Ming Zhang

List of Publications by Year
in descending order

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68 papers	6,033 citations	136950 32 h-index	98798 67 g-index
69 all docs	69 docs citations	69 times ranked	2746 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	Single-layered organic photovoltaics with double cascading charge transport pathways: 18% efficiencies. Nature Communications, 2021, 12, 309.	12.8	509
3	Efficient Organic Solar Cell with 16.88% Efficiency Enabled by Refined Acceptor Crystallization and Morphology with Improved Charge Transfer and Transport Properties. Advanced Energy Materials, 2020, 10, 1904234.	19.5	402
4	Subtle Molecular Tailoring Induces Significant Morphology Optimization Enabling over 16% Efficiency Organic Solar Cells with Efficient Charge Generation. Advanced Materials, 2020, 32, e1906324.	21.0	312
5	Over 12% Efficiency Nonfullerene Allâ€Smallâ€Molecule Organic Solar Cells with Sequentially Evolved Multilength Scale Morphologies. Advanced Materials, 2019, 31, e1807842.	21.0	272
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	Simplified synthetic routes for low cost and high photovoltaic performance n-type organic semiconductor acceptors. Nature Communications, 2019, 10, 519.	12.8	231
8	A Fully Nonâ€fused Ring Acceptor with Planar Backbone and Nearâ€IR Absorption for High Performance Polymer Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 22714-22720.	13.8	184
9	Over 14% efficiency all-polymer solar cells enabled by a low bandgap polymer acceptor with low energy loss and efficient charge separation. Energy and Environmental Science, 2020, 13, 5017-5027.	30.8	170
10	Efficient Organic Solar Cells from Molecular Orientation Control of M-Series Acceptors. Joule, 2021, 5, 197-209.	24.0	164
11	Solution-processed green and blue quantum-dot light-emitting diodes with eliminated charge leakage. Nature Photonics, 2022, 16, 505-511.	31.4	152
12	Progress and prospects of the morphology of non-fullerene acceptor based high-efficiency organic solar cells. Energy and Environmental Science, 0, , .	30.8	149
13	Approaching 16% Efficiency in All-Small-Molecule Organic Solar Cells Based on Ternary Strategy with a Highly Crystalline Acceptor. Joule, 2020, 4, 2223-2236.	24.0	142
14	The coupling and competition of crystallization and phase separation, correlating thermodynamics and kinetics in OPV morphology and performances. Nature Communications, 2021, 12, 332.	12.8	140
15	13.7% Efficiency Smallâ€Molecule Solar Cells Enabled by a Combination of Material and Morphology Optimization. Advanced Materials, 2019, 31, e1904283.	21.0	111
16	Highâ€Efficiency Organic Photovoltaics using Eutectic Acceptor Fibrils to Achieve Current Amplification. Advanced Materials, 2021, 33, e2007177.	21.0	111
17	Revealing Morphology Evolution in Highly Efficient Bulk Heterojunction and Pseudoâ€Planar Heterojunction Solar Cells by Additives Treatment. Advanced Energy Materials, 2021, 11, 2003390.	19.5	106
18	Nonfullerene Acceptor for Organic Solar Cells with Chlorination on Dithieno[3,2-b:2â€²,3â€²-d]pyrrol Fused-Ring. ACS Energy Letters, 2019, 4, 763-770.	17.4	102

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19	Morphology Characterization of Bulk Heterojunction Solar Cells. Small Methods, 2018, 2, 1700229.	8.6	98
20	Revealing the Critical Role of the HOMO Alignment on Maximizing Current Extraction and Suppressing Energy Loss in Organic Solar Cells. IScience, 2019, 19, 883-893.	4.1	68
21	Synergy of Liquidâ€Crystalline Smallâ€Molecule and Polymeric Donors Delivers Uncommon Morphology Evolution and 16.6% Efficiency Organic Photovoltaics. Advanced Science, 2020, 7, 2000149.	11.2	67
22	Understanding the Effect of End Group Halogenation in Tuning Miscibility and Morphology of Highâ€Performance Small Molecular Acceptors. Solar Rrl, 2020, 4, 2000250.	5.8	63
23	Regio-Specific Selenium Substitution in Non-Fullerene Acceptors for Efficient Organic Solar Cells. Chemistry of Materials, 2019, 31, 6770-6778.	6.7	60
24	Green solvent-processed efficient non-fullerene organic solar cells enabled by low-bandgap copolymer donors with EDOT side chains. Journal of Materials Chemistry A, 2019, 7, 716-726.	10.3	45
25	10.13% Efficiency Allâ€Polymer Solar Cells Enabled by Improving the Optical Absorption of Polymer Acceptors. Solar Rrl, 2020, 4, 2000142.	5.8	45
26	Melamine-Doped Cathode Interlayer Enables High-Efficiency Organic Solar Cells. ACS Energy Letters, 2021, 6, 3582-3589.	17.4	45
27	Asâ€Cast Ternary Organic Solar Cells Based on an Asymmetric Sideâ€Chains Featured Acceptor with Reduced Voltage Loss and 14.0% Efficiency. Advanced Functional Materials, 2020, 30, 1909535.	14.9	43
28	The Molecular Ordering and Doubleâ€Channel Carrier Generation of Nonfullerene Photovoltaics within Multiâ€Lengthâ€Scale Morphology. Advanced Materials, 2022, 34, e2108317.	21.0	43
29	Fused selenophene-thieno[3,2-b]thiopheneâ€“selenophene (ST)-based narrow-bandgap electron acceptor for efficient organic solar cells with small voltage loss. Chemical Communications, 2019, 55, 8258-8261.	4.1	42
30	Marcus Hole Transfer Governs Charge Generation and Device Operation in Nonfullerene Organic Solar Cells. ACS Energy Letters, 2021, 6, 2971-2981.	17.4	41
31	Defectâ€Passivation Using Organic Dyes for Enhanced Efficiency and Stability of Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900529.	5.8	40
32	Efficient modulation of end groups for the asymmetric small molecule acceptors enabling organic solar cells with over 15% efficiency. Journal of Materials Chemistry A, 2020, 8, 5927-5935.	10.3	39
33	Asymmetrical side-chain engineering of small-molecule acceptors enable high-performance nonfullerene organic solar cells. Nano Energy, 2020, 67, 104209.	16.0	35
34	Electronâ€Deficient and Quinoid Central Unit Engineering for Unfused Ringâ€Based A₁â€“Dâ€“A₂â€“Dâ€“A₁â€Type Acceptor Enables High Performance Nonfullerene Polymer Solar Cells with High V_{oc} and PCE Simultaneously. Small, 2020, 16, e1907681.	10.0	31
35	Side-Chain Engineering of Benzodithiophene-Bridged Dimeric Porphyrin Donors for All-Small-Molecule Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 41506-41514.	8.0	30
36	Universal and versatile morphology engineering via hot fluorous solvent soaking for organic bulk heterojunction. Nature Communications, 2020, 11, 5585.	12.8	29

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37	Efficient and thermally stable all-polymer solar cells based on a fluorinated wide-bandgap polymer donor with high crystallinity. Journal of Materials Chemistry A, 2018, 6, 16403-16411.	10.3	26
38	Two Birds with One Stone: High Efficiency and Low Synthetic Cost for Benzotriazoleâ€Based Polymer Solar Cells by a Simple Chemical Approach. Advanced Energy Materials, 2020, 10, 2002142.	19.5	26
39	Side chain engineering on dithieno[3,2-b:2,3-d]pyrrol fused electron acceptors for efficient organic solar cells. Materials Chemistry Frontiers, 2019, 3, 702-708.	5.9	24
40	A Fully Nonâ€fused Ring Acceptor with Planar Backbone and Nearâ€IR Absorption for High Performance Polymer Solar Cells. Angewandte Chemie, 2020, 132, 22903-22909.	2.0	23
41	Spontaneous carrier generation and low recombination in high-efficiency non-fullerene solar cells. Energy and Environmental Science, 2022, 15, 3483-3493.	30.8	23
42	Synergistic Effects of Sideâ€Chain Engineering and Fluorination on Small Molecule Acceptors to Simultaneously Broaden Spectral Response and Minimize Voltage Loss for 13.8% Efficiency Organic Solar Cells. Solar Rrl, 2019, 3, 1900169.	5.8	22
43	Enhanced efficiency and stability of nonfullerene ternary polymer solar cells based on a spontaneously assembled active layer: the role of a high mobility small molecular electron acceptor. Journal of Materials Chemistry C, 2020, 8, 6196-6202.	5.5	22
44	Enhancing phase separation with a conformation-locked nonfullerene acceptor for over 14.4% efficiency solar cells. Journal of Materials Chemistry C, 2019, 7, 13279-13286.	5.5	20
45	Weak Makes It Powerful: The Role of Cognate Small Molecules as an Alloy Donor in 2D/1A Ternary Fullerene Solar Cells for Finely Tuned Hierarchical Morphology in Thick Active Layers. Small Methods, 2020, 4, 1900766.	8.6	19
46	Over 14% Efficiency Singleâ€Junction Organic Solar Cells Enabled by Reasonable Conformation Modulating in Naphtho[2,3â€b:6,7â€bâ€²]difuran Based Polymer. Advanced Energy Materials, 2021, 11, 2003954.	19.5	19
47	Ternary non-fullerene polymer solar cells with a high crystallinity n-type organic semiconductor as the second acceptor. Journal of Materials Chemistry A, 2018, 6, 24814-24822.	10.3	16
48	Manipulating Crystallization Kinetics of Conjugated Polymers in Nonfullerene Photovoltaic Blends toward Refined Morphologies and Higher Performances. Macromolecules, 2021, 54, 4030-4041.	4.8	16
49	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
50	Nonfused Ring Electron Acceptors for Efficient Organic Solar Cells Enabled by Multiple Intramolecular Conformational Locks. ACS Applied Energy Materials, 2022, 5, 5136-5145.	5.1	16
51	A 1 â€A 2 Type Wide Bandgap Polymers for Highâ€Performance Polymer Solar Cells: Energy Loss and Morphology. Solar Rrl, 2019, 3, 1800291.	5.8	15
52	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
53	Side chain engineering of polymer acceptors for all-polymer solar cells with enhanced efficiency. Journal of Materials Chemistry C, 2020, 8, 4012-4020.	5.5	13
54	PCE11-based polymer solar cells with high efficiency over 13% achieved by room-temperature processing. Journal of Materials Chemistry A, 2020, 8, 8661-8668.	10.3	13

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55	Complex multilength-scale morphology in organic photovoltaics. Trends in Chemistry, 2022, 4, 699-713.	8.5	13
56	Elucidating the Roles of Hole Transport Layers in pâ€iâ€n Perovskite Solar Cells. Advanced Electronic Materials, 2020, 6, 2000149.	5.1	11
57	Ternary Strategy Enabling Highâ€Performance Organic Solar Cells with Optimized Film Morphology and Reduced Nonradiative Energy Loss. Solar Rrl, 2021, 5, 2100806.	5.8	10
58	Correlating Electronic Structure and Device Physics with Mixing Region Morphology in Highâ€Efficiency Organic SolarÂCells. Advanced Science, 2022, 9, e2104613.	11.2	10
59	Enhancing the Intermolecular Interactions of Ladder-Type Heteroheptacene-Based Nonfullerene Acceptors for Efficient Polymer Solar Cells by Incorporating Asymmetric Side Chains. CCS Chemistry, 2023, 5, 455-468.	7.8	9
60	Control of aggregation and dissolution of small molecule hole transport layers via a doping strategy for highly efficient perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 11932-11942.	5.5	8
61	Slotâ€Dieâ€Coated Organic Solar Cells Optimized through Multistep Crystallization Kinetics. Solar Rrl, 2022, 6, .	5.8	7
62	Manipulating the Crystalline Morphology in the Nonfullerene Acceptor Mixture to Improve the Carrier Transport and Suppress the Energetic Disorder. Small Science, 2022, 2, 2100092.	9.9	5
63	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
64	Nonâ€Fullerene Acceptors: Efficient Organic Solar Cell with 16.88% Efficiency Enabled by Refined Acceptor Crystallization and Morphology with Improved Charge Transfer and Transport Properties (Adv. Energy Mater. 18/2020). Advanced Energy Materials, 2020, 10, 2070083.	19.5	3
65	Specific interaction between fluorine atoms and thiol groups accounting for higher domain purity and photostability in narrowband BHJ systems. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 941-951.	2.1	1
66	Defectâ€Passivation Using Organic Dyes for Enhanced Efficiency and Stability of Perovskite Solar Cells. Solar Rrl, 2020, 4, 2070052.	5.8	1
67	Bimolecular crystal instability and morphology of bulk heterojunction blends in organic and perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 11695-11703.	5.5	1
68	Organic Solar Cells: Highâ€Efficiency Organic Photovoltaics using Eutectic Acceptor Fibrils to Achieve Current Amplification (Adv. Mater. 18/2021). Advanced Materials, 2021, 33, 2170142.	21.0	1