Bin Kan

List of Publications by Year
in descending order

76 papers	8,519 citations	81839 39 h-index	71651 76 g-index
77 all docs	77 docs citations	77 times ranked	6002 citing authors

#	Article	IF	Citations
1	The design of quinoxaline based unfused non-fullerene acceptors for high performance and stable organic solar cells. Chemical Engineering Journal, 2022, 427, 131473.	6.6	32
2	Artificial neuromorphic cognitive skins based on distributed biaxially stretchable elastomeric synaptic transistors. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	25
3	Recent progress on <scp>allâ€small</scp> molecule organic solar cells using <scp>smallâ€molecule</scp> nonfullerene acceptors. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 175-200.	8.5	113
4	Flexible organic solar cells for biomedical devices. Nano Research, 2021, 14, 2891-2903.	5.8	19
5	Asymmetrical side-chain engineering of small-molecule acceptors enable high-performance nonfullerene organic solar cells. Nano Energy, 2020, 67, 104209.	8.2	35
6	Lowâ€Bandgap Porphyrins for Highly Efficient Organic Solar Cells: Materials, Morphology, and Applications. Advanced Materials, 2020, 32, e1906129.	11.1	143
7	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.	7.8	43
8	Efficient and thermally stable organic solar cells based on small molecule donor and polymer acceptor. Nature Communications, 2019, 10, 3271.	5.8	94
9	Sequentially Deposited versus Conventional Nonfullerene Organic Solar Cells: Interfacial Trap States, Vertical Stratification, and Exciton Dissociation. Advanced Energy Materials, 2019, 9, 1902145.	10.2	36
10	Cathode interlayer-free organic solar cells with enhanced device performance upon alcohol treatment. Journal of Materials Chemistry C, 2019, 7, 7947-7952.	2.7	17
11	A Tandem Organic Solar Cell with PCE of 14.52% Employing Subcells with the Same Polymer Donor and Two Absorption Complementary Acceptors. Advanced Materials, 2019, 31, e1804723.	11.1	48
12	Over 12% Efficiency Nonfullerene Allâ€Smallâ€Molecule Organic Solar Cells with Sequentially Evolved Multilength Scale Morphologies. Advanced Materials, 2019, 31, e1807842.	11.1	272
13	Organic Solar Cells: Sequentially Deposited versus Conventional Nonfullerene Organic Solar Cells: Interfacial Trap States, Vertical Stratification, and Exciton Dissociation (Adv. Energy Mater. 47/2019). Advanced Energy Materials, 2019, 9, 1970185.	10.2	1
14	Small Molecule Acceptors with a Nonfused Architecture for High-Performance Organic Photovoltaics. Chemistry of Materials, 2019, 31, 904-911.	3.2	66
15	Medium-Bandgap Small-Molecule Donors Compatible with Both Fullerene and Nonfullerene Acceptors. ACS Applied Materials & Interfaces, 2018, 10, 9587-9594.	4.0	25
16	A New Nonfullerene Acceptor with Near Infrared Absorption for High Performance Ternaryâ€Blend Organic Solar Cells with Efficiency over 13%. Advanced Science, 2018, 5, 1800307.	5.6	111
17	A Halogenation Strategy for over 12% Efficiency Nonfullerene Organic Solar Cells. Advanced Energy Materials, 2018, 8, 1702870.	10.2	159
18	Two Thieno[3,2â€b]thiopheneâ€Based Small Molecules as Bifunctional Photoactive Materials for Organic Solar Cells. Solar Rrl, 2018, 2, 1700179.	3.1	12

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19	All-Small-Molecule Organic Solar Cells Based on Pentathiophene Donor and Alkylated Indacenodithiophene-Based Acceptors with Efficiency over 8%. ACS Applied Energy Materials, 2018, 1, 2150-2156.	2.5	29
20	Substituents on the end group subtle tuning the energy levels and absorptions of small-molecule nonfullerene acceptors. Dyes and Pigments, 2018, 155, 241-248.	2.0	18
21	Nonfullerene Tandem Organic Solar Cells with High Performance of 14.11%. Advanced Materials, 2018, 30, e1707508.	11.1	184
22	Fineâ€Tuning the Energy Levels of a Nonfullerene Smallâ€Molecule Acceptor to Achieve a High Shortâ€Circuit Current and a Power Conversion Efficiency over 12% in Organic Solar Cells. Advanced Materials, 2018, 30, 1704904.	11.1	214
23	Unveiling the Molecular Symmetry Dependence of Exciton Dissociation Processes in Small-Molecular Heterojunctions. Journal of Physical Chemistry C, 2018, 122, 26851-26856.	1.5	5
24	Highâ€Performance Allâ€Smallâ€Molecule Solar Cells Based on a New Type of Small Molecule Acceptors with Chlorinated End Groups. Advanced Energy Materials, 2018, 8, 1802021.	10.2	76
25	Two-Dimensional Ruddlesdenâ€“Popper Perovskite with Nanorod-like Morphology for Solar Cells with Efficiency Exceeding 15%. Journal of the American Chemical Society, 2018, 140, 11639-11646.	6.6	397
26	Efficient non-fullerene organic solar cells employing sequentially deposited donorâ€“acceptor layers. Journal of Materials Chemistry A, 2018, 6, 18225-18233.	5.2	49
27	Ternary Organic Solar Cells With 12.8% Efficiency Using Two Nonfullerene Acceptors With Complementary Absorptions. Advanced Energy Materials, 2018, 8, 1800424.	10.2	90
28	Manipulating active layer morphology of molecular donor/polymer acceptor based organic solar cells through ternary blends. Science China Chemistry, 2018, 61, 1025-1033.	4.2	25
29	A chlorinated low-bandgap small-molecule acceptor for organic solar cells with 14.1% efficiency and low energy loss. Science China Chemistry, 2018, 61, 1307-1313.	4.2	210
30	Extended Conjugation Length of Nonfullerene Acceptors with Improved Planarity via Noncovalent Interactions for Highâ€Performance Organic Solar Cells. Advanced Energy Materials, 2018, 8, 1801618.	10.2	102
31	A series of dithienobenzodithiophene based small molecules for highly efficient organic solar cells. Science China Chemistry, 2017, 60, 552-560.	4.2	16
32	Molecular Origin of Donor- and Acceptor-Rich Domain Formation in Bulk-Heterojunction Solar Cells with an Enhanced Charge Transport Efficiency. Journal of Physical Chemistry C, 2017, 121, 5864-5870.	1.5	18
33	Evaluation of Electron Donor Materials for Solutionâ€Processed Organic Solar Cells via a Novel Figure of Merit. Advanced Energy Materials, 2017, 7, 1700465.	10.2	114
34	Triperylene Hexaimides Based Allâ€Smallâ€Molecule Solar Cells with an Efficiency over 6% and Open Circuit Voltage of 1.04 V. Advanced Energy Materials, 2017, 7, 1601664.	10.2	57
35	Solution-processed organic tandem solar cells with power conversion efficiencies >12%. Nature Photonics, 2017, 11, 85-90.	15.6	510
36	Small-Molecule Acceptor Based on the Heptacyclic Benzodi(cyclopentadithiophene) Unit for Highly Efficient Nonfullerene Organic Solar Cells. Journal of the American Chemical Society, 2017, 139, 4929-4934.	6.6	459

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37	Developing high-performance small molecule organic solar cells via a large planar structure and an electron-withdrawing central unit. Chemical Communications, 2017, 53, 451-454.	2.2	22
38	Assessing the stability of high performance solution processed small molecule solar cells. Solar Energy Materials and Solar Cells, 2017, 161, 368-376.	3.0	31
39	An A-D-A Type Small-Molecule Electron Acceptor with End-Extended Conjugation for High Performance Organic Solar Cells. Chemistry of Materials, 2017, 29, 7908-7917.	3.2	139
40	Processability: Evaluation of Electron Donor Materials for Solutionâ€Processed Organic Solar Cells via a Novel Figure of Merit (Adv. Energy Mater. 18/2017). Advanced Energy Materials, 2017, 7, .	10.2	0
41	Design and synthesis of low band gap non-fullerene acceptors for organic solar cells with impressively high Jsc over 21 mA cm_2. Science China Materials, 2017, 60, 819-828.	3.5	29
42	3-Dimensional non-fullerene acceptors based on triptycene and perylene diimide for organic solar cells. Organic Electronics, 2017, 50, 458-465.	1.4	11
43	A New Nonfullerene Electron Acceptor with a Ladder Type Backbone for Highâ€Performance Organic Solar Cells. Advanced Materials, 2017, 29, 1604964.	11.1	289
44	Evaluation of Small Molecules as Front Cell Donor Materials for Highâ€Efficiency Tandem Solar Cells. Advanced Materials, 2016, 28, 7008-7012.	11.1	43
45	New Insights into the Correlation between Morphology, Excited State Dynamics, and Device Performance of Small Molecule Organic Solar Cells. Advanced Energy Materials, 2016, 6, 1600961.	10.2	34
46	Oligothiophene-based small molecules with 3,3â€²-difluoro-2,2â€²-bithiophene central unit for solution-processed organic solar cells. Organic Electronics, 2016, 38, 172-179.	1.4	8
47	High efficiency and stability small molecule solar cells developed by bulk microstructure fine-tuning. Nano Energy, 2016, 28, 241-249.	8.2	57
48	Enhancing efficiency for additiveâ€“free bladeâ€“coated smallâ€“molecule solar cells by thermal annealing. Organic Electronics, 2016, 37, 305-311.	1.4	7
49	A simple small molecule as an acceptor for fullerene-free organic solar cells with efficiency near 8%. Journal of Materials Chemistry A, 2016, 4, 10409-10413.	5.2	104
50	Oligothiophene based small molecules with a new end group for solution processed organic photovoltaics. Organic Electronics, 2016, 33, 71-77.	1.4	5
51	Diketopyrrolopyrrole based small molecules with near infrared absorption for solution processed organic solar cells. Dyes and Pigments, 2016, 126, 173-178.	2.0	18
52	Alkylthio substituted thiophene modified benzodithiophene-based highly efficient photovoltaic small molecules. Organic Electronics, 2016, 28, 263-268.	1.4	12
53	Fullerene-free small molecule organic solar cells with a high open circuit voltage of 1.15 V. Chemical Communications, 2016, 52, 465-468.	2.2	79
54	Dithienopyrrole Based Small Molecule with Low Band Gap for Organic Solar Cells. Chinese Journal of Chemistry, 2015, 33, 852-858.	2.6	15

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55	Subtle Balance Between Length Scale of Phase Separation and Domain Purification in Smallâ€Molecule Bulkâ€Heterojunction Blends under Solvent Vapor Treatment. Advanced Materials, 2015, 27, 6296-6302.	11.1	159
56	A low bandgap carbazole based small molecule for organic solar cells. Organic Electronics, 2015, 24, 89-95.	1.4	16
57	Correlating Molecular Structures with Transport Dynamics in High-Efficiency Small-Molecule Organic Photovoltaics. ACS Applied Materials & Interfaces, 2015, 7, 13137-13141.	4.0	15
58	Investigation of the enhanced performance and lifetime of organic solar cells using solution-processed carbon dots as the electron transport layers. Journal of Materials Chemistry C, 2015, 3, 12403-12409.	2.7	28
59	Benzo[1,2-b:4,5-bâ€²]dithiophene (BDT)-based small molecules for solution processed organic solar cells. Journal of Materials Chemistry A, 2015, 3, 4765-4776.	5.2	117
60	A new oligobenzodithiophene end-capped with 3-ethyl-rhodanine groups for organic solar cells with high open-circuit voltage. Science China Chemistry, 2015, 58, 339-346.	4.2	23
61	Investigation of the effect of large aromatic fusion in the small molecule backbone on the solar cell device fill factor. Journal of Materials Chemistry A, 2015, 3, 16679-16687.	5.2	26
62	Device characterization and optimization of small molecule organic solar cells assisted by modelling simulation of the currentâ€“voltage characteristics. Physical Chemistry Chemical Physics, 2015, 17, 19261-19267.	1.3	2
63	A Series of Simple Oligomer-like Small Molecules Based on Oligothiophenes for Solution-Processed Solar Cells with High Efficiency. Journal of the American Chemical Society, 2015, 137, 3886-3893.	6.6	788
64	Large active layer thickness toleration of high-efficiency small molecule solar cells. Journal of Materials Chemistry A, 2015, 3, 22274-22279.	5.2	19
65	A solution-processed high performance organic solar cell using a small molecule with the thieno[3,2-b]thiophene central unit. Chemical Communications, 2015, 51, 15268-15271.	2.2	48
66	Dithienosilole-Based Small-Molecule Organic Solar Cells with an Efficiency over 8%: Investigation of the Relationship between the Molecular Structure and Photovoltaic Performance. Chemistry of Materials, 2015, 27, 6077-6084.	3.2	92
67	Enhancement of Performance and Mechanism Studies of All-Solution Processed Small-Molecule based Solar Cells with an Inverted Structure. ACS Applied Materials & Interfaces, 2015, 7, 21245-21253.	4.0	12
68	Small Molecules Based on Alkyl/Alkylthio-thieno[3,2-b]thiophene-Substituted Benzo[1,2-b:4,5-bâ€²]dithiophene for Solution-Processed Solar Cells with High Performance. Chemistry of Materials, 2015, 27, 8414-8423.	3.2	71
69	Small-molecule solar cells with efficiency over 9%. Nature Photonics, 2015, 9, 35-41.	15.6	769
70	Impact of the Electronâ€Transport Layer on the Performance of Solutionâ€Processed Smallâ€Molecule Organic Solar Cells. ChemSusChem, 2014, 7, 2358-2364.	3.6	40
71	Solution-Processed Organic Solar Cells Based on Dialkylthiol-Substituted Benzodithiophene Unit with Efficiency near 10%. Journal of the American Chemical Society, 2014, 136, 15529-15532.	6.6	670
72	Effect of thermal annealing on active layer morphology and performance for small molecule bulk heterojunction organic solar cells. Journal of Materials Chemistry C, 2014, 2, 7247-7255.	2.7	70

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73	A high-performance photovoltaic small molecule developed by modifying the chemical structure and optimizing the morphology of the active layer. RSC Advances, 2014, 4, 31977-31980.	1.7	54
74	Open-circuit voltage up to 1.07V for solution processed small molecule based organic solar cells. Organic Electronics, 2014, 15, 2285-2294.	1.4	32
75	Investigation of Quinquethiophene Derivatives with Different End Groups for High Open Circuit Voltage Solar Cells. Advanced Energy Materials, 2013, 3, 639-646.	10.2	65
76	Solution-Processed and High-Performance Organic Solar Cells Using Small Molecules with a Benzodithiophene Unit. Journal of the American Chemical Society, 2013, 135, 8484-8487.	6.6	675