Wei Gao

List of Publications by Year
in descending order

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52	4,585	109137 35	168136 53
papers	citations	h-index	g-index

54	54	54	2437
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Achieving 19% Power Conversion Efficiency in Planarâ€Mixed Heterojunction Organic Solar Cells Using a Pseudosymmetric Electron Acceptor. Advanced Materials, 2022, 34, .	11.1	271
2	Use of two structurally similar small molecular acceptors enabling ternary organic solar cells with high efficiencies and fill factors. Energy and Environmental Science, 2018, 11, 3275-3282.	15.6	261
3	Fineâ€Tuning of Molecular Packing and Energy Level through Methyl Substitution Enabling Excellent Small Molecule Acceptors for Nonfullerene Polymer Solar Cells with Efficiency up to 12.54%. Advanced Materials, 2018, 30, 1706124.	11.1	253
4	Asymmetrical Ladderâ€Type Donorâ€Induced Polar Small Molecule Acceptor to Promote Fill Factors Approaching 77% for Highâ€Performance Nonfullerene Polymer Solar Cells. Advanced Materials, 2018, 30, e1800052.	11.1	252
5	Alloy-like ternary polymer solar cells with over 17.2% efficiency. Science Bulletin, 2020, 65, 538-545.	4.3	252
6	Ternary nonfullerene polymer solar cells with efficiency >13.7% by integrating the advantages of the materials and two binary cells. Energy and Environmental Science, 2018, 11, 2134-2141.	15.6	223
7	Efficient ternary non-fullerene polymer solar cells with PCE of 11.92% and FF of 76.5%. Energy and Environmental Science, 2018, 11, 841-849.	15.6	210
8	A Novel Thiophene-Fused Ending Group Enabling an Excellent Small Molecule Acceptor for High-Performance Fullerene-Free Polymer Solar Cells with 11.8% Efficiency. Solar Rrl, 2017, 1, 1700044.	3.1	198
9	Over 14.5% efficiency and 71.6% fill factor of ternary organic solar cells with 300 nm thick active layers. Energy and Environmental Science, 2020, 13, 958-967.	15.6	198
10	Adding a Third Component with Reduced Miscibility and Higher LUMO Level Enables Efficient Ternary Organic Solar Cells. ACS Energy Letters, 2020, 5, 2711-2720.	8.8	188
11	Over 13% Efficiency Ternary Nonfullerene Polymer Solar Cells with Tilted Up Absorption Edge by Incorporating a Medium Bandgap Acceptor. Advanced Energy Materials, 2018, 8, 1801968.	10.2	167
12	Energy level modulation of non-fullerene acceptors enables efficient organic solar cells with small energy loss. Journal of Materials Chemistry A, 2018, 6, 2468-2475.	5.2	145
13	Over 17% Efficiency Binary Organic Solar Cells with Photoresponses Reaching 1000 nm Enabled by Selenophene-Fused Nonfullerene Acceptors. ACS Energy Letters, 2021, 6, 9-15.	8.8	141
14	Achieving 14.11% efficiency of ternary polymer solar cells by simultaneously optimizing photon harvesting and exciton distribution. Journal of Materials Chemistry A, 2019, 7, 7843-7851.	5.2	130
15	Asymmetric Acceptors Enabling Organic Solar Cells to Achieve an over 17% Efficiency: Conformation Effects on Regulating Molecular Properties and Suppressing Nonradiative Energy Loss. Advanced Energy Materials, 2021, 11, 2003177.	10.2	114
16	Unconjugated Sideâ€Chain Engineering Enables Small Molecular Acceptors for Highly Efficient Nonâ€Fullerene Organic Solar Cells: Insights into the Fineâ€Tuning of Acceptor Properties and Micromorphology. Advanced Functional Materials, 2019, 29, 1902155.	7.8	105
17	Asymmetrical Small Molecule Acceptor Enabling Nonfullerene Polymer Solar Cell with Fill Factor Approaching 79%. ACS Energy Letters, 2018, 3, 1760-1768.	8.8	102
18	Thickâ€Film Organic Solar Cells Achieving over 11% Efficiency and Nearly 70% Fill Factor at Thickness over 400 nm. Advanced Functional Materials, 2020, 30, 1908336.	7.8	94

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19	Side Group Engineering of Small Molecular Acceptors for Highâ€Performance Fullereneâ€Free Polymer Solar Cells: Thiophene Being Superior to Selenophene. Advanced Functional Materials, 2017, 27, 1702194.	7.8	88
20	A Generally Applicable Approach Using Sequential Deposition to Enable Highly Efficient Organic Solar Cells. Small Methods, 2020, 4, 2000687.	4.6	86
21	Nearâ€Infrared Small Molecule Acceptor Enabled Highâ€Performance Nonfullerene Polymer Solar Cells with Over 13% Efficiency. Advanced Functional Materials, 2018, 28, 1803128.	7.8	78
22	Designing an asymmetrical isomer to promote the LUMO energy level and molecular packing of a non-fullerene acceptor for polymer solar cells with 12.6% efficiency. Chemical Science, 2018, 9, 8142-8149.	3.7	67
23	Efficient small-molecule non-fullerene electron transporting materials for high-performance inverted perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 4443-4448.	5.2	66
24	Enabling High Efficiency of Hydrocarbonâ€Solvent Processed Organic Solar Cells through Balanced Charge Generation and Nonâ€Radiative Loss. Advanced Energy Materials, 2021, 11, 2101768.	10.2	61
25	Over 15.7% Efficiency of Ternary Organic Solar Cells by Employing Two Compatible Acceptors with Similar LUMO Levels. Small, 2020, 16, e2000441.	5.2	59
26	Efficient Ternary Organic Solar Cells with Two Compatible Nonâ€Fullerene Materials as One Alloyed Acceptor. Small, 2018, 14, e1802983.	5.2	55
27	16.3% Efficiency binary all-polymer solar cells enabled by a novel polymer acceptor with an asymmetrical selenophene-fused backbone. Science China Chemistry, 2022, 65, 309-317.	4.2	54
28	Dithieno[3,2â€b:2Ê¹,3Ê¹â€d]pyrrolâ€Fused Asymmetrical Electron Acceptors: A Study into the Effects of Nitrogenâ€Functionalization on Reducing Nonradiative Recombination Loss and Dipole Moment on Morphology. Advanced Science, 2020, 7, 1902657.	5.6	51
29	Conformationâ€Tuning Effect of Asymmetric Small Molecule Acceptors on Molecular Packing, Interaction, and Photovoltaic Performance. Small, 2020, 16, e2001942.	5.2	49
30	Asymmetric Isomer Effects in Benzo[câ€Š][1,2,5]thiadiazoleâ€Fused Nonacyclic Acceptors: Dielectric Constant and Molecular Crystallinity Control for Significant Photovoltaic Performance Enhancement. Advanced Functional Materials, 2021, 31, 2104369.	7.8	46
31	Dithieno[3,2-b:2â€²,3â€²-d]pyridin-5(4H)-one based Dâ€“A type copolymers with wide bandgaps of up to 2.05 eV to achieve solar cell efficiencies of up to 7.33%. Chemical Science, 2016, 7, 6167-6175.	3.7	43
32	Side-Chain Effects on Energy-Level Modulation and Device Performance of Organic Semiconductor Acceptors in Organic Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 34146-34152.	4.0	42
33	Overcoming the energy loss in asymmetrical non-fullerene acceptor-based polymer solar cells by halogenation of polymer donors. Journal of Materials Chemistry A, 2019, 7, 15404-15410.	5.2	39
34	A universal nonfullerene electron acceptor matching with different band-gap polymer donors for high-performance polymer solar cells. Journal of Materials Chemistry A, 2018, 6, 6874-6881.	5.2	37
35	A Highâ€Performance Nonâ€Fullerene Acceptor Compatible with Polymers with Different Bandgaps for Efficient Organic Solar Cells. Solar Rrl, 2019, 3, 1800376.	3.1	37
36	Simultaneously increasing open-circuit voltage and short-circuit current to minimize the energy loss in organic solar cells via designing asymmetrical non-fullerene acceptor. Journal of Materials Chemistry A, 2019, 7, 11053-11061.	5.2	37

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37	An asymmetrical fused-ring electron acceptor designed by a cross-conceptual strategy achieving 15.6% efficiency. Journal of Materials Chemistry A, 2020, 8, 14583-14591.	5.2	32
38	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758.	5.2	30
39	Intramolecular Chloroâ€“Sulfur Interaction and Asymmetric Sideâ€Chain Isomerization to Balance Crystallinity and Miscibility in Allâ€Smallâ€Molecule Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	29
40	Regulating the electron transporting properties of indacenodithiophene derivatives for perovskite solar cells with PCEs up to 19.51%. Journal of Materials Chemistry A, 2018, 6, 18044-18049.	5.2	26
41	Regulating exciton bonding energy and bulk heterojunction morphology in organic solar cells via methyl-functionalized non-fullerene acceptors. Journal of Materials Chemistry A, 2019, 7, 6809-6817.	5.2	26
42	Benzobisthiadiazole-alt-bithiazole copolymers with deep HOMO levels for good-performance field-effect transistors with air stability and a high on/off ratio. Polymer Chemistry, 2016, 7, 2808-2814.	1.9	22
43	Chlorination Strategyâ€Induced Abnormal Nanomorphology Tuning in Highâ€Efficiency Organic Solar Cells: A Study of Phenylâ€Substituted Benzodithiopheneâ€Based Nonfullerene Acceptors. Solar Rrl, 2019, 3, 1900262.	3.1	17
44	Fusedâ€Ring Core Engineering for Small Molecule Acceptors Enable Highâ€Performance Nonfullerene Polymer Solar Cells. Small Methods, 2019, 3, 1900280.	4.6	17
45	Nearâ€Infrared Absorbing Nonfullerene Acceptors for Organic Solar Cells. Solar Rrl, 2022, 6, 2100868.	3.1	16
46	Multifunctional asymmetrical molecules for high-performance perovskite and organic solar cells. Journal of Materials Chemistry A, 2019, 7, 2412-2420.	5.2	14
47	Over 16% Efficiency of Thickâ€Film Organic Photovoltaics with Symmetric and Asymmetric Nonâ€Fullerene Materials as Alloyed Acceptor. Solar Rrl, 2021, 5, 2100365.	3.1	13
48	Fluorene-fused ladder-type non-fullerene small molecule acceptors for high-performance polymer solar cells. Materials Chemistry Frontiers, 2019, 3, 709-715.	3.2	11
49	Extending Photoresponse to the Nearâ€Infrared Region for Inverted Perovskite Solar Cells by Using a Lowâ€Bandgap Electron Transporting Material. Solar Rrl, 2020, 4, 1900565.	3.1	10
50	A novel 9H-indeno[1,2-b]pyrazine-2,3-dicarbonitrile end group for an efficient non-fullerene small molecule acceptor. Journal of Materials Chemistry C, 2019, 7, 10111-10118.	2.7	6
51	Photooxidation Analysis of Two Isomeric Nonfullerene Acceptors: A Systematic Study of Conformational, Morphological, and Environmental Factors. Solar Rrl, 2021, 5, 2000704.	3.1	6
52	Intramolecular Chloroâ€“Sulfur Interaction and Asymmetric Sideâ€Chain Isomerization to Balance Crystallinity and Miscibility in Allâ€Smallâ€Molecule Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	3