CITATION REPORT List of articles citing

An electron acceptor challenging fullerenes for efficient polymer solar cells

DOI: 10.1002/adma.201404317 Advanced Materials, 2015, 27, 1170-4.

Source: https://exaly.com/paper-pdf/61622775/citation-report.pdf

Version: 2024-04-09

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
2254	Roll-Coated Fabrication of Fullerene-Free Organic Solar Cells with Improved Stability. 2015 , 2, 1500096		75
2253	Influence of Molecular Geometry of Perylene Diimide Dimers and Polymers on Bulk Heterojunction Morphology Toward High-Performance Nonfullerene Polymer Solar Cells. 2015 , 25, 5326-5332		106
2252	Designing Efficient Non-Fullerene Acceptors by Tailoring Extended Fused-Rings with Electron-Deficient Groups. 2015 , 5, 1501063		196
2251	High-Performance Non-Fullerene Polymer Solar Cells Based on a Pair of Donor-Acceptor Materials with Complementary Absorption Properties. <i>Advanced Materials</i> , 2015 , 27, 7299-304	24	219
2250	Conjoint use of Dibenzosilole and Indan-1,3-dione Functionalities to Prepare an Efficient Non-Fullerene Acceptor for Solution-Processable Bulk-Heterojunction Solar Cells. 2015 , 4, 1096-1102		21
2249	Efficient non-fullerene polymer solar cells enabled by tetrahedron-shaped core based 3D-structure small-molecular electron acceptors. 2015 , 3, 13632-13636		92
2248	A perylene diimide (PDI)-based small molecule with tetrahedral configuration as a non-fullerene acceptor for organic solar cells. 2015 , 3, 4698-4705		164
2247	Perylene and naphthalene diimide polymers for all-polymer solar cells: a comparative study of chemical copolymerization and physical blend. 2015 , 6, 5254-5263		42
2246	A 1,8-naphthalimide based small molecular acceptor for polymer solar cells with high open circuit voltage. 2015 , 3, 6979-6985		37
2245	High efficiency all-polymer solar cells realized by the synergistic effect between the polymer side-chain structure and solvent additive. 2015 , 3, 7077-7085		70
2244	Solution-processed boron subphthalocyanine derivatives as acceptors for organic bulk-heterojunction solar cells. 2015 , 3, 7345-7352		58
2243	Novel Small Molecular Materials Based on Phenoxazine Core Unit for Efficient Bulk Heterojunction Organic Solar Cells and Perovskite Solar Cells. 2015 , 27, 1808-1814		91
2242	Phthalimide-based £conjugated small molecules with tailored electronic energy levels for use as acceptors in organic solar cells. 2015 , 3, 8904-8915		57
2241	Spirobifluorene-based acceptors for polymer solar cells: Effect of isomers. 2015 , 123, 16-25		15
2240	Key components to the recent performance increases of solution processed non-fullerene small molecule acceptors. 2015 , 3, 16393-16408		151
2239	New conjugated molecules with four DPP (diketopyrrolopyrrole) moieties linked by [2,2]paracyclophane as electron acceptors for organic photovoltaic cells. 2015 , 39, 6421-6427		7
2238	Development of small-molecule materials for high-performance organic solar cells. 2015 , 58, 922-936		37

(2015-2015)

2237	Enhanced Efficiency in Fullerene-Free Polymer Solar Cell by Incorporating Fine-designed Donor and Acceptor Materials. 2015 , 7, 9274-80	97
2236	An N-ethylated barbituric acid end-capped bithiophene as an electron-acceptor material in fullerene-free organic photovoltaics. 2015 , 51, 6222-5	17
2235	NDI-Based Small Molecule as Promising Nonfullerene Acceptor for Solution-Processed Organic Photovoltaics. 2015 , 5, 1500195	91
2234	Oligothiophene-bridged perylene diimide dimers for fullerene-free polymer solar cells: effect of bridge length. 2015 , 3, 13000-13010	40
2233	Interface engineering for efficient fullerene-free organic solar cells. 2015 , 106, 123301	19
2232	Pivotal factors in solution-processed, non-fullerene, all small-molecule organic solar cell device optimization. 2015 , 27, 197-201	11
2231	A planar electron acceptor for efficient polymer solar cells. 2015 , 8, 3215-3221	283
2230	The structural evolution of an isoindigo-based non-fullerene acceptor for use in organic photovoltaics. 2015 , 5, 80098-80109	40
2229	Fullerene-free organic photovoltaics based on unconventional material combination: a molecular donor and polymeric acceptors. 2015 , 3, 22325-22331	14
2228	Non-fullerene electron acceptors for use in organic solar cells. 2015 , 48, 2803-12	944
2227	New advances in non-fullerene acceptor based organic solar cells. 2015 , 5, 93002-93026	138
2226	Dynamics, Miscibility, and Morphology in Polymer:Molecule Blends: The Impact of Chemical Functionality. 2015 , 27, 7643-7651	16
2225	Efficient ternary polymer solar cells with a parallel-linkage structure. 2015 , 3, 11930-11936	30
2224	Enhanced efficiency of polymer photovoltaic cells via the incorporation of a water-soluble naphthalene diimide derivative as a cathode interlayer. 2015 , 3, 9565-9571	49
2223	Pyrene terminal functionalized perylene diimide as non-fullerene acceptors for bulk heterojunction solar cells. 2015 , 5, 83155-83163	19
2222	Comparison of conventional and inverted structures in fullerene-free organic solar cells. 2015 , 24, 744-749	17
2221	Non-Fullerene-Acceptor-Based Bulk-Heterojunction Organic Solar Cells with Efficiency over 7. 2015 , 137, 11156-62	440
2220	Three-dimensional molecular donors combined with polymeric acceptors for high performance fullerene-free organic photovoltaic devices. 2015 , 3, 22162-22169	28

2219	Investigating the crystalline nature, charge transport properties and photovoltaic performances of ladder-type donor based small molecules. 2015 , 5, 80677-80681		5
2218	Beyond Fullerenes: Designing Alternative Molecular Electron Acceptors for Solution-Processable Bulk Heterojunction Organic Photovoltaics. 2015 , 6, 3770-80		121
2217	Star-shaped isoindigo-based small molecules as potential non-fullerene acceptors in bulk heterojunction solar cells. 2015 , 39, 8771-8779		23
2216	The influence of spacer units on molecular properties and solar cell performance of non-fullerene acceptors. 2015 , 3, 20108-20112		36
2215	Nonfullerene acceptors based on extended fused rings flanked with benzothiadiazolylmethylenemalononitrile for polymer solar cells. 2015 , 3, 20758-20766		84
2214	Molecular helices as electron acceptors in high-performance bulk heterojunction solar cells. 2015 , 6, 8242		475
2213	Effect of Fluorine Substitution on Photovoltaic Properties of Alkoxyphenyl Substituted Benzo[1,2-b:4,5-b']dithiophene-Based Small Molecules. 2015 , 7, 25237-46		32
2212	Small Molecules Based on Alkyl/Alkylthio-thieno[3,2-b]thiophene-Substituted Benzo[1,2-b:4,5-b?]dithiophene for Solution-Processed Solar Cells with High Performance. 2015 , 27, 841	4-842	3 ⁶³
2211	Geometrically controlled organic small molecule acceptors for efficient fullerene-free organic photovoltaic devices. 2016 , 4, 12308-12318		48
2210	Fullerene-Free Polymer Solar Cells with over 11% Efficiency and Excellent Thermal Stability. <i>Advanced Materials</i> , 2016 , 28, 4734-9	24	1507
2210		24	1507 74
	Advanced Materials, 2016, 28, 4734-9 A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar	24	
2209	Advanced Materials, 2016, 28, 4734-9 A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar Cells. 2016, 6, 1600742 Naphthalenediimide-alt-Fused Thiophene D-A Copolymers for the Application as Acceptor in All-Polymer Solar Cells. 2016, 11, 2785-2791 A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations.	24	74
2209	Advanced Materials, 2016, 28, 4734-9 A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar Cells. 2016, 6, 1600742 Naphthalenediimide-alt-Fused Thiophene D-A Copolymers for the Application as Acceptor in All-Polymer Solar Cells. 2016, 11, 2785-2791 A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations.		74
2209 2208 2207	Advanced Materials, 2016, 28, 4734-9 A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar Cells. 2016, 6, 1600742 Naphthalenediimide-alt-Fused Thiophene D-A Copolymers for the Application as Acceptor in All-Polymer Solar Cells. 2016, 11, 2785-2791 A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations. Advanced Materials, 2016, 28, 910-6 Green-Solvent-Processed All-Polymer Solar Cells Containing a Perylene Diimide-Based Acceptor		74 18 164
2209 2208 2207 2206	Advanced Materials, 2016, 28, 4734-9 A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar Cells. 2016, 6, 1600742 Naphthalenediimide-alt-Fused Thiophene D-A Copolymers for the Application as Acceptor in All-Polymer Solar Cells. 2016, 11, 2785-2791 A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations. Advanced Materials, 2016, 28, 910-6 Green-Solvent-Processed All-Polymer Solar Cells Containing a Perylene Diimide-Based Acceptor with an Efficiency over 6.5%. 2016, 6, 1501991 Achieving high performance non-fullerene organic solar cells through tuning the numbers of		74 18 164 148
2209 2208 2207 2206	A Wide Bandgap Polymer with Strong Interaction for Efficient Fullerene-Free Polymer Solar Cells. 2016, 6, 1600742 Naphthalenediimide-alt-Fused Thiophene D-A Copolymers for the Application as Acceptor in All-Polymer Solar Cells. 2016, 11, 2785-2791 A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations. Advanced Materials, 2016, 28, 910-6 Green-Solvent-Processed All-Polymer Solar Cells Containing a Perylene Diimide-Based Acceptor with an Efficiency over 6.5%. 2016, 6, 1501991 Achieving high performance non-fullerene organic solar cells through tuning the numbers of electron deficient building blocks of molecular acceptors. 2016, 324, 538-546 An Electron-Deficient Building Block Based on the B<-N Unit: An Electron Acceptor for All-Polymer	24	74 18 164 148 35

(2016-2016)

2201	Breaking the 10% Efficiency Barrier in Organic Photovoltaics: Morphology and Device Optimization of Well-Known PBDTTT Polymers. 2016 , 6, 1502529	267
2200	Naphtho[1,2-c:5,6-c?]bis[1,2,5]thiadiazole-Containing EConjugated Compound: Nonfullerene Electron Acceptor for Organic Photovoltaics. 2016 , 26, 1161-1168	37
2199	Difluorobenzothiadiazole-Based Small-Molecule Organic Solar Cells with 8.7% Efficiency by Tuning of EConjugated Spacers and Solvent Vapor Annealing. 2016 , 26, 1803-1812	94
2198	11.4% Efficiency non-fullerene polymer solar cells with trialkylsilyl substituted 2D-conjugated polymer as donor. 2016 , 7, 13651	822
2197	Tellurophene-Based N-type Copolymers for Photovoltaic Applications. 2016 , 8, 34620-34629	26
2196	A novel porphyrin-containing polyimide for memory devices. 2016 , 7, 2780-2784	40
2195	A Nonfullerene Small Molecule Acceptor with 3D Interlocking Geometry Enabling Efficient Organic Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 69-76	186
2194	Covalently Bound Clusters of Alpha-Substituted PDI-Rival Electron Acceptors to Fullerene for Organic Solar Cells. 2016 , 138, 7248-51	346
2193	Chemical modification of AlQ3 to a potential electron acceptor for solution-processed organic solar cells. 2016 , 57, 2797-2799	
2192	Perylene diimide based all small-molecule organic solar cells: Impact of branched-alkyl side chains on solubility, photophysics, self-assembly, and photovoltaic parameters. 2016 , 35, 151-157	46
2191	A four-directional non-fullerene acceptor based on tetraphenylethylene and diketopyrrolopyrrole functionalities for efficient photovoltaic devices with a high open-circuit voltage of 1.18 V. 2016 , 52, 8522-5	59
2190	Understanding the morphology of solution processed fullerene-free small molecule bulk heterojunction blends. 2016 , 18, 12476-85	26
2189	Synthesis and photovoltaic properties of low bandgap dimeric perylene diimide based non-fullerene acceptors. 2016 , 59, 209-217	22
2188	A Fluorinated Polythiophene Derivative with Stabilized Backbone Conformation for Highly Efficient Fullerene and Non-Fullerene Polymer Solar Cells. 2016 , 49, 2993-3000	125
2187	A perylene bisimide derivative with a LUMO level of 🛭 .56 eV for non-fullerene solar cells. 2016 , 4, 4134-4137	20
2186	Naphthalene diimide-based non-fullerene acceptors for simple, efficient, and solution-processable bulk-heterojunction devices. 2016 , 6, 38703-38708	15
2185	Perfluoroalkyl-substituted conjugated polymers as electron acceptors for all-polymer solar cells: the effect of diiodoperfluoroalkane additives. 2016 , 4, 7736-7745	25
2184	Morphology-dependent charge recombination through localized states in polymer/polymer blend solar cells. 2016 , 33, 55-61	7

2183	Roll coated large area ITO- and vacuum-free all organic solar cells from diketopyrrolopyrrole based non-fullerene acceptors with molecular geometry effects. 2016 , 6, 41542-41550		11
2182	Trifluoromethyl-functionalized bathocuproine for polymer solar cells. 2016 , 4, 4640-4646		10
2181	A comparative study of photovoltaic performance between non-fullerene and fullerene based organic solar cells. 2016 , 6, 43715-43718		11
2180	1,8-Naphthalimide-based nonfullerene acceptors for wide optical band gap polymer solar cells with an ultrathin active layer thickness of 35 nm. 2016 , 4, 5656-5663		37
2179	Highly Efficient Fullerene-Free Polymer Solar Cells Fabricated with Polythiophene Derivative. <i>Advanced Materials</i> , 2016 , 28, 9416-9422	24	253
2178	Energy-Level Modulation of Small-Molecule Electron Acceptors to Achieve over 12% Efficiency in Polymer Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 9423-9429	24	1191
2177	Theoretical investigations of the small molecular acceptor materials based on oligothiophene In naphthalene diimide in organic solar cells. 2016 , 6, 102159-102171		9
2176	Impact of Fullerene Mixing Behavior on the Microstructure, Photophysics, and Device Performance of Polymer/Fullerene Solar Cells. 2016 , 8, 29608-29618		23
2175	Non-fullerene small molecule acceptors based on perylene diimides. 2016 , 4, 17604-17622		227
2174	Narrow bandgap conjugated polymers based on a high-mobility polymer template for visibly transparent photovoltaic devices. 2016 , 4, 17333-17343		15
2173	Tetrafluoroquinoxaline based polymers for non-fullerene polymer solar cells with efficiency over 9%. 2016 , 30, 312-320		86
2172	Tuning the fused aromatic rings to enhance photovoltaic performance in wide band-gap polymer solar cells. 2016 , 104, 130-137		9
2171	Indenothiophene-Based Wide Bandgap Copolymer for Polymer Fullerene Solar Cells with 9.01% Efficiency and 1.0 V Open Circuit Voltage. 2016 , 2, 1600340		27
2170	Organic Optoelectronic Materials: Mechanisms and Applications. 2016 , 116, 13279-13412		892
2169	Highly efficient and thermally stable fullerene-free organic solar cells based on a small molecule donor and acceptor. 2016 , 4, 16335-16340		77
2168	Processing a pyridyl-based polymeric additive for improved photovoltaic performance of a wide-bandgap Econjugated polymer. 2016 , 4, 8052-8060		5
2167	A fused-ring based electron acceptor for efficient non-fullerene polymer solar cells with small HOMO offset. 2016 , 27, 430-438		112
2166	Reduced Intramolecular Twisting Improves the Performance of 3D Molecular Acceptors in Non-Fullerene Organic Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 8546-8551	24	143

(2016-2016)

2165	Highly Sensitive Organic Photodetectors with Tunable Spectral Response under Bi-Directional Bias. 2016 , 4, 1711-1717	60
2164	Conjugated DonorAcceptor Polymers Entailing Pechmann Dye-Derived Acceptor with Siloxane-Terminated Side Chains Exhibiting Balanced Ambipolar Semiconducting Behavior. 2016 , 49, 5857-5865	30
2163	Realizing 11.3% efficiency in fullerene-free polymer solar cells by device optimization. 2016 , 59, 1574-1582	72
2162	High-Performance Non-Fullerene Organic Solar Cells Based on a Selenium-Containing Polymer Donor and a Twisted Perylene Bisimide Acceptor. 2016 , 3, 1600117	72
2161	Molecular Engineering on Conjugated Side Chain for Polymer Solar Cells with Improved Efficiency and Accessibility. 2016 , 28, 5887-5895	54
2160	Effect of Alkyl Side Chains of Conjugated Polymer Donors on the Device Performance of Non-Fullerene Solar Cells. 2016 , 49, 6445-6454	70
2159	A non-fullerene acceptor with a fully fused backbone for efficient polymer solar cells with a high open-circuit voltage. 2016 , 4, 14983-14987	87
2158	Alkoxy substituted benzodithiophene-alt-fluorobenzotriazole copolymer as donor in non-fullerene polymer solar cells. 2016 , 59, 1317-1322	20
2157	Semitransparent, non-fullerene and flexible all-plastic solar cells. 2016 , 107, 108-112	36
2156	A fused thieno[3,2-b]thiophene-dithiophene based donor molecule for organic photovoltaics: a structural comparative study with indacenodithiophene. 2016 , 4, 9656-9663	4
2155	Nonfullerene Tandem Organic Solar Cells with High Open-Circuit Voltage of 1.97 V. <i>Advanced Materials</i> , 2016 , 28, 9729-9734	98
2154	Ternary-Blend Polymer Solar Cells Combining Fullerene and Nonfullerene Acceptors to Synergistically Boost the Photovoltaic Performance. <i>Advanced Materials</i> , 2016 , 28, 9559-9566	242
2153	Design and Synthesis of a Low Bandgap Small Molecule Acceptor for Efficient Polymer Solar Cells. Advanced Materials, 2016, 28, 8283-8287	373
2152	Structure Evolution of Oligomer Fused-Ring Electron Acceptors toward High Efficiency of As-Cast Polymer Solar Cells. 2016 , 6, 1600854	141
2151	High-Efficiency Nonfullerene Polymer Solar Cells with Medium Bandgap Polymer Donor and Narrow Bandgap Organic Semiconductor Acceptor. <i>Advanced Materials</i> , 2016 , 28, 8288-8295	224
2150	Diketopyrrolopyrrole-based oligomers accessed via sequential C H activated coupling for fullerene-free organic photovoltaics. 2016 , 134, 139-147	34
2149	Fast charge separation in a non-fullerene organic solar cell with a small driving force. 2016 , 1,	967
2148	A Thieno[3,4-b]thiophene-Based Non-fullerene Electron Acceptor for High-Performance Bulk-Heterojunction Organic Solar Cells. 2016 , 138, 15523-15526	269

2147	High Performance Small-Molecule Cathode Interlayer Materials with D-A-D Conjugated Central Skeletons and Side Flexible Alcohol/Water-Soluble Groups for Polymer Solar Cells. 2016 , 8, 32823-32832	28
2146	Side-Chain Isomerization on an n-type Organic Semiconductor ITIC Acceptor Makes 11.77% High Efficiency Polymer Solar Cells. 2016 , 138, 15011-15018	747
2145	Fullerene-free polymer solar cell based on a polythiophene derivative with an unprecedented energy loss of less than 0.5 eV. 2016 , 4, 18043-18049	75
2144	Donor polymer design enables efficient non-fullerene organic solar cells. 2016 , 7, 13094	298
2143	Design, Synthesis, and Self-Assembly Behavior of Liquid-Crystalline Bis-[60]Fullerodendrimers. 2016 , 22, 17366-17376	10
2142	New insight of molecular interaction, crystallization and phase separation in higher performance small molecular solar cells via solvent vapor annealing. 2016 , 30, 639-648	58
2141	From Fullerene-Polymer to All-Polymer Solar Cells: The Importance of Molecular Packing, Orientation, and Morphology Control. 2016 , 49, 2424-2434	351
2140	High-efficiency and air-stable P3HT-based polymer solar cells with a new non-fullerene acceptor. 2016 , 7, 11585	903
2139	Rigidifying Nonplanar Perylene Diimides by Ring Fusion Toward Geometry-Tunable Acceptors for High-Performance Fullerene-Free Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 951-8	222
2138	Organic Semiconductors based on Dyes and Color Pigments. <i>Advanced Materials</i> , 2016 , 28, 3615-45 24	298
2137	An Electron-Deficient Building Block Based on the B<-N Unit: An Electron Acceptor for All-Polymer Solar Cells. 2016 , 55, 1436-40	186
2136	A simple small molecule as an acceptor for fullerene-free organic solar cells with efficiency near 8%. 2016 , 4, 10409-10413	96
2135	Impact of the alkyl side chain position on the photovoltaic properties of solution-processable organic molecule donor materials. 2016 , 4, 11747-11753	8
2134	High-Efficiency Nonfullerene Polymer Solar Cell Enabling by Integration of Film-Morphology Optimization, Donor Selection, and Interfacial Engineering. 2016 , 8, 15415-21	32
2133	Non-fullerene polymer solar cells based on a selenophene-containing fused-ring acceptor with photovoltaic performance of 8.6%. 2016 , 9, 3429-3435	154
2132	Enhanced photovoltaic performance in inverted polymer solar cells using Li ion doped ZnO cathode buffer layer. 2016 , 36, 50-56	19
2131	Molecular Design of Benzodithiophene-Based Organic Photovoltaic Materials. 2016 , 116, 7397-457	824
2130	A simple perylene diimide derivative with a highly twisted geometry as an electron acceptor for efficient organic solar cells. 2016 , 4, 10659-10665	97

2129	A twisted monomeric perylenediimide electron acceptor for efficient organic solar cells. 2016 , 59, 427-434	8
2128	Potassium-neutralized perylene derivative (K4PTC) and rGO-K4PTC composite as effective and inexpensive electron transport layers for polymer solar cells. 2016 , 37, 47-54	6
2127	Charge transfer dynamics in poly(3-hexylthiophene): nanodiamond blend films. 2016, 64, 8-12	8
2126	High-Performance Solution-Processed Non-Fullerene Organic Solar Cells Based on Selenophene-Containing Perylene Bisimide Acceptor. 2016 , 138, 375-80	579
2125	Roll-coating fabrication of flexible organic solar cells: comparison of fullerene and fullerene-free systems. 2016 , 4, 1044-1051	73
2124	Phthalimide end-capped thienoisoindigo and diketopyrrolopyrrole as non-fullerene molecular acceptors for organic solar cells. 2016 , 4, 250-256	62
2123	Significant Improvement of Semiconducting Performance of the Diketopyrrolopyrrole-Quaterthiophene Conjugated Polymer through Side-Chain Engineering via Hydrogen-Bonding. 2016 , 138, 173-85	211
2122	A spirobifluorene and diketopyrrolopyrrole moieties based non-fullerene acceptor for efficient and thermally stable polymer solar cells with high open-circuit voltage. 2016 , 9, 604-610	316
2121	Random terpolymer with a cost-effective monomer and comparable efficiency to PTB7-Th for bulk-heterojunction polymer solar cells. 2016 , 7, 926-932	37
2120	The Challenge to Develop Metrology at the Nanoscale. 2016 , 105-130	
2120	The Challenge to Develop Metrology at the Nanoscale. 2016 , 105-130 Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016 , 8, 9247-53	48
	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016	48
2119	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016 , 8, 9247-53 Non-Fullerene Polymer Solar Cells Based on Alkylthio and Fluorine Substituted 2D-Conjugated	,
2119 2118	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016 , 8, 9247-53 Non-Fullerene Polymer Solar Cells Based on Alkylthio and Fluorine Substituted 2D-Conjugated Polymers Reach 9.5% Efficiency. 2016 , 138, 4657-64 1,1,4,4-Tetracyanobuta-1,3-diene Substituted Diketopyrrolopyrroles: An Acceptor for Solution	663
2119 2118 2117	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016, 8, 9247-53 Non-Fullerene Polymer Solar Cells Based on Alkylthio and Fluorine Substituted 2D-Conjugated Polymers Reach 9.5% Efficiency. 2016, 138, 4657-64 1,1,4,4-Tetracyanobuta-1,3-diene Substituted Diketopyrrolopyrroles: An Acceptor for Solution Processable Organic Bulk Heterojunction Solar Cells. 2016, 120, 6324-6335 Indacenodithienothiophenellaphthalene diimide copolymer as an acceptor for all-polymer solar	663
2119 2118 2117 2116	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016, 8, 9247-53 Non-Fullerene Polymer Solar Cells Based on Alkylthio and Fluorine Substituted 2D-Conjugated Polymers Reach 9.5% Efficiency. 2016, 138, 4657-64 1,1,4,4-Tetracyanobuta-1,3-diene Substituted Diketopyrrolopyrroles: An Acceptor for Solution Processable Organic Bulk Heterojunction Solar Cells. 2016, 120, 6324-6335 IndacenodithienothiopheneBaphthalene diimide copolymer as an acceptor for all-polymer solar cells. 2016, 4, 5810-5816	663 50 62
2119 2118 2117 2116 2115	Solution-Processable Silicon Phthalocyanines in Electroluminescent and Photovoltaic Devices. 2016, 8, 9247-53 Non-Fullerene Polymer Solar Cells Based on Alkylthio and Fluorine Substituted 2D-Conjugated Polymers Reach 9.5% Efficiency. 2016, 138, 4657-64 1,1,4,4-Tetracyanobuta-1,3-diene Substituted Diketopyrrolopyrroles: An Acceptor for Solution Processable Organic Bulk Heterojunction Solar Cells. 2016, 120, 6324-6335 Indacenodithienothiopheneflaphthalene diimide copolymer as an acceptor for all-polymer solar cells. 2016, 4, 5810-5816 High-Performance Electron Acceptor with Thienyl Side Chains for Organic Photovoltaics. 2016, 138, 4955-61 Solution processed bulk heterojunction solar cells based on ADIA small molecules with a	6635062831

2111	Cracking perylene diimide backbone for fullerene-free polymer solar cells. 2016 , 128, 226-234	16
2110	Highly efficient ternary polymer solar cells by optimizing photon harvesting and charge carrier transport. 2016 , 22, 241-254	180
2109	Photomultiplication photodetectors with P3HT:fullerene-free material as the active layers exhibiting a broad response. 2016 , 8, 5578-86	68
2108	A non-fullerene electron acceptor modified by thiophene-2-carbonitrile for solution-processed organic solar cells. 2016 , 4, 3777-3783	67
2107	Electron-Accepting EConjugated Systems for Organic Photovoltaics: Influence of Structural Modification on Molecular Orientation at Donor Acceptor Interfaces. 2016 , 28, 1705-1713	49
2106	EBridge-Independent 2-(Benzo[c][1,2,5]thiadiazol-4-ylmethylene)malononitrile-Substituted Nonfullerene Acceptors for Efficient Bulk Heterojunction Solar Cells. 2016 , 28, 2200-2208	86
2105	A Facile Planar Fused-Ring Electron Acceptor for As-Cast Polymer Solar Cells with 8.71% Efficiency. 2016 , 138, 2973-6	784
2104	Modulation of band gap and p- versus n-semiconductor character of ADA dyes by core and acceptor group variation. 2016 , 3, 545-555	23
2103	Adjusting acceptor redistribution for highly efficient solvent additive-free polymer solar cells. 2016 , 4, 3202-3208	7
2102	A non-fullerene electron acceptor based on central carbazole and terminal diketopyrrolopyrrole functionalities for efficient, reproducible and solution-processable bulk-heterojunction devices. 2016 , 6, 28103-28109	33
2101	More than Conformational II wisting Ibr II oplanarity II Molecular Strategies for Designing High-Efficiency Nonfullerene Organic Solar Cells. 2016 , 28, 1948-1964	209
2100	Efficient fullerene-free organic solar cells based on fused-ring oligomer molecules. 2016 , 4, 1486-1494	45
2099	Electron-transporting third component modifying cathode for simplified inverted ternary blend solar cells. 2016 , 4, 1051-1056	18
2098	An efficient nonfullerene acceptor for all-small-molecule solar cells with versatile processability in environmentally benign solvents. 2016 , 30, 105-111	11
2097	Alkylthio substituted thiophene modified benzodithiophene-based highly efficient photovoltaic small molecules. 2016 , 28, 263-268	11
2096	Fullerene-free small molecule organic solar cells with a high open circuit voltage of 1.15 V. 2016 , 52, 465-8	69
2095	Oligomer Molecules for Efficient Organic Photovoltaics. 2016 , 49, 175-83	492
2094	A nonfullerene acceptor for wide band gap polymer based organic solar cells. 2016 , 52, 469-72	41

2093	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	216
2092	Development of quinoxaline based polymers for photovoltaic applications. 2017 , 5, 1858-1879	74
2091	High open-circuit voltage ternary organic solar cells based on ICBA as acceptor and absorption-complementary donors. 2017 , 1, 1223-1228	16
2090	A new wide bandgap small molecular acceptor based on indenofluorene derivatives for fullerene-free organic solar cells. 2017 , 140, 261-268	23
2089	Molecular design of a wide-band-gap conjugated polymer for efficient fullerene-free polymer solar cells. 2017 , 10, 546-551	151
2088	Fused Nonacyclic Electron Acceptors for Efficient Polymer Solar Cells. 2017 , 139, 1336-1343	729
2087	Small is Powerful: Recent Progress in Solution-Processed Small Molecule Solar Cells. 2017 , 7, 1602242	323
2086	Recent progress in non-fullerene small molecule acceptors in organic solar cells (OSCs). 2017 , 5, 1275-1302	333
2085	Design, Synthesis, and Photovoltaic Characterization of a Small Molecular Acceptor with an Ultra-Narrow Band Gap. 2017 , 129, 3091-3095	43
2084	Design, Synthesis, and Photovoltaic Characterization of a Small Molecular Acceptor with an Ultra-Narrow Band Gap. 2017 , 56, 3045-3049	590
2083	Two new medium bandgap asymmetric copolymers based on thieno[2,3-f]benzofuran for efficient organic solar cells. 2017 , 140, 337-345	12
2082	Indacenodithiophene-based wide bandgap copolymers for high performance single-junction and tandem polymer solar cells. 2017 , 33, 313-324	45
2081	Small molecule carbazole-based diketopyrrolopyrroles with tetracyanobutadiene acceptor unit as a non-fullerene acceptor for bulk heterojunction organic solar cells. 2017 , 5, 3311-3319	42
2080	New Wide Band Gap Donor for Efficient Fullerene-Free All-Small-Molecule Organic Solar Cells. 2017 , 139, 1958-1966	225
2079	High-Performance Organic Solar Cells Based on a Non-Fullerene Acceptor with a Spiro Core. 2017 , 12, 721-725	25
2078	Surprising Effects upon Inserting Benzene Units into a Quaterthiophene-Based D-A PolymerImproving Non-Fullerene Organic Solar Cells via Donor Polymer Design. 2017 , 7, 1602304	50
2077	A Theoretical Perspective on the Photovoltaic Performance of S,N-Heteroacenes: An Even D dd Effect on the Charge Separation Dynamics. 2017 , 121, 2574-2587	38
2076	High-Performance Ternary Organic Solar Cell Enabled by a Thick Active Layer Containing a Liquid Crystalline Small Molecule Donor. 2017 , 139, 2387-2395	351

2075	The investigations of two conjugated polymers that show distinctly different photovoltaic properties in polymer solar cells. 2017 , 44, 42-49	7
2074	Finely designed medium-band-gap polymer donor with judiciously selecting chalcogen atom for high efficiency polymer solar cell. 2017 , 141, 342-347	8
2073	Universal Strategy To Reduce Noise Current for Sensitive Organic Photodetectors. 2017 , 9, 9176-9183	55
2072	Non-fullerene organic solar cells based on diketopyrrolopyrrole polymers as electron donors and ITIC as an electron acceptor. 2017 , 19, 8069-8075	24
2071	High Efficiency Ternary Nonfullerene Polymer Solar Cells with Two Polymer Donors and an Organic Semiconductor Acceptor. 2017 , 7, 1602215	86
2070	Excellent Long-Term Stability of Power Conversion Efficiency in Non-Fullerene-Based Polymer Solar Cells Bearing Tricyanovinylene-Functionalized n-Type Small Molecules. 2017 , 9, 8838-8847	43
2069	Electrostatically self-assembled chitosan derivatives working as efficient cathode interlayers for organic solar cells. 2017 , 34, 164-171	28
2068	A New Function of N719: N719 Based Solution-Processible Binary Cathode Buffer Layer Enables High-Efficiency Single-Junction Polymer Solar Cells. 2017 , 1, 1700014	24
2067	Effect of furan Ebridge on the photovoltaic performance of D-A copolymers based on bi(alkylthio-thienyl)benzodithiophene and fluorobenzotriazole. 2017 , 60, 537-544	22
2066	Single-Junction Binary-Blend Nonfullerene Polymer Solar Cells with 12.1% Efficiency. <i>Advanced Materials</i> , 2017 , 29, 1700144	566
2065		566 10
2065	Materials, 2017 , 29, 1700144 A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for	
2065	A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells. 2017 , 142, 39-50	10
2065 2064	A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells. 2017, 142, 39-50 A perylene diimide electron acceptor with a triptycene core for organic solar cells. 2017, 5, 3188-3194 Asymmetric medium bandgap copolymers and narrow bandgap small-molecule acceptor with over	10
2065 2064 2063	A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells. 2017, 142, 39-50 A perylene diimide electron acceptor with a triptycene core for organic solar cells. 2017, 5, 3188-3194 Asymmetric medium bandgap copolymers and narrow bandgap small-molecule acceptor with over 7% efficiency. 2017, 45, 42-48 Halogenated conjugated molecules for ambipolar field-effect transistors and non-fullerene organic solar cells. 2017, 1, 1389-1395	10 25 13
2065 2064 2063 2062 2061	A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells. 2017, 142, 39-50 A perylene diimide electron acceptor with a triptycene core for organic solar cells. 2017, 5, 3188-3194 Asymmetric medium bandgap copolymers and narrow bandgap small-molecule acceptor with over 7% efficiency. 2017, 45, 42-48 Halogenated conjugated molecules for ambipolar field-effect transistors and non-fullerene organic solar cells. 2017, 1, 1389-1395 Rhodanine flanked indacenodithiophene as non-fullerene acceptor for efficient polymer solar cells.	10 25 13 149
2065 2064 2063 2062 2061	A novel A-D-A small molecule with 1,8-naphthalimide as a potential non-fullerene acceptor for solution processable solar cells. 2017, 142, 39-50 A perylene diimide electron acceptor with a triptycene core for organic solar cells. 2017, 5, 3188-3194 Asymmetric medium bandgap copolymers and narrow bandgap small-molecule acceptor with over 7% efficiency. 2017, 45, 42-48 Halogenated conjugated molecules for ambipolar field-effect transistors and non-fullerene organic solar cells. 2017, 1, 1389-1395 Rhodanine flanked indacenodithiophene as non-fullerene acceptor for efficient polymer solar cells. 2017, 60, 257-263	10 25 13 149 36

2057	Investigation of Conjugated Polymers Based on Naphtho[2,3-c]thiophene-4,9-dione in Fullerene-Based and Fullerene-Free Polymer Solar Cells. 2017 , 50, 1453-1462	27	
2056	Efficient Nonfullerene Polymer Solar Cells Enabled by a Novel Wide Bandgap Small Molecular Acceptor. <i>Advanced Materials</i> , 2017 , 29, 1606054	1 16 <u>.</u>	9
2055	Phosphate ester side-chain-modified conjugated polymer for hybrid solar cells. 2017 , 134,	2	
2054	A novel wide bandgap conjugated polymer (2.0 eV) based on bithiazole for high efficiency polymer solar cells. 2017 , 34, 556-561	30	
2053	Highly Efficient Parallel-Like Ternary Organic Solar Cells. 2017 , 29, 2914-2920	140	Ο
2052	Significantly improving the efficiency of polymer solar cells through incorporating noncovalent conformational locks. 2017 , 1, 1317-1323	15	
2051	Recent progress on intramolecular charge-transfer compounds as photoelectric active materials. 2017 , 60, 1093-1101	49	1
2050	Energy-level modulation of non-fullerene acceptors to achieve high-efficiency polymer solar cells at a diminished energy offset. 2017 , 5, 9649-9654	72	
2049	Naphthalene substituents bonded via the Eposition: an extended conjugated moiety can achieve a decent trade-off between optical band gap and open circuit voltage in symmetry-breaking benzodithiophene-based polymer solar cells. 2017 , 5, 9141-9147	22	
2048	Small molecular non-fullerene acceptors based on naphthalenediimide and benzoisoquinoline-dione functionalities for efficient bulk-heterojunction devices. 2017 , 143, 1-9	16	
2047	Tuning Energy Levels without Negatively Affecting Morphology: A Promising Approach to Achieving Optimal Energetic Match and Efficient Nonfullerene Polymer Solar Cells. 2017 , 7, 1602119	35	
2046	Regular Organic Solar Cells with Efficiency over 10% and Promoted Stability by Ligand- and Thermal Annealing-Free Al-Doped ZnO Cathode Interlayer. 2017 , 4, 1700053	46	
2045	Cyclopentadithiophene-based co-oligomers for solution-processed organic solar cells. 2017 , 143, 112-122	4	
2044	Dual FEster resonance energy transfer effects in non-fullerene ternary organic solar cells with the third component embedded in the donor and acceptor. 2017 , 5, 12120-12130	84	
2043	Terminal Btacking determines three-dimensional molecular packing and isotropic charge transport in an AA electron acceptor for non-fullerene organic solar cells. 2017 , 5, 4852-4857	158	8
2042	Fine-Tuned Photoactive and Interconnection Layers for Achieving over 13% Efficiency in a Fullerene-Free Tandem Organic Solar Cell. 2017 , 139, 7302-7309	399	9
2041	Heteroheptacene-cored semiconducting molecules for non-fullerene organic solar cells. 2017 , 144, 133-14	11 18	
2040	Non-fullerene small molecular acceptors based on dithienocyclopentafluorene and dithienocyclopentacarbazole cores for polymer solar cells. 2017 , 144, 48-57	24	

2039	Significant Influence of the Methoxyl Substitution Position on Optoelectronic Properties and Molecular Packing of Small-Molecule Electron Acceptors for Photovoltaic Cells. 2017 , 7, 1700183	155
2038	A Novel Thiophene-Fused Ending Group Enabling an Excellent Small Molecule Acceptor for High-Performance Fullerene-Free Polymer Solar Cells with 11.8% Efficiency. 2017 , 1, 1700044	187
2037	Indacenodithiophene: a promising building block for high performance polymer solar cells. 2017 , 5, 10798-1	081 / 43
2036	An Open-Circuit Voltage and Power Conversion Efficiency Study of Fullerene Ternary Organic Solar Cells Based on Oligomer/Oligomer and Oligomer/Polymer. 2017 , 38, 1700090	4
2035	Enhancing the performance of non-fullerene solar cells with polymer acceptors containing large-sized aromatic units. 2017 , 47, 133-138	13
2034	Achieving over 10% efficiency in a new acceptor ITTC and its blends with hexafluoroquinoxaline based polymers. 2017 , 5, 11286-11293	94
2033	Achieving 12.8% Efficiency by Simultaneously Improving Open-Circuit Voltage and Short-Circuit Current Density in Tandem Organic Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1606340	91
2032	High-performance all-polymer nonfullerene solar cells by employing an efficient polymer-small molecule acceptor alloy strategy. 2017 , 36, 356-365	48
2031	Small Molecule Acceptor and Polymer Donor Crystallinity and Aggregation Effects on Microstructure Templating: Understanding Photovoltaic Response in Fullerene-Free Solar Cells. 2017 , 29, 4432-4444	58
2030	Fullerene-Free Organic Solar Cells with Efficiency Over 12% Based on EDTAInO Hybrid Cathode Interlayer. 2017 , 29, 4176-4180	78
2029	Facile Approach to Preparing a Vanadium Oxide Hydrate Layer as a Hole-Transport Layer for High-Performance Polymer Solar Cells. 2017 , 9, 18087-18094	24
2028	Conjugated polymers containing B<-N unit as electron acceptors for all-polymer solar cells. 2017 , 60, 450-459	96
2027	ITIC surface modification to achieve synergistic electron transport layer enhancement for planar-type perovskite solar cells with efficiency exceeding 20%. 2017 , 5, 9514-9522	88
2026	Water- and alcohol-soluble cationic phenanthroline derivatives as efficient cathode interfacial layers for bulk-heterojunction polymer solar cells. 2017 , 5, 4858-4866	6
2025	A Wide-Bandgap Donor Polymer for Highly Efficient Non-fullerene Organic Solar Cells with a Small Voltage Loss. 2017 , 139, 6298-6301	288
2024	Conjugated polymer acceptors based on fused perylene bisimides with a twisted backbone for non-fullerene solar cells. 2017 , 8, 3300-3306	39
2023	Organic solar cells based on a polymer acceptor and a small molecule donor with a high open-circuit voltage. 2017 , 5, 6812-6819	20
2022	Thieno[3,4-c]pyrrole-4,6(5H)-dione Polymers with Optimized Energy Level Alignments for Fused-Ring Electron Acceptor Based Polymer Solar Cells. 2017 . 29, 5636-5645	36

2021	Molecular Optimization Enables over 13% Efficiency in Organic Solar Cells. 2017, 139, 7148-7151	2152
2020	Dopant-Free Hole-Transport Materials Based on Methoxytriphenylamine-Substituted Indacenodithienothiophene for Solution-Processed Perovskite Solar Cells. 2017 , 10, 2833-2838	38
2019	An acrylated fullerene derivative for efficient and thermally stable polymer solar cells. 2017 , 58, 2695-2699	4
2018	Photophysical Properties of Film Composites of Organic Polymers with Heterometallic Complexes of Transition Metals: a Review. 2017 , 53, 69-92	2
2017	Visibly transparent conjugated polymers based on non-alternant cyclopenta-fused emeraldicene for polymer solar cells. 2017 , 49, 114-122	6
2016	Efficiency enhancement in DIBSQ:PC71BM organic photovoltaic cells by using Liq-doped Bphen as a cathode buffer layer. 2017 , 11, 233-240	3
2015	Morphology control enables thickness-insensitive efficient nonfullerene polymer solar cells. 2017 , 1, 2057-2064	37
2014	Subtle side-chain tuning on terminal groups of small molecule electron acceptors for efficient fullerene-free polymer solar cells. 2017 , 5, 15175-15182	47
2013	Eco-Friendly Solvent-Processed Fullerene-Free Polymer Solar Cells with over 9.7% Efficiency and Long-Term Performance Stability. 2017 , 7, 1700566	76
2012	A two-dimension-conjugated small molecule for efficient ternary organic solar cells. 2017 , 48, 179-187	14
2011	Correlating photovoltaic properties of a PTB7-Th:PC71BM blend to photophysics and microstructure as a function of thermal annealing. 2017 , 5, 14646-14657	49
2010	Hexafluoroquinoxaline Based Polymer for Nonfullerene Solar Cells Reaching 9.4% Efficiency. 2017 , 9, 18816-18825	36
2009	ZnO films using a precursor solution irradiated with an electron beam as the cathode interfacial layer in inverted polymer solar cells. 2017 , 7, 26689-26696	9
2008	Wide Bandgap Copolymers Based on Quinoxalino[6,5-f].quinoxaline for Highly Efficient Nonfullerene Polymer Solar Cells. 2017 , 27, 1701491	82
2007	A ternary conjugated DA copolymer yields over 9.0% efficiency in organic solar cells. 2017 , 5, 12015-12021	9
2006	A new n-type semiconducting molecule with an asymmetric indenothiophene core for a high-performing non-fullerene type organic solar cell. 2017 , 5, 7182-7190	22
2005	N-Heteroacenes as a New Class of Non-Fullerene Electron Acceptors for Organic Bulk-Heterojunction Photovoltaic Devices. 2017 , 1, 1700053	26
2004	Two compatible nonfullerene acceptors with similar structures as alloy for efficient ternary polymer solar cells. 2017 , 38, 510-517	137

2003 A near-infrared non-fullerene electron acceptor for high performance polymer solar cells. **2017**, 10, 1610-1620₂₃8

	D. 1 1. C. N C.		
2002	Potential of Nonfullerene Small Molecules with High Photovoltaic Performance. 2017 , 12, 2160-2171		39
2001	Efficient and Stable Ternary Organic Solar Cells Based on Two Planar Nonfullerene Acceptors with Tunable Crystallinity and Phase Miscibility. 2017 , 9, 20704-20710		40
2000	Fused Hexacyclic Nonfullerene Acceptor with Strong Near-Infrared Absorption for Semitransparent Organic Solar Cells with 9.77% Efficiency. <i>Advanced Materials</i> , 2017 , 29, 1701308	ł	325
1999	Design and synthesis of thieno[3,4-c]pyrrole-4,6-dione based conjugated copolymers for organic solar cells. 2017 , 66, 1206-1213		1
1998	Interface design for high-efficiency non-fullerene polymer solar cells. 2017 , 10, 1784-1791		149
1997	Simultaneous enhancement of the molecular planarity and the solubility of non-fullerene acceptors: effect of aliphatic side-chain substitution on the photovoltaic performance. 2017 , 5, 7776-7783		79
1996	Cadmium-doped flexible perovskite solar cells with a low-cost and low-temperature-processed CdS electron transport layer. 2017 , 7, 19457-19463		41
1995	High-Performance Nonfullerene Polymer Solar Cells based on Imide-Functionalized Wide-Bandgap Polymers. <i>Advanced Materials</i> , 2017 , 29, 1606396	}	135
1994	A trilobal non-fullerene electron acceptor based on benzo[1,2- b :3,4- b ?:5,6- b ?] trithiophene and perylenediimide for polymer solar cells. 2017 , 227, 122-130		11
1993	An H-shaped, small molecular non-fullerene acceptor for efficient organic solar cells with an impressive open-circuit voltage of 1.17 V. 2017 , 1, 1600-1606		28
1992	Effects of including electron-withdrawing atoms on the physical and photovoltaic properties of indacenodithieno[3,2-b]thiophene-based donor\(\text{lcceptor polymers: towards an acceptor design for efficient polymer solar cells. \(\text{2017}, 7, 20440-20450 \)		14
1991	Theoretical design of three-dimensional non-fullerene acceptor materials based on an arylenediimide unit towards high efficiency organic solar cells. 2017 , 41, 3857-3864		12
1990	High-Performance Non-Fullerene Polymer Solar Cells Based on Fluorine Substituted Wide Bandgap Copolymers Without Extra Treatments. 2017 , 1, 1700020		94
1989	Comparing the device physics, dynamics and morphology of polymer solar cells employing conventional PCBM and non-fullerene polymer acceptor N2200. 2017 , 35, 251-262		72
1988	Achieving Highly Efficient Nonfullerene Organic Solar Cells with Improved Intermolecular Interaction and Open-Circuit Voltage. <i>Advanced Materials</i> , 2017 , 29, 1700254		314
1987	P3HT-Based Photovoltaic Cells with a High Voc of 1.22 V by Using a Benzotriazole-Containing Nonfullerene Acceptor End-Capped with Thiazolidine-2,4-dione. 2017 , 6, 410-414		98
1986	Efficient Polymer Solar Cells with High Open-Circuit Voltage Containing Diketopyrrolopyrrole-Based Non-Fullerene Acceptor Core End-Capped with Rhodanine Units. 2017 , 9, 11739-11748		38

1985	Towards a bright future: polymer solar cells with power conversion efficiencies over 10%. 2017 , 60, 571-582	104
1984	Twisted terrylene dyes: synthesis and application in organic solar cells. 2017 , 4, 811-816	17
1983	Small-Molecule Acceptor Based on the Heptacyclic Benzodi(cyclopentadithiophene) Unit for Highly Efficient Nonfullerene Organic Solar Cells. 2017 , 139, 4929-4934	404
1982	A Review on the Origin of Synthetic Metal Radical: Singlet Open-Shell Radical Ground State?. 2017 , 121, 8579-8588	30
1981	Efficient Semitransparent Solar Cells with High NIR Responsiveness Enabled by a Small-Bandgap Electron Acceptor. <i>Advanced Materials</i> , 2017 , 29, 1606574	224
1980	9.73% Efficiency Nonfullerene All Organic Small Molecule Solar Cells with Absorption-Complementary Donor and Acceptor. 2017 , 139, 5085-5094	270
1979	Design, synthesis, and structural characterization of the first dithienocyclopentacarbazole-based n-type organic semiconductor and its application in non-fullerene polymer solar cells. 2017 , 5, 7451-7461	60
1978	Pronounced Effects of a Triazine Core on Photovoltaic Performance-Efficient Organic Solar Cells Enabled by a PDI Trimer-Based Small Molecular Acceptor. <i>Advanced Materials</i> , 2017 , 29, 1605115	205
1977	An All-Solution Processed Recombination Layer with Mild Post-Treatment Enabling Efficient Homo-Tandem Non-fullerene Organic Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1604231	63
1976	Perylenediimide derivatives based on a dendritic oligothiophene core as electron acceptor for use in polymer solar cells. 2017 , 139, 498-508	13
1975	Bisperylene bisimide based conjugated polymer as electron acceptor for polymer-polymer solar cells. 2017 , 35, 239-248	46
1974	Rylene diimide and dithienocyanovinylene copolymers for polymer solar cells. 2017 , 35, 230-238	18
1973	High-performance fullerene-free polymer solar cells with solution-processed conjugated polymers as anode interfacial layer. 2017 , 35, 219-229	33
1972	Enhancing performance of non-fullerene organic solar cells via side chain engineering of fused-ring electron acceptors. 2017 , 139, 627-634	40
1971	Non-planar perylenediimide acceptors with different geometrical linker units for efficient non-fullerene organic solar cells. 2017 , 5, 1713-1723	47
1970	A simple small molecule as the acceptor for fullerene-free organic solar cells. 2017 , 60, 366-369	26
1969	D-A copolymers based on lactam acceptor unit and thiophene derivatives for efficient polymer solar cells. 2017 , 139, 201-207	11
1968	High-Efficiency Nonfullerene Organic Solar Cells: Critical Factors that Affect Complex Multi-Length Scale Morphology and Device Performance. 2017 , 7, 1602000	205

1967	Controlled self-aggregation of perylene bisimide and its application in thick photoconductive interlayers for high performance polymer solar cells. 2017 , 1, 1087-1092	10
1966	Improved Performance of Ternary Polymer Solar Cells Based on A Nonfullerene Electron Cascade Acceptor. 2017 , 7, 1602127	90
1965	Molecular electron acceptors for efficient fullerene-free organic solar cells. 2017 , 19, 3440-3458	101
1964	Influence of polymer side chains on the photovoltaic performance of non-fullerene organic solar cells. 2017 , 5, 937-942	13
1963	Recently developed high-efficiency organic photoactive materials for printable photovoltaic cells: a mini review. 2017 , 223, 107-121	33
1962	Singlet Fission: Progress and Prospects in Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1601652	116
1961	Recent advances in wide bandgap semiconducting polymers for polymer solar cells. 2017 , 5, 1860-1872	76
1960	A-D-A-type small molecular acceptor with one hexyl-substituted thiophene as ©ridge for fullerene-free organic solar cells. 2017 , 60, 49-56	9
1959	Non-fullerene acceptors based on fused-ring oligomers for efficient polymer solar cells via complementary light-absorption. 2017 , 5, 23926-23936	57
1958	26 mA cm🏿 Jsc from organic solar cells with a low-bandgap nonfullerene acceptor. 2017 , 62, 1494-1496	316
1957	Angular-Shaped Dithienonaphthalene-Based Nonfullerene Acceptor for High-Performance Polymer Solar Cells with Large Open-Circuit Voltages and Minimal Energy Losses. 2017 , 29, 9775-9785	52
1956	Fused Perylene Diimide-Based Polymeric Acceptors for Efficient All-Polymer Solar Cells. 2017 , 50, 7559-7566	57
1955	Achieving over 9.8% Efficiency in Nonfullerene Polymer Solar Cells by Environmentally Friendly Solvent Processing. 2017 , 9, 37078-37086	29
1954	A carbon-oxygen-bridged ladder-type building block for efficient donor and acceptor materials used in organic solar cells. 2017 , 62, 1331-1336	77
1953	Insertion of double bond Ebridges of ADA acceptors for high performance near-infrared polymer solar cells. 2017 , 5, 22588-22597	50
1952	A-ED-EA Electron-Donating Small Molecules for Solution-Processed Organic Solar Cells: A Review. 2017 , 38, 1700470	55
1951	Correlated In Situ Low-Frequency Noise and Impedance Spectroscopy Reveal Recombination Dynamics in Organic Solar Cells Using Fullerene and Non-Fullerene Acceptors. 2017 , 27, 1703805	22
1950	A Twisted Thieno[3,4-b]thiophene-Based Electron Acceptor Featuring a 14-Œlectron	

1949	A random donor polymer based on an asymmetric building block to tune the morphology of non-fullerene organic solar cells. 2017 , 5, 22480-22488		10
1948	Donor polymer fluorination doubles the efficiency in non-fullerene organic photovoltaics. 2017 , 5, 2253	6-225	4 1 3
1947	A Highly Crystalline Wide-Band-Gap Conjugated Polymer toward High-Performance As-Cast Nonfullerene Polymer Solar Cells. 2017 , 9, 36061-36069		28
1946	High-performance nonfullerene polymer solar cells based on a fluorinated wide bandgap copolymer with a high open-circuit voltage of 1.04 V. 2017 , 5, 22180-22185		55
1945	Fused-Ring Acceptors with Asymmetric Side Chains for High-Performance Thick-Film Organic Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1703527	24	204
1944	Origin of Efficient Inverted Nonfullerene Organic Solar Cells: Enhancement of Charge Extraction and Suppression of Bimolecular Recombination Enabled by Augmented Internal Electric Field. 2017 , 8, 5264-5271		64
1943	Highly Efficient Ternary-Blend Polymer Solar Cells Enabled by a Nonfullerene Acceptor and Two Polymer Donors with a Broad Composition Tolerance. <i>Advanced Materials</i> , 2017 , 29, 1704271	24	196
1942	Non-Fullerene Acceptors With A2 = A1-D-A1 = A2 Skeleton Containing Benzothiadiazole and Thiazolidine-2,4-Dione for High-Performance P3HT-Based Organic Solar Cells. 2017 , 1, 1700166		38
1941	Design of a New Small-Molecule Electron Acceptor Enables Efficient Polymer Solar Cells with High Fill Factor. <i>Advanced Materials</i> , 2017 , 29, 1704051	24	200
1940	Ladder-Type Dithienonaphthalene-Based Small-Molecule Acceptors for Efficient Nonfullerene Organic Solar Cells. 2017 , 29, 7942-7952		96
1939	Thieno[3,2-b]pyrrolo-Fused Pentacyclic Benzotriazole-Based Acceptor for Efficient Organic Photovoltaics. 2017 , 9, 31985-31992		99
1938	Efficient non-fullerene polymer solar cells based on a wide bandgap polymer of meta-alkoxy-phenyl-substituted benzodithiophene and difluorobenzotriazole. 2017 , 5, 19680-19686		24
1937	Two-Dimensional BDT-Based Wide Band Gap Polymer Donor for Efficient Non-Fullerene Organic Solar Cells. 2017 , 121, 19634-19641		16
1936	2D/1A Strategy to Regulate Film Morphology for Efficient and Stable Nonfullerene Organic Solar Cells. 2017 , 50, 6954-6960		17
1935	Cellular Architecture-Based All-Polymer Flexible Thin-Film Photodetectors with High Performance and Stability in Harsh Environment. 2017 , 2, 1700185		6
1934	An A-D-A Type Small-Molecule Electron Acceptor with End-Extended Conjugation for High Performance Organic Solar Cells. 2017 , 29, 7908-7917		119
1933	Side Chain Engineering on Medium Bandgap Copolymers to Suppress Triplet Formation for High-Efficiency Polymer Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1703344	24	182
1932	Thick Film Polymer Solar Cells Based on Naphtho[1,2-c:5,6-c]bis[1,2,5]thiadiazole Conjugated Polymers with Efficiency over 11%. 2017 , 7, 1700944		115

1931	The effect of end-capping groups in A-D-A type non-fullerene acceptors on device performance of organic solar cells. 2017 , 60, 1458-1467	29
1930	Recent development of perylene diimide-based small molecular non-fullerene acceptors in organic solar cells. 2017 , 28, 2105-2115	51
1929	Design of Donor Polymers with Strong Temperature-Dependent Aggregation Property for Efficient Organic Photovoltaics. 2017 , 50, 2519-2528	176
1928	Pyrene-Fused Perylene Diimides: New Building Blocks to Construct Non-Fullerene Acceptors With Extremely High Open-Circuit Voltages up to 1.26 V. 2017 , 1, 1700123	23
1927	PTB7-Th based organic solar cell with a high V oc of 1.05 V by modulating the LUMO energy level of benzotriazole-containing non-fullerene acceptor. 2017 , 62, 1275-1282	24
1926	Cyanopyridone flanked the tetraphenylethylene to generate an efficient, three-dimensional small molecule non-fullerene electron acceptor. 2017 , 1, 2511-2518	24
1925	Isomeric Effects of Solution Processed Ladder-Type Non-Fullerene Electron Acceptors. 2017 , 1, 1700107	41
1924	Side-Chain Effects on Energy-Level Modulation and Device Performance of Organic Semiconductor Acceptors in Organic Solar Cells. 2017 , 9, 34146-34152	36
1923	Design of a Highly Crystalline Low-Band Gap Fused-Ring Electron Acceptor for High-Efficiency Solar Cells with Low Energy Loss. 2017 , 29, 8369-8376	156
1922	Effect of Non-fullerene Acceptors' Side Chains on the Morphology and Photovoltaic Performance of Organic Solar Cells. 2017 , 9, 33906-33912	56
1921	A Novel BODIPY-Based Low-Band-Gap Small-Molecule Acceptor for Efficient Non-fullerene Polymer Solar Cells. 2017 , 35, 1813-1823	19
1920	Highly Efficient Non-Fullerene Organic Photovoltaics Processed from o-Xylene without Using Additives. 2017 , 121, 21969-21974	24
1919	Acceptor-rich bulk heterojunction polymer solar cells with balanced charge mobilities. 2017, 51, 16-24	11
1918	Crystalline Medium-Bandgap Light-Harvesting Donor Material Based on ENaphthalene Asymmetric-Modified Benzodithiophene Moiety toward Efficient Polymer Solar Cells. 2017 , 29, 8249-8257	30
1917	Fullerene-Free Organic Solar Cells with an Efficiency of 10.2% and an Energy Loss of 0.59 eV Based on a Thieno[3,4-c]Pyrrole-4,6-dione-Containing Wide Band Gap Polymer Donor. 2017 , 9, 32939-32945	41
1916	Side Group Engineering of Small Molecular Acceptors for High-Performance Fullerene-Free Polymer Solar Cells: Thiophene Being Superior to Selenophene. 2017 , 27, 1702194	81
1915	Ternary Organic Solar Cells with Minimum Voltage Losses. 2017 , 7, 1700390	49
1914	Polymer Main-Chain Substitution Effects on the Efficiency of Nonfullerene BHJ Solar Cells. 2017 , 7, 1700834	64

1913	Modulating the Molecular Packing and Nanophase Blending via a Random Terpolymerization Strategy toward 11% Efficiency Nonfullerene Polymer Solar Cells. 2017 , 7, 1701125		81
1912	Constructing DA copolymers based on thiophene-fused benzotriazole units containing different alkyl side-chains for non-fullerene polymer solar cells. 2017 , 5, 8179-8186		17
1911	Design of Hexabenzocoronene Derivatives as Non-Fullerene Acceptors in Organic Photovoltaics by Bridging Dimers and Modulating Structural Twists. 2017 , 1, 1700060		18
1910	Boosting performance of inverted organic solar cells by using a planar coronene based electron-transporting layer. 2017 , 39, 454-460		33
1909	The influence of numbers of subunits on the photovoltaic performance of non-fullerene acceptors. 2017 , 231, 19-24		4
1908	Donor日cceptor日cceptor-based non-fullerene acceptors comprising terminal chromen-2-one functionality for efficient bulk-heterojunction devices. 2017 , 146, 502-511		18
1907	Enhancing Performance of Nonfullerene Acceptors via Side-Chain Conjugation Strategy. <i>Advanced Materials</i> , 2017 , 29, 1702125	24	227
1906	Donor-fullerene dyads for energy cascade organic solar cells. 2017 , 468, 192-202		6
1905	Organic solar cells based on a Cu2O/FBT-TH4 anode buffer layer with enhanced power conversion efficiency and ambient stability. 2017 , 5, 8033-8040		7
1904	Efficient Organic Solar Cells with Non-Fullerene Acceptors. 2017 , 13, 1701120		185
1903	Understanding charge transport and recombination losses in high performance polymer solar cells with non-fullerene acceptors. 2017 , 5, 17230-17239		54
1902	High-Efficiency Nonfullerene Organic Solar Cells with a Parallel Tandem Configuration. <i>Advanced Materials</i> , 2017 , 29, 1702547	24	64
1901	Medium Bandgap Polymer Donor Based on Bi(trialkylsilylthienyl-benzo[1,2-b:4,5-b?]-difuran) for High Performance Nonfullerene Polymer Solar Cells. 2017 , 7, 1700746		62
1900	New small-molecule acceptors based on hexacyclic naphthalene(cyclopentadithiophene) for efficient non-fullerene organic solar cells. 2017 , 5, 17204-17210		65
1899	High Extinction Coefficient Thieno[3,4-b]thiophene-Based Copolymer for Efficient Fullerene-Free Solar Cells with Large Current Density. 2017 , 29, 6766-6771		51
1898	Simultaneous Increase in Open-Circuit Voltage and Efficiency of Fullerene-Free Solar Cells through Chlorinated Thieno[3,4-b]thiophene Polymer Donor. 2017 , 2, 1971-1977		45
1897	Ladder-type nonacyclic indacenodithieno[3,2-b]indole for highly efficient organic field-effect transistors and organic photovoltaics. 2017 , 5, 8988-8998		9
1896	High-performance nonfullerene polymer solar cells with open-circuit voltage over 1 V and energy loss as low as 0.54 eV. 2017 , 40, 20-26		58

1895	Rationally Designed Donor Acceptor Random Copolymers with Optimized Complementary Light Absorption for Highly Efficient All-Polymer Solar Cells. 2017 , 27, 1703070	35
1894	PDI Derivative through Fine-Tuning the Molecular Structure for Fullerene-Free Organic Solar Cells. 2017 , 9, 29924-29931	120
1893	Wide Band Gap and Highly Conjugated Copolymers Incorporating 2-(Triisopropylsilylethynyl)thiophene-Substituted Benzodithiophene for Efficient Non-Fullerene Organic Solar Cells. 2017 , 9, 28828-28837	12
1892	Performance limitations in thieno[3,4-c]pyrrole-4,6-dione-based polymer:ITIC solar cells. 2017 , 19, 23990-239	9 & 7
1891	A New Electron Acceptor with -Alkoxyphenyl Side Chain for Fullerene-Free Polymer Solar Cells with 9.3% Efficiency. 2017 , 4, 1700152	35
1890	A Three-dimensional Non-fullerene Small Molecule Acceptor for Solution-processed Organic Solar Cells. 2017 , 35, 1687-1692	27
1889	Tuning Voc for high performance organic ternary solar cells with non-fullerene acceptor alloys. 2017 , 5, 19697-19702	80
1888	A triptycene-cored perylenediimide derivative and its application in organic solar cells as a non-fullerene acceptor. 2017 , 41, 10237-10244	5
1887	All-Small-Molecule Nonfullerene Organic Solar Cells with High Fill Factor and High Efficiency over 10%. 2017 , 29, 7543-7553	164
1886	Environmentally-friendly solvent processed fullerene-free organic solar cells enabled by screening halogen-free solvent additives. 2017 , 60, 697-706	22
1885	Ultrafast Electron Dynamics in Solar Energy Conversion. 2017 , 117, 10940-11024	202
1884	Asymmetric indenothiophene-based non-fullerene acceptors for efficient polymer solar cells. 2017 , 60, 707-716	11
1883	Significant enhancement of photovoltaic performance through introducing S?N conformational locks. 2017 , 5, 21674-21678	70
1882	Non-fullerene polymer solar cells with VOC > 1 V based on fluorinated quinoxaline unit conjugated polymers. 2017 , 5, 8774-8781	25
1881	Structural optimization of large acceptorflonorflcceptor-type molecules for improved performance of fullerene-free polymer solar cells. 2017 , 7, 38773-38779	9
1880	Enhancing Indacenodithiophene Acceptor Crystallinity via Substituent Manipulation Increases Organic Solar Cell Efficiency. 2017 , 29, 10294-10298	92
1879	High Efficiency Near-Infrared and Semitransparent Non-Fullerene Acceptor Organic Photovoltaic Cells. 2017 , 139, 17114-17119	312
1878	Exploring what prompts ITIC to become a superior acceptor in organic solar cell by combining molecular dynamics simulation with quantum chemistry calculation. 2017 , 19, 31227-31235	25

1877	Enhancing Efficiency and Stability of Organic Solar Cells by UV Absorbent. 2017 , 1, 1700148	13
1876	A Designed Ladder-Type Heteroarene Benzodi(Thienopyran) for High-Performance Fullerene-Free Organic Solar Cells. 2017 , 1, 1700165	23
1875	High open-circuit voltage and short-circuit current flexible polymer solar cells using ternary blends and ultrathin Ag-based transparent electrodes. 2017 , 5, 25476-25484	25
1874	Incorporating an Electrode Modification Layer with a Vertical Phase Separated Photoactive Layer for Efficient and Stable Inverted Nonfullerene Polymer Solar Cells. 2017 , 9, 43871-43879	17
1873	Haptacyclic Carbazole-Based Ladder-Type Nonfullerene Acceptor with Side-Chain Optimization for Efficient Organic Photovoltaics. 2017 , 9, 42035-42042	37
1872	Wide bandgap small molecular acceptors for low energy loss organic solar cells. 2017 , 5, 12591-12596	32
1871	Toward Over 15% Power Conversion Efficiency for Organic Solar Cells: Current Status and Perspectives. 2017 , 1, 1700258	114
1870	Synthesis and Photovoltaic Properties of a Series of Narrow Bandgap Organic Semiconductor Acceptors with Their Absorption Edge Reaching 900 nm. 2017 , 29, 10130-10138	83
1869	Phthalimide-Based Wide Bandgap Donor Polymers for Efficient Non-Fullerene Solar Cells. 2017 , 50, 8928-893	3726
1868	Photo-degradation of high efficiency fullerene-free polymer solar cells. 2017 , 9, 18788-18797	40
1867	A low temperature processed fused-ring electron transport material for efficient planar perovskite solar cells. 2017 , 5, 24820-24825	36
1866	Vinylene- and ethynylene-bridged perylene diimide dimers as nonfullerene acceptors for polymer solar cells. 2017 , 146, 143-150	11
1865	An Efficient, "Burn in" Free Organic Solar Cell Employing a Nonfullerene Electron Acceptor. Advanced Materials, 2017, 29, 1701156 24	138
1864	Electron-transporting small molecule/o-xylene hybrid additives to boost the performance of simplified inverted polymer solar cells. 2017 , 123, 1	1
1863	3D Structural Model of High-Performance Non-Fullerene Polymer Solar Cells as Revealed by High-Resolution AFM. 2017 , 9, 24451-24455	1
1862	A stereoregular ⊞icyanodistyrylbenzene (EDCS)-based conjugated polymer for high-performance organic solar cells with small energy loss and high quantum efficiency. 2017 , 5, 16681-16688	20
1861	Poly(3-hexylthiophene)-based non-fullerene solar cells achieve high photovoltaic performance with small energy loss. 2017 , 5, 16573-16579	35
1860	Push-Pull Type Non-Fullerene Acceptors for Polymer Solar Cells: Effect of the Donor Core. 2017 , 9, 24771-24	77 3 9

1859	Naphthalene diimide-based random terpolymer for efficient all-polymer solar cells with high open circuit voltage. 2017 , 146, 169-177		12
1858	Non-fullerene small molecular acceptors with a carbazole core for organic solar cells with high open-circuit voltage. 2017 , 146, 293-299		12
1857	Isomeric small molecule acceptors based on perylene diimide and spirobifluorene for non-fullerene organic solar cells. 2017 , 146, 151-158		14
1856	Highly Efficient Inverted D:A:A Ternary Blend Organic Photovoltaics Combining a Ladder-type Non-Fullerene Acceptor and a Fullerene Acceptor. 2017 , 9, 24797-24803		36
1855	Ternary Polymer Solar Cells based on Two Acceptors and One Donor for Achieving 12.2% Efficiency. <i>Advanced Materials</i> , 2017 , 29, 1604059	24	314
1854	Thienobenzene-fused perylene bisimide as a non-fullerene acceptor for organic solar cells with a high open-circuit voltage and power conversion efficiency. 2017 , 1, 749-756		38
1853	Nonfullerene acceptor with strong near-infrared absorption for polymer solar cells. 2017 , 137, 553-559		12
1852	Mapping Polymer Donors toward High-Efficiency Fullerene Free Organic Solar Cells. <i>Advanced Materials</i> , 2017 , 29, 1604155	24	335
1851	Triphenylamine-cored star-shape compounds as non-fullerene acceptor for high-efficiency organic solar cells: Tuning the optoelectronic properties by S/Se-annulated perylene diimide. 2017 , 41, 166-172		49
1850	Perylene and naphthalene diimide copolymers for all-polymer solar cells: Effect of perylene/naphthalene ratio. 2017 , 55, 682-689		18
1849	Reducible fabrication cost for P3HT-based organic solar cells by using one-step synthesized novel fullerene derivative. 2017 , 159, 172-178		6
1848	Naphthalene diimidediketopyrrolopyrrole copolymers as non-fullerene acceptors for use in bulk-heterojunction all-polymer UVNIR photodetectors. 2017 , 8, 528-536		27
1847	Efficient Charge Transfer and Fine-Tuned Energy Level Alignment in a THF-Processed Fullerene-Free Organic Solar Cell with 11.3% Efficiency. <i>Advanced Materials</i> , 2017 , 29, 1604241	24	279
1846	Arginine-Mediated Self-Assembly of Porphyrin on Graphene: A Photocatalyst for Degradation of Dyes. 2017 , 7, 643		23
1845	Organic polymeric and small molecular electron acceptors for organic solar cells. 2018, 124, 1-57		55
1844	A low cost and high performance polymer donor material for polymer solar cells. 2018 , 9, 743		459
1843	Enhancing the Performance of Polymer Solar Cells via Core Engineering of NIR-Absorbing Electron Acceptors. <i>Advanced Materials</i> , 2018 , 30, e1706571	24	255
1842	A molecular structure and crystallization correlation study of pyromellitic diimide-based conjugated copolymers. 2018 , 65, 828-834		1

1841	Balanced Partnership between Donor and Acceptor Components in Nonfullerene Organic Solar Cells with >12% Efficiency. <i>Advanced Materials</i> , 2018 , 30, e1706363	24	148
1840	Next-generation organic photovoltaics based on non-fullerene acceptors. 2018 , 12, 131-142		1155
1839	Improving performance of organic solar cells by supplying additional acceptors to surface of bulk-heterojunction layers. 2018 , 6, 2793-2800		14
1838	Subnaphthalocyanines as Electron Acceptors in Polymer Solar Cells: Improving Device Performance by Modifying Peripheral and Axial Substituents. 2018 , 24, 6339-6343		17
1837	Effect of Benzene RingsIncorporation on Photovoltaic Performance of Indacenodithiophene-cored Molecular Acceptors. 2018 , 36, 306-310		3
1836	Conductivity enhancement of PEDOT:PSS film via sulfonic acid modification: application as transparent electrode for ITO-free polymer solar cells. 2018 , 61, 1179-1186		10
1835	Liquid-Crystalline Tris[60]fullerodendrimers. 2018 , 83, 3208-3219		11
1834	Medium-Bandgap Small-Molecule Donors Compatible with Both Fullerene and Nonfullerene Acceptors. 2018 , 10, 9587-9594		21
1833	Near-Infrared Harvesting Fullerene-Free All-Small-Molecule Organic Solar Cells Based on Porphyrin Donors. 2018 , 6, 5306-5313		28
1832	Wide Bandgap Molecular Acceptors with a Truxene Core for Efficient Nonfullerene Polymer Solar Cells: Linkage Position on Molecular Configuration and Photovoltaic Properties. 2018 , 28, 1707493		68
1831	Intra-molecular Charge Transfer and Electron Delocalization in Non-fullerene Organic Solar Cells. 2018 , 10, 10043-10052		20
1830	Chemical and Morphological Control of Interfacial Self-Doping for Efficient Organic Electronics. <i>Advanced Materials</i> , 2018 , 30, e1705976	24	38
1829	Vertical Stratification Engineering for Organic Bulk-Heterojunction Devices. 2018, 12, 4440-4452		56
1828	A nonfullerene acceptor utilizing a novel asymmetric multifused-ring core unit for highly efficient organic solar cells. 2018 , 6, 4873-4877		60
1827	Non-fullerene acceptors for large-open-circuit-voltage and high-efficiency organic solar cells. 2018 , 1, 47-59		7
1826	Chlorination of Side Chains: A Strategy for Achieving a High Open Circuit Voltage Over 1.0 V in Benzo[1,2-b:4,5-b?]dithiophene-Based Non-Fullerene Solar Cells. 2018 , 1, 2365-2372		46
1825	⊞tacking induced high current density and improved efficiency in ternary organic solar cells. 2018 , 10, 9971-9980		11
1824	A new nonfullerene acceptor based on perylene diimides for organic solar cells. 2018 , 29, 10362-10368		11

1823	Introducing optically polarizable molecules into perovskite solar cells by simultaneously enhanced spinBrbital coupling, suppressed non-radiative recombination and improved transport balance towards enhancing photovoltaic actions. 2018 , 6, 6164-6171	15
1822	Blade-Cast Nonfullerene Organic Solar Cells in Air with Excellent Morphology, Efficiency, and Stability. <i>Advanced Materials</i> , 2018 , 30, e1800343	118
1821	n-Type core effect on perylene diimide based acceptors for panchromatic fullerene-free organic solar cells. 2018 , 156, 318-325	10
1820	Measurements of the field-effect electron mobility of the acceptor ITIC. 2018 , 58, 290-293	15
1819	A Medium Bandgap DA Copolymer Based on 4-Alkyl-3,5-difluorophenyl Substituted Quinoxaline Unit for High Performance Solar Cells. 2018 , 51, 2838-2846	36
1818	Chlorine substituted 2D-conjugated polymer for high-performance polymer solar cells with 13.1% efficiency via toluene processing. 2018 , 48, 413-420	212
1817	Silaindacenodithiophene-Based Fused-Ring Non-Fullerene Electron Acceptor for Efficient Polymer Solar Cells. 2018 , 36, 495-501	17
1816	MoS Quantum Dots@TiO Nanotube Arrays: An Extended-Spectrum-Driven Photocatalyst for Solar Hydrogen Evolution. 2018 , 11, 1708-1721	65
1815	Efficient Nonfullerene Polymer Solar Cells Enabled by Small-Molecular Acceptors with a Decreased Fused-Ring Core. 2018 , 2, 1700373	17
1814	Fine-tuning the side-chains of non-fullerene small molecule acceptors to match with appropriate polymer donors. 2018 , 6, 8586-8594	33
1813	Significant enhancement of the photovoltaic performance of organic small molecule acceptors via side-chain engineering. 2018 , 6, 7988-7996	36
1812	High-Performance Additive-/Post-Treatment-Free Nonfullerene Polymer Solar Cells via Tuning Molecular Weight of Conjugated Polymers. 2018 , 14, e1704491	16
1811	A narrow-bandgap donor polymer for highly efficient as-cast non-fullerene polymer solar cells with a high open circuit voltage. 2018 , 58, 82-87	16
1810	Synthesis and photovoltaic properties of a simple non-fused small molecule acceptor. 2018 , 58, 133-138	19
1809	A Highly Planar Nonfullerene Acceptor with Multiple Noncovalent Conformational Locks for Efficient Organic Solar Cells. 2018 , 2, 1700330	28
1808	A New Nonfullerene Acceptor with Near Infrared Absorption for High Performance Ternary-Blend Organic Solar Cells with Efficiency over 13. 2018 , 5, 1800307	96
1807	A Donor Polymer Based on a Difluorinated Pentathiophene Unit Enabling Enhanced Performance for Nonfullerene Organic Solar Cells. 2018 , 2, 1700415	13
1806	Perylene Diimide-Based Zwitterion as the Cathode Interlayer for High-Performance Nonfullerene Polymer Solar Cells. 2018 , 10, 14986-14992	20

1805	Porphyrin Side Chains Linked by a Flexible Alkyl-interval. 2018 , 36, 599-604	5
1804	Theoretical Modeling of Singlet Fission. 2018 , 118, 7164-7207	234
1803	Organic solar cells based on anthracene-containing PPEBPVs and non-fullerene acceptors. 2018 , 72, 1769-1778	5
1802	ADA small molecule acceptors with ladder-type arenes for organic solar cells. 2018, 6, 8839-8854	60
1801	Isomeric N-Annulated Perylene Diimide Dimers for Organic Solar Cells. 2018 , 13, 918-923	16
1800	Efficient ternary non-fullerene polymer solar cells with PCE of 11.92% and FF of 76.5%. 2018 , 11, 841-849	190
1799	A highly efficient polymer non-fullerene organic solar cell enhanced by introducing a small molecule as a crystallizing-agent. 2018 , 21, 79-87	41
1798	A new NIR absorbing DPP-based polymer for thick organic solar cells. 2018 , 6, 2957-2961	17
1797	Miscibility E unction Relations in Organic Solar Cells: Significance of Optimal Miscibility in Relation to Percolation. 2018 , 8, 1703058	175
1796	A new random D-A copolymer based on two different benzotriazole units as co-acceptors for polymer solar cells. 2018 , 139, 123-129	2
1795	Non-fullerene acceptors for organic solar cells. 2018 , 3,	1634
1794	A perylenediimide dimer containing an asymmetric Ebridge and its fused derivative for fullerene-free organic solar cells. 2018 , 6, 2580-2587	26
1793	Ternalization Approach for Tuning Light Absorption and Crystalline Structure of Diketopyrrolopyrrole-Based Polymer Using Bisthiadiazole Unit. 2018 , 165, B3001-B3005	1
1792	Design of asymmetric benzodithiophene based wide band-gap conjugated polymers toward efficient polymer solar cells promoted by a low boiling point additive. 2018 , 6, 2806-2813	16
1791	Small Molecule Interlayers in Organic Solar Cells. 2018 , 8, 1702730	45
1790	From Molecular Packing Structures to Electronic Processes: Theoretical Simulations for Organic Solar Cells. 2018 , 8, 1702743	73
1789	Effect of the Molecular Configuration of Perylene Diimide Acceptors on Charge Transfer and Device Performance. 2018 , 1, 833-840	13
1788	A carbonBxygen-bridged hexacyclic ladder-type building block for low-bandgap nonfullerene acceptors. 2018 , 2, 700-703	37

Influence of the Active Layer Thickness on Non-Fullerene Polymer Solar Cell Performance. 2018, 1787 271, 106-111 Control of Geminate Recombination by the Material Composition and Processing Conditions in 9 Novel Polymer: Nonfullerene Acceptor Photovoltaic Devices. 2018, 122, 1253-1260 1785 The progress and prospects of non-fullerene acceptors in ternary blend organic solar cells. 2018, 5, 206-221 100 1784 A Halogenation Strategy for over 12% Efficiency Nonfullerene Organic Solar Cells. 2018, 8, 1702870 146 Conformation Locking on Fused-Ring Electron Acceptor for High-Performance Nonfullerene 88 1783 Organic Solar Cells. 2018, 28, 1705095 Molecular Consideration for Small Molecular Acceptors Based on Ladder-Type Dipyran: Influences 45 of O-Functionalization and Bridges. 2018, 28, 1705927 Thiazole Imide-Based All-Acceptor Homopolymer: Achieving High-Performance Unipolar Electron 1781 24 121 Transport in Organic Thin-Film Transistors. Advanced Materials, 2018, 30, 1705745 Energy level modulation of non-fullerene acceptors enables efficient organic solar cells with small 133 energy loss. 2018, 6, 2468-2475 The Critical Role of Anode Work Function in Non-Fullerene Organic Solar Cells Unveiled by 32 Counterion-Size-Controlled Self-Doping Conjugated Polymers. 2018, 30, 1078-1084 A thieno[3,4-b]thiophene linker enables a low-bandgap fluorene-cored molecular acceptor for 1778 12 efficient non-fullerene solar cells. 2018, 2, 760-767 Terthieno[3,2-b]Thiophene (6T) Based Low Bandgap Fused-Ring Electron Acceptor for Highly Efficient Solar Cells with a High Short-Circuit Current Density and Low Open-Circuit Voltage Loss. 82 1777 2018, 8, 1702831 Ternary Nonfullerene Polymer Solar Cells with a Power Conversion Efficiency of 11.6% by Inheriting 139 the Advantages of Binary Cells. 2018, 3, 555-561 A polymer design strategy toward green solvent processed efficient non-fullerene polymer solar 38 1775 cells. 2018, 6, 4324-4330 Dithienosilole-based non-fullerene acceptors for efficient organic photovoltaics. 2018, 6, 4266-4270 34 Efficient Ternary Organic Solar Cells With Small Aggregation Phases and Low Bimolecular 9 Recombination Using ICBA: ITIC Double Electron Acceptors. 2018, 8, 171-176 Self-Assembled Quasi-3D Nanocomposite: A Novel p-Type Hole Transport Layer for High 31 Performance Inverted Organic Solar Cells. 2018, 28, 1706403 Enhanced power conversion efficiency in iridium complex-based terpolymers for polymer solar 56 1771 cells. 2018, 2, 1770 On the Molecular Origin of Charge Separation at the DonorAcceptor Interface. 2018, 8, 1702232 45

1769	Printed Nonfullerene Organic Solar Cells with the Highest Efficiency of 9.5%. 2018 , 8, 1701942	81
1768	Organic solar cells based on non-fullerene acceptors. 2018 , 17, 119-128	1743
1767	Fused pentacyclic electron acceptors with four cis-arranged alkyl side chains for efficient polymer solar cells. 2018 , 6, 3724-3729	25
1766	Controlling Blend Morphology for Ultrahigh Current Density in Nonfullerene Acceptor-Based Organic Solar Cells. 2018 , 3, 669-676	187
1765	Improved Tandem All-Polymer Solar Cells Performance by Using Spectrally Matched Subcells. 2018 , 8, 1703291	49
1764	Incorporating Trialkylsilylethynyl-Substituted Head-to-Head Bithiophene Unit into Copolymers for Efficient Non-Fullerene Organic Solar Cells. 2018 , 10, 7271-7280	6
1763	Effect of annealing dependent blend morphology and dielectric properties on the performance and stability of non-fullerene organic solar cells. 2018 , 176, 109-118	47
1762	High-efficiency and air stable fullerene-free ternary organic solar cells. 2018 , 45, 177-183	169
1761	Synergistic effects of chlorination and a fully two-dimensional side-chain design on molecular energy level modulation toward non-fullerene photovoltaics. 2018 , 6, 2942-2951	33
1760	High efficiency small molecular acceptors based on novel O-functionalized ladder-type dipyran building block. 2018 , 45, 10-20	39
1759	Small bandgap porphyrin-based polymer acceptors for non-fullerene organic solar cells. 2018 , 6, 717-721	19
1758	An Unfused-Core-Based Nonfullerene Acceptor Enables High-Efficiency Organic Solar Cells with Excellent Morphological Stability at High Temperatures. <i>Advanced Materials</i> , 2018 , 30, 1705208	272
1757	Enhancing the performance of the electron acceptor ITIC-Th via tailoring its end groups. 2018 , 2, 537-543	36
1756	Fluorinated and Alkylthiolated Polymeric Donors Enable both Efficient Fullerene and Nonfullerene Polymer Solar Cells. 2018 , 28, 1706404	57
1755	High-Performance Organic Bulk-Heterojunction Solar Cells Based on Multiple-Donor or Multiple-Acceptor Components. <i>Advanced Materials</i> , 2018 , 30, 1705706	124
1754	Fused Tris(thienothiophene)-Based Electron Acceptor with Strong Near-Infrared Absorption for High-Performance As-Cast Solar Cells. <i>Advanced Materials</i> , 2018 , 30, 1705969	305
1753	Fine-Tuning of Molecular Packing and Energy Level through Methyl Substitution Enabling Excellent Small Molecule Acceptors for Nonfullerene Polymer Solar Cells with Efficiency up to 12.54. 24 Advanced Materials, 2018, 30, 1706124	232
1752	Improve the Performance of the All-Small-Molecule Nonfullerene Organic Solar Cells through Enhancing the Crystallinity of Acceptors. 2018 , 8, 1702377	75

1751	Optimizing the conjugated side chains of quinoxaline based polymers for nonfullerene solar cells with 10.5% efficiency. 2018 , 6, 3074-3083		46
1750	Chemical reaction between an ITIC electron acceptor and an amine-containing interfacial layer in non-fullerene solar cells. 2018 , 6, 2273-2278		73
1749	Ternary System with Controlled Structure: A New Strategy toward Efficient Organic Photovoltaics. <i>Advanced Materials</i> , 2018 , 30, 1705243	24	91
1748	Recent Progress in Ternary Organic Solar Cells Based on Nonfullerene Acceptors. 2018 , 8, 1702814		133
1747	Widely Applicable n-Type Molecular Doping for Enhanced Photovoltaic Performance of All-Polymer Solar Cells. 2018 , 10, 2776-2784		40
1746	An Alkylated Indacenodithieno[3,2-b]thiophene-Based Nonfullerene Acceptor with High Crystallinity Exhibiting Single Junction Solar Cell Efficiencies Greater than 13% with Low Voltage Losses. <i>Advanced Materials</i> , 2018 , 30, 1705209	24	399
1745	Stirring Up Acceptor Phase and Controlling Morphology via Choosing Appropriate Rigid Aryl Rings as Lever Arms in Symmetry-Breaking Benzodithiophene for High-Performance Fullerene and Fullerene-Free Polymer Solar Cells. <i>Advanced Materials</i> , 2018 , 30, 1705870	24	45
1744	Alkyl Chain Regiochemistry of Benzotriazole-Based Donor Polymers Influencing Morphology and Performances of Non-Fullerene Organic Solar Cells. 2018 , 8, 1702427		31
1743	Bis-Silicon-Bridged Stilbene: A Core for Small-Molecule Electron Acceptor for High-Performance Organic Solar Cells. 2018 , 30, 587-591		33
1742	Barbiturate end-capped non-fullerene acceptors for organic solar cells: tuning acceptor energetics to suppress geminate recombination losses. 2018 , 54, 2966-2969		23
1741	2D expanded conjugated polymers with non-fullerene acceptors for efficient polymer solar cells. 2018 , 6, 1753-1758		11
1740	Surpassing 10% Efficiency Benchmark for Nonfullerene Organic Solar Cells by Scalable Coating in Air from Single Nonhalogenated Solvent. <i>Advanced Materials</i> , 2018 , 30, 1705485	24	127
1739	A three-dimensional thiophene-annulated perylene bisimide as a fullerene-free acceptor for a high performance polymer solar cell with the highest PCE of 8.28% and a VOC over 1.0 V. 2018 , 6, 1136-1142		39
1738	Alkylthienyl substituted asymmetric 2D BDT and DTBT-based polymer solar cells with a power conversion efficiency of 9.2%. 2018 , 6, 2371-2378		28
1737	High performance non-fullerene polymer solar cells based on PTB7-Th as the electron donor with 10.42% efficiency. 2018 , 6, 2549-2554		57
1736	The crucial role of intermolecular Interactions in ADA-type electron acceptors and their effective modulation. 2018 , 6, 2664-2670		25
1735	Enhanced Charge Transfer, Transport and Photovoltaic Efficiency in All-Polymer Organic Solar Cells by Polymer Backbone Fluorination. 2018 , 36, 280-286		4
1734	Solution-Processed In2O3/ZnO Heterojunction Electron Transport Layers for Efficient Organic Bulk Heterojunction and Inorganic Colloidal Quantum-Dot Solar Cells. 2018 , 2, 1800076		32

1733	Efficient ternary polymer solar cells with a shelf-life stability for longer than 410 days. 2018 , 183, 120-128	9
1732	Synergistic effect of fluorination on both donor and acceptor materials for high performance non-fullerene polymer solar cells with 13.5% efficiency. 2018 , 61, 531-537	302
1731	Near-infrared absorbing non-fullerene acceptors with selenophene as Ibridges for efficient organic solar cells. 2018 , 6, 8059-8067	79
1730	Regulating the optoelectronic properties of small molecule donors with multiple alternative electron-donor and acceptor units for organic solar cells. 2018 , 6, 8101-8108	2
1729	Over 14% Efficiency in Polymer Solar Cells Enabled by a Chlorinated Polymer Donor. <i>Advanced Materials</i> , 2018 , 30, e1800868	832
1728	Alkylsilyl Functionalized Copolymer Donor for Annealing-Free High Performance Solar Cells with over 11% Efficiency: Crystallinity Induced Small Driving Force. 2018 , 28, 1800606	38
1727	A High-Efficiency Organic Solar Cell Enabled by the Strong Intramolecular Electron Push-Pull Effect of the Nonfullerene Acceptor. <i>Advanced Materials</i> , 2018 , 30, e1707170	295
1726	Small molecule donors based on benzodithiophene and diketopyrrolopyrrole compatible with both fullerene and non-fullerene acceptors. 2018 , 6, 5843-5848	18
1725	Substituents on the end group subtle tuning the energy levels and absorptions of small-molecule nonfullerene acceptors. 2018 , 155, 241-248	17
1724	Generating a three-dimensional non-fullerene electron acceptor by combining inexpensive spiro[fluorene-9,9?-xanthene] and cyanopyridone functionalities. 2018 , 2, 1090-1096	18
1723	Molecular Engineering for Large Open-Circuit Voltage and Low Energy Loss in Around 10% Non-fullerene Organic Photovoltaics. 2018 , 3, 1028-1035	43
1722	Nonfullerene Acceptor Molecules for Bulk Heterojunction Organic Solar Cells. 2018 , 118, 3447-3507	1051
1721	A universal nonfullerene electron acceptor matching with different band-gap polymer donors for high-performance polymer solar cells. 2018 , 6, 6874-6881	26
1720	Improved performance of non-fullerene polymer solar cells using wide-bandgap random terpolymers. 2018 , 57, 317-322	10
1719	Small-molecule acceptors based on 4H-cyclopenta[1,2-b:5,4-b?]dithiophene units with near-infrared absorption for nonfullerene polymer solar cells. 2018 , 240, 15-20	13
1718	Introduction. 2018 , 1-21	
1717	Analyzing the efficiency, stability and cost potential for fullerene-free organic photovoltaics in one figure of merit. 2018 , 11, 1355-1361	119
1716	A 2-(trifluoromethyl)thieno[3,4-b]thiophene-based small-molecule electron acceptor for polymer solar cell application. 2018 , 155, 179-185	7

1715	Tackling Energy Loss for High-Efficiency Organic Solar Cells with Integrated Multiple Strategies. <i>Advanced Materials</i> , 2018 , 30, e1706816	24	75	
1714	Dithieno[3,2-b:2',3'-d]pyrrol Fused Nonfullerene Acceptors Enabling Over 13% Efficiency for Organic Solar Cells. <i>Advanced Materials</i> , 2018 , 30, e1707150	24	340	
1713	Fused-Ring Electron Acceptor ITIC-Th: A Novel Stabilizer for Halide Perovskite Precursor Solution. 2018 , 8, 1703399		80	
1712	Thermally Stable All-Polymer Solar Cells with High Tolerance on Blend Ratios. 2018 , 8, 1800029		134	
1711	The role of hydrogen bonding in bulk-heterojunction (BHJ) solar cells: A review. 2018 , 182, 1-13		26	
1710	Modulating Molecular Orientation Enables Efficient Nonfullerene Small-Molecule Organic Solar Cells. 2018 , 30, 2129-2134		127	
1709	A trifluoromethyl substituted wide bandgap conjugated polymer for non-fullerene polymer solar cells with 10.4% efficiency. 2018 , 6, 6551-6558		18	
1708	Efficient device engineering for inverted non-fullerene organic solar cells with low energy loss. 2018 , 6, 4457-4463		30	
1707	Synthesis of a selenium and germanium containing random copolymer as an acceptor for all-polymer solar cells. 2018 , 58, 387-394		0	
1706	Star-shaped electron acceptors containing a truxene core for non-fullerene solar cells. 2018 , 52, 42-50		45	
1705	Thiophene-Fused Naphthalene Diimides: New Building Blocks for Electron Deficient Functional Materials. 2018 , 91, 121-140		52	
1704	Conjugated polymers based on 1,8-naphthalene monoimide with high electron mobility. 2018 , 56, 276-	281	6	
1703	Cyclometalated Pt complex based random terpolymers as electron acceptors for all polymer solar cells. 2018 , 56, 105-115		12	
1702	AC/DC electrical conduction and dielectric properties of PMMA/PVAc/C60 down-shifting nanocomposite films. 2018 , 1154, 239-247		5	
1701	Influence of Donor Polymer on the Molecular Ordering of Small Molecular Acceptors in Nonfullerene Polymer Solar Cells. 2018 , 8, 1701674		46	
1700	Medium band gap conjugated polymers from thienoacene derivatives and pentacyclic aromatic lactam as promising alternatives of poly(3-hexylthiophene) in photovoltaic application. 2018 , 56, 85-95		24	
1699	Ternary Organic Solar Cells with >11% Efficiency Incorporating Thick Photoactive Layer and Nonfullerene Small Molecule Acceptor. 2018 , 8, 1701691		69	
1698	Polymer Solar Cells. 2018 , 45-108		1	

1697	Tailoring the second acceptor unit in easily synthesized ternary copolymers toward efficient non-fullerene polymer solar cells. 2018 , 148, 72-80		4
1696	Bay-annulated indigo based near-infrared sensitive polymer for organic solar cells. 2018 , 56, 213-220		6
1695	Naphthodithiophene-Based Nonfullerene Acceptor for High-Performance Organic Photovoltaics: Effect of Extended Conjugation. <i>Advanced Materials</i> , 2018 , 30, 1704713	24	183
1694	Broadening the Photoresponse to Near-Infrared Region by Cooperating Fullerene and Nonfullerene Acceptors for High Performance Ternary Polymer Solar Cells. 2018 , 39, 1700492		10
1693	Achieving high short-circuit current and fill-factor via increasing quinoidal character on nonfullerene small molecule acceptor. 2018 , 29, 381-384		27
1692	Enhancing the performance of a fused-ring electron acceptor via extending benzene to naphthalene. 2018 , 6, 66-71		34
1691	Novel wide-bandgap copolymer bearing alkylthio-thiophene-substituted benzodithiophene and methyl thiophene-3-carboxylate for highly stable fullerene-free simple polymer solar cells. 2018 , 53, 151-159		8
1690	Rational design of asymmetric benzodithiophene based photovoltaic polymers for efficient solar cells. 2018 , 6, 948-956		33
1689	Effects of Nonradiative Losses at Charge Transfer States and Energetic Disorder on the Open-Circuit Voltage in Nonfullerene Organic Solar Cells. 2018 , 28, 1705659		61
1688	Triplet Tellurophene-Based Acceptors for Organic Solar Cells. 2018 , 130, 1108-1114		21
1687	Advances in Non-Fullerene Acceptor Based Ternary Organic Solar Cells. 2018 , 2, 1700158		79
1686	Breaking 10% Efficiency in Semitransparent Solar Cells with Fused-Undecacyclic Electron Acceptor. 2018 , 30, 239-245		144
1685	High-Performance As-Cast Nonfullerene Polymer Solar Cells with Thicker Active Layer and Large Area Exceeding 11% Power Conversion Efficiency. <i>Advanced Materials</i> , 2018 , 30, 1704546	24	210
1684	A green route to a novel hyperbranched electrolyte interlayer for nonfullerene polymer solar cells with over 11% efficiency. 2018 , 54, 563-566		30
1683	The design of highly efficient polymer solar cells with outstanding short-circuit current density based on small band gap electron acceptor. 2018 , 150, 363-369		14
1682	A High Dielectric N-Type Small Molecular Acceptor Containing Oligoethyleneglycol Side-Chains for Organic Solar Cells. 2018 , 36, 199-205		16
1681	Energy levels modulation of small molecule acceptors for polymer solar cells. 2018 , 235, 131-135		9
1680	Tunable Electron Donating and Accepting Properties Achieved by Modulating the Steric Hindrance of Side Chains in A-D-A Small-Molecule Photovoltaic Materials. 2018 , 30, 619-628		39

1679	Absorptive Behaviors and Photovoltaic Performance Enhancements of Alkoxy-Phenyl Modified Indacenodithieno[3,2-b]thiophene-Based Nonfullerene Acceptors. 2018 , 6, 2177-2187	24
1678	Writable and patternable organic solar cells and modules inspired by an old Chinese calligraphy tradition. 2018 , 5, 123-130	34
1677	A high dielectric constant non-fullerene acceptor for efficient bulk-heterojunction organic solar cells. 2018 , 6, 395-403	173
1676	Hole-Transfer Dependence on Blend Morphology and Energy Level Alignment in Polymer: ITIC Photovoltaic Materials. <i>Advanced Materials</i> , 2018 , 30, 1704263	85
1675	Improved photocurrent and efficiency of non-fullerene organic solar cells despite higher charge recombination. 2018 , 6, 957-962	13
1674	Modulation of the power conversion efficiency of organic solar cells via architectural variation of a promising non-fullerene acceptor. 2018 , 6, 574-582	11
1673	Realizing Over 13% Efficiency in Green-Solvent-Processed Nonfullerene Organic Solar Cells Enabled by 1,3,4-Thiadiazole-Based Wide-Bandgap Copolymers. <i>Advanced Materials</i> , 2018 , 30, 1703973	364
1672	Fine-Tuning the Energy Levels of a Nonfullerene Small-Molecule Acceptor to Achieve a High Short-Circuit Current and a Power Conversion Efficiency over 12% in Organic Solar Cells. <i>Advanced Materials</i> , 2018 , 30, 1704904	190
1671	Effect of Alkylsilyl Side-Chain Structure on Photovoltaic Properties of Conjugated Polymer Donors. 2018 , 8, 1702324	85
1670	Triplet Tellurophene-Based Acceptors for Organic Solar Cells. 2018 , 57, 1096-1102	104
1670 1669		
1669		
1669	Non-fullerene small molecule electron acceptors for high-performance organic solar cells. 2018 , 27, 990-1016 Side-chain engineering in naphthalenediimide-based n-type polymers for high-performance	9
1669 1668	Non-fullerene small molecule electron acceptors for high-performance organic solar cells. 2018 , 27, 990-1016 Side-chain engineering in naphthalenediimide-based n-type polymers for high-performance all-polymer photodetectors. 2018 , 9, 327-334 Exploring more effective polymer donors for the famous non-fullerene acceptor ITIC in organic	15
1669 1668 1667	Non-fullerene small molecule electron acceptors for high-performance organic solar cells. 2018, 27, 990-1016 Side-chain engineering in naphthalenediimide-based n-type polymers for high-performance all-polymer photodetectors. 2018, 9, 327-334 Exploring more effective polymer donors for the famous non-fullerene acceptor ITIC in organic solar cells by increasing electron-withdrawing ability. 2018, 53, 308-314 Feasible D1AD2A Random Copolymers for Simultaneous High-Performance Fullerene and	9 15 19
1669 1668 1667	Non-fullerene small molecule electron acceptors for high-performance organic solar cells. 2018, 27, 990-1016 Side-chain engineering in naphthalenediimide-based n-type polymers for high-performance all-polymer photodetectors. 2018, 9, 327-334 Exploring more effective polymer donors for the famous non-fullerene acceptor ITIC in organic solar cells by increasing electron-withdrawing ability. 2018, 53, 308-314 Feasible D1AD2A Random Copolymers for Simultaneous High-Performance Fullerene and Nonfullerene Solar Cells. 2018, 8, 1702166 A novel small molecule based on naphtho[1,2-b:5,6-b?]dithiophene benefits both fullerene and	9 15 19 53
1669 1668 1667 1666	Non-fullerene small molecule electron acceptors for high-performance organic solar cells. 2018, 27, 990-1016 Side-chain engineering in naphthalenediimide-based n-type polymers for high-performance all-polymer photodetectors. 2018, 9, 327-334 Exploring more effective polymer donors for the famous non-fullerene acceptor ITIC in organic solar cells by increasing electron-withdrawing ability. 2018, 53, 308-314 Feasible D1AD2A Random Copolymers for Simultaneous High-Performance Fullerene and Nonfullerene Solar Cells. 2018, 8, 1702166 A novel small molecule based on naphtho[1,2-b:5,6-b?]dithiophene benefits both fullerene and non-fullerene solar cells. 2018, 2, 143-148 Pyran-Bridged Indacenodithiophene as a Building Block for Constructing Efficient A-D-A-Type	9 15 19 53

1661	Ternary Nonfullerene Polymer Solar Cells with 12.16% Efficiency by Introducing One Acceptor with Cascading Energy Level and Complementary Absorption. <i>Advanced Materials</i> , 2018 , 30, 1703005	156
1660	Molecular engineering of side chain architecture of conjugated polymers enhances performance of photovoltaics by tuning ternary blend structures. 2018 , 43, 138-148	41
1659	A large-bandgap small-molecule electron acceptor utilizing a new indacenodibenzothiophene core for organic solar cells. 2018 , 2, 136-142	15
1658	A near-infrared porphyrin-based electron acceptor for non-fullerene organic solar cells. 2018 , 29, 371-373	23
1657	Determining the Dielectric Constants of Organic Photovoltaic Materials Using Impedance Spectroscopy. 2018 , 28, 1801542	52
1656	Impact of Nonfullerene Molecular Architecture on Charge Generation, Transport, and Morphology in PTB7-Th-Based Organic Solar Cells. 2018 , 28, 1802702	37
1655	Energy Transfer in Dendritic Systems Having Pyrene Peripheral Groups as Donors and Different Acceptor Groups. 2018 , 10,	12
1654	An ADA?DA type small molecule acceptor with wide absorption spectrum and near-infrared absorption. 2018 , 2, 2333-2339	13
1653	The influence of the Ebridging unit of fused-ring acceptors on the performance of organic solar cells. 2018 , 6, 21335-21340	24
1652	Rational design of near-infrared dyes based on boron dipyrromethene derivatives for application in organic solar cells 2018 , 8, 33659-33665	5
1651	A bright outlook on organic photoelectrochemical cells for water splitting. 2018 , 6, 21809-21826	35
1650	High-performance ternary organic solar cells with photoresponses beyond 1000 nm. 2018 , 6, 24210-24215	25
1649	Donor polymer based on alkylthiophene side chains for efficient non-fullerene organic solar cells: insights into fluorination and side chain effects on polymer aggregation and blend morphology. 2018 , 6, 23270-23277	9
1648	High performance ambient-air-stable FAPbI3 perovskite solar cells with molecule-passivated Ruddlesden Popper/3D heterostructured film. 2018, 11, 3358-3366	154
1647	Synthesis and photovoltaic properties of a non-fullerene acceptor with F-phenylalkoxy as a side chain. 2018 , 42, 19279-19284	4
1646	Construction of J-type aggregates as multi-functional interlayers for nonfullerene polymer solar cells. 2018 , 5, 3324-3330	5
1645	One-pot synthesis of electron-acceptor composite enables efficient fullerene-free ternary organic solar cells. 2018 , 6, 22519-22525	25
1644	Bandgap Engineering of Dual Acceptor-Containing Naphthalene Diimide Polymers for All-Polymer Solar Cells. 2018 , 6, 16005-16010	11

1643	Non-Fullerene-Based Printed Organic Photodiodes with High Responsivity and Megahertz Detection Speed. 2018 , 10, 42733-42739	25
1642	High Efficiency Non-fullerene Organic Tandem Photovoltaics Based on Ternary Blend Subcells. 2018 , 18, 7977-7984	25
1641	Effects of the Number of Bromine Substitution on Photovoltaic Efficiency and Energy Loss of Benzo[1,2-b:4,5-b?]diselenophene-based Narrow-Bandgap Multibrominated Nonfullerene Acceptors. 2018 , 3, 1800250	29
1640	Side-Chain-Promoted Benzodithiophene-based Conjugated Polymers toward Striking Enhancement of Photovoltaic Properties for Polymer Solar Cells. 2018 , 10, 42747-42755	34
1639	Selenopheno[3,2-b]thiophene-Based Narrow-Bandgap Nonfullerene Acceptor Enabling 13.3% Efficiency for Organic Solar Cells with Thickness-Insensitive Feature. 2018 , 3, 2967-2976	109
1638	Simple-structured small molecule acceptors constructed by a weakly electron-deficient thiazolothiazole core for high-efficiency non-fullerene organic solar cells. 2018 , 6, 24267-24276	55
1637	Multi-component non-fullerene acceptors with tunable bandgap structures for efficient organic solar cells. 2018 , 6, 23644-23649	35
1636	Design and application of volatilizable solid additives in non-fullerene organic solar cells. 2018 , 9, 4645	130
1635	Comparison Study of Wide Bandgap Polymer (PBDB-T) and Narrow Bandgap Polymer (PBDTTT-EFT) as Donor for Perylene Diimide Based Polymer Solar Cells. 2018 , 6, 613	3
1634	Enhanced open circuit voltage of small molecule acceptors containing angular-shaped indacenodithiophene units for P3HT-based organic solar cells. 2018 , 6, 12347-12354	12
1633	A small-molecule acceptor incorporating a silicon bridging atom for efficient nonfullerene polymer solar cells. 2018 , 6, 13211-13217	8
1632	Non-fullerene acceptor engineering with three-dimensional thiophene/selenophene-annulated perylene diimides for high performance polymer solar cells. 2018 , 6, 12601-12607	18
1631	Ternary non-fullerene polymer solar cells with a high crystallinity n-type organic semiconductor as the second acceptor. 2018 , 6, 24814-24822	14
1630	Designing Three-dimensional (3D) Non-Fullerene Small Molecule Acceptors with Efficient Photovoltaic Parameters. 2018 , 3, 12797-12804	66
1629	Introducing Four 1,1-Dicyanomethylene-3-indanone End-Capped Groups as an Alternative Strategy for the Design of Small-Molecular Nonfullerene Acceptors. 2018 , 122, 29122-29128	31
1628	Establishing a microscopic model for nonfullerene organic solar cells: Self-accumulation effect of charges. 2018 , 149, 194902	3
1627	End-cap Group Engineering of a Small Molecule Non-Fullerene Acceptor: The Influence of Benzothiophene Dioxide. 2018 , 1, 7146-7152	9
1626	Recent Progress in Fused-Ring Based Nonfullerene Acceptors for Polymer Solar Cells. 2018 , 6, 404	16

1625	Synthesis of Isomeric Perylenodithiophene Diimides. 2018 , 20, 6606-6609	8
1624	Organophosphorus Derivatives as Cathode Interfacial-Layer Materials for Highly Efficient Fullerene-Free Polymer Solar Cells. 2018 , 10, 35896-35903	12
1623	Fused-Ring Nonfullerene Acceptor Forming Interpenetrating J-Architecture for Fullerene-Free Polymer Solar Cells. 2018 , 8, 1800204	60
1622	Electron Acceptors With a Truxene Core and Perylene Diimide Branches for Organic Solar Cells: The Effect of Ring-Fusion. 2018 , 6, 328	12
1621	Highly Efficient Tuning of Ferromagnetic Spin Interactions in High-Spin Arylamine Structures by Incorporation of Spin Bearing Carbazole Units. 2018 , 122, 9584-9591	2
1620	Thin Semiconductor Films of Fullerene C70 Nanoaggregates on the Surface of a Plane Glass Substrate. 2018 , 54, 164-167	3
1619	UV-Cross-linkable Donor-Acceptor Polymers Bearing a Photostable Conjugated Backbone for Efficient and Stable Organic Photovoltaics. 2018 , 10, 35430-35440	14
1618	Organic Solar Cell Materials toward Commercialization. 2018 , 14, e1801793	177
1617	Effect of Molecular Shape on the Properties of Non-Fullerene Acceptors: Contrasting Calamitic Versus 3D Design Principles. 2018 , 1, 6513-6523	9
1616	Cyclopentadithiophene-cored non-fullerene acceptors for efficient polymer solar cells with superior stability. 2018 , 174, 991-998	9
1615	Bio-Inspired Catecholamine-Derived Surface Modifier for Graphene-Based Organic Solar Cells. 2018 , 1, 6463-6468	9
1614	Dithienonaphthalene-Based Non-fullerene Acceptors With Different Bandgaps for Organic Solar Cells. 2018 , 6, 427	5
1613	Multiple Roles of a Non-fullerene Acceptor Contribute Synergistically for High-Efficiency Ternary Organic Photovoltaics. 2018 , 2, 2154-2166	66
1612	Toward Efficient Carbon-Dots-Based Electron-Extraction Layer Through Surface Charge Engineering. 2018 , 10, 40255-40264	9
1611	Near-Infrared Electron Acceptors with Fluorinated Regioisomeric Backbone for Highly Efficient Polymer Solar Cells. <i>Advanced Materials</i> , 2018 , 30, e1803769	102
1610	Chlorine Atom-Induced Molecular Interlocked Network in a Non-Fullerene Acceptor. 2018 , 10, 39992-40000	86
1609	Fluorinated Thieno[2',3':4,5]benzo[1,2-][1,2,3]triazole: New Acceptor Unit To Construct Polymer Donors. 2018 , 3, 13894-13901	6
1608	Star-Shaped and Fused Electron Acceptors based on C -Symmetric Coplanar Trindeno[1, 2-b: 4, 5-b': 7, 8-b"]trithiophene Core for Non-Fullerene Solar Cells. 2019 , 25, 1055-1063	6

1607	Achieving Balanced Crystallinity of Donor and Acceptor by Combining Blade-Coating and Ternary Strategies in Organic Solar Cells. <i>Advanced Materials</i> , 2018 , 30, e1805041	24	105
1606	High-Performance Fused Ring Electron Acceptor-Perovskite Hybrid. 2018, 140, 14938-14944		51
1605	Opto-Electrical Properties of Composite Materials Based on Two Benzotrithiophene Copolymers and Fullerene Derivatives. 2018 , 2018, 1-9		О
1604	Multichloro-Substitution Strategy: Facing Low Photon Energy Loss in Nonfullerene Solar Cells. 2018 , 1, 6549-6559		28
1603	Dual-Accepting-Unit Design of Donor Material for All-Small-Molecule Organic Solar Cells with Efficiency Approaching 11%. 2018 , 30, 8661-8668		78
1602	Impact of Terminal End-Group of Acceptor-Donor-Acceptor-type Small Molecules on Molecular Packing and Photovoltaic Properties. 2018 , 10, 39952-39961		14
1601	Fine-tuning of the chemical structure of photoactive materials for highly efficient organic photovoltaics. 2018 , 3, 1051-1058		235
1600	Influence of Blend Morphology and Energetics on Charge Separation and Recombination Dynamics in Organic Solar Cells Incorporating a Nonfullerene Acceptor. 2018 , 28, 1704389		68
1599	Exploration of Syntheses and Functions of Higher Ladder-type Econjugated Heteroacenes. 2018 , 4, 2538-2570		54
1598	Pyran-annulated perylene diimide derivatives as non-fullerene acceptors for high performance organic solar cells. 2018 , 6, 11111-11117		13
1597	A tetrameric perylene diimide non-fullerene acceptor via unprecedented direct (hetero)arylation cross-coupling reactions. 2018 , 54, 11443-11446		20
1596	Enhanced efficiency of polymer solar cells through synergistic optimization of mobility and tuning donor alloys by adding high-mobility conjugated polymers. 2018 , 6, 11015-11022		70
1595	A-A-D-A-A Type Non-Fullerene Acceptors with 2-(1,1-Dicyanomethylene)rhodanine as the Terminal Groups for Poly(3-hexylthiophene)-Based Organic Solar Cells. 2018 , 10, 34427-34434		37
1594	Enhancing the Photovoltaic Performance of Nonfullerene Acceptors via Conjugated Rotatable End Groups. 2018 , 8, 1802131		21
1593	Recent development of efficient A-D-A type fused-ring electron acceptors for organic solar. 2018 , 174, 171-188		39
1592	A2A1DA1A2 type non-fullerene acceptors based on methoxy substituted benzotriazole with three different end-capped groups for P3HT-based organic solar cells. 2018 , 6, 10902-10909		28
1591	Electronic states and molecular orientation of ITIC film. 2018 , 27, 088801		5
1590	Use of two structurally similar small molecular acceptors enabling ternary organic solar cells with high efficiencies and fill factors. 2018 , 11, 3275-3282		227

(2018-2018)

1589	Extension of indacenodithiophene backbone conjugation enables efficient asymmetric ADA type non-fullerene acceptors. 2018 , 6, 18847-18852	64
1588	A Fused Ring Electron Acceptor with Decacyclic Core Enables over 13.5% Efficiency for Organic Solar Cells. 2018 , 8, 1802050	83
1587	Synthesis of star-shaped non-fullerene acceptors and their applications in organic solar cells. 2018 , 245, 167-174	3
1586	Low-Temperature Processable High-Performance DA-Type Random Copolymers for Nonfullerene Polymer Solar Cells and Application to Flexible Devices. 2018 , 8, 1801601	29
1585	Exciton Binding Energies of Nonfullerene Small Molecule Acceptors: Implication for Exciton Dissociation Driving Forces in Organic Solar Cells. 2018 , 122, 22309-22316	57
1584	Small-Molecule Electron Acceptors for Efficient Non-fullerene Organic Solar Cells. 2018, 6, 414	43
1583	Butterfly-shaped asymmetric squaraine dimers for organic photovoltaics. 2018 , 6, 10547-10556	8
1582	Atomistic Insight Into Donor/Acceptor Interfaces in High-Efficiency Nonfullerene Organic Solar Cells. 2018 , 2, 1800190	33
1581	Planar inverted perovskite solar cells based on the electron transport layer of PC61BM:ITIC. 2018 , 245, 116-120	12
1580	Enhancement of intra- and inter-molecular Econjugated effects for a non-fullerene acceptor to achieve high-efficiency organic solar cells with an extended photoresponse range and optimized morphology. 2018 , 2, 2006-2012	33
1579	An effective strategy for controlling the morphology of high-performance non-fullerene polymer solar cells without post-treatment: employing bare rigid aryl rings as lever arms in new asymmetric benzodithiophene. 2018 , 6, 18125-18132	20
1578	Understanding the effects of the energy band alignment at the donor/acceptor interface on the open circuit voltage of organic photovoltaic devices. 2018 , 711, 113-117	8
1577	Alkyl Chain End Group Engineering of Small Molecule Acceptors for Non-Fullerene Organic Solar Cells. 2018 , 1, 4724-4730	18
1576	Effect of Side Groups on the Photovoltaic Performance Based on Porphyrin-Perylene Bisimide Electron Acceptors. 2018 , 10, 32454-32461	15
1575	Efficient non-fullerene organic solar cells employing sequentially deposited donor ceptor layers. 2018 , 6, 18225-18233	36
1574	The first thieno[3,4-b]pyrazine based small molecular acceptor with a linear A-A-D-A-A skeleton for fullerene-free organic solar cells with a high V of 1.05 V. 2018 , 54, 10770-10773	15
1573	Synthesis of Conjugated Wide-Bandgap Copolymers Bearing Ladder-Type Donating Units and Their Application to Non-Fullerene Polymer Solar Cells. 2018 , 26, 844-850	8
1572	A new wide-bandgap conjugated polymer based on imide-fused benzotriazole for highly efficient nonfullerene polymer solar cells. 2018 , 158, 219-224	2

1571	Over 14% Efficiency in Organic Solar Cells Enabled by Chlorinated Nonfullerene Small-Molecule Acceptors. <i>Advanced Materials</i> , 2018 , 30, e1800613	24	538
1570	Efficient ternary polymer solar cells with dihydronaphthyl-based C60 bisadduct as an third component material. 2018 , 170, 164-173		7
1569	Key Tradeoffs Limiting the Performance of Organic Photovoltaics. 2018 , 8, 1703551		44
1568	Highly Efficient Non-Fullerene Organic Solar Cells Using 4,8-Bis((2-ethylhexyl)oxy)benzo[1,2-b:4,5-b?]dithiophene-Based Polymers as Additives. 2018 , 51, 4032-4	1039	7
1567	Non-fullerene-based small molecules as efficient n-type electron transporting layers in inverted organicIhorganic halide perovskite solar cells. 2018 , 65, 406-410		12
1566	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. 2018 , 6, 11751-11758		29
1565	High-Efficiency All-Small-Molecule Organic Solar Cells Based on an Organic Molecule Donor with Alkylsilyl-Thienyl Conjugated Side Chains. <i>Advanced Materials</i> , 2018 , 30, e1706361	24	130
1564	Highly Efficient Nonfullerene Polymer Solar Cells Enabled by a Copper(I) Coordination Strategy Employing a 1,3,4-Oxadiazole-Containing Wide-Bandgap Copolymer Donor. <i>Advanced Materials</i> , 2018 , 30, e1800737	24	69
1563	High-Efficiency Ternary Polymer Solar Cells Based on Intense FRET Energy Transfer Process. 2018 , 2, 1800101		29
1562	Non-fullerene acceptors end-capped with an extended conjugation group for efficient polymer solar cells. 2018 , 59, 366-373		7
1561	A small molecular electron acceptor based on asymmetric hexacyclic core of thieno[1,2-b]indaceno[5,6-b?]thienothiophene for efficient fullerene-free polymer solar cells. 2018 , 63, 845-852		22
1560	Nonfullerene Polymer Solar Cells Based on a Main-Chain Twisted Low-Bandgap Acceptor with Power Conversion Efficiency of 13.2%. 2018 , 3, 1499-1507		98
1559	Revealing the effects of molecular packing on the performances of polymer solar cells based on ADNDA type non-fullerene acceptors. 2018 , 6, 12132-12141		80
1558	Asymmetrical Ladder-Type Donor-Induced Polar Small Molecule Acceptor to Promote Fill Factors Approaching 77% for High-Performance Nonfullerene Polymer Solar Cells. <i>Advanced Materials</i> , 2018 , 30, e1800052	24	199
1557	Design of a New Fused-Ring Electron Acceptor with Excellent Compatibility to Wide-Bandgap Polymer Donors for High-Performance Organic Photovoltaics. <i>Advanced Materials</i> , 2018 , 30, e1800403	24	152
1556	Nonfullerene Acceptor with "Donor-Acceptor Combined Bridge" for Organic Photovoltaics with Large Open-Circuit Voltage. 2018 , 10, 18984-18992		26
1555	Engineering the morphology via processing additives in multiple all-polymer solar cells for improved performance. 2018 , 6, 10421-10432		54
1554	Ternary Organic Solar Cells With 12.8% Efficiency Using Two Nonfullerene Acceptors With Complementary Absorptions. 2018 , 8, 1800424		81

1553	Hidden Structure Ordering Along Backbone of Fused-Ring Electron Acceptors Enhanced by Ternary Bulk Heterojunction. <i>Advanced Materials</i> , 2018 , 30, e1802888	177
1552	Effect of Core Size on Performance of Fused-Ring Electron Acceptors. 2018 , 30, 5390-5396	77
1551	Ternary Blend Strategy for Achieving High-Efficiency Organic Solar Cells with Nonfullerene Acceptors Involved. 2018 , 28, 1802004	77
1550	Influence of side chains on low optical bandgap copolymers based on 2,1,3-benzoxadiazole for polymer solar cells. 2018 , 61, 261-265	2
1549	From PCBM-Polymer to Low-Cost and Thermally Stable C60/C70-Polymer Solar Cells: The Role of Molecular Structure, Crystallinity, and Morphology Control. 2018 , 10, 24037-24045	9
1548	Design and synthesis of medium-bandgap small-molecule electron acceptors for efficient tandem solar cells. 2018 , 6, 13588-13592	16
1547	Novel Nonconjugated Polymer as Cathode Buffer Layer for Efficient Organic Solar Cells. 2018 , 10, 24082-2408	89 19
1546	Asymmetrical Small Molecule Acceptor Enabling Nonfullerene Polymer Solar Cell with Fill Factor Approaching 79%. 2018 , 3, 1760-1768	90
1545	Manipulating active layer morphology of molecular donor/polymer acceptor based organic solar cells through ternary blends. 2018 , 61, 1025-1033	16
1544	Fluorination vs. chlorination: a case study on high performance organic photovoltaic materials. 2018 , 61, 1328-1337	142
1543	Short-axis substitution approach on ladder-type benzodithiophene-based electron acceptor toward highly efficient organic solar cells. 2018 , 61, 1405-1412	14
1542	Innovative approaches in thin-film photovoltaic cells. 2018 , 595-632	
1541	Mapping Nonfullerene Acceptors with a Novel Wide Bandgap Polymer for High Performance Polymer Solar Cells. 2018 , 8, 1801214	40
1540	A novel bifunctional ADA type small molecule for efficient organic solar cells. 2018, 2, 1626-1630	10
1539	Effect of Isomerization on High-Performance Nonfullerene Electron Acceptors. 2018 , 140, 9140-9147	296
1538	Cyanovinylene-based copolymers synthesized by tin-free Knoevenagel polycondensation for high efficiency polymer solar cells. 2018 , 6, 8020-8027	7
1537	Angular-Shaped 4,9-Dialkylnaphthodithiophene-Based Octacyclic Ladder-Type Non-Fullerene Acceptors for High Efficiency Ternary-Blend Organic Photovoltaics. 2018 , 30, 4968-4977	34
1536	An Electron Acceptor with Broad VisibleNIR Absorption and Unique Solid State Packing for As-Cast High Performance Binary Organic Solar Cells. 2018 , 28, 1802324	99

1535	Ladder-Type Heteroarene-Based Organic Semiconductors. 2018 , 13, 2587-2600	49
1534	Controlling Molecular Weight to Achieve High-Efficient Polymer Solar Cells With Unprecedented Fill Factor of 79% Based on Non-Fullerene Small Molecule Acceptor. 2018 , 2, 1800129	14
1533	Organic Solar Cells. 2018 , 567-597	3
1532	Nonfullerene Polymer Solar Cells Reaching a 9.29% Efficiency Using a BODIPY-Thiophene Backboned Donor Material. 2018 , 1, 3359-3368	15
1531	Improved Efficiency of Polymer Solar Cells by Modifying the Side Chain of Wide-Band Gap Conjugated Polymers Containing Pyrrolo[3,4-f]benzotriazole-5,7(6 H)-dione Moiety. 2018 , 10, 22495-22503	19
1530	Ultrafast Channel II process induced by a 3-D texture with enhanced acceptor order ranges for high-performance non-fullerene polymer solar cells. 2018 , 11, 2569-2580	59
1529	Effect of a methyl thiophene-3-carboxylate bridge in an indacenodithiophene-based acceptor: In one of non-fullerene polymer solar cells. 2018 , 6, 7549-7556	17
1528	Ternary Organic Photovoltaics Prepared by Sequential Deposition of Single Donor and Binary Acceptors. 2018 , 10, 27757-27763	16
1527	Enhancing the performance of non-fullerene organic solar cells via end group engineering of fused-ring electron acceptors. 2018 , 6, 16638-16644	38
1526	A wide-bandgap polymer based on the alkylphenyl-substituted benzo[1,2-b:4,5-b?]dithiophene unit with high power conversion efficiency of over 11%. 2018 , 6, 16529-16536	21
1525	Trifluoromethyl-Substituted Large Band-Gap Polytriphenylamines for Polymer Solar Cells with High Open-Circuit Voltages. 2018 , 10,	1
1524	A chlorinated low-bandgap small-molecule acceptor for organic solar cells with 14.1% efficiency and low energy loss. 2018 , 61, 1307-1313	184
1523	Efficient and thermally stable all-polymer solar cells based on a fluorinated wide-bandgap polymer donor with high crystallinity. 2018 , 6, 16403-16411	23
1522	Enhance the performance of polymer solar cells via extension of the flanking end groups of fused ring acceptors. 2018 , 61, 1320-1327	20
1521	High-performance inverted two-dimensional perovskite solar cells using non-fullerene acceptor as electron transport layer. 2018 , 62, 189-194	13
1520	Conjugated Polymers Containing Sulfonic Acid Fluorene Unit for Achieving Multiple Interfacial Modifications in Fullerene-free Organic Solar Cells. 2018 , 122, 19328-19337	5
1519	Effect of Side-Chain Engineering of Bithienylbenzodithiophene-alt-fluorobenzotriazole-Based Copolymers on the Thermal Stability and Photovoltaic Performance of Polymer Solar Cells. 2018 , 51, 6028-6036	39
1518	Effect of Ring-Fusion on Miscibility and Domain Purity: Key Factors Determining the Performance of PDI-Based Nonfullerene Organic Solar Cells. 2018 , 8, 1800234	59

1517	Optical Gaps of Organic Solar Cells as a Reference for Comparing Voltage Losses. 2018 , 8, 1801352	211
1516	N-Annulated perylene diimide derivatives as non-fullerene acceptors for solution-processed solar cells with an open-circuit voltage of up to 1.14 V. 2018 , 42, 15079-15087	19
1515	De novo design of small molecule acceptors via fullerene/non-fullerene hybrids for polymer solar cells. 2018 , 54, 9801-9804	10
1514	Modulation of End Groups for Low-Bandgap Nonfullerene Acceptors Enabling High-Performance Organic Solar Cells. 2018 , 8, 1801203	86
1513	Highly Efficient Non-Fullerene Polymer Solar Cells Enabled by Wide Bandgap Copolymers With Conjugated Selenyl Side Chains. 2018 , 2, 1800186	18
1512	Iris-Like Acceptor with Most PDI Units for Organic Solar Cells. 2018 , 10, 28812-28818	26
1511	Efficient Non-Fullerene Organic Photovoltaic Modules Incorporating As-Cast and Thickness-Insensitive Photoactive Layers. 2018 , 8, 1801387	39
1510	Efficient Organic Solar Cells with Extremely High Open-Circuit Voltages and Low Voltage Losses by Suppressing Nonradiative Recombination Losses. 2018 , 8, 1801699	97
1509	Benzoxadiazole and Benzoselenadiazole as Bridges in Nonfullerene Acceptors for Efficient Polymer Solar Cells. 2018 , 7, 2285-2293	6
1508	Effects of fused-ring regiochemistry on the properties and photovoltaic performance of n-type organic semiconductor acceptors. 2018 , 6, 15933-15941	23
1507	A synergetic effect of an alkyl-thiophene Ebridge and side chain modification on device performances for stable all-polymer solar cells with high PCE. 2018 , 6, 8418-8428	9
1506	Flexible Organic Solar Cells. 2018 , 305-337	0
1505	Highly Efficient Organic Solar Cells Based on S,N-Heteroacene Non-Fullerene Acceptors. 2018 , 30, 5429-5434	158
1504	Nonfullerene/Fullerene Acceptor Blend with a Tunable Energy State for High-Performance Ternary Organic Solar Cells. 2018 , 10, 25570-25579	23
1503	Toward Efficient Polymer Solar Cells Processed by a Solution-Processed Layer-By-Layer Approach. <i>Advanced Materials</i> , 2018 , 30, e1802499	83
1502	Novel Conjugated Polymers Prepared by Direct (Hetero) arylation: An Eco-Friendly Tool for Organic Electronics. 2018 , 23,	8
1501	Overcoming Space-Charge Effect for Efficient Thick-Film Non-Fullerene Organic Solar Cells. 2018 , 8, 1801609	48
1500	Wide-Bandgap Small Molecular Acceptors Based on a Weak Electron-Withdrawing Moiety for Efficient Polymer Solar Cells. 2018 , 2, 1800120	24

1499	Design rules for minimizing voltage losses in high-efficiency organic solar cells. 2018 , 17, 703-709	500
1498	Design of Nonfullerene Acceptors with Near-Infrared Light Absorption Capabilities. 2018 , 8, 1801209	79
1497	A Highly Efficient Non-Fullerene Organic Solar Cell with a Fill Factor over 0.80 Enabled by a Fine-Tuned Hole-Transporting Layer. <i>Advanced Materials</i> , 2018 , 30, e1801801	299
1496	Nonfullerene small-molecule acceptors with perpendicular side-chains for fullerene-free solar cells. 2018 , 6, 15433-15455	69
1495	High-Performance Ternary Nonfullerene Polymer Solar Cells with Both Improved Photon Harvesting and Device Stability. 2018 , 10, 25594-25603	30
1494	Balancing Crystal Size in Small-Molecule Nonfullerene Solar Cells through Fine-Tuning the Film-Forming Kinetics to Fabricate Interpenetrating Network. 2018 , 3, 7603-7612	9
1493	Diketopyrrolopyrrole-based acceptors with multi-arms for organic solar cells 2018 , 8, 25031-25039	6
1492	Effect of Substituents of Thienylenellinylenellinienylene-Based Conjugated Polymer Donors on the Performance of Fullerene and Nonfullerene Solar Cells. 2018 , 122, 16613-16623	9
1491	A heptacyclic carbon®xygen-bridged ladder-type building block for ADA acceptors. 2018, 2, 1716-1719	29
1490	Asymmetric thieno[2,3-b]thiophene-based electron acceptor featuring a seven fused-ring electron donor unit as core for nonfullerene organic photovoltaics. 2018 , 62, 82-88	14
1489	Utilizing Benzotriazole and Indacenodithiophene Units to Construct Both Polymeric Donor and Small Molecular Acceptors to Realize Organic Solar Cells With High Open-Circuit Voltages Beyond 1.2 V. 2018 , 6, 147	17
1488	Insight Into the Role of PCBM on Enhancing the Photovoltaic Performance of Ternary Organic Solar Cells. 2018 , 6, 198	28
1487	Nonfullerene Acceptors for Semitransparent Organic Solar Cells. 2018 , 8, 1800002	123
1486	A Wide Band Gap Polymer with a Deep Highest Occupied Molecular Orbital Level Enables 14.2% Efficiency in Polymer Solar Cells. 2018 , 140, 7159-7167	579
1485	Regioisomeric Etonjugated terpolymers bearing carboxylate substituted thienothiophenyl quarterthiophene and their application to fullerene-free polymer solar cells. 2018 , 146, 142-150	6
1484	Influence of substrate temperature on the film morphology and photovoltaic performance of non-fullerene organic solar cells. 2018 , 174, 1-6	8
1483	Improving the stability and efficiency of perovskite light-emitting diodes via an insulating layer of polyethylenimine ethoxylated. 2018 , 201, 359-363	14
1482	Pt complex-based terpolymer acceptors linked through ancillary ligand for all-polymer solar cells. 2018 , 6, 9903-9913	14

1481	Designing an asymmetrical isomer to promote the LUMO energy level and molecular packing of a non-fullerene acceptor for polymer solar cells with 12.6% efficiency. 2018 , 9, 8142-8149	56
1480	Electron mobility of non-fullerene acceptors using a time of flight method. 2018 , 63, 415-420	10
1479	Exploring photophysical processes in a ternary-blended polymer solar cell. 2018 , 153, 398-407	8
1478	High-efficiency quaternary polymer solar cells enabled with binary fullerene additives to reduce nonfullerene acceptor optical band gap and improve carriers transport. 2018 , 61, 1609-1618	25
1477	Enhanced electron transport enables over 12% efficiency by interface engineering of non-fullerene organic solar cells. 2018 , 187, 273-282	22
1476	Tris(8-hydroxyquinoline)aluminum(III)-Cored Molecular Cathode Interlayer: Improving Electron Mobility and Photovoltaic Efficiency of Polymer Solar Cells. 2018 , 2, 1800182	14
1475	Regulating the electron transporting properties of indacenodithiophene derivatives for perovskite solar cells with PCEs up to 19.51%. 2018 , 6, 18044-18049	20
1474	Role of Charge-Transfer State in Perylene-Based Organic Solar Cells. 2018 , 3, 9204-9210	2
1473	Naphthobistriazole-based wide bandgap donor polymers for efficient non-fullerene organic solar cells: Significant fine-tuning absorption and energy level by backbone fluorination. 2018 , 53, 258-269	31
1472	Chemical optimization of benzo-dithiophene and benzo-[2,1,3]thiadiazole copolymers for the high performance, green-solvent-processed polymer solar cells. 2018 , 173, 1043-1050	2
1471	Ternary blend organic solar cells with a non-fullerene acceptor as a third component to synergistically improve the efficiency. 2018 , 62, 261-268	21
1470	Carboxylate substitution position influencing polymer properties and enabling non-fullerene organic solar cells with high open circuit voltage and low voltage loss. 2018 , 6, 16874-16881	9
1469	Hydrogen bond induced high performance ternary fullerene-free organic solar cells with increased current density and enhanced stability. 2018 , 6, 9691-9702	24
1468	Improved efficiency in fullerene and non-fullerene polymer solar cells having an interdigitated interface with the electron transport layer. 2018 , 2, 1859-1865	6
1467	Recent advances in electron acceptors with ladder-type backbone for organic solar cells. 2018 , 6, 17256-17287	45
1466	A tetrachlorinated molecular non-fullerene acceptor for high performance near-IR absorbing organic solar cells. 2018 , 6, 9060-9064	16
1465	Charge Transfer Dynamics and Device Performance of Environmentally Friendly Processed Nonfullerene Organic Solar Cells. 2018 , 1, 4776-4785	19
1464	Closely packed, low reorganization energy Extended postfullerene acceptors for efficient polymer solar cells. 2018 , 115, E8341-E8348	85

1463	Beyond Fullerenes: Indacenodithiophene-Based Organic Charge-Transport Layer toward Upscaling of Low-Cost Perovskite Solar Cells. 2018 , 10, 22143-22155	20
1462	Combining Fullerenes and Zwitterions in Non-Conjugated Polymer Interlayers to Raise Solar Cell Efficiency. 2018 , 57, 9675-9678	31
1461	1D/2A ternary blend active layer enables as-cast polymer solar cells with higher efficiency, better thickness tolerance, and higher thermal stability. 2018 , 61, 359-365	16
1460	Aromatic end-capped acceptor effects on molecular stacking and the photovoltaic performance of solution-processable small molecules. 2018 , 6, 22077-22085	13
1459	A helical perylene diimide-based acceptor for non-fullerene organic solar cells: synthesis, morphology and exciton dynamics. 2018 , 5, 172041	3
1458	Near-Infrared Small Molecule Acceptor Enabled High-Performance Nonfullerene Polymer Solar Cells with Over 13% Efficiency. 2018 , 28, 1803128	70
1457	Highly Eextended small molecules with bis(alkylthio)methylene side chains for organic field-effect transistors. 2018 , 6, 7604-7611	9
1456	A Rational Design and Synthesis of Cross-Conjugated Small Molecule Acceptors Approaching High-Performance Fullerene-Free Polymer Solar Cells. 2018 , 30, 4331-4342	16
1455	Current Status of Outdoor Lifetime Testing of Organic Photovoltaics. 2018 , 5, 1800434	59
1454	Enhancing the Performance of Organic Solar Cells by Hierarchically Supramolecular Self-Assembly of Fused-Ring Electron Acceptors. 2018 , 30, 4307-4312	95
1453	Combining Fullerenes and Zwitterions in Non-Conjugated Polymer Interlayers to Raise Solar Cell Efficiency. 2018 , 130, 9823-9826	4
1452	Subphthalocyanine-cored star-shaped electron acceptors with perylene diimide wings for non-fullerene solar cells. 2018 , 6, 7141-7148	11
1451	Introducing cyclic alkyl chains into small-molecule acceptors for efficient polymer solar cells. 2018 , 6, 7046-7053	20
1450	Alkoxy-Induced Near-Infrared Sensitive Electron Acceptor for High-Performance Organic Solar Cells. 2018 , 30, 4150-4156	66
1449	Quinoxaline-Based Wide Band Gap Polymers for Efficient Nonfullerene Organic Solar Cells with Large Open-Circuit Voltages. 2018 , 10, 23235-23246	30
1448	An axisymmetric heptacyclic lactam unit for efficient polymer solar cells. 2018 , 6, 6911-6915	4
1447	Understanding the side-chain effects on ADA acceptors: in-plane and out-of-plane. 2018, 2, 1563-1567	12
1446	Synthesis and photovoltaic properties of a small molecule acceptor with thienylenevinylene thiophene as [bridge. 2019 , 160, 227-233	5

1445	Star-shaped small molecule acceptors with a subphthalocyanine core for solution-processed non-fullerene solar cells. 2019 , 160, 243-251	15
1444	Electronic, optical, and charge transport properties of A-EA electron acceptors for organic solar cells: Impact of anti-aromatic listructures. 2019 , 30, 211-216	5
1443	High-Performance Polymer Solar Cells Achieved by Introducing Side-Chain Heteroatom on Small-Molecule Electron Acceptor. 2019 , 40, e1800393	29
1442	Polymer Donors for High-Performance Non-Fullerene Organic Solar Cells. 2019 , 58, 4442-4453	270
1441	Comparison of Linear- and Star-Shaped Fused-Ring Electron Acceptors. 2019 , 1, 367-374	30
1440	Backbone Coplanarity Tuning of 1,4-Di(3-alkoxy-2-thienyl)-2,5-difluorophenylene-Based Wide Bandgap Polymers for Efficient Organic Solar Cells Processed from Nonhalogenated Solvent. 2019 , 11, 31119-31128	11
1439	Low Energetic Disorder in Small-Molecule Non-Fullerene Electron Acceptors. 2019 , 1, 350-353	17
1438	Molecular Tuning of Titanium Complexes with Controllable Work Function for Efficient Organic Photovoltaics. 2019 , 123, 20800-20807	2
1437	Amorphous electron donors with controllable morphology for non-fullerene polymer solar cells. 2019 , 7, 10881-10890	4
1436	Thiophene copolymer for 1 V high open-circuit voltage semitransparent photovoltaic devices. 2019 , 7, 10868-10875	10
1435	Methane-perylene diimide-based small molecule acceptors for high efficiency non-fullerene organic solar cells. 2019 , 7, 10901-10907	11
1434	Non-fullerene Acceptors for Harvesting Excitons from Semiconducting Carbon Nanotubes. 2019 , 123, 21395-21402	9
1433	Modulating Structure Ordering via Side-Chain Engineering of Thieno[3,4-]thiophene-Based Electron Acceptors for Efficient Organic Solar Cells with Reduced Energy Losses. 2019 , 11, 35193-35200	5
1432	High-efficiency ternary nonfullerene organic solar cells fabricated with a near infrared acceptor enhancing exciton utilization and extending absorption. 2019 , 7, 10498-10506	20
1431	Wide-gap non-fullerene acceptor enabling high-performance organic photovoltaic cells for indoor applications. 2019 , 4, 768-775	256
1430	Thioether Bond Modification Enables Boosted Photovoltaic Performance of Nonfullerene Polymer Solar Cells. 2019 , 11, 32218-32224	15
1429	Z-Shaped Fused-Chrysene Electron Acceptors for Organic Photovoltaics. 2019 , 11, 33006-33011	14
1428	Synthesis and Characterization of Benzothiadiazole and Dicyanovinylindandione Based Small-Molecular Conjugated Materials and Their Photovoltaic Properties. 2019 , 27, 1261-1267	6

1427	Isomerically Pure Benzothiophene-Incorporated Acceptor: Achieving Improved and of Nonfullerene Organic Solar Cells via End Group Manipulation. 2019 , 11, 33179-33187	26
1426	The effect of light environment during the film formation process on the morphology and function of organic photovoltaics. 2019 , 7, 10581-10588	1
1425	Morphology of small molecular donor/polymer acceptor blends in organic solar cells: effect of the latacking capability of the small molecular donors. 2019 , 7, 10521-10529	10
1424	Modulating the molecular packing and distribution enables fullerene-free ternary organic solar cells with high efficiency and long shelf-life. 2019 , 7, 20139-20150	30
1423	Power Generation, Evaporation Mitigation, and Thermal Insulation of Semitransparent Polymer Solar Cells: A Potential for Floating Photovoltaic Applications. 2019 , 2, 6060-6070	17
1422	Dramatically different photovoltaic effect induced by siloxane-terminated combinatory side chain in polymer solar cells. 2019 , 256, 116116	7
1421	Benzodithiophene-modified terpolymer acceptors with reduced molecular planarity and crystallinity: improved performance and stability for all-polymer solar cells. 2019 , 7, 10338-10351	13
1420	Tetrahydroxy-Perylene Bisimide Embedded in a Zinc Oxide Thin Film as an Electron-Transporting Layer for High-Performance Non-Fullerene Organic Solar Cells. 2019 , 131, 13185-13189	15
1419	Recent Progress in All-Polymer Solar Cells Based on Wide-Bandgap p-Type Polymers. 2019 , 14, 3109-3118	13
1418	Rational design non-fullerene acceptor-based high efficiency BHJ polymer solar cells through theoretical investigations. 2019 , 383, 111985	2
1417	Exploring Deep and Shallow Trap States in a Non-Fullerene Acceptor ITIC-Based Organic Bulk Heterojunction Photovoltaic System. 2019 , 123, 20691-20697	9
1416	Reduced Nonradiative Energy Loss Caused by Aggregation of Nonfullerene Acceptor in Organic Solar Cells. 2019 , 9, 1901823	53
1415	Facile synthesis of high-performance nonfullerene acceptor isomers via a one stone two birds strategy. 2019 , 7, 20667-20674	15
1414	Utilizing Difluorinated Thiophene Units To Improve the Performance of Polymer Solar Cells. 2019 , 52, 6523-6532	11
1413	Tuning of the conformation of asymmetric nonfullerene acceptors for efficient organic solar cells. 2019 , 7, 22279-22286	47
1412	Design of a Rigid Scaffold Structure toward Efficient and Stable Organic Photovoltaics. 2019 , 1, 402-411	8
1411	Regio-Specific Selenium Substitution in Non-Fullerene Acceptors for Efficient Organic Solar Cells. 2019 , 31, 6770-6778	41
1410	Influence of an ester directing-group on defect formation in the synthesis of conjugated polymers via direct arylation polymerization (DArP) using sustainable solvents. 2019 , 10, 4561-4572	19

1409	A two-dimensional halogenated thiophene side-chain strategy for balancing Voc and Jsc and improving efficiency of non-fullerene small molecule acceptor-based organic solar cells. 2019 , 7, 20274-20284	27
1408	Enhancing the of P3HT-Based OSCs via a Thiophene-Fused Aromatic Heterocycle as a "Bridge" for A-ED-EA-Type Acceptors. 2019 , 11, 26005-26016	17
1407	Insights into constitutional isomeric effects on donor acceptor intermolecular arrangements in non-fullerene organic solar cells. 2019 , 7, 18468-18479	28
1406	A thieno[3,4-b]pyrazine-based A2A1DA1A2 type low bandgap non-fullerene acceptor with 1,1-dicyanomethylene-3-indanone (IC) as the terminal group. 2019 , 7, 8820-8824	7
1405	Star-Shaped Fused-Ring Electron Acceptors with a -Symmetric and Electron-Rich Benzotri(cyclopentadithiophene) Core for Efficient Nonfullerene Organic Solar Cells. 2019 , 11, 28115-28124	13
1404	Effects of energy-level offset between a donor and acceptor on the photovoltaic performance of non-fullerene organic solar cells. 2019 , 7, 18889-18897	57
1403	A Carbonylated Terthiophene-Based Twisted Polymer for Efficient Ternary Polymer Solar Cells. 2019 , 40, e1900246	6
1402	Realizing Efficient Charge/Energy Transfer and Charge Extraction in Fullerene-Free Organic Photovoltaics via a Versatile Third Component. 2019 , 19, 5053-5061	34
1401	Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. 2019 , 9, 1901438	71
1400	Chain Engineering of Benzodifuran-Based Wide-Bandgap Polymers for Efficient Non-Fullerene Polymer Solar Cells. 2019 , 40, e1900227	13
1399	Fluorinated Photovoltaic Materials for High-Performance Organic Solar Cells. 2019 , 14, 3085-3095	49
1398	High-Efficiency As-Cast Organic Solar Cells Based on Acceptors with Steric Hindrance Induced Planar Terminal Group. 2019 , 9, 1901280	64
1397	Tuning the absorption range of naphthothiophene diimide-based acceptors for organic solar cells. 2019 , 171, 107691	
1396	High-Throughput Optical Screening for Efficient Semitransparent Organic Solar Cells. 2019 , 3, 2241-2254	89
1395	Alkyl Chain Length Effects of Polymer Donors on the Morphology and Device Performance of Polymer Solar Cells with Different Acceptors. 2019 , 9, 1901740	60
1394	A chlorinated non-fullerene acceptor for efficient polymer solar cells. 2019 , 30, 2343-2346	19
1393	Enhancing the Photovoltaic Performance of Ladder-Type Dithienocyclopentacarbazole-Based Nonfullerene Acceptors through Fluorination and Side-Chain Engineering. 2019 , 31, 5953-5963	35
1392	Ring fusion attenuates the device performance: star-shaped long helical perylene diimide based non-fullerene acceptors. 2019 , 7, 9564-9572	14

1391	A novel 9H-indeno[1,2-b]pyrazine-2,3-dicarbonitrile end group for an efficient non-fullerene small molecule acceptor. 2019 , 7, 10111-10118	5
1390	Efficient and thermally stable organic solar cells based on small molecule donor and polymer acceptor. 2019 , 10, 3271	64
1389	C60-small arylamine push-pull dyads for single-material organic solar cells. 2019 , 171, 107748	8
1388	Isomer-free: Precise Positioning of Chlorine-Induced Interpenetrating Charge Transfer for Elevated Solar Conversion. 2019 , 17, 302-314	57
1387	Effect of linear side-chain length on the photovoltaic performance of benzodithiophene-alt-dicarboxylic ester terthiophene polymers. 2019 , 43, 12950-12956	7
1386	Impact of Nonfullerene Acceptor Side Chain Variation on Transistor Mobility. 2019 , 5, 1900344	30
1385	Impact of the Siloxane-Terminated Side Chain on Photovoltaic Performances of the Dithienylbenzodithiophene-Difluorobenzotriazole-Based Wide Band Gap Polymer Donor in Non-Fullerene Polymer Solar Cells. 2019 , 11, 29094-29104	22
1384	A Small-Molecule "Charge Driver" enables Perovskite Quantum Dot Solar Cells with Efficiency Approaching 13. <i>Advanced Materials</i> , 2019 , 31, e1900111	58
1383	Rhodanine-based nonfullerene acceptors for organic solar cells. 2019 , 62, 1574-1596	13
1382	Terpolymer Strategy toward High-Efficiency Polymer Solar Cells: Integrating Symmetric Benzodithiophene and Asymmetrical Thieno[2,3-f]benzofuran Segments. 2019 , 31, 6163-6173	39
1381	High-Performance Nonfullerene Organic Photovoltaic Cells Using a TPD-Based Wide Bandgap Donor Polymer. 2019 , 2, 5692-5697	12
1380	Tetrahydroxy-Perylene Bisimide Embedded in a Zinc Oxide Thin Film as an Electron-Transporting Layer for High-Performance Non-Fullerene Organic Solar Cells. 2019 , 58, 13051-13055	35
1379	Asymmetric ADA-type nonfullerene small molecule acceptors for efficient organic solar cells. 2019 , 7, 19348-19354	22
1378	14%-efficiency fullerene-free ternary solar cell enabled by designing a short side-chain substituted small-molecule acceptor. 2019 , 64, 103934	34
1377	Simple and Versatile Non-Fullerene Acceptor Based on Benzothiadiazole and Rhodanine for Organic Solar Cells. 2019 , 11, 30098-30107	14
1376	Unraveling the Morphology in Solution-Processed Pseudo-Bilayer Planar Heterojunction Organic Solar Cells. 2019 , 11, 26213-26221	25
1375	Novel acceptor-donor-acceptor structured small molecule-based nanoparticles for highly efficient photothermal therapy. 2019 , 55, 8967-8970	15
1374	Alkylthiazole-based semicrystalline polymer donors for fullerene-free organic solar cells. 2019 , 10, 4314-4321	10

1373	2019 , 7, 9513-9522	20
1372	Forced coplanarity of dithienofluorene-based non-fullerene acceptors to achieve high-efficiency organic solar cells. 2019 , 7, 17947-17953	11
1371	Non-fullerene Acceptors with a Thieno[3,4-c]pyrrole-4,6-dione (TPD) Core for Efficient Organic Solar Cells. 2019 , 37, 1005-1014	38
1370	Side-chain engineering of wide-bandgap polymers based on benzo[1,2-b:4,5-b?]dithiophene and [2,2?-bithiophene]-4,4?-dicarboxylate for fullerene-free organic solar cells. 2019 , 7, 9581-9590	6
1369	Chlorination Strategy-Induced Abnormal Nanomorphology Tuning in High-Efficiency Organic Solar Cells: A Study of Phenyl-Substituted Benzodithiophene-Based Nonfullerene Acceptors. 2019 , 3, 1900262	15
1368	Simultaneous improvement of three parameters using a binary processing solvent system approach in as-cast non-fullerene solar cells. 2019 , 7, 25978-25984	9
1367	1 V high open-circuit voltage fluorinated alkoxybiphenyl side-chained benzodithiophene based photovoltaic polymers. 2019 , 257, 116182	1
1366	Thieno[2,3-f]benzofuran based donor-acceptor polymer for fullerene-free solar cells. 2019 , 120, 109205	3
1365	Effect of the third component on charge transfer character in ternary organic solar cells with a cascade-type electronic structure. 2019 , 383, 126001	4
1364	Reducing the Nano-Scale Aggregation of Perylene Diimide Based Acceptor by Conjugating a Bridge with a Large Volume. 2019 , 10,	1
1363	In-Depth Spectroscopy and New Heights for Organic Solar Cells. 2019 , 3, 2294-2296	
1362	5H-Fluoreno [3,2- b:6,7- b�Dithiophene Based Non-fullerene Small Molecular Acceptors for Polymer Solar Cell Application. 2019 , 34, 1220-1227	1
1361	Fluorine Tuning of Morphology, Energy Loss, and Carrier Dynamics in Perylenediimide Polymer Solar Cells. 2019 ,	6
1360	Crystalline Cooperativity of Donor and Acceptor Segments in Double-Cable Conjugated Polymers toward Efficient Single-Component Organic Solar Cells. 2019 , 131, 15678-15686	8
1359	Crystalline Cooperativity of Donor and Acceptor Segments in Double-Cable Conjugated Polymers toward Efficient Single-Component Organic Solar Cells. 2019 , 58, 15532-15540	31
1358	A wide bandgap conjugated polymer donor based on alkoxyl-fluorophenyl substituted benzodithiophene for high performance non-fullerene polymer solar cells. 2019 , 7, 1307-1314	17
1357	Exploring alkylthiol additives in PBDB-T:ITIC blended active layers for solar cell applications. 2019 , 28, 088802	2
1356	Sequentially Deposited versus Conventional Nonfullerene Organic Solar Cells: Interfacial Trap States, Vertical Stratification, and Exciton Dissociation. 2019 , 9, 1902145	22

1355	Rational Tuning of Molecular Interaction and Energy Level Alignment Enables High-Performance Organic Photovoltaics. <i>Advanced Materials</i> , 2019 , 31, e1904215	24	108	
1354	Quantum-Chemical Evaluation of Impact of Chlorination versus Fluorination on the Electronic Properties of Donors and Acceptors for Organic Solar Cells. 2019 , 2, 1900136		8	
1353	Black Phosphorous Quantum Dots Sandwiched Organic Solar Cells. 2019 , 15, e1903977		22	
1352	Improved Efficiency in All-Small-Molecule Organic Solar Cells with Ternary Blend of Nonfullerene Acceptor and Chlorinated and Nonchlorinated Donors. 2019 , 11, 44528-44535		33	
1351	A medium-bandgap small molecule donor compatible with both fullerene and unfused-ring nonfullerene acceptors for efficient organic solar cells. 2019 , 7, 13396-13401		11	
1350	Enhancing phase separation with a conformation-locked nonfullerene acceptor for over 14.4% efficiency solar cells. 2019 , 7, 13279-13286		17	
1349	Enhancing the Performance of a Fused-Ring Electron Acceptor by Unidirectional Extension. 2019 , 141, 19023-19031		102	
1348	Bicomponent Random Approach for the Synthesis of Donor Polymers for Efficient All-Polymer Solar Cells Processed from A Green Solvent. 2019 , 11, 43441-43451		5	
1347	Modulation of Three p-Type Polymers Containing a Fluorinated-Thiophene-Fused-Benzotriazole Unit To Pair with a Benzotriazole-Based Non-fullerene Acceptor for High VOC Organic Solar Cells. 2019 , 52, 8625-8630		22	
1346	Theoretical Insight into Multiple Charge-Transfer Mechanisms at the P3HT/Nonfullerenes Interface in Organic Solar Cells. 2019 , 7, 19699-19707		16	
1345	P3HT-Based Polymer Solar Cells with 8.25% Efficiency Enabled by a Matched Molecular Acceptor and Smart Green-Solvent Processing Technology. <i>Advanced Materials</i> , 2019 , 31, e1906045	24	88	
1344	Comparative study of absorption and photoluminescent properties of organic solar cells based on P3HT:PCBM and P3HT:ITIC blends. 2019 , 125, 1		3	
1343	Regulation of Molecular Packing and Blend Morphology by Finely Tuning Molecular Conformation for High-Performance Nonfullerene Polymer Solar Cells. 2019 , 11, 44501-44512		14	
1342	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	24	113	
1341	Ternary Polymer Solar Cells Facilitating Improved Efficiency and Stability. <i>Advanced Materials</i> , 2019 , 31, e1904601	24	71	
1340	S-alkylbenzothiophenium-based solid-state electrolyte for efficient quantum-dot sensitized solar cells. 2019 , 194, 286-293		1	
1339	A Narrow-Bandgap n-Type Polymer Semiconductor Enabling Efficient All-Polymer Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1905161	24	76	
1338	High Performance Thick-Film Nonfullerene Organic Solar Cells with Efficiency over 10% and Active Layer Thickness of 600 nm. 2019 , 9, 1902688		49	

1337	Additive-Free Non-Fullerene Organic Solar Cells. 2019 , 6, 5547-5562	8
1336	Efficient Organic Solar Cells with a High Open-Circuit Voltage of 1.34 V. 2019 , 37, 1153-1157	15
1335	Recent advances in molecular design of functional conjugated polymers for high-performance polymer solar cells. 2019 , 99, 101175	83
1334	Efficient non-fullerene polymer solar cells enabled by side-chain conjugated thieno[3,4-c]pyrrole-4,6-dione-based polymer and small molecular acceptors. 2019 , 145, 104378	3
1333	Organic and hybrid organic-inorganic flexible optoelectronics: Recent advances and perspectives. 2019 , 256, 116137	13
1332	Solution-Processable All-Small-Molecules for High-Performance Nonfullerene Organic Solar Cells with High Crystallinity Acceptor. 2019 , 123, 28021-28026	9
1331	Perylene Diimide-Based Nonfullerene Polymer Solar Cells with over 11% Efficiency Fabricated by Smart Molecular Design and Supramolecular Morphology Optimization. 2019 , 29, 1906587	42
1330	Building Blocks for High-Efficiency Organic Photovoltaics: Interplay of Molecular, Crystal, and Electronic Properties in Post-Fullerene ITIC Ensembles. 2019 , 20, 2608-2626	29
1329	Conjugation-Curtailing of Benzodithionopyran-Cored Molecular Acceptor Enables Efficient Air-Processed Small Molecule Solar Cells. 2019 , 15, e1902656	11
1328	Ambient Processable and Stable All-Polymer Organic Solar Cells. 2019 , 29, 1806747	77
1328 1327	Ambient Processable and Stable All-Polymer Organic Solar Cells. 2019, 29, 1806747 A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019, 4, 14800-14804	77
1327		
1327	A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019 , 4, 14800-14804	3
1327	A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019 , 4, 14800-14804 Fused octacyclic electron acceptor isomers for organic solar cells. 2019 , 7, 21432-21437 Polydopamine/ZnO electron transport layers enhance charge extraction in inverted non-fullerene	3 21
1327 1326 1325	A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019, 4, 14800-14804 Fused octacyclic electron acceptor isomers for organic solar cells. 2019, 7, 21432-21437 Polydopamine/ZnO electron transport layers enhance charge extraction in inverted non-fullerene organic solar cells. 2019, 7, 10795-10801 Impact of end groups on the performance of non-fullerene acceptors for organic solar cell	3 21 21
1327 1326 1325	A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019, 4, 14800-14804 Fused octacyclic electron acceptor isomers for organic solar cells. 2019, 7, 21432-21437 Polydopamine/ZnO electron transport layers enhance charge extraction in inverted non-fullerene organic solar cells. 2019, 7, 10795-10801 Impact of end groups on the performance of non-fullerene acceptors for organic solar cell applications. 2019, 7, 22701-22729 Nonacyclic carbazole-based non-fullerene acceptors enable over 12% efficiency with enhanced	3 21 21 54
1327 1326 1325 1324	A Wide-Band Gap Copolymer Donor for Efficient Fullerene-Free Solar Cells. 2019, 4, 14800-14804 Fused octacyclic electron acceptor isomers for organic solar cells. 2019, 7, 21432-21437 Polydopamine/ZnO electron transport layers enhance charge extraction in inverted non-fullerene organic solar cells. 2019, 7, 10795-10801 Impact of end groups on the performance of non-fullerene acceptors for organic solar cell applications. 2019, 7, 22701-22729 Nonacyclic carbazole-based non-fullerene acceptors enable over 12% efficiency with enhanced stability for organic solar cells. 2019, 7, 21903-21910 Intrinsic photo-degradation and mechanism of polymer solar cells: the crucial role of non-fullerene	3 21 21 54 21

1319	A non-fullerene acceptor based on alkylphenyl substituted benzodithiophene for high efficiency polymer solar cells with a small voltage loss and excellent stability. 2019 , 7, 24366-24373	23
1318	Designing difluoro substituted benzene ring based fullerene free acceptors for small Naphthalene Di-Imide based molecules with DFT approaches. 2019 , 51, 1	9
1317	Influence of Acceptor Type and Polymer Molecular Weight on the Mechanical Properties of Polymer Solar Cells. 2019 , 31, 9057-9069	63
1316	Multivalent anions as universal latent electron donors. 2019 , 573, 519-525	30
1315	Significantly improving the performance of polymer solar cells by the isomeric ending-group based small molecular acceptors: Insight into the isomerization. 2019 , 66, 104146	36
1314	A Trialkylsilylthienyl Chain-Substituted Small-Molecule Acceptor with Higher LUMO Level and Reduced Band Gap for Over 16% Efficiency Fullerene-Free Ternary Solar Cells. 2019 , 31, 8908-8917	41
1313	How Does Polymorphism Affect the Interfacial Charge-Transfer States in Organic Photovoltaics?. 2019 , 123, 25585-25595	1
1312	Understanding the impact of side-chains on photovoltaic performance in efficient all-polymer solar cells. 2019 , 7, 12641-12649	9
1311	Bromination of the Small-Molecule Acceptor with Fixed Position for High-Performance Solar Cells. 2019 , 31, 8044-8051	40
1310	Enhanced intramolecular charge transfer of unfused electron acceptors for efficient organic solar cells. 2019 , 3, 513-519	37
1309	Molecular design of near-infrared fluorescent Pdots for tumor targeting: aggregation-induced emission anti-aggregation-caused quenching. 2019 , 10, 198-207	33
1308	Synergistic effect of side-chain and backbone engineering in thieno[2,3-f]benzofuran-based conjugated polymers for high performance non-fullerene organic solar cells. 2019 , 7, 958-964	39
1307	A novel polymer donor based on dithieno[2,3-d:2?,3?-d??]benzo[1,2-b:4,5-b?]dithiophene for highly efficient polymer solar cells. 2019 , 7, 2646-2652	23
1306	Enhancing photovoltaic performance by tuning the domain sizes of a small-molecule acceptor by side-chain-engineered polymer donors. 2019 , 7, 3072-3082	46
1305	Energy level-modulated non-fullerene small molecule acceptors for improved VOC and efficiency of inverted perovskite solar cells. 2019 , 7, 3336-3343	21
1304	Effects of water vapor and oxygen on non-fullerene small molecule acceptors. 2019 , 7, 879-886	17
1303	Separating Crystallization Process of P3HT and O-IDTBR to Construct Highly Crystalline Interpenetrating Network with Optimized Vertical Phase Separation. 2019 , 29, 1807591	54
1302	Designing Alternative Non-Fullerene Molecular Electron Acceptors for Solution-Processable Organic Photovoltaics. 2019 , 19, 1078-1092	8

1301	Enhanced intermolecular interactions to improve twisted polymer photovoltaic performance. 2019 , 62, 370-377		24
1300	Low-Energy-Loss Polymer Solar Cells with 14.52% Efficiency Enabled by Wide-Band-Gap Copolymers. 2019 , 12, 1-12		51
1299	Pyrene-fused PDI based ternary solar cells: high power conversion efficiency over 10%, and improved device thermal stability. 2019 , 3, 93-102		23
1298	Highly-efficient semi-transparent organic solar cells utilising non-fullerene acceptors with optimised multilayer MoO3/Ag/MoO3 electrodes. 2019 , 3, 450-455		27
1297	Alkoxythiophene and alkylthiothiophene Ebridges enhance the performance of ADA electron acceptors. 2019 , 3, 492-495		16
1296	Green solvent-processed efficient non-fullerene organic solar cells enabled by low-bandgap copolymer donors with EDOT side chains. 2019 , 7, 716-726		31
1295	High-performance organic solar cells based on polymer donor/small molecule donor/nonfullerene acceptor ternary blends. 2019 , 7, 2268-2274		32
1294	Seleno twisted benzodiperylenediimides: facile synthesis and excellent electron acceptors for additive-free organic solar cells. 2019 , 55, 703-706		9
1293	High-performance wide-bandgap copolymers with dithieno[3,2-b:2?,3?-d]pyridin-5(4H)-one units. 2019 , 3, 399-402		16
1292	Fine Optimization of Morphology Evolution Kinetics with Binary Additives for Efficient Non-Fullerene Organic Solar Cells. 2019 , 6, 1801560		22
1291	Star-shaped magnesium tetraethynylporphyrin bearing four peripheral electron-accepting diketopyrrolopyrrole functionalities for organic solar cells. 2019 , 7, 4072-4083		17
1290	Effects of various donor:acceptor blend ratios on photophysical properties in non-fullerene organic bulk heterojunctions. 2019 , 30, 995-999		10
1289	Enhanced JSC of P3HT-based non-fullerene polymer solar cells by modulating aggregation effect of P3HT in solution state. 2019 , 68, 15-21		12
1288	Designing indacenodithiophene based non-fullerene acceptors with a donor-acceptor combined bridge for organic solar cells 2019 , 9, 3605-3617		40
1287	Length evolution of fused-ring electron acceptors toward optimal blend morphology in polymer solar cells incorporating asymmetric benzodithiophene-based donors. 2019 , 7, 4823-4828		12
1286	Highly efficient polymer solar cells based on low-temperature processed ZnO: application of a bifunctional Au@CNTs nanocomposite. 2019 , 7, 2676-2685		7
1285	A Terminally Tetrafluorinated Nonfullerene Acceptor for Well-Performing Alloy Ternary Solar Cells. 2019 , 29, 1805872		56
1284	Conjugated Donor-Acceptor Terpolymers Toward High-Efficiency Polymer Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1807019	24	89

1283	A 3-Fluoro-4-hexylthiophene-Based Wide Bandgap Donor Polymer for 10.9% Efficiency Eco-Friendly Nonfullerene Organic Solar Cells. 2019 , 15, e1805321		19
1282	Simplified synthetic routes for low cost and high photovoltaic performance n-type organic semiconductor acceptors. 2019 , 10, 519		153
1281	A Simple Phenyl Group Introduced at the Tail of Alkyl Side Chains of Small Molecular Acceptors: New Strategy to Balance the Crystallinity of Acceptors and Miscibility of Bulk Heterojunction Enabling Highly Efficient Organic Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1807832	24	150
1280	Molecular engineering of central fused-ring cores of non-fullerene acceptors for high-efficiency organic solar cells. 2019 , 7, 4313-4333		88
1279	Isomerization of Perylene Diimide Based Acceptors Enabling High-Performance Nonfullerene Organic Solar Cells with Excellent Fill Factor. 2019 , 6, 1802065		56
1278	Fluorination Effects on Indacenodithienothiophene Acceptor Packing and Electronic Structure, End-Group Redistribution, and Solar Cell Photovoltaic Response. 2019 , 141, 3274-3287		226
1277	Morphological optimization by rational matching of the donor and acceptor boosts the efficiency of alkylsilyl fused ring-based polymer solar cells. 2019 , 7, 4847-4854		9
1276	Performance Optimization of Parallel-Like Ternary Organic Solar Cells through Simultaneous Improvement in Charge Generation and Transport. 2019 , 29, 1808731		29
1275	Zwitterions for Organic/Perovskite Solar Cells, Light-Emitting Devices, and Lithium Ion Batteries: Recent Progress and Perspectives. 2019 , 9, 1803354		41
1274	New roles of fused-ring electron acceptors in organic solar cells. 2019 , 7, 4766-4770		3
1273	Fused nonacyclic electron acceptors with additional alkyl side chains for efficient polymer solar cells. 2019 , 68, 151-158		7
1272	A-ED-EA small-molecule donors with different end alkyl chains obtain different morphologies in organic solar cells. 2019 , 30, 906-910		6
1271	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. 2019 , 10, 570		2 60
1270	Spirobifluorene based small molecules as an alternative to traditional fullerene acceptors for organic solar cells. 2019 , 94, 97-106		26
1269	Achieving Balanced Charge Transport and Favorable Blend Morphology in Non-Fullerene Solar Cells via Acceptor End Group Modification. 2019 , 31, 1752-1760		36
1268	A new dialkylthio-substituted naphtho[2,3-c]thiophene-4,9-dione based polymer donor for high-performance polymer solar cells. 2019 , 12, 675-683		61
1267	A universal layer-by-layer solution-processing approach for efficient non-fullerene organic solar cells. 2019 , 12, 384-395		143
1266	Ladder-type dithienocyclopentadibenzothiophene-cored wide-bandgap polymers for efficient non-fullerene solar cells with large open-circuit voltages. 2019 , 7, 3307-3316		9

1265	Non-fullerene organic solar cells based on a small molecule with benzo[1,2-c:4,5-c']dithiophene-4,8-dione as Ebridge. 2019 , 67, 175-180	7
1264	First-principles theoretical designing of planar non-fullerene small molecular acceptors for organic solar cells: manipulation of noncovalent interactions. 2019 , 21, 2128-2139	33
1263	Charge-transfer state dynamics in all-polymer solar cells: formation, dissociation and decoherence. 2019 , 21, 2755-2763	4
1262	Pairing 1D/2D-conjugation donors/acceptors towards high-performance organic solar cells. 2019 , 3, 276-283	7
1261	Comparative study of light- and thermal-induced degradation for both fullerene and non-fullerene-based organic solar cells. 2019 , 3, 723-735	28
1260	Nonhalogen solvent-processed polymer solar cells based on chlorine and trialkylsilyl substituted conjugated polymers achieve 12.8% efficiency. 2019 , 7, 2351-2359	61
1259	Multifunctional asymmetrical molecules for high-performance perovskite and organic solar cells. 2019 , 7, 2412-2420	11
1258	Highly efficient near-infrared and semitransparent polymer solar cells based on an ultra-narrow bandgap nonfullerene acceptor. 2019 , 7, 3745-3751	70
1257	Constructing a donor ceptor linear-conjugation structure for heterologous perylene diimides to greatly improve the photovoltaic performance. 2019 , 7, 835-842	15
1256	Influence of backbone modification of difluoroquinoxaline-based copolymers on the interchain packing, blend morphology and photovoltaic properties of nonfullerene organic solar cells. 2019 , 7, 1681-168	9 ¹⁸
1255	Low Optical Loss Amplified Spontaneous Emission and Lasing in a Solution-Processed Organic Semiconductor. 2019 , 7, 1900701	8
1254	Single-molecule conductance investigation of BDT derivatives: an additional pattern found to induce through-space channels beyond Estacking. 2019 , 55, 8325-8328	8
1253	Short-Axis Methyl Substitution Approach on Indacenodithiophene: A New Multi-Fused Ladder-Type Arene for Organic Solar Cells. 2019 , 7, 372	3
1252	Quad-rotor-shaped non-fullerene electron acceptor materials with potential to enhance the photoelectric performance of organic solar cells. 2019 , 7, 18150-18157	9
1251	Ternary Polymer Solar Cells with High Efficiency of 14.24% by Integrating Two Well-Complementary Nonfullerene Acceptors. 2019 , 29, 1903596	39
1250	Enhancing Photovoltaic Performance by Cathode Interfacial Modification with Inorganic/Organic Gradient Diffusion Structures. 2019 ,	1
1249	Supramolecular nanomaterials with photocatalytic activity obtained via self-assembly of a fluorinated porphyrin derivative. 2019 , 254, 115639	13
1248	Synergistic Effects of Side-Chain Engineering and Fluorination on Small Molecule Acceptors to Simultaneously Broaden Spectral Response and Minimize Voltage Loss for 13.8% Efficiency Organic Solar Cells. 2019 , 3, 1900169	19

1247	Influences of Non-fullerene Acceptor Fluorination on Three-Dimensional Morphology and Photovoltaic Properties of Organic Solar Cells. 2019 , 11, 26194-26203	33
1246	Recent Advances, Design Guidelines, and Prospects of All-Polymer Solar Cells. 2019 , 119, 8028-8086	367
1245	Efficient photovoltaic performances and enhanced dielectric constants enabled by a fluorinated quinoxaline-based polymer with non-fullerene acceptors. 2019 , 73, 109-114	1
1244	Diffusion-Limited Crystallization: A Rationale for the Thermal Stability of Non-Fullerene Solar Cells. 2019 , 11, 21766-21774	56
1243	Over 16% efficiency organic photovoltaic cells enabled by a chlorinated acceptor with increased open-circuit voltages. 2019 , 10, 2515	1093
1242	All-polymer solar cells based on a novel narrow-bandgap polymer acceptor with power conversion efficiency over 10%. 2019 , 7, 16190-16196	80
1241	Simple perylene diimide based polymer acceptor with tuned aggregation for efficient all-polymer solar cells. 2019 , 170, 107608	3
1240	Delicate Energy-Level Adjustment and Interfacial Defect Passivation of ZnO Electron Transport Layers in Organic Solar Cells by Constructing ZnO/In Nanojunctions. 2019 , 123, 16546-16555	10
1239	Efficient Non-Fullerene Organic Solar Cells Based on a Wide-Bandgap Polymer Donor Containing an Alkylthiophenyl-Substituted Benzodithiophene Moiety. 2019 , 20, 2668-2673	4
1238	Carboxylate-Substituted Polythiophenes for Efficient Fullerene-Free Polymer Solar Cells: The Effect of Chlorination on Their Properties. 2019 , 52, 4464-4474	50
1237	Nonfullerene n-Type Organic Semiconductors for Perovskite Solar Cells. 2019 , 9, 1900860	44
1236	Ternary Solar Cells Employing Thieno[3,4-b]thiophene-Based Copolymer Offer High Performance with Large Current Density and Fine-Tuned Morphology. 2019 , 123, 14976-14984	13
1235	Dual Imide-Functionalized Unit-Based Regioregular D-A-D-A Polymers for Efficient Unipolar n-Channel Organic Transistors and All-Polymer Solar Cells. 2019 , 11, 22583-22594	26
1234	Fused-Ring Core Engineering for Small Molecule Acceptors Enable High-Performance Nonfullerene Polymer Solar Cells. 2019 , 3, 1900280	12
1233	Regulating the morphology of fluorinated non-fullerene acceptor and polymer donor via binary solvent mixture for high efficiency polymer solar cells. 2019 , 62, 1221-1229	23
1232	Rylene Diimide Electron Acceptors for Organic Solar Cells. 2019 , 1, 869-881	41
1231	A nonfullerene acceptor with a 1000 nm absorption edge enables ternary organic solar cells with improved optical and morphological properties and efficiencies over 15%. 2019 , 12, 2529-2536	188
1230	The comprehensive utilization of the synergistic effect of fullerene and non-fullerene acceptors to achieve highly efficient polymer solar cells. 2019 , 7, 15841-15850	92

1229	Introducing Fluorine and Sulfur Atoms into Quinoxaline-Based p-type Polymers To Gradually Improve the Performance of Fullerene-Free Organic Solar Cells. 2019 , 8, 743-748	65
1228	Achieving Both Enhanced Voltage and Current through Fine-Tuning Molecular Backbone and Morphology Control in Organic Solar Cells. 2019 , 9, 1901024	54
1227	Effectiveness of Solvent Vapor Annealing over Thermal Annealing on the Photovoltaic Performance of Non-Fullerene Acceptor Based BHJ Solar Cells. 2019 , 9, 8529	23
1226	Fused selenophene-thieno[3,2-b]thiophene-selenophene (ST)-based narrow-bandgap electron acceptor for efficient organic solar cells with small voltage loss. 2019 , 55, 8258-8261	34
1225	Renaissance of Fused Porphyrins: Substituted Methylene-Bridged Thiophene-Fused Strategy for High-Performance Dye-Sensitized Solar Cells. 2019 , 141, 9910-9919	125
1224	Fullerene-free polymer solar cells enabled with a PhI-based wide band gap donor polymer: promoting efficiencies via acceptor screening and device engineering. 2019 , 7, 8442-8449	3
1223	Experimental and theoretical study of planar small molecule acceptor for organic solar cells. 2019 , 1196, 169-175	13
1222	Synthesis of medium bandgap copolymers based on benzotriazole for non-fullerene organic solar cells. 2019 , 179, 121580	3
1221	Achieving a High Fill Factor and Stability in Perylene Diimide B ased Polymer Solar Cells Using the Molecular Lock Effect between 4,4?-Bipyridine and a Tri(8-hydroxyquinoline)aluminum(III) Core. 2019 , 29, 1902079	22
1220	Miscibility Tuning for Optimizing Phase Separation and Vertical Distribution toward Highly Efficient Organic Solar Cells. 2019 , 6, 1900565	56
1219	A p-B conjugated triarylborane as an alcohol-processable n-type semiconductor for organic optoelectronic devices. 2019 , 7, 7427-7432	29
1218	Preparation and Physical Characterization of Pyrene and Pyrrolo[3,4-c]pyrrole-1,4-dione-Based Copolymers. 2019 , 8, 429-433	5
1217	Efficient Polymeric Donor for Both Visible and Near-Infrared-Absorbing Organic Solar Cells. 2019 , 2, 4284-429	115
1216	Red-shifted delayed fluorescence at the expense of photoluminescence quantum efficiency - an intramolecular charge-transfer molecule based on a benzodithiophene-4,8-dione acceptor. 2019 , 21, 10580-10586	10
1215	Silicon phthalocyanine passivation for fullerene-free perovskite solar cells with efficient electron extraction. 2019 , 12, 064006	9
1214	Stable Postfullerene Solar Cells via Direct CH Arylation Polymerization. Morphology P erformance Relationships. 2019 , 31, 4313-4321	24
1213	The crucial role of end group planarity for fused-ring electron acceptors in organic solar cells. 2019 , 3, 1642-1652	9
1212	Overcoming the energy loss in asymmetrical non-fullerene acceptor-based polymer solar cells by halogenation of polymer donors. 2019 , 7, 15404-15410	32

1211	Impact of the Bonding Sites at the Inner or Outer Bridged Positions for Non-Fullerene Acceptors. 2019 , 11, 19444-19451	20
1210	Simple non-fused electron acceptors for efficient and stable organic solar cells. 2019 , 10, 2152	214
1209	Changing the Ebridge from thiophene to thieno[3,2-b]thiophene for the D-EA type polymer enables high performance fullerene-free organic solar cells. 2019 , 55, 6708-6710	68
1208	Local Excitation/Charge-Transfer Hybridization Simultaneously Promotes Charge Generation and Reduces Nonradiative Voltage Loss in Nonfullerene Organic Solar Cells. 2019 , 10, 2911-2918	52
1207	Enhanced Hole Transport in Ternary Blend Polymer Solar Cells. 2019 , 20, 2683-2688	6
1206	Asymmetric Nonfullerene Small Molecule Acceptors for Organic Solar Cells. 2019 , 9, 1900999	130
1205	A wide-bandgap DA copolymer donor based on a chlorine substituted acceptor unit for high performance polymer solar cells. 2019 , 7, 14070-14078	51
1204	Effects of the core unit on perylene-diimide-based molecular acceptors in fullerene-free organic solar cells. 2019 , 71, 238-245	8
1203	Benzodithiophene-Fused Perylene Bisimides as Electron Acceptors for Non-Fullerene Organic Solar Cells with High Open-Circuit Voltage. 2019 , 20, 2696-2701	4
1202	Significant influence of halogenation on the energy levels and molecular configurations of polymers in DTBDT-based polymer solar cells. 2019 , 3, 1244-1252	13
1201	Charge carrier transport and nanomorphology control for efficient non-fullerene organic solar cells. 2019 , 12, 398-407	20
1200	Triimide-Functionalized n-Type Polymer Semiconductors Enabling All-Polymer Solar Cells with Power Conversion Efficiencies Approaching 9%. 2019 , 3, 1900107	26
1199	Introduction of co-additives to form well dispersed photoactive layer to improve performance and stability of organic solar cells. 2019 , 185, 1-12	11
1198	Tailoring exciton diffusion and domain size in photovoltaic small molecules by annealing. 2019 , 7, 7922-7928	12
1197	An Octylrhodanine-endcapped Thiophene as a Nonfused Nonfullerene Acceptor for Organic Solar Cells. 2019 , 48, 529-532	1
1196	Novel benzodithiophene unit with an alkylthiobiphenyl side chain for constructing high-efficiency polymer solar cells. 2019 , 7, 6105-6111	8
1195	Unconjugated Side-Chain Engineering Enables Small Molecular Acceptors for Highly Efficient Non-Fullerene Organic Solar Cells: Insights into the Fine-Tuning of Acceptor Properties and Micromorphology. 2019 , 29, 1902155	86
1194	Facile Synthesis of Polycyclic Aromatic Hydrocarbon (PAH) B ased Acceptors with Fine-Tuned Optoelectronic Properties: Toward Efficient Additive-Free Nonfullerene Organic Solar Cells. 2019 , 9, 1803976	38

1193	Multi-Sulfur-Annulated Fused Perylene Diimides for Organic Solar Cells with Low Open-Circuit Voltage Loss. 2019 , 2, 3805-3814	22	<u>!</u>
1192	Interaction between the Non-Fullerene Acceptor ITIC and Potassium. 2019, 4, 8087-8093	O	
1191	Nonfullerene All-Small-Molecule Organic Solar Cells. 2019 , 4, 1241-1250	11	2
1190	Delineation of Thermodynamic and Kinetic Factors that Control Stability in Non-fullerene Organic Solar Cells. 2019 , 3, 1328-1348	74	ł
1189	A New Acceptor for Highly Efficient Organic Solar Cells. 2019 , 3, 908-909	23	;
1188	Efficient as-cast semi-transparent organic solar cells with efficiency over 9% and a high average visible transmittance of 27.6. 2019 , 21, 10660-10666	22	!
1187	Organic bulk-heterojunction injected perovskite films for highly efficient solar cells. 2019 , 7, 6391-6397	6	
1186	Recent Progress in Molecular Design of Fused Ring Electron Acceptors for Organic Solar Cells. 2019 , 15, e1900134	89)
1185	Modulating morphology via side-chain engineering of fused ring electron acceptors for high performance organic solar cells. 2019 , 62, 790-796	16	ó
1184	Efficient Polymer Solar Cells Having High Open-Circuit Voltage and Low Energy Loss Enabled by a Main-Chain Twisted Small Molecular Acceptor. 2019 , 11, 16795-16803	22	:
1183	Benzo[1,2-b:4,5-b?]diselenophene-fused nonfullerene acceptors with alternative aromatic ring-based and monochlorinated end groups: a new synergistic strategy to simultaneously achieve highly efficient organic solar cells with the energy loss of 0.49 eV. 2019 , 7, 11802-11813	31	-
1182	Correlating the electron-donating core structure with morphology and performance of carbon oxygen-bridged ladder-type non-fullerene acceptor based organic solar cells. 2019 , 61, 318-326	32	:
1181	Ternary Organic Solar Cells with Small Nonradiative Recombination Loss. 2019 , 4, 1196-1203	84	ŀ
1180	Nonfullerene Polymer Solar Cell with Large Active Area of 216 cm2 and High Power Conversion Efficiency of 7.7%. 2019 , 3, 1900071	17	,
1179	Improved photovoltaic performance of a nonfullerene acceptor based on a benzo[b]thiophene fused end group with extended Econjugation. 2019 , 7, 9822-9830	27	7
1178	Enhanced Interactions of Nonfullerene Acceptors by Volatilizable Solid Additives in Efficient Polymer Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1900477	4 69)
1177	Low-bandgap non-fullerene acceptors based on selenophene [spacer and alkylated indaceno[1,2-b:5,6-b?]dithiophene for organic solar cells. 2019 , 69, 200-207	7	
1176	An extraordinary cyclohexylmethyl side chain dominating polymeric donor packing patterns and energy levels for efficient non-fullerene polymer solar cells. 2019 , 7, 10505-10513	14	ļ

1175	High-performance non-fullerene polymer solar cells based on naphthobistriazole wide bandgap donor copolymers. 2019 , 7, 4709-4715	О
1174	Hybridization of Local Exciton and Charge-Transfer States Reduces Nonradiative Voltage Losses in Organic Solar Cells. 2019 , 141, 6362-6374	188
1173	As-cast ternary polymer solar cells based on a nonfullerene acceptor and its fluorinated counterpart showing improved efficiency and good thickness tolerance. 2019 , 7, 9798-9806	20
1172	High Voc ternary nonfullerene polymer solar cells with improved efficiency and good thermal stability. 2019 , 69, 174-180	9
1171	Efficiency enhancements in non-fullerene acceptor-based organic solar cells by post-additive soaking. 2019 , 7, 8805-8810	11
1170	A direct comparison of monomeric vs. dimeric and non-annulated vs. N-annulated perylene diimide electron acceptors for organic photovoltaics. 2019 , 43, 5187-5195	16
1169	Transforming Ionene Polymers into Efficient Cathode Interlayers with Pendent Fullerenes. 2019 , 131, 5733-5737	2
1168	Simple Bithiophene R hodanine-Based Small Molecule Acceptor for Use in Additive-Free Nonfullerene OPVs with Low Energy Loss of 0.51 eV. 2019 , 9, 1804021	45
1167	A High-Performance Non-Fullerene Acceptor Compatible with Polymers with Different Bandgaps for Efficient Organic Solar Cells. 2019 , 3, 1800376	34
1166	Flexible ITO-free organic solar cells over 10% by employing drop-coated conductive PEDOT:PSS transparent anodes. 2019 , 62, 500-505	16
1165	Asymmetric fused-ring electron acceptor with two distinct terminal groups for efficient organic solar cells. 2019 , 7, 8055-8060	38
1164	Fluorene-fused ladder-type non-fullerene small molecule acceptors for high-performance polymer solar cells. 2019 , 3, 709-715	8
1163	Efficient Polymer Solar Cells With High Fill Factor Enabled by A Furo[3,4-c]pyrrole-4,6-dione-Based Copolymer. 2019 , 3, 1900012	14
1162	Pluripotent Features of Doubly Thiophene-Fused Benzodiphospholes as Organic Functional Materials. 2019 , 25, 6425-6438	7
1161	Isomers of Dithienocyclopentapyrene-Based Non-Fullerene Electron Acceptors: Configuration Effect on Photoelectronic Properties. 2019 , 25, 6385-6391	9
1160	Stability of Nonfullerene Organic Solar Cells: from Built-in Potential and Interfacial Passivation Perspectives. 2019 , 9, 1900157	72
1159	Energy level modulation of ITIC derivatives: Effects on the photodegradation of conventional and inverted organic solar cells. 2019 , 69, 255-262	23
1158	Diketopyrrolopyrrole-based conjugated materials for non-fullerene organic solar cells. 2019 , 7, 10174-10199	72

1157	Highly fluorescent anthracene derivative as a non-fullerene acceptor in OSCs with small non-radiative energy loss of 0.22 eV and high PCEs of over 13%. 2019 , 7, 10212-10216	21
1156	Ring-perfluorinated non-volatile additives with a high dielectric constant lead to highly efficient and stable organic solar cells. 2019 , 7, 4716-4724	20
1155	Impact of an electron withdrawing group on the thiophene-fused benzotriazole unit on the photovoltaic performance of the derived polymer solar cells. 2019 , 166, 381-389	7
1154	Regulating Bulk-Heterojunction Molecular Orientations through Surface Free Energy Control of Hole-Transporting Layers for High-Performance Organic Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1806921	53
1153	Transforming Ionene Polymers into Efficient Cathode Interlayers with Pendent Fullerenes. 2019 , 58, 5677-5681	15
1152	Fluorinated heptacyclic carbazole-based ladder-type acceptors with aliphatic side chains for efficient fullerene-free organic solar cells. 2019 , 3, 829-835	17
1151	Achieving over 16% efficiency for single-junction organic solar cells. 2019 , 62, 746-752	723
1150	Tuning the dipole moments of nonfullerene acceptors with an asymmetric terminal strategy for highly efficient organic solar cells. 2019 , 7, 8889-8896	53
1149	Polymer solar cells based on spontaneously-spreading film with double electron-transporting layers. 2019 , 69, 56-61	5
1148	The binding energy and dynamics of charge-transfer states in organic photovoltaics with low driving force for charge separation. 2019 , 150, 104704	26
1147	Enhanced efficiency of polymer solar cells by improving molecular aggregation and broadening the absorption spectra. 2019 , 166, 42-48	32
1146	A new small molecule donor for efficient and stable all small molecule organic solar cells. 2019 , 70, 78-85	16
1145	Benzotriazole-Based p-Type Polymers with Thieno[3,2-b]thiophene Bridges and Fluorine Substituents To Realize High VOC. 2019 , 1, 906-913	17
1144	Fused Benzothiadiazole: A Building Block for n-Type Organic Acceptor to Achieve High-Performance Organic Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1807577	214
1143	Reduced Energy Loss Enabled by a Chlorinated Thiophene-Fused Ending-Group Small Molecular Acceptor for Efficient Nonfullerene Organic Solar Cells with 13.6% Efficiency. 2019 , 9, 1900041	117
1142	Limitations and Perspectives on Triplet-Material-Based Organic Photovoltaic Devices. <i>Advanced Materials</i> , 2019 , 31, e1900690	31
1141	Chlorination strategy on polymer donors toward efficient solar conversions. 2019 , 39, 208-216	26
1140	Effect of Thionation on the Performance of PNDIT2-Based Polymer Solar Cells. 2019 , 123, 12062-12072	2

1139	Fluorination-modulated end units for high-performance non-fullerene acceptors based organic solar cells. 2019 , 62, 1210-1217	11
1138	An A2A1A2-type small molecule donor for high-performance organic solar cells. 2019, 7, 5381-5384	9
1137	Methyl Thioether Functionalization of a Polymeric Donor for Efficient Solar Cells Processed from Non-Halogenated Solvents. 2019 , 31, 3025-3033	19
1136	Simultaneously increasing open-circuit voltage and short-circuit current to minimize the energy loss in organic solar cells via designing asymmetrical non-fullerene acceptor. 2019 , 7, 11053-11061	25
1135	A Simple Approach to Prepare Chlorinated Polymer Donors with Low-Lying HOMO Level for High Performance Polymer Solar Cells. 2019 , 31, 6558-6567	43
1134	Thiolated Epolyglutamic acid as a bioadhesive hydrogel-forming material: evaluation of gelation, bioadhesive properties and sustained release of KGF in the repair of injured corneas. 2019 , 7, 2582-2599	19
1133	An Operando Study on the Photostability of Nonfullerene Organic Solar Cells. 2019 , 3, 1900077	40
1132	Organic Solar Cells Based on High Hole Mobility Conjugated Polymer and Nonfullerene Acceptor with Comparable Bandgaps and Suitable Energy Level Offsets Showing Significant Suppression of JscVoc Trade-Off. 2019 , 3, 1900079	20
1131	Photocatalytic effect of ZnO on the stability of nonfullerene acceptors and its mitigation by SnO2 for nonfullerene organic solar cells. 2019 , 6, 1438-1443	80
1130	Inverse Optical Cavity Design for Ultrabroadband Light Absorption Beyond the Conventional Limit in Low-Bandgap Nonfullerene Acceptor B ased Solar Cells. 2019 , 9, 1900463	20
1129	Dithienocyclopentadibenzothiophene: a C2v-symmetric core for nonfullerene acceptors with tunable bandgaps. 2019 , 7, 9609-9617	11
1128	An easily available near-infrared absorbing non-fullerene photovoltaic electron acceptor with indeno[1,2-b]indole as the central core. 2019 , 166, 467-472	6
1127	Spin-Dependent ElectronHole Recombination and Dissociation in Nonfullerene Acceptor ITIC-Based Organic Photovoltaic Systems. 2019 , 3, 1900063	12
1126	Photovoltaic Materials. 2019 , 1033-1054	
1125	Effects of Fluorination on Exciton Binding Energy and Charge Transport of Econjugated Donor Polymers and the ITIC Molecular Acceptor: A Theoretical Study. 2019 , 123, 6395-6406	24
1124	Over 12% Efficiency Nonfullerene All-Small-Molecule Organic Solar Cells with Sequentially Evolved Multilength Scale Morphologies. <i>Advanced Materials</i> , 2019 , 31, e1807842	228
1123	Functional Organic Semiconductors Based on Bay-Annulated Indigo (BAI). 2019 , 19, 1062-1077	9
1122	A conjugated polymer based on alkylthio-substituted benzo[1,2-c:4,5-c]dithiophene-4,8-dione acceptor for polymer solar cells. 2019 , 165, 335-340	12

1121	Photovoltaic donor-acceptor conjugated polymers with minimally substituted acceptor moieties. 2019 , 68, 280-284	9
1120	A benzo[1,2-d:4,5-d?]bisthiazole-based wide-bandgap copolymer semiconductor for efficient fullerene-free organic solar cells with a small energy loss of 0.50 eV. 2019 , 7, 5234-5238	9
1119	Synthesis and photovoltaic investigation of dithieno[2,3-d:2?,3?-d?]-benzo[1,2-b:3,4-b?:5,6-d?]trithiophene-based conjugated polymer with an enlarged Etonjugated system. 2019 , 30, 1290-1302	O
1118	A review of non-fullerene polymer solar cells: from device physics to morphology control. 2019 , 82, 036601	127
1117	Multiple Fused Ring-Based Near-Infrared Nonfullerene Acceptors with an Interpenetrated Charge-Transfer Network. 2019 , 31, 1664-1671	53
1116	Photochemical synthesis of Eextended ullazine derivatives as new electron donors for efficient conjugated DA polymers. 2019 , 7, 3015-3024	10
1115	High-Efficiency Polymer Solar Cells Over 13.9% With a High VOC Beyond 1.0 V by Synergistic Effect of Fluorine and Sulfur. 2019 , 3, 1900005	42
1114	Stereoisomerism of ladder-type acceptor molecules and its effect on photovoltaic properties. 2019 , 165, 354-360	4
1113	A cyclopentadithiophene-bridged small molecule acceptor with near-infrared light absorption for efficient organic solar cells. 2019 , 7, 4013-4019	14
1112	Regulating exciton bonding energy and bulk heterojunction morphology in organic solar cells via methyl-functionalized non-fullerene acceptors. 2019 , 7, 6809-6817	18
1111	Tandem structure: a breakthrough in power conversion efficiency for highly efficient polymer solar cells. 2019 , 3, 910-934	23
1110	Asymmetric Wide-Bandgap Polymers Simultaneously Improve the Open-Circuit Voltage and Short-Circuit Current for Organic Photovoltaics. 2019 , 40, e1800906	20
1109	Unveiling Excitonic Dynamics in High-Efficiency Nonfullerene Organic Solar Cells to Direct Morphological Optimization for Suppressing Charge Recombination. 2019 , 6, 1802103	24
1108	Morphology of organic photovoltaic non-fullerene acceptors investigated by grazing incidence X-ray scattering techniques. 2019 , 5, 100030	58
1107	Recent Advances in n-Type Polymers for All-Polymer Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1807275 _{2.4}	132
1106	Achieving Thickness-Insensitive Morphology of the Photoactive Layer for Printable Organic Photovoltaic Cells via Side Chain Engineering in Nonfullerene Acceptors. 2019 , 9, 1900044	27
1105	Diketopyrrolopyrrole-based terpolymers with tunable broad band absorption for fullerene and fullerene-free polymer solar cells. 2019 , 7, 3375-3384	11
1104	Dihydropyreno[1,2-b:6,7-b?]dithiophene based electron acceptors for high efficiency as-cast organic solar cells. 2019 , 7, 5943-5948	16

1103	Nonfullerene acceptors with a novel nonacyclic core for high-performance polymer solar cells. 2019 , 7, 3335-3341		5
1102	High-Performance All-Polymer Solar Cells Enabled by an n-Type Polymer Based on a Fluorinated Imide-Functionalized Arene. <i>Advanced Materials</i> , 2019 , 31, e1807220	24	123
1101	Ternary polymer solar cells with alloyed non-fullerene acceptor exhibiting 12.99% efficiency and 76.03% fill factor. 2019 , 59, 58-65		50
1100	Ternary Organic Solar Cells with Efficiency >16.5% Based on Two Compatible Nonfullerene Acceptors. <i>Advanced Materials</i> , 2019 , 31, e1905645	24	190
1099	Acceptor Gradient Polymer Donors for Non-Fullerene Organic Solar Cells. 2019 , 31, 9729-9741		10
1098	Tuning of optoelectronic properties of triphenylamines-based donor materials for organic solar cells. 2019 , 18, 1950036		7
1097	Assessing the energy offset at the electron donor/acceptor interface in organic solar cells through radiative efficiency measurements. 2019 , 12, 3556-3566		52
1096	II wisted Itonjugated molecules as donor materials for efficient all-small-molecule organic solar cells processed with tetrahydrofuran. 2019 , 7, 23008-23018		21
1095	Achieving high-performance non-halogenated nonfullerene acceptor-based organic solar cells with 13.7% efficiency via a synergistic strategy of an indacenodithieno[3,2-b]selenophene core unit and non-halogenated thiophene-based terminal group. 2019 , 7, 24389-24399		30
1094	Introducing an identical benzodithiophene donor unit for polymer donors and small-molecule acceptors to unveil the relationship between the molecular structure and photovoltaic performance of non-fullerene organic solar cells. 2019 , 7, 26351-26357		14
1093	Non-halogenated-solvent-processed highly efficient organic solar cells with a record open circuit voltage enabled by noncovalently locked novel polymer donors. 2019 , 7, 27394-27402		11
1092	Oxygen heterocycle-fused indacenodithiophenebithiophene enables an efficient non-fullerene molecular acceptor. 2019 , 7, 15344-15349		2
1091	Nonfullerene acceptors comprising a naphthalene core for high efficiency organic solar cells 2019 , 9, 39163-39169		3
1090	Designing dithienonaphthalene based acceptor materials with promising photovoltaic parameters for organic solar cells 2019 , 9, 34496-34505		23
1089	A wide-bandgap copolymer donor based on a phenanthridin-6(5H)-one unit. 2019 , 3, 2686-2689		3
1088	All-polymer indoor photovoltaics with high open-circuit voltage. 2019 , 7, 26533-26539		71
1087	Tuning terminal aromatics of electron acceptors to achieve high-efficiency organic solar cells. 2019 , 7, 27632-27639		57
1086	Functionalizing tetraphenylpyrazine with perylene diimides (PDIs) as high-performance nonfullerene acceptors. 2019 , 7, 14563-14570		6

1085	Synthesis of ITIC Derivatives with Extended Econjugation as Non-Fullerene Acceptors for Organic Solar Cells. 2019 , 11, 47121-47130	14
1084	Indacenodithieno[3,2-b]thiophene-Based Wide Bandgap D-FA Copolymer for Nonfullerene Organic Solar Cells. 2019 , 8, 1599-1604	16
1083	Enhancing the efficiency of PTB7-Th:COi8DFIC-based ternary solar cells with versatile third components. 2019 , 6, 041405	15
1082	A new non-fullerene acceptor based on the combination of a heptacyclic benzothiadiazole unit and a thiophene-fused end group achieving over 13% efficiency. 2019 , 21, 26557-26563	19
1081	Nonhalogenated-Solvent-Processed Efficient Polymer Solar Cells Enabled by Medium-Band-Gap A-ED-EA Small-Molecule Acceptors Based on a 6,12-Dihydro-diindolo[1,2-:10,20-]pyrazine Unit. 2019 , 11, 48134-48146	6
1080	Naphthalene core-based noncovalently fused-ring electron acceptors: effects of linkage positions on photovoltaic performances. 2019 , 7, 15141-15147	15
1079	Mesoporous silica hybrids as an antireflective coating to enhance light harvesting and achieve over 16% efficiency of organic solar cells. 2019 , 7, 14962-14969	7
1078	Solution-processable n-doped graphene-containing cathode interfacial materials for high-performance organic solar cells. 2019 , 12, 3400-3411	91
1077	Semitransparent solar cells with over 12% efficiency based on a new low bandgap fluorinated small molecule acceptor. 2019 , 3, 2483-2490	43
1076	[2,2'-Bithiophene]-4,4'-dicarboxamide: a novel building block for semiconducting polymers 2019 , 9, 30496-30502	3
1075	High-yielding Pd(dba)ICH-based four-fold Sonogashira coupling with selenophene-conjugated magnesium tetraethynylporphyrin for organic solar cells 2019 , 9, 32562-32572	2
1074	Suppressing photo-oxidation of non-fullerene acceptors and their blends in organic solar cells by exploring material design and employing friendly stabilizers. 2019 , 7, 25088-25101	61
1073	Polymer Donors for High-Performance Non-Fullerene Organic Solar Cells. 2019 , 131, 4488-4499	25
1072	Synthesis and photovoltaic properties of new conjugated polymers based on red hair pigment skeleton. 2019 , 160, 823-829	5
1071	Dithienothiapyran: An Excellent Donor Block for Building High-Performance Copolymers in Nonfullerene Polymer Solar Cells. 2019 , 11, 3308-3316	18
1070	Perylene Monoimide Dimers Enhance Ternary Organic Solar Cells Efficiency by Induced D A Crystallinity. 2019 , 2, 305-311	9
1069	High-efficiency non-fullerene polymer solar cell fabricated by a simple process using new conjugated terpolymers. 2019 , 7, 111-118	18
1068	Synthesis of new conjugated small-molecule-dyes based on 2-(2-methyl-4H-chromen-4-ylidene)malononitrile as the electron-withdrawing group and their application in photovoltaic devices. 2019 , 163, 660-666	8

1067	The resurgence of organic photovoltaics. 2019 , 17, 15-20	3
1066	Opto-electronic properties of non-fullerene fused-undecacyclic electron acceptors for organic solar cells. 2019 , 159, 150-159	46
1065	Fused thienobenzene-thienothiophene electron acceptors for organic solar cells. 2019 , 37, 58-65	3
1064	High-Performance Mid-Bandgap Fused-Pyrene Electron Acceptor. 2019 , 31, 6484-6490	31
1063	Recent Advances in Fullerene-free Polymer Solar Cells: Materials and Devices. 2019 , 37, 207-215	36
1062	Molecular Order Control of Non-fullerene Acceptors for High-Efficiency Polymer Solar Cells. 2019 , 3, 819-833	144
1061	Enhanced Device Performance and Stability of Organic Photovoltaics Incorporating a Star-Shaped Multifunctional Additive. 2019 , 2, 833-843	11
1060	Controlling Molecular Packing and Orientation via Constructing a Ladder-Type Electron Acceptor with Asymmetric Substituents for Thick-Film Nonfullerene Solar Cells. 2019 , 11, 3098-3106	32
1059	Small Molecule Acceptors with a Nonfused Architecture for High-Performance Organic Photovoltaics. 2019 , 31, 904-911	47
1058	New-structure perylene diimide oligomers by the linkage of the bay- and imide-position for nonfullerene solar cells. 2019 , 163, 356-362	7
1057	High lying energy of charge-transfer states and small energetic offsets enabled by fluorinated quinoxaline-based alternating polymer and alkyl-thienyl side-chain modified non-fullerene acceptor. 2019 , 66, 63-69	4
1056	High-Efficiency Nonfullerene Polymer Solar Cells with Band gap and Absorption Tunable Donor/Acceptor Random Copolymers. 2019 , 11, 2189-2196	5
1055	Improving the Electron Mobility of ITIC by End-Group Modulation: The Role of Fluorination and Extension. 2019 , 3, 1800251	19
1054	Fullerene-Free Molecular Acceptors for Organic Photovoltaics. 2019 , 221-279	2
1053	Amino-Functionalized Graphene Quantum Dots as Cathode Interlayer for Efficient Organic Solar Cells: Quantum Dot Size on Interfacial Modification Ability and Photovoltaic Performance. 2019 , 6, 1801480	31
1052	Fluorination with an enlarged dielectric constant prompts charge separation and reduces bimolecular recombination in non-fullerene organic solar cells with a high fill factor and efficiency > 13%. 2019 , 56, 494-501	43
1051	Semitransparent ternary nonfullerene polymer solar cells exhibiting 9.40% efficiency and 24.6% average visible transmittance. 2019 , 55, 424-432	134
1050	High-Performance Fullerene-Free Polymer Solar Cells Featuring Efficient Photocurrent Generation from Dual Pathways and Low Nonradiative Recombination Loss. 2019 , 4, 8-16	49

1049	A Maverick Asymmetrical Backbone with Distinct Flanked Twist Angles Modulating the Molecular Aggregation and Crystallinity for High Performance Nonfullerene Solar Cells. 2019 , 9, 1802530	40
1048	Revealing the Impact of F4-TCNQ as Additive on Morphology and Performance of High-Efficiency Nonfullerene Organic Solar Cells. 2019 , 29, 1806262	41
1047	Nanomorphology in ADA type small molecular acceptors-based bulk heterojunction polymer solar cells. 2019 , 35, 104-123	19
1046	Isatin-derived non-fullerene acceptors towards high open circuit voltage solar cells. 2019 , 162, 898-904	10
1045	A1-A2 Type Wide Bandgap Polymers for High-Performance Polymer Solar Cells: Energy Loss and Morphology. 2019 , 3, 1800291	15
1044	Nonfullerene Small-Molecule Acceptors for Organic Photovoltaics: Understanding the Impact of Methoxy Substitution Position on Molecular Packing and Electron-Transfer Properties. 2019 , 29, 1806845	15
1043	12.5% Flexible Nonfullerene Solar Cells by Passivating the Chemical Interaction Between the Active Layer and Polymer Interfacial Layer. <i>Advanced Materials</i> , 2019 , 31, e1806616	110
1042	Monolithic nonlinear optical chromophores with extended conjugate bridge: Large refractive index, high thermal and electro-optic stability. 2019 , 164, 97-104	8
1041	Filster resonance energy transfer and morphology optimization for high-performance ternary organic photodetectors. 2019 , 67, 146-152	16
1040	A Benzobis(thiazole)-Based Copolymer for Highly Efficient Non-Fullerene Polymer Solar Cells. 2019 , 31, 919-926	22
1039	Efficient Quaternary Organic Solar Cells with Parallel-Alloy Morphology. 2019 , 29, 1806804	47
1038	Cu2S nanocrystals incorporated highly efficient non-fullerene ternary organic solar cells. 2019 , 19, 394-399	6
1037	Fluorobenzotriazole (FTAZ)-Based Polymer Donor Enables Organic Solar Cells Exceeding 12% Efficiency. 2019 , 29, 1808828	53
1036	Organic materials for optoelectronic applications: Overview. 2019 , 3-42	3
1035	Single-Junction Organic Solar Cell with over 15% Efficiency Using Fused-Ring Acceptor with Electron-Deficient Core. 2019 , 3, 1140-1151	2595
1034	New indolo carbazole-based non-fullerene n-type semiconductors for organic solar cell applications. 2019 , 7, 543-552	14
1033	Air-Processed, Stable Organic Solar Cells with High Power Conversion Efficiency of 7.41. 2019 , 15, e1804671	14
1032	A non-fullerene acceptor enables efficient P3HT-based organic solar cells with small voltage loss and thickness insensitivity. 2019 , 30, 1277-1281	19

1031	Planar Benzofuran Inside-Fused Perylenediimide Dimers for High V Fullerene-Free Organic Solar Cells. 2019 , 11, 4203-4210	29
1030	Systematic investigation of methyl substitution effect on physicochemical properties and photovoltaic performance in nonfullerene small-molecule electron acceptors. 2019 , 164, 126-132	3
1029	Asymmetric selenophene-based non-fullerene acceptors for high-performance organic solar cells. 2019 , 7, 1435-1441	42
1028	A new narrow bandgap polymer as donor material for high performance non-fullerene polymer solar cells. 2019 , 64, 241-246	5
1027	High-Performance Nonfullerene Polymer Solar Cells Based on a Wide-Bandgap Polymer without Extra Treatment. 2019 , 40, e1800660	5
1026	Recent progress on non-fullerene acceptors for organic photovoltaics. 2019 , 24, 94-118	87
1025	Wide bandgap donor-acceptor conjugated polymers with alkylthiophene as side chains for high-performance non-fullerene polymer solar cells. 2019 , 65, 31-38	6
1024	Crystalline Conjugated Polymers for Organic Solar Cells: From Donor, Acceptor to Single-Component. 2019 , 19, 962-972	22
1023	High-Performance Eight-Membered Indacenodithiophene-Based Asymmetric A-D-A Type Non-Fullerene Acceptors. 2019 , 3, 1800246	36
1022	Realizing high-responsive superlattice organic photodiodes by C60 and zinc phthalocyanine. 2019 , 54, 3187-3195	4
1021	The progress of non-fullerene small molecular acceptors for high efficiency polymer solar cells. 2019 , 190, 83-97	23
1020	Polymersolarzellen: Fortschritt, Herausforderungen und Perspektiven. 2019 , 131, 4173-4186	24
1019	All-Polymer Solar Cells: Recent Progress, Challenges, and Prospects. 2019 , 58, 4129-4142	305
1018	Near-infrared non-fullerene acceptors based on dithienyl[1,2-b:4,5-b]benzodithiophene core for high performance PTB7-Th-based polymer solar cells. 2019 , 65, 63-69	9
1017	Synthesis of organic molecule donor for efficient organic solar cells with low acceptor content. 2019 , 64, 54-61	3
1016	Bithiazole-based copolymer with deep HOMO level and noncovalent conformational lock for organic photovoltaics. 2019 , 64, 110-116	11
1015	Ladder-Type Nonacyclic Arene Bis(thieno[3,2-b]thieno)cyclopentafluorene as a Promising Building Block for Non-Fullerene Acceptors. 2019 , 14, 1814-1822	28
1014	Imide-Functionalized Polymer Semiconductors. 2019 , 25, 87-105	48

1013	13%-Efficiency Quaternary Polymer Solar Cell with Nonfullerene and Fullerene as Mixed Electron Acceptor Materials. 2019 , 11, 766-773	15
1012	Si-Bridged Ladder-Type Small-Molecule Acceptors for High-Performance Organic Photovoltaics. 2019 , 11, 1125-1134	13
1011	Large-Area Organic Solar Cells: Material Requirements, Modular Designs, and Printing Methods. <i>Advanced Materials</i> , 2019 , 31, e1805089	152
1010	Phthalimide-Based High Mobility Polymer Semiconductors for Efficient Nonfullerene Solar Cells with Power Conversion Efficiencies over 13. 2019 , 6, 1801743	32
1009	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. 2019 , 3, 432-442	54
1008	Using ternary blend as a strategy to improve the driving force for charge transfer and facilitate electron transport in polymer solar cells. 2019 , 65, 419-425	8
1007	Isomery-Dependent Miscibility Enables High-Performance All-Small-Molecule Solar Cells. 2019 , 15, e1804271	43
1006	Versatile Ternary Approach for Novel Organic Solar Cells: A Review. 2019 , 3, 1800263	94
1005	Synthesis of low band-gap 2D conjugated polymers and their application for organic field effect transistors and solar cells. 2019 , 64, 27-36	10
1004	End-chain effects of non-fullerene acceptors on polymer solar cells. 2019 , 64, 1-6	11
1003	Side chain engineering for the regulation of quinoxaline based D-A copolymers. 2019 , 162, 487-493	1
1002	Simple non-fullerene electron acceptors with unfused core for organic solar cells. 2019 , 30, 222-224	19
1001	Highly twisted ladder-type backbone bearing perylene diimides for non-fullerene acceptors in organic solar cells. 2019 , 161, 221-226	11
1000	Emerging Organic and Organic/Inorganic Hybrid Photovoltaic Devices for Specialty Applications: Low-Level-Lighting Energy Conversion and Biomedical Treatment. 2019 , 7, 1800662	51
999	The Dawn of Single Material Organic Solar Cells. 2019 , 6, 1801026	83
998	Efficient Polymer Solar Cells Based on Non-fullerene Acceptors with Potential Device Lifetime Approaching 10 Years. 2019 , 3, 215-226	229
997	Can Polymer Solar Cells Open the Path to Sustainable and Efficient Photovoltaic Windows Fabrication?. 2019 , 19, 1166-1178	10
996	Bis(carboxylate) substituted benzodithiophene based wide-bandgap polymers for high performance nonfullerene polymer solar cells. 2019 , 162, 120-125	3

995	Effects of processing additives in non-fullerene organic bulk heterojunction solar cells with efficiency >11%. 2019 , 30, 217-221	13
994	Critical review of the molecular design progress in non-fullerene electron acceptors towards commercially viable organic solar cells. 2019 , 48, 1596-1625	617
993	Organic solar cells: Materials and prospects of graphene for active and interfacial layers. 2020 , 45, 261-288	6
992	Ternary organic solar cells based on polymer donor, polymer acceptor and PCBM components. 2020 , 31, 865-868	31
991	Tuning the optoelectronic properties of vinylene linked perylenediimide dimer by ring annulation at the inside or outside bay positions for fullerene-free organic solar cells. 2020 , 40, 112-119	21
990	Heteroatom substitution-induced asymmetric ADA type non-fullerene acceptor for efficient organic solar cells. 2020 , 40, 144-150	26
989	Efficiency enhancement of organic solar cells enabled by interface engineering of sol-gel zinc oxide with an oxadiazole-based material. 2020 , 76, 105483	12
988	Rationally pairing photoactive materials for high-performance polymer solar cells with efficiency of 16.53%. 2020 , 63, 265-271	104
987	Nonfullerene acceptors with an N-annulated perylene core and two perylene diimide units for efficient organic solar cells. 2020 , 173, 107970	7
986	Trendsetters in High-Efficiency Organic Solar Cells: Toward 20% Power Conversion Efficiency. 2020 , 4, 1900342	42
985	A Nonfullerene Acceptor with Alkylthio- and Dimethoxy-Thiophene-Groups Yielding High-Performance Ternary Organic Solar Cells. 2020 , 4, 1900353	20
984	Interface-enhanced organic solar cells with extrapolated T80 lifetimes of over 20 years. 2020 , 65, 208-216	90
983	Improving Molecular Planarity by Changing Alky Chain Position Enables 12.3% Efficiency All-Small-Molecule Organic Solar Cells with Enhanced Carrier Lifetime and Reduced Recombination. 2020 , 4, 1900326	37
982	A high throughput molecular screening for organic electronics via machine learning: present status and perspective. 2020 , 59, SD0801	19
981	Tuning opto-electronic properties of alkoxy-induced based electron acceptors in infrared region for high performance organic solar cells. 2020 , 298, 111963	24
980	Asymmetrical side-chain engineering of small-molecule acceptors enable high-performance nonfullerene organic solar cells. 2020 , 67, 104209	22
979	Significant influence of doping effect on photovoltaic performance of efficient fullerene-free polymer solar cells. 2020 , 43, 40-46	24
978	Understanding the Photovoltaic Behavior of A-D-A Molecular Semiconductors through a Permutation of End Groups. 2020 , 85, 52-61	9

(2020-2020)

	Cells. 2020 , 2, 1900108	12
976	Designing a thiophene-fused quinoxaline unit to build DA copolymers for non-fullerene organic solar cells. 2020 , 174, 108022	5
975	Efficient polymer solar cells that use conjugated polyelectrolyte with a tetravalent amine-end side chain. 2020 , 77, 105542	1
974	Difluorobenzoxadiazole-based conjugated polymers for efficient non-fullerene polymer solar cells with low voltage loss. 2020 , 77, 105541	O
973	Color and transparency-switchable semitransparent polymer solar cells towards smart windows. 2020 , 65, 217-224	42
972	Synthesis and characterization of new nonfullerene electron acceptors with a chrysene core. 2020 , 174, 108012	3
971	Cyclopentadithiophene cored A-ED-EA non-fullerene electron acceptor in ternary polymer solar cells to extend the light absorption up to 900 nm. 2020 , 77, 105530	4
970	Impact of Noncovalent Sulfur E luorine Interaction Position on Properties, Structures, and Photovoltaic Performance in Naphthobisthiadiazole-Based Semiconducting Polymers. 2020 , 10, 1903278	25
969	Organoboron Polymer for 10% Efficiency All-Polymer Solar Cells. 2020 , 32, 1308-1314	100
968	High-performance NIR-sensitive fused tetrathienoacene electron acceptors. 2020 , 8, 3011-3017	11
967	18% Efficiency organic solar cells. 2020 , 65, 272-275	1625
966	Photovoltaic Performances of Fused Ring Acceptors with Isomerized Ladder-Type Dipyran Cores. 2020 , 12, 4887-4894	13
	2020, 12, 4007-4094	
965	Subnaphthalocyanine triimides: potential three-dimensional solution processable acceptors for organic solar cells. 2020 , 8, 2186-2195	5
965 964	Subnaphthalocyanine triimides: potential three-dimensional solution processable acceptors for	
	Subnaphthalocyanine triimides: potential three-dimensional solution processable acceptors for organic solar cells. 2020 , 8, 2186-2195 Chlorinated Fused Nonacyclic Non-Fullerene Acceptor Enables Efficient Large-Area Polymer Solar	5
964	Subnaphthalocyanine triimides: potential three-dimensional solution processable acceptors for organic solar cells. 2020 , 8, 2186-2195 Chlorinated Fused Nonacyclic Non-Fullerene Acceptor Enables Efficient Large-Area Polymer Solar Cells with High Scalability. 2020 , 32, 1022-1030 Understanding the Interplay of Transport-Morphology-Performance in PBDB-T-Based Polymer	5
964	Subnaphthalocyanine triimides: potential three-dimensional solution processable acceptors for organic solar cells. 2020 , 8, 2186-2195 Chlorinated Fused Nonacyclic Non-Fullerene Acceptor Enables Efficient Large-Area Polymer Solar Cells with High Scalability. 2020 , 32, 1022-1030 Understanding the Interplay of Transport-Morphology-Performance in PBDB-T-Based Polymer Solar Cells. 2020 , 4, 1900524 End Group Engineering on the Side Chains of Conjugated Polymers toward Efficient Non-Fullerene	5 20 21

959	The effect of aggregation behavior on photovoltaic performances in benzodithiophene-thiazolothiazole-based wide band-gap conjugated polymers with side chain position changes. 2020 , 11, 1629-1636	22
958	Efficient as-cast thick film small-molecule organic solar cell with less fluorination on the donor. 2020 , 4, 206-212	7
957	Increased conjugated backbone twisting to improve carbonylated-functionalized polymer photovoltaic performance. 2020 , 7, 261-266	8
956	An environmentally friendly natural polymer as a universal interfacial modifier for fullerene and non-fullerene polymer solar cells. 2020 , 4, 1234-1241	6
955	Translating local binding energy to a device effective one. 2020 , 4, 760-771	4
954	10 cm2 nonfullerene solar cells with efficiency over 10% using HxMoO3-assisted growth of silver electrodes with a low threshold thickness of 4 nm. 2020 , 8, 69-76	5
953	A chlorinated nonacyclic carbazole-based acceptor affords over 15% efficiency in organic solar cells. 2020 , 8, 1131-1137	48
952	Study of photovoltaic performances for asymmetrical and symmetrical chlorinated thiophene-bridge-based conjugated polymers. 2020 , 8, 2301-2306	9
951	Improving the performance of near infrared binary polymer solar cells by adding a second non-fullerene intermediate band-gap acceptor. 2020 , 8, 909-915	39
950	Side-chain engineering of medium bandgap polymer donors for efficient polymer solar cells. 2020 , 78, 105603	3
949	Chlorination of Conjugated Side Chains To Enhance Intermolecular Interactions for Elevated Solar Conversion. 2020 , 53, 165-173	14
948	Potassium-Presenting Zinc Oxide Surfaces Induce Vertical Phase Separation in Fullerene-Free Organic Photovoltaics. 2020 , 20, 715-721	34
947	Ester-Substituted Pentathiophene Copolymer-Based Sky-Blue Semitransparent Solar Cells for Building Windows. 2020 , 3, 915-922	10
946	Atom-Varied Side Chains in Conjugated Polymers Affect Efficiencies of Photovoltaic Devices Incorporating Small Molecules. 2020 , 2, 636-646	12
945	Sequential molecular doping of non-fullerene organic solar cells without hole transport layers. 2020 , 8, 158-164	9
944	Recent advances of polymer acceptors for high-performance organic solar cells. 2020 , 8, 28-43	38
943	Novel wide-bandgap non-fullerene acceptors for efficient tandem organic solar cells. 2020 , 8, 1164-1175	28
942	Tailoring and Modifying an Organic Electron Acceptor toward the Cathode Interlayer for Highly Efficient Organic Solar Cells. <i>Advanced Materials</i> , 2020 , 32, e1906557	63

(2020-2020)

941	High Open-Circuit Voltage Organic Photovoltaics Fabricated Using an Alkylidene Fluorene Derivative as a Non-fullerene Acceptor. 2020 , 41, 143-149	1
940	Non-Fullerene Organic Solar Cells Based on Benzo[1,2-b:4,5-b?]difuran-Conjugated Polymer with 14% Efficiency. 2020 , 30, 1906809	27
939	Molecular origin of photostability for fluorene-based donor\(\textit{lcceptor type photovoltaic polymers.}\) 2020 , 59, SDDA11	1
938	Regulating the Packing of Non-Fullerene Acceptors via Multiple Noncovalent Interactions for Enhancing the Performance of Organic Solar Cells. 2020 , 12, 4638-4648	50
937	The role of chemical design in the performance of organic semiconductors. 2020, 4, 66-77	205
936	A novel acceptor with a N,N-dialkyl thieno[3',2':2,3]indolo[7,6-g]thieno[3,2-b]indole (TITI) core for organic solar cells with a high fill factor of 0.75. 2020 , 56, 751-753	8
935	Boosted photovoltaic performance of indenothiophene-based molecular acceptor via fusing a thiophene. 2020 , 8, 630-636	5
934	Perylene diimide acceptor with two planar arms and a twisted core for high efficiency polymer solar cells. 2020 , 175, 108186	9
933	High Efficiency Polymer Solar Cells with Efficient Hole Transfer at Zero Highest Occupied Molecular Orbital Offset between Methylated Polymer Donor and Brominated Acceptor. 2020 , 142, 1465-1474	228
932	Subtle Polymer Donor and Molecular Acceptor Design Enable Efficient Polymer Solar Cells with a Very Small Energy Loss. 2020 , 30, 1907570	76
931	Scalable fabrication of organic solar cells based on non-fullerene acceptors. 2020 , 5, 014004	50
930	PBDB-T and its derivatives: A family of polymer donors enables over 17% efficiency in organic photovoltaics. 2020 , 35, 115-130	141
929	Effect of molecular structure of benzo[1,2-b:4,5-b?]dithiophene-based push-pull type donor polymers on performance panchromatic organic photodiodes. 2020 , 78, 105580	4
928	Reduced Energy Loss in Non-Fullerene Organic Solar Cells with Isomeric Donor Polymers Containing Thiazole Espacers. 2020 , 12, 753-762	17
927	Largely improved bulk-heterojunction morphology in organic solar cells based on a conjugated terpolymer donor via a ternary strategy. 2020 , 186, 122050	5
926	13.34 % Efficiency Non-Fullerene All-Small-Molecule Organic Solar Cells Enabled by Modulating the Crystallinity of Donors via a Fluorination Strategy. 2020 , 59, 2808-2815	114
925	Near-infrared organic photoelectric materials for light-harvesting systems: Organic photovoltaics and organic photodiodes. 2020 , 2, 57-91	36
924	13.34 % Efficiency Non-Fullerene All-Small-Molecule Organic Solar Cells Enabled by Modulating the Crystallinity of Donors via a Fluorination Strategy. 2020 , 132, 2830-2837	8

923	Effects of Monofluorinated Positions at the End-Capping Groups on the Performances of Twisted Non-Fullerene Acceptor-Based Polymer Solar Cells. 2020 , 12, 789-797	18
922	Organic photovoltaic cell with 17% efficiency and superior processability. 2020 , 7, 1239-1246	318
921	Comparative study on the effects of alkylsilyl and alkylthio side chains on the performance of fullerene and non-fullerene polymer solar cells. 2020 , 77, 105572	2
920	Rational Design of 2D plconjugated Polysquaraines for Both Fullerene and Nonfullerene Polymer Solar Cells. 2020 , 221, 1900439	4
919	Halogenation on terminal groups of ITIC based electron acceptors as an effective strategy for efficient polymer solar cells. 2020 , 195, 429-435	13
918	Organic Solar Cells Based on Non-fullerene Small-Molecule Acceptors: Impact of Substituent Position. 2020 , 2, 119-135	20
917	Designing High Performance Nonfullerene Electron Acceptors with Rylene Imides for Efficient Organic Photovoltaics. 2020 , 32, 195-204	21
916	High-efficiency organic solar cells with low voltage-loss of 0.46 V. 2020 , 31, 1991-1996	11
915	Deciphering the Role of Fluorination: Morphological Manipulation Prompts Charge Separation and Reduces Carrier Recombination in All-Small-Molecule Photovoltaics. 2020 , 4, 1900528	21
914	Bithieno[3,4-c]pyrrole-4,6-dione-Mediated Crystallinity in Large-Bandgap Polymer Donors Directs Charge Transportation and Recombination in Efficient Nonfullerene Polymer Solar Cells. 2020 , 5, 367-375	25
913	Balanced Charge Transport Optimizes Industry-Relevant Ternary Polymer Solar Cells. 2020 , 4, 2000538	9
912	Tuning the intermolecular interaction of A2-A1-D-A1-A2 type non-fullerene acceptors by substituent engineering for organic solar cells with ultrahigh VOC of \sim 1.2 V. 2020 , 63, 1666-1674	52
911	Self-Stimulated Dissociation in Non-Fullerene Organic Bulk-Heterojunction Solar Cells. 2020 , 4, 2443-2457	15
910	An A-ED-EA-Type Organic Semiconductor Based Optoelectrical Device With Photo Response and Optical Memory Behaviors. 2020 , 7,	
909	Enhanced efficiency in nonfullerene organic solar cells by tuning molecular order and domain characteristics. 2020 , 77, 105310	15
908	Charge separation boosts exciton diffusion in fused ring electron acceptors. 2020 , 8, 23304-23312	8
907	Investigation of processEtructureproperty relationship in ternary organic photovoltaics. 2020 , 128, 145501	3
906	Reducing Voltage Losses in the A-DA?D-A Acceptor-Based Organic Solar Cells. 2020 , 6, 2147-2161	73

905	A critical review on semitransparent organic solar cells. 2020 , 78, 105376	133
904	Effects of monohalogenated terminal units of non-fullerene acceptors on molecular aggregation and photovoltaic performance. 2020 , 208, 866-872	8
903	Recent advances of computational chemistry in organic solar cell research. 2020, 8, 15920-15939	20
902	Selenium Heterocyclic Electron Acceptor with Small Urbach Energy for As-Cast High-Performance Organic Solar Cells. 2020 , 142, 18741-18745	130
901	The design of dithieno[3,2-b:2?,3?-d]pyrrole organic photovoltaic materials for high-efficiency organic/perovskite solar cells. 2020 , 8, 22572-22592	20
900	High-Performance Ternary Polymer Solar Cells Enabled by a New Narrow Bandgap Nonfullerene Small Molecule Acceptor with a Higher LUMO Level. 2020 , 41, e2000393	4
899	Indole-based ADA?DA type acceptor-based organic solar cells achieve efficiency over 15 % with low energy loss. 2020 , 4, 6203-6211	3
898	Investigating the active layer thickness dependence of non-fullerene organic solar cells based on PM7 derivatives. 2020 , 8, 15459-15469	8
897	Alkyloxime Side Chain Enabled Polythiophene Donors for Efficient Organic Solar Cells. 2020 , 53, 8796-8808	9
896	A Green Solvent Processable Wide-Bandgap Conjugated Polymer for Organic Solar Cells. 2020 , 4, 2000547	9
895	Elucidating the Key Role of the Cyano (II?N) Group to Construct Environmentally Friendly Fused-Ring Electron Acceptors. 2020 , 124, 23059-23068	12
894	Altering the Positions of Chlorine and Bromine Substitution on the End Group Enables High-Performance Acceptor and Efficient Organic Solar Cells. 2020 , 10, 2002649	59
893	Recent advances in non-fullerene organic solar cells: from lab to fab. 2020 , 56, 14337-14352	40
892	Molecular Engineering and Morphology Control of Polythiophene:Nonfullerene Acceptor Blends for High-Performance Solar Cells. 2020 , 10, 2002572	54
891	Deciphering the Role of Chalcogen-Containing Heterocycles in Nonfullerene Acceptors for Organic Solar Cells. 2020 , 5, 3415-3425	39
890	Long-range exciton diffusion in molecular non-fullerene acceptors. 2020 , 11, 5220	87
889	Effect of the chlorine substitution position of the end-group on intermolecular interactions and photovoltaic performance of small molecule acceptors. 2020 , 13, 5028-5038	29
888	Material perceptions and advances in molecular heteroacenes for organic solar cells. 2020 , 13, 4738-4793	22

887	A key progress in introducing single walled carbon nanotubes to photovoltaic devices. 2020 , 1	5
886	Indacenodithienothiophene based chromophore with cyclopentadienylidenehydrazine acceptor moieties. 2020 , 30, 647-649	4
885	Over 14% efficiency all-polymer solar cells enabled by a low bandgap polymer acceptor with low energy loss and efficient charge separation. 2020 , 13, 5017-5027	117
884	Toward ideal hole transport materials: a review on recent progress in dopant-free hole transport materials for fabricating efficient and stable perovskite solar cells. 2020 , 13, 4057-4086	109
883	Annealing-free efficient organic solar cells via an alkylbenzene side-chain strategy of small-molecule electron acceptors. 2020 , 8, 22155-22162	10
882	Regulating molecular orientations of dipyran-based nonfullerene acceptors through side-chain engineering at the Ebridge. 2020 , 8, 22416-22422	11
881	Tailoring non-fullerene acceptors using selenium-incorporated heterocycles for organic solar cells with over 16% efficiency. 2020 , 8, 23756-23765	42
880	Efficient and stable operation of nonfullerene organic solar cells: retaining a high built-in potential. 2020 , 8, 21255-21264	15
879	Molecular design of a non-fullerene acceptor enables a P3HT-based organic solar cell with 9.46% efficiency. 2020 , 13, 2864-2869	93
878	Long-range exciton diffusion in non-fullerene acceptors and coarse bulk heterojunctions enable highly efficient organic photovoltaics. 2020 , 8, 15687-15694	15
877	Crystallography, Morphology, Electronic Structure, and Transport in Non-Fullerene/Non-Indacenodithienothiophene Polymer:Y6 Solar Cells. 2020 , 142, 14532-14547	120
876	Methyl functionalization on conjugated side chains for polymer solar cells processed from non-chlorinated solvents. 2020 , 8, 11532-11539	2
875	An Ink-Composition Engineering Approach for Upscaling of Organic Solar Cells with High-Efficiency Retention Factor. 2020 , 4, 2000246	9
874	Fused-ring bislactone building blocks for polymer donors. 2020 , 65, 1792-1795	16
873	A Review of Grazing Incidence Small- and Wide-Angle X-Ray Scattering Techniques for Exploring the Film Morphology of Organic Solar Cells. 2020 , 4, 2000337	41
872	A 2,5-difluoro benzene-based low cost and efficient polymer donor for non-fullerene solar cells. 2020 , 207, 720-728	8
871	A Non-Conjugated Polymer Acceptor for Efficient and Thermally Stable All-Polymer Solar Cells. 2020 , 132, 20007-20012	9
870	Extension, Selenium Incorporation, and Trimerization: "Three in One" for Efficient Perylene Diimide Oligomer-Based Organic Solar Cells. 2020 , 12, 9528-9536	9

869	Fused-ring electron acceptors in China. 2020 , 63, 1179-1181	10
868	Design of novel thiazolothiazole-based conjugated polymer for efficient fullerene and non-fullerene organic solar cells. 2020 , 268, 116508	7
867	Printable and Large-Area Organic Solar Cells Enabled by a Ternary Pseudo-Planar Heterojunction Strategy. 2020 , 30, 2003223	36
866	A Non-Conjugated Polymer Acceptor for Efficient and Thermally Stable All-Polymer Solar Cells. 2020 , 59, 19835-19840	55
865	Diels-Alder Cycloaddition to the Bay Region of Perylene and Its Derivatives as an Attractive Strategy for PAH Core Expansion: Theoretical and Practical Aspects. 2020 , 25,	3
864	Optimization of the Bulk Heterojunction of All-Small-Molecule Organic Photovoltaics Using Design of Experiment and Machine Learning Approaches. 2020 , 12, 54596-54607	11
863	The Crystallinity Control of Polymer Donor Materials for High-Performance Organic Solar Cells. 2020 , 8, 603134	6
862	Unraveling the influence of non-fullerene acceptor molecular packing on photovoltaic performance of organic solar cells. 2020 , 11, 6005	44
861	Excited-State Symmetry-Breaking Charge Separation Dynamics in Multibranched Perylene Diimide Molecules. 2020 , 11, 10329-10339	25
860	Significantly Sensitized Ternary Blend Polymer Solar Cells with a Very Small Content of the Narrow-Band Gap Third Component That Utilizes Optical Interference. 2020 , 53, 10623-10635	10
859	Enhancing the photovoltaic performance of heteroheptacene-based nonfullerene acceptors through the synergistic effect of side-chain engineering and fluorination. 2020 , 8, 24543-24552	12
858	The importance of the molecular weight of PEDOT hole transporting materials for efficient organic solar cells. 2020 , 8, 17185-17193	4
857	Prato reaction derived polythiophene/C60 donor ceptor double cable polymer, fabrication of photodetectors and evaluation of photocurrent generation. 2020 , 8, 17365-17373	3
856	Recent advances in high-efficiency organic solar cells fabricated by eco-compatible solvents at relatively large-area scale. 2020 , 8, 120901	20
855	Incorporating Indium Selenide Nanosheets into a Polymer/Small Molecule Binary Blend Active Layer Enhances the Long-Term Stability and Performance of Its Organic Photovoltaics. 2020 , 12, 55023-55032	4
854	Theoretical Design of Dithienopicenocarbazole-Based Molecules by Molecular Engineering of Terminal Units Toward Promising Non-fullerene Acceptors. 2020 , 8, 580252	2
853	Improving the all-polymer solar cell performance by adding a narrow bandgap polymer as the second donor 2020 , 10, 38344-38350	3
852	Donor-Acceptor Polymer Based on Planar Structure of Alkylidene-Fluorene Derivative: Correlation of Power Conversion Efficiency among Polymer and Various Acceptor Units. 2020 , 12,	1

851	Effects on Photovoltaic Characteristics by Organic Bilayer- and Bulk-Heterojunctions: Energy Losses, Carrier Recombination and Generation. 2020 , 12, 55945-55953	7
850	Butterfly Effects Arising from Starting Materials in Fused-Ring Electron Acceptors. 2020 , 142, 20124-20133	45
849	Efficient Double- and Triple-Junction Nonfullerene Organic Photovoltaics and Design Guidelines for Optimal Cell Performance. 2020 , 5, 3692-3701	5
848	Silicon and oxygen synergistic effects for the discovery of new high-performance nonfullerene acceptors. 2020 , 11, 5814	21
847	Improving the charge transport of the ternary blend active layer for efficient semitransparent organic solar cells. 2020 , 13, 5177-5185	40
846	Effects of Fluorination Position on Fused-Ring Electron Acceptors. 2020 , 1, 2000006	4
845	Fine-tuning HOMO energy levels between PM6 and PBDB-T polymer donors via ternary copolymerization. 2020 , 63, 1256-1261	20
844	Efficient Ternary Organic Solar Cells with a New Electron Acceptor Based on 3,4-(2,2-Dihexylpropylenedioxy)thiophene. 2020 , 12, 40590-40598	12
843	Delocalization of exciton and electron wavefunction in non-fullerene acceptor molecules enables efficient organic solar cells. 2020 , 11, 3943	222
842	Quantifying Voc loss induced by alkyl pendants of acceptors in organic solar cells. 2020 , 8, 12568-12577	7
841	On the relations between backbone thiophene functionalization and charge carrier mobility of ADA type small molecules. 2020 , 44, 15177-15185	1
840	Influence of Alkyl Substitution Position on Wide-Bandgap Polymers in High-Efficiency Nonfullerene Polymer Solar Cells. 2020 , 41, e2000170	1
839	Fluorinated biselenophene-naphthalenediimide copolymers for efficient all-polymer solar cells. 2020 , 183, 108721	
838	Asymmetric ITIC acceptor for asymmetric benzodithiophene polymer solar cells. 2020 , 183, 108727	2
837	Thienoquinolinone as a new building block for wide bandgap semiconducting polymer donors for organic solar cells. 2020 , 8, 12265-12271	1
836	Noncovalent Estacked robust topological organic framework. 2020 , 117, 20397-20403	4
835	Enhancement of photovoltaic efficiency through fine adjustment of indacene-based non-fullerene acceptor by minimal chlorination for polymer solar cells. 2020 , 1, 320-333	9
834	A-DA?D-A non-fullerene acceptors for high-performance organic solar cells. 2020 , 63, 1352-1366	118

833	Thieno[3,4-]pyrrole-4,6-dione-based conjugated polymers for organic solar cells. 2020 , 56, 10394-10408	12
832	Non-halogenated additive engineering for morphology optimization in environmental-friendly solvent processed non-fullerene organic solar cells. 2020 , 86, 105893	5
831	PDI-Based Hexapod-Shaped Nonfullerene Acceptors for the High-Performance As-Cast Organic Solar Cells. 2020 , 12, 37409-37417	8
830	An universal morphology regulator for efficient and stable nonfullerene organic solar cells by I interaction. 2020 , 86, 105827	6
829	Fast Field-Insensitive Charge Extraction Enables High Fill Factors in Polymer Solar Cells. 2020 , 12, 38460-3846	593
828	The Bulk Heterojunction in Organic Photovoltaic, Photodetector, and Photocatalytic Applications. Advanced Materials, 2020 , 32, e2001763	68
827	Unveiling Photovoltaic Performance Enhancement Mechanism of Polymer Solar Cells via Synergistic Effect of Binary Solvent Additives. 2020 , 4, 2000239	2
826	Hole (donor) and electron (acceptor) transporting organic semiconductors for bulk-heterojunction solar cells. 2020 , 2, 100042	25
825	An asymmetric acceptor enabling 77.51% fill factor in organic solar cells. 2020 , 65, 1876-1879	5
824	Efficient As-Cast Polymer Solar Cells with High and Stabilized Fill Factor. 2020 , 4, 2000275	6
823	Econjugated polymers and molecules enabling small photon energy loss simultaneously with high efficiency in organic photovoltaics. 2020 , 8, 20213-20237	16
822	Impacts of a second acceptor on the energy loss, blend morphology and carrier dynamics in non-fullerene ternary polymer solar cells. 2020 , 8, 11727-11734	4
821	Influence of 3D morphology on the performance of all-polymer solar cells processed using environmentally benign nonhalogenated solvents. 2020 , 77, 105106	6
820	A Cost-Effective, Aqueous-Solution-Processed Cathode Interlayer Based on Organosilica Nanodots for Highly Efficient and Stable Organic Solar Cells. <i>Advanced Materials</i> , 2020 , 32, e2002973	32
819	Ladder-Type Heteroheptacenes with Different Heterocycles for Nonfullerene Acceptors. 2020 , 59, 21627-216	5 36 6
818	PTV-based p-type organic semiconductors: Candidates for low-cost photovoltaic donors with simple synthetic routes. 2020 , 209, 122900	11
817	A low boiling-point and low-cost fluorinated additive improves the efficiency and stability of organic solar cells. 2020 , 8, 15296-15302	5
816	Comparison Study of the Chlorination Positions in Wide Band Gap Donor Polymers. 2020 , 124, 24592-24600	7

815	Structural Cutting of Non-fullerene Acceptors by Chlorination: Effects of Substituent Number on Device Performance. 2020 , 12, 50541-50549	11
814	The regioisomeric bromination effects of fused-ring electron acceptors: modulation of the optoelectronic property and miscibility endowing the polymer solar cells with 15% efficiency. 2020 , 8, 25101-25108	10
813	Highly Efficient Nonfullerene Acceptor with Sulfonyl-Based Ending Groups. 2020, 12, 49659-49665	5
812	Alkylated Indacenodithiophene-Based Non-fullerene Acceptors with Extended Econjugation for High-Performance Large-Area Organic Solar Cells. 2020 , 12, 50638-50647	6
811	Precisely Controlling the Position of Bromine on the End Group Enables Well-Regular Polymer Acceptors for All-Polymer Solar Cells with Efficiencies over 15. <i>Advanced Materials</i> , 2020 , 32, e2005942 24	144
810	Size Modulation and Heterovalent Doping Facilitated Hybrid Organic and Perovskite Quantum Dot Bulk Heterojunction Solar Cells. 2020 , 3, 11359-11367	10
809	Enhancing Open-Circuit Voltage of High-Efficiency Nonfullerene Ternary Solar Cells with a Star-Shaped Acceptor. 2020 , 12, 50660-50667	6
808	Essential relation of spin states, trap states and photo-induced polarization for efficient charge dissociation in a polymer-nonfullerene based organic photovoltaic system. 2020 , 78, 105324	5
807	Efficient polymer solar cells enabled by alkoxy-phenyl side-chain-modified main-chain-twisted small molecular acceptors. 2020 , 8, 22335-22345	6
806	A Fully Non-fused Ring Acceptor with Planar Backbone and Near-IR Absorption for High Performance Polymer Solar Cells. 2020 , 59, 22714-22720	87
805	Chlorination of dithienobenzodithiophene (DTBDT) based polymers to simultaneously improve the VOC, JSC and FF of non-fullerene organic solar cells. 2020 , 4, 5665-5673	7
804	Ladder-Type Heteroheptacenes with Different Heterocycles for Nonfullerene Acceptors. 2020 , 132, 21811-2	1887
803	Practically Viable Approach to Efficient and Reliable Semitransparent Flexible Organic Solar Cells: Face-Seal Encapsulation Embedded with Tailored Color-Control Functionality. 2020 , 1, 2000020	1
802	Interfacial Dipole in Organic and Perovskite Solar Cells. 2020 , 142, 18281-18292	70
801	Effect of main and side chain chlorination on the photovoltaic properties of benzodithiophene-alt-benzotriazole polymers. 2020 , 8, 15426-15435	7
800	Synthesis and characterization of new dyes based on chromone malononitrile as the electron withdrawing group and their photovoltaic effect. 2020 , 705, 28-34	O
799	Development of ADA?DA Small-Molecular Acceptors Based on a 6,12-Dihydro-diindolo[1,2-b:10,20-e]pyrazine Unit for Efficient As-Cast Polymer Solar Cells. 2020 , 124, 21366-21377	5
798	Improving Efficiency of Organic Solar Cells by Restricting the Rotation of Side Chain on Small Molecule Acceptor. 2020 , 4, 2000359	2

(2020-2020)

797	Large-Area Nonfullerene Organic Solar Cell Modules Fabricated by a Temperature-Independent Printing Method. 2020 , 12, 41877-41885	14
796	A Non-fullerene Acceptor with Enhanced Intermolecular Ecore Interaction for High-Performance Organic Solar Cells. 2020 , 142, 15246-15251	138
795	Modulating Energy Level on an A-D-A?-D-A-Type Unfused Acceptor by a Benzothiadiazole Core Enables Organic Solar Cells with Simple Procedure and High Performance. 2020 , 4, 2000421	25
794	Simultaneous Performance and Stability Improvement of Ternary Polymer Solar Cells Enabled by Modulating the Molecular Packing of Acceptors. 2020 , 4, 2000374	12
793	Control over Estacking of heteroheptacene-based nonfullerene acceptors for 16% efficiency polymer solar cells. 2020 , 7, 1886-1895	42
792	The role of exciton lifetime for charge generation in organic solar cells at negligible energy-level offsets. 2020 , 5, 711-719	110
791	Recent Advances Toward Highly Efficient Tandem Organic Solar Cells. 2020 , 1, 2000016	11
790	Random terpolymer based on thiophene-thiazolothiazole unit enabling efficient non-fullerene organic solar cells. 2020 , 11, 4612	119
789	Diketopyrrolopyrrole linked porphyrin dimers for visible-near-infrared photoresponsive nonfullerene organic solar cells. 2020 , 1, 2520-2525	5
788	A Fully Non-fused Ring Acceptor with Planar Backbone and Near-IR Absorption for High Performance Polymer Solar Cells. 2020 , 132, 22903-22909	12
787	Importance of Optimal Crystallinity and Hole Mobility of BDT-Based Polymer Donor for Simultaneous Enhancements of Voc, Jsc, and FF in Efficient Nonfullerene Organic Solar Cells. 2020 , 30, 2005787	28
786	Side chain engineering investigation of non-fullerene acceptors for photovoltaic device with efficiency over 15%. 2020 , 63, 1799-1806	18
785	A biopolymeric buffer layer improves device efficiency and stability in inverted organic solar cells. 2020 , 8, 15795-15803	7
784	Isomerization Strategy of Nonfullerene Small-Molecule Acceptors for Organic Solar Cells. 2020 , 30, 2004477	31
783	Two Compatible Polymer Donors Enabling Ternary Organic Solar Cells with a Small Nonradiative Energy Loss and Broad Composition Tolerance. 2020 , 4, 2000396	17
782	Nonfullerene All-Small-Molecule Organic Solar Cells: Prospect and Limitation. 2020 , 4, 2000258	21
781	Ultrafast and Long-Range Exciton Migration through Anisotropic Coulombic Coupling in the Textured Films of Fused-Ring Electron Acceptors. 2020 , 11, 7908-7913	8
78o	Comprehensive and Comparative Analysis of Photoinduced Charge Generation, Recombination Kinetics, and Energy Losses in Fullerene and Nonfullerene Acceptor-Based Organic Solar Cells. 2020 , 12, 45083-45091	5

779	Highly Efficient All-Polymer Solar Cells Enabled by Random Ternary Copolymer Acceptors with High Tolerance on Molar Ratios. 2020 , 4, 2000409		9
778	Multi-channel exciton dissociation in D18/Y6 complexes for high-efficiency organic photovoltaics. 2020 , 8, 20408-20413		16
777	Comparing Benzodithiophene Unit with Alkylthionaphthyl and Alkylthiobiphenyl Side-Chains in Constructing High-Performance Nonfullerene Solar Cells. 2020 , 12,		0
776	End-capped group manipulation of indacenodithienothiophene-based non-fullerene small molecule acceptors for efficient organic solar cells. 2020 , 12, 17795-17804		5
775	Side-Chain Engineering of Benzodithiophene-Bridged Dimeric Porphyrin Donors for All-Small-Molecule Organic Solar Cells. 2020 , 12, 41506-41514		16
774	Substitution Effect on Thiobarbituric Acid End Groups for High Open-Circuit Voltage Non-Fullerene Organic Solar Cells. 2020 , 12, 41852-41860		11
773	Hot Hydrocarbon-Solvent Slot-Die Coating Enables High-Efficiency Organic Solar Cells with Temperature-Dependent Aggregation Behavior. <i>Advanced Materials</i> , 2020 , 32, e2002302	24	65
772	Enabling High-Performance Tandem Organic Photovoltaic Cells by Balancing the Front and Rear Subcells. <i>Advanced Materials</i> , 2020 , 32, e2002315	24	16
771	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 . 2020 , 59, 21683-21692		45
770	A perylene diimide-containing acceptor enables high fill factor in organic solar cells. 2020 , 56, 11433-1	1436	13
77° 769	A perylene diimide-containing acceptor enables high fill factor in organic solar cells. 2020 , 56, 11433-1 Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020 , 132, 21867-21876	1436	13
	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for	1436	
769	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020 , 132, 21867-21876 Effect of Nitro-Substituted Ending Groups on the Photovoltaic Properties of Nonfullerene	1436	11
769 768	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020 , 132, 21867-21876 Effect of Nitro-Substituted Ending Groups on the Photovoltaic Properties of Nonfullerene Acceptors. 2020 , 12, 41861-41868 Role of Morphology and Ffister Resonance Energy Transfer in Ternary Blend Organic Solar Cells.	1436	11
769 768 767	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020, 132, 21867-21876 Effect of Nitro-Substituted Ending Groups on the Photovoltaic Properties of Nonfullerene Acceptors. 2020, 12, 41861-41868 Role of Morphology and Fister Resonance Energy Transfer in Ternary Blend Organic Solar Cells. 2020, 3, 12025-12036 Improving ternary blend morphology by adding a conjugated molecule into non-fullerene polymer	1436	11 4 8
769 768 767 766	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020, 132, 21867-21876 Effect of Nitro-Substituted Ending Groups on the Photovoltaic Properties of Nonfullerene Acceptors. 2020, 12, 41861-41868 Role of Morphology and Fister Resonance Energy Transfer in Ternary Blend Organic Solar Cells. 2020, 3, 12025-12036 Improving ternary blend morphology by adding a conjugated molecule into non-fullerene polymer solar cells 2020, 10, 43508-43513 Recent Advances in Non-Fullerene Acceptors of the IDIC/ITIC Families for Bulk-Heterojunction	1436	11 4 8
769 768 767 766 765	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8 %. 2020, 132, 21867-21876 Effect of Nitro-Substituted Ending Groups on the Photovoltaic Properties of Nonfullerene Acceptors. 2020, 12, 41861-41868 Role of Morphology and Fister Resonance Energy Transfer in Ternary Blend Organic Solar Cells. 2020, 3, 12025-12036 Improving ternary blend morphology by adding a conjugated molecule into non-fullerene polymer solar cells 2020, 10, 43508-43513 Recent Advances in Non-Fullerene Acceptors of the IDIC/ITIC Families for Bulk-Heterojunction Organic Solar Cells. 2020, 21, The alkyl chain positioning of thieno[3,4-c]pyrrole-4,6-dione (TPD)-Based polymer donors mediates	1436	111 4 8 3 15

761	Emerging Approaches in Enhancing the Efficiency and Stability in Non-Fullerene Organic Solar Cells. 2020 , 10, 2002746		58	
760	Preparation of non-fullerene acceptors with a multi-asymmetric configuration in a one-pot reaction for organic solar cells. 2020 , 8, 17229-17236		15	
759	The Role of Demixing and Crystallization Kinetics on the Stability of Non-Fullerene Organic Solar Cells. <i>Advanced Materials</i> , 2020 , 32, e2005348	24	30	
758	2D Star-Shaped Non-Fullerene Electron Acceptors with Modulation of J-/H-Type Aggregations: Molecular DesignMorphologyElectrical Property Correlation. 2020 , 5, 2000174		3	
757	Fluorinating Extended Molecular Acceptors Yields Highly Connected Crystal Structures and Low Reorganization Energies for Efficient Solar Cells. 2020 , 10, 2000635		45	
756	Suppressing the Photocatalytic Activity of Zinc Oxide Electron-Transport Layer in Nonfullerene Organic Solar Cells with a Pyrene-Bodipy Interlayer. 2020 , 12, 21961-21973		28	
755	Dopamine Semiquinone Radical Doped PEDOT:PSS: Enhanced Conductivity, Work Function and Performance in Organic Solar Cells. 2020 , 10, 2000743		52	
754	Advances and prospective in thermally stable nonfullerene polymer solar cells. 2021 , 64, 1875		12	
753	Chemical Design Rules for Non-Fullerene Acceptors in Organic Solar Cells. 2102363		7	
752	Alkylsilyl Fused Ring-Based Polymer Donor for Non-Fullerene Solar Cells with Record Open Circuit Voltage and Energy Loss. 2021 , 17, e2104451		2	
751	Tuning of a A-A-D-A-A-Type Small Molecule with Benzodithiophene as a Central Core with Efficient Photovoltaic Properties for Organic Solar Cells. 2021 , 6, 28923-28935		12	
75°	Simple Nonfused Ring Electron Acceptors with 3D Network Packing Structure Boosting the Efficiency of Organic Solar Cells to 15.44%. 2102591		23	
749	Ultrafast Structure and Vibrational Dynamics of a Cyano-Containing Non-Fullerene Acceptor for Organic Solar Cells Revealed by Two-Dimensional Infrared Spectroscopy. 2021 , 125, 11987-11995			
748	Recent advances and prospects of asymmetric non-fullerene small molecule acceptors for polymer solar cells. 2021 , 42, 101607		3	
747	Thermoplastic Elastomer Tunes Phase Structure and Promotes Stretchability of High-Efficiency Organic Solar Cells. <i>Advanced Materials</i> , 2021 , 33, e2106732	24	32	
746	Recent Progress in the Design of Fused-Ring Non-Fullerene Acceptors-Relations between Molecular Structure and Optical, Electronic, and Photovoltaic Properties.		9	
745	Pentacyclic Aromatic Lactam-Containing Copolymer with Well-Controlled Energy Alignment and Morphology with 17% Efficiency of Organic Solar Cells.		1	
744	Recent Progress in Advanced Organic Photovoltaics: Emerging Techniques and Materials.		1	

743	Simple Nonfused-Ring Electron Acceptors with Noncovalently Conformational Locks for Low-Cost and High-Performance Organic Solar Cells Enabled by End-Group Engineering. 2108861	13
742	Direct Observation of the Charge Transfer States from a Non-Fullerene Organic Solar Cell with a Small Driving Force. 2021 , 12, 10595-10602	4
741	Importance of High-Electron Mobility in Polymer Acceptors for Efficient All-Polymer Solar Cells: Combined Engineering of Backbone Building Unit and Regioregularity. 2108508	10
740	New Electron Acceptor with End-Extended Conjugation for High-Performance Polymer Solar Cells.	2
739	Triarylborane-BODIPY conjugate: An efficient non-fullerene electron acceptor for bulk heterojunction organic solar cell. 2021 , 230, 242-249	3
738	Development of new nonacyclic small-molecule acceptors involving two benzo[1,2-b:4,5-b?]dithiophene moieties for efficient polymer solar cells. 2021 , 282, 116922	
737	ZnO:Al textured films for improved performance in organic photovoltaics. 2015 , 64, 178801	1
736	Innovative architecture design for high performance organic and hybrid multi-junction solar cells. 2017 ,	
735	Photovoltaic Materials. 2018 , 1-22	
734	Air-Stable Optoelectronic Devices with Metal Oxide Cathodes. 2019 , 413-422	O
734 733	Air-Stable Optoelectronic Devices with Metal Oxide Cathodes. 2019, 413-422 Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019,	O
	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by	O
733	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019 , Application of organic photovoltaic materials (OPV) as greenhouse roof structures: A review. 2020 ,	13
733 732	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019 , Application of organic photovoltaic materials (OPV) as greenhouse roof structures: A review. 2020 , 1, 1-5	
733 732 731	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019 , Application of organic photovoltaic materials (OPV) as greenhouse roof structures: A review. 2020 , 1, 1-5 Near-infrared Materials: The Turning Point of Organic Photovoltaics. <i>Advanced Materials</i> , 2021 , e210733@4 Alkyl-Chain Branching of Non-Fullerene Acceptors Flanking Conjugated Side Groups toward Highly	13
733 732 731 730	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019, Application of organic photovoltaic materials (OPV) as greenhouse roof structures: A review. 2020, 1, 1-5 Near-infrared Materials: The Turning Point of Organic Photovoltaics. Advanced Materials, 2021, e210733@4 Alkyl-Chain Branching of Non-Fullerene Acceptors Flanking Conjugated Side Groups toward Highly Efficient Organic Solar Cells. 2021, 11, 2102596 Nonfused Ring Electron Acceptors with a Small Side-Chain Difference Lead to Vastly Different	13
733 732 731 730 729	Efficient ternary organic solar cells with energy cascade and Foerster resonance energy transfer by doping phosphorescent small molecule. 2019, Application of organic photovoltaic materials (OPV) as greenhouse roof structures: A review. 2020, 1, 1-5 Near-infrared Materials: The Turning Point of Organic Photovoltaics. Advanced Materials, 2021, e210733\(\text{0}\)4 Alkyl-Chain Branching of Non-Fullerene Acceptors Flanking Conjugated Side Groups toward Highly Efficient Organic Solar Cells. 2021, 11, 2102596 Nonfused Ring Electron Acceptors with a Small Side-Chain Difference Lead to Vastly Different Power Conversion Efficiencies: Impact of Aggregation. Uncovering the out-of-plane nanomorphology of organic photovoltaic bulk heterojunction by	13 19

725	Hydroxylated non-fullerene acceptor for highly efficient inverted perovskite solar cells.	13
724	Azobenzene dyads containing fullerene, porphyrin and pyrene chromophores: Molecular design and optical properties. 2022 , 197, 109858	2
723	Solution-processable silicon naphthalocyanine tetraimides as near infrared electron acceptors in organic solar cells. 2022 , 197, 109846	О
722	Metallated terpolymer donors with strongly absorbing iridium complex enables polymer solar cells with 16.71% efficiency. 2022 , 430, 132832	5
721	Fused-heterocycle engineering on asymmetric non-fullerene acceptors enables organic solar cells approaching 29 mA/cm2 short-circuit current density. 2022 , 430, 132830	1
720	Simple non-fused small-molecule acceptors with bithiazole core: synthesis, crystallinity and photovoltaic properties.	1
719	Simple-structure small molecular acceptors based on a benzodithiophenedione core: synthesis, optoelectronic and photovoltaic properties.	О
718	Thiophenes and Their Benzo Derivatives: Applications. 2020 , 613-613	
717	Modifying polymer PM6 by incorporating a component with low synthetic complexity for enhanced short-circuit current density.	1
716	Density functional theory study of donor conjugated polymers with substituent effect. 2021 , 28, 1	
715	Photophysics and Charge Generation in Low Energy-offset Blends for Organic Solar Cells. 2021 , 75, 862-867	1
714	High-efficiency organic solar cells enabled by an alcohol-washable solid additive. 1	7
713	Near-Infrared Nonfullerene Acceptors Based on 4H-Cyclopenta[1,2-b:5,4-b']dithiophene for Organic Solar Cells and Organic Field-Effect Transistors. 2021 ,	2
712	Introducing Low-Cost Pyrazine Unit into Terpolymer Enables High-Performance Polymer Solar Cells with Efficiency of 18.23%. 2109271	14
711	Efficient Organic Solar Cells Enabled by Chlorinated Nonplanar Small Molecules.	3
710	Asymmetric Non-Fullerene Small-Molecule Acceptors toward High-Performance Organic Solar Cells. 2021 , 7, 1787-1797	9
709	Rational Design and Characterization of Symmetry-Breaking Organic Semiconductors in Polymer Solar Cells: A Theory Insight of the Asymmetric Advantage. 2021 , 14,	7
708	Key progresses of MOE Key Laboratory of Macromolecular Synthesis and Functionalization in 2020. 2021 ,	12

707	Ternary Strategy Enabling High-Performance Organic Solar Cells with Optimized Film Morphology and Reduced Nonradiative Energy Loss. 2021 , 5, 2100806	1
706	Non-fullerene electron acceptors constructed by four strong electron-withdrawing end groups: Potential to improve the photoelectric performance of organic solar cells by theoretical investigations. 2020 , 181, 108542	2
705	Organoboron molecules and polymers for organic solar cell applications. 2021,	10
704	Using fullerene as the third component to boosting the photovoltaic performances of pyran acceptor. 2022 , 197, 109933	O
703	New wide bandgap D-A polymer based on Benzothiadiazole-pyrrolo[3,4-b] dithieno[2,3-f:3[½[h]quinoxalindione and thiazole functionalized benzo[1,2-b:4,5-b][dithiophene units for high performance ternary organic solar cells with over 16% efficiency.	
702	ITIC derivative acceptors for ternary organic solar cells: fine-tuning of absorption bands, LUMO energy levels, and cascade charge transfer.	3
701	Role of Iodo-Substituted Subphthalocyanine (Subpcs) Etonjugated aromatic N-fused di-Iminoisonidole units on the performance of non-fullerene small organic solar cells. 2022 , 1207, 113508	3
700	Near-infrared absorbing polymer acceptors enabled by selenophene-fused core and halogenated end-group for binary all-polymer solar cells with efficiency over 16%. 2022 , 92, 106718	15
699	The evolution of small molecular acceptors for organic solar cells: Advances, challenges and prospects. 2022 , 198, 109963	2
698	Modulation of Vertical Component Distribution for Large-Area Thick-Film Organic Solar Cells. 2100838	1
697	Chlorination Enabling a Low-Cost Benzodithiophene-Based Wide-Bandgap Donor Polymer with an Efficiency of over 17. <i>Advanced Materials</i> , 2021 , e2105483	13
696	Pronounced Backbone Coplanarization by Extension in a Sterically Hindered Conjugated Polymer System Leads to Higher Photovoltaic Performance in Non-Fullerene Solar Cells. 2021 , 13, 56420-56429	1
695	Increasing donor-acceptor spacing for reduced voltage loss in organic solar cells. 2021, 12, 6679	7
694	Kinetics Manipulation Enables High-performance Thick Ternary Organic Solar Cells via R2R Compatible Slot-die Coating. <i>Advanced Materials</i> , 2021 , e2105114	13
693	Effect of Terminal-Group Halogenation of Naphthalene-Based Nonfullerene Acceptors on Their Film Structure and Photophysical and Photovoltaic Properties.	O
692	Near-Infrared Absorbing Nonfullerene Acceptors for Organic Solar Cells. 2100868	1
691	Triphenyleno[1,2-:7,8-']bis([1,2,5]thiadiazole) as a V-Shaped Electron-Deficient Unit to Construct Wide-Bandgap Amorphous Polymers for Efficient Organic Solar Cells. 2021 , 13, 57743-57749	1
690	Molecular engineering of non-fullerene acceptors based on thiophene-fused end groups for fullerene-free organic solar cells. 2021 , 109987	O

689	Ladder-Type Fused Benzodithiophene Extended along the Short-Axis Direction as a New Donor Building Block for Efficient Organic Solar Cells. 2021 , 13, 57693-57702		0
688	Over 17% Efficiency of Ternary Organic Photovoltaics Employing Two Acceptors with an Acceptor-Donor-Acceptor Configuration. 2021 , 13, 57684-57692		19
687	Non-fullerene acceptor pre-aggregates enable high efficiency pseudo-bulk heterojunction organic solar cells. 1		4
686	High-Performance Non-Fused Wide Bandgap Acceptor for Versatile Photovoltaic Applications. <i>Advanced Materials</i> , 2021 , e2108090	24	13
685	Delicately Controlled Polymer Orientation for High-Performance Non-Fullerene Solar Cells with Halogen-Free Solvent Processing. 2021 , 13, 57654-57663		3
684	A New End Group on Nonfullerene Acceptors Endows Efficient Organic Solar Cells with Low Energy Losses. 2108614		13
683	Effects of Halogenation on the Benzotriazole Unit of Non-Fullerene Acceptors in Organic Solar Cells with High Voltages. 2021 ,		3
682	A Polymer Donor with Versatility for Fabricating High-Performance Ternary Organic Photovoltaics. 2021 , 431, 133950		4
681	Effect of Molecular Symmetry on Fused-Ring Electron Acceptors. 2100797		1
680	Developing Efficient Small Molecule Acceptors with sp -Hybridized Nitrogen at Different Positions by Density Functional Theory Calculations, Molecular Dynamics Simulations and Machine Learning. 2021 ,		22
679	The Original Design Principles of the Y-Series Nonfullerene Acceptors, from Y1 to Y6. 2021 ,		12
678	Achieving efficient organic solar cells via synergistically doping active layers and interfaces by a conjugated macrocycle. 2021 , 9, 25629-25640		4
677	Versatile third components in organic ternary solar cells. 2022 , 231, 732-757		О
676	Toward High-Efficiency Organic Photovoltaics: Perspectives on the Origin and Role of Energetic Disorder 2022 , 13, 544-551		1
675	Non-fullerene acceptors with direct and indirect hexa-fluorination afford >17% efficiency in polymer solar cells.		8
674	Stable dinitrile end-capped closed-shell non-quinodimethane as a donor, an acceptor and an additive for organic solar cells.		Ο
673	Impact of substituents on the performance of small-molecule semiconductors in organic photovoltaic devices via regulating morphology.		1
672	Simple benzothiadiazole-based small molecules as additives for efficient organic solar cells. 2022 , 101, 106424		2

671	Solid-solvent hybrid additive for the simultaneous control of the macro- and micro-morphology in non-fullerene-based organic solar cells. 2022 , 93, 106878	9
670	Sequential stacking of a thin BHJ layer acting as a morphology regulator for efficiency enhancement in non-fullerene ternary solar cells. 2022 , 433, 134337	Ο
669	High-performance heptacyclic ladder-type heteroarene-based electron acceptors enabled by bulky neighboring side-chains and end-group fluorination. 2022 , 432, 134393	Ο
668	Ternary organic solar cells: A review of the role of the third element. 2022 , 94, 106915	14
667	Multiple charge separation pathways in new-generation non-fullerene acceptors: a computational study. 2021 , 9, 24849-24856	2
666	Isomeric Fluorene-based Heteroundecenes with Different Side Chains Anchoring Positions for Small Molecule Acceptors. 2022 , 37, 136-147	
665	Review on Y6-Based Semiconductor Materials and Their Future Development via Machine Learning. 2022 , 12, 168	2
664	Exploiting Novel Unfused-Ring Acceptor for Efficient Organic Solar Cells with Record Open-Circuit Voltage and Fill Factor 2021 ,	1
663	Conjugated Mesopolymer Achieving 15% Efficiency Single-Junction Organic Solar Cells 2022 , e2105430	5
662	Truxene Expanded BODIPY Star-Shaped Molecules as Acceptors for Non-Fullerene Solar Cells with over 13% Efficiency.	4
661	Self-assembled monolayers for interface engineering in polymer solar cells.	1
660	Near-infrared nonfullerene acceptors with halogenated terminated fused tris(thienothiophene) for efficient polymer solar cells. 2022 , 231, 433-439	
659	Recent progress in organic solar cells based on non-fullerene acceptors: materials to devices.	24
658	Realizing 19.05% Efficiency Polymer Solar Cells by Progressively Improving Charge Extraction and Suppressing Charge Recombination <i>Advanced Materials</i> , 2022 , e2109516	70
657	The Synthesis of Asymmetric Perylene Diimide Acceptors and Their Optoelectronic Properties Studies. 2022 , 2022,	
656	Hybrid Cathode Interlayer Enables 17.4% Efficiency Binary Organic Solar Cells 2022 , e2105575	6
655	Benzo[1,2-b:4,5-b?]difuran Based Polymer Donor for High-Efficiency (>16%) and Stable Organic Solar Cells. 2103684	7
654	Enhancing the Performance of Small-Molecule Organic Solar Cells via Fused-Ring Design 2022 , 14, 7093-710	15

653	Simple Tricyclic-Based A-ED-EA-Type Nonfullerene Acceptors for High-Efficiency Organic Solar Cells 2022 ,	2
652	Influence of altering chlorine substitution positions on the photovoltaic properties of small molecule donors in all-small-molecule organic solar cells. 2022 , 10, 2017-2025	2
651	Regioregularity-control of conjugated polymers: from synthesis and properties, to photovoltaic device applications. 2022 , 10, 2672-2696	6
650	Simple thiazole-centered oligothiophene donor enables 15.4% efficiency all small molecule organic solar cells. 2022 , 10, 3009-3017	7
649	High-performance nonfused ring electron acceptor with a steric hindrance induced planar molecular backbone. 2022 , 65, 594	3
648	Origin of the Additive-Induced V Change in Non-Fullerene Organic Solar Cells 2022 , e2107106	1
647	Chalcogen-substituted PCBM derivatives as ternary components in PM6:Y6 solar cells. 2022, 3, 1071-1078	
646	Machine learning and molecular dynamics simulation-assisted evolutionary design and discovery pipeline to screen efficient small molecule acceptors for PTB7-Th-based organic solar cells with over 15% efficiency.	23
645	Influence of Fluorine Substitution on the Photovoltaic Performance of Wide Band Gap Polymer Donors for Polymer Solar Cells 2022 ,	3
644	Enhancing organic photovoltaic performance with 3D-transport dual nonfullerene acceptors. 2022 , 10, 1948-1955	2
643	Low nonradiative energy losses within 0.2 eV in efficient non-fullerene all-small-molecule organic solar cells.	4
642	A dopant-free hole transport material boosting the performance of inverted methylamine-free perovskite solar cells. 2022 , 10, 3159-3168	1
641	Revealing the microstructure-related light-induced degradation for all-polymer solar cells based on regioisomerized end-capping group acceptors. 2022 , 10, 1246-1258	1
640	Advanced nanomaterials utilized as top transparent electrodes in semi-transparent photovoltaic. 2022 , 46, 100563	3
639	NIR-Absorbing Electron Acceptor Based on a Selenium-Heterocyclic Core Attaching to Phenylalkyl Side Chains for Polymer Solar Cells with 17.3% Efficiency 2022 ,	4
638	Non-Volatile Perfluorophenyl-Based Additive for Enhanced Efficiency and Thermal Stability of Nonfullerene Organic Solar Cells via Supramolecular Fluorinated Interactions. 2103702	7
637	Polycyclic aromatic hydrocarbon-based organic semiconductors: ring-closing synthesis and optoelectronic properties.	5
636	ADADA small molecule acceptors with non-fully-fused core units.	1

635	BODIPY Cored A-D-A'-D-A Type Nonfused-Ring Electron Acceptor for Efficient Polymer Solar Cells 2022 , e2100828	3
634	Achieving Efficient Polymer Solar Cells Based on Near-Infrared Absorptive Backbone Twisted Nonfullerene Acceptors through a Synergistic Strategy of an Indacenodiselenophene Fused-Ring Core and a Chlorinated Terminal Group. 2022 , 5, 1322-1330	O
633	Design of Nonfused Nonfullerene Acceptors Based on Pyrido- or Benzothiadiazole Cores for Organic Solar Cells.	2
632	1-Chloronaphthalene-Induced Donor/Acceptor Vertical Distribution and Carrier Dynamics Changes in Nonfullerene Organic Solar Cells and the Governed Mechanism 2022 , e2101475	8
631	Statistical analysis of properties of non-fullerene acceptors for organic photovoltaics.	
630	Device modelling and optimization studies on novel ITIC-OE based non-fullerene organic solar cell with diverse hole and electron transport layers. 2022 , 123, 111912	1
629	Molecular optimization of incorporating pyran fused acceptordonordcceptor type acceptors enables over 15% efficiency in organic solar cells. 2022 , 10, 1977-1983	1
628	Optimising the photovoltaic parameters in donor\(\text{lcceptor}\) cceptor ternary polymer solar cells using Machine Learning framework. \(\text{2022}\), 231, 447-457	1
627	Simultaneously Achieving Highly Efficient and Stable Polymer:Non-Fullerene Solar Cells Enabled By Molecular Structure Optimization and Surface Passivation 2022 , e2104588	4
626	Surface adhesion engineering for robust organic semiconductor devices.	o
625	Slot-Die-Coated Organic Solar Cells Optimized through Multistep Crystallization Kinetics. 2100740	1
624	Diphenylamine Substituted High-performance Fully Nonfused Ring Electron Acceptors: The Effect of Isomerism. 2022 , 435, 134987	2
623	The history and development of Y6. 2022 , 102, 106436	2
622	Balancing the Voc-Jsc trade-off in polymer solar cells based on 2-(benzoxazol-2-yl)-acetonitrile end-capped small-molecule acceptors through asymmetry and halogenation of end groups. 2022 , 106446	2
621	Efficient organic solar cells with small energy losses based on a wide-bandgap trialkylsilyl-substituted donor polymer and a non-fullerene acceptor. 2022 , 435, 134878	1
620	Organic electronics: an overview of key materials, processes, and devices. 2022 , 3-71	
619	Recent Progress on All-Small-Molecule Organic Photovoltaics.	12
618	Optimized bicontinuous interpenetrating network morphology formed by gradual chlorination to boost photovoltaic performance. 2022 , 135198	1

617	Non-Radiative Recombination Energy Losses in Non-Fullerene Organic Solar Cells. 2111855	13
616	Exciton Binding Energy of Non-Fullerene Electron Acceptors. 2100184	6
615	Nitrogen-Bridged Star-Shaped Fused-Ring Electron Acceptors for Organic Solar Cells. 2022 , 100093	0
614	New Bithiophene Extended IDIC-Based Non-Fullerene Acceptors and Organic Photovoltaics Thereof 2022 , 27,	
613	ReviewLonjugated Polymer Photovoltaic Materials: Performance and Applications of Organic Semiconductors in Photovoltaics.	O
612	Ternary organic solar cell with 1750 hours half lifetime under UV irradiation with solar intensity.	2
611	The synergistic effects of central core size and end group engineering on performance of narrow bandgap nonfullerene acceptors. 2022 , 435, 135020	0
610	Limitations of machine learning models when predicting compounds with completely new chemistries: possible improvements applied to the discovery of new non-fullerene acceptors.	2
609	Morphology evolution via solvent optimization enables all-polymer solar cells with improved efficiency and reduced voltage loss.	1
608	Terthiophene Based Non-Fused Electron Acceptors for Efficient Organic Solar Cells.	
607	Pot- and atom-economic synthesis of oligomeric non-fullerene acceptors via CH direct arylation.	3
606	Recent Progress in Polymer-based Infrared Photodetectors.	Ο
605	Trifluoro alkyl side chains in the non-fullerene acceptors to optimize the phase miscibility and vertical distribution of organic solar cells.	1
604	Crystallinity modulation of donors by heteroatom side-chain engineering and solvent additive achieving 14.3% all-small-molecule organic solar cells.	5
603	Efficient semi-transparent organic solar cells enabled by a quasi-heterojunction active layer structure. 2022 , 10, 3720-3728	1
602	Organic photodetectors with high detectivity for broadband detection covering UV-vis-NIR.	2
601	Achieving 17.5% efficiency for polymer solar cells via a donor and acceptor layered optimization strategy. 2022 , 10, 5489-5496	8
600	On the interface reactions and stability of nonfullerene organic solar cells.	2

Modulating the Molecular Orientation of Linear Benzodifuran-Based Isomeric Polymers by Exchanging the Positions of Chlorine and Fluorine Atoms.

598	The effect of alkyl substitution position of thienyl outer side chains on photovoltaic performance of ADA?DA type acceptors.	10
597	Structureproperties of small donoracceptor molecules for homojunction single-material organic solar cells. 2022 , 10, 5716-5726	1
596	Improving the efficiency and stability of binary small-molecule organic solar cells by incorporating a small amount of polymer acceptor.	O
595	Selection of side groups on simple non-fullerene acceptors for the application in organic solar cells: From flexible to rigid.	
594	The Renaissance of Oligothiophene-Based DonorAcceptor Polymers in Organic Solar Cells. 2104050	7
593	Revealing Donor Acceptor Interaction on the Printed Active Layer Morphology and the Formation Kinetics for Nonfullerene Organic Solar Cells at Ambient Conditions. 2103977	3
592	Manipulating molecular aggregation and crystalline behavior of A-DA'D-A type acceptors by side chain engineering in organic solar cells.	1
591	Organic Photovoltaics[New Renaissance: Advances Toward Roll-to-Roll Manufacturing of Non-Fullerene Acceptor Organic Photovoltaics. 2101556	6
590	Large-Area Flexible Organic Solar Cells. 2022 , 405-453	O
589	Influence of Large Steric Hinderance Substituent Position on Conformation and Charge Transfer Process for Non-Fused Ring Acceptors 2022 , e2200007	1
588	Electron-Donating Ladder-Type Heteroacenes for Photovoltaic Applications: From Polymer Donor Materials to Small-Molecule Acceptor Materials. 2022 , 215-239	
587	Potential Applications of Organic Solar Cells. 2022 , 645-676	О
586	ADADA-Type Oligomer versus ADA-Type Small Molecule: Synthesis and Advanced Effect of the DA Repeat Unit on Morphology and Photovoltaic Properties. 2022 , 5, 3146-3155	
585	Branched Alkoxy Side Chain Enables High-Performance Non-Fullerene Acceptors with High Open-Circuit Voltage and Highly Ordered Molecular Packing. 2022 , 34, 2059-2068	6
584	Chlorinated Organic Solar Cells. 2022 , 241-273	
583	Hole Transfer Prompted by Viscous Oligomer Solid Additives in Non-Fullerene Bulk-Heterojunction Layers. 2022 , 4, 1940-1947	0
582	Non-halogenated solvents processed efficient ITO-free flexible organic solar cells with up-scaled area 2022 , e2200049	1

Random Copolymerization Strategy for Host Polymer Donor PM6 Enables Improved Efficiency Both in Binary and Ternary Organic Solar Cells.. **2022**,

580	Nonfused Ring Electron Acceptors for Efficient Organic Solar Cells Enabled by Multiple Intramolecular Conformational Locks.	2
579	Isomeric Nonfullerene Acceptors: Planar Conformation Leading to a Higher Efficiency.	O
578	Non-fullerene based Inverted Organic Photovoltaic Device with Long-Term Stability.	Ο
577	High-Performance Ternary Semitransparent Polymer Solar Cells with Different Bandgap Third Component as Non-Fullerene Guest Acceptor. 2200070	
576	Optimizing the Photovoltaic Performance of Organic Solar Cells for Indoor Light Harvesting 2022,	O
575	Manipulating the Intermolecular Interactions through Side Chain Engineering and Unilateral EBridge Strategy for Efficient Small Molecular Photovoltaic Acceptor. 2200166	9
574	Tuning Morphology of Active Layer by using a Wide Bandgap Oligomer-Like Donor Enables Organic Solar Cells with Over 18% Efficiency. 2104060	10
573	Recent Progress of Benzodifuran-Based Polymer Donors for High-Performance Organic Photovoltaics. 2200006	3
572	Twisted A-D-A Type Acceptors with Thermally-Activated Delayed Crystallization Behavior for Efficient Nonfullerene Organic Solar Cells. 2103957	O
571	A Sustainable Synthetic Approach to the Indaceno[1,2-b:5,6-b?]dithiophene (IDT) Core through Cascade Cyclization Deprotection Reactions. 2022 , 4, 206-215	1
570	Low-cost and Stable SFX-based Semiconductor Materials in Organic Optoelectronics. 2022,	
569	Characteristics of the Colorless Polyimide-Based Flexible X-ray Detector with Non-Fullerene Acceptor Polymer 2022 , 12,	
568	Layer-by-Layer Processed PM6:Y6-Based Stable Ternary Polymer Solar Cells with Improved Efficiency over 18% by Incorporating an Asymmetric Thieno[3,2- b]indole-Based Acceptor. 2200629	8
567	Solvent-assisted conformational interconversion of an organic semiconductor with multiple non-covalent interactions. 2022 , 3, 100765	О
566	Electron/Hole Transporting Materials for Nonfullerene Organic Solar Cells 2022,	О
565	Conjugated Extension of Non-Fullerene Acceptors Enables Efficient Organic Solar Cells with Optoelectronic Response over 1000 nm.	О
564	Thermally stable poly(3-hexylthiophene): Nonfullerene solar cells with efficiency breaking 10%.	7

563	Pushing the Efficiency of High Open-Circuit Voltage Binary Organic Solar Cells by Vertical Morphology Tuning 2022 , e2200578	9
562	Recent Progress in Indacenodithiophene-Based Acceptor Materials for Non-Fullerene Organic Solar Cells 2022 , 380, 18	2
561	Phenalene New Ring-Locked Vinyl Bridge for Nonfullerene Acceptors With Enhanced Chemical and Photochemical Stabilities. 2022 , 2,	
560	Revealing the Sole Impact of Acceptor's Molecular Conformation to Energy Loss and Device Performance of Organic Solar Cells through Positional Isomers 2022 , e2103428	1
559	Non-Fused Polymerized Small Molecular Acceptors for Efficient All-Polymer Solar Cells. 2101034	3
558	From Perylene Diimide Polymers to Fused-Ring Electron Acceptors: A 15-Year Exploration Journey of Nonfullerene Acceptors.	2
557	Ab Initio Study of Two-Dimensional Cross-Shaped Non-Fullerene Acceptors for Efficient Organic Solar Cells 2022 , 7, 10638-10648	O
556	The molecular ordering and double channel carrier generation of non-fullerene photovoltaics within multi-length-scale morphology <i>Advanced Materials</i> , 2022 , e2108317	16
555	Enhancing Efficiency of Nonfullerene Organic Solar Cells via Using Polyelectrolyte-Coated Plasmonic Gold Nanorods as Rear Interfacial Modifiers 2022 ,	2
554	Molecular Insight into Efficient Charge Generation in Low-Driving-Force Nonfullerene Organic Solar Cells 2022 ,	10
553	Stable, Econjugated radical anions of boron-nitrogen dihydroindeno[1,2-b]fluorenes.	O
552	Exploration of the Intriguing Photovoltaic Behavior for Fused Indacenodithiophene-Based A-D-A Conjugated Systems: A DFT Model Study 2022 , 7, 11606-11617	6
551	Recent Progress in Organic Solar Cells: A Review on Materials from Acceptor to Donor 2022 , 27,	4
550	M-Series Nonfullerene Acceptors with Varied Fluorinated End Groups: Crystal Structure, Intermolecular Interaction, Charge Transport, and Photovoltaic Performance. 2200119	O
549	The origin and evolution of Y6 structure. 2022 , 43, 030202	2
548	C-H Direct Arylation: A Robust Tool to Tailor the EConjugation Lengths of Non-fullerene Acceptors 2022 ,	3
547	Perylene-diimide-based cathode interlayer materials for high performance organic solar cells.	6
546	Double-Cable Conjugated Polymers with Rigid Phenyl Linkers for Single-Component Organic Solar Cells.	O

545	Fullerene-free, MoTe2 atomic layer blended bulk heterojunctions for improved organic solar cell and photodetector performance. 2022 , 17, 2875-2887	1
544	Reducing Photovoltaic Property Loss of Organic Solar Cells in Blade-Coating by Optimizing Micro-Nanomorphology via Nonhalogenated Solvent. 2200165	9
543	A Versatile Planar Building Block with C 2V Symmetry for High-Performance Non-Halogenated Solvent Processable Polymer Donors. 2104028	5
542	Selenium: A Unique Member in the Chalcogen Family for Conjugated Materials Employed in Perovskite and Organic Solar Cells.	4
541	Oligomeric Acceptor: A IIwo-in-OnelStrategy to Bridge Small Molecules and Polymers for Stable Solar Devices.	
540	Carrier Generation Engineering toward 18% Efficiency Organic Solar Cells by Controlling Film Microstructure. 2103940	5
539	A New Noncovalently Fused-Ring Electron Acceptor Based on 3,7-Dialkyloxybenzo[1,2-b:4,5-b']dithiophene for Low-Cost and High-Performance Organic Solar Cells 2022 , e2200085	1
538	Effect of fluorine atoms on the dielectric constants, optoelectronic properties and charge carrier kinetic characteristics of indacenodithieno[3,2-b]thiophene based non-fullerene acceptors for efficient organic solar cells. 2022 , 236, 206-214	1
537	Simultaneously Enhanced Efficiency and Mechanical Durability in Ternary Solar Cells Enabled by Low-Cost Incompletely Separated Fullerenes 2022 , e2200139	2
536	Ferroelectric Polymer Drives Performance Enhancement of Non-fullerene Organic Solar Cells.	
535	Synergistic halogenation of backbone and end group for high-performance non-fused acceptors based organic solar cells. 2022 , 200, 110178	1
534	Bithienopyrroledione-based polymeric donors for efficient fullerene- and non-fullerene-based organic photovoltaic cells. 2022 , 200, 110176	O
533	Oligomeric Acceptor: A "Two-in-One" Strategy to Bridge Small Molecules and Polymers for Stable Solar Devices 2022 ,	5
532	Ferroelectric Polymer Drives Performance Enhancement of Non-fullerene Organic Solar Cells 2022 ,	4
531	The halogen effect of perylene diimide-based non-fullerene acceptors on photovoltaic properties. 2022 , 201, 110232	O
530	Engineering of A2-D-A1-D-A2 type BT-dIDT based non-fullerene acceptors for effective organic solar cells. 2022 , 1211, 113666	3
529	Experimental investigation of the mobility in the ITIC single crystal based field-effect transistor. 2022 , 104, 106469	
528	Performances of two side-chain modified medium-bandgap alternating polymers with main-chain twisted non-fullerene acceptor. 2022 , 286, 117038	

527	End-capped modification of Y-Shaped dithienothiophen[3,2-b]-pyrrolobenzothiadiazole (TPBT) based non-fullerene acceptors for high performance organic solar cells by using DFT approach. 2022 , 30, 101875	10
526	High efficiency ternary organic solar cells via morphology regulation with asymmetric nonfused ring electron acceptor. 2022 , 438, 135384	3
525	Terthiophene based non-fused electron acceptors for efficient organic solar cells. 2022, 105, 106512	3
524	Morphology manipulation for highly miscible photovoltaic blend of carboxylate-substituted polythiophene:Y6. 2022 , 202, 110269	O
523	Fabrication of cellulose nanofibers by the method of interfacial molecular films and the creation of organized soluble starch molecular films. 2022 , 643, 128784	O
522	Block copolymer compatibilizer for efficient and stable nonfullerene organic solar cells. 2022 , 438, 135543	3
521	Dual-functional ambipolar non-fused ring electron acceptor as third component and designing similar molecular structure between two acceptors for high-performance ternary organic solar cells. 2022 , 98, 107186	3
520	Ternary strategy: An analogue as third component reduces the energy loss and improves the efficiency of polymer solar cells. 2022 , 70, 67-73	
519	Comprehensive review on the application of inorganic and organic photovoltaics as greenhouse shading materials. 2022 , 52, 102077	2
518	-Tetrafluorophenylene Divinylene-Bridged Nonfullerene Acceptors as Binary Components or Additives for High-Efficiency Organic Solar Cells 2021 ,	2
517	Recent progress in cathode interlayer materials for non-fullerene organic solar cells. 2022, 4,	5
516	P3HT-Based Organic Solar Cells with a Photoresponse to 1000 nm Enabled by Narrow Band Gap Nonfullerene Acceptors with High HOMO Levels 2021 , 13, 61487-61495	4
515	16.3% Efficiency binary all-polymer solar cells enabled by a novel polymer acceptor with an asymmetrical selenophene-fused backbone. 2022 , 65, 309-317	12
514	Dithienobenzothiadiazole-Bridged Nonfullerene Electron Acceptors for Efficient Organic Solar Cells.	O
513	Perylene-diimide derived organic photovoltaic materials. 2022 , 65, 462-485	10
512	Novel quad-rotor-shaped photovoltaic materials: first example of fused-ring non-fullerene acceptors with proficient photovoltaic properties for high-performance solar cells 2021 , 28, 18	1
511	Recent progress in organic solar cells (Part I material science). 2022 , 65, 224-268	48
510	Fine-Tuning Batch Factors of Polymer Acceptors Enables a Binary All-Polymer Solar Cell with High Efficiency of 16.11%. 2022 , 12, 2103193	8

509	Exploring Charge Transport in High-Temperature Polymorphism of ITIC Derivatives in Simple Processed Unipolar Bottom Contact Organic Field-Effect Transistor. 2022 , 8, 2100743	1
508	Harnessing Intramolecular Chalcogen-Chalcogen Bonding in Merocyanines for Utilization in High-Efficiency Photon-to-Current Conversion Optoelectronics. 2021 ,	O
507	Functional Ligand-Decorated ZnO Nanoparticles as Cathode Interlayers for Efficient Organic Solar Cells. 2022 , 5, 1291-1297	4
506	Miscibility-Controlled Mechanical and Photovoltaic Properties in Double-Cable Conjugated Polymer/Insulating Polymer Composites. 2022 , 55, 322-330	4
505	Fine-Tuning Active Layer Morphology via Modification of Both Side Chains and Terminal Groups toward High-Performance Organic Solar Cells. 2022 , 10, 2100912	0
504	Naphthobistriazole based Non-Fused Electron Acceptors for Organic Solar Cells.	1
503	Palladium(II) and Platinum(II) Porphyrin Donors for Organic Photovoltaics.	2
502	Amphiphilic PTB7-Based Rod-Coil Block Copolymer for Water-Processable Nanoparticles as an Active Layer for Sustainable Organic Photovoltaic: A Case Study 2022 , 14,	0
501	Engineering Non-fullerene Acceptors as a Mechanism to Control Film Morphology and Energy Loss in Organic Solar Cells.	3
500	Promoting the photovoltaic performance and stability of organic solar cells by imidazole-doped PEDOT:PSS. 2022 , 33, 12083	
499	PTB7-Th-Based Organic Photovoltaic Cells with a High of over 1.0 V Fluorination and Side Chain Engineering of Benzotriazole-Containing Nonfullerene Acceptors 2022 ,	3
498	Low-cost polymer acceptors with noncovalently fused-ring backbones for efficient all-polymer solar cells. 2022 , 65, 926	3
497	Designing of small organic non-fullerene(NFAs) acceptor molecules with an ADA Framework for high performance organic solar cells: A DFT and TD-DFT method.	О
496	Pentyl side chain-based benzoditiophene Eonjugated polymer for non-halogenated solvent processed organic solar cells. 1-12	
495	Aggregation of Small Molecule and Polymer Acceptors with 2D-Fused Backbones in Organic Solar Cells.	О
494	Layer-by-Layer and Non-halogenated Solvent Processing of Benzodithiophene-Free Simple Polymer Donors for Organic Solar Cells. 2022 , 136515	1
493	Stability improvement mechanism due to less charge accumulation in ternary polymer solar cells. 2022 , 6,	4
492	CHAPTER 3. High-performance Organic Photovoltaic Donor Polymers. 69-108	

491	Data_Sheet_1.docx. 2018 ,	
490	Image_1.PDF. 2018 ,	
489	Image_2.PDF. 2018 ,	
488	Image_3.PDF. 2018 ,	
487	Image_4.PDF. 2018 ,	
486	Table_1.PDF. 2018 ,	
485	Table_2.PDF. 2018 ,	
484	Data_Sheet_1.PDF. 2018 ,	
483	Table_1.DOCX. 2018 ,	
482	Data_Sheet_1.DOCX. 2020 ,	
481	Table_1.DOCX. 2019 ,	
480	Table1_v1.DOCX. 2020 ,	
479	Efficient designing of half-moon-shaped chalcogen heterocycles as non-fullerene acceptors for organic solar cells 2022 , 28, 125	2
478	Structural symmetry-breaking of a perylene diimide acceptor at the N-position for enhanced photovoltaic performance.	1
477	Synergistic end-capped engineering on non-fused thiophene ring-based acceptors to enhance the photovoltaic properties of organic solar cells 2022 , 12, 12321-12334	5
476	A Novel Naphthalene Diimide-based Conjugated Polymer as Electron Transport Material for Non-Fullerene Organic Solar Cells.	1
475	Manipulating the D:A interfacial energetics and intermolecular packing for 19.2% efficiency organic photovoltaics.	54
474	Terminal groups play an important role in enhancing the performance of organic solar cells based on non-fused electron acceptors.	О

473	Indenofluorenes for Organic Optoelectronics: The Fused Dance of Five and Six-Membered Rings Enabling Structural Versatility.		1
472	An optoelectronic study to design better benzodithiophene (BDT) donor unit based non-fullerene organic solar cells (OSCs): the DFT approaches. 1		1
471	Halogen-free Polymer Donors Based on 3,4-Dicyanothiophene for High-performance Polymer Solar Cells. 1		О
470	Heteroheptacene-based acceptors with thieno[3,2-b]pyrrole yield high-performance polymer solar cells.		6
469	Self-assembly enables simple structure organic photovoltaics via green-solvent and open-air-printing: Closing the lab-to-fab gap. 2022 ,		4
468	A2-A1-DA1D-A1-A2-Type Non-Fullerene Acceptors for Poly(3-hexylthiophene)-Based Organic Photovoltaic Application.		
467	High-Performance Organic Solar Modules via the Bilayer-Merged-Annealing Assisted Blading Coating <i>Advanced Materials</i> , 2022 , e2110569	24	5
466	Fine Tuning Alkyl Substituents on Dithienoquinoxaline-Based Wide-Bandgap Polymer Donors for Organic Photovoltaics 2022 ,		2
465	Vertically optimized phase separation with improved exciton diffusion enables efficient organic solar cells with thick active layers 2022 , 13, 2369		23
464	Icing on the cake: combining a dual PEG-functionalized pillararene and an A-D-A small molecule photosensitizer for multimodal phototherapy. 1		2
463	Fluorinated phenanthrenequinoxaline-based D-A type copolymers for non-fullerene polymer solar cells. 2022 , 250, 124867		
462	Single photovoltaic material solar cells with enhanced exciton dissociation and extended electron diffusion. 2022 , 100895		1
461	Over 16% efficiency all-polymer solar cells by sequential deposition.		6
460	Lowing the energy loss of organic solar cells by molecular packing engineering via multiple molecular conjugation extension.		7
459	Novel Third Components with (Thio)barbituric Acid as the End Groups Improving the Efficiency of Ternary Solar Cells 2022 ,		3
458	New wide band gap Econjugated copolymers based on anthra[1,2-b: 4,3-b': 6,7-c''] trithiophene-8,12-dione for high performance non-fullerene polymer solar cells with an efficiency of 15.07 %. 2022 , 251, 124892		1
457	Pyran-fused non-fullerene acceptor achieving 15.51% efficiency in organic solar cells. 2022 , 106, 106547	1	1
456	A simple high-performance fully nonfused ring electron acceptor with a planar molecular backbone. 2022 , 444, 136472		2

455	Control of Phase Separation and Crystallization for High-Efficiency and Mechanically-Deformable Organic Solar Cells.	1
454	A´New Diazabenzo[k]fluoranthene-based´D-A Conjugated Polymer Donor for Efficient Organic Solar Cells 2022 , e2200276	o
453	Synergy of Backbone and Endgroup engineering for Efficient Non-Fused-Ring Asymmetric Electron Accoptors based Organic Solar Cells.	
452	Low-bandgap small molecule acceptors with asymmetric side chains.	
451	A simple single-thiophene derivative assists efficient as-cast ternary organic solar cells through Fister resonance energy transfer.	o
450	Progress review of asymmetric polymers for organic solar cells.	O
449	Achieving High-Efficiency Organic Photovoltaics from a New Completely Amorphous Donor Polymer.	0
448	Metal-Organic Framework Nanosheets as Templates to Enhance Performance in Semi-Crystalline Organic Photovoltaic Cells. 2200366	
447	High efficiency and more functions bring a bright future for organic photovoltaic cells. 2022,	2
446	The Intrinsic Role of the Fusion Mode and Electron-Deficient Core in Fused-Ring Electron Acceptors for Organic Photovoltaics.	O
445	High-Performance Non-fullerene Organic Solar Cells Enabled by Noncovalent Conformational Locks and Side-Chain Engineering. 2022 , 137206	2
444	Free charge photogeneration in a single component high photovoltaic efficiency organic semiconductor. 2022 , 13,	8
443	2D/1A ternary blend system enables non-fused ring electron acceptor based polymer solar cells with improved photovoltaic parameters. 2022 , 107, 106562	
442	Towards High-Performance Organic Photovoltaics: The New Cooperation of Sequential Solution-Processing and Promissing Non-fullerene Acceptors.	6
441	Interplay between Charge Separation and Hole Back Transfer Determines the Efficiency of Non-Fullerene Organic Solar Cells with Low Energy Level Offset.	
440	Regulating phase separation and molecular stacking by introducing siloxane to small-molecule donors enables high efficiency all-small-molecule organic solar cells.	8
439	Kinetic Processes of Phase Separation and Aggregation Behaviors in Slot-die Processed High Efficiency Y6-based Organic Solar Cells.	3
438	Effects of Energetic Disorder in Bulk Heterojunction Organic Solar Cells.	7

437	Single-junction organic solar cell smashes performance record.	O
436	Unfused Acceptors Matching EBridge Blocks with Proper Frameworks Enable Over 12% As-Cast Organic Solar Cells. 2201209	o
435	Band-like transport in non-fullerene acceptor semiconductor Y6. 2022 , 15,	0
434	A-EA structured non-fullerene acceptors for stable organic solar cells with efficiency over 17%.	7
433	Recent progress in organic solar cells (Part II device engineering).	12
432	Design of Non-fused Ring Acceptors toward High-Performance, Stable, and Low-Cost Organic Photovoltaics.	3
431	The Intrinsic Role of the Fusion Mode and Electron-Deficient Core in Fused-Ring Electron Acceptors for Organic Photovoltaics.	
430	Enhancing the Photovoltaic Performance of Chlorobenzene-Cored UnFused Electron Acceptors by Introducing SIO Noncovalent Interaction. 2022 , 137375	1
429	Impact of pendent naphthalenedimide content in random double-cable conjugated polymers on their microstructures and photovoltaic performance. 2022 , 253, 125020	
428	Vinylene-Inserted Asymmetric Polymer Acceptor with Absorption Approaching 1000 nm for Versatile Applications in All-Polymer Solar Cells and Photomultiplication-Type Polymeric Photodetectors.	1
427	PTB7 and PTB7-Th as universal polymers to evaluate materials development aspects of organic solar cells including interfacial layers, new fullerenes, and non-fullerene electron acceptors. 2022 , 287, 117088	0
426	Modulating the molecular orientation of linear benzodifuran-based isomeric polymers by exchanging the positions of chlorine and fluorine atoms. 2022 , 99, 107413	4
425	Non-halogenated solvent processable wide bandgap polymer based on carboxylate-substituted benzodithiophene for high-efficiency polymer solar cells. 2022 , 204, 110459	
424	Highly Efficient Ternary Solar Cells with Reduced Non-radiative Energy Loss and Enhanced Stability via Two Compatible Non-fullerene Acceptors.	5
423	Photoinduced intra- and inter-molecular charge transfer dynamics in organic small molecules with intra-molecular push-pull electronic structure.	2
422	Recent advances in small molecular design for high performance non-fullerene organic solar cells.	1
421	Molecular Orientation and Femtosecond Electron Transfer Dynamics in Halogenated and Nonhalogenated, Eco-Friendly Processed PTB7-Th, ITIC, PTB7-Th:ITIC, and PTB7-Th:PCBM Films.	
420	Flexible Organic Photovoltaics with Star-Shaped Nonfullerene Acceptors End Capped with Indene Malononitrile and Barbiturate Derivatives. 2200264	О

419	Isomerization of Asymmetric Ladder-Type Heteroheptacene-Based Small-Molecule Acceptors Improving Molecular Packing: Efficient Nonfullerene Organic Solar Cells with Excellent Fill Factors. 220320	0 3
418	Noncovalent Interactions Induced by Fluorination of the Central Core Improve the Photovoltaic Performance of A-D-A?-D-A-Type Nonfused Ring Acceptors.	3
417	End Group Engineering Enabling Organic Solar Cells with High Open-Circuit Voltage.	
416	Effects of Oxygen Position in the Alkoxy Substituents on the Photovoltaic Performance of A-DA?D-A Type Pentacyclic Small Molecule Acceptors. 2373-2381	3
415	Efficient and Stable Quasiplanar Heterojunction Solar Cells with an Acetoxy-Substituted Wide-Bandgap Polymer. 1322-1331	O
414	S?N Conformational Lock Acceptor Based on Indacenodithiophene (IDT) Structure and High Electronegative Terminal End Group. 2022 , 15, 4238	
413	Random Terpolymer Enabling High-Efficiency Organic Solar Cells Processed by Nonhalogenated Solvent with a Low Nonradiative Energy Loss. 2203193	6
412	Hammer throw-liked hybrid cyclic and alkyl chains: a new side chain engineering for over 18% efficiency organic solar cells. 2022 , 107538	4
411	Comparative study on thermally evaporated and solution processed cathode modifying layers in organic solar cells.	O
410	Hybrid Dihalogenation on the End Group of Indacenodithieno[3,2-b]thiophene-Based Small-Molecule Acceptors Enables Efficient Polymer Solar Cells Processed from Nonhalogenated Solvents and Additives.	
409	Stable Open-Shell IC-Fused Fluorenyl Enabling Efficient Photothermal Conversion. 2200400	1
408	Research progress of large-area organic solar cells. 2022,	
407	Airway obstruction by a folding metal rod within a Reinforced Oral tracheal Tube: Case Report. 2022 , 3, 83-86	
406	A Thiazole-Based Polymer Donor for Efficient Organic Solar Cells.	1
405	Nonhalogenated Dual-Slot-Die Processing Enables High-Efficiency Organic Solar Cells. <i>Advanced Materials</i> , 2202659	8
404	Intramolecular Choloro-Sulfur Interaction and Asymmetric Side-Chain Isomerization to Balance Crystallinity and Miscibility in All-Small-Molecule Solar Cells.	4
403	Achieving 19% Power Conversion Efficiency in Planar-Mixed Heterojunction Organic Solar Cells Using a Pseudo-Symmetric Electron Acceptor. <i>Advanced Materials</i> , 2202089	32
402	Physicochemical insights and in silico designing of new fullerene-free acceptor molecules for highly efficient and stable organic solar cells. 2022 , 169, 110842	

401	Peripheral Halogenation Engineering Controls Molecular Stacking to Enable Highly Efficient Organic Solar Cells.		9
400	Application of indacenodiselenophene central core and modulation of terminal group interaction for high-efficient P3HT-based organic solar cells. 2022 , 10, 10114-10123		1
399	A Dual Post-Treatment Method for Improving the Performance of Ternary NiMgO Semiconductor Interfacial Layers and Their Organic Solar Cells?. 2022 , 80, 581		
398	End-group modification of non-fullerene acceptors enables efficient organic solar cells.		1
397	Machine learning with quantum chemistry descriptors: predicting the solubility of small-molecule optoelectronic materials for organic solar cells.		1
396	Rationally Tuning Blend Miscibility of Polymer Donor and Nonfullerene Acceptor for Constructing Efficient Organic Solar Cells?. 2022 , 80, 724		
395	Rationally regulating the terminal unit and copolymerization spacer of polymerized small-molecule acceptors for all-polymer solar cells with high open-circuit voltage over 1.10 V.		1
394	Fluorination and chlorination effects on the charge transport properties of the IDIC non-fullerene acceptor: an ab-initio investigation. 2022 , 13, 15		
393	An unfused-ring acceptor enabling ~12% efficiency for layer-by-layer organic solar cells.		0
392	A novel ADA?DA bifunctional small molecule for organic solar cell applications with impressive photovoltaic performance.		O
391	An electron acceptor featuring a BN covalent bond and small singletEriplet gap for organic solar cells.		2
390	A Review on the Materials Science and Device Physics of Semitransparent Organic Photovoltaics. 2022 , 15, 4639		O
389	Material Design and Device Fabrication Strategies for Stretchable Organic Solar Cells. <i>Advanced Materials</i> , 2201623	24	8
388	Low-cost synthesis of small molecule acceptors makes polymer solar cells commercially viable. 2022 , 13,		6
387	Effects of Thieno[3,2-b]thiophene Number on Narrow-Bandgap Fused-Ring Electron Acceptors.		О
386	Thin-Film Morphology and Optical Properties of Photoisomerizable DonorAcceptor Oligothiophenes.		
385	Revealing the Unusual Efficiency Enhancement of Organic Solar Cells with Polymer-Donor-Treated Cathode Contacts.		О
384	Determination of the charge carrier density in organic solar cells: A tutorial. 2022 , 131, 221101		3

383	Strong Intermolecular Interactions Induced by High Quadrupole Moments Enable Excellent Photostability of Non-Fullerene Acceptors for Organic Photovoltaics. 2201267		1
382	Lowly Fused Non-Fullerene Acceptors Towards Efficient Organic Solar Cells Enabled by Isomerization.		
381	A Low Reorganization Energy and Two-dimensional Acceptor with Four End Units for Organic Solar Cells with Low Eloss.		1
380	Subtle Alignment of Organic Semiconductors at the Donor/Acceptor Heterojunction Facilitates the Photoelectric Conversion Process.		O
379	Photo-Induced Charge Transfer of Fullerene and Non-Fullerene Conjugated Polymer Blends via Ab Initio Excited-State Dynamics.		O
378	Revisiting Conjugated Polymers with Long-Branched Alkyl Chains: High Molecular Weight, Excellent Mechanical Properties, and Low Voltage Losses.		1
377	2D Outer Side Chain-Incorporated Y Acceptors for Highly Efficient Organic Solar Cells with Nonhalogenated Solvent and Annealing-Free Process. 2200070		O
376	Double-Cable Conjugated Polymers with Pendent Near-Infrared Electron Acceptors for Single-Component Organic Solar Cells.		1
375	Double-Cable Conjugated Polymers with Pendent Near-Infrared Electron Acceptors for Single-Component Organic Solar Cells.		
374	Intramolecular ChloroBulfur Interaction and Asymmetric Side-Chain Isomerization to Balance Crystallinity and Miscibility in All-Small-Molecule Solar Cells.		1
373	Molecular Insights of Non-fused Ring Acceptors for High-Performance Non-fullerene Organic Solar Cells.		O
372	Reducing Steric Hindrance Around Electronegative Atom in Polymer Simultaneously Enhanced Efficiency and Stability of Organic Solar Cells. 2022 , 107611		O
371	Oligothiophene-based photovoltaic materials for organic solar cells: rise, plateau, and revival. 2022,		3
370	Solution Processable Benzotrithiophene (BTT)-Based Organic Semiconductors: Recent Advances and Review. 2200473		1
369	Revealing aggregation of non-fullerene acceptors in intermixed phase by ultraviolet-visible absorption spectroscopy. 2022 , 100983		0
368	Versatile Sequential Casting Processing for Highly Efficient and Stable Binary Organic Photovoltaics. <i>Advanced Materials</i> , 2203379	24	12
367	Narrow-Wide Copolymer for Strong Red-Color-Selective Absorption.		
366	Interplay between charge separation and hole back transfer determines the efficiency of non-fullerene organic solar cells with low energy level offset. 2022 , 108, 106601		1

365	Non-fullerene acceptors with alkoxy side chains and different halogenated end groups for efficient organic solar cells. 2022 , 205, 110525	
364	Enhanced efficiency of polymer solar cells via simple fluorination on the Ebridge of polymer donors. 2022 , 106611	
363	Structural modification on Dimethoxythienothiophene based non-fullerene acceptor molecule for construction of high-performance organic chromophores by employing DFT approach. 2022 , 110906	6
362	Recent Advances in Single-Junction Organic Solar Cells.	7
361	Isomerization of Noncovalently Conformational Lock in Nonfused Electron Acceptor toward Efficient Organic Solar Cells.	1
360	Delocalization suppresses nonradiative charge recombination in polymer solar cells.	O
359	New wide bandgap conjugated D-A copolymers based on BDT or NDT donor unit and anthra[1,2-b:4,3,b[6,7-c]trithiophene -8-12-dione acceptor for fullerene-free polymer solar cells. 2200168	
358	Enhanced efficiency of inverted organic solar cells by using alcohol molecules modified ZnO as an electron transport layer. 2022 , 128,	O
357	A Benzo[1,2-b:4,5-b?]Difuran Based Donor Polymer Achieving High-Performance (>17%) Single-Junction Organic Solar Cells with a Fill Factor of 80.4%. 2201850	3
356	Benzotriazole-Based Non-Fused Ring Acceptors for Efficient and Thermally Stable Organic Solar Cells. 2200530	2
355	Ester-Functionalized 1,1-Dicyanomethylene-3-indanone End-Capped Nonfullerene Acceptors for High-Performance, Annealing-Free Organic Solar Cells. 2022 , 14, 33614-33625	O
354	Pyrrolopyrrole-1,3-dione-Based Wide Band-Gap Polymeric Donors Exemplify High Voltage and Diminutive Energy Loss for Efficient Binary and Tandem Nonfullerene Organic Solar Cells with Efficiency Exceeding 15.7%.	О
353	Improved Predictions of Organic Photovoltaic Performance through Machine Learning Models Empowered by Artificially Generated Failure Data.	О
352	A 4-Arm Small Molecule Acceptor with High Photovoltaic Performance.	О
351	Central Unit Fluorination of Non-Fullerene Acceptor Enables Highly Efficient Organic Solar Cells with Over 18% Efficiency.	O
350	Organic Conjugated Small Molecules with DonorAcceptor Structures: Design and Application in Phototherapy of Tumors.	1
349	Central Unit Fluorination of Non-Fullerene Acceptor Enables Highly Efficient Organic Solar Cells with Over 18% Efficiency.	7
348	Water/Alcohol-Soluble Conjugated Polymers Based on Cyclopentadithiophene and Fluorene as Cathode Interlayers Elevate the Stability and Efficiency in Organic Solar Cells. 2022 , 5, 9495-9502	O

347	Perylene Diimide-Fused Dithiophenepyrroles with Different End Groups as Acceptors for Organic Photovoltaics. 2022 , 14, 37990-38003	3
346	A Transparent Electrode Based on Solution-Processed ZnO for Organic Optoelectronic Devices. 2022 , 13,	4
345	Design Rules of the Mixing Phase and Impacts on Device Performance in High-Efficiency Organic Photovoltaics. 2022 , 2022, 1-11	0
344	Three Isomeric Non-Fullerene Acceptors Comprising a Mono-Brominated End-Group for Efficient Organic Solar Cells. 2022 , 14, 35985-35996	1
343	The principles, design and applications of fused-ring electron acceptors.	21
342	Vertical Stratification Engineering of Insulating Poly(aryl ether)s Enables 18.6% Organic Solar Cells with Improved Stability. 2927-2936	3
341	Promoting the Efficiency and Stability of Nonfullerene Organic Photovoltaics by Incorporating Open-Cage [60]Fullerenes in the Nonfullerene Nanocrystallites.	0
340	Renewed Prospects for Organic Photovoltaics.	25
339	Achieving and Understanding of Highly Efficient Ternary Organic Photovoltaics: From Morphology and Energy Loss to Working Mechanism. 2200828	2
338	ITO Electrode with a Tunable Work Function for Organic Photovoltaic Devices. 2022 , 4, 4104-4112	1
337	On the Stability of Non-fullerene Acceptors and Their Corresponding Organic Solar Cells: Influence of Side Chains. 2206042	4
336	A convenient method for assessing steady-state carrier density and lifetime in solar cell materials using pulse excitation measurements. 2022 , 157, 084201	
335	Large-area Flexible Organic Solar Cells: Printing Technologies and Modular Design.	2
334	Efficient Polymer Solar Cells Facilitated by Halogenated Substituted Wide-Bandgap Polymers and a Backbone Twisted Low-Bandgap Acceptor. 2022 , 7,	
333	A simple structure copolymer donor based on carboxylated benzodithiophene for polymer solar cells.	1
332	Influence of Asphaltene Modification on Structure of P3HT/Asphaltene Blends: Molecular Dynamics Simulations. 2022 , 12, 2867	
331	Recent Progress in Hole-Transporting Layers of Conventional Organic Solar Cells with p IB Structure. 2205398	5
330	High-Performance Ternary Organic Solar Cells through Incorporation of a Series of A2-A1-D-A1-A2 Type Nonfullerene Acceptors with Different Terminal Groups. 2022 , 7, 2845-2855	4

329	High-Performance Ternary Organic Solar Cells Enabled by Introducing a New A-DA?D-A Guest Acceptor with Higher-Lying LUMO Level. 2022 , 14, 36582-36591	3
328	Medium Bandgap Small Molecule Acceptors With Isomer-Free Chlorinated End Groups Enabling High-Performance Tandem Organic Solar Cells. 2204720	Ο
327	A 4-Arm Small Molecule Acceptor with High Photovoltaic Performance.	Ο
326	Introducing a new 7-ring fused diindenone-dithieno[3,2-b:2',3'-d]thiophene unit as a promising component for organic semiconductor materials. 18, 944-955	
325	High-Performance Nonfused Ring Electron Acceptors with V-Shaped Side Chains. 2203454	0
324	Manipulating Charge Transfer and Transport via Intermediary Electron Acceptor Channels Enables 19.3% Efficiency Organic Photovoltaics. 2201076	18
323	Simultaneously Enhancing Exciton/Charge Transport in Organic Solar Cells by Organoboron Additive. 2205926	2
322	Investigating the Role of Novel Benzotrithiophene-Based Bat-Shaped Non-Fullerene Acceptors for High Performance Organic Solar Cells.	Ο
321	Wide Bandgap Conjugated Polymers Based on Difluorobenzoxadiazole for Efficient Non-Fullerene Organic Solar Cells. 2200591	1
320	Solid additive engineering enables high-efficiency and eco-friendly all-polymer solar cells. 2022,	6
319	Nonconjugated Self-Doped Polymer Zwitterions as Efficient Interlayers for High Performance Organic Solar Cells. 2022 , 34, 7293-7301	2
318	Over 18% binary organic solar cells enabled by isomerization of non-fullerene acceptors with alkylthiophene side chains.	5
317	Managing Challenges in Organic Photovoltaics: Properties and Roles of Donor/Acceptor Interfaces. 2206707	2
316	Effects of charge injection barrier on the dark current of organic photodiodes. 2022 , 109, 106621	Ο
315	Device modeling of two-dimensional hole transport materials for boosting the performance of non-fullerene acceptor bulk heterojunction organic solar cells. 2022 , 132, 112771	1
314	Photoinduced spin-orbital coupling effect at donor: acceptor interface in non-fullerene organic solar cells. 2022 , 109, 106613	
313	Role of novel carbon-oxygen-bridged Z-shaped non-fullerene acceptors for high efficiency organic solar cells. 2022 , 290, 117159	0
312	Flexible solar and thermal energy conversion devices: Organic photovoltaics (OPVs), organic thermoelectric generators (OTEGs) and hybrid PV-TEG systems. 2022 , 29, 101614	O

311	Recent advances of non-fullerene organic solar cells: From materials and morphology to devices and applications.	1
310	Semi-transparent fullerene-based tandem solar cells with excellent light utilization efficiency enabled by careful selection of sub-cells. 2022 , 109, 106633	Ο
309	Deciphering the effect of chalcogen-incorporated heterocycles in nonfused electron acceptors for organic photovoltaics. 2022 , 207, 110680	Ο
308	Recent advances of nonfullerene acceptors in organic solar cells. 2022 , 103, 107802	2
307	PTB7-Th /Non-fullerene acceptors for organic solar cells. 2022 , 291, 117189	О
306	Heterocyclic-based photoactive materials. 2023 , 219-296	O
305	Organic photovoltaic cells offer ultrahigh VOC of \sim 1.2 \vee under AM 1.5G light and a high efficiency of 21.2 $\%$ under indoor light. 2023 , 451, 139080	2
304	An acceptor with an asymmetric and extended conjugated backbone for high-efficiency organic solar cells with low nonradiative energy loss. 2022 , 10, 16714-16721	1
303	Computational chemistry-assisted design of a non-fullerene acceptor enables 17.4% efficiency in high-boiling-point solvent processed binary organic solar cells.	1
302	AzaBenzannulated perylene diimide multimers as electron acceptors for organic solar cells.	O
301	Hopping transport in perylene diimide based organic solar cells: a DFT approach.	О
300	Solid additive tuning of polymer blend morphology enables non-halogenated-solvent all-polymer solar cells with an efficiency of over 17%.	4
299	A meta-alkylthio-phenyl Chain Substituted Small Molecule Donor as the Third Component for High-Efficiency Organic Solar Cells.	3
298	Asymmetric side-chain substitution enables a 3D network acceptor with hydrogen bond assisted crystal packing and enhanced electronic coupling for efficient organic solar cells.	8
297	n-Type polymer electron acceptors for organic solar cells.	O
296	Isomeric non-fullerene acceptors for high-efficiency organic solar cells.	Ο
295	Over 17% efficiency all-small-molecule organic solar cells based on an organic molecular donor employing a 2D side chain symmetry breaking strategy.	8
294	Recent Advances of Benzodifuran Based Photovoltaics Materials.	O

293	Optimized Molecular Aggregation and Photophysical Process Synergistically Promoted Photovoltaic Performance in Low Regularity Benzo[c][1,2,5]thiadiazole-based Medium Bandgap Copolymers via Modulating [Bridges.	2
292	Engineering of W-shaped benzodithiophenedione-based small molecular acceptors with improved optoelectronic properties for high efficiency organic solar cells. 2022 , 12, 21801-21820	3
291	N-doping of nonfullerene bulk-heterojunction organic solar cells strengthens photogeneration and exciton dissociation. 2022 , 10, 18845-18855	0
290	Research Progress in Degradation Mechanism of Organic Solar Cells. 2022 , 80, 993	O
289	Bulk heterojunction organic photovoltaic cells based on DA type BODIPY small molecules as non-fullerene acceptors. 2022 , 10, 12776-12788	1
288	A Structurally Simple Linear Conjugated Polymer toward Practical Application of Organic Solar Cells.	3
287	Branched alkyl-chain engineering of chlorinated asymmetrical acceptors for improved organic photovoltaic performance.	0
286	Molecular tuning non-fullerene electron acceptor in organic photovoltaics: a theoretical study.	O
285	Side chain engineering of indacenodithieno[3,2-b]thiophene (IDTT)-based wide bandgap polymers for non-fullerene organic photovoltaics.	1
284	Insights into the chemistry of vapor phase infiltration for imaging non-fullerene acceptors. 2022 , 10, 12428-12435	0
283	Fused ring ADA?DA (Y-series) non-fullerene acceptors: recent developments and design strategies for organic photovoltaics. 2022 , 10, 17968-17987	3
282	Rationally regulating the Ebridge of small molecule acceptors for efficient organic solar cells. 2022 , 10, 17808-17816	O
281	Single junction binary and ternary polymer solar cells-based DA structured copolymer with low lying HOMO energy level and two nonfullerene acceptors.	0
280	Effects of the rigid and sterically bulky structure of non-fused nonfullerene acceptors on transient photon-to-current dynamics. 2022 , 10, 20035-20047	O
279	A Facile Depolymerization Reaction Enables Efficient Feedstock Recycle of Polymerized Small Molecule Acceptors in All-Polymer Solar Cells.	0
278	Efficient organic solar cells processed from a halogen-free solvent based on benzo[1,2-b:4,5-b?]difuran terpolymers. 2022 , 10, 12292-12299	O
277	Binary Alloy of Functionalized Small-Molecule Acceptors of ADA: DA Structure for Ternary-Blend Photovoltaics Displaying High Open-Circuit Voltages and Efficiencies.	3
276	PBDB-T-Based Binary-OSCs Achieving over 15.83% Efficiency via End-Group Functionalization and Alkyl-Chain Engineering of Quinoxaline-Containing Non-Fullerene Acceptors. 2022 , 14, 41264-41274	O

275	Development of non-fullerene electron acceptors for efficient organic photovoltaics. 2022, 4,	2
274	??????????. 2022,	Ο
273	Recent Advances in Single-Junction Organic Solar Cells. 2022 , 134,	2
272	Host-Guest Active Layer Enabling Annealing-Free , Nonhalogenated Green Solvent Processing for High-Performance Organic Solar Cells.	2
271	Furan-based liquid-crystalline small-molecule donor guest improving the photovoltaic performance of organic solar cells with amorphous packing.	1
270	Bright short-wavelength infrared organic light-emitting devices.	1
269	Anode interfacial modification for non-fullerene polymer solar cells: Recent advances and prospects.	3
268	A Medium-Bandgap Nonfullerene Acceptor Enabling Organic Photovoltaic Cells with 30% Efficiency under Indoor Artificial Light. 2207009	3
267	Efficient Non-Fullerene Solar Cells Enabled by a Temperature-Dependent Terpolymer with Controlled Aggregation and Orientation. 2022 , 5, 11866-11873	O
266	Enhancing photovoltaic performance of asymmetric fused-ring electron acceptor by expanding pyrrole to pyrrolo[3,2- b]pyrrole.	O
265	Fluorination of Carbazole-Based Polymeric Hole-Transporting Material Improves Device Performance of Perovskite Solar Cells with Fill Factor up to 82%.	1
264	Tuning the Molecular Packing of Low-Cost Non-Fullerene Acceptors via Asymmetric Terminal Groups. 2022 , 5, 11283-11291	O
263	Unraveling complex performance-limiting factors of brominated ITIC derivative: PM6 organic solar cells by using time-resolved measurements.	0
262	Precise Control of Selenium Functionalization in Non-Fullerene Acceptors Enabling High-Efficiency Organic Solar Cells.	O
261	Recent advances in bulk-heterojunction solar cells: A Review.	1
260	Molecular engineering of Y-series acceptors for nonfullerene organic solar cells.	2
259	Photonic crystal for efficiency enhancement of the semitransparent organic solar cells. 2022 , 97, 105806	0
258	PBDB-T Accessed via Direct CH Arylation Polymerization for Organic Photovoltaic Application.	O

257	Truxene-Centered Electron Acceptors for Non-Fullerene Solar Cells: Alkyl Chain and Branched Arm Engineering. 2022 , 23, 10402	O
256	Computational Design of Crescent Shaped Promising Nonfullerene Acceptors with 1,4-Dihydro-2,3-quinoxalinedione Core and Different Electron-withdrawing Terminal Units for Photovoltaic Applications.	O
255	Multi-Phase Morphology with Enhanced Carrier Lifetime via Quaternary Strategy Enables High-Efficiency Thick-Film and Large-Area Organic Photovoltaics. 2206269	5
254	Effect of Terminal Electron-Withdrawing Group on the Photovoltaic Performance of Asymmetric Fused-Ring Electron Acceptors. 2022 , 14, 43207-43214	2
253	Coexisting Glassy Phases with Different Compositions in NFA-Based Bulk Heterojunctions. 2125-2133	O
252	Precise Control of Selenium Functionalization in Non-Fullerene Acceptors Enabling High-Efficiency Organic Solar Cells.	O
251	Color-tunable donor-acceptor-type B-embedded dioxygen-bridged Econjugated molecules: Synthesis, structures, and optical properties. 2022 , 110805	0
250	Substitution of ethylene with ethynylene in the photostable perylene-diimide-based dimers enables an elevated photovoltaic performance. 2022 , 110816	O
249	All-Polymer Solar Cells with 17% Efficiency Enabled by the End-Capped Ternary Strategy. 2204030	3
248	Fluorine-Substituted Bridge through a Simple Method for Efficient Polymer Donor. 2200697	O
247	Quasi-Homojunction Organic Nonfullerene Photovoltaics Featuring Fundamentals Distinct from Bulk Heterojunction. 2206717	4
246	Enhancing exciton diffusion by reducing energy disorder in organic solar cells.	O
245	Benzonitrile-Functionalized Non-Fullerene Acceptors for Organic Solar Cells with Low Non-Radiative Loss.	1
244	Opportunities and challenges for machine learning to Select Combination of Donor and Acceptor Materials for Efficient organic solar cells.	O
243	A class of electron-deficient units: fluorenone imide and its electron-withdrawing group-functionalized derivatives.	0
242	Tunable cyano substituents in D Δ conjugated polymers accessed via direct arylation for photocatalytic hydrogen production.	2
241	Non-fullerene acceptors with alkylthiothiophene side chains for efficient non-halogenated solvent processed indoor organic photovoltaics.	О
240	Organic Photovoltaic Devices. 2022 , 131-176	O

239	Optimal bulk morphology via side-chain engineering on non-fullerene acceptor for efficient organic solar cells.	0
238	Estimating donor:acceptor compatibility for polymer solar cells through nonfused-ring acceptors with benzoxadiazole core and different halogenated terminal groups.	О
237	Exploration of the interesting photovoltaic behavior of the fused benzothiophene dioxide moiety as a core donor with modification in acceptors for high-efficacy organic solar cells. 2022 , 12, 29010-29021	0
236	Noncovalent molecular interactions, charge transport and photovoltaic performance of asymmetric M-series acceptors with dichlorinated end groups.	1
235	Unfused-ring Acceptors with Dithienobenzotriazole Core for Efficient Organic Solar Cells.	0
234	Effect of the Push P ull Electronic Structure of Nonfullerene Acceptor Molecules on the Interfacial Charge Dynamics in Heterojunction Organic Solar Cells. 2200102	1
233	Y-Series-Based Polymer Acceptors for High-Performance All-Polymer Solar Cells in Binary and Non-binary Systems. 3835-3854	4
232	Machine learning assisted prediction of charge transfer properties in organic solar cells by using morphology-related descriptors.	1
231	Recent progress in low-cost noncovalently fused-ring electron acceptors for organic solar cells.	1
230	Organic Planar Heterojunction Solar Cells and Photodetectors Tailored to the Exciton Diffusion Length Scale of a Non-Fullerene Acceptor. 2208001	Ο
229	Solvent-Induced Polymorphism in Non-Fullerene-Based Organic Solar Cells. 2200819	Ο
228	Terpolymer Donor with Inside Alkyl Substituents on Thiophene 🛭 Bridges toward Thiazolothiazole A 2 -Unit Enables 18.21% Efficiency of Polymer Solar Cells. 2203513	2
227	Theoretical design and prediction of novel fluorene-based non-fullerene acceptors for environmentally friendly organic solar cell. 2022 , 104374	Ο
226	Revealing the Crystalline Packing Structure of Y6 in the Active Layer of Organic Solar Cells: The Critical Role of Solvent Additives.	Ο
225	Recent progress in solution-processed flexible organic photovoltaics. 2022 , 6,	Ο
224	Improvement of photovoltaic properties of benzo[1,2-b:4,5-b?]difuran-conjugated polymer by side-chain modification. 2022 ,	О
223	Intersystem Crossing in AcceptorDonorAcceptor Type Organic Photovoltaic Molecules Promoted by Symmetry Breaking in Polar Environments. 10305-10311	O
222	Deciphering the Role of Side-Chain Engineering and Solvent Vapor Annealing for Binary All-Small-Molecule Organic Solar Cells. 2210549	2

221	Investigating Underlying Mechanisms for Nonfullerene Hybrid Bulk Heterojunctions-Based Organic Magnetoresistance. 2200983	0
220	Superior aggregation, morphology and photovoltaic performance enabled by fine tuning of fused electron-deficient units in polymer donors. 2022 ,	О
219	PTQ10-Based Organic Photovoltaics with a High VOC of ~1.2 V via Chlorination of Benzotriazole-Based Nonfullerene Acceptors.	О
218	High-Performance Organic Solar Cells by Adding Two-Dimensional GeSe. 2209094	2
217	26.75 cm2 organic solar modules demonstrate a certified efficiency of 14.34%. 2022 , 43, 100501	2
216	Recent Advances in Organic and Inorganic Hole and Electron Transport Layers for Organic Solar Cells: Basic Concept and Device Performance.	3
215	Toward High-Performance Quinoxaline Based Non-fullerene Small Molecule Acceptors for Organic Solar Cells.	Ο
214	Reducing Trap Density in Organic Solar Cells via Extending Fused Ring Donor Unit of A-D-A-Type Nonfullerene Acceptor for Over 17% Efficiency. 2207336	5
213	Designing High-Performance Wide Bandgap Polymer Donors by the Synergistic Effect of Introducing Carboxylate and Fluoro Substituents. 3927-3935	O
212	Universal Concept for Bright, Organic, Solid-State Emitters-Doping of Small-Molecule Ionic Isolation Lattices with FRET Acceptors. 2022 , 144, 19981-19989	Ο
211	Simple Approach for Synthesizing a Fluorinated Polymer Donor Enables Promoted Efficiency in Polymer Solar Cells.	O
210	Efficient and Stable Nonfused Ring Small Molecule Acceptors Powered by an Electron Donating Unit for Organic Solar Cells.	Ο
209	Highly Efficient Non-Fullerene Organic Solar Cells with Nickel Oxide Hole Transporting Layer: Employing Dipole Induced Energy Level Modification.	О
208	Over 13% Efficient Single-Component Organic Solar Cells Enabled by Adjusting the Conjugated-Length of Intermediate PBDB-T Block. 2208412	O
207	Donor End-Capped Alkyl Chain Length Dependent Non-Radiative Energy Loss in All-Small-Molecule Organic Solar Cells. 2207020	5
206	Photo-induced force microscopy applied to electronic devices and biosensors. 2022,	O
205	Latest progress on fully non-fused electron acceptors for high-performance organic solar cells. 2022 , 107968	1
204	Impact of fluorination of central thiophene linking core in thermostable perylene-diimide-based dimeric acceptors on molecular configuration and photovoltaic performance. 2022 , 134, 113126	O

203	High performance and low cost organic solar cells based on pentacyclic A-DA D -A acceptor with efficiency over 16%.	О
202	A-FAILype naphthalimide-based cathode interlayers for efficient organic solar cells. 2023, 209, 110911	O
201	Suppressed recombination loss in organic photovoltaics adopting a planar hixed heterojunction architecture.	6
200	Indoor photovoltaic energy harvesting based on semiconducting Econjugated polymers and oligomeric materials toward future IoT applications.	O
199	Designing of Un-Fused Electron Acceptors with Enhanced Power Conversion Efficiency by Introducing Unique SD Noncovalent Interaction. 1-13	O
198	4,4-Bis(2-ethylhexyl)-6-(9-(2-ethylhexyl)-2,3,4,4a,9,9a-hexahydro-1H-carbazol-6-yl)-4H-cyclopenta[2,1-b:3,4-b?]	dithiophe
197	Symmetry-Induced Ordered Assembly of a Naphthobisthiadiazole-Based Nonfused-Ring Electron Acceptor Enables Efficient Organic Solar Cells.	0
196	Weak Electron-Deficient Building Block Containing OB <- N Bonds for Polymer Donors.	O
195	A Simple Building Block with Noncovalently Conformational Locks towards Constructing Low-Cost and High-Performance Nonfused Ring Electron Acceptors.	O
194	Small-Molecule Acceptor with Unsymmetric Substituents and Fused Rings for High-Performance Organic Solar Cells with Enhanced Mobility and Reduced Energy Losses.	O
193	Unprecedented Efficiency Increase in a Ternary Polymer Solar Cell Exhibiting Polymer-Mediated Polymorphism of a Non-Fullerene Acceptor. 2440-2446	0
192	What's Next for Organic Solar Cells? The Frontiers and Challenges. 2200149	O
191	Enabling Donor:Acceptor Bicontinuous Networks via Short Contacts in Double-Cable Polymers with Pendant Rylene Diimides.	0
190	Insights into Magneto-Photocurrent and Coherent Spin Mixing for Binary and Ternary Nonfullerene Bulk Heterojunction Organic Solar Cells.	O
189	Enhanced performance via Ebridge alteration of porphyrin-based donors for all-small-molecule organic solar cells.	4
188	New Method for Preparing ZnO Layer for Efficient and Stable Organic Solar Cells. 2208305	1
187	New Non-Fullerene Acceptor with Extended Conjugation of Cyclopenta [2,1-b:3,4-b] Dithiophene for Organic Solar Cells. 2022 , 27, 7615	О
186	Conjugated Starbursts with AcceptorEDonorEAcceptor Architectures as Nonfullerene Acceptors for High-Efficiency Organic Solar Cells.	1

185	Molecular stacking pattern effects in heterojunction of D18: Y6 organic solar cell.	O
184	Recent progress in flexible organic solar cells. 2022 ,	1
183	Tethered Small-Molecule Acceptors Simultaneously Enhances the Efficiency and Stability of Polymer Solar Cells. 2206563	1
182	Recent progress in non-fused ring electron acceptors for high performance organic solar cells.	2
181	Solution-processed and thickness-insensitive hole transport layer for high efficiency organic solar cells.	0
180	Intrinsic influence of selenium substitution in thiophene and benzo-2,1,3-thiadiazole on the electronic structure, excited states and photovoltaic performances evaluated using theoretical calculations.	O
179	High-performance semitransparent organic solar cells based on sequentially processed heterojunction.	1
178	Wide-bandgap polymer donors for non-fullerene organic solar cells. 2022 , 11, 17-30	O
177	Oligothiophene electron donor and electron acceptor for all small molecule organic solar cells with efficiency over 9%. 2023 , 456, 141006	O
176	Crystal structures in state-of-the-art non-fullerene electron acceptors.	О
175	A case study on the thermal-stability of polymerized small molecular acceptor-based polymer solar cells.	O
174	Relating reorganization energies, exciton diffusion length and non-radiative recombination to the room temperature UV-vis absorption spectra of NF-SMA.	1
173	Third component with a high LUMO energy level enables 17.69% efficiency in ternary organic solar cells. 2023 , 135, 113382	0
172	Enhance the performance of organic solar cells by nonfused ring electron acceptors bearing a pendent perylenediimide group. 2023 , 210, 111033	o
171	Influence of the cooling rate in annealing post-treatment on small molecule with siloxane side chains for solution-processed organic field-effect transistors. 2023 , 210, 111040	0
170	Challenging PM6-alike donor polymers for paring a Y-type state-of-art acceptor in binary blends for bulk heterojunction solar cells.	o
169	End Group Effect of Asymmetric Benzodithiophene-Based Donor with Liquid-Crystal State for Small-Molecule Binary Solar Cell. 2205244	0
168	Recent Progress in All-Small-Molecule Organic Solar Cells. 2205594	2

167	Nonfullerene Acceptors Based on Naphthalene Substituted Thieno[3,2-b]thiophene Core for Efficient Organic Solar Cells. 2022 , 92, 2354-2362	O
166	A Simple Nonfused Ring Electron Acceptor with a Power Conversion Efficiency Over 16%.	О
165	High-Performance Green Thick-Film Ternary Organic Solar Cells Enabled by Crystallinity Regulation. 2210534	1
164	First theoretical framework for highly efficient photovoltaic parameters by structural modification with benzothiophene-incorporated acceptors in dithiophene based chromophores. 2022 , 12,	1
163	Nonvolatile Ternary Memristor Based on Fluorene-Benzimidazole Copolymer/Au NP Composites. 2022 , 12, 4117	О
162	Perylene diimide-based non-fullerene acceptors with A-D-AED-A architecture for organic solar cells.	О
161	Carbazole and Diketopyrrolopyrrole-Based D-A EConjugated Oligomers Accessed via Direct CH Arylation for Opto-Electronic Property and Performance Study. 2022 , 27, 9031	1
160	Triplets with a Twist: Ultrafast Intersystem Crossing in a Series of Electron Acceptor Materials Driven by Conformational Disorder.	О
159	Enhanced Photodynamic of Carriers and Suppressed Charge Recombination Enable Approaching 18% Efficiency in Nonfullerene Organic Solar Cells. 2022 , 14, 54885-54894	О
158	Over 19% Efficiency Organic Solar Cells by Regulating Multidimensional Intermolecular Interactions. 2208986	7
157	A Versatile and Low-Cost Polymer Donor Based on 4-Chlorothiazole for Highly Efficient Polymer Solar Cells. 2208750	1
156	A Volatile Solid Additive Enables Oligothiophene All-Small-Molecule Organic Solar Cells with Excellent Commercial Viability. 2211873	2
155	Organic Photovoltaics Utilizing Small-Molecule Donors and Y-series Nonfullerene Acceptors. 2206566	О
154	An n-doped organic layer assists the anode modification of inverted organic solar cell for the efficiency improvement. 2023 , 129,	О
153	Unsymmetrically Chlorinated Non-Fused Electron Acceptor Leads to High-Efficiency and Stable Organic Solar Cells.	О
152	High-Sensitivity Organic Photodetector Based on Surface-Concentrated Nonfused Ring Electron Acceptor. 2202525	1
151	Incorporating a weak acceptor unit into PTB7-Th to tune the open circuit voltage for non-fullerene polymer solar cells. 2022 , 133214	0
150	Semitransparent organic photovoltaics for building-integrated photovoltaic applications.	1

149	Fibrillization of Non-Fullerene Acceptors Enables 19% Efficiency Pseudo-Bulk Heterojunction Organic Solar Cells. 2208211	4
148	Enhanced High-temperature Energy Storage Performance of All-organic Composite Dielectric via Constructing Fiber Reinforced Structure.	O
147	Unsymmetrically Chlorinated Non-Fused Electron Acceptor Leads to High-Efficiency and Stable Organic Solar Cells.	О
146	A Simple Cathode Interfacial Material Performs Well in Organic Solar Cells. 2200986	O
145	Overcoming Small-Bandgap Charge Recombination in Visible and NIR-Light-Driven Hydrogen Evolution by Engineering the Polymer Photocatalyst Structure.	О
144	All-Fused-Ring Small Molecule Acceptors with Near-Infrared Absorption.	O
143	Effects of Mixed Halogenation on the Performance of Non-Fullerene Acceptors in All-Small Molecule Organic Solar Cells.	0
142	Effects of alkyl chains of benzothiadiazole-based conjugated polymers on the photovoltaic performance of non-fullerene organic solar cells.	O
141	Smartly Optimizing Crystallinity, Compatibility, and Morphology for Polymer Solar Cells by Small Molecule Acceptor with Unique 2D-EDOT Side Chain. 2212290	0
140	Rational design of the S, N-heteroacene-based nonfullerene by introducing the fluorine atom for efficient high-performance organic solar cells.	O
139	Effect of Steric Hindrance at the Anthracene Core on the Photovoltaic Performance of Simple Nonfused Ring Electron Acceptors.	0
138	Fused ring pyrrolo[3,2-b]pyrrole-based tilde-shaped acceptor molecules for highly efficient organic solar cells. 2023 , 111228	O
137	Polymer Solar Cells with Active Layer Thickness Compatible with Scalable Fabrication Processes: A Meta-Analysis. 2210146	1
136	Stable Block Copolymer Single-material Organic Solar Cells: Progress and Perspective.	O
135	Green-Light Wavelength-Selective Organic Solar Cells Based on Poly(3-hexylthiophene) and Naphthobisthiadiazole-Containing Acceptors toward Agrivoltaics.	0
134	Inner alkyl chain modulation of small molecular acceptors enables molecular packing optimization and efficient organic solar cells.	1
133	18.2%-efficient ternary all-polymer organic solar cells with improved stability enabled by a chlorinated guest polymer acceptor. 2023 , 7, 221-237	2
132	Benzodithiophene with multiple side-chains for efficient wide-bandgap DA copolymers.	O

131	Effect of terminal fluorine substitution of nonfullerene small molecular acceptor on the thermal stability of organic solar cells.	0
130	Triplet Excitons and Associated Efficiency-Limiting Pathways in Organic Solar Cell Blends Based on (Non-) Halogenated PBDB-T and Y-Series. 2212640	Ο
129	Terminal Groups of Nonfullerene Acceptors: Design and Application.	0
128	Cyano-Capped Molecules: Versatile Organic Materials.	1
127	Recent Progress of Printing Technologies for High-Efficient Organic Solar Cells. 2023, 13, 156	0
126	All-Small-Molecule Efficient Ternary Organic Solar Cells Employing a Coumarin Donor and Two Fullerene-Free Acceptors.	O
125	Investigation of Isomerization Effects on Photovoltaic Performance of Fused Ring Electron Acceptors via Manipulating Side-Chain Position.	0
124	Applying l-cystine as an electron transport layer toward efficient organic solar cells. 2023 , 136, 113404	2
123	Asymmetric non-fullerene acceptor based on a cyclohexane side chain for efficient organic solar cell. 2023 , 114, 106737	0
122	Photovoltaic performances of two alternating polymers having meta-octyloxy-phenyl modified dithieno[3,2-f:2?,3?-h]quinoxaline unit. 2023 , 211, 111049	O
121	17% efficiency for linear-shaped ADA-type nonfullerene acceptors enabled by 3D reticulated molecular packing. 2023 , 107, 108116	0
120	A new cyano (II N) free molecular design perspective for constructing carbazole-thiophene based environmental friendly organic solar cells. 2023, 652, 414630	O
119	Fused phthalimide-based ADA?DA small molecule: New protocol for n-type organic semiconductors. 2023 , 293, 117278	0
118	Medium Bandgap Polymers for Efficient Non-Fullerene Polymer Solar CellsAn In-Depth Study of Structural Diversity of Polymer Structure. 2023 , 24, 522	O
117	A review of nonfullerene solar cells: Insight into the correlation among molecular structure, morphology, and device performance. 20220040	O
116	Quinoxaline-based Polymers with Asymmetric Aromatic Side Chain Enables 16.27% Efficiency for Organic Solar Cells.	O
115	Recent Developments of Polymer Solar Cells with Photovoltaic Performance over 17%. 2213324	1
114	Quantitative Relationships between Film Morphology, Charge Carrier Dynamics, and Photovoltaic Performance in Bulk-Heterojunction Binary vs Ternary Acceptor Blends.	O

113	Natural Materials for Sustainable Organic Solar Cells: Status and Challenge. 2213910	0
112	Non-Fullerene Acceptors Containing Alkylated Large EConjugated Building Blocks for Efficient Organic Photovoltaic Cells.	O
111	Controlling Morphology and Voltage Loss with Ternary Strategy Triggers Efficient All-Small-Molecule Organic Solar Cells. 2023 , 8, 1058-1067	1
110	The voltage loss in organic solar cells. 2023 , 44, 010202	O
109	Efficient and Thermally Stable Organic Solar Cells via a Fully Halogen-Free Active Blend and Solvent.	O
108	A Two-Step Heating Strategy for Nonhalogen Solvent-Processed Organic Solar Cells Based on a Low-Cost Polymer Donor.	О
107	Monomer morphology selection rules for an accurate design of bulk heterojunction: An updated theoretical account.	0
106	Double-Cable Conjugated Polymers Based on Simple Non-Fused Electron Acceptors for Single-Component Organic Solar Cells.	O
105	In Situ Study the Dynamics of Blade-Coated All-Polymer Bulk Heterojunction Formation and Impact on Photovoltaic Performance of Solar Cells. 2201134	0
104	Enhancing Photon Utilization Efficiency for High-Performance Organic Photovoltaic Cells via Regulating Phase Transition Kinetics. 2210865	1
103	Recent advances in n-type and ambipolar organic semiconductors and their multi-functional applications.	1
102	In Silico Designing of Thieno[2,3-b]thiophene Core-Based Highly Conjugated, Fused-Ring, Near-Infrared Sensitive Non-fullerene Acceptors for Organic Solar Cells. 2023 , 8, 4767-4781	O
101	Quantum modeling of dimethoxyl-indaceno dithiophene based acceptors for the development of semiconducting acceptors with outstanding photovoltaic potential. 2023 , 13, 4641-4655	0
100	Enhancing Efficiency of Organic Solar Cells with Alkyl Diamines Doped PEDOT: PSS. 656-663	O
99	Small molecule-based organic solar cells. 2023 , 97-122	0
98	Organic Solar Cells. 2023 , 118-138	O
97	A Novel Doping Layer Strategy to Realize High Efficiency Laye-by-Layer Organic Solar Cells. 2023 , 375, 02008	0
96	Near 0 eV HOMO offset Enable High Performance Nonfullerene Organic Solar Cells with Large Open Circuit Voltage and Fill Factor.	Ο

95	Unraveling the device performance differences between bulk-heterojunction and single-component polymer solar cells.	O
94	Tuning the LUMO levels of non-fullerene acceptors via extension of £conjugated cores for organic solar cells.	O
93	Symmetry Breaking: An Efficient Structure Design of Nonfullerene Acceptors to Reduce the Energy Loss in Organic Solar Cells.	O
92	Impact of Polarization Effect on Exciton Binding Energies and Charge Transport for the Crystals of Chlorinated ITIC Derivatives. 2023 , 127, 5597-5603	О
91	Structurally Complementary Star-shaped Unfused Ring Electron Acceptors with Simultaneously Enhanced Device Parameters for Ternary Organic Solar Cells.	O
90	Benzothiadiazole-based materials for organic solar cells. 2023 , 108438	O
89	Finely Tuned Molecular Packing Realized by a New Rhodanine-Based Acceptor Enabling Excellent Additive-Free Small- and Large-Area Organic Photovoltaic Devices Approaching 19 and 12.20% Efficiencies.	O
88	Exploration of photovoltaic behavior of benzodithiophene based non-fullerene chromophores: first theoretical framework for highly efficient photovoltaic parameters. 2023 , 24, 1882-1896	O
87	Impact of side-chain engineering on quantum efficiency and voltage losses in organic solar cells. 2023 , 465, 142909	O
86	Dimer Acceptor Adopting a Flexible Linker for Efficient and Durable Organic Solar Cells.	O
85	Structural Fusion Yields Guest Acceptors that Enable Ternary Organic Solar Cells with 18.77 % Efficiency. 2023 , 135,	O
84	Structural Fusion Yields Guest Acceptors that Enable Ternary Organic Solar Cells with 18.77 % Efficiency. 2023 , 62,	O
83	B?N-Bond-Embedded Triplet Terpolymers with Small Singlet Triplet Energy Gaps for Suppressing Non-Radiative Recombination and Improving Blend Morphology in Organic Solar Cells. 2211871	O
82	Suppressing the energetic disorder of all-polymer solar cells enables over 18% efficiency. 2023 , 16, 1581-15	589 _O
81	Controlling Kinetic Quenching Depth Toward High-Performance and Photo-Stable Organic Solar Cells Printed from a Non-Halogenated Solvent. 2214361	O
80	Modulation of Alkyl Chain Length on the Thiazole Side Group Enables Over 17% Efficiency in All-Small-Molecule Organic Solar Cells. 2214926	1
79	High-Efficiency Organic Solar Cells Enabled by Chalcogen Containing Branched Chain Engineering: Balancing Short-Circuit Current and Open-Circuit Voltage, Enhancing Fill Factor. 2213429	O
78	Revealing the spacing effect of neighboring side-chains in modulating molecular aggregation and orientation of M-series acceptors.	O

77	Spatiotemporal Mapping Uncouples Exciton Diffusion from SingletBinglet Annihilation in the Electron Acceptor Y6. 2023 , 14, 1999-2005	Ο
76	Impact of donor halogenation on reorganization energies and voltage losses in bulk-heterojunction solar cells. 2023 , 16, 1277-1290	Ο
75	Harnessing the Structure-Performance Relationships in Designing Non-Fused Ring Acceptors for Organic Solar Cells.	0
74	Harnessing the Structure-Performance Relationships in Designing Non-Fused Ring Acceptors for Organic Solar Cells.	O
73	Modulation of Molecular Stacking via Tuning 2-Ethylhexyl Alkyl Chain Enables Improved Efficiency for All-Small-Molecule Organic Solar Cells. 2023 , 15, 10803-10811	O
72	Stable radical based conjugated electrolytes as a cathode interlayer for organic solar cells with thickness-insensitive fill factors. 2023 , 11, 6574-6580	Ο
71	Efficient perylene-diimides-based nonfullerene acceptors with triazine cores synthesized via a simple nucleophilic substitution reaction.	0
70	Near-Infrared Acceptors with Imide-Containing End Groups for Organic Solar Cells. 2023 , 15, 12119-12126	O
69	13% Single-Component Organic Solar Cells based on Double-Cable Conjugated Polymers with Pendent Y-Series Acceptors. 2300629	O
68	Interplay Between £Conjugated Polymer Donors and Acceptors Determines Crystalline Order of Their Blends and Photovoltaic Performance. 2023 , 13,	O
67	Synthesis and characterization of novel conjugated polymer based on indacenetetraone as the electron acceptor and its photovoltaic properties. 1-7	0
66	Indacenodithiophene Bridged Dimeric Porphyrin Donor and Absorption Complementary Indacenodithiophene Acceptor for Nonfullerene Organic Photovoltaics. 2023 , 6, 3032-3041	O
65	A comparison of para, meta, and ortho-carborane centred non-fullerene acceptors for organic solar cells. 2023 , 11, 3989-3996	0
64	Enhancing the reproducibility of large-area organic solar cells via double-cable conjugated polymers. 2023 , 461, 142124	Ο
63	The Multiplicity of Interactions of Fused-Ring Electron Acceptor Polymorphs on the Exciton Migration and Charge Transport. 2023 , 14, 2331-2338	O
62	Nitrofluorene-based ADA electron acceptors for organic photovoltaics.	O
61	Enhancing performance of tin-based perovskite solar cells via fused-ring electron acceptor. 2023, 100113	Ο
60	Resonant Raman-Active Polymer Dot Barcodes for Multiplex Cell Mapping. 2023 , 17, 4800-4812	Ο

59	Role of Nonfullerene Acceptor Impurities and Purification on the Efficiency and Stability of Organic Photovoltaics. 2300047	O
58	Recent Research Progress of n-Type Conjugated Polymer Acceptors and All-Polymer Solar Cells.	O
57	Facile Approach for Efficient Non-Fullerene-Based Binary and Ternary Organic Solar Cells Using Hydrated Vanadium Pentoxide as a Hole Transport Layer. 2023 , 6, 3442-3451	0
56	Selenium-Based Nonfused Electron Acceptors for Efficient Organic Photovoltaic Cells. 2300095	O
55	Benzo[d]thiazole Based Wide Bandgap Donor Polymers Enable 19.54% Efficiency Organic Solar Cells Along with Desirable Batch-to-Batch Reproducibility and General Applicability.	0
54	Near-infrared absorbing acceptor with suppressed triplet exciton generation enabling high performance tandem organic solar cells. 2023 , 14,	0
53	Alkyl-thiophene-alkyl linkers to construct double-cable conjugated polymers for single-component organic solar cells. 2023 , 108287	0
52	High-Efficiency Binary Organic Solar Cells Enabled by Pseudo-Bilayer Configuration in Dilute Solution. 2201090	O
51	Synthesis, characterization and exploration of photovoltaic behavior of hydrazide based scaffolds: a concise experimental and DFT study. 2023 , 13, 7237-7249	0
50	Terthiophene based low-cost fully non-fused electron acceptors for high-efficiency as-cast organic solar cells. 2023 , 11, 7498-7504	O
49	Photochemical Decomposition of Y-Series Non-Fullerene Acceptors Is Responsible for Degradation of High-Efficiency Organic Solar Cells. 2300046	0
48	Efficient Polymer Solar Cells Enabled by A-DA?D-A Type Acceptors with Alkoxypheny-Substituted Quinoxaline as the Fused-Ring Core.	O
47	Switching Quantum Interference in Single-Molecule Junctions by Mechanical Tuning.	0
46	Research on perylene diimide organic solar cells. 2023,	O
45	Switching Quantum Interference in Single-Molecule Junctions by Mechanical Tuning.	0
44	Synthesis, Properties, and Photovoltaic Characteristics of Fluoranthenedione-containing Nonfullerene Acceptors for Organic Solar Cells. 2022 , 35, 187-191	0
43	Physical mechanisms on FRET and ICT for efficient Y6:PM6 as bulk heterojunction active layers. 2023 , 25, 9807-9816	0
42	Rationale for highly efficient and outdoor-stable terpolymer solar cells.	O

41	Cyclization of Inner Linear Alkyl Chains in Fused-Ring Electron Acceptors Toward Efficient Organic Solar Cells. 2300067	0
40	Robust and hydrophobic interlayer material for efficient and highly stable organic solar cells. 2023 , 7, 545-557	o
39	Alkoxy- and Alkyl-Side-Chain-Functionalized Terpolymer Acceptors for All-Polymer Photovoltaics Delivering High Open-Circuit Voltages and Efficiencies. 2215095	0
38	Tuning the Intermolecular Electrostatic Interaction toward High-Efficiency and Low-Cost Organic Solar Cells. 2300202	О
37	N-Annulated Perylene Diimide Non-Fullerene Acceptors for Organic Photovoltaics. 2023 , 2, 151-178	О
36	Reduced bimolecular charge recombination in efficient organic solar cells comprising non-fullerene acceptors. 2023 , 13,	О
35	Dimer Acceptor Adopting a Flexible Linker for Efficient and Durable Organic Solar Cells.	О
34	The Dynamics of Delocalized Excitations in Organic Solar Cells with Nonfullerene Acceptors. 2023 , 14, 3031-3038	О
33	Large Steric Hindrance Enhanced Molecular Planarity for Low-Cost Non-Fused Electron Acceptors. 2023 , 15, 16801-16808	O
32	Achieving high performance organic solar cells with a closer distance in branched alkyl-chain acceptors.	О
31	19.31% binary organic solar cell and low non-radiative recombination enabled by non-monotonic intermediate state transition. 2023 , 14,	0
30	Rational strategy to enhance the thermal stability of solar cell performance using a photocrosslinkable conjugated polymer.	О
29	Enhanced Open-Circuit Voltage by Using 2,7-Pyrene as a Central Donor Unit in A-ED-EA-Type Small-Molecule-Based Organic Solar Cells. 2023 , 8,	0
28	Balancing the Energy levels and Charge Mobility of the Conjugated Polymer PM6 by a Third Component to Enable Efficient Organic Solar Cells. 2023 , 8,	О
27	Chlorinated Narrow Bandgap Polymer Suppresses Non-Radiative Recombination Energy Loss Enabling Perylene Diimides-Based Organic Solar Cells Exceeding 10% Efficiency.	0
26	Molecular orientation-dependent energetic shifts in solution-processed non-fullerene acceptors and their impact on organic photovoltaic performance. 2023 , 14,	О
25	Simultaneous Improvements in Efficiency and Stability of Organic Solar Cells via a Symmetric-Asymmetric Dual-Acceptor Strategy.	0
24	Dithienobenzothiadiazole (DTBT)-Based Polymers Enable Organic Solar Cells with Ultrahigh V OC of $1.3\mathrm{V}$.	O

23	Half-Planar-Half-Twisted Small Molecule Acceptors for Efficient Polymer Solar Cells.	O
22	Sensitive photodetection below silicon bandgap using quinoid-capped organic semiconductors. 2023 , 9,	O
21	Enhanced Efficiency and Stability of Novel Pseudo-ternary Polymer Solar Cells Enabled by a Conjugated Donor Block Copolymer.	O
20	Recent Progress in Large-Area Organic Solar Cells.	O
19	Impact of regio-isomeric monochlorinated end groups on packing mode, miscibility, and photovoltaic performance of asymmetric selenophene-fused m-series acceptors. 2023 , 108448	0
18	Recent Research Progress in Random Copolymerization of Polymer Photovoltaic Materials for High-Performance Polymer Solar Cells.	O
17	Revealing the Role of Donor/Acceptor Interfaces in Nonfullerene-Acceptor Based Organic Solar Cells: Charge Separation versus Recombination. 3811-3817	О
16	Comprehensive Understanding of Fluorination-Performance Relationship: The Best-Performed A-D-A-Type Acceptors. 2023 ,	O
15	Easily Available High-Performance Organic Solar Cells by Regulating Phenylalkyl Side Groups of Non-Fused Ring Electron Acceptors.	О
14	Direct Arylation Synthesis of Small Molecular Acceptors for Organic Solar Cells. 2023 , 28, 3515	O
13	18.9% Efficiency Ternary Organic Solar Cells Enabled by Isomerization Engineering of Chlorine-Substitution on Small Molecule Donors.	O
12	Molecular Packing and Dielectric Property Optimization through Peripheral Halogen Swapping Enables Binary Organic Solar Cells with an Efficiency of 18.77%.	O
11	Nanocomposition of PEDOT:PSS with metal phthalocyanines as promising hole transport layers for organic photovoltaics. 2023 , 295, 117347	О
10	Progress in Organic Photocurrent Multiplication. 2023 , 175-190	O
9	Application of Newly Designed Y-Series Nonfullerene Acceptors for High-Efficient Organic Solar Cells.	0
8	Effects of Multifunctional Interlayers on the Performance of Perovskite Solar Cells. 2023,	O
7	Effects of Halogenation on Cyclopentadithiophenevinylene-Based Acceptors with Excellent Responses in Binary Organic Solar Cells.	О
6	Non-Fullerene Acceptors with Benzodithiophene-Based Fused Planar Ring Cores for Organic Solar Cells.	O

CITATION REPORT

5	Designing Electron-Deficient Diketone Unit Based Non-Fused Ring Acceptors with Amplified Optoelectronic Features for Highly Efficient Organic Solar Cells: A DFT Study. 2023 , 28, 3625	0
4	Development of polymeric blue prosthetic retina photoreceptors.	O
3	Highly ductile, stable, and efficient organic photovoltaic blends enabled by polymerized ladder-type heteroheptacene-based small-molecule acceptors. 2023 , 143062	O
2	Completely non-fused ring acceptors with low non-radiative energy loss enabled by end-group modulation. 2023 , 11, 6155-6161	О
1	Recent progress on efficient perovskite/organic tandem solar cells. 2023,	0