

# Rui Sun

## List of Publications by Year in descending order

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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	Single-junction Organic Solar Cells with 19.17% Efficiency Enabled by Introducing One Asymmetric Guest Acceptor. <i>Advanced Materials</i> , 2022, 34, e2110147.	21.0	377
2	Fine-Tuning Energy Levels via Asymmetric End Groups Enables Polymer Solar Cells with Efficiencies over 17%. <i>Joule</i> , 2020, 4, 1236-1247.	24.0	344
3	Achieving over 17% efficiency of ternary all-polymer solar cells with two well-compatible polymer acceptors. <i>Joule</i> , 2021, 5, 1548-1565.	24.0	281
4	A Layer-by-Layer Architecture for Printable Organic Solar Cells Overcoming the Scaling Lag of Module Efficiency. <i>Joule</i> , 2020, 4, 407-419.	24.0	272
5	Controlling Molecular Mass of Low-Band-Gap Polymer Acceptors for High-Performance All-Polymer Solar Cells. <i>Joule</i> , 2020, 4, 1070-1086.	24.0	236
6	Desired open-circuit voltage increase enables efficiencies approaching 19% in symmetric-asymmetric molecule ternary organic photovoltaics. <i>Joule</i> , 2022, 6, 662-675.	24.0	212
7	Simultaneous enhanced efficiency and thermal stability in organic solar cells from a polymer acceptor additive. <i>Nature Communications</i> , 2020, 11, 1218.	12.8	197
8	A universal layer-by-layer solution-processing approach for efficient non-fullerene organic solar cells. <i>Energy and Environmental Science</i> , 2019, 12, 384-395.	30.8	193
9	Achieving Fast Charge Separation and Low Nonradiative Recombination Loss by Rational Fluorination for High-Efficiency Polymer Solar Cells. <i>Advanced Materials</i> , 2019, 31, e1905480.	21.0	162
10	Regular Polymer Acceptors Enabled by Determined Fluorination on End Groups for All-Polymer Solar Cells with 15.2% Efficiency. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10137-10146.	13.8	145
11	Reduced Energy Loss Enabled by a Chlorinated Thiophene-Fused End-Group Small Molecular Acceptor for Efficient Nonfullerene Organic Solar Cells with 13.6% Efficiency. <i>Advanced Energy Materials</i> , 2019, 9, 1900041.	19.5	144
12	A multi-objective optimization-based layer-by-layer blade-coating approach for organic solar cells: rational control of vertical stratification for high performance. <i>Energy and Environmental Science</i> , 2019, 12, 3118-3132.	30.8	142
13	Balancing the efficiency, stability, and cost potential for organic solar cells via a new figure of merit. <i>Joule</i> , 2021, 5, 1209-1230.	24.0	138
14	Altering alkyl-chains branching positions for boosting the performance of small-molecule acceptors for highly efficient nonfullerene organic solar cells. <i>Science China Chemistry</i> , 2020, 63, 361-369.	8.2	128
15	Solution-Processed Polymer Solar Cells with over 17% Efficiency Enabled by an Iridium Complexation Approach. <i>Advanced Energy Materials</i> , 2020, 10, 2000590.	19.5	117
16	Asymmetric Acceptors Enabling Organic Solar Cells to Achieve an over 17% Efficiency: Conformation Effects on Regulating Molecular Properties and Suppressing Nonradiative Energy Loss. <i>Advanced Energy Materials</i> , 2021, 11, 2003177.	19.5	114
17	Suppressing photo-oxidation of non-fullerene acceptors and their blends in organic solar cells by exploring material design and employing friendly stabilizers. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25088-25101.	10.3	107
18	Altering the Positions of Chlorine and Bromine Substitution on the End Group Enables High-Performance Acceptor and Efficient Organic Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 2002649.	19.5	103

#	ARTICLE	IF	CITATIONS
19	High-Performance All-Polymer Solar Cells with a Pseudo-Bilayer Configuration Enabled by a Stepwise Optimization Strategy. <i>Advanced Functional Materials</i> , 2021, 31, 2010411.	14.9	99
20	Thick-Film Organic Solar Cells Achieving over 11% Efficiency and Nearly 70% Fill Factor at Thickness over 400 nm. <i>Advanced Functional Materials</i> , 2020, 30, 1908336.	14.9	94
21	Fluorinated End Group Enables High-Performance All-Polymer Solar Cells with Near-Infrared Absorption and Enhanced Device Efficiency over 14%. <i>Advanced Energy Materials</i> , 2021, 11, 2003171.	19.5	89
22	A Difluoro-Monobromo End Group Enables High-Performance Polymer Acceptor and Efficient All-Polymer Solar Cells Processable with Green Solvent under Ambient Condition. <i>Advanced Functional Materials</i> , 2021, 31, 2100791.	14.9	89
23	Tailoring non-fullerene acceptors using selenium-incorporated heterocycles for organic solar cells with over 16% efficiency. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23756-23765.	10.3	85
24	Machine learning for accelerating the discovery of high-performance donor/acceptor pairs in non-fullerene organic solar cells. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	77
25	A conjugated donor-acceptor block copolymer enables over 11% efficiency for single-component polymer solar cells. <i>Joule</i> , 2021, 5, 1800-1815.	24.0	77
26	A wide-bandgap D-A copolymer donor based on a chlorine substituted acceptor unit for high performance polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14070-14078.	10.3	68
27	Slot-die printed non-fullerene organic solar cells with the highest efficiency of 12.9% for low-cost PV-driven water splitting. <i>Nano Energy</i> , 2019, 61, 559-566.	16.0	65
28	An Oligothiophene-Fullerene Molecule with a Balanced Donor-Acceptor Backbone for High-Performance Single-Component Organic Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 14556-14561.	13.8	62
29	High-performance all-polymer solar cells with only 0.47 eV energy loss. <i>Science China Chemistry</i> , 2020, 63, 1449-1460.	8.2	62
30	Spontaneous open-circuit voltage gain of fully fabricated organic solar cells caused by elimination of interfacial energy disorder. <i>Energy and Environmental Science</i> , 2019, 12, 2518-2528.	30.8	57
31	All-small molecule solar cells based on donor molecule optimization with highly enhanced efficiency and stability. <i>Journal of Materials Chemistry A</i> , 2018, 6, 15675-15683.	10.3	55
32	High-efficiency all-small-molecule organic solar cells based on an organic molecule donor with an asymmetric thieno[2,3-f] benzofuran unit. <i>Science China Chemistry</i> , 2020, 63, 1246-1255.	8.2	55
33	Dithieno[3,2-b:2',3'-d]pyrrole-Fused Asymmetrical Electron Acceptors: A Study into the Effects of Nitrogen-Functionalization on Reducing Nonradiative Recombination Loss and Dipole Moment on Morphology. <i>Advanced Science</i> , 2020, 7, 1902657.	11.2	51
34	The Intrinsic Role of Molecular Mass and Polydispersity Index in High-Performance Non-Fullerene Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2021, 11, .	19.5	47
35	Highly Efficient and Stable All-Polymer Solar Cells Enabled by Near-Infrared Isomerized Polymer Acceptors. <i>Chemistry of Materials</i> , 2021, 33, 761-773.	6.7	47
36	Modification on the Indacenodithieno[3,2-b]thiophene Core to Achieve Higher Current and Reduced Energy Loss for Nonfullerene Solar Cells. <i>Chemistry of Materials</i> , 2020, 32, 1297-1307.	6.7	46

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37	Asymmetric Isomer Effects in Benzo[ <i>c</i> ][1,2,5]thiadiazole-Fused Nonacyclic Acceptors: Dielectric Constant and Molecular Crystallinity Control for Significant Photovoltaic Performance Enhancement. <i>Advanced Functional Materials</i> , 2021, 31, 2104369.	14.9	46
38	Achieving Eco-Compatible Organic Solar Cells with Efficiency >16.5% Based on an Iridium Complex-Incorporated Polymer Donor. <i>Solar Rrl</i> , 2020, 4, 2000156.	5.8	43
39	High-performance all-small-molecule organic solar cells without interlayers. <i>Energy and Environmental Science</i> , 2021, 14, 3174-3183.	30.8	43
40	Tailoring polymer acceptors by electron linkers for achieving efficient and stable all-polymer solar cells. <i>National Science Review</i> , 2022, 9, nwab151.	9.5	41
41	PEDOT:PSS-Free Polymer Non-Fullerene Polymer Solar Cells with Efficiency up to 18.60% Employing a Binary-Solvent-Chlorinated ITO Anode. <i>Advanced Functional Materials</i> , 2021, 31, 2106846.	14.9	40
42	Baseplate Temperature-Dependent Vertical Composition Gradient in Pseudo-Bilayer Films for Printing Non-Fullerene Organic Solar Cells. <i>Advanced Energy Materials</i> , 2021, 11, 2102135.	19.5	33
43	An Effective Method for Recovering Nonradiative Recombination Loss in Scalable Organic Solar Cells. <i>Advanced Functional Materials</i> , 2020, 30, 2000417.	14.9	31
44	Improving Photovoltaic Performance of Non-Fullerene Polymer Solar Cells Enabled by Fine-Tuning Blend Microstructure via Binary Solvent Mixtures. <i>Advanced Functional Materials</i> , 2021, 31, 2008767.	14.9	31
45	Simultaneous Enhanced Device Efficiency and Color Neutrality in Semitransparent Organic Photovoltaics Employing a Synergy of Ternary Strategy and Optical Engineering. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	30
46	A new small molecule donor for efficient and stable all small molecule organic solar cells. <i>Organic Electronics</i> , 2019, 70, 78-85.	2.6	20
47	Isomerization of Asymmetric Ladder-Type Heteroheptacene-Based Small-Molecule Acceptors Improving Molecular Packing: Efficient Nonfullerene Organic Solar Cells with Excellent Fill Factors. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	20
48	Highly Efficient All-Polymer Solar Cells Enabled by Random Ternary Copolymer Acceptors with High Tolerance on Molar Ratios. <i>Solar Rrl</i> , 2020, 4, 2000409.	5.8	15
49	Alkyl chain engineering of non-fullerene small molecule acceptors for solution-processable organic solar cells. <i>Organic Electronics</i> , 2020, 87, 105963.	2.6	14
50	Polymerized small-molecule acceptors based on vinylene as $\pi$ -bridge for efficient all-polymer solar cells. <i>Polymer</i> , 2021, 230, 124104.	3.8	14
51	Regio-Regular Polymer Acceptors Enabled by Determined Fluorination on End Groups for All-Polymer Solar Cells with 15.2% Efficiency. <i>Angewandte Chemie</i> , 2021, 133, 10225-10234.	2.0	13
52	A Near-Infrared Polymer Acceptor Enables over 15% Efficiency for All-Polymer Solar Cells. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2022, 40, 877-888.	3.8	13
53	Remove the water-induced traps toward improved performance in organic solar cells. <i>Science China Materials</i> , 2021, 64, 2629-2644.	6.3	11
54	Synergistic Benefits of Cesium-Doped Aqueous Precursor in Air-Processed Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , 2020, 4, 1900406.	5.8	10

#	ARTICLE	IF	CITATIONS
55	Revealing the microstructure-related light-induced degradation for all-polymer solar cells based on regioisomerized end-capping group acceptors. <i>Journal of Materials Chemistry C</i> , 2022, 10, 1246-1258.	5.5	10
56	Finely Tuned Cores in Star-Shaped Zwitterionic Molecules for Interface Engineering of High-Performance Polymer Solar Cells. <i>Solar Rrl</i> , 2019, 3, 1900166.	5.8	7
57	Two similar near-infrared (IR) non-fullerene acceptors as near IR sensitizers for ternary solar cells. <i>Organic Electronics</i> , 2020, 85, 105880.	2.6	7
58	An Oligothiophene-Fullerene Molecule with a Balanced Donor-Acceptor Backbone for High-Performance Single-Component Organic Solar Cells. <i>Angewandte Chemie</i> , 2019, 131, 14698-14703.	2.0	6
59	Photooxidation Analysis of Two Isomeric Nonfullerene Acceptors: A Systematic Study of Conformational, Morphological, and Environmental Factors. <i>Solar Rrl</i> , 2021, 5, 2000704.	5.8	6
60	An end-capped strategy for crystalline polymer donor to improve the photovoltaic performance of non-fullerene solar cells. <i>Science China Chemistry</i> , 2022, 65, 964-972.	8.2	6
61	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. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2639-2647.	5.5	2
62	A facile strategy for high performance air-processed perovskite solar cells with dopant-free poly(3-hexylthiophene) hole transporter. <i>Solar Energy</i> , 2022, 237, 153-160.	6.1	2
63	Simple (thienylmethylene)oxindole-based polymer materials as donors for efficient non-fullerene polymer solar cells. <i>Nano Select</i> , 2021, 2, 417-424.	3.7	0