Zhipeng Kan

List of Publications by Year
in descending order

79	3,354	132226	156116
papers	citations	32 h-index	55 g-index

84	84	84	3264
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	All-Small-Molecule Organic Solar Cells with an Ordered Liquid Crystalline Donor. Joule, 2019, 3, 3034-3047.	24.7	281
2	15.34% efficiency all-small-molecule organic solar cells with an improved fill factor enabled by a fullerene additive. Energy and Environmental Science, 2020, 13, 2134-2141.	32.2	231
3	Additive-induced miscibility regulation and hierarchical morphology enable 17.5% binary organic solar cells. Energy and Environmental Science, 2021, 14, 3044-3052.	32.2	191
4	Key Parameters Requirements for Nonâ€Fullereneâ€Based Organic Solar Cells with Power Conversion Efficiency >20%. Advanced Science, 2019, 6, 1802028.	12.4	156
5	Thieno[3,4â€c]pyrroleâ€4,6â€dioneâ€3,4â€difluorothiophene Polymer Acceptors for Efficient Allâ€Polymer Bulk Heterojunction Solar Cells. Angewandte Chemie - International Edition, 2016, 55, 12996-13000.	14.8	133
6	15.8% efficiency binary all-small-molecule organic solar cells enabled by a selenophene substituted sematic liquid crystalline donor. Energy and Environmental Science, 2021, 14, 5366-5376.	32.2	109
7	Delicate Morphology Control Triggers 14.7% Efficiency Allâ€Smallâ€Molecule Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2001076.	22.2	105
8	Donor Derivative Incorporation: An Effective Strategy toward High Performance Allâ€Smallâ€Molecule Ternary Organic Solar Cells. Advanced Science, 2019, 6, 1901613.	12.4	99
9	Eutectic phase behavior induced by a simple additive contributes to efficient organic solar cells. Nano Energy, 2021, 84, 105862.	16.5	85
10	Benzodithiophene-Based Small-Molecule Donors for Next-Generation All-Small-Molecule Organic Photovoltaics. Matter, 2020, 3, 1403-1432.	10.2	82
11	15.3% Efficiency Allâ€Smallâ€Molecule Organic Solar Cells Achieved by a Locally Asymmetric F, Cl Disubstitution Strategy. Advanced Science, 2021, 8, 2004262.	12.4	82
12	Impact of Fluorine Substituents on Ï€â€Conjugated Polymer Mainâ€Chain Conformations, Packing, and Electronic Couplings. Advanced Materials, 2016, 28, 8197-8205.	24.3	80
13	Thieno[3,4â€c]Pyrroleâ€4,6â€Dioneâ€Based Polymer Acceptors for High Openâ€Circuit Voltage Allâ€Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1602574.	22.2	79
14	Synergy of Liquidâ€Crystalline Smallâ€Molecule and Polymeric Donors Delivers Uncommon Morphology Evolution and 16.6% Efficiency Organic Photovoltaics. Advanced Science, 2020, 7, 2000149.	12.4	72
15	Isoindigoâ€3,4â€Difluorothiophene Polymer Acceptors Yield â€œAllâ€Polymerâ€•Bulkâ€Heterojunction Solar Cells with over 7â€‰% Efficiency. Angewandte Chemie - International Edition, 2018, 57, 531-535.	14.8	69
16	A â€œÏ*f*-Holeâ€•Containing Volatile Solid Additive Enabling 16.5% Efficiency Organic Solar Cells. IScience, 2020, 23, 100965.	4.1	67
17	Carrier Transport and Recombination in Efficient â€œAllâ€Smallâ€Moleculeâ€•Solar Cells with the Nonfullerene Acceptor IDTBR. Advanced Energy Materials, 2018, 8, 1800264.	22.2	66
18	Higher Mobility and Carrier Lifetimes in Solutionâ€Processable Smallâ€Molecule Ternary Solar Cells with 11% Efficiency. Advanced Energy Materials, 2019, 9, 1802836.	22.2	65

#	Article	IF	Citations
19	Triphenylamine-Based Pushâ€“Pull Ïƒâ€“C₆₀ Dyad As Photoactive Molecular Material for Single-Component Organic Solar Cells: Synthesis, Characterizations, and Photophysical Properties. Chemistry of Materials, 2018, 30, 3474-3485.	7.1	58
20	Improving Molecular Planarity by Changing Alky Chain Position Enables 12.3% Efficiency Allâ€Smallâ€Molecule Organic Solar Cells with Enhanced Carrier Lifetime and Reduced Recombination. Solar Rrl, 2020, 4, 1900326.	6.0	56
21	Energetic Disorder and Activation Energy in Efficient Ternary Organic Solar Cells with Nonfullerene Acceptor Ehâ€DTBR as the Third Component. Solar Rrl, 2020, 4, 1900403.	6.0	47
22	Terminal group engineering for small-molecule donors boosts the performance of nonfullerene organic solar cells. Journal of Materials Chemistry A, 2019, 7, 2541-2546.	10.5	46
23	Hybrid Cathode Interlayer Enables 17.4% Efficiency Binary Organic Solar Cells. Advanced Science, 2022, 9, e2105575.	12.4	46
24	Mixed Domains Enhance Charge Generation and Extraction in Bulkâ€Heterojunction Solar Cells with Smallâ€Molecule Donors. Advanced Energy Materials, 2018, 8, 1702941.	22.2	45
25	Thermal annealing reduces geminate recombination in TQ1:N2200 all-polymer solar cells. Journal of Materials Chemistry A, 2018, 6, 7428-7438.	10.5	45
26	Simple organic donors based on halogenated oligothiophenes for all small molecule solar cells with efficiency over 11%. Journal of Materials Chemistry A, 2020, 8, 5843-5847.	10.5	45
27	18.42% efficiency polymer solar cells enabled by terpolymer donors with optimal miscibility and energy levels. Journal of Materials Chemistry A, 2022, 10, 7878-7887.	10.5	45
28	High Efficiency Inverted Organic Solar Cells with a Neutral Fulleropyrrolidine Electron-Collecting Interlayer. ACS Applied Materials & Interfaces, 2016, 8, 14293-14300.	8.3	40
29	Atomic-layer-deposited AZO outperforms ITO in high-efficiency polymer solar cells. Journal of Materials Chemistry A, 2018, 6, 10176-10183.	10.5	38
30	Molecular ordering and phase segregation induced by a volatile solid additive for highly efficient all-small-molecule organic solar cells. Journal of Materials Chemistry A, 2021, 9, 2857-2863.	10.5	38
31	Understanding the Light Soaking Effects in Inverted Organic Solar Cells Functionalized with Conjugated Macroelectrolyte Electronâ€Collecting Interlayers. Advanced Science, 2016, 3, 1500245.	12.4	36
32	Rational molecular and device design enables organic solar cells approaching 20% efficiency. Nature Communications, 2024, 15, .	13.2	36
33	From Recombination Dynamics to Device Performance: Quantifying the Efficiency of Exciton Dissociation, Charge Separation, and Extraction in Bulk Heterojunction Solar Cells with Fluorineâ€Substituted Polymer Donors. Advanced Energy Materials, 2018, 8, 1701678.	22.2	33
34	Molecular Lock Induced by Chloroplatinic Acid Doping of PEDOT:PSS for High-Performance Organic Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 30954-30961.	8.3	33
35	Revealing the structural effects of non-fullerene acceptors on the performances of ternary organic photovoltaics under indoor light conditions. Nano Energy, 2020, 75, 104934.	16.5	32
36	Wideâ€Bandgap Small Molecular Acceptors Based on a Weak Electronâ€Withdrawing Moiety for Efficient Polymer Solar Cells. Solar Rrl, 2018, 2, 1800120.	6.0	31

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37	Buildup of Triplet-State Population in Operating TQ1:PC₇₁BM Devices Does Not Limit Their Performance. Journal of Physical Chemistry Letters, 2020, 11, 2838-2845.	4.9	31
38	A multifunctional additive of scandium trifluoromethanesulfonate to achieve efficient inverted perovskite solar cells with a high fill factor of 83.80%. Journal of Materials Chemistry A, 2020, 8, 19555-19560.	10.5	30
39	Simple near-Infrared Nonfullerene Acceptors Enable Organic Solar Cells with >9% Efficiency. ACS Applied Materials & Interfaces, 2019, 11, 6717-6723.	8.3	29
40	Deciphering the Role of Fluorination: Morphological Manipulation Prompts Charge Separation and Reduces Carrier Recombination in Allâ€Smallâ€Molecule Photovoltaics. Solar Rrl, 2020, 4, 1900528.	6.0	28
41	Thieno[3,4â€c]pyroleâ€4,6â€dioneâ€3,4â€difluorothiophene Polymer Acceptors for Efficient Allâ€Polymer Bulk Heterojunction Solar Cells. Angewandte Chemie, 2016, 128, 13190-13194.	2.1	27
42	Self-assembly enables simple structure organic photovoltaics via green-solvent and open-air-printing: Closing the lab-to-fab gap. Materials Today, 2022, 55, 46-55.	18.1	26
43	Thiazole-Functionalized Terpolymer Donors Obtained via Random Ternary Copolymerization for High-Performance Polymer Solar Cells. Macromolecules, 2020, 53, 9034-9042.	5.1	24
44	Efficiency improvement of planar perovskite solar cells using a phenol additive. Journal of Materials Chemistry C, 2018, 6, 11519-11524.	5.6	22
45	Suppressing Bimolecular Charge Recombination and Energetic Disorder with Planar Heterojunction Active Layer Enables 18.1% Efficiency Binary Organic Solar Cells. , 2023, 5, 1718-1726.		18
46	Vertical Phase Regulation with 1,3,5â€Tribromobenzene Leads to 18.5% Efficiency Binary Organic Solar Cells. Advanced Science, 2023, 10, .	12.4	18
47	Impact of Intermolecular Interactions between Halogenated Volatile Solid Additives and the Nonfullerene Acceptor in Organic Solar Cells. Advanced Functional Materials, 2023, 33, .	16.5	18
48	Effects of Fluorination on Fused Ring Electron Acceptor for Active Layer Morphology, Exciton Dissociation, and Charge Recombination in Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 56231-56239.	8.3	15
49	Isoindigoâ€3,4â€Difluorothiophene Polymer Acceptors Yield â€œAllâ€Polymerâ€•Bulkâ€Heterojunction Solar Cells with over 7â€‰% Efficiency. Angewandte Chemie, 2018, 130, 540-544.	2.1	13
50	Fluorinated oligothiophene donors for high-performance nonfullerene small-molecule organic solar cells. Sustainable Energy and Fuels, 2020, 4, 2680-2685.	4.8	13
51	Synergistic Interplay between Asymmetric Backbone Conformation, Molecular Aggregation, and Charge-Carrier Dynamics in Fused-Ring Electron Acceptor-Based Bulk Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 2961-2970.	8.3	13
52	A new simple volatile solid additive triggers morphological optimization and performance stabilization in polymer solar cells. Sustainable Energy and Fuels, 2022, 6, 2191-2197.	4.8	13
53	Engineering of P3CT-Na through diprophylline treatment to realize efficient and stable inverted perovskite solar cells. Chemical Engineering Journal, 2021, 419, 129581.	13.0	12
54	Effects of fluorination position on all-polymer organic solar cells. Dyes and Pigments, 2022, 200, 110180.	3.9	12

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55	Isomeric acceptors incorporation enables 18.1% efficiency ternary organic solar cells with reduced trap-assisted charge recombination. Chemical Engineering Journal, 2023, 465, 142822.	13.0	12
56	Doubleâ€Dipole Induced by Incorporating Nitrogenâ€Bromine Hybrid Cathode Interlayers Leads to Suppressed Current Leakage and Enhanced Charge Extraction in Nonâ€Fullerene Organic Solar Cells. Advanced Science, 2023, 10, .	12.4	12
57	Difluorinated Oligothiophenes for Highâ€Efficiency Allâ€Smallâ€Molecule Organic Solar Cells: Positional Isomeric Effect of Fluorine Substitution on Performance Variations. Solar Rrl, 2020, 4, 1900472.	6.0	11
58	Charge Photogeneration and Recombination in Mesostructured CuSCNâ€Nanowire/PC₇₀BM Solar Cells. Solar Rrl, 2018, 2, 1800095.	6.0	10
59	Crystallinity dictates the selection of fullerene or non-fullerene acceptors in a small molecule organic solar cell. Dyes and Pigments, 2021, 187, 109085.	3.9	10
60	Annealing-free alcohol-processable MoO anode interlayer enables efficient light utilization in organic photovoltaics. Journal of Energy Chemistry, 2021, 61, 141-146.	13.4	10
61	Charge Carrier Dynamics in Planar Heterojunction Organic Solar Cells. Solar Rrl, 2023, 7, .	6.0	10
62	Suppressing nongeminate recombination with two well-compatible polymer donors enables 16.6% efficiency all-polymer solar cells. Chemical Engineering Journal, 2023, 470, 144186.	13.0	10
63	Quantification of Photophysical Processes in Allâ€Polymer Bulk Heterojunction Solar Cells. Solar Rrl, 2020, 4, 2000181.	6.0	9
64	High performance organic solar cells enabled by an iodinated additive. Organic Electronics, 2021, 93, 106161.	2.8	9
65	Balancing the performance and stability of organic photodiodes with all-polymer active layers. Journal of Materials Chemistry C, 2022, 10, 17502-17511.	5.6	9
66	Perovskiteâ€Based Photovoltaics for Artificial Indoor Light Harvesting: A Critical Review. Solar Rrl, 2023, 7, .	6.0	9
67	Regulating the Donorâ€“Acceptor Interfaces to Reduce Trap Density for Efficient Indoor Organic Solar Cells. Solar Rrl, 2023, 7, .	6.0	9
68	Block copolymers as efficient cathode interlayer materials for organic solar cells. Frontiers of Chemical Science and Engineering, 2021, 15, 571-578.	4.5	8
69	Triggering the Donorâ€“Acceptor Phase Segregation with Solid Additives Enables 16.5% Efficiency in All-Polymer Solar Cells. ACS Applied Materials & Interfaces, 2023, 15, 44012-44021.	8.3	8
70	Organic solar cells based on anthracene-containing PPEâ€“PPVs and non-fullerene acceptors. Chemical Papers, 2018, 72, 1769-1778.	2.2	7
71	Cyano-functionalized small-molecule acceptors for high-efficiency wide-bandgap organic solar cells. Journal of Materials Chemistry C, 2020, 8, 9195-9200.	5.6	7
72	Impact of Structural Polymorphs on Charge Collection and Nongeminate Recombination in Organic Photovoltaic Devices. Journal of Physical Chemistry C, 2018, 122, 29141-29149.	3.3	6

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73	An asymmetric end-capping strategy enables a new non-fullerene acceptor for organic solar cells with efficiency over 10%. Chemical Communications, 2020, 56, 6531-6534.	4.2	6
74	18.9% Efficiency Binary Organic Solar Cells Enabled by Regulating the Intrinsic Properties of PEDOT:PSS. Advanced Functional Materials, 2024, 34, .	16.5	5
75	Branched versus linear: side-chain effect on fluorinated wide bandgap donors and their applications in organic solar cells. New Journal of Chemistry, 2020, 44, 753-760.	2.7	3
76	Small molecule donor based on alkoxylated benzothiadiazole unit: Synthesis and photovoltaics properties. Materials Chemistry and Physics, 2020, 247, 122874.	4.1	2
77	Probing fluorescence resonance energy transfer and hole transfer in organic solar cells using a tandem structure. Journal of Materials Chemistry C, 2023, 11, 11167-11174.	5.6	2
78	Room-temperature-modulated polymorphism of nonfullerene acceptors enables efficient bilayer organic solar cells. Energy and Environmental Science, 0, , .	32.2	0
79	Hole-selective-molecule doping improves the layer thickness tolerance of PEDOT:PSS for efficient organic solar cells. EScience, 2024, , 100305.	42.6	0