

Increased open circuit voltage in fluorinated benzothia conjugated polymers

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Citation Report

#	ARTICLE	IF	CITATIONS
2	Fundamental Study on Organic Solar Cells Based on Soluble Zinc Phthalocyanine. Japanese Journal of Applied Physics, 2012, 51, 04DK09.	0.8	5
3	Thiophene fluorination to enhance photovoltaic performance in low band gap donor-acceptor polymers. Chemical Communications, 2012, 48, 11130.	2.2	68
4	Synthesis of a low bandgap polymer based on a thiadiazolo-indolo[3,2-b]carbazole derivative for enhancement of open circuit voltage of polymer solar cells. Polymer Chemistry, 2012, 3, 2928.	1.9	17
5	Fluorinated Copolymer PCPDTBT with Enhanced Open-Circuit Voltage and Reduced Recombination for Highly Efficient Polymer Solar Cells. Journal of the American Chemical Society, 2012, 134, 14932-14944.	6.6	361
6	Quinoxaline-Based Semiconducting Polymers: Effect of Fluorination on the Photophysical, Thermal, and Charge Transport Properties. Macromolecules, 2012, 45, 6380-6389.	2.2	61
7	Significant Improved Performance of Photovoltaic Cells Made from a Partially Fluorinated Cyclopentadithiophene/Benzothiadiazole Conjugated Polymer. Macromolecules, 2012, 45, 5427-5435.	2.2	186
8	Improved Charge Transport and Absorption Coefficient in Indacenodithieno[3,2-b]thiophene-based Ladder-Type Polymer Leading to Highly Efficient Polymer Solar Cells. Advanced Materials, 2012, 24, 6356-6361.	11.1	343
9	A Novel Thiophene Derivative-based Conjugated Polymer for Polymer Solar Cells with High Open-circuit Voltage. Chinese Journal of Chemistry, 2012, 30, 2219-2224.	2.6	19
10	Controlling band gap and hole mobility of photovoltaic donor polymers with terpolymer system. Polymer, 2012, 53, 5275-5284.	1.8	16
11	Synthesis, Molecular and Photovoltaic Properties of Donor-Acceptor Conjugated Polymers Incorporating a New Heptacyclic Indacenodithieno[3,2-b]thiophene Arene. Macromolecules, 2012, 45, 9282-9291.	2.2	68
12	New TIPS-substituted benzo[1,2-b:4,5-b']dithiophene-based copolymers for application in polymer solar cells. Journal of Materials Chemistry, 2012, 22, 22224.	6.7	42
13	Synthesis of π -Conjugated Polymers Containing Fluorinated Arylene Units via Direct Arylation: Efficient Synthetic Method of Materials for OLEDs. Macromolecules, 2012, 45, 4128-4133.	2.2	140
14	Improved thin film morphology and bulk-heterojunction solar cell performance through systematic tuning of the surface energy of conjugated polymers. Journal of Materials Chemistry, 2012, 22, 5587.	6.7	73
15	Cyclopenta[c]thiophene oligomers based solution processable D-A copolymers and their application as FET materials. Polymer Chemistry, 2012, 3, 1453.	1.9	17
16	Synthesis and Photovoltaic Properties of Low Band Gap Polymers Containing Benzo[1,2-b:4,5-b']dithiophene-4,8-dione. Macromolecules, 2012, 45, 1710-1714.	2.2	48
17	Structure-Property Optimizations in Donor Polymers via Electronics, Substituents, and Side Chains Toward High Efficiency Solar Cells. Macromolecular Rapid Communications, 2012, 33, 1162-1177.	2.0	110
18	Using Cyclopenta[2,1-b:3,4-b']dithiophene-4-one as a Building Block for Low-Bandgap Conjugated Copolymers Applied in Solar Cells. Macromolecular Rapid Communications, 2012, 33, 1574-1579.	2.0	16
19	Non-Basic High-Performance Molecules for Solution-Processed Organic Solar Cells. Advanced Materials, 2012, 24, 3646-3649.	11.1	568

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20	Facile Synthesis of Fluorine-Substituted Benzothiadiazole-Based Organic Semiconductors and Their Use in Solution-Processed Small-Molecule Organic Solar Cells. <i>Chemistry - A European Journal</i> , 2012, 18, 11433-11439.	1.7	64
21	Synthesis of thienoselenadiazole-containing conjugated copolymers and their application in polymer solar cells. <i>Polymer Journal</i> , 2012, 44, 978-981.	1.3	8
22	Molecular Weight Effect on the Absorption, Charge Carrier Mobility, and Photovoltaic Performance of an Indacenodiselenophene-Based Ladder-Type Polymer. <i>Chemistry of Materials</i> , 2013, 25, 3188-3195.	3.2	155
23	Side-Chain Effect on Cyclopentadithiophene/Fluorobenzothiadiazole-Based Low Band Gap Polymers and Their Applications for Polymer Solar Cells. <i>Macromolecules</i> , 2013, 46, 5497-5503.	2.2	94
24	Development of Large Band-Gap Conjugated Copolymers for Efficient Regular Single and Tandem Organic Solar Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 13549-13557.	6.6	289
25	Highly luminescent, fluorinated semiconducting polymer dots for cellular imaging and analysis. <i>Chemical Communications</i> , 2013, 49, 8256.	2.2	43
26	Synthesis and Photovoltaic Properties of a New Low-Bandgap Polymer Consisting of Benzodithiophene and Fluorinated Benzoselenadiazole Units. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 1780-1788.	1.1	11
27	Non-halogenated solvents for environmentally friendly processing of high-performance bulk-heterojunction polymer solar cells. <i>Energy and Environmental Science</i> , 2013, 6, 3241.	15.6	168
28	Correlating molecular morphology with optoelectronic function in solar cells based on low band-gap copolymer:fullerene blends. <i>Journal of Materials Chemistry C</i> , 2013, 1, 7266.	2.7	67
29	Effect of Fluorine Substitution on Photovoltaic Properties of Benzothiadiazole-Carbazole Alternating Copolymers. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21148-21157.	1.5	53
30	Structural variation of donor-acceptor copolymers containing benzodithiophene with bithienyl substituents to achieve high open circuit voltage in bulk heterojunction solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 15535.	5.2	33
31	Synthesis and photovoltaic properties of a D-A copolymer of dithienosilole and fluorinated-benzotriazole. <i>Polymer Chemistry</i> , 2013, 4, 1467-1473.	1.9	35
32	Fluorinated Benzothiadiazole-Based Conjugated Polymers for High-Performance Polymer Solar Cells without Any Processing Additives or Post-treatments. <i>Journal of the American Chemical Society</i> , 2013, 135, 17060-17068.	6.6	327
33	Controllable Direct Arylation: Fast Route to Symmetrical and Unsymmetrical 4,7-Diaryl-5,6-difluoro-2,1,3-benzothiadiazole Derivatives for Organic Optoelectronic Materials. <i>Journal of the American Chemical Society</i> , 2013, 135, 16376-16379.	6.6	129
34	The effect of thieno[3,2-b]thiophene on the absorption, charge mobility and photovoltaic performance of diketopyrrolopyrrole-based low bandgap conjugated polymers. <i>Journal of Materials Chemistry C</i> , 2013, 1, 7526.	2.7	38
35	A New Pentacyclic Indacenodiselenophene Arene and Its Donor-Acceptor Copolymers for Solution-Processable Polymer Solar Cells and Transistors: Synthesis, Characterization, and Investigation of Alkyl/Alkoxy Side-Chain Effect. <i>Macromolecules</i> , 2013, 46, 7715-7726.	2.2	59
36	Fluorine substitution enhanced photovoltaic performance of a D-A ₁ -D-A ₂ copolymer. <i>Chemical Communications</i> , 2013, 49, 9335.	2.2	116
37	New benzotrithiophene derivative with a broad band gap for high performance polymer solar cells. <i>Polymer Chemistry</i> , 2013, 4, 57-60.	1.9	50

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38	Increased open circuit voltage in a fluorinated quinoxaline-based alternating conjugated polymer. <i>Polymer Chemistry</i> , 2013, 4, 1161-1166.	1.9	52
39	Fluorinated Polymer Yields High Organic Solar Cell Performance for a Wide Range of Morphologies. <i>Advanced Functional Materials</i> , 2013, 23, 3463-3470.	7.8	91
40	Diketopyrrolopyrrole-based liquid crystalline conjugated donor-acceptor copolymers with reduced band gap for polymer solar cells. <i>Journal of Polymer Science Part A</i> , 2013, 51, 258-266.	2.5	15
41	Ethynylene-containing donor-acceptor alternating conjugated polymers: Synthesis and photovoltaic properties. <i>Journal of Polymer Science Part A</i> , 2013, 51, 383-393.	2.5	16
42	Naphtho[1,2-b:5,6-b ²]dithiophene-based copolymers for applications to polymer solar cells. <i>Polymer Chemistry</i> , 2013, 4, 2132.	1.9	24
43	Effect of Fluorination on the Properties of a Donor-Acceptor Copolymer for Use in Photovoltaic Cells and Transistors. <i>Chemistry of Materials</i> , 2013, 25, 277-285.	3.2	218
44	A highly crystalline low band-gap polymer consisting of perylene and diketopyrrolopyrrole for organic photovoltaic cells. <i>Chemical Communications</i> , 2013, 49, 3248.	2.2	31
45	Synthesis of a Novel Low-Bandgap Polymer Based on a Ladder-Type Heptacyclic Arene Consisting of Outer Thieno[3,2-b]thiophene Units for Efficient Photovoltaic Application. <i>Macromolecular Rapid Communications</i> , 2013, 34, 681-688.	2.0	26
46	Dithiazolyl-benzothiadiazole-containing polymer acceptors: synthesis, characterization, and all-polymer solar cells. <i>Polymer Chemistry</i> , 2013, 4, 5228.	1.9	41
47	Fluorine Substituents Reduce Charge Recombination and Drive Structure and Morphology Development in Polymer Solar Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 1806-1815.	6.6	528
48	Photovoltaics of donor-acceptor polymers based on benzodithiophene with lateral thiophenyl and fluorinated benzothiadiazole. <i>Journal of Polymer Science Part A</i> , 2013, 51, 1506-1511.	2.5	23
49	Indacenodithieno[3,2-b]thiophene-based broad bandgap polymers for high efficiency polymer solar cells. <i>Polymer Chemistry</i> , 2013, 4, 5220.	1.9	42
50	Design and Synthesis of Copolymers of Indacenodithiophene and Naphtho[1,2-c:5,6-c ²]bis(1,2,5-thiadiazole) for Polymer Solar Cells. <i>Macromolecules</i> , 2013, 46, 3950-3958.	2.2	69
51	Fluorine substituted benzothiazole-based low bandgap polymers for photovoltaic applications. <i>RSC Advances</i> , 2013, 3, 11869.	1.7	20
52	3,8-Dialkoxynaphthodithiophene based copolymers for efficient polymer solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2013, 108, 213-222.	3.0	15
53	Theoretical study of phenyl-substituted indacenodithiophene copolymers for high performance organic photovoltaics. <i>Journal of Chemical Physics</i> , 2013, 138, 064901.	1.2	17
54	Increasing the Open-Circuit Voltage in High-Performance Organic Photovoltaic Devices through Conformational Twisting of an Indacenodithiophene-Based Conjugated Polymer. <i>Macromolecular Rapid Communications</i> , 2013, 34, 1623-1628.	2.0	32
55	Organic and Hybrid Solar Cells. , 2014, , .		18

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56	Recent Developments in the Synthesis and Applications of 1,2,5-Thia- and Selenadiazoles. A Review. Organic Preparations and Procedures International, 2014, 46, 475-544.	0.6	46
57	Donor Materials for Organic Solar Cell (OSC). , 2014, , 53-96.		1
58	A new polymer from fluorinated benzothiadiazole and alkoxyphenyl substituted benzo[1,2-b:4,5-b ²]dithiophene: Synthesis and photovoltaic applications. Synthetic Metals, 2014, 187, 201-208.	2.1	13
59	Fluoro-benzoselenadiazole-based low band gap polymers for high efficiency organic solar cells. Polymer Chemistry, 2014, 5, 330-334.	1.9	28
60	Highly Efficient Inverted Organic Solar Cells Through Material and Interfacial Engineering of Indacenodithieno[3,2-b:4,5-b ²]thiophene-Based Polymers and Devices. Advanced Functional Materials, 2014, 24, 1465-1473.	7.8	132
61	Substituent effect of fluorine atom on benzothiadiazole bridging unit in dye sensitized solar cells. Tetrahedron, 2014, 70, 427-433.	1.0	15
62	Si-based Earth abundant clathrates for solar energy conversion. Energy and Environmental Science, 2014, 7, 2598-2602.	15.6	31
63	Synergistic Effect of Fluorination on Molecular Energy Level Modulation in Highly Efficient Photovoltaic Polymers. Advanced Materials, 2014, 26, 1118-1123.	11.1	386
64	Synthesis of PCDTBT-Based Fluorinated Polymers for High Open-Circuit Voltage in Organic Photovoltaics: Towards an Understanding of Relationships between Polymer Energy Levels Engineering and Ideal Morphology Control. ACS Applied Materials & Interfaces, 2014, 6, 7523-7534.	4.0	88
65	Enhanced open-circuit voltage in polymer solar cells by dithieno[3,2-b:4,5-b ²]pyrrole N-acylation. Journal of Materials Chemistry A, 2014, 2, 7535-7545.	5.2	33
66	Tailored Donor-Acceptor Polymers with an D1-A-D2 Structure: Controlling Intermolecular Interactions to Enable Enhanced Polymer Photovoltaic Devices. Journal of the American Chemical Society, 2014, 136, 6049-6055.	6.6	186
67	Influence of fluorine substituents on the film dielectric constant and open-circuit voltage in organic photovoltaics. Journal of Materials Chemistry C, 2014, 2, 3278-3284.	2.7	64
68	Design and Synthesis of Molecular Donors for Solution-Processed High-Efficiency Organic Solar Cells. Accounts of Chemical Research, 2014, 47, 257-270.	7.6	446
69	Synthesis of fluorinated analogues of a practical polymer TQ for improved open-circuit voltages in polymer solar cells. Polymer Chemistry, 2014, 5, 2540.	1.9	40
70	A chlorinated phenazine-based donor-acceptor copolymer with enhanced photovoltaic performance. Polymer Chemistry, 2014, 5, 1848.	1.9	33
71	Effect of Donor-Acceptor Substitution on Optoelectronic Properties of Conducting Organic Polymers. Journal of Chemical Theory and Computation, 2014, 10, 4921-4937.	2.3	26
72	Fluorinated low band gap copolymer based on dithienosilole-benzothiadiazole for high-performance photovoltaic device. Polymer Chemistry, 2014, 5, 6279-6286.	1.9	16
73	Fluorinated Benzothiadiazole (BT) Groups as a Powerful Unit for High-Performance Electron-Transporting Polymers. ACS Applied Materials & Interfaces, 2014, 6, 20390-20399.	4.0	53

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74	Improving the photovoltaic performance of ladder-type dithienonaphthalene-containing copolymers through structural isomerization. <i>Journal of Materials Chemistry A</i> , 2014, 2, 13905-13915.	5.2	22
75	Benzothiadiazole – an excellent acceptor for indacenodithiophene based polymer solar cells. <i>RSC Advances</i> , 2014, 4, 37934-37940.	1.7	18
76	Side-Chain Engineering of Benzodithiophene-Fluorinated Quinoxaline Low-Band-Gap Copolymers for High-Performance Polymer Solar Cells. <i>Chemistry - A European Journal</i> , 2014, 20, 13259-13271.	1.7	44
77	Eleven-Membered Fused-Ring Low Band-Gap Polymer with Enhanced Charge Carrier Mobility and Photovoltaic Performance. <i>Advanced Functional Materials</i> , 2014, 24, 3631-3638.	7.8	99
78	Synthesis of poly(5,6-difluoro-2,1,3-benzothiadiazole-9,9-dioctyl-fluorene) via direct arylation polycondensation. <i>Journal of Polymer Science Part A</i> , 2014, 52, 2367-2374.	2.5	31
79	Organometallic Approaches to Conjugated Polymers for Plastic Solar Cells: From Laboratory Synthesis to Industrial Production. <i>European Journal of Organic Chemistry</i> , 2014, 2014, 6583-6614.	1.2	63
80	Semi-crystalline photovoltaic polymers with efficiency exceeding 9% in a \sim 300 nm thick conventional single-cell device. <i>Energy and Environmental Science</i> , 2014, 7, 3040-3051.	15.6	600
81	Fluorinated benzothiadiazole-based low band gap copolymers to enhance open-circuit voltage and efficiency of polymer solar cells. <i>European Polymer Journal</i> , 2014, 59, 25-35.	2.6	19
82	Effects of side chain isomerism on the physical and photovoltaic properties of indacenodithieno[3,2- <i>b</i>]thiophene-quinoxaline copolymers: toward a side chain design for enhanced photovoltaic performance. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18988-18997.	5.2	45
84	Effect of Fluorine Content in Thienothiophene-Benzodithiophene Copolymers on the Morphology and Performance of Polymer Solar Cells. <i>Chemistry of Materials</i> , 2014, 26, 3009-3017.	3.2	136
85	Synthesis, optical and electrochemical properties of small molecules DMM-TPA[DTS(FBTTh3)3] and TPA[DTS(FBTTh3)3], and their application as donors for bulk heterojunction solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 12368-12379.	5.2	16
86	High open-circuit voltage polymer solar cells based on A copolymer of indacenodithiophene and fluorine-substituted benzotriazole. <i>Organic Electronics</i> , 2014, 15, 818-823.	1.4	16
87	An Easy and Effective Method to Modulate Molecular Energy Level of the Polymer Based on Benzodithiophene for the Application in Polymer Solar Cells. <i>Advanced Materials</i> , 2014, 26, 2089-2095.	11.1	137
88	Electronic structure and photovoltaic application of BiI ₃ . <i>Applied Physics Letters</i> , 2015, 107, .	1.5	125
89	Photophysics of Molecular-Weight-Induced Losses in Indacenodithienothiophene-Based Solar Cells. <i>Advanced Functional Materials</i> , 2015, 25, 4898-4907.	7.8	61
90	Enhanced Performance of Organic Solar Cells with Increased End Group Dipole Moment in Indacenodithieno[3,2- <i>b</i>]thiophene-Based Molecules. <i>Advanced Functional Materials</i> , 2015, 25, 4889-4897.	7.8	61
91	A Large-Bandgap Conjugated Polymer for Versatile Photovoltaic Applications with High Performance. <i>Advanced Materials</i> , 2015, 27, 4655-4660.	11.1	882
92	Bulk Heterojunction Solar Cells – Opportunities and Challenges. , 0, , .		4

#	ARTICLE	IF	CITATIONS
93	Synthesis and photovoltaic properties of dithieno[3,2-b:2',3'-d]silole-based conjugated copolymers. <i>Journal of Materials Chemistry A</i> , 2015, 3, 13794-13800.	5.2	18
94	Synthesis and photovoltaic properties of conjugated copolymers containing cyclopentadithiophene and two different electron-deficient moieties in the polymer backbone. <i>Journal of Polymer Research</i> , 2015, 22, 1.	1.2	4
95	Recent Advances in P-Type Conjugated Polymers for High-Performance Solar Cells. <i>Topics in Applied Physics</i> , 2015, , 145-189.	0.4	1
96	Organic Optoelectronic Materials. <i>Lecture Notes in Quantum Chemistry II</i> , 2015, , .	0.3	33
97	Conjugated Polymer Photovoltaic Materials. <i>Lecture Notes in Quantum Chemistry II</i> , 2015, , 195-239.	0.3	3
98	Efficient solar cells based on a new polymer from fluorinated benzothiadiazole and alkylthienyl substituted thieno[2,3-f]benzofuran. <i>Dyes and Pigments</i> , 2015, 116, 139-145.	2.0	14
99	Effect of molecular weight on the properties and organic solar cell device performance of a donor-acceptor conjugated polymer. <i>Polymer Chemistry</i> , 2015, 6, 2312-2318.	1.9	70
100	4,9-Dihydro-s-indaceno[1,2-b:5,6-b']dithiophene-embedded electrochromic conjugated polymers with high coloration efficiency and fast coloration time. <i>Solar Energy Materials and Solar Cells</i> , 2015, 136, 92-99.	3.0	33
101	Benzodithiophene-thiophene-based photovoltaic polymers with different side-chains. <i>Journal of Polymer Science Part A</i> , 2015, 53, 854-862.	2.5	15
102	Scope and Limitations of a Direct Arylation Polycondensation Scheme in the Synthesis of PCPDTBT-type Copolymers. <i>Macromolecular Rapid Communications</i> , 2015, 36, 1061-1068.	2.0	56
103	Progress in High-Efficient Solution Process Organic Photovoltaic Devices. <i>Topics in Applied Physics</i> , 2015, , .	0.4	17
104	Intra- and Intermolecular Steric Hindrance Effects Induced Higher Open-Circuit Voltage and Power Conversion Efficiency. <i>ACS Macro Letters</i> , 2015, 4, 361-366.	2.3	39
105	Recent Advances in Bulk Heterojunction Polymer Solar Cells. <i>Chemical Reviews</i> , 2015, 115, 12666-12731.	23.0	2,308
106	Effects of fluorination on the electrochromic performance of benzothiadiazole-based donor-acceptor copolymers. <i>Journal of Materials Chemistry C</i> , 2015, 3, 5589-5597.	2.7	65
107	Effect of fluorination on the performance of poly(thieno[2,3-f]benzofuran-co-benzothiadiazole) derivatives. <i>RSC Advances</i> , 2015, 5, 30145-30152.	1.7	10
108	Fluorinated conjugated polymers in organic bulk heterojunction photovoltaic solar cells. <i>Progress in Polymer Science</i> , 2015, 47, 70-91.	11.8	114
109	Rational design of D_{12} conjugated polymers with superior spectral coverage. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 26677-26689.	1.3	12
110	Polymer design for solar cell - Current trend and future scenario. <i>European Polymer Journal</i> , 2015, 72, 309-340.	2.6	24

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111	Effect of fluorine substitution on the photovoltaic performance of poly(thiophene-quinoxaline) copolymers. <i>Polymer Chemistry</i> , 2015, 6, 8203-8213.	1.9	14
112	Dithienosilolothiophene: A New Polyfused Donor for Organic Electronics. <i>Macromolecules</i> , 2015, 48, 5557-5562.	2.2	3
113	Impact of fluorine substitution upon the photovoltaic properties of benzothiadiazole-fluorene alternate copolymers. <i>RSC Advances</i> , 2015, 5, 46386-46394.	1.7	27
114	Triisopropylsilylacetylene-functionalised anthracene-alt-benzothiadiazole copolymers for application in bulk heterojunction solar cells. <i>RSC Advances</i> , 2015, 5, 101607-101615.	1.7	4
115	Low band-gap weak donor–strong acceptor conjugated polymer for organic solar cell. <i>RSC Advances</i> , 2015, 5, 98876-98879.	1.7	7
116	A hexacyclic ladder-type building block for high-performance D–A copolymers. <i>Journal of Materials Chemistry A</i> , 2015, 3, 24211-24214.	5.2	21
117	Fluorination as an effective tool to increase the open-circuit voltage and charge carrier mobility of organic solar cells based on poly(cyclopenta[2,1-b:3,4-b ²]dithiophene-alt-quinoxaline) copolymers. <i>Journal of Materials Chemistry A</i> , 2015, 3, 2960-2970.	5.2	32
118	Impact of Backbone Fluorination on π -Conjugated Polymers in Organic Photovoltaic Devices: A Review. <i>Polymers</i> , 2016, 8, 11.	2.0	151
119	Twisted olefinic building blocks for low bandgap polymers in solar cells and ambipolar field-effect transistors. <i>Journal of Polymer Science Part A</i> , 2016, 54, 889-899.	2.5	7
120	Novel silicon phases and nanostructures for solar energy conversion. <i>Applied Physics Reviews</i> , 2016, 3, .	5.5	68
121	A novel crystallizable low band gap polymer for high-efficiency polymer photovoltaic cells. <i>Journal of Polymer Science Part A</i> , 2016, 54, 44-48.	2.5	2
122	Recent progress towards fluorinated copolymers for efficient photovoltaic applications. <i>Chinese Chemical Letters</i> , 2016, 27, 1241-1249.	4.8	56
123	Synthesis of fluorinated diphenyl-diketopyrrolopyrrole derivatives as new building blocks for conjugated copolymers. <i>Polymer Chemistry</i> , 2016, 7, 3311-3324.	1.9	17
124	Fluorinated benzothiadiazole-based small molecules for photovoltaic applications. <i>Synthetic Metals</i> , 2016, 220, 455-461.	2.1	17
125	Benzo[1,2,3]thiadiazole (isoBT): Synthesis, Structural Analysis, and Implementation in Semiconducting Polymers. <i>Chemistry of Materials</i> , 2016, 28, 6390-6400.	3.2	40
126	Controlling Open-Circuit Voltage in Organic Solar Cells by Terminal Fluoro-Functionalization of Narrow-Bandgap π -Conjugated Molecules. <i>Journal of Physical Chemistry C</i> , 2016, 120, 21235-21241.	1.5	16
127	Effect of fluorination and symmetry on the properties of polymeric photovoltaic materials based on an asymmetric building block. <i>RSC Advances</i> , 2016, 6, 90051-90060.	1.7	23
128	Efficiency enhancement in an indacenodithiophene and thieno[3,4-c]pyrrole-4,6-dione backbone photovoltaic polymer with an extended thieno[3,2-b]thiophene π -bridge. <i>Journal of Materials Chemistry C</i> , 2016, 4, 6280-6286.	2.7	18

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129	Utilizing intermixing of conjugated polymer and fullerene from sequential solution processing for efficient polymer solar cells. <i>Organic Electronics</i> , 2016, 36, 82-88.	1.4	9
130	Synthesis and Optoelectronic Properties of Benzo[1,2-b:4,5-b']dithiophene-Based Copolymers with Conjugated 2-(2-Ethylhexyl)-3,4-dimethoxythiophene Side Chains. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 1586-1599.	1.1	9
131	Non-fullerene acceptor with low energy loss and high external quantum efficiency: towards high performance polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 5890-5897.	5.2	219
132	Diketopyrrolopyrrole-based conjugated polymers as additives to optimize morphology for polymer solar cells. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2016, 34, 491-504.	2.0	47
133	The end-capped group effect on dithienosilole trimer based small molecules for efficient organic photovoltaics. <i>Journal of Materials Chemistry C</i> , 2016, 4, 1972-1978.	2.7	17
134	An Indacenodithiophene-Quinoxaline Polymer Prepared by Direct Arylation Polymerization for Organic Photovoltaics. <i>Macromolecules</i> , 2016, 49, 527-536.	2.2	67
135	Effect of fluorination pattern and extent on the properties of PCDTBT derivatives. <i>New Journal of Chemistry</i> , 2016, 40, 1655-1662.	1.4	14
136	C-H-Activated Direct Arylation of Strong Benzothiadiazole and Quinoxaline-Based Electron Acceptors. <i>Journal of Organic Chemistry</i> , 2016, 81, 360-370.	1.7	40
137	Enhanced high-open circuit voltage in fluorinated benzoselenadiazole-based polymer solar cells. <i>High Performance Polymers</i> , 2016, 28, 401-410.	0.8	2
138	A 1,1'-vinylene-fused indacenodithiophene-based low bandgap polymer for efficient polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5106-5114.	5.2	34
139	Indacenodithiophene: a promising building block for high performance polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10798-10814.	5.2	85
140	Step-by-step improvement in photovoltaic properties of fluorinated quinoxaline-based low-band-gap polymers. <i>Organic Electronics</i> , 2017, 47, 14-23.	1.4	28
141	The Influence of Oxygen Atoms on Conformation and π - π Stacking of Ladder-Type Donor-Based Polymers and Their Photovoltaic Properties. <i>Macromolecular Rapid Communications</i> , 2017, 38, 1700156.	2.0	6
142	The Effect of Fluorine Substitution on the Molecular Interactions and Performance in Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24011-24019.	4.0	39
143	Direct arylation polymerization toward a narrow bandgap donor-acceptor conjugated polymer of alternating 5,6-difluoro-2,1,3-benzothiadiazole and alkylquarternarythiophene: From synthesis, optoelectronic properties to devices. <i>Journal of Polymer Science Part A</i> , 2017, 55, 1869-1879.	2.5	19
144	Rational Design of High-Performance Wide-Bandgap (~ 2 eV) Polymer Semiconductors as Electron Donors in Organic Photovoltaics Exhibiting High Open Circuit Voltages (~ 1 V). <i>Macromolecular Rapid Communications</i> , 2017, 38, 1600614.	2.0	20
145	Incorporating Fluorine Substitution into Conjugated Polymers for Solar Cells: Three Different Means, Same Results. <i>Journal of Physical Chemistry C</i> , 2017, 121, 2059-2068.	1.5	22
146	Fused Perylene Diimide-Based Polymeric Acceptors for Efficient All-Polymer Solar Cells. <i>Macromolecules</i> , 2017, 50, 7559-7566.	2.2	74

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147	Two-Dimensional Conjugated Polymer Based on sp^2 -Carbon Bridged Indacenodithiophene for Efficient Polymer Solar Cells. <i>Macromolecules</i> , 2017, 50, 7984-7992.	2.2	27
148	Impact of the Catalytic System on the Formation of Structural Defects for the Synthesis of Well-Defined Donor-Acceptor Semiconducting Polymers. <i>Macromolecular Chemistry and Physics</i> , 2017, 218, 1700283.	1.1	3
149	Intense and Stable Near-Infrared Emission from Light-Emitting Electrochemical Cells Comprising a Metal-Free Indacenodithieno[3,2-b]thiophene-Based Copolymer as the Single Emitter. <i>Chemistry of Materials</i> , 2017, 29, 7750-7759.	3.2	49
150	The Curious Case of Fluorination of Conjugated Polymers for Solar Cells. <i>Accounts of Chemical Research</i> , 2017, 50, 2401-2409.	7.6	309
151	Synthesis of low bandgap small molecules containing fluorinated benzothiadiazole and phenothiazine for photovoltaic applications. <i>Molecular Crystals and Liquid Crystals</i> , 2017, 653, 27-32.	0.4	1
152	Dithieno[3,2-b:2',3'-d]pyrrole-benzo[c][1,2,5]thiadiazole conjugate small molecule donors: effect of fluorine content on their photovoltaic properties. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 20513-20522.	1.3	7
153	Indacenodithiophene-based D-A conjugated polymers for application in polymer solar cells. <i>Organic Electronics</i> , 2017, 50, 443-457.	1.4	26
154	Donor-acceptor conjugated polymers based on two-dimensional thiophene derivatives for bulk heterojunction solar cells. <i>Polymer Chemistry</i> , 2017, 8, 421-430.	1.9	19
155	Semi-crystalline A1-A2-type copolymers for efficient polymer solar cells. <i>Polymer Journal</i> , 2017, 49, 141-148.	1.3	6
156	Recent Development on Narrow Bandgap Conjugated Polymers for Polymer Solar Cells. <i>Polymers</i> , 2017, 9, 39.	2.0	44
157	Efficient post-treatment-free polymer solar cells from indacenodithiophene and fluorinated quinoxaline-based conjugated polymers. <i>Dyes and Pigments</i> , 2018, 154, 164-171.	2.0	5
158	Synthesis and photovoltaic properties of new D-A copolymers based on 5,6-bis(2-ethylhexyl)naphtha[2,1-b:3,4-b']dithiophene-2,9-diyl donor and fluorine substituted 6,7-bis(9,9-didodecyl-9H-fluorene-2-yl)[1,2,5]thiadiazolo[3,4-g]quinoxaline acceptor units. <i>Journal of Polymer Science Part A</i> , 2018, 56, 1297-1307.	2.5	2
159	Facile Synthesis of the O-Functionalized Ladder-Type Dipyran Building Block and Its Application in Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 13931-13940.	4.0	9
160	Effect of Fluorination on the Photovoltaic Properties of Medium Bandgap Polymers for Polymer Solar Cells. <i>Chinese Journal of Chemistry</i> , 2018, 36, 502-506.	2.6	4
161	Organic electronics by design: the power of minor atomic and structural changes. <i>Journal of Materials Chemistry C</i> , 2018, 6, 3564-3572.	2.7	21
162	Synthesis and photovoltaic properties of copolymers with a fluoro quinoxaline unit. <i>Journal of Polymer Science Part A</i> , 2018, 56, 821-830.	2.5	18
163	Investigating the effect of heteroatom substitution in 2,1,3-benzoxadiazole and 2,1,3-benzothiadiazole compounds for organic photovoltaics. <i>Journal of Materials Chemistry C</i> , 2018, 6, 3709-3714.	2.7	11
164	Indaceno-Based Conjugated Polymers for Polymer Solar Cells. <i>Macromolecular Rapid Communications</i> , 2018, 39, e1700697.	2.0	23

#	ARTICLE	IF	CITATIONS
165	Enhanced Charge Transfer, Transport and Photovoltaic Efficiency in All-Polymer Organic Solar Cells by Polymer Backbone Fluorination. Chinese Journal of Chemistry, 2018, 36, 280-286.	2.6	5
166	4-Hydroxy-1,2,6-Thiadiazine-containing donor-acceptor conjugated polymers: synthesis, optoelectronic characterization and their use in organic solar cells. Journal of Materials Chemistry C, 2018, 6, 3658-3667.	2.7	10
167	Asymmetric, efficient π -conjugated organic semiconducting chromophore for bulk-heterojunction organic photovoltaics. Dyes and Pigments, 2018, 149, 141-148.	2.0	14
168	Designing 1,5-Naphthyridine-2,6-dione-Based Conjugated Polymers for Higher Crystallinity and Enhanced Light Absorption to Achieve 9.63% Efficiency Polymer Solar Cells. Advanced Energy Materials, 2018, 8, 1701467.	10.2	16
169	Impact of Acceptor Fluorination on the Performance of All-Polymer Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 955-969.	4.0	31
170	Optimization of the Donor Material Structure and Processing Conditions to Obtain Efficient Small-Molecule Donors for Bulk Heterojunction Solar Cells. ChemPhotoChem, 2018, 2, 81-88.	1.5	1
171	Polymer semiconductors incorporating head-to-head linked 4-alkoxy-5-(3-alkylthiophen-2-yl)thiazole. RSC Advances, 2018, 8, 35724-35734.	1.7	6
172	Optimizing F content of donor units by ternary copolymerization for effective heterojunction solar cells. Synthetic Metals, 2018, 246, 178-184.	2.1	1
173	Characterization of push-pull type of conjugated polymers containing 8H-thieno[2,3-b]indole for organic photovoltaics. Synthetic Metals, 2018, 245, 267-275.	2.1	9
174	Fluorinated naphtho[1,2-c:5,6-c']bis[1,2,5]thiadiazole-containing π -conjugated compound: synthesis, properties, and acceptor applications in organic solar cells. NPG Asia Materials, 2018, 10, 1016-1028.	3.8	19
175	Transforming the molecular orientation of crystalline lamellae by the degree of multi-fluorination within π -A copolymers and its effect on photovoltaic performance. Journal of Materials Chemistry C, 2018, 6, 10513-10523.	2.7	2
176	Substituent effects on furan-phenylene copolymer for photovoltaic improvement: A density functional study. Chemical Physics, 2018, 510, 60-69.	0.9	9
177	Benzothiadiazole, hexylthiophen and alkoxy benzene based solution processable copolymer: Effect of the electron withdrawing substituents (fluorine atoms) on electrochemical, optical and electrochromic properties. Organic Electronics, 2018, 61, 1-9.	1.4	23
178	Solvent-Free Pd-Catalyzed Heteroaryl-Aryl Coupling via C-H Bond Activation for the Synthesis of Extended Heteroaromatic Conjugated Molecules. Journal of Organic Chemistry, 2018, 83, 9312-9321.	1.7	26
179	Recent Developments in C-H Activation for Materials Science in the Center for Selective C-H Activation. Molecules, 2018, 23, 922.	1.7	47
180	An Asymmetrical Polymer Based on Thieno[2,3-b]benzofuran for Efficient Fullerene-Free Polymer Solar Cells. ACS Applied Energy Materials, 2018, 1, 1888-1892.	2.5	18
181	Synthesis and characterization of a donor-acceptor type copolymer containing ester-functionalized benzo[c][1,2,5]thiadiazole as an accepting building block for organic photovoltaics. Thin Solid Films, 2018, 663, 56-61.	0.8	4
182	Investigation of Fluorine Atom Effect on Benzothiadiazole Acceptor Unit in Donor Acceptor Donor Systems. Journal of the Electrochemical Society, 2019, 166, G141-G147.	1.3	13

#	ARTICLE	IF	CITATIONS
183	Benzothiadiazole Halogenation Impact in Conjugated Polymers, a Comprehensive Study. <i>Macromolecules</i> , 2019, 52, 8006-8016.	2.2	26
184	Effect of multiple electron-withdrawing substituents on photovoltaic properties of quinoxaline-based polymers. <i>Molecular Crystals and Liquid Crystals</i> , 2019, 685, 14-21.	0.4	2
185	Recent advances in molecular design of functional conjugated polymers for high-performance polymer solar cells. <i>Progress in Polymer Science</i> , 2019, 99, 101175.	11.8	140
186	Photoelectronic properties of composite films based on conductive polymer PIDT-BT and single-walled carbon nanotubes. <i>SN Applied Sciences</i> , 2019, 1, 1.	1.5	0
187	Backbone Fluorination of Polythiophenes Improves Device Performance of Non-Fullerene Polymer Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 7572-7583.	2.5	38
188	Synthesis of conjugated polymers with directly coupled 2-butyloctyloxybenzodithiophene and benzothiadiazole units for application as active layers in organic solar cells. <i>Reactive and Functional Polymers</i> , 2019, 144, 104355.	2.0	11
189	Medium-Bandgap Conjugated Polymer Donors for Organic Photovoltaics. <i>Macromolecular Rapid Communications</i> , 2019, 40, e1900074.	2.0	30
190	Synthesis of dipolar molecular rotors as linkers for metal-organic frameworks. <i>Beilstein Journal of Organic Chemistry</i> , 2019, 15, 1331-1338.	1.3	3
191	Dithienosilole- <i>co</i> -5-fluoro-2,1,3-benzothiadiazole-containing regioisomeric polymers for organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2019, 7, 8522-8526.	2.7	8
192	Fluorination effects of A-D-A small molecule donors based benzotriazole for organic solar cells. <i>Synthetic Metals</i> , 2019, 251, 95-103.	2.1	9
193	Significant Effect of Fluorination on Simultaneously Improving Work Function and Transparency of Anode Interlayer for Organic Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1803826.	10.2	21
194	Enhanced Photovoltaic Performance in D-A Copolymers Containing Triisopropylsilylethynyl-Substituted Dithienobenzodithiophene by Modulating the Electron-Deficient Units. <i>Polymers</i> , 2019, 11, 12.	2.0	28
195	Fluorinated dithienyl-diketopyrrolopyrrole: a new building block for organic optoelectronic materials. <i>New Journal of Chemistry</i> , 2019, 43, 16411-16420.	1.4	8
196	Enhanced open-circuit voltages of trifluoromethylated quinoxaline-based polymer solar cells. <i>Organic Electronics</i> , 2019, 65, 363-369.	1.4	8
197	The role of data source selection in chemical hazard assessment: A case study on organic photovoltaics. <i>Journal of Hazardous Materials</i> , 2019, 365, 227-236.	6.5	7
198	Angular/linear-shaped indacenodithiophene (IDT) for donor-acceptor copolymers: Geometric shape effects on physical properties and photovoltaic performance. <i>Polymer</i> , 2019, 162, 11-19.	1.8	8
199	Fluorene based amorphous hole transporting materials for solution processed organic light-emitting diodes. <i>Organic Electronics</i> , 2020, 79, 105633.	1.4	20
200	Dopant-Free, Donor-Acceptor-Type Polymeric Hole-Transporting Materials for the Perovskite Solar Cells with Power Conversion Efficiencies over 20%. <i>Advanced Energy Materials</i> , 2020, 10, 1903146.	10.2	74

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201	New Conjugated Polymers Based on Dithieno[2,3- <i>b</i> :3',2'- <i>b'</i>]isindole-7,9(8H)-dione Derivatives for Applications in Nonfullerene Polymer Solar Cells. <i>Solar Rrl</i> , 2020, 4, 1900475.	3.1	7
202	Redox-active fluoropolymers. , 2020, , 115-141.		1
203	Donor-acceptor Type Polymers Containing Fused-Ring Units as Dopant-Free, Hole-Transporting Materials for High-Performance Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2020, 3, 12475-12483.	2.5	15
204	Preparation and Characterization of Quinoxaline-Pyrene-Based Conjugated Copolymers for Organic Photovoltaic Devices. <i>Coatings</i> , 2020, 10, 1098.	1.2	3
205	Highly efficient non-fullerene polymer solar cells from a benzo[1,2- <i>b</i> :4,5- <i>b'</i>]difuran-based conjugated polymer with improved stabilities. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11381-11390.	5.2	13
206	Electrochemical synthesis of fluorinated polyanilines. <i>Electrochimica Acta</i> , 2020, 348, 136329.	2.6	7
207	Fluorination of a polymer donor through the trifluoromethyl group for high-performance polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12149-12155.	5.2	12
208	Effect of fluorine substituents on benzothiadiazole-based D- π -A photosensitizers for dye-sensitized solar cells. <i>RSC Advances</i> , 2020, 10, 9203-9209.	1.7	12
209	Fluorination Effect for Highly Conjugated Alternating Copolymers Involving Thienylenevinylene-Thiophene-Flanked Benzodithiophene and Benzothiadiazole Subunits in Photovoltaic Application. <i>Polymers</i> , 2020, 12, 504.	2.0	7
210	Effect of fluorine on optoelectronic properties in DI-A-DII-A-DI type organic molecules: A combined experimental and DFT study. <i>Journal of Molecular Structure</i> , 2020, 1210, 128019.	1.8	7
211	Development of conjugated polymers for organic flexible electronics. , 2021, , 27-70.		4
212	Organic Semiconductors at the University of Washington: Advancements in Materials Design and Synthesis and toward Industrial Scale Production. <i>Advanced Materials</i> , 2021, 33, e1904239.	11.1	25
213	Alkoxy functionalized benzothiadiazole based donor-acceptor conjugated copolymers for organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2021, 9, 5113-5123.	2.7	22
214	An Effective Strategy to Design a Large Bandgap Conjugated Polymer by Tuning the Molecular Backbone Curvature. <i>Macromolecular Rapid Communications</i> , 2021, 42, 2000757.	2.0	7
215	Effect of fluorine atoms on optoelectronic, aggregation and dielectric constants of 2,1,3-benzothiadiazole-based alternating conjugated polymers. <i>Dyes and Pigments</i> , 2021, 193, 109486.	2.0	18
216	Structure-property relationship of donor-acceptor type conjugated copolymers with thienisoquinoline and benzothiadiazole units. <i>Dyes and Pigments</i> , 2021, 195, 109728.	2.0	1
217	An indacenodithiophene core moiety for organic solar cells. <i>Materials Chemistry Frontiers</i> , 2021, 5, 7724-7736.	3.2	10
218	Fundamental Study on Organic Solar Cells Based on Soluble Zinc Phthalocyanine. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 04DK09.	0.8	6

#	ARTICLE	IF	CITATIONS
219	Fluorine-containing triblock copolymers as solid-state polymer electrolytes for lithium metal batteries. <i>Journal of Power Sources</i> , 2021, 516, 230686.	4.0	23
220	Density functional theory study of donor-acceptor conjugated polymers with substituent effect. <i>Journal of Polymer Research</i> , 2021, 28, 1.	1.2	4
221	Effect of Bulky Atom Substitution on Backbone Coplanarity and Electrical Properties of Cyclopentadithiophene-Based Semiconducting Polymers. <i>Macromolecular Rapid Communications</i> , 2022, 43, e2100709.	2.0	2
222	Solution-processable phenothiazine and phenoxazine substituted fluorene cored nanotextured hole transporting materials for achieving high-efficiency OLEDs. <i>Journal of Materials Chemistry C</i> , 2022, 10, 3593-3608.	2.7	20
223	Achieve Better Performance of Inverted Perovskite Solar Cells by Using the Fluorinated Polymer as the Electron Transporting Layer. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	2
225	Fluorinated phenanthrenequinoxaline-based D-A type copolymers for non-fullerene polymer solar cells. <i>Polymer</i> , 2022, 250, 124867.	1.8	0
226	Achieving High-Efficiency Organic Photovoltaics from a New Completely Amorphous Donor Polymer. <i>Chemistry of Materials</i> , 2022, 34, 5103-5115.	3.2	9
227	Benzotriazole-EDOT electrochromic conjugated polymers show sub-second response time and $774 \text{ cm}^2/\text{s}$ coloration efficiency. <i>New Journal of Chemistry</i> , 2022, 46, 16684-16692.	1.4	5
228	Fluorinated Benzothiadiazole-based polymers with chalcogenophenes for organic field-effect transistors. <i>Organic Electronics</i> , 2022, 111, 106649.	1.4	6
229	Synthesis and Characterization of Polymers Containing Ethynylene and Ethynylene-Thiophene Based Alternating Polymers Containing 2,1,3-Linked Naphthothiadiazole Units as Acceptor Linked with Fluorine as Donor: Electrochemical and Spectroscopic Studies. <i>Polymers</i> , 2022, 14, 4139.	2.0	2
230	Large Transconductance of Electrochemical Transistors Based on Fluorinated Donor-Acceptor Conjugated Polymers. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 1629-1638.	4.0	1
231	Electronic Structure and Optoelectronic Properties of a New Polymer Series (N-alkyl 2-pyridone) <i>Tj ETQq1 1 0.784314 rgBT /Overlock</i> 2022, , 157-173.	0.2	2
232	Perfluoropolyether-based block copolymer electrolytes enabling high-temperature-resistant solid-state lithium metal batteries. <i>Journal of Power Sources</i> , 2023, 561, 232751.	4.0	4
233	Modulation of Dielectric Constant and Photovoltaic Properties of 2,1,3-benzothiadiazole-based Alternating Copolymers by Adding Fluorine Atoms to the Backbone of Polymers. <i>ChemistrySelect</i> , 2023, 8, .	0.7	2
234	Lest We Forget-The Importance of Heteroatom Interactions in Heterocyclic Conjugated Systems, from Synthetic Metals to Organic Semiconductors. <i>Advanced Materials</i> , 0, , .	11.1	4