

Chenkai Sun

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8825862/publications.pdf>

Version: 2024-02-01

43
papers

4,759
citations

159358

30
h-index

253896

43
g-index

43
all docs

43
docs citations

43
times ranked

3483
citing authors

#	ARTICLE	IF	CITATIONS
1	A low cost and high performance polymer donor material for polymer solar cells. Nature Communications, 2018, 9, 743.	5.8	635
2	Cathode engineering with perylene-diimide interlayer enabling over 17% efficiency single-junction organic solar cells. Nature Communications, 2020, 11, 2726.	5.8	467
3	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
4	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
5	9.73% Efficiency Nonfullerene All Organic Small Molecule Solar Cells with Absorption-Complementary Donor and Acceptor. Journal of the American Chemical Society, 2017, 139, 5085-5094.	6.6	303
6	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
7	Simplified synthetic routes for low cost and high photovoltaic performance n-type organic semiconductor acceptors. Nature Communications, 2019, 10, 519.	5.8	231
8	Side Chain Engineering on Medium Bandgap Copolymers to Suppress Triplet Formation for High Efficiency Polymer Solar Cells. Advanced Materials, 2017, 29, 1703344.	11.1	209
9	A universal layer-by-layer solution-processing approach for efficient non-fullerene organic solar cells. Energy and Environmental Science, 2019, 12, 384-395.	15.6	193
10	Achieving Fast Charge Separation and Low Nonradiative Recombination Loss by Rational Fluorination for High Efficiency Polymer Solar Cells. Advanced Materials, 2019, 31, e1905480.	11.1	162
11	High Efficiency All Small Molecule Organic Solar Cells Based on an Organic Molecule Donor with Alkylsilyl Thienyl Conjugated Side Chains. Advanced Materials, 2018, 30, e1706361.	11.1	154
12	Rationally pairing photoactive materials for high-performance polymer solar cells with efficiency of 16.53%. Science China Chemistry, 2020, 63, 265-271.	4.2	139
13	Solution-processable n-doped graphene-containing cathode interfacial materials for high-performance organic solar cells. Energy and Environmental Science, 2019, 12, 3400-3411.	15.6	129
14	Side Chain Impact on Molecular Orientation of Organic Semiconductor Acceptors: High Performance Nonfullerene Polymer Solar Cells with Thick Active Layer over 400 nm. Advanced Energy Materials, 2018, 8, 1800856.	10.2	118
15	Suppressing photo-oxidation of non-fullerene acceptors and their blends in organic solar cells by exploring material design and employing friendly stabilizers. Journal of Materials Chemistry A, 2019, 7, 25088-25101.	5.2	107
16	Effect of Alkylsilyl Side Chain Structure on Photovoltaic Properties of Conjugated Polymer Donors. Advanced Energy Materials, 2018, 8, 1702324.	10.2	102
17	Medium Bandgap Polymer Donor Based on Bi(trialkylsilylthienyl)benzo[1,2-b:4,5-b']difuran for High Performance Nonfullerene Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1700746.	10.2	72
18	16.52% Efficiency All Polymer Solar Cells with High Tolerance of the Photoactive Layer Thickness. Advanced Materials, 2022, 34, e2108749.	11.1	63

#	ARTICLE	IF	CITATIONS
19	Nonradiative Triplet Loss Suppressed in Organic Photovoltaic Blends with Fluoridated Nonfullerene Acceptors. <i>Journal of the American Chemical Society</i> , 2021, 143, 4359-4366.	6.6	60
20	High-Performance Polymer Solar Cells with Minimal Energy Loss Enabled by a Main-Chain-Twisted Nonfullerene Acceptor. <i>Chemistry of Materials</i> , 2019, 31, 4222-4227.	3.2	52
21	A Simple Approach to Prepare Chlorinated Polymer Donors with Low-Lying HOMO Level for High Performance Polymer Solar Cells. <i>Chemistry of Materials</i> , 2019, 31, 6558-6567.	3.2	50
22	Effect of Side-Chain Engineering of Bithienylbenzodithiophene- <i>i>alt</i>-fluorobenzotriazole-Based Copolymers on the Thermal Stability and Photovoltaic Performance of Polymer Solar Cells. <i>Macromolecules</i>, 2018, 51, 6028-6036.</i>	2.2	47
23	18.55% Efficiency Polymer Solar Cells Based on a Small Molecule Acceptor with Alkylthienyl Outer Side Chains and a Low-Cost Polymer Donor PTQ10. <i>CCS Chemistry</i> , 2023, 5, 841-850.	4.6	45
24	Dâ€A Copolymer Donor Based on Bithienyl Benzodithiophene D-Unit and Monoalkoxy Bifluoroquinoxaline A-Unit for High-Performance Polymer Solar Cells. <i>Chemistry of Materials</i> , 2020, 32, 3254-3261.	3.2	43
25	Perylene-diimide derived organic photovoltaic materials. <i>Science China Chemistry</i> , 2022, 65, 462-485.	4.2	43
26	Green solvent-processed organic solar cells based on a low cost polymer donor and a small molecule acceptor. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7718-7724.	2.7	40
27	Nonâ€Halogenatedâ€Solvent Processed and Additiveâ€Free Tandem Organic Solar Cell with Efficiency Reaching 16.67%. <i>Advanced Functional Materials</i> , 2021, 31, 2102361.	7.8	40
28	Understanding the Effect of the Third Component PC₇₁BM on Nanoscale Morphology and Photovoltaic Properties of Ternary Organic Solar Cells. <i>Solar Rrl</i> , 2020, 4, 1900540.	3.1	37
29	Improvement of Photovoltaic Performance of Polymer Solar Cells by Rational Molecular Optimization of Organic Molecule Acceptors. <i>Advanced Energy Materials</i> , 2018, 8, 1800815.	10.2	36
30	Quinoxalineâ€Based Dâ€A Copolymers for the Applications as Polymer Donor and Hole Transport Material in Polymer/Perovskite Solar Cells. <i>Advanced Materials</i> , 2022, 34, e2104161.	11.1	35
31	Stable perovskite solar cells with efficiency of 22.6% via quinoxaline-based polymeric hole transport material. <i>Science China Chemistry</i> , 2021, 64, 2035-2044.	4.2	28
32	Effect of Replacing Thiophene by Selenophene on the Photovoltaic Performance of Wide Bandgap Copolymer Donors. <i>Macromolecules</i> , 2019, 52, 4776-4784.	2.2	26
33	Effects of fused-ring regiochemistry on the properties and photovoltaic performance of n-type organic semiconductor acceptors. <i>Journal of Materials Chemistry A</i> , 2018, 6, 15933-15941.	5.2	25
34	Non-equivalent D-A copolymerization strategy towards highly efficient polymer donor for polymer solar cells. <i>Science China Chemistry</i> , 2021, 64, 1031-1038.	4.2	25
35	Utilizing an electron-deficient thieno[3,4- <i><i>c</i></i>]pyrrole-4,6-dione (TPD) unit as a Ĩ-bridge to improve the photovoltaic performance of Aâ€Īâ€Dâ€Īâ€A type acceptors. <i>Journal of Materials Chemistry C</i> , 2020, 8, 15981-15984.	2.7	24
36	Effects of Alkoxy and Fluorine Atom Substitution of Donor Molecules on the Morphology and Photovoltaic Performance of All Small Molecule Organic Solar Cells. <i>Frontiers in Chemistry</i> , 2018, 6, 413.	1.8	19

#	ARTICLE	IF	CITATIONS
37	Understanding the Morphology of High-Performance Solar Cells Based on a Low-Cost Polymer Donor. ACS Applied Materials & Interfaces, 2020, 12, 9537-9544.	4.0	17
38	Ternary All-Polymer Solar Cells with Two Synergetic Donors Enable Efficiency over 14.5%. Energy & Fuels, 2021, 35, 19045-19054.	2.5	15
39	Synthesis and photovoltaic properties of 2D-conjugated polymers with alkylsilyl-substituted thieno[3,2-b]thiophene conjugated side chains. Organic Electronics, 2018, 57, 255-262.	1.4	11
40	Side-chain engineering of medium bandgap polymer donors for efficient polymer solar cells. Organic Electronics, 2020, 78, 105603.	1.4	5
41	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
42	Systematic investigation of methyl substitution effect on physicochemical properties and photovoltaic performance in nonfullerene small-molecule electron acceptors. Dyes and Pigments, 2019, 164, 126-132.	2.0	4
43	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