Side Chain on Photovoltaic Performances of the Dithienylbenzodithiophene-Difluorobenzotriazole-Based Wide Band Gap Polymer Donor in Non-Fullerene Polymer Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 29094-29104	9.5	22
47	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	13	9
46	Synthesis, characterization and device application of a novel blue-emitting copolymer incorporating fluorene and benzothiazole backbone units. *Optical Materials*, **2019**, 98, 109443	3.3	5
45	Binary Nonchlorinated and Nonaromatic Solvent-Processed PTB7:PC71BM and PTB7-Th:PC71BM Active Layers Showing Efficiency Comparable to that of Chlorobenzene in Organic Solar Cells. *Journal of Physical Chemistry C*, **2019**, 123, 2105-2113	3.8	10
44	Enhancing the performance of solution-processed organic thin-film transistors by blending binary compatible small molecule semiconductors. *Organic Electronics*, **2019**, 64, 104-109	3.5	8
43	Silaindacenodithiophene-Based Fused-Ring Non-Fullerene Electron Acceptor for Efficient Polymer Solar Cells. *Chinese Journal of Chemistry*, **2018**, 36, 495-501	4.9	17
42	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	9.5	7

41	Ternary non-fullerene polymer solar cells with 13.51% efficiency and a record-high fill factor of 78.13%. *Energy and Environmental Science*, **2018**, 11, 3392-3399	35.4	122
40	Benzoxadiazole and Benzoselenadiazole as Bridges in Nonfullerene Acceptors for Efficient Polymer Solar Cells. *Asian Journal of Organic Chemistry*, **2018**, 7, 2285-2293	3	6
39	Terpinolene processed PTB7:PC71BM blend film for polymer solar cells: a non-aromatic and non-chlorinated solvent predicted by Hansen solubility parameters. *Synthetic Metals*, **2018**, 242, 17-22	3.6	6
38	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	15.6	34
37	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	3.5	16
36	An extended conjugated area of electron-donating units in D A structured polymers towards high-mobility field-effect transistors and highly efficient polymer solar cells. *Journal of Materials Chemistry C*, **2017**, 5, 2786-2793	7.1	29
35	para-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	14.4	38
34	26 mA cm Jsc from organic solar cells with a low-bandgap nonfullerene acceptor. *Science Bulletin* , **2017**, 62, 1494-1496	10.6	316
33	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	9.5	28
32	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	13	91
31	All-Polymer Solar Cells Based on a Conjugated Polymer Containing Siloxane-Functionalized Side Chains with Efficiency over 10. *Advanced Materials*, **2017**, 29, 1703906	24	294
30	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	6.6	35
29	Using o-Chlorobenzaldehyde as a Fast Removable Solvent Additive during Spin-Coating PTB7-Based Active Layers: High Efficiency Thick-Film Polymer Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1601344	21.8	41
28	Solution-processed small molecules with ethynylene bridges for highly efficient organic solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 14720-14728	13	13
27	Highly efficient green PLED based on triphenlyaminesilole-carbazole-fluorene copolymers with TPBI as the hole blocking layer. *Dyes and Pigments*, **2016**, 127, 155-160	4.6	21
26	Alternating dithienobenzoxadiazole-based conjugated polymers for field-effect transistors and polymer solar cells. *Organic Electronics*, **2016**, 31, 1-10	3.5	10
25	Aqueous Solution Processed Photoconductive Cathode Interlayer for High Performance Polymer Solar Cells with Thick Interlayer and Thick Active Layer. *Advanced Materials*, **2016**, 28, 7521-6	24	86
24	D-A copolymers based on 5,6-difluorobenzotriazole and oligothiophenes: Synthesis, field effect transistors, and polymer solar cells. *Polymer*, **2014**, 55, 1707-1715	3.9	26

23	Using ultra-high molecular weight hydrophilic polymer as cathode interlayer for inverted polymer solar cells: Enhanced efficiency and excellent air-stability. *Solar Energy Materials and Solar Cells*, **2014**, 123, 104-111	6.4	18
22	Dithienobenzothiadiazole-based conjugated polymer: processing solvent-relied interchain aggregation and device performances in field-effect transistors and polymer solar cells. *Macromolecular Rapid Communications*, **2014**, 35, 1960-7	4.8	22
21	Low band-gap conjugated polymers with strong interchain aggregation and very high hole mobility towards highly efficient thick-film polymer solar cells. *Advanced Materials*, **2014**, 26, 2586-91	24	339
20	Hydrophilic poly(triphenylamines) with phosphonate groups on the side chains: synthesis and photovoltaic applications. *Journal of Materials Chemistry*, **2012**, 22, 4329		41
19	High Efficiency and High Voc 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	3.8	99
18	2,7-Carbazole-1,4-phenylene Copolymers with Polar Side Chains for Cathode Modifications in Polymer Light-Emitting Diodes. *Macromolecules*, **2011**, 44, 4204-4212	5.5	42
17	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, 3086-9	24	221
16	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	5.5	134
15	Silole-Containing Conjugated Polymers **2010**, 247-285		
14	Development of novel conjugated donor polymers for high-efficiency bulk-heterojunction photovoltaic devices. *Accounts of Chemical Research*, **2009**, 42, 1709-18	24.3	1292
13	Silole-Containing Polymers: Chemistry and Optoelectronic Properties. *Macromolecular Rapid Communications*, **2007**, 28, 1714-1742	4.8	289
12	Simple Silole-Containing Polyfluorene for White Electroluminescence with Simultaneous Blue, Green, and Red Emission. *Macromolecular Rapid Communications*, **2007**, 28, 2012-2018	4.8	25
11	Conjugated Fluorene and Silole Copolymers: Synthesis, Characterization, Electronic Transition, Light Emission, Photovoltaic Cell, and Field Effect Hole Mobility. *Macromolecules*, **2005**, 38, 2253-2260	5.5	158
10	Conjugated random and alternating 2,3,4,5-tetraphenylsilole-containing polyfluorenes: Synthesis, characterization, strong solution photoluminescence, and light-emitting diodes. *Polymer*, **2005**, 46, 8422-8429	3.9	52
9	Aggregation-Induced Emission of cis,cis-1,2,3,4-Tetraphenylbutadiene from Restricted Intramolecular Rotation. *Journal of Physical Chemistry A*, **2004**, 108, 7522-7526	2.8	254
8	Relationship between water absorbency and reaction conditions in aqueous solution polymerization of polyacrylate superabsorbents. *Journal of Applied Polymer Science*, **2000**, 75, 808-814	2.9	129
7	Swelling behaviors of polyacrylate superabsorbent in the mixtures of water and hydrophilic solvents. *Journal of Applied Polymer Science*, **2000**, 75, 1331-1338	2.9	36
6	Swelling behaviors of polyacrylate superabsorbent in the mixtures of water and hydrophilic solvents **2000**, 75, 1331		1

5	An efficient preparation method for superabsorbent polymers. *Journal of Applied Polymer Science*, **1999**, 74, 119-124	2.9	48
4	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*,	13	3
3	An unprecedented quinoid□donor□acceptor strategy to boost the carrier mobilities of semiconducting polymers for organic field-effect transistors. *Journal of Materials Chemistry A*,	13	1
2	A Simple Fused-Ring Acceptor toward High-Sensitivity Binary Near-Infrared Photodetector. *Advanced Optical Materials*,2200371	8.1	1
1	Unravelling the Role of Electron Acceptors for the Universal Enhancement of Charge Transport in Quinoid-Donor-Acceptor Polymers for High-Performance Transistors. *Advanced Functional Materials*,2201903	15.6	1