

Fast charge separation in a non-fullerene organic solar cell

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Citation Report

#	ARTICLE	IF	CITATIONS
1	11.4% Efficiency non-fullerene polymer solar cells with trialkylsilyl substituted 2D-conjugated polymer as donor. <i>Nature Communications</i> , 2016, 7, 13651.	5.8	917
2	High-Performance Non-Fullerene Organic Solar Cells Based on a Pair of Medium Band Gap Polymer Donor and Perylene Bisimide Derivative Acceptor. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 2647-2653.	1.1	11
3	Non-fullerene small molecule acceptors based on perylene diimides. <i>Journal of Materials Chemistry A</i> , 2016, 4, 17604-17622.	5.2	281
4	Propeller-shaped small molecule acceptors containing a 9,9- spiro bifluorene core with imide-linked perylene diimides for non-fullerene organic solar cells. <i>Journal of Materials Chemistry C</i> , 2016, 4, 10610-10615.	2.7	30
5	Tetrafluoroquinoxaline based polymers for non-fullerene polymer solar cells with efficiency over 9%. <i>Nano Energy</i> , 2016, 30, 312-320.	8.2	94
6	Enhancing the photovoltaic performance of binary acceptor-based conjugated polymers incorporating methyl units. <i>RSC Advances</i> , 2016, 6, 98071-98079.	1.7	5
7	Comparison of the Morphology Development of Polymer-Fullerene and Polymer-Polymer Solar Cells during Solution-Shearing Blade Coating. <i>Advanced Energy Materials</i> , 2016, 6, 1601225.	10.2	79
8	Synthesis, Self-Assembly, and Solar Cell Performance of N-Annulated Perylene Diimide Non-Fullerene Acceptors. <i>Chemistry of Materials</i> , 2016, 28, 7098-7109.	3.2	211
9	Diketopyrrolopyrrole Polymers with Thienyl and Thiazolyl Linkers for Application in Field-Effect Transistors and Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 30328-30335.	4.0	26
10	A Thieno[3,4- <i>b</i>]thiophene-Based Non-fullerene Electron Acceptor for High-Performance Bulk-Heterojunction Organic Solar Cells. <i>Journal of the American Chemical Society</i> , 2016, 138, 15523-15526.	6.6	286
11	Reduced voltage losses yield 10% efficient fullerene free organic solar cells with >1 V open circuit voltages. <i>Energy and Environmental Science</i> , 2016, 9, 3783-3793.	15.6	477
12	Fullerene-free polymer solar cell based on a polythiophene derivative with an unprecedented energy loss of less than 0.5 eV. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18043-18049.	5.2	88
13	Donor polymer design enables efficient non-fullerene organic solar cells. <i>Nature Communications</i> , 2016, 7, 13094.	5.8	328
14	Enhancement in Organic Photovoltaics Controlled by the Interplay between Charge-Transfer Excitons and Surface Plasmons. <i>ACS Omega</i> , 2016, 1, 722-729.	1.6	13
15	Limits for Recombination in a Low Energy Loss Organic Heterojunction. <i>ACS Nano</i> , 2016, 10, 10736-10744.	7.3	79
16	Nonfullerene Polymer Solar Cells based on a Perylene Monoimide Acceptor with a High Open-Circuit Voltage of 1.3 V. <i>Advanced Functional Materials</i> , 2017, 27, 1603892.	7.8	67
17	Realizing Small Energy Loss of 0.55 eV, High Open-Circuit Voltage >1 V and High Efficiency $>10\%$ in Fullerene-Free Polymer Solar Cells via Energy Driver. <i>Advanced Materials</i> , 2017, 29, 1605216.	11.1	230
18	Development of quinoxaline based polymers for photovoltaic applications. <i>Journal of Materials Chemistry C</i> , 2017, 5, 1858-1879.	2.7	103

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19	Molecular design of a wide-band-gap conjugated polymer for efficient fullerene-free polymer solar cells. <i>Energy and Environmental Science</i> , 2017, 10, 546-551.	15.6	180
20	Fused Nonacyclic Electron Acceptors for Efficient Polymer Solar Cells. <i>Journal of the American Chemical Society</i> , 2017, 139, 1336-1343.	6.6	813
21	Small is Powerful: Recent Progress in Solution-Processed Small Molecule Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1602242.	10.2	371
22	Designing Small Molecule Organic Solar Cells with High Open-Circuit Voltage. <i>ChemistrySelect</i> , 2017, 2, 1253-1261.	0.7	12
23	Design, Synthesis, and Photovoltaic Characterization of a Small Molecular Acceptor with an Ultra-Narrow Band Gap. <i>Angewandte Chemie</i> , 2017, 129, 3091-3095.	1.6	61
24	Design, Synthesis, and Photovoltaic Characterization of a Small Molecular Acceptor with an Ultra-Narrow Band Gap. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 3045-3049.	7.2	711
25	N-Annulated perylene diimide dimers: acetylene linkers as a strategy for controlling structural conformation and the impact on physical, electronic, optical and photovoltaic properties. <i>Journal of Materials Chemistry C</i> , 2017, 5, 2074-2083.	2.7	68
26	Comparing non-fullerene acceptors with fullerene in polymer solar cells: a case study with FTAZ and PyCNTAZ. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4886-4893.	5.2	44
27	Small molecule carbazole-based diketopyrrolopyrroles with tetracyanobutadiene acceptor unit as a non-fullerene acceptor for bulk heterojunction organic solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3311-3319.	5.2	51
28	Theoretical Design of Perylene Diimide Dimers with Different Linkers and Bridged Positions as Promising Non-Fullerene Acceptors for Organic Photovoltaic Cells. <i>Journal of Physical Chemistry C</i> , 2017, 121, 2125-2134.	1.5	50
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30	An Electron Acceptor with Porphyrin and Perylene Bisimides for Efficient Non-Fullerene Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 2694-2698.	7.2	232
31	An Electron Acceptor with Porphyrin and Perylene Bisimides for Efficient Non-Fullerene Solar Cells. <i>Angewandte Chemie</i> , 2017, 129, 2738-2742.	1.6	28
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34	Single-Junction Binary Blend Nonfullerene Polymer Solar Cells with 12.1% Efficiency. <i>Advanced Materials</i> , 2017, 29, 1700144.	11.1	629
35	Naphthobis(chalcogen)diazole Conjugated Polymers: Emerging Materials for Organic Electronics. <i>Advanced Materials</i> , 2017, 29, 1605218.	11.1	91
36	Halogenated conjugated molecules for ambipolar field-effect transistors and non-fullerene organic solar cells. <i>Materials Chemistry Frontiers</i> , 2017, 1, 1389-1395.	3.2	173

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38	Efficient Nonfullerene Polymer Solar Cells Enabled by a Novel Wide Bandgap Small Molecular Acceptor. <i>Advanced Materials</i> , 2017, 29, 1606054.	11.1	181
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44	Fine-Tuned Photoactive and Interconnection Layers for Achieving over 13% Efficiency in a Fullerene-Free Tandem Organic Solar Cell. <i>Journal of the American Chemical Society</i> , 2017, 139, 7302-7309.	6.6	427
45	Room temperature processed polymers for high-efficient polymer solar cells with power conversion efficiency over 9%. <i>Nano Energy</i> , 2017, 37, 32-39.	8.2	50
46	Fullerene-Free Organic Solar Cells with Efficiency Over 12% Based on EDTA-ZnO Hybrid Cathode Interlayer. <i>Chemistry of Materials</i> , 2017, 29, 4176-4180.	3.2	91
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54	Tuning the optoelectronic properties for high-efficiency (>7.5%) all small molecule and fullerene-free solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 14259-14269.	5.2	34

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56	Potential of Nonfullerene Small Molecules with High Photovoltaic Performance. <i>Chemistry - an Asian Journal</i> , 2017, 12, 2160-2171.	1.7	45
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72	High-Efficiency Nonfullerene Organic Solar Cells: Critical Factors that Affect Complex Multi-Length Scale Morphology and Device Performance. <i>Advanced Energy Materials</i> , 2017, 7, 1602000.	10.2	232

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74	Molecular electron acceptors for efficient fullerene-free organic solar cells. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 3440-3458.	1.3	112
75	Fullerene-free polymer solar cells processed from non-halogenated solvents in air with PCE of 4.8%. <i>Chemical Communications</i> , 2017, 53, 1164-1167.	2.2	57
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92	Constructing a Strongly Absorbing Low-Bandgap Polymer Acceptor for High-Performance All-Polymer Solar Cells. <i>Angewandte Chemie</i> , 2017, 129, 13688-13692.	1.6	51
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102	Boosting performance of inverted organic solar cells by using a planar coronene based electron-transporting layer. <i>Nano Energy</i> , 2017, 39, 454-460.	8.2	39
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105	Understanding charge transport and recombination losses in high performance polymer solar cells with non-fullerene acceptors. <i>Journal of Materials Chemistry A</i> , 2017, 5, 17230-17239.	5.2	66
106	Low-bandgap conjugated polymers enabling solution-processable tandem solar cells. <i>Nature Reviews Materials</i> , 2017, 2, .	23.3	284
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114	High-performance nonfullerene polymer solar cells with open-circuit voltage over 1 V and energy loss as low as 0.54 eV. <i>Nano Energy</i> , 2017, 40, 20-26.	8.2	70
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124	Ultrafast Long-Range Charge Separation in Nonfullerene Organic Solar Cells. <i>ACS Nano</i> , 2017, 11, 12473-12481.	7.3	82
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129	Toward Over 15% Power Conversion Efficiency for Organic Solar Cells: Current Status and Perspectives. <i>Small Methods</i> , 2017, 1, 1700258.	4.6	130
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131	An Efficient, "Burn in"-Free Organic Solar Cell Employing a Nonfullerene Electron Acceptor. <i>Advanced Materials</i> , 2017, 29, 1701156.	11.1	175
132	Energy Losses in Small-Molecule Organic Photovoltaics. <i>Advanced Energy Materials</i> , 2017, 7, 1700237.	10.2	49
133	A stereoregular \hat{I}^2 -dicyanodistyrylbenzene (\hat{I}^2 -DCS)-based conjugated polymer for high-performance organic solar cells with small energy loss and high quantum efficiency. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16681-16688.	5.2	23
134	Efficiency Potential of Photovoltaic Materials and Devices Unveiled by Detailed-Balance Analysis. <i>Physical Review Applied</i> , 2017, 7, .	1.5	252
135	Poly(3-hexylthiophene)-based non-fullerene solar cells achieve high photovoltaic performance with small energy loss. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16573-16579.	5.2	37
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137	Indacenodithiophene-based D-A conjugated polymers for application in polymer solar cells. <i>Organic Electronics</i> , 2017, 50, 443-457.	1.4	26
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