Minmin Shi

List of Publications by Year
in descending order

103 papers	11,621 citations	61945 43 h-index	36008 97 g-index
104 all docs	104 docs citations	104 times ranked	13662 citing authors

#	Article	IF	Citations
1	Graphene-Like Two-Dimensional Materials. Chemical Reviews, 2013, 113, 3766-3798.	23.0	3,761
2	Over 17% efficiency ternary organic solar cells enabled by two non-fullerene acceptors working in an alloy-like model. Energy and Environmental Science, 2020, 13, 635-645.	15.6	636
3	New Phase for Organic Solar Cell Research: Emergence of Y-Series Electron Acceptors and Their Perspectives. ACS Energy Letters, 2020, 5, 1554-1567.	8.8	491
4	Dopant-Free Hole-Transporting Material with a <i>C</i>_{3<i>h</i>} Symmetrical Truxene Core for Highly Efficient Perovskite Solar Cells. Journal of the American Chemical Society, 2016, 138, 2528-2531.	6.6	446
5	Layerâ€byâ€Layer Processed Ternary Organic Photovoltaics with Efficiency over 18%. Advanced Materials, 2021, 33, e2007231.	11.1	438
6	An Unfusedâ€Coreâ€Based Nonfullerene Acceptor Enables Highâ€Efficiency Organic Solar Cells with Excellent Morphological Stability at High Temperatures. Advanced Materials, 2018, 30, 1705208.	11.1	380
7	Highly Efficient Fullerene-Free Organic Solar Cells Operate at Near Zero Highest Occupied Molecular Orbital Offsets. Journal of the American Chemical Society, 2019, 141, 3073-3082.	6.6	362
8	Simple non-fused electron acceptors for efficient and stable organic solar cells. Nature Communications, 2019, 10, 2152.	5.8	348
9	A spirobifluorene and diketopyrrolopyrrole moieties based non-fullerene acceptor for efficient and thermally stable polymer solar cells with high open-circuit voltage. Energy and Environmental Science, 2016, 9, 604-610.	15.6	347
10	Asymmetric Electron Acceptors for Highâ€Efficiency and Lowâ€Energyâ€Loss Organic Photovoltaics. Advanced Materials, 2020, 32, e2001160.	11.1	246
11	Efficient Organic Solar Cells with Nonâ€Fullerene Acceptors. Small, 2017, 13, 1701120.	5.2	216
12	Desired open-circuit voltage increase enables efficiencies approaching 19% in symmetric-asymmetric molecule ternary organic photovoltaics. Joule, 2022, 6, 662-675.	11.7	212
13	Molecular Engineered Holeâ€Extraction Materials to Enable Dopantâ€Free, Efficient pâ€iâ€n Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700012.	10.2	195
14	Blending of HAuCl4 and histidine in aqueous solution: a simple approach to the Au10 cluster. Nanoscale, 2011, 3, 2596.	2.8	179
15	Atomically Monodispersed and Fluorescent Subâ€Nanometer Gold Clusters Created by Biomoleculeâ€Assisted Etching of Nanometerâ€Sized Gold Particles and Rods. Chemistry - A European Journal, 2009, 15, 4944-4951.	1.7	147
16	Spiro Linkage as an Alternative Strategy for Promising Nonfullerene Acceptors in Organic Solar Cells. Advanced Functional Materials, 2015, 25, 5954-5966.	7.8	140
17	Revealing the effects of molecular packing on the performances of polymer solar cells based on Aâ€“Dâ€“Câ€“Dâ€“A type non-fullerene acceptors. Journal of Materials Chemistry A, 2018, 6, 12132-12141.	5.2	119
18	Molecular electron acceptors for efficient fullerene-free organic solar cells. Physical Chemistry Chemical Physics, 2017, 19, 3440-3458.	1.3	112

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19	A simple perylene diimide derivative with a highly twisted geometry as an electron acceptor for efficient organic solar cells. Journal of Materials Chemistry A, 2016, 4, 10659-10665.	5.2	110
20	Nonfullerene Tandem Organic Solar Cells with High Openâ€Circuit Voltage of 1.97 V. Advanced Materials, 2016, 28, 9729-9734.	11.1	104
21	Unveiling structure-performance relationships from multi-scales in non-fullerene organic photovoltaics. Nature Communications, 2021, 12, 4627.	5.8	98
22	A non-fullerene acceptor with a fully fused backbone for efficient polymer solar cells with a high open-circuit voltage. Journal of Materials Chemistry A, 2016, 4, 14983-14987.	5.2	97
23	A Nearâ€Infrared Photoactive Morphology Modifier Leads to Significant Current Improvement and Energy Loss Mitigation for Ternary Organic Solar Cells. Advanced Science, 2018, 5, 1800755.	5.6	93
24	Near-Infrared Electron Acceptors with Unfused Architecture for Efficient Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 16700-16706.	4.0	93
25	One-Step Fabrication of CdS Nanorod Arrays via Solution Chemistry. Journal of Physical Chemistry C, 2008, 112, 13457-13462.	1.5	90
26	Tuning terminal aromatics of electron acceptors to achieve high-efficiency organic solar cells. Journal of Materials Chemistry A, 2019, 7, 27632-27639.	5.2	86
27	Energy-level modulation of non-fullerene acceptors to achieve high-efficiency polymer solar cells at a diminished energy offset. Journal of Materials Chemistry A, 2017, 5, 9649-9654.	5.2	83
28	A solution-processable bipolar diketopyrrolopyrrole molecule used as both electron donor and acceptor for efficient organic solar cells. Journal of Materials Chemistry A, 2015, 3, 1902-1905.	5.2	79
29	A non-fullerene electron acceptor modified by thiophene-2-carbonitrile for solution-processed organic solar cells. Journal of Materials Chemistry A, 2016, 4, 3777-3783.	5.2	77
30	Nearâ€Infrared Nonfullerene Acceptors Based on Benzobis(thiazole) Unit for Efficient Organic Solar Cells with Low Energy Loss. Small Methods, 2019, 3, 1900531.	4.6	76
31	Design of Non-fused Ring Acceptors toward High-Performance, Stable, and Low-Cost Organic Photovoltaics. Accounts of Materials Research, 2022, 3, 644-657.	5.9	66
32	An ester-functionalized diketopyrrolopyrrole molecule with appropriate energy levels for application in solution-processed organic solar cells. Journal of Materials Chemistry A, 2013, 1, 105-111.	5.2	63
33	Electron acceptors with varied linkages between perylene diimide and benzotrithiophene for efficient fullerene-free solar cells. Journal of Materials Chemistry A, 2017, 5, 9396-9401.	5.2	60
34	Enhanced Charge Transfer between Fullerene and Non-Fullerene Acceptors Enables Highly Efficient Ternary Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 42444-42452.	4.0	58
35	A New End Group on Nonfullerene Acceptors Endows Efficient Organic Solar Cells with Low Energy Losses. Advanced Functional Materials, 2022, 32, 2108614.	7.8	56
36	Enhanced intramolecular charge transfer of unfused electron acceptors for efficient organic solar cells. Materials Chemistry Frontiers, 2019, 3, 513-519.	3.2	53

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37	Template-free synthesis of vertically aligned CdS nanorods and its application in hybrid solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 338-344.	3.0	52
38	Effect of CsF interlayer on the performance of polymer bulk heterojunction solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 650-653.	3.0	51
39	Fe₃O₄@Au/polyaniline multifunctional nanocomposites: their preparation and optical, electrical and magnetic properties. Nanotechnology, 2008, 19, 265702.	1.3	49
40	Si/ZnO coreâ€“shell nanowire arrays for photoelectrochemical water splitting. International Journal of Hydrogen Energy, 2011, 36, 15153-15159.	3.8	49
41	Shape-controlled syntheses of PbS submicro-/nano-crystals via hydrothermal method. Journal of Crystal Growth, 2009, 311, 1533-1538.	0.7	47
42	Enhancement of intra- and inter-molecular Ï€-conjugated effects for a non-fullerene acceptor to achieve high-efficiency organic solar cells with an extended photoresponse range and optimized morphology. Materials Chemistry Frontiers, 2018, 2, 2006-2012.	3.2	46
43	Improved photon-to-electron response of ternary blend organic solar cells with a low band gap polymer sensitizer and interfacial modification. Journal of Materials Chemistry A, 2016, 4, 1702-1707.	5.2	45
44	High efficiency hybrid solar cells using post-deposition ligand exchange by monothiols. Physical Chemistry Chemical Physics, 2012, 14, 12094.	1.3	42
45	A diketopyrrolopyrrole molecule end-capped with a furan-2-carboxylate moiety: the planarity of molecular geometry and photovoltaic properties. Journal of Materials Chemistry A, 2014, 2, 6589.	5.2	42
46	Highâ€Efficiency ITOâ€Free Organic Photovoltaics with Superior Flexibility and Upscalability. Advanced Materials, 2022, 34, e2200044.	11.1	41
47	Incorporation of ester groups into low band-gap diketopyrrolopyrrole containing polymers for solar cell applications. Journal of Materials Chemistry, 2012, 22, 15710.	6.7	40
48	Conformation Locking of Simple Nonfused Electron Acceptors Via Multiple Intramolecular Noncovalent Bonds to Improve the Performances of Organic Solar Cells. ACS Applied Energy Materials, 2021, 4, 819-827.	2.5	40
49	Toward Highly Thermal Stable Perovskite Solar Cells by Rational Design of Interfacial Layer. IScience, 2019, 22, 534-543.	1.9	38
50	A simple synthesis of Fe3O4 nanoclusters and their electromagnetic nanocomposites with polyaniline. Materials Chemistry and Physics, 2010, 122, 588-594.	2.0	35
51	Synthesis, characterization, and photovoltaic property of a low band gap polymer alternating dithienopyrrole and thienopyrroledione units. Polymer, 2011, 52, 2559-2564.	1.8	34
52	Synthesis and Photovoltaic Properties of Ester Group Functionalized Polythiophene Derivatives. Macromolecular Rapid Communications, 2011, 32, 506-511.	2.0	33
53	Synergistic Effects of Chlorination and Branched Alkyl Side Chain on the Photovoltaic Properties of Simple Nonâ€Fullerene Acceptors with Quinoxaline as the Core. ChemSusChem, 2021, 14, 3599-3606.	3.6	33
54	Diketo-pyrrolo-pyrrole-Based Medium Band Gap Copolymers for Efficient Plastic Solar Cells: Morphology, Transport, and Composition-Dependent Photovoltaic Behavior. Journal of Physical Chemistry C, 2011, 115, 11282-11292.	1.5	32

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55	Synthesis and photovoltaic properties from inverted geometry cells and roll-to-roll coated large area cells from dithienopyrrole-based donorâ€“acceptor polymers. Journal of Materials Chemistry A, 2013, 1, 1785-1793.	5.2	32
56	Synthesis, electrochemical, and spectroscopic properties of soluble perylene monoimide diesters. Tetrahedron, 2008, 64, 5404-5409.	1.0	31
57	A direct arylation-derived DPP-based small molecule for solution-processed organic solar cells. Nanotechnology, 2014, 25, 014006.	1.3	30
58	Improving Polymer/Nanocrystal Hybrid Solar Cell Performance via Tuning Ligand Orientation at CdSe Quantum Dot Surface. ACS Applied Materials & Interfaces, 2014, 6, 19154-19160.	4.0	30
59	Combining Fusedâ€Ring and Unfusedâ€Core Electron Acceptors Enables Efficient Ternary Organic Solar Cells with Enhanced Fill Factor and Broad Compositional Tolerance. Solar Rrl, 2019, 3, 1900317.	3.1	28
60	Influences of Quinoid Structures on Stability and Photovoltaic Performance of Nonfullerene Acceptors. Solar Rrl, 2020, 4, 2000286.	3.1	27
61	A non-fullerene acceptor enables efficient P3HT-based organic solar cells with small voltage loss and thickness insensitivity. Chinese Chemical Letters, 2019, 30, 1277-1281.	4.8	26
62	High gas-sensitivity and selectivity of fluorinated zinc phthalocyanine film to some non-oxidizing gases at room temperature. Thin Solid Films, 2005, 489, 257-261.	0.8	25
63	Roll-coating fabrication of ITO-free flexible solar cells based on a non-fullerene small molecule acceptor. RSC Advances, 2015, 5, 36001-36006.	1.7	25
64	Non-fullerene acceptors with nitrogen-containing six-membered heterocycle cores for the applications in organic solar cells. Solar Energy Materials and Solar Cells, 2021, 225, 111046.	3.0	23
65	Highly efficient hybrid solar cells with tunable dipole at the donorâ€“acceptor interface. Nanoscale, 2014, 6, 10545-10550.	2.8	20
66	Efficient and 1,8-diiodooctane-free ternary organic solar cells fabricated via nanoscale morphology tuning using small-molecule dye additive. Nano Research, 2017, 10, 3765-3774.	5.8	20
67	Fe3O4nanobelts: one-pot and template-free synthesis, magnetic property, and application for lithium storage. Nanotechnology, 2012, 23, 395601.	1.3	18
68	Design of charge transporting grids for efficient ITO-free flexible up-scaled organic photovoltaics. Materials Chemistry Frontiers, 2017, 1, 304-309.	3.2	18
69	Water-soluble and highly fluorescent hybrids of multi-walled carbon nanotubes with uniformly arranged gold nanoparticles. Nanotechnology, 2007, 18, 485603.	1.3	17
70	Preparation and photo-induced charge transfer of the composites based on 3D structural CdS nanocrystals and MEH-PPV. Solar Energy, 2010, 84, 771-776.	2.9	17
71	Synthesis and photovoltaic properties of n-type conjugated polymers alternating 2,7-carbazole and arylene diimides. Solar Energy Materials and Solar Cells, 2012, 103, 157-163.	3.0	17
72	Optical and electrical effects of plasmonic nanoparticles in high-efficiency hybrid solar cells. Physical Chemistry Chemical Physics, 2013, 15, 17105-17111.	1.3	17

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73	A Benzobis(thiazole)-Based Wide Bandgap Polymer Donor Enables over 15% Efficiency Organic Photovoltaics with a Flat Energetic Offset. Macromolecules, 2021, 54, 7862-7869.	2.2	17
74	Solvent-dependent fluorescence property of multi-walled carbon nanotubes noncovalently functionalized by pyrene-derivatized polymer. Nanotechnology, 2009, 20, 135705.	1.3	16
75	Effect of end-groups on the photovoltaic property of diphenyl substituted diketopyrrolopyrrole derivatives. Synthetic Metals, 2014, 188, 66-71.	2.1	16
76	A nuanced approach for assessing OPV materials for large scale applications. Sustainable Energy and Fuels, 2020, 4, 940-949.	2.5	16
77	Phase controlled all-polymer bulk-heterojunction photovoltaic cells with high open-circuit voltage. Solar Energy Materials and Solar Cells, 2010, 94, 2244-2250.	3.0	15
78	Design and synthesis of carbonyl group modified conjugated polymers for photovoltaic application. Polymer Bulletin, 2012, 68, 1867-1877.	1.7	14
79	A non-fullerene electron acceptor with a spirobifluorene core and four diketopyrrolopyrrole arms end capped by 4-fluorobenzene. Dyes and Pigments, 2017, 143, 217-222.	2.0	14
80	Synthesis of monodisperse and single-crystal Fe3O4 hollow spheres by a solvothermal approach. Materials Chemistry and Physics, 2012, 132, 987-992.	2.0	13
81	New â€“(Dâ€“A1â€“Dâ€“A2)nâ€“ type conjugated polymers for photovoltaic applications: consensus between low band-gap and low HOMO energy level. Tetrahedron, 2013, 69, 3419-3424.	1.0	13
82	Roll coated large area ITO- and vacuum-free all organic solar cells from diketopyrrolopyrrole based non-fullerene acceptors with molecular geometry effects. RSC Advances, 2016, 6, 41542-41550.	1.7	13
83	Influence of Bridging Groups on the Photovoltaic Properties of Wide-Bandgap Poly(BDTT-<i>alt</i>-BDD)s. ACS Applied Materials & Interfaces, 2019, 11, 1394-1401.	4.0	13
84	The effect of molecular geometry on the photovoltaic property of diketopyrrolopyrrole based non-fullerene acceptors. Synthetic Metals, 2015, 203, 249-254.	2.1	9
85	Erbium bisphthalocyanine nanowires by electrophoretic deposition: Morphology control and optical properties. Thin Solid Films, 2009, 517, 2099-2105.	0.8	8
86	Improving the device performance of organic solar cells with immiscible solid additives. Journal of Materials Chemistry C, 2022, 10, 2749-2756.	2.7	8
87	Carrier Transport in Zinc Phthalocyanine Doped with a Fluorinated Perylene Derivative: Bulk Conductivity versus Interfacial Injection. Journal of Physical Chemistry C, 2009, 113, 17160-17169.	1.5	7
88	Effect of substituents on the aggregate structure and photovoltaic property of violanthrone derivatives. Dyes and Pigments, 2012, 95, 377-383.	2.0	7
89	A novel electrochemically and thermally stable polythiophene for photovoltaic application. Journal of Applied Polymer Science, 2013, 127, 161-168.	1.3	6
90	Recent development of organic electron transport materials*. Progress in Natural Science: Materials International, 2003, 13, 81-87.	1.8	5

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91	Hydrothermal synthesis of Cu2S nanocrystalline thin film on indium tin oxide substrate: Morphology, optical and electrical properties. Thin Solid Films, 2012, 520, 5249-5253.	0.8	5
92	Crystal growth and characterization of fluorinated perylene diimides. Chemical Research in Chinese Universities, 2014, 30, 63-67.	1.3	4
93	A bipolar diketopyrrolopyrrole molecule end capped with thiophene-2,3-dicarboxylate used as both electron donor and acceptor for organic solar cells. Synthetic Metals, 2016, 222, 211-218.	2.1	4
94	Phosphate ester sideâ€chainâ€modified conjugated polymer for hybrid solar cells. Journal of Applied Polymer Science, 2017, 134, .	1.3	3
95	Synthesis of a novel perylene diimide derivative and its charge transfer interaction with C60. Science in China Series B: Chemistry, 2008, 51, 152-157.	0.8	2
96	Tandem Organic Solar Cells: Nonfullerene Tandem Organic Solar Cells with High Open-Circuit Voltage of 1.97 V (Adv. Mater. 44/2016). Advanced Materials, 2016, 28, 9870-9870.	11.1	2
97	Conformation tuning of simple non-fused electron acceptors via oxygen and sulfur substitutions and its effects on photovoltaics. Multifunctional Materials, 2021, 4, 024003.	2.4	2
98	Potential Toxic Effects of Nano-Oxides. , 2012, , 347-373.		1
99	Selection of side groups on simple <scp>nonâ€fullerene</scp> acceptors for the application in organic solar cells: From flexible to rigid. Journal of Polymer Science, 2022, 60, 2343-2351.	2.0	1
100	Water-Soluble and Ambient-Stable Au@MWNTs Nanohybrids by in situ Fabrication in Solution. , 2007, , .		0
101	Chemical modification of AlQ3 to a potential electron acceptor for solution-processed organic solar cells. Tetrahedron Letters, 2016, 57, 2797-2799.	0.7	0
102	PREPARATION AND PHOTO-INDUCED CHARGE TRANSFER OF COMPOSITES BASED ON PCPDTBT. Acta Polymerica Sinica, 2009, 009, 790-795.	0.0	0
103	Toward Highly Thermal Stable Perovskite Solar Cells by Rational Design of Interfacial Layer. SSRN Electronic Journal, 0, , .	0.4	0