Lei Meng

List of Publications by Year
in descending order

68 papers	10,330 citations	76196 40 h-index	102304 66 g-index
68 all docs	68 docs citations	68 times ranked	10339 citing authors

#	Article	IF	Citations
1	Improved air stability of perovskite solar cells via solution-processed metal oxide transport layers. Nature Nanotechnology, 2016, 11, 75-81.	15.6	1,890
2	Recent Advances in the Inverted Planar Structure of Perovskite Solar Cells. Accounts of Chemical Research, 2016, 49, 155-165.	7.6	559
3	High-efficiency robust perovskite solar cells on ultrathin flexible substrates. Nature Communications, 2016, 7, 10214.	5.8	534
4	Addressing the stability issue of perovskite solar cells for commercial applications. Nature Communications, 2018, 9, 5265.	5.8	527
5	Multifunctional Fullerene Derivative for Interface Engineering in Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 15540-15547.	6.6	490
6	Guanidinium: A Route to Enhanced Carrier Lifetime and Open-Circuit Voltage in Hybrid Perovskite Solar Cells. Nano Letters, 2016, 16, 1009-1016.	4.5	479
7	Cathode engineering with perylene-diimide interlayer enabling over 17% efficiency single-junction organic solar cells. Nature Communications, 2020, 11, 2726.	5.8	467
8	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	11.7	448
9	High Efficiency Polymer Solar Cells with Efficient Hole Transfer at Zero Highest Occupied Molecular Orbital Offset between Methylated Polymer Donor and Brominated Acceptor. Journal of the American Chemical Society, 2020, 142, 1465-1474.	6.6	344
10	Tuning the electron-deficient core of a non-fullerene acceptor to achieve over 17% efficiency in a single-junction organic solar cell. Energy and Environmental Science, 2020, 13, 2459-2466.	15.6	324
11	Interface and Defect Engineering for Metal Halide Perovskite Optoelectronic Devices. Advanced Materials, 2019, 31, e1803515.	11.1	315
12	High-performance perovskite/Cu(In,Ga)Se ₂ monolithic tandem solar cells. Science, 2018, 361, 904-908.	6.0	314
13	Highâ€Brightness Blue and White LEDs based on Inorganic Perovskite Nanocrystals and their Composites. Advanced Materials, 2017, 29, 1606859.	11.1	237
14	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21%. Journal of the American Chemical Society, 2018, 140, 17255-17262.	6.6	235
15	Pure Formamidiniumâ€Based Perovskite Lightâ€Emitting Diodes with High Efficiency and Low Driving Voltage. Advanced Materials, 2017, 29, 1603826.	11.1	179
16	Polymerized small molecular acceptor based all-polymer solar cells with an efficiency of 16.16% via tuning polymer blend morphology by molecular design. Nature Communications, 2021, 12, 5264.	5.8	170
17	Achieving Fast Charge Separation and Low Nonradiative Recombination Loss by Rational Fluorination for Highâ€Efficiency Polymer Solar Cells. Advanced Materials, 2019, 31, e1905480.	11.1	162
18	Highly Efficient Allâ€Smallâ€Molecule Organic Solar Cells with Appropriate Active Layer Morphology by Side Chain Engineering of Donor Molecules and Thermal Annealing. Advanced Materials, 2020, 32, e1908373.	11.1	162

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19	Recent progress in organic solar cells (Part II device engineering). Science China Chemistry, 2022, 65, 1457-1497.	4.2	157
20	A Quinoxalineâ€Based Dâ€“A Copolymer Donor Achieving 17.62% Efficiency of Organic Solar Cells. Advanced Materials, 2021, 33, e2100474.	11.1	155
21	Highâ€Performance Allâ€Polymer Solar Cells: Synthesis of Polymer Acceptor by a Random Ternary Copolymerization Strategy. Angewandte Chemie - International Edition, 2020, 59, 15181-15185.	7.2	136
22	Promoting charge separation resulting in ternary organic solar cells efficiency over 17.5%. Nano Energy, 2020, 78, 105272.	8.2	132
23	High performance tandem organic solar cells via a strongly infrared-absorbing narrow bandgap acceptor. Nature Communications, 2021, 12, 178.	5.8	122
24	Unique Energy Alignments of a Ternary Material System toward Highâ€Performance Organic Photovoltaics. Advanced Materials, 2018, 30, e1801501.	11.1	116
25	Efficiency Enhancement of Cu₂ZnSn(S,Se)₄ Solar Cells via Alkali Metals Doping. Advanced Energy Materials, 2016, 6, 1502386.	10.2	109
26	Ternary System with Controlled Structure: A New Strategy toward Efficient Organic Photovoltaics. Advanced Materials, 2018, 30, 1705243.	11.1	105
27	Multifunctional Polymer Framework Modified SnO₂ Enabling a Photostable Î±-FAPbI₃ Perovskite Solar Cell with Efficiency Exceeding 23%. ACS Energy Letters, 2021, 6, 3824-3830.	8.8	93
28	Understanding energetic disorder in electron-deficient-core-based non-fullerene solar cells. Science China Chemistry, 2020, 63, 1159-1168.	4.2	92
29	Unraveling the High Open Circuit Voltage and High Performance of Integrated Perovskite/Organic Bulk-Heterojunction Solar Cells. Nano Letters, 2017, 17, 5140-5147.	4.5	78
30	The effect of alkyl substitution position of thienyl outer side chains on photovoltaic performance of Aâ€“DAâ€²Dâ€“A type acceptors. Energy and Environmental Science, 2022, 15, 2011-2020.	15.6	73
31	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. Joule, 2019, 3, 432-442.	11.7	65
32	16.52% Efficiency Allâ€Polymer Solar Cells with High Tolerance of the Photoactive Layer Thickness. Advanced Materials, 2022, 34, e2108749.	11.1	63
33	A Selenophene Containing Benzodithiophene-<i>alt</i>-thienothiophene Polymer for Additive-Free High Performance Solar Cell. Macromolecules, 2015, 48, 562-568.	2.2	59
34	Effect of the chlorine substitution position of the end-group on intermolecular interactions and photovoltaic performance of small molecule acceptors. Energy and Environmental Science, 2020, 13, 5028-5038.	15.6	56
35	Constructing Monolithic Perovskite/Organic Tandem Solar Cell with Efficiency of 22.0% via Reduced Openâ€Circuit Voltage Loss and Broadened Absorption Spectra. Advanced Materials, 2022, 34, e2108829.	11.1	56
36	A-Ï€-A structured non-fullerene acceptors for stable organic solar cells with efficiency over 17%. Science China Chemistry, 2022, 65, 1374-1382.	4.2	53

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37	Effects of Shortâ€Axis Alkoxy Substituents on Molecular Selfâ€Assembly and Photovoltaic Performance of Indacenodithiopheneâ€Based Acceptors. Advanced Functional Materials, 2020, 30, 1906855.	7.8	50
38	Introducing Lowâ€Cost Pyrazine Unit into Terpolymer Enables Highâ€Performance Polymer Solar Cells with Efficiency of 18.23%. Advanced Functional Materials, 2022, 32, 2109271.	7.8	49
39	Flexible and Airâ€Stable Nearâ€Infrared Sensors Based on Solutionâ€Processed Inorganicâ€"Organic Hybrid Phototransistors. Advanced Functional Materials, 2021, 31, 2105887.	7.8	47
40	Dâ€"A Copolymer Donor Based on Bithienyl Benzodithiophene D-Unit and Monoalkoxy Bifluoroquinoxaline A-Unit for High-Performance Polymer Solar Cells. Chemistry of Materials, 2020, 32, 3254-3261.	3.2	43
41	Green solvent-processed organic solar cells based on a low cost polymer donor and a small molecule acceptor. Journal of Materials Chemistry C, 2020, 8, 7718-7724.	2.7	40
42	Nonâ€Halogenatedâ€Solvent Processed and Additiveâ€Free Tandem Organic Solar Cell with Efficiency Reaching 16.67%. Advanced Functional Materials, 2021, 31, 2102361.	7.8	40
43	Chlorinated polymerized small molecule acceptor enabling ternary all-polymer solar cells with over 16.6% efficiency. Science China Chemistry, 2022, 65, 954-963.	4.2	39
44	Low-cost synthesis of small molecule acceptors makes polymer solar cells commercially viable. Nature Communications, 2022, 13, .	5.8	38
45	Understanding the Effect of the Third Component PC₇₁BM on Nanoscale Morphology and Photovoltaic Properties of Ternary Organic Solar Cells. Solar Rrl, 2020, 4, 1900540.	3.1	37
46	Quinoxalineâ€Based Dâ€"A Copolymers for the Applications as Polymer Donor and Hole Transport Material in Polymer/Perovskite Solar Cells. Advanced Materials, 2022, 34, e2104161.	11.1	35
47	15.71% Efficiency Allâ€Smallâ€Molecule Organic Solar Cells Based on Lowâ€Cost Synthesized Donor Molecules. Advanced Functional Materials, 2022, 32, .	7.8	34
48	Rationally Induced Interfacial Dipole in Planar Heterojunction Perovskite Solar Cells for Reduced <i>J</i>â€"<i>V</i> Hysteresis. Advanced Energy Materials, 2018, 8, 1800568.	10.2	32
49	High Mobility Indium Oxide Electron Transport Layer for an Efficient Charge Extraction and Optimized Nanomorphology in Organic Photovoltaics. Nano Letters, 2018, 18, 5805-5811.	4.5	31
50	Stable perovskite solar cells with efficiency of 22.6% via quinoxaline-based polymeric hole transport material. Science China Chemistry, 2021, 64, 2035-2044.	4.2	28
51	Asymmetric Siloxane Functional Side Chains Enable High-Performance Donor Copolymers for Photovoltaic Applications. ACS Applied Materials & Interfaces, 2020, 12, 17760-17768.	4.0	27
52	Fine-Tuning Miscibility and Ï€â€"Ï€ Stacking by Alkylthio Side Chains of Donor Molecules Enables High-Performance All-Small-Molecule Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 36033-36043.	4.0	27
53	Non-equivalent D-A copolymerization strategy towards highly efficient polymer donor for polymer solar cells. Science China Chemistry, 2021, 64, 1031-1038.	4.2	25
54	Enhanced performance of ternary organic solar cells with a wide bandgap acceptor as the third component. Journal of Materials Chemistry A, 2019, 7, 27423-27431.	5.2	23

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55	Highâ€Efficiency Organic Tandem Solar Cells With Effective Transition Metal Chelates Interconnecting Layer. Solar Rrl, 2017, 1, 1700139.	3.1	19
56	Inorganicâ€"Organic Hybrid Phototransistor Array with Enhanced Photogating Effect for Dynamic Near-Infrared Light Sensing and Image Preprocessing. Nano Letters, 2022, 22, 5434-5442.	4.5	19
57	Introducing Electron-Withdrawing Linking Units and Thiophene Ï€-Bridges into Polymerized Small Molecule Acceptors for High-Efficiency All-Polymer Solar Cells. Chemistry of Materials, 2021, 33, 8212-8222.	3.2	17
58	Ternary All-Polymer Solar Cells with Two Synergetic Donors Enable Efficiency over 14.5%. Energy & Fuels, 2021, 35, 19045-19054.	2.5	15
59	Effects of Alkyl Side Chains of Small Molecule Donors on Morphology and the Photovoltaic Property of All-Small-Molecule Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 54237-54245.	4.0	13
60	Influence of altering chlorine substitution positions on the photovoltaic properties of small molecule donors in all-small-molecule organic solar cells. Journal of Materials Chemistry C, 2022, 10, 2017-2025.	2.7	12
61	Effect of Isomerization of Linking Units on the Photovoltaic Performance of PSMA-Type Polymer Acceptors in All-Polymer Solar Cells. Macromolecules, 2022, 55, 4420-4428.	2.2	11
62	Effects of the Center Units of Smallâ€Molecule Donors on the Morphology, Photovoltaic Performance, and Device Stability of Allâ€Smallâ€Molecule Organic Solar Cells. Solar Rrl, 2021, 5, 2100515.	3.1	10
63	Molecular Properties and Aggregation Behavior of Small-Molecule Acceptors Calculated by Molecular Simulation. ACS Omega, 2021, 6, 14467-14475.	1.6	5
64	A Cost-Effective Alpha-Fluorinated Bithienyl Benzodithiophene Unit for High-Performance Polymer Donor Material. ACS Applied Materials & Interfaces, 2021, 13, 55403-55411.	4.0	5
65	Backbone regulation of a bithiazole-based wide bandgap polymer donor by introducing thiophene bridges towards efficient polymer solar cells. Organic Electronics, 2021, 92, 106130.	1.4	2
66	Two new A-D-A type small molecule acceptors based on C2v-symmetric dithienocyclopentaspiro[fluorene-9,9â€²-xanthene] core for polymer solar cells. Organic Electronics, 2021, 92, 106120.	1.4	1
67	All-in-one strategy: overcome the challenges in the device enlargement of perovskite solar cells. Science China Chemistry, 0, , 1.	4.2	0
68	Photovoltaics: Special Issue Dedicated to Professor Yongfang Li. Aggregate, 2022, 3, .	5.2	0