Haijun Fan

List of Publications by Year
in descending order

109 papers	6,050 citations	87723 38 h-index	74018 75 g-index
112 all docs	112 docs citations	112 times ranked	5090 citing authors

#	Article	IF	Citations
1	High-efficiency small-molecule ternary solar cells with a hierarchical morphology enabled by synergizing fullerene and non-fullerene acceptors. Nature Energy, 2018, 3, 952-959.	19.8	558
2	Organic Solar Cells with 18% Efficiency Enabled by an Alloy Acceptor: A Twoâ€inâ€One Strategy. Advanced Materials, 2021, 33, e2100830.	11.1	323
3	Subtle Molecular Tailoring Induces Significant Morphology Optimization Enabling over 16% Efficiency Organic Solar Cells with Efficient Charge Generation. Advanced Materials, 2020, 32, e1906324.	11.1	312
4	A Thieno[3,4-<i>b</i>]thiophene-Based Non-fullerene Electron Acceptor for High-Performance Bulk-Heterojunction Organic Solar Cells. Journal of the American Chemical Society, 2016, 138, 15523-15526.	6.6	286
5	Efficient Semitransparent Solar Cells with High NIR Responsiveness Enabled by a Smallâ€Bandgap Electron Acceptor. Advanced Materials, 2017, 29, 1606574.	11.1	252
6	n-Type Molecular Photovoltaic Materials: Design Strategies and Device Applications. Journal of the American Chemical Society, 2020, 142, 11613-11628.	6.6	215
7	A Twisted Thieno[3,4â€<i>b</i>]thiopheneâ€Based Electron Acceptor Featuring a 14â€Ï€â€Electron Indenoindene Core for Highâ€Performance Organic Photovoltaics. Advanced Materials, 2017, 29, 1704510.	11.1	196
8	Electron transfer through rigid organic molecular wires enhanced by electronic and electronâ€"vibration coupling. Nature Chemistry, 2014, 6, 899-905.	6.6	180
9	Design of a New Fusedâ€Ring Electron Acceptor with Excellent Compatibility to Wideâ€Bandgap Polymer Donors for Highâ€Performance Organic Photovoltaics. Advanced Materials, 2018, 30, e1800403.	11.1	169
10	Thieno[3,4-<i>b</i>]thiophene-Based Novel Small-Molecule Optoelectronic Materials. Accounts of Chemical Research, 2017, 50, 1342-1350.	7.6	148
11	Two-Dimensional Ï€-Expanded Quinoidal Terthiophenes Terminated with Dicyanomethylenes as n-Type Semiconductors for High-Performance Organic Thin-Film Transistors. Journal of the American Chemical Society, 2014, 136, 16176-16184.	6.6	147
12	Air- and Heat-Stable Planar Tri-<i>p</i>-quinodimethane with Distinct Biradical Characteristics. Journal of the American Chemical Society, 2011, 133, 16342-16345.	6.6	121
13	13.7% Efficiency Smallâ€Molecule Solar Cells Enabled by a Combination of Material and Morphology Optimization. Advanced Materials, 2019, 31, e1904283.	11.1	111
14	Carbon-bridged oligo(p-phenylenevinylene)s for photostable and broadly tunable, solution-processable thin film organic lasers. Nature Communications, 2015, 6, 8458.	5.8	105
15	Low bandgap Ï€â€conjugated copolymers based on fused thiophenes and benzothiadiazole: Synthesis and structureâ€property relationship study. Journal of Polymer Science Part A, 2009, 47, 5498-5508.	2.5	100
16	Pursuing Highâ€Mobility nâ€Type Organic Semiconductors by Combination of â€œMoleculeâ€Frameworkâ€• and â€œSideâ€Chainâ€• Engineering. Advanced Materials, 2016, 28, 8456-8462.	11.1	93
17	Airâ€Stable nâ€Type Thermoelectric Materials Enabled by Organic Diradicaloids. Angewandte Chemie - International Edition, 2019, 58, 4958-4962.	7.2	92
18	Accurate Determination of the Minimum HOMO Offset for Efficient Charge Generation using Organic Semiconducting Alloys. Advanced Energy Materials, 2020, 10, 1903298.	10.2	92

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19	Carbon-Bridged Oligo(phenylenevinylene)s: Stable Ï€-Systems with High Responsiveness to Doping and Excitation. Journal of the American Chemical Society, 2012, 134, 19254-19259.	6.6	87
20	Modular Synthesis of 1<i>H</i>-Indenes, Dihydro-<i>s</i>-Indacene, and Diindenoindaceneâ€"a Carbon-Bridged <i>p</i>-Phenylenevinylene Congener. Journal of the American Chemical Society, 2009, 131, 13596-13597.	6.6	84
21	Efficient Solution-Processed n-Type Small-Molecule Thermoelectric Materials Achieved by Precisely Regulating Energy Level of Organic Dopants. ACS Applied Materials & Interfaces, 2017, 9, 28795-28801.	4.0	78
22	Carbon-Bridged 1,2-Bis(2-thienyl)ethylene: An Extremely Electron Rich Dithiophene Building Block Enabling Electron Acceptors with Absorption above 1000 nm for Highly Sensitive NIR Photodetectors. Journal of the American Chemical Society, 2021, 143, 4281-4289.	6.6	72
23	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.	1.9	68
24	A wide-bandgap Dâ€"A copolymer donor based on a chlorine substituted acceptor unit for high performance polymer solar cells. Journal of Materials Chemistry A, 2019, 7, 14070-14078.	5.2	68
25	Airâ€Stable nâ€Type Thermoelectric Materials Enabled by Organic Diradicaloids. Angewandte Chemie, 2019, 131, 5012-5016.	1.6	64
26	A Copolymer of Benzodithiophene with TIPS Side Chains for Enhanced Photovoltaic Performance. Macromolecules, 2011, 44, 9173-9179.	2.2	61
27	Efficiency enhancement in small molecule bulk heterojunction organic solar cells via additive. Applied Physics Letters, 2010, 97, .	1.5	59
28	Multifaceted Regioregular Oligo(thieno[3,4-<i>b</i>]thiophene)s Enabled by Tunable Quinoidization and Reduced Energy Band Gap. Journal of the American Chemical Society, 2015, 137, 10357-10366.	6.6	52
29	Isomeryâ€Dependent Miscibility Enables Highâ€Performance Allâ€Smallâ€Molecule Solar Cells. Small, 2019, 15, 1804271.	5.2	50
30	New sensitizers for dye-sensitized solar cells featuring a carbon-bridged phenylenevinylene. Chemical Communications, 2013, 49, 582-584.	2.2	49
31	Diaceno[<i>a</i>,<i>e</i>]pentalenes from Homoannulations of <i>o</i>-Alkynylaryliodides Utilizing a Unique Pd(OAc)₂/<i>n</i>-Bu₄NOAc Catalytic Combination. Organic Letters, 2014, 16, 4924-4927.	2.4	48
32	Diaceno[<i>a</i>,<i>e</i>]pentalenes: An Excellent Molecular Platform for Highâ€Performance Organic Semiconductors. Chemistry - A European Journal, 2015, 21, 17016-17022.	1.7	48
33	Developing Quinoidal Fluorophores with Unusually Strong Red/Near-Infrared Emission. Journal of the American Chemical Society, 2015, 137, 11294-11302.	6.6	47
34	Design of All-Fused-Ring Electron Acceptors with High Thermal, Chemical, and Photochemical Stability for Organic Photovoltaics. CCS Chemistry, 2021, 3, 1070-1080.	4.6	46
35	Development of small-molecule materials for high-performance organic solar cells. Science China Chemistry, 2015, 58, 922-936.	4.2	45
36	Planarization, Fusion, and Strain of Carbon-Bridged Phenylenevinylene Oligomers Enhance Ï€-Electron and Charge Conjugation: A Dissectional Vibrational Raman Study. Journal of the American Chemical Society, 2015, 137, 3834-3843.	6.6	44

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37	Soluble dithienothiophene polymers: Effect of link pattern. Journal of Polymer Science Part A, 2009, 47, 2843-2852.	2.5	43
38	New X-shaped oligothiophenes for solution-processed solar cells. Journal of Materials Chemistry, 2011, 21, 9667.	6.7	43
39	Theoryâ€Guided Material Design Enabling Highâ€Performance Multifunctional Semitransparent Organic Photovoltaics without Optical Modulations. Advanced Materials, 2022, 34, e2200337.	11.1	42
40	Marcus Hole Transfer Governs Charge Generation and Device Operation in Nonfullerene Organic Solar Cells. ACS Energy Letters, 2021, 6, 2971-2981.	8.8	41
41	nâ€Type Quinoidal Oligothiopheneâ€Based Semiconductors for Thinâ€Film Transistors and Thermoelectrics. Advanced Functional Materials, 2020, 30, 2000765.	7.8	40
42	Photophysical Properties of Intramolecular Charge Transfer in a Tribranched Donorâ€“Ï€â€“Acceptor Chromophore. ChemPhysChem, 2015, 16, 2357-2365.	1.0	39
43	An Efficient and Colorâ€Tunable Solutionâ€Processed Organic Thinâ€Film Laser with a Polymeric Topâ€Layer Resonator. Advanced Optical Materials, 2017, 5, 1700238.	3.6	39
44	Synthesis and photovoltaic properties of copolymers of carbazole and thiophene with conjugated side chain containing acceptor end groups. Polymer Chemistry, 2011, 2, 1678.	1.9	37
45	Poly(3-hexylthiophene)-based non-fullerene solar cells achieve high photovoltaic performance with small energy loss. Journal of Materials Chemistry A, 2017, 5, 16573-16579.	5.2	37
46	Dithienosilole-based non-fullerene acceptors for efficient organic photovoltaics. Journal of Materials Chemistry A, 2018, 6, 4266-4270.	5.2	37
47	Ullmann-Type Intramolecular Câ€“O Reaction Toward Thieno[3,2-<i>b</i>]furan Derivatives with up to Six Fused Rings. Journal of Organic Chemistry, 2017, 82, 10920-10927.	1.7	36
48	Cathode interfacial layer-free all small-molecule solar cells with efficiency over 12%. Journal of Materials Chemistry A, 2019, 7, 15944-15950.	5.2	36
49	Low-bandgap thieno[3,4-c]pyrrole-4,6-dione-polymers for high-performance solar cells with significantly enhanced photocurrents. Journal of Materials Chemistry A, 2015, 3, 11194-11198.	5.2	35
50	An electron-rich 2-alkylthieno[3,4-b]thiophene building block with excellent electronic and morphological tunability for high-performance small-molecule solar cells. Journal of Materials Chemistry A, 2016, 4, 17354-17362.	5.2	35
51	Bis-Silicon-Bridged Stilbene: A Core for Small-Molecule Electron Acceptor for High-Performance Organic Solar Cells. Chemistry of Materials, 2018, 30, 587-591.	3.2	35
52	One-pot synthesis of electron-acceptor composite enables efficient fullerene-free ternary organic solar cells. Journal of Materials Chemistry A, 2018, 6, 22519-22525.	5.2	35
53	Stable Crossâ€Conjugated Tetrathiophene Diradical. Angewandte Chemie - International Edition, 2019, 58, 11291-11295.	7.2	35
54	Spatial Distribution Recast for Organic Bulk Heterojunctions for Highâ€Performance Allâ€Inorganic Perovskite/Organic Integrated Solar Cells. Advanced Energy Materials, 2020, 10, 2000851.	10.2	34

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55	Copolymers of fluorene and thiophene with conjugated side chain for polymer solar cells: Effect of pendant acceptors. Journal of Polymer Science Part A, 2011, 49, 1462-1470.	2.5	33
56	A two-dimensional halogenated thiophene side-chain strategy for balancing Voc and Jsc and improving efficiency of non-fullerene small molecule acceptor-based organic solar cells. Journal of Materials Chemistry A, 2019, 7, 20274-20284.	5.2	33
57	Highâ€Performance Polymer Solar Cells Achieved by Introducing Sideâ€Chain Heteroatom on Smallâ€Molecule Electron Acceptor. Macromolecular Rapid Communications, 2019, 40, e1800393.	2.0	30
58	Synthesis and photovoltaic properties of Dâ€“A copolymers of benzodithiophene and naphtho[2,3-c]thiophene-4,9-dione. Polymer Chemistry, 2012, 3, 99-104.	1.9	29
59	Near-Infrared All-Fused-Ring Nonfullerene Acceptors Achieving an Optimal Efficiency-Cost-Stability Balance in Organic Solar Cells. CCS Chemistry, 2023, 5, 654-668.	4.6	29
60	Facile Modification of a Noncovalently Fused-Ring Electron Acceptor Enables Efficient Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 45806-45814.	4.0	27
61	Design of All-Fused-Ring Nonfullerene Acceptor for Highly Sensitive Self-Powered Near-Infrared Organic Photodetectors. , 2022, 4, 882-890.		27
62	Electric Field Facilitating Hole Transfer in Non-Fullerene Organic Solar Cells with a Negative HOMO Offset. Journal of Physical Chemistry C, 2020, 124, 15132-15139.	1.5	26
63	Thiazolothiazoleâ€containing polythiophenes with low HOMO level and high hole mobility for polymer solar cells. Journal of Polymer Science Part A, 2011, 49, 4875-4885.	2.5	25
64	A Designed Ladderâ€Type Heteroarene Benzodi(Thienopyran) for Highâ€Performance Fullereneâ€Free Organic Solar Cells. Solar Rrl, 2017, 1, 1700165.	3.1	25
65	Insight into thin-film stacking modes of Ï€-expanded quinoidal molecules on charge transport property via side-chain engineering. Journal of Materials Chemistry C, 2017, 5, 1935-1943.	2.7	24
66	Star-shaped magnesium tetraethynylporphyrin bearing four peripheral electron-accepting diketopyrrolopyrrole functionalities for organic solar cells. Journal of Materials Chemistry A, 2019, 7, 4072-4083.	5.2	24
67	Small bandgap non-fullerene acceptor enables efficient PTB7-Th solar cell with near 0 eV HOMO offset. Journal of Energy Chemistry, 2021, 52, 60-66.	7.1	24
68	Low-Bandgap Small-Molecule Donor Material Containing Thieno[3,4-<i>b</i>]thiophene Moiety for High-Performance Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 3661-3668.	4.0	22
69	Isomeric indacenedibenzothiophenes: synthesis, photoelectric properties and ambipolar semiconductivity. Journal of Materials Chemistry C, 2016, 4, 5202-5206.	2.7	21
70	Evolved Phase Separation toward Balanced Charge Transport and High Efficiency in Polymer Solar Cells. ACS Applied Materials & Interfaces, 2011, 3, 3646-3653.	4.0	20
71	Synthesis and photovoltaic properties of copolymers based on bithiophene and bithiazole. Journal of Polymer Science Part A, 2011, 49, 2746-2754.	2.5	20
72	1,3-Bis(thieno[3,4-<i>b</i>]thiophen-6-yl)-4<i>H</i>-thieno[3,4-<i>c</i>]pyrrole-4,6(5<i>H</i>)-dione-Based Small-Molecule Donor for Efficient Solution-Processed Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 6213-6219.	4.0	20

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73	Amineâ€“Amine Electronic Coupling through a Dibenzo[<i>a</i>,<i>e</i>]pentalene Bridge. Organic Letters, 2016, 18, 256-259.	2.4	18
74	A large-bandgap small-molecule electron acceptor utilizing a new indacenodibenzothiophene core for organic solar cells. Materials Chemistry Frontiers, 2018, 2, 136-142.	3.2	18
75	Carbon-Bridged Phenylene-Vinylenes: On the Common Diradicaloid Origin of Their Photonic and Chemical Properties. Journal of Physical Chemistry C, 2017, 121, 23141-23148.	1.5	16
76	Design and synthesis of medium-bandgap small-molecule electron acceptors for efficient tandem solar cells. Journal of Materials Chemistry A, 2018, 6, 13588-13592.	5.2	16
77	A benzo[1,2-<i>d</i>:4,5-<i>d</i>â€²]bisthiazole-based wide-bandgap copolymer semiconductor for efficient fullerene-free organic solar cells with a small energy loss of 0.50 eV. Journal of Materials Chemistry A, 2019, 7, 5234-5238.	5.2	16
78	Fast construction of dianthraceno[a,e]pentalenes for OPV applications. Organic Chemistry Frontiers, 2017, 4, 711-716.	2.3	15
79	Radically Tunable n-Type Organic Semiconductor via Polymorph Control. Chemistry of Materials, 2021, 33, 2466-2477.	3.2	15
80	Design of Nearâ€Infrared Nonfullerene Acceptor with Ultralow Nonradiative Voltage Loss for Highâ€Performance Semitransparent Ternary Organic Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	15
81	High-Performance Inverted Polymer Solar Cells with Zirconium Acetylacetonate Buffer Layers. ACS Applied Materials & Interfaces, 2016, 8, 33856-33862.	4.0	14
82	Applying the heteroatom effect of chalcogen for high-performance small-molecule solar cells. Journal of Materials Chemistry A, 2017, 5, 3425-3433.	5.2	14
83	One-pot synthesis and property study on thieno[3,2-<i>b</i>]furan compounds. RSC Advances, 2019, 9, 7123-7127.	1.7	14
84	Thieno[3,4â€<i>c</i>]pyrroleâ€4,6â€dione Oligothiophenes Have Two Crossed Paths for Electron Delocalization. Chemistry - A European Journal, 2018, 24, 13523-13534.	1.7	13
85	PCE11-based polymer solar cells with high efficiency over 13% achieved by room-temperature processing. Journal of Materials Chemistry A, 2020, 8, 8661-8668.	5.2	13
86	A thieno[3,4-<i>b</i>]thiophene linker enables a low-bandgap fluorene-cored molecular acceptor for efficient non-fullerene solar cells. Materials Chemistry Frontiers, 2018, 2, 760-767.	3.2	12
87	Aâ€“Dâ€“Câ€“Dâ€“A type non-fullerene acceptors based on the benzotriazole (BTA) unfused core for organic solar cells. New Journal of Chemistry, 2021, 45, 12802-12807.	1.4	12
88	Conjugationâ€Curtailing of Benzodithionopyranâ€Cored Molecular Acceptor Enables Efficient Airâ€Processed Small Molecule Solar Cells. Small, 2019, 15, e1902656.	5.2	11
89	Seeing Is Believing: A Wavy N-Heteroarene with 20 Six-Membered Rings Linearly Annulated in a Row. CCS Chemistry, 2022, 4, 3491-3496.	4.6	10
90	Design of a Quinoidal Thieno[3,4â€•b]thiopheneâ€Diketopyrrolopyrroleâ€Based Small Molecule as nâ€Type Semiconductor. Chemistry - an Asian Journal, 2019, 14, 1717-1722.	1.7	9

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91	A thieno[3,4-b]thiophene-based small-molecule donor with a Ï€-extended dithienobenzodithiophene core for efficient solution-processed organic solar cells. Materials Chemistry Frontiers, 2017, 1, 2349-2355.	3.2	8
92	A 2-(trifluoromethyl)thieno[3,4-b]thiophene-based small-molecule electron acceptor for polymer solar cell application. Dyes and Pigments, 2018, 155, 179-185.	2.0	8
93	Stable Crossâ€Conjugated Tetrathiophene Diradical. Angewandte Chemie, 2019, 131, 11413.	1.6	8
94	Modulating Structure Ordering via Side-Chain Engineering of Thieno[3,4-<i>b</i>]thiophene-Based Electron Acceptors for Efficient Organic Solar Cells with Reduced Energy Losses. ACS Applied Materials & Interfaces, 2019, 11, 35193-35200.	4.0	7
95	Thermal-assisted Voc increase in an indenoindene-based non-fullerene solar system. Dyes and Pigments, 2019, 165, 18-24.	2.0	7
96	Boosted photovoltaic performance of indenothiophene-based molecular acceptor<i>via</i>fusing a thiophene. Journal of Materials Chemistry C, 2020, 8, 630-636.	2.7	5
97	Manipulating the Crystalline Morphology in the Nonfullerene Acceptor Mixture to Improve the Carrier Transport and Suppress the Energetic Disorder. Small Science, 2022, 2, 2100092.	5.8	5
98	Vacuum-deposited organic solar cells utilizing a low-bandgap non-fullerene acceptor. Journal of Materials Chemistry C, 2022, 10, 2569-2574.	2.7	5
99	Organic Photovoltaics Integrated with Thermoelectric Generator Achieving Low Critical Temperature Difference and Efficient Energy Conversion. Advanced Functional Materials, 2022, 32, .	7.8	5
100	Stericâ€Hindrance Modulation toward Highâ€Performance 1,3â€Bis(thieno[3,4â€<i>b</i>]thiophenâ€6â€yl)â€4<i>H</i>â€thieno[3,4â€<i>c</i>]pyrroleâ€4,6(5<i>H</i>)â€dioneâ€Based Polymer Solar Cells with Enhanced Openâ€Circuit Voltage. Advanced Electronic Materials, 2017, 3, 1700213.	2.6	4
101	Effect of Benzene Ringsâ€™ Incorporation on Photovoltaic Performance of Indacenodithiopheneâ€cored Molecular Acceptors. Chinese Journal of Chemistry, 2018, 36, 306-310.	2.6	4
102	Fineâ€Tuning Active Layer Morphology via Modification of Both Side Chains and Terminal Groups toward Highâ€Performance Organic Solar Cells. Energy Technology, 2022, 10, .	1.8	4
103	Oxygen heterocycle-fused indacenodithiophenebithiophene enables an efficient non-fullerene molecular acceptor. Journal of Materials Chemistry C, 2019, 7, 15344-15349.	2.7	3
104	High-Performance Ternary Organic Solar Cells Enabled by Combining Fullerene and Nonfullerene Electron Acceptors. Organic Materials, 2019, 01, 030-037.	1.0	3
105	Efficient NDT small molecule solar cells with high fill factor using pendant group engineering. Journal of Materials Chemistry C, 2020, 8, 7561-7566.	2.7	3
106	Synthesis and characterizations of poly(4â€alkylthiazole vinylene). Journal of Applied Polymer Science, 2012, 124, 847-854.	1.3	2
107	Regulation of excitation transitions by molecular design endowing full-color-tunable emissions with unexpected high quantum yields for bioimaging application. Science China Chemistry, 2018, 61, 418-426.	4.2	2
108	High performance achieved <i>via</i> core engineering and side-chain engineering in organic solar cells based on the penta-fused-ring acceptor. Journal of Materials Chemistry C, 2022, 10, 7724-7730.	2.7	1

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109	Organic Electronics: Pursuing Highâ€Mobility nâ€Type Organic Semiconductors by Combination of â€œMoleculeâ€Frameworkâ€• and â€œSideâ€Chainâ€• Engineering (Adv. Mater. 38/2016). Advanced Materials, 2016, 28, 8455-8455.	[illegible]	0