Rui Sun

List of Publications by Year
in descending order

63 papers	5,151 citations	87888 38 h-index	118850 62 g-index
63 all docs	63 docs citations	63 times ranked	2207 citing authors

#	Article	IF	Citations
1	Tailoring polymer acceptors by electron linkers for achieving efficient and stable all-polymer solar cells. National Science Review, 2022, 9, nwab151.	9.5	41
2	Revealing the microstructure-related light-induced degradation for all-polymer solar cells based on regioisomerized end-capping group acceptors. Journal of Materials Chemistry C, 2022, 10, 1246-1258.	5.5	10
3	Efficient charge generation and low open circuit voltage loss enable a PCE of 10.3% in small molecule donor and polymer acceptor organic solar cells. Journal of Materials Chemistry C, 2022, 10, 2639-2647.	5.5	2
4	Simultaneous Enhanced Device Efficiency and Color Neutrality in Semitransparent Organic Photovoltaics Employing a Synergy of Ternary Strategy and Optical Engineering. Advanced Functional Materials, 2022, 32, .	14.9	30
5	Desired open-circuit voltage increase enables efficiencies approaching 19% in symmetric-asymmetric molecule ternary organic photovoltaics. Joule, 2022, 6, 662-675.	24.0	212
6	An end-capped strategy for crystalline polymer donor to improve the photovoltaic performance of non-fullerene solar cells. Science China Chemistry, 2022, 65, 964-972.	8.2	6
7	A facile strategy for high performance air-processed perovskite solar cells with dopant-free poly(3-hexylthiophene) hole transporter. Solar Energy, 2022, 237, 153-160.	6.1	2
8	Singleâ€Junction Organic Solar Cells with 19.17% Efficiency Enabled by Introducing One Asymmetric Guest Acceptor. Advanced Materials, 2022, 34, e2110147.	21.0	377
9	A Near-Infrared Polymer Acceptor Enables over 15% Efficiency for All-Polymer Solar Cells. Chinese Journal of Polymer Science (English Edition), 2022, 40, 877-888.	3.8	13
10	Isomerization of Asymmetric Ladderâ€Type Heteroheptaceneâ€Based Smallâ€Molecule Acceptors Improving Molecular Packing: Efficient Nonfullerene Organic Solar Cells with Excellent Fill Factors. Advanced Functional Materials, 2022, 32, .	14.9	20
11	Simple (thienylmethylene)oxindoleâ€based polymer materials as donors for efficient nonâ€fullerene polymer solar cells. Nano Select, 2021, 2, 417-424.	3.7	0
12	The Intrinsic Role of Molecular Mass and Polydispersity Index in Highâ€Performance Nonâ€Fullerene Polymer Solar Cells. Advanced Energy Materials, 2021, 11, .	19.5	47
13	Fluorinated End Group Enables Highâ€Performance Allâ€Polymer Solar Cells with Nearâ€Infrared Absorption and Enhanced Device Efficiency over 14%. Advanced Energy Materials, 2021, 11, 2003171.	19.5	89
14	Asymmetric Acceptors Enabling Organic Solar Cells to Achieve an over 17% Efficiency: Conformation Effects on Regulating Molecular Properties and Suppressing Nonradiative Energy Loss. Advanced Energy Materials, 2021, 11, 2003177.	19.5	114
15	Improving Photovoltaic Performance of Nonâ€Fullerene Polymer Solar Cells Enables by Fineâ€Tuning Blend Microstructure via Binary Solvent Mixtures. Advanced Functional Materials, 2021, 31, 2008767.	14.9	31
16	High-performance all-small-molecule organic solar cells without interlayers. Energy and Environmental Science, 2021, 14, 3174-3183.	30.8	43
17	Highly Efficient and Stable All-Polymer Solar Cells Enabled by Near-Infrared Isomerized Polymer Acceptors. Chemistry of Materials, 2021, 33, 761-773.	6.7	47
18	Photooxidation Analysis of Two Isomeric Nonfullerene Acceptors: A Systematic Study of Conformational, Morphological, and Environmental Factors. Solar Rrl, 2021, 5, 2000704.	5.8	6

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19	Highâ€Performance Allâ€Polymer Solar Cells with a Pseudoâ€Bilayer Configuration Enabled by a Stepwise Optimization Strategy. Advanced Functional Materials, 2021, 31, 2010411.	14.9	99
20	Regioâ€Regular Polymer Acceptors Enabled by Determined Fluorination on End Groups for Allâ€Polymer Solar Cells with 15.2â€‰% Efficiency. Angewandte Chemie, 2021, 133, 10225-10234.	2.0	13
21	Regioâ€Regular Polymer Acceptors Enabled by Determined Fluorination on End Groups for Allâ€Polymer Solar Cells with 15.2â€‰% Efficiency. Angewandte Chemie - International Edition, 2021, 60, 10137-10146.	13.8	145
22	A Difluoroâ€Monobromo End Group Enables Highâ€Performance Polymer Acceptor and Efficient Allâ€Polymer Solar Cells Processable with Green Solvent under Ambient Condition. Advanced Functional Materials, 2021, 31, 2100791.	14.9	89
23	Balancing the efficiency, stability, and cost potential for organic solar cells via a new figure of merit. Joule, 2021, 5, 1209-1230.	24.0	138
24	Asymmetric Isomer Effects in Benzo[<i>c</i>â€Š][1,2,5]thiadiazoleâ€Fused Nonacyclic Acceptors: Dielectric Constant and Molecular Crystallinity Control for Significant Photovoltaic Performance Enhancement. Advanced Functional Materials, 2021, 31, 2104369.	14.9	46
25	Achieving over 17% efficiency of ternary all-polymer solar cells with two well-compatible polymer acceptors. Joule, 2021, 5, 1548-1565.	24.0	281
26	Remove the water-induced traps toward improved performance in organic solar cells. Science China Materials, 2021, 64, 2629-2644.	6.3	11
27	A conjugated donor-acceptor block copolymer enables over 11% efficiency for single-component polymer solar cells. Joule, 2021, 5, 1800-1815.	24.0	77
28	PEDOT:PSSâ€Free Polymer Nonâ€Fullerene Polymer Solar Cells with Efficiency up to 18.60% Employing a Binaryâ€Solventâ€Chlorinated ITO Anode. Advanced Functional Materials, 2021, 31, 2106846.	14.9	40
29	Polymerized small-molecule acceptors based on vinylene as Ï€-bridge for efficient all-polymer solar cells. Polymer, 2021, 230, 124104.	3.8	14
30	Baseplate Temperatureâ€Dependent Vertical Composition Gradient in Pseudoâ€Bilayer Films for Printing Nonâ€Fullerene Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2102135.	19.5	33
31	A Layer-by-Layer Architecture for Printable Organic Solar Cells Overcoming the Scaling Lag of Module Efficiency. Joule, 2020, 4, 407-419.	24.0	272
32	Altering the Positions of Chlorine and Bromine Substitution on the End Group Enables Highâ€Performance Acceptor and Efficient Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2002649.	19.5	103
33	Tailoring non-fullerene acceptors using selenium-incorporated heterocycles for organic solar cells with over 16% efficiency. Journal of Materials Chemistry A, 2020, 8, 23756-23765.	10.3	85
34	Machine learning for accelerating the discovery of high-performance donor/acceptor pairs in non-fullerene organic solar cells. Npj Computational Materials, 2020, 6, .	8.7	77
35	Alkyl chain engineering of non-fullerene small molecule acceptors for solution-processable organic solar cells. Organic Electronics, 2020, 87, 105963.	2.6	14
36	Highly Efficient Allâ€Polymer Solar Cells Enabled by Random Ternary Copolymer Acceptors with High Tolerance on Molar Ratios. Solar Rrl, 2020, 4, 2000409.	5.8	15

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37	Controlling Molecular Mass of Low-Band-Gap Polymer Acceptors for High-Performance All-Polymer Solar Cells. Joule, 2020, 4, 1070-1086.	24.0	236
38	Fine-Tuning Energy Levels via Asymmetric End Groups Enables Polymer Solar Cells with Efficiencies over 17%. Joule, 2020, 4, 1236-1247.	24.0	344
39	An Effective Method for Recovering Nonradiative Recombination Loss in Scalable Organic Solar Cells. Advanced Functional Materials, 2020, 30, 2000417.	14.9	31
40	Simultaneous enhanced efficiency and thermal stability in organic solar cells from a polymer acceptor additive. Nature Communications, 2020, 11, 1218.	12.8	197
41	High-performance all-polymer solar cells with only 0.47 eV energy loss. Science China Chemistry, 2020, 63, 1449-1460.	8.2	62
42	Two similar near-infrared (IR) non-fullerene acceptors as near IR sensitizers for ternary solar cells. Organic Electronics, 2020, 85, 105880.	2.6	7
43	Altering alkyl-chains branching positions for boosting the performance of small-molecule acceptors for highly efficient nonfullerene organic solar cells. Science China Chemistry, 2020, 63, 361-369.	8.2	128
44	Thickâ€Film Organic Solar Cells Achieving over 11% Efficiency and Nearly 70% Fill Factor at Thickness over 400 nm. Advanced Functional Materials, 2020, 30, 1908336.	14.9	94
45	Dithieno[3,2â€‹<i>b</i>:2Ê¹,3Ê¹â€‹<i>d</i>]pyrrolâ€Fused Asymmetrical Electron Acceptors: A Study into the Effects of Nitrogenâ€Functionalization on Reducing Nonradiative Recombination Loss and Dipole Moment on Morphology. Advanced Science, 2020, 7, 1902657.	11.2	51
46	Modification on the Indacenodithieno[3,2-<i>b</i>]thiophene Core to Achieve Higher Current and Reduced Energy Loss for Nonfullerene Solar Cells. Chemistry of Materials, 2020, 32, 1297-1307.	6.7	46
47	Achieving Ecoâ€Compatible Organic Solar Cells with Efficiency >16.5% Based on an Iridium Complexâ€Incorporated Polymer Donor. Solar Rrl, 2020, 4, 2000156.	5.8	43
48	Solutionâ€Processed Polymer Solar Cells with over 17% Efficiency Enabled by an Iridium Complexation Approach. Advanced Energy Materials, 2020, 10, 2000590.	19.5	117
49	Synergistic Benefits of Cesiumâ€Doped Aqueous Precursor in Airâ€Processed Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900406.	5.8	10
50	High-efficiency all-small-molecule organic solar cells based on an organic molecule donor with an asymmetric thieno[2,3-f] benzofuran unit. Science China Chemistry, 2020, 63, 1246-1255.	8.2	55
51	An Oligothiopheneâ€“Fullerene Molecule with a Balanced Donorâ€“Acceptor Backbone for Highâ€Performance Singleâ€Component Organic Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 14556-14561.	13.8	62
52	An Oligothiopheneâ€“Fullerene Molecule with a Balanced Donorâ€“Acceptor Backbone for Highâ€Performance Singleâ€Component Organic Solar Cells. Angewandte Chemie, 2019, 131, 14698-14703.	2.0	6
53	A multi-objective optimization-based layer-by-layer blade-coating approach for organic solar cells: rational control of vertical stratification for high performance. Energy and Environmental Science, 2019, 12, 3118-3132.	30.8	142
54	Finely Tuned Cores in Starâ€Shaped Zwitterionic Molecules for Interface Engineering of Highâ€Performance Polymer Solar Cells. Solar Rrl, 2019, 3, 1900166.	5.8	7

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55	Achieving Fast Charge Separation and Low Nonradiative Recombination Loss by Rational Fluorination for Highâ€Efficiency Polymer Solar Cells. Advanced Materials, 2019, 31, e1905480.	21.0	162
56	A universal layer-by-layer solution-processing approach for efficient non-fullerene organic solar cells. Energy and Environmental Science, 2019, 12, 384-395.	30.8	193
57	Spontaneous open-circuit voltage gain of fully fabricated organic solar cells caused by elimination of interfacial energy disorder. Energy and Environmental Science, 2019, 12, 2518-2528.	30.8	57
58	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.	10.3	68
59	Slot-die printed non-fullerene organic solar cells with the highest efficiency of 12.9% for low-cost PV-driven water splitting. Nano Energy, 2019, 61, 559-566.	16.0	65
60	A new small molecule donor for efficient and stable all small molecule organic solar cells. Organic Electronics, 2019, 70, 78-85.	2.6	20
61	Reduced Energy Loss Enabled by a Chlorinated Thiopheneâ€Fused Endingâ€Group Small Molecular Acceptor for Efficient Nonfullerene Organic Solar Cells with 13.6% Efficiency. Advanced Energy Materials, 2019, 9, 1900041.	19.5	144
62	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.	10.3	107
63	All-small molecule solar cells based on donor molecule optimization with highly enhanced efficiency and stability. Journal of Materials Chemistry A, 2018, 6, 15675-15683.	10.3	55