Mingliang Sun

List of Publications by Year
in descending order

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117 papers	2,576 citations	172207 29 h-index	243296 44 g-index
117 all docs	117 docs citations	117 times ranked	2671 citing authors

#	Article	IF	Citations
1	A Simple Phenyl Group Introduced at the Tail of Alkyl Side Chains of Small Molecular Acceptors: New Strategy to Balance the Crystallinity of Acceptors and Miscibility of Bulk Heterojunction Enabling Highly Efficient Organic Solar Cells. Advanced Materials, 2019, 31, e1807832.	11.1	187
2	Highâ€Performance Photovoltaic Polymers Employing Symmetryâ€Breaking Building Blocks. Advanced Materials, 2016, 28, 8490-8498.	11.1	98
3	A universal halogen-free solvent system for highly efficient polymer solar cells. Journal of Materials Chemistry A, 2015, 3, 12723-12729.	5.2	97
4	Challenges of prelithiation strategies for next generation high energy lithium-ion batteries. Energy Storage Materials, 2022, 47, 297-318.	9.5	74
5	Ultrathin Polyaniline-based Buffer Layer for Highly Efficient Polymer Solar Cells with Wide Applicability. Scientific Reports, 2014, 4, 6570.	1.6	69
6	Near-infrared response photovoltaic device based on novel narrow band gap small molecule and PCBM fabricated by solution processing. Solar Energy Materials and Solar Cells, 2007, 91, 1681-1687.	3.0	66
7	Enhanced efficiency of polymer photovoltaic cells via the incorporation of a water-soluble naphthalene diimide derivative as a cathode interlayer. Journal of Materials Chemistry C, 2015, 3, 9565-9571.	2.7	60
8	Simple planar perovskite solar cells with a dopant-free benzodithiophene conjugated polymer as hole transporting material. Journal of Materials Chemistry C, 2015, 3, 10070-10073.	2.7	60
9	A new isoindigo-based molecule with ideal energy levels for solution-processable organic solar cells. Dyes and Pigments, 2013, 98, 11-16.	2.0	59
10	A Fluoreneâ^'Oxadiazole Copolymer for White Light-Emitting Electrochemical Cells. Macromolecules, 2010, 43, 1714-1718.	2.2	58
11	Subtle side-chain tuning on terminal groups of small molecule electron acceptors for efficient fullerene-free polymer solar cells. Journal of Materials Chemistry A, 2017, 5, 15175-15182.	5.2	52
12	High efficiency solution-processed two-dimensional small molecule organic solar cells obtained via low-temperature thermal annealing. Journal of Materials Chemistry A, 2014, 2, 15904-15911.	5.2	48
13	Terpolymer Strategy toward High-Efficiency Polymer Solar Cells: Integrating Symmetric Benzodithiophene and Asymmetrical Thieno[2,3-f]benzofuran Segments. Chemistry of Materials, 2019, 31, 6163-6173.	3.2	47
14	Synergistic effect of side-chain and backbone engineering in thieno[2,3-f]benzofuran-based conjugated polymers for high performance non-fullerene organic solar cells. Journal of Materials Chemistry A, 2019, 7, 958-964.	5.2	46
15	Enhancement of photovoltaic performance by increasing conjugation of the acceptor unit in benzodithiophene and quinoxaline copolymers. Journal of Materials Chemistry C, 2014, 2, 8047-8053.	2.7	44
16	Progress and trends of photodynamic therapy: From traditional photosensitizers to AIE-based photosensitizers. Photodiagnosis and Photodynamic Therapy, 2021, 34, 102254.	1.3	43
17	Benzo[1,2-b:4,5-bâ€²]dithiophene and benzotriazole based small molecule for solution-processed organic solar cells. Organic Electronics, 2014, 15, 405-413.	1.4	42
18	Two-dimensional benzodithiophene and benzothiadiazole based solution-processed small molecular organic field-effect transistors & solar cells. Journal of Materials Chemistry C, 2014, 2, 3921.	2.7	41

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19	Subtle Side Chain Triggers Unexpected Two-Channel Charge Transport Property Enabling 80% Fill Factors and Efficient Thick-Film Organic Photovoltaics. Innovation(China), 2021, 2, 100090.	5.2	40
20	Hyperconjugated side chained benzodithiophene and 4,7-di-2-thienyl-2,1,3-benzothiadiazole based polymer for solar cells. Polymer Chemistry, 2014, 5, 2076.	1.9	39
21	Solution-processed, indacenodithiophene-based, small-molecule organic field-effect transistors and solar cells. Journal of Materials Chemistry C, 2014, 2, 7523.	2.7	39
22	Intra- and Intermolecular Steric Hindrance Effects Induced Higher Open-Circuit Voltage and Power Conversion Efficiency. ACS Macro Letters, 2015, 4, 361-366.	2.3	39
23	Rational design of asymmetric benzodithiophene based photovoltaic polymers for efficient solar cells. Journal of Materials Chemistry A, 2018, 6, 948-956.	5.2	38
24	Crystalline Medium-Bandgap Light-Harvesting Donor Material Based on Î²-Naphthalene Asymmetric-Modified Benzodithiophene Moiety toward Efficient Polymer Solar Cells. Chemistry of Materials, 2017, 29, 8249-8257.	3.2	35
25	Efficient fullerene-based and fullerene-free polymer solar cells using two wide band gap thiophene-thiazolothiazole-based photovoltaic materials. Journal of Materials Chemistry A, 2016, 4, 9511-9518.	5.2	34
26	Efficient fullerene-free solar cells with wide optical band gap polymers based on fluorinated benzotriazole and asymmetric benzodithiophene. Journal of Materials Chemistry A, 2017, 5, 21650-21657.	5.2	33
27	The regulation of Ï€-bridge of indacenodithiophene-based donor-Ï€-acceptor conjugated polymers toward efficient polymer solar cells. Dyes and Pigments, 2019, 162, 43-51.	2.0	33
28	Extremely Colorâ€Stable Blue Lightâ€Emitting Polymers Based on Alternating 2,7â€Fluoreneâ€coâ€3,9â€carbazole Copolymer. Macromolecular Chemistry and Physics, 2007, 208, 1503-1509.	1.1	31
29	An Easily Accessible Cathode Buffer Layer for Achieving Multiple High Performance Polymer Photovoltaic Cells. Journal of Physical Chemistry C, 2015, 119, 27322-27329.	1.5	30
30	Fluorene Side-Chained Benzodithiophene Polymers for Low Energy Loss Solar Cells. Macromolecules, 2017, 50, 6880-6887.	2.2	28
31	Cyclic alkyl chains promote the polymer self-assembly and packing orders for solar cells. Nano Energy, 2017, 36, 110-117.	8.2	27
32	Metal free benzothiadiazole-diketopyrrolopyrrole-based conjugated polymer/g-C3N4 photocatalyst for enhanced sterilization and degradation in visible to near-infrared region. Journal of Colloid and Interface Science, 2022, 608, 103-113.	5.0	27
33	Fuse the Ï€-Bridge to Acceptor Moiety of Donor-Ï€-Acceptor Conjugated Polymer: Enabling an All-Round Enhancement in Photovoltaic Parameters of Nonfullerene Organic Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 31087-31095.	4.0	26
34	Low HOMO isoindigo based small molecule for high open-circuit voltage 1.0V solution processed organic solar cells. Synthetic Metals, 2013, 178, 38-43.	2.1	25
35	4,7-Di-2-thienyl-2,1,3-benzothiadiazole with hexylthiophene side chains and a benzodithiophene based copolymer for efficient organic solar cells. Polymer Chemistry, 2015, 6, 4415-4423.	1.9	25
36	Investigation of Fluorination on Donor Moiety of Donorâ€“Acceptor 4,7-Dithienylbenzothiadiazole-Based Conjugated Polymers toward Enhanced Photovoltaic Efficiency. ACS Applied Materials & Interfaces, 2016, 8, 26152-26161.	4.0	25

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37	A novel naphthyl side-chained benzodithiophene polymer for efficient photovoltaic cells with a high fill factor of 75%. Journal of Materials Chemistry A, 2017, 5, 10430-10436.	5.2	25
38	Narrow band-gap oligomer for solution-processed heterojunction organic solar cells. Synthetic Metals, 2008, 158, 125-129.	2.1	23
39	Improved open-circuit voltage of benzodithiophene based polymer solar cells using bulky terthiophene side group. Solar Energy Materials and Solar Cells, 2015, 138, 26-34.	3.0	23
40	Steric minimization towards high planarity and molecular weight for aggregation and photovoltaic studies. Journal of Materials Chemistry A, 2015, 3, 23587-23596.	5.2	23
41	2D Benzodithiophene based conjugated polymer/g-C3N4 heterostructures with enhanced photocatalytic activity: Synergistic effect of antibacterial carbazole side chain and main chain copolymerization. Applied Catalysis B: Environmental, 2022, 312, 121401.	10.8	22
42	Efficient white-light-emitting diodes based on polyfluorene doped with fluorescent chromophores. Applied Physics Letters, 2007, 91, 213502.	1.5	21
43	Selenophene and fluorene based narrow band gap copolymers with Eg=1.41eV for near infrared polymer light emitting diodes. Synthetic Metals, 2012, 162, 1406-1410.	2.1	21
44	New small molecules with thiazolothiazole and benzothiadiazole acceptors for solution-processed organic solar cells. New Journal of Chemistry, 2014, 38, 1559.	1.4	21
45	A new highly conjugated crossed benzodithiophene and its donorâ€“acceptor copolymers for high open circuit voltages polymer solar cells. Polymer Chemistry, 2015, 6, 3398-3406.	1.9	21
46	A fluorine-induced high-performance narrow bandgap polymer based on thiadiazolo[3,4-c]pyridine for photovoltaic applications. Journal of Materials Chemistry A, 2016, 4, 11729-11737.	5.2	21
47	Halogenation on terminal groups of ITIC based electron acceptors as an effective strategy for efficient polymer solar cells. Solar Energy, 2020, 195, 429-435.	2.9	21
48	Near-infrared response thienoisoindigo-based small molecule for solution-processed bulk-heterojunction solar cells. Synthetic Metals, 2014, 187, 24-29.	2.1	20
49	Two-Dimensional BDT-Based Wide Band Gap Polymer Donor for Efficient Non-Fullerene Organic Solar Cells. Journal of Physical Chemistry C, 2017, 121, 19634-19641.	1.5	19
50	Low-bandgap conjugated polymers based on benzodipyrrolidone with reliable unipolar electron mobility exceeding 1 cm2 Vâ^'1 sâ^'1. Science China Chemistry, 2021, 64, 1219-1227.	4.2	19
51	Benzothiadiazole â€“ an excellent acceptor for indacenodithiophene based polymer solar cells. RSC Advances, 2014, 4, 37934-37940.	1.7	18
52	Efficiency enhancement in an indacenodithiophene and thieno[3,4-c]pyrrole-4,6-dione backbone photovoltaic polymer with an extended thieno[3,2-b]thiophene Ï€-bridge. Journal of Materials Chemistry C, 2016, 4, 6280-6286.	2.7	18
53	Recent progress in emerging 2D layered materials for organic solar cells. Solar Energy, 2021, 218, 621-638.	2.9	17
54	Development of New Twoâ€Dimensional Small Molecules Based on Benzodifuran for Efficient Organic Solar Cells. Chemistry - an Asian Journal, 2014, 9, 2621-2627.	1.7	16

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55	A diketopyrrolopyrrole-based low bandgap polymer with enhanced photovoltaic performances through backbone twisting. Journal of Materials Chemistry A, 2016, 4, 18174-18180.	5.2	16
56	Carbazole side-chained benzodithiophene based two-dimensional D-A conjugated photovoltaic polymers. Dyes and Pigments, 2019, 170, 107548.	2.0	16
57	Fabricating binary cathode interface layer by effective molecular electrostatic potential and interfacial dipole to optimize electron transport and improve organic solar cell. Chemical Engineering Journal, 2022, 446, 137209.	6.6	16
58	Thiophene copolymer for 1 V high open-circuit voltage semitransparent photovoltaic devices. Journal of Materials Chemistry C, 2019, 7, 10868-10875.	2.7	15
59	Aminonaphthalimideâ€Based Molecular Cathode Interlayers for Asâ€Cast Organic Solar Cells. ChemSusChem, 2021, 14, 4783-4792.	3.6	14
60	Benzothiadiazole-sandwiched quarter thiophene-based oligomer for organic solar cells. Synthetic Metals, 2009, 159, 556-560.	2.1	13
61	Ester-Substituted Pentathiophene Copolymer-Based Sky-Blue Semitransparent Solar Cells for Building Windows. ACS Applied Energy Materials, 2020, 3, 915-922.	2.5	13
62	Synthesis and photovoltaic properties of conjugated D-A copolymers based on thienyl substituted pyrene and diketopyrrolopyrrole for polymer solar cells. Journal of Polymer Science Part A, 2014, 52, 3198-3204.	2.5	12
63	Acceptor-rich bulk heterojunction polymer solar cells with balanced charge mobilities. Organic Electronics, 2017, 51, 16-24.	1.4	12
64	Addition of 2D Ti₃C₂T_x to Enhance Photocurrent in Diodes for Highâ€Efficiency Organic Solar Cells. Solar Rrl, 2021, 5, 2100127.	3.1	12
65	A â€œgreenâ€•all-organic heterostructure functionalized by self-assembled fullerene small molecule with enhanced photocatalytic activity. Applied Surface Science, 2022, 585, 152738.	3.1	12
66	Extending two-dimensional Ï€-conjugation length by introducing the alkoxybiphenyl unit for efficient benzodithiophene based photovoltaic polymer. Journal of Materials Chemistry C, 2016, 4, 8716-8723.	2.7	11
67	High lithium anodic performance of flower-like carbon nanoflakes derived from MOF based on double ligands. Journal of Alloys and Compounds, 2019, 806, 520-528.	2.8	11
68	Small Organic Molecule Based Photoelectrodes for Efficient Photoelectrochemical Cathodic Protection. ACS Applied Electronic Materials, 2020, 2, 4012-4022.	2.0	11
69	Enhancing organic photovoltaic performance with 3D-transport dual nonfullerene acceptors. Journal of Materials Chemistry A, 2022, 10, 1948-1955.	5.2	11
70	(E)-1,2-Di(thiophen-2-yl)ethene based high mobility polymer for efficient photovoltaic devices without any post treatment. RSC Advances, 2016, 6, 68049-68057.	1.7	10
71	Asymmetric 2D benzodithiophene and quinoxaline copolymer for photovoltaic applications. Journal of Materials Chemistry C, 2017, 5, 6798-6804.	2.7	10
72	Modifying the morphology via employing rigid phenyl side chains achieves efficient nonfullerene polymer solar cells. Journal of Polymer Science Part A, 2018, 56, 2762-2770.	2.5	10

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73	Incorporation of a classical visible non-fullerene acceptor into host binary blend enable ternary high-performance semitransparent polymer solar cells. Chemical Engineering Journal, 2022, 427, 132048.	6.6	10
74	Nearâ€infrared electroluminescence from fluoreneâ€based copolymers. Journal of Polymer Science Part A, 2008, 46, 3007-3013.	2.5	9
75	Preparation and electrochemical properties of polyâ€2,5â€dihydroxyaniline/activated carbon composite electrode in organic electrolyte. Journal of Applied Polymer Science, 2013, 127, 4672-4680.	1.3	9
76	Novel pendent thiophene sideâ€chained benzodithiophene for polymer solar cells. Journal of Polymer Science Part A, 2015, 53, 1558-1566.	2.5	9
77	Benzodithiopheneâ€Based Polymers Containing Alkylthiophenyl Side Chains with Lowered HOMO Energy Levels for Organic Solar Cells. Asian Journal of Organic Chemistry, 2016, 5, 1273-1279.	1.3	9
78	Multi-armed imide-based molecules promote interfacial charge transfer for efficient organic solar cells. Chemical Engineering Journal, 2022, 441, 135894.	6.6	9
79	Comparative study of the conformational effect of dithienothiophene- and terthiophene-based photovoltaic polymers. Journal of Materials Chemistry C, 2016, 4, 11088-11095.	2.7	8
80	Fabrication and Characterization of FA_xCs_{1â^'x}PbI₃ Polycrystal Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100166.	3.1	8
81	Manipulating the intermolecular stacking of polymeric donors for efficient organic solar cells. Journal of Materials Chemistry C, 2021, 9, 14209-14216.	2.7	8
82	Fluorene-Benzothiadiazole Copolymer for Single Component Green Light-Emitting Electrochemical Cells. Journal of Display Technology, 2013, 9, 476-482.	1.3	7
83	Novel wide band gap polymers based on dithienobenzoxadiazole for polymer solar cells with high open circuit voltages over 1 V. RSC Advances, 2016, 6, 51419-51425.	1.7	7
84	Rhodanine side-chained thiophene and indacenodithiophene copolymer for solar cell applications. Materials Today Energy, 2017, 5, 287-292.	2.5	7
85	Design of simple-structure wide-bandgap conjugated polymers based on BDT for efficient non-fullerene solar cells. Dyes and Pigments, 2021, 194, 109604.	2.0	7
86	Weakening the Aggregations of Polymer Chains toward Efficient Nonâ€Fullerene Polymer Solar Cells. Macromolecular Rapid Communications, 2018, 39, e1800446.	2.0	6
87	Low surface energy selfâ€polishing polymer grafted <scp>MWNTs</scp> for antibacterial coating and controlledâ€release property of <scp>Cu₂O</scp>. Journal of Applied Polymer Science, 2021, 138, 50267.	1.3	6
88	Random terpolymers for high-performance semitransparent polymer solar cells. Dyes and Pigments, 2021, 195, 109680.	2.0	6
89	Simple benzothiadiazole-based small molecules as additives for efficient organic solar cells. Organic Electronics, 2022, 101, 106424.	1.4	6
90	Pyrroleâ€based narrowâ€bandâ€gap copolymers for red lightâ€emitting diodes and bulk heterojunction photovoltaic cells. Journal of Applied Polymer Science, 2010, 118, 1462-1468.	1.3	5

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91	Synthesis and Optical-electronic Properties of a Novel Star-shaped Benzodithiophene Molecule. Chemistry Letters, 2015, 44, 291-293.	0.7	5
92	Î²-Phase transformation and energy transfer induced photoluminescence modulation of fluorene based copolymer mono-dispersive nanoparticles. RSC Advances, 2013, 3, 23704.	1.7	4
93	Novel Panchromatic Absorption Material, Isoindigo-based Aâ€“Ï€â€“Aâ€“Ï€â€“A Small Molecule. Chemistry Letters, 2014, 43, 1870-1872.	0.7	4
94	Hydrophilic poly-ether side-chained benzodithiophene-based homopolymer for solar cells and field-effect transistors. Journal of Materials Science, 2015, 50, 2263-2271.	1.7	4
95	Thiophene Ï€ bridge effect on bulky sideâ€chained benzodithiopheneâ€based photovoltaic polymers. Journal of Polymer Science Part A, 2016, 54, 1615-1622.	2.5	4
96	Thieno[2,3-f]benzofuran based donor-acceptor polymer for fullerene-free solar cells. European Polymer Journal, 2019, 120, 109205.	2.6	4
97	A medium-band-gap polymer based alkoxyl-substituted benzoxadiazole moiety for efficient polymer solar cells. Polymer, 2019, 168, 1-7.	1.8	4
98	Alkoxyphenyl or alkylphenyl side-chained Thieno[2,3-f]benzofuran polymer for efficient non-fullerene solar cells. Materials Today Energy, 2020, 16, 100381.	2.5	4
99	Ternary copolymerization strategy reducing the cost of benzodithiopheneâ€“benzodithiophenedione polymer, retaining high photovoltaic performance. Polymer International, 2021, 70, 443-449.	1.6	4
100	Naphtho[2,3-c]thiophene-4,9-dione based polymers for efficient fullerene solar cells. Polymer, 2021, 212, 123184.	1.8	4
101	Highâ€Performance Ternary Semitransparent Polymer Solar Cells with Different Bandgap Third Component as Nonâ€Fullerene Guest Acceptor. Solar Rrl, 2022, 6, .	3.1	4
102	A triple bond side-chained 2D-conjugated benzodithiophene based photovoltaic polymer. RSC Advances, 2014, 4, 58426-58431.	1.7	3
103	Electrochemistry and Near-infrared Electrochromism of Electropolymerized Polydithiophenes with Î², Î² â€² -Positions Bridged by Carbonyl or Dicarbonyl Substitute. Electrochimica Acta, 2014, 142, 108-117.	2.6	3
104	Single-Component Oligomer Nanoparticle-Based Size-Dependent Dual-Emission Modulation. Journal of Physical Chemistry C, 2018, 122, 4199-4205.	1.5	3
105	Fusing Benzo[c][1,2,5]oxadiazole Unit with Thiophene for Constructing Wideâ€bandgap Highâ€performance IDTâ€based Polymer Solar Cell Donor Material. Macromolecular Rapid Communications, 2018, 39, e1700782.	2.0	3
106	1 V high open-circuit voltage fluorinated alkoxybiphenyl side-chained benzodithiophene based photovoltaic polymers. Synthetic Metals, 2019, 257, 116182.	2.1	3
107	Asymmetric ITIC acceptor for asymmetric benzodithiophene polymer solar cells. Dyes and Pigments, 2020, 183, 108727.	2.0	3
108	Ester-substituted copolymer-based ternary semitransparent polymer solar cells with enhanced FF and PCE. Polymer, 2021, 229, 123973.	1.8	3

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109	Effects of brominated terminal groups on the performance of fused-ring electron acceptors in organic solar cells. Dyes and Pigments, 2021, 194, 109652.	2.0	3
110	V enhancement of thienobenzofuran and benzotriazole backboned photovoltaic polymer by side chain sulfuration or fluoridation. Dyes and Pigments, 2021, 184, 108775.	2.0	3
111	Capacitive properties of low potential electro-polymerized polyfluorene and activated carbon composite electrode. Science China Chemistry, 2012, 55, 352-358.	4.2	2
112	Synthesis and solar cells applications of EOâ€PFâ€DTBT polymer. Journal of Applied Polymer Science, 2014, 131, .	1.3	2
113	Thiophene Ï€â€bridge effect on photovoltaic performances of dithienosilole and bithiazole backboned polymers. Journal of Applied Polymer Science, 2015, 132, .	1.3	2
114	Bulky electron donating side chain enhances the open-circuit voltage of benzodithiophene photovoltaic polymers. Materials Today Energy, 2020, 18, 100568.	2.5	2
115	Corrosion behavior of anodic oxidized TiO2 film in seawater. Journal of Ocean University of China, 2010, 9, 376-380.	0.6	1
116	Near-infrared nonfullerene acceptors with halogenated terminated fused tris(thienothiophene) for efficient polymer solar cells. Solar Energy, 2022, 231, 433-439.	2.9	0
117	Effects of additional Ï€-bridges on a terpolymer based on the second acceptor unit of DTBT and the performance of organic solar cells. Polymer, 2022, 254, 125089.	1.8	0