Citation Report
List of articles citing

Recent progress in non-fullerene small molecule acceptors in organic solar cells (OSCs)

DOI: 10.1039/c6tc05066b
Journal of Materials Chemistry C, 2017, 5, 1275-1302.

Source: https://exaly.com/paper-pdf/65942477/citation-report.pdf
Version: 2024-04-27

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
360	Electron acceptors with varied linkages between perylene diimide and benzotrithiophene for efficient fullerene-free solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 9396-9401	13	48
359	Terminal π-stacking determines three-dimensional molecular packing and isotropic charge transport in an A-π-A electron acceptor for non-fullerene organic solar cells. *Journal of Materials Chemistry C*, **2017**, 5, 4852-4857	7.1	158
358	Effect of substituents of twisted benzodiperylenediimides on non-fullerene solar cells. **2017**, 47, 72-78		8
357	Effects of alkyl or alkyloxy side chains in poly[4,6-bis(3?-dodecylthien-2?-yl)thieno-[3,4- c][1,2,5]thiadiazole-5?,5?-diyl- alt -2,5-di(alkyl or alkyloxy)-1,4-phenylene]: Synthesis, photophysics, and spectroelectrochemical and photovoltaic properties. **2017**, 118, 180-191		7
356	Recent progress in two-dimensional COFs for energy-related applications. *Journal of Materials Chemistry A*, **2017**, 5, 14463-14479	13	185
355	Visibly transparent conjugated polymers based on non-alternant cyclopenta-fused emeraldicene for polymer solar cells. **2017**, 49, 114-122		6
354	Eco-Friendly Solvent-Processed Fullerene-Free Polymer Solar Cells with over 9.7% Efficiency and Long-Term Performance Stability. **2017**, 7, 1700566		76
353	Tuning the optoelectronic properties for high-efficiency (>7.5%) all small molecule and fullerene-free solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 14259-14269	13	28
352	Alkylated Selenophene-Based Ladder-Type Monomers via a Facile Route for High-Performance Thin-Film Transistor Applications. *Journal of the American Chemical Society*, **2017**, 139, 8552-8561	16.4	80
351	n-Channel Organic Semiconductors Derived from Air-Stable Four-Coordinate Boron Complexes of Substituted Thienylthiazoles. *Chemistry - A European Journal*, **2017**, 23, 11620-11628	4.8	26
350	A High-Performance D-A Copolymer Based on Dithieno[3,2-b:2?,3?-d]Pyridin-5(4H)-One Unit Compatible with Fullerene and Nonfullerene Acceptors in Solar Cells. **2017**, 7, 1602509		84
349	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
348	Microwave Synthesis of Thionated Naphthalene Diimide-Based Small Molecules and Polymers. **2017**, 82, 12337-12345		13
347	A carbon-oxygen-bridged ladder-type building block for efficient donor and acceptor materials used in organic solar cells. **2017**, 62, 1331-1336		77
346	Unexpected One-Pot Synthesis of Diindolotriazatruxene: A Planar Electron-Rich Scaffold Toward Highly π-Extended PAHs. **2017**, 6, 1749-1754		5
345	Quantitative Analysis of the Molecular Dynamics of P3HT:PCBM Bulk Heterojunction. **2017**, 121, 9073-9080		18
344	The effect of end-capping groups in A-D-A type non-fullerene acceptors on device performance of organic solar cells. *Science China Chemistry*, **2017**, 60, 1458-1467	7.9	29

343	Pyrene-Fused Perylene Diimides: New Building Blocks to Construct Non-Fullerene Acceptors With Extremely High Open-Circuit Voltages up to 1.26 V. *Solar Rrl*, **2017**, 1, 1700123	7.1	23
342	Pentaerythritol based push‐pull tetramers for organic photovoltaics. **2017**, 1, 1921-1927		11
341	Naphthalene diimide-based non-fullerene acceptors flanked by open-ended and aromatizable acceptor functionalities. **2017**, 53, 11157-11160		20
340	Cyanopyridone flanked the tetraphenylethylene to generate an efficient, three-dimensional small molecule non-fullerene electron acceptor. **2017**, 1, 2511-2518		24
339	Isomeric Effects of Solution Processed Ladder-Type Non-Fullerene Electron Acceptors. *Solar Rrl*, **2017**, 1, 1700107	7.1	41
338	Chalcogen-Atom-Annulated Perylene Diimide Trimers for Highly Efficient Nonfullerene Polymer Solar Cells. **2017**, 38, 1700405		17
337	Design and synthesis of low band gap non-fullerene acceptors for organic solar cells with impressively high Jsc over 21 mA cm_2. **2017**, 60, 819-828		26
336	Polymer Main-Chain Substitution Effects on the Efficiency of Nonfullerene BHJ Solar Cells. **2017**, 7, 1700834		64
335	Special photophysical properties of poly(2,11-diquinoxalinopyrene)s. **2017**, 35, 1097-1109		4
334	The influence of numbers of subunits on the photovoltaic performance of non-fullerene acceptors. *Synthetic Metals*, **2017**, 231, 19-24	3.6	4
333	"Roller-Wheel"-Type Pt-Containing Small Molecules and the Impact of "Rollers" on Material Crystallinity, Electronic Properties, and Solar Cell Performance. *Journal of the American Chemical Society*, **2017**, 139, 14109-14119	16.4	14
332	Donor‐acceptor‐acceptor-based non-fullerene acceptors comprising terminal chromen-2-one functionality for efficient bulk-heterojunction devices. *Dyes and Pigments*, **2017**, 146, 502-511	4.6	18
331	Impact of end-capped groups on the properties of dithienosilole-based small molecules for solution-processed organic solar cells. *Dyes and Pigments*, **2017**, 147, 183-189	4.6	14
330	Spin dynamics of light-induced charge separation in composites of semiconducting polymers and PCBM revealed using Q-band pulse EPR. **2017**, 19, 22141-22152		10
329	PDI Derivative through Fine-Tuning the Molecular Structure for Fullerene-Free Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 29924-29931	9.5	120
328	Asymmetric indenothiophene-based non-fullerene acceptors for efficient polymer solar cells. **2017**, 60, 707-716		11
327	Structural optimization of large acceptor‐donor‐acceptor-type molecules for improved performance of fullerene-free polymer solar cells. *RSC Advances*, **2017**, 7, 38773-38779	3.7	9
326	All-Small-Molecule Solar Cells Incorporating NDI-Based Acceptors: Synthesis and Full Characterization. *ACS Applied Materials & Interfaces*, **2017**, 9, 44667-44677	9.5	22

325	Spectroscopic Engineering toward Near-Infrared Absorption of Materials Containing Perylene Diimide. **2017**, 82, 1359-1364		14
324	Imaging Individual Molecular-Like Orbitals of a Non-Planar Naphthalene Diimide on Pt(111): A Combined STM and DFT Study. **2017**, 121, 26916-26924		6
323	Toward Over 15% Power Conversion Efficiency for Organic Solar Cells: Current Status and Perspectives. **2017**, 1, 1700258		114
322	Poly[(arylene ethynylene)--(arylene vinylene)]s Based on Anthanthrone and Its Derivatives: Synthesis and Photophysical, Electrochemical, Electroluminescent, and Photovoltaic Properties. **2017**, 50, 8357-8371		10
321	Isomeric small molecule acceptors based on perylene diimide and spirobifluorene for non-fullerene organic solar cells. *Dyes and Pigments*, **2017**, 146, 151-158	4.6	14
320	Solar Cells. **2017**, 145-237		
319	Novel rhodanine based molecular acceptor for organic solar cells. **2017**, 8, 80402		
318	A Review of Organic Photovoltaic Energy Source and Its Technological Designs. **2017**, 2017, 1-12		14
317	Formation of Thermally Stable Bulk Heterojunction by Reducing the Polymer and Fullerene Intermixing. *Scientific Reports*, **2017**, 7, 9690	4.9	13
316	Applications of Fluorogens with Rotor Structures in Solar Cells. *Molecules*, **2017**, 22,	4.8	12
315	Organic polymeric and small molecular electron acceptors for organic solar cells. **2018**, 124, 1-57		55
314	Effect of Replacing Alkyl Side Chains with Triethylene Glycols on Photovoltaic Properties of Easily Accessible Fluorene-Based Non-Fullerene Molecular Acceptors: Improve or Deteriorate?. **2018**, 1, 1276-1285		8
313	Synthesis of Conjugated Materials Based on Benzodithiophene - Benzothiadazole and Their Application of Organic Solar Cells. **2018**, 26, 552-556		6
312	Next-generation organic photovoltaics based on non-fullerene acceptors. **2018**, 12, 131-142		1155
311	Recent Progress in Using Pyrene-4,5-diketones and Pyrene-4,5,9,10-tetraketones as Building Blocks to Construct Large Acenes and Heteroacenes. **2018**, 7, 2130-2146		42
310	Hydrogen-bonded azaphenacene: a strategy for the organization of π-conjugated materials. *Journal of Materials Chemistry C*, **2018**, 6, 3968-3975	7.1	11
309	Impact of Nonfullerene Acceptor Core Structure on the Photophysics and Efficiency of Polymer Solar Cells. **2018**, 3, 802-811		38
308	Triptycenyl-phenazino-thiadiazole as acceptor in organic bulk-heterojunction solar cells. **2018**, 57, 285-291		16

307	An efficient non-fullerene acceptor based on central and peripheral naphthalene diimides. **2018**, 54, 5062-5065		21
306	Triphenylamine-Based Push–Pull C60 Dyad As Photoactive Molecular Material for Single-Component Organic Solar Cells: Synthesis, Characterizations, and Photophysical Properties. **2018**, 30, 3474-3485		43
305	End-group tuning of DTBDT-based small molecules for organic photovoltaics. *Dyes and Pigments*, **2018**, 157, 93-100	4.6	12
304	n-Type core effect on perylene diimide based acceptors for panchromatic fullerene-free organic solar cells. *Dyes and Pigments*, **2018**, 156, 318-325	4.6	10
303	The effect of polymer molecular weight on the performance of PTB7-Th:O-IDTBR non-fullerene organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 9506-9516	13	54
302	Synthesis and Characterization of a 2-(1,1-Dicyanomethylene) rhodanine-based Nonfullerene Acceptor for OPVs. **2018**, 39, 555-558		
301	Synthesis of 1-amino-12-hydroxyl-perylene tetra-(alkoxycarbonyl) for selective sensing of fluoride. *Dyes and Pigments*, **2018**, 156, 225-232	4.6	10
300	A–D–A small molecule acceptors with ladder-type arenes for organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 8839-8854	13	60
299	A perylenediimide dimer containing an asymmetric bridge and its fused derivative for fullerene-free organic solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 2580-2587	7.1	26
298	A carbon–oxygen-bridged hexacyclic ladder-type building block for low-bandgap nonfullerene acceptors. **2018**, 2, 700-703		37
297	Glass Forming Acceptor Alloys for Highly Efficient and Thermally Stable Ternary Organic Solar Cells. **2018**, 8, 1702741		69
296	Recent Advances of Flexible Data Storage Devices Based on Organic Nanoscaled Materials. **2018**, 14, 1703126		102
295	Facile Syntheses, Characterization, and Physical Properties of Sulfur-Decorated Pyran-Annulated Perylene Diimides. **2018**, 7, 702-706		10
294	Organic electronics by design: the power of minor atomic and structural changes. *Journal of Materials Chemistry C*, **2018**, 6, 3564-3572	7.1	19
293	9,9'-Bifluorenylidene-Core Perylene Diimide Acceptors for As-Cast Non-Fullerene Organic Solar Cells: The Isomeric Effect on Optoelectronic Properties. *Chemistry - A European Journal*, **2018**, 24, 4149-4156	4.8	24
292	Nanoscale Domain Imaging of All-Polymer Organic Solar Cells by Photo-Induced Force Microscopy. **2018**, 12, 1473-1481		40
291	Dithienosilole-based non-fullerene acceptors for efficient organic photovoltaics. *Journal of Materials Chemistry A*, **2018**, 6, 4266-4270	13	34
290	Designing of Efficient Acceptors for Organic Solar Cells: Molecular Modelling at DFT Level. **2018**, 29, 359-365		30

289	On the Molecular Origin of Charge Separation at the Donor–Acceptor Interface. **2018**, 8, 1702232		45
288	Two Thieno[3,2-b]thiophene-Based Small Molecules as Bifunctional Photoactive Materials for Organic Solar Cells. *Solar Rrl*, **2018**, 2, 1700179	7.1	10
287	Enhancing the Efficiency of Organic Photovoltaics by a Photoactive Molecular Mediator. *Solar Rrl*, **2018**, 2, 1700208	7.1	5
286	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. *Advanced Materials*, **2018**, 30, 1705209	24	399
285	Barbiturate end-capped non-fullerene acceptors for organic solar cells: tuning acceptor energetics to suppress geminate recombination losses. **2018**, 54, 2966-2969		23
284	All-Small-Molecule Organic Solar Cells Based on Pentathiophene Donor and Alkylated Indacenodithiophene-Based Acceptors with Efficiency over 8%. **2018**, 1, 2150-2156		24
283	Combining Facile Synthetic Methods with Greener Processing for Efficient Polymer-Perylene Diimide Based Organic Solar Cells. **2018**, 2, 1800081		44
282	Synergistic Effect of Fluorine Substitution and Thio-Alkylation on Photovoltaic Performances of Alternating Conjugated Polymers Based on Alkylthio-Substituted Benzothiadiazole-Quaterthiophene. **2018**, 1, 2192-2199		14
281	A High-Efficiency Organic Solar Cell Enabled by the Strong Intramolecular Electron Push-Pull Effect of the Nonfullerene Acceptor. *Advanced Materials*, **2018**, 30, e1707170	24	295
280	Generating a three-dimensional non-fullerene electron acceptor by combining inexpensive spiro[fluorene-9,9?-xanthene] and cyanopyridone functionalities. **2018**, 2, 1090-1096		18
279	Molecular Engineering for Large Open-Circuit Voltage and Low Energy Loss in Around 10% Non-fullerene Organic Photovoltaics. **2018**, 3, 1028-1035		43
278	A Comparative Investigation of Cyclohexyl-End-Capped Versus Hexyl-End-Capped Small-Molecule Donors on Small Donor/Polymer Acceptor Junction Solar Cells. *Solar Rrl*, **2018**, 2, 1800009	7.1	8
277	Analyzing the efficiency, stability and cost potential for fullerene-free organic photovoltaics in one figure of merit. **2018**, 11, 1355-1361		119
276	A 2-(trifluoromethyl)thieno[3,4-b]thiophene-based small-molecule electron acceptor for polymer solar cell application. *Dyes and Pigments*, **2018**, 155, 179-185	4.6	7
275	Star-shaped electron acceptors containing a truxene core for non-fullerene solar cells. **2018**, 52, 42-50		45
274	Thiophene-Fused Naphthalene Diimides: New Building Blocks for Electron Deficient π-Functional Materials. **2018**, 91, 121-140		52
273	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
272	Designing high performance all-small-molecule solar cells with non-fullerene acceptors: comprehensive studies on photoexcitation dynamics and charge separation kinetics. **2018**, 11, 211-220		27

271	Modulation of the power conversion efficiency of organic solar cells via architectural variation of a promising non-fullerene acceptor. *Journal of Materials Chemistry A*, **2018**, 6, 574-582	13	11
270	A novel thiazole based acceptor for fullerene-free organic solar cells. *Dyes and Pigments*, **2018**, 149, 470-474	4.6	26
269	Recent progress on organic donor–acceptor complexes as active elements in organic field-effect transistors. *Journal of Materials Chemistry C*, **2018**, 6, 3485-3498	7.1	150
268	The 3 D Structure of Twisted Benzo[ghi]perylene-Triimide Dimer as a Non-Fullerene Acceptor for Inverted Perovskite Solar Cells. **2018**, 11, 415-423		19
267	Impact of Nonfullerene Molecular Architecture on Charge Generation, Transport, and Morphology in PTB7-Th-Based Organic Solar Cells. **2018**, 28, 1802702		37
266	Improvement in interlayer structure of p-i-n-type organic solar cells with the use of fullerene-linked tetrabenzoporphyrin as additive.. *RSC Advances*, **2018**, 8, 35237-35245	3.7	2
265	Achieving efficient thick active layer and large area ternary polymer solar cells by incorporating a new fused heptacyclic non-fullerene acceptor. *Journal of Materials Chemistry A*, **2018**, 6, 20313-20326	13	30
264	Structural Correlations and Percolation in Twisted Perylene Diimides Using a Simple Anisotropic Coarse-Grained Model. **2018**, 14, 6495-6504		11
263	Recent Developments in the Optimization of the Bulk Heterojunction Morphology of Polymer: Fullerene Solar Cells. **2018**, 11,		44
262	Enhanced open circuit voltage of small molecule acceptors containing angular-shaped indacenodithiophene units for P3HT-based organic solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 12347-12354	7.1	12
261	A small-molecule acceptor incorporating a silicon bridging atom for efficient nonfullerene polymer solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 13211-13217	7.1	8
260	Synthesis of Molecular Dyads and Triads Based Upon N-Annulated Perylene Diimide Monomers and Dimers. **2018**, 2018, 6933-6943		7
259	Fluorobenzotriazole-Based Medium-Bandgap Conjugated D–A Copolymers for Applications to Fullerene-Based and Nonfullerene Polymer Solar Cells. **2018**, 56, 2330-2343		5
258	Effect of Molecular Shape on the Properties of Non-Fullerene Acceptors: Contrasting Calamitic Versus 3D Design Principles. **2018**, 1, 6513-6523		9
257	Cyclopentadithiophene-cored non-fullerene acceptors for efficient polymer solar cells with superior stability. **2018**, 174, 991-998		9
256	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. *Chemistry - A European Journal*, **2019**, 25, 1055-1063	4.8	6
255	Fluorinated naphtho[1,2-c:5,6-c′]bis[1,2,5]thiadiazole-containing π-conjugated compound: synthesis, properties, and acceptor applications in organic solar cells. **2018**, 10, 1016-1028		13
254	Synthesis of the 4,7-Dibromo Derivative of Highly Electron-Deficient [1,2,5]Thiadiazolo[3,4-d]pyridazine and Its Cross-Coupling Reactions. **2018**, 2018, 5668-5677		15

253	Design and Synthesis of N-Phenylcarbazole-Substituted Diketopyrrolopyrrole-Based Monomers and Dimers: A Comparative Study. **2018**, 2018, 6474-6481		2
252	Fluoranthene and its extended diimides: Construction of new electron acceptors. **2018**, 59, 3782-3786		7
251	Extension of indacenodithiophene backbone conjugation enables efficient asymmetric ADA type non-fullerene acceptors. *Journal of Materials Chemistry A*, **2018**, 6, 18847-18852	13	64
250	Synthesis of star-shaped non-fullerene acceptors and their applications in organic solar cells. *Synthetic Metals*, **2018**, 245, 167-174	3.6	3
249	Low-Temperature Processable High-Performance DA-Type Random Copolymers for Nonfullerene Polymer Solar Cells and Application to Flexible Devices. **2018**, 8, 1801601		29
248	Atomistic Insight Into Donor/Acceptor Interfaces in High-Efficiency Nonfullerene Organic Solar Cells. *Solar Rrl*, **2018**, 2, 1800190	7.1	33
247	Efficient long-range electron transfer processes in polyfluorene-perylene diimide blends. *Nanoscale* , **2018**, 10, 10934-10944	7.7	6
246	In Situ Analysis of Solvent and Additive Effects on Film Morphology Evolution in Spin-Cast Small-Molecule and Polymer Photovoltaic Materials. **2018**, 8, 1800611		34
245	Non-fullerene-based small molecules as efficient n-type electron transporting layers in inverted organic inorganic halide perovskite solar cells. **2018**, 65, 406-410		12
244	A Concise and Efficient Route to Electron-Accepting 2,2?-[2,2?-Arenediylbis(11-oxoanthra[1,2-b]thiophene-6-ylidene)]dipropanedinitriles. **2018**, 2018, 2259-2266		3
243	Naphtho[1,2-:5,6-']bis[1,2,5]thiadiazole-Based Nonfullerene Acceptors: Effect of Substituents on the Thiophene Unit on Properties and Photovoltaic Characteristics. **2018**, 3, 5814-5824		4
242	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
241	Fullerenes: the stars of photovoltaics. **2018**, 2, 2480-2493		63
240	A minimal non-radiative recombination loss for efficient non-fullerene all-small-molecule organic solar cells with a low energy loss of 0.54 eV and high open-circuit voltage of 1.15 V. *Journal of Materials Chemistry A*, **2018**, 6, 13918-13924	13	42
239	Metal Ion/Dendrimer Complexes with Tunable Work Functions in a Wide Range and Their Application as Electron- and Hole-Transport Materials of Non-Fullerene Organic Solar Cells. **2018**, 28, 1802554		10
238	New copolymers with fluorinated and non-fluorinated benzothiadiazole units for efficient single layer near infra-red photodiodes with fast time response. *Synthetic Metals*, **2018**, 243, 67-74	3.6	6
237	Triptycene as a Supramolecular Additive in PTB7:PCBM Blends and Its Influence on Photovoltaic Properties. *ACS Applied Materials & Interfaces*, **2018**, 10, 24665-24678	9.5	5
236	Effect of a methyl thiophene-3-carboxylate bridge in an indacenodithiophene-based acceptor donor acceptor-type molecule on the performance of non-fullerene polymer solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 7549-7556	7.1	17

235	Sensitivity of Molecular Packing and Photovoltaic Performance to Subtle Fluctuation of Steric Distortions within DA Copolymer Backbones. **2018**, 1, 4332-4340		9
234	High-performance inverted two-dimensional perovskite solar cells using non-fullerene acceptor as electron transport layer. **2018**, 62, 189-194		13
233	Bulk heterojunction polymer solar cell and perovskite solar cell: Concepts, materials, current status, and opto-electronic properties. **2018**, 173, 407-424		40
232	Recent progress in porphyrin-based materials for organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 16769-16797	13	114
231	Iris-Like Acceptor with Most PDI Units for Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 28812-28818	9.5	26
230	Phthalimide and naphthalimide: Effect of end-capping groups on molecular properties and photovoltaic performance of 9-fluorenone based acceptors for organic solar cells. **2018**, 62, 12-20		5
229	Diphenylphenoxy-Thiophene-PDI Dimers as Acceptors for OPV Applications with Open Circuit Voltage Approaching 1 Volt. **2018**, 8,		5
228	Wide-Bandgap Small Molecular Acceptors Based on a Weak Electron-Withdrawing Moiety for Efficient Polymer Solar Cells. *Solar Rrl*, **2018**, 2, 1800120	7.1	24
227	All-small molecule solar cells based on donor molecule optimization with highly enhanced efficiency and stability. *Journal of Materials Chemistry A*, **2018**, 6, 15675-15683	13	45
226	Effect of Substituents of Thienylene-Vinylene-Thienylene-Based Conjugated Polymer Donors on the Performance of Fullerene and Nonfullerene Solar Cells. **2018**, 122, 16613-16623		9
225	Regioisomeric π-conjugated terpolymers bearing carboxylate substituted thienothiophenyl quarterthiophene and their application to fullerene-free polymer solar cells. **2018**, 146, 142-150		6
224	Improved fullerene-free polymer solar cells using a rationally designed binary mixed solution of an electron extracting layer. **2018**, 2, 1876-1883		7
223	A propeller-shaped perylene diimide hexamer as a nonfullerene acceptor for organic solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 9336-9340	7.1	24
222	Effects of conjugated bridges on the photovoltaic properties of ortho-functionalized perylene diimides for non-fullerene polymer solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 13171-13178	7.1	9
221	Recent advances in electron acceptors with ladder-type backbone for organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 17256-17287	13	45
220	Efficient heterojunction solar cells based on the synergy between planarity and dipole moment in fluorinated-thienothiophenes-based donor-acceptor polymers. *Synthetic Metals*, **2018**, 245, 42-50	3.6	7
219	Closely packed, low reorganization energy π-extended postfullerene acceptors for efficient polymer solar cells. **2018**, 115, E8341-E8348		85
218	Synthesis and optoelectronic property manipulation of conjugated polymer photovoltaic materials based on benzo[d]-dithieno[3,2-b;2?,3?-f]azepine. **2018**, 147, 184-195		2

217	Dithienosilole-based small molecule donors for efficient all-small-molecule organic solar cells. *Dyes and Pigments*, **2018**, 158, 445-450	4.6	6
216	A Rational Design and Synthesis of Cross-Conjugated Small Molecule Acceptors Approaching High-Performance Fullerene-Free Polymer Solar Cells. **2018**, 30, 4331-4342		16
215	Trap-Door-Like Irreversible Photoinduced Charge Transfer in a Donor-Acceptor Complex. **2018**, 9, 3517-3524		10
214	Improved photovoltaic performance of 2,7-pyrene based small molecules via the use of 3-carbazole as terminal unit. **2018**, 74, 3989-3995		5
213	Synthesis and photovoltaic properties of a small molecule acceptor with thienylenevinylene thiophene as bridge. *Dyes and Pigments*, **2019**, 160, 227-233	4.6	5
212	Alkyl side-chain and fluorination engineering in the indeno[1,2-b]fluorene-based small-molecule acceptors for efficient non-fullerene organic solar cells. *Dyes and Pigments*, **2019**, 160, 432-438	4.6	11
211	Design and synthesis of covalent organic frameworks towards energy and environment fields. **2019** , 355, 602-623		141
210	Synthesis, characterization and charge storage properties of biindolo[2,3-b]quinoxaline for solution-processing organic transistor memory. *Dyes and Pigments*, **2019**, 167, 255-261	4.6	9
209	Modulating Structure Ordering via Side-Chain Engineering of Thieno[3,4-]thiophene-Based Electron Acceptors for Efficient Organic Solar Cells with Reduced Energy Losses. *ACS Applied Materials & Interfaces*, **2019**, 11, 35193-35200	9.5	5
208	Elemental Nanoanalysis of Interfacial Alumina–Aryl Fluoride Interactions in Fullerene-Free Organic Tandem Solar Cells. **2019**, 6, 1901053		6
207	Enhancing Open-Circuit Voltage and Charge Transportation for Ternary Organic Solar Cells With Energy Cascade Double Nonfullerene Acceptors. **2019**, 9, 1290-1296		4
206	In-situ synthesis of porous organic polymer on rGO for high-performance capacitive energy storage. **2019**, 25, 100873		2
205	Effects of incorporated pyrazine on the interchain packing and photovoltaic properties of wide-bandgap D–A polymers for non-fullerene polymer solar cells. **2019**, 10, 4459-4468		12
204	Effects of energy-level offset between a donor and acceptor on the photovoltaic performance of non-fullerene organic solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 18889-18897	13	57
203	Star-Shaped Non-Fullerene Small Acceptors for Organic Solar Cells. **2019**, 12, 4570-4600		20
202	A bacteriochlorin-diketopyrrolopyrrole triad as a donor for solution-processed bulk heterojunction organic solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 9655-9664	7.1	4
201	Ring fusion attenuates the device performance: star-shaped long helical perylene diimide based non-fullerene acceptors. *Journal of Materials Chemistry C*, **2019**, 7, 9564-9572	7.1	14
200	A series of V-shaped small molecule non-fullerene electron acceptors for efficient bulk-heterojunction devices. *Dyes and Pigments*, **2019**, 171, 107677	4.6	12

199	Fabrication of P3HT: PCBM bulk heterojunction organic solar cell. **2019**, 331, 012028		
198	Green-synthesized, low-cost tetracyanodiazafluorene (TCAF) as electron injection material for organic light-emitting diodes. **2019**, 30, 1969-1973		5
197	Theoretical Insight into Multiple Charge-Transfer Mechanisms at the P3HT/Nonfullerenes Interface in Organic Solar Cells. **2019**, 7, 19699-19707		16
196	Fabrication of a novel multi-sized and layered (Ti x ,Nb1)C surface-reinforced layer on TiNb alloy. **2019**, 6, 106512		
195	Building Blocks for High-Efficiency Organic Photovoltaics: Interplay of Molecular, Crystal, and Electronic Properties in Post-Fullerene ITIC Ensembles. **2019**, 20, 2608-2626		29
194	Electron-Rich Extended Diindolotriazatruxene-Based Chemosensors with Highly Selective and Rapid Responses to Nitroaromatic Explosives. **2019**, 84, 1623-1629		4
193	Conjugation-Curtailing of Benzodithionopyran-Cored Molecular Acceptor Enables Efficient Air-Processed Small Molecule Solar Cells. **2019**, 15, e1902656		11
192	13.9% Efficiency Ternary Nonfullerene Organic Solar Cells Featuring Low-Structural Order. **2019**, 4, 2378-2385		42
191	Molecular origin of efficient hole transfer from non-fullerene acceptors: insights from first-principles calculations. *Journal of Materials Chemistry C*, **2019**, 7, 12180-12193	7.1	17
190	Side Chain and Solvent Direction of Film Morphology in Small-Molecule Organic Solar Materials. **2019**, 31, 8308-8319		8
189	A- A- A small molecules for ternary solar cells. *Dyes and Pigments*, **2019**, 164, 148-155	4.6	8
188	Combination of noncovalent conformational locks and side chain engineering to tune the crystallinity of nonfullerene acceptors for high-performance P3HT based organic solar cells. **2019**, 3, 64-69		18
187	Pyrene-fused PDI based ternary solar cells: high power conversion efficiency over 10%, and improved device thermal stability. **2019**, 3, 93-102		23
186	Conjugated materials containing dithieno[3,2-b:2?,3?-d]pyrrole and its derivatives for organic and hybrid solar cell applications. *Journal of Materials Chemistry A*, **2019**, 7, 64-96	13	104
185	Enhanced JSC of P3HT-based non-fullerene polymer solar cells by modulating aggregation effect of P3HT in solution state. **2019**, 68, 15-21		12
184	Design of organic small molecules for photovoltaic application with high open-circuit voltage (Voc). *Journal of Materials Chemistry C*, **2019**, 7, 2487-2521	7.1	41
183	Near-IR Absorbing D-A-D Zn-Porphyrin-Based Small-Molecule Donors for Organic Solar Cells with Low-Voltage Loss. *ACS Applied Materials & Interfaces*, **2019**, 11, 7216-7225	9.5	20
182	Achieving Balanced Charge Transport and Favorable Blend Morphology in Non-Fullerene Solar Cells via Acceptor End Group Modification. **2019**, 31, 1752-1760		36

181	Comparative study of light- and thermal-induced degradation for both fullerene and non-fullerene-based organic solar cells. **2019**, 3, 723-735		28
180	Synthesis of Sulfur/Nitrogen-Enriched Polyimide and Interlayer Application for Inverted Polymer:Nonfullerene Solar Cells. *Solar Rrl*, **2019**, 3, 1900101	7.1	4
179	Polymer nanocomposites for solar cells: research trends and perspectives. **2019**, 557-600		1
178	Influences of Non-fullerene Acceptor Fluorination on Three-Dimensional Morphology and Photovoltaic Properties of Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 26194-26203	8.5	33
177	Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. *Advanced Materials*, **2019**, 31, e1900904	24	117
176	Entropy promotes charge separation in bulk heterojunction organic photovoltaics. **2019**, 382, 111875		4
175	Cathode interfacial layer-free all small-molecule solar cells with efficiency over 12%. *Journal of Materials Chemistry A*, **2019**, 7, 15944-15950	13	24
174	Efficient Polymeric Donor for Both Visible and Near-Infrared-Absorbing Organic Solar Cells. **2019**, 2, 4284-4291		5
173	Recent Progress in Organic Electron Transport Materials in Inverted Perovskite Solar Cells. **2019**, 15, e1900854		141
172	Unraveling the unstable amorphous phase evolution effect on burn-in loss in polymer-fullerene solar cells. **2019**, 71, 156-163		5
171	Asymmetric Nonfullerene Small Molecule Acceptors for Organic Solar Cells. **2019**, 9, 1900999		130
170	An Updated Strategy for Designing Non-Fullerene Acceptors by the Lowest Singlet and Triplet States Excitation: Influence of Periodical Substitution from O, S, and Se to Te for BAE Derivatives. **2019**, 123, 11397-11405		10
169	An efficient, three-dimensional non-fullerene electron acceptor: functionalizing tetraphenylethylene with naphthalene diimides. **2019**, 3, 1231-1237		14
168	Recent Progress in Molecular Design of Fused Ring Electron Acceptors for Organic Solar Cells. **2019** , 15, e1900134		89
167	Subphthalocyanine Triimides: Solution Processable Bowl-Shaped Acceptors for Bulk Heterojunction Solar Cells. **2019**, 21, 3382-3386		26
166	Synthesis of a tetrazine-quaterthiophene copolymer and its optical, structural and photovoltaic properties. **2019**, 54, 10065-10076		4
165	Random Copolymers Outperform Gradient and Block Copolymers in Stabilizing Organic Photovoltaics. **2019**, 29, 1900467		4
164	Non-Fullerene-Derivative-Dependent Dielectric Properties in High-Performance Ternary Organic Solar Cells. **2019**, 9, 1031-1039		11

163	Synthesis and photovoltaic properties of small molecule electron acceptors with twin spiro-type core structure. *Dyes and Pigments*, **2019**, 168, 197-204	4.6	8
162	Complex Adsorption Behavior of a Nonplanar Naphthalene Diimide on Au(111). **2019**, 123, 9860-9867		1
161	Simple alcohol solvent treatment enables efficient non-fullerene organic solar cells. **2019**, 52, 195104		4
160	Pluripotent Features of Doubly Thiophene-Fused Benzodiphospholes as Organic Functional Materials. *Chemistry - A European Journal*, **2019**, 25, 6425-6438	4.8	7
159	Use of Carbon Nanostructures in Hybrid Photovoltaic Devices. **2019**, 1-47		
158	Efficient design and structural modifications for tuning the photoelectric properties of small-molecule acceptors in organic solar cells. **2019**, 43, 6577-6586		7
157	Thin-film transistors of rhodanine end-capped oligothiophene. **2019**, 58, SBBG09		0
156	Increase in efficiency on using selenophene instead of thiophene in π-bridges for D-π-DPP-π-D organic solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 11886-11894	13	21
155	An A2-A1-A2-type small molecule donor for high-performance organic solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 5381-5384	7.1	9
154	Negligible Energy Loss During Charge Generation in Small-Molecule/Fullerene Bulk-Heterojunction Solar Cells Leads to Open-Circuit Voltage over 1.10 V. **2019**, 2, 2717-2722		20
153	A case study of tuning the crystal polymorphs of organic semiconductors towards simultaneously improved light emission and field-effect properties. *Journal of Materials Chemistry C*, **2019**, 7, 5925-5930	7.1	14
152	Comparative analysis of burn-in photo-degradation in non-fullerene COi8DFIC acceptor based high-efficiency ternary organic solar cells. **2019**, 3, 1085-1096		23
151	Effects of Fluorination on Exciton Binding Energy and Charge Transport of π-Conjugated Donor Polymers and the ITIC Molecular Acceptor: A Theoretical Study. **2019**, 123, 6395-6406		24
150	Functional Organic Semiconductors Based on Bay-Annulated Indigo (BAI). **2019**, 19, 1062-1077		9
149	Organic photovoltaics (OPVs): Device physics. **2019**, 665-693		6
148	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. *Journal of Materials Chemistry A*, **2019**, 7, 5234-5238	13	9
147	A review of non-fullerene polymer solar cells: from device physics to morphology control. **2019**, 82, 036601		127
146	Thermal-assisted Voc increase in an indenoindene-based non-fullerene solar system. *Dyes and Pigments*, **2019**, 165, 18-24	4.6	6

145	Energy Loss in Organic Photovoltaics: Nonfullerene Versus Fullerene Acceptors. **2019**, 11,		51
144	Double-caged fullerene acceptors: effect of alkyl chain length on photovoltaic performance. *Journal of Materials Chemistry C*, **2019**, 7, 3278-3285	7.1	1
143	Degradation Mechanism Identified for the Fullerene and Non-fullerene based Organic Solar Cells under Ambient Condition. **2019**,		
142	Donor‐acceptor substituted 1,8-naphthalimides: design, synthesis, and structure‐property relationship. *Journal of Materials Chemistry C*, **2019**, 7, 14798-14815	7.1	34
141	Harnessing Direct (Hetero)Arylation in Pursuit of a Saddle-Shaped Perylene Diimide Tetramer. **2019** , 2, 8939-8945		9
140	A high-performance non-fullerene electron acceptor with bisalkylthiothiophene ‐bridges for organic photovoltaics. *Journal of Materials Chemistry C*, **2019**, 7, 14499-14503	7.1	4
139	Heterocyclic anthrazoline derivatives: a critical review. **2019**, 43, 18415-18432		4
138	Higher Mobility and Carrier Lifetimes in Solution-Processable Small-Molecule Ternary Solar Cells with 11% Efficiency. **2019**, 9, 1802836		52
137	Backbone Conformation Tuning of Carboxylate-Functionalized Wide Band Gap Polymers for Efficient Non-Fullerene Organic Solar Cells. **2019**, 52, 341-353		30
136	Pyrene-Fused Pyrazaacenes with Eight Rectilinearly Arranged Aromatic Rings. **2019**, 8, 155-160		4
135	Solution-Processed Metal Oxide Nanocrystals as Carrier Transport Layers in Organic and Perovskite Solar Cells. **2019**, 29, 1804660		72
134	Monolithic nonlinear optical chromophores with extended conjugate bridge: Large refractive index, high thermal and electro-optic stability. *Dyes and Pigments*, **2019**, 164, 97-104	4.6	8
133	Recent progress on non-fullerene acceptors for organic photovoltaics. **2019**, 24, 94-118		87
132	Novel perylene diimide acceptor for nonfullerene organic solar cells. **2019**, 12, 1950022		3
131	Direct connection of an amine to oligothiophene to generate push-pull chromophores for organic photovoltaic applications. *Dyes and Pigments*, **2019**, 162, 315-323	4.6	3
130	Efficient Inverted Perovskite Solar Cells by Employing N-Type (D-A -D-A) Polymers as Electron Transporting Layer. **2019**, 15, e1803339		41
129	Panchromatic All-Polymer Photodetector with Tunable Polarization Sensitivity. **2019**, 7, 1801346		20
128	Ladder-Type Nonacyclic Arene Bis(thieno[3,2-b]thieno)cyclopentafluorene as a Promising Building Block for Non-Fullerene Acceptors. *Chemistry - an Asian Journal*, **2019**, 14, 1814-1822	4.5	28

127	Can Polymer Solar Cells Open the Path to Sustainable and Efficient Photovoltaic Windows Fabrication?. **2019**, 19, 1166-1178		10
126	Critical review of the molecular design progress in non-fullerene electron acceptors towards commercially viable organic solar cells. **2019**, 48, 1596-1625		617
125	Robust random forest based non-fullerene organic solar cells efficiency prediction. **2020**, 76, 105465		26
124	Synthesis and property study of phthalocyanine tetraimides as solution processable electron acceptors. *Dyes and Pigments*, **2020**, 173, 107980	4.6	4
123	A theoretical study of the absorption spectra of electron-deficient pentacene derivatives using DFT and TDDFT. **2020**, 225, 117480		3
122	Understanding the Photovoltaic Behavior of A-D-A Molecular Semiconductors through a Permutation of End Groups. **2020**, 85, 52-61		9
121	Photoinduced electron transfer from zinc meso-tetraphenylporphyrin to a one-dimensional perylenediimide aggregate: Probing anion delocalization effects. **2020**, 24, 143-152		4
120	One-bump positive solutions for the Kirchhoff equations with perturbation in. **2020**, 43, 398-408		
119	Meta-analysis: the molecular organization of non-fullerene acceptors. **2020**, 7, 1062-1072		24
118	Excimer formation effects and trap-assisted charge recombination loss channels in organic solar cells of perylene diimide dimer acceptors. *Journal of Materials Chemistry C*, **2020**, 8, 1686-1696	7.1	13
117	Efficiency enhancement of a fluorinated wide-bandgap polymer for ternary nonfullerene organic solar cells. **2020**, 188, 122131		7
116	High Open-Circuit Voltage Organic Photovoltaics Fabricated Using an Alkylidene Fluorene Derivative as a Non-fullerene Acceptor. **2020**, 41, 143-149		1
115	Boosted photovoltaic performance of indenothiophene-based molecular acceptor via fusing a thiophene. *Journal of Materials Chemistry C*, **2020**, 8, 630-636	7.1	5
114	A perylene diimide electron acceptor with a triphenylamine core: promoting photovoltaic performance via hot spin-coating. *Journal of Materials Chemistry C*, **2020**, 8, 2135-2141	7.1	10
113	Cyclotriphosphazene cored naphthalimide-BODIPY dendrimeric systems: Synthesis, photophysical and antimicrobial properties. **2020**, 502, 119386		8
112	Recent progress in aqueous monovalent-ion batteries with organic materials as promising electrodes. **2020**, 18, 100547		27
111	A Review of Grazing Incidence Small- and Wide-Angle X-Ray Scattering Techniques for Exploring the Film Morphology of Organic Solar Cells. *Solar Rrl*, **2020**, 4, 2000337	7.1	41
110	A review on synthesis, photophysical properties, and applications of dendrimers with perylene core. **2020**, 137, 109933		21

109	Optimising Non-Patterned MoO/Ag/MoO Anode for High-Performance Semi-Transparent Organic Solar Cells towards Window Applications. **2020**, 10,		9
108	Functionalization of spiro[fluorene-9,9?-xanthene] with diketopyrrolopyrrole to generate a promising, three-dimensional non-fullerene acceptor. **2020**, 4, 3209-3215		2
107	Synthesis and characterization of a wide-bandgap polymer based on perfluorinated and alkylthiolated benzodithiophene with a deep highest occupied molecular orbital level for organic photovoltaics. **2020**, 58, 2755-2763		4
106	Multi-channel exciton dissociation in D18/Y6 complexes for high-efficiency organic photovoltaics. *Journal of Materials Chemistry A*, **2020**, 8, 20408-20413	13	16
105	End-capped group manipulation of indacenodithienothiophene-based non-fullerene small molecule acceptors for efficient organic solar cells. *Nanoscale*, **2020**, 12, 17795-17804	7.7	5
104	Optical properties of recent non-fullerene molecular acceptors for bulk heterojunction solar cells. **2020**, 19, 103633		1
103	Oxygen-ether-bridged perylene diimide dimers: Efficient synthesis, properties, and photovoltaic performance. *Dyes and Pigments*, **2020**, 180, 108508	4.6	3
102	The first connection of carbonyl-bridged triarylamine and diketopyrrolopyrrole functionalities to generate a three-dimensional, non-fullerene electron acceptor. **2020**, 4, 2176-2183		5
101	With PBDB-T as the Donor, the PCE of Non-Fullerene Organic Solar Cells Based on Small Molecule INTIC Increased by 52.4. **2020**, 13,		5
100	What is the role of planarity and torsional freedom for aggregation in a π-conjugated donor–acceptor model oligomer?. *Journal of Materials Chemistry C*, **2020**, 8, 4944-4955	7.1	3
99	Small-molecular iridium complex based organic solar cells with improved photovoltaic performance through device optimization. *Journal of Materials Chemistry C*, **2020**, 8, 5761-5768	7.1	6
98	Functional transformation of four-bladed rylene propellers utilizing non-metal and d8 metal core shifting strategy: significant impact on photovoltaic performance and electrocatalytic hydrogen evolution activity. *Journal of Materials Chemistry A*, **2020**, 8, 3918-3932	13	6
97	The Air Effect in the Burn-In Thermal Degradation of Nonfullerene Organic Solar Cells. **2020**, 8, 1901401		14
96	Improvement of Exciton Collection and Light-Harvesting Range in Ternary Blend Polymer Solar Cells Based on Two Non-Fullerene Acceptors. **2020**, 10,		5
95	4H-pyranylidene-based small push-pull chromophores: Synthesis, structure, electronic properties and photovoltaic evaluation. *Dyes and Pigments*, **2020**, 178, 108357	4.6	1
94	Achieving efficient green-solvent-processed organic solar cells by employing ortho-ortho perylene diimide dimer. **2020**, 83, 105732		4
93	Near-IR absorption and photocurrent generation using a first-of-its-kind boron difluoride formazanate non-fullerene acceptor. **2020**, 4, 1643-1647		7
92	PCE11-based polymer solar cells with high efficiency over 13% achieved by room-temperature processing. *Journal of Materials Chemistry A*, **2020**, 8, 8661-8668	13	9

91	Recent progress on all-small molecule organic solar cells using small-molecule nonfullerene acceptors. **2021**, 3, 175-200		45
90	A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Short-Circuit Conditions. **2021**, 11, 2002760		14
89	Tetraphenylethylene vs triphenylethylene core-based perylene diimide acceptor for non-fullerene organic solar cells. *Dyes and Pigments*, **2021**, 184, 108813	4.6	3
88	Perfluorinated ionomer and poly(3,4-ethylenedioxythiophene) colloid as a hole transporting layer for optoelectronic devices. *Journal of Materials Chemistry A*, **2021**, 9, 17967-17977	13	4
87	Non-conjugated electrolytes as thickness-insensitive interfacial layers for high-performance organic solar cells. *Journal of Materials Chemistry A*,	13	5
86	Recent advances in the □on□off□approaches for on-demand liquid-phase hydrogen evolution. *Journal of Materials Chemistry A*, **2021**, 9, 18164-18174	13	21
85	A time and resource efficient machine learning assisted design of non-fullerene small molecule acceptors for P3HT-based organic solar cells and green solvent selection. *Journal of Materials Chemistry A*, **2021**, 9, 15684-15695	13	49
84	Over 17.5% efficiency ternary organic solar cells with enhanced photon utilization via a medium band gap non-fullerene acceptor. *Journal of Materials Chemistry A*, **2021**, 9, 16418-16426	13	12
83	Thiophene-Fused Naphthodiphospholes: Modulation of the Structural and Electronic Properties of Polycyclic Aromatics by Precise Fusion of Heteroles. **2021**, 86, 130-136		2
82	Recent progress of ultra-narrow-bandgap polymer donors for NIR-absorbing organic solar cells. **2021**, 3, 4306-4320		6
81	Phenothiazine functional materials for organic optoelectronic applications. **2021**, 23, 14969-14996		9
80	The role of solvent additive in metal nano-composite doped thin film organic solar cell. **2021**, 665, 012020		
79	Flexible organic solar cells for biomedical devices. **2021**, 14, 2891-2903		5
78	End-Capped Molecular Engineering of S-Shaped Hepta-Ring-Containing Fullerene-Free Acceptor Molecules with Remarkable Photovoltaic Characteristics for Highly Efficient Organic Solar Cells. **2021**, 9, 2001090		25
77	Selenium-Substituted Non-Fullerene Acceptors: A Route to Superior Operational Stability for Organic Bulk Heterojunction Solar Cells. **2021**, 15, 7700-7712		14
76	Effect of alkyl side chains of twisted conjugated polymer donors on photovoltaic performance. **2021**, 218, 123475		3
75	Recent advances on □conjugated polymers as active elements in high performance organic field-effect transistors. **2021**, 16, 1		24
74	High-Performance Ternary Organic Solar Cells Enabled by Synergizing Fullerene and Non-fullerene Acceptors. **2021**, 03, 254-276		1

73	High performance nonvolatile organic field-effect transistor memory devices based on pyrene diimide derivative. **2021**, 3, 814-822		3
72	Complementary absorbing ternary blend containing structural isomeric donor polymers for improving the performance of PC61BM-based indoor photovoltaics. **2021**, 221, 123606		2
71	Structural optimization of acceptor molecules guided by a semi-empirical model for organic solar cells with efficiency over 15%. **2021**, 64, 2388-2396		2
70	The Role of the Core Attachment Positioning in Triggering Intramolecular Singlet Exciton Fission in Perylene Diimide Tetramers. **2021**, 125, 5114-5131		3
69	Computational and experimental investigations of a cyano group containing novel small molecule organic semiconductor. **2021**, 32, 14749		1
68	Effect of Fused Thiophene Bridges on the Efficiency of Non-Fullerene Polymer Solar Cells made with Conjugated Donor Copolymers Containing Alkyl Thiophene-3-Carboxylate. **2021**, 29, 435-442		3
67	Synthesis, Characterization and Photovoltaic Properties of Electron-Accepting (11-Oxoanthra[2,1-b]thiophen-6-ylidene)dipropanedinitrile-Based Molecules. **2021**, 6, 6043-6049		
66	Charge photogeneration and recombination in ternary polymer solar cells based on compatible acceptors. **2021**, 56, 14181-14195		3
65	Theoretical Study on Understanding the Effects of Core Structure and Energy Level Tuning on Efficiency of Nonfullerene Acceptors in Organic Solar Cells. **2021**, 4, 2100019		0
64	A Review on Emerging Barrier Materials and Encapsulation Strategies for Flexible Perovskite and Organic Photovoltaics. **2021**, 11, 2101383		13
63	Over 16.5% efficiency in ternary organic solar cells by adding an alloyed acceptor with energy transfer process. *Dyes and Pigments*, **2021**, 192, 109434	4.6	5
62	Backbone Engineering with Fluoroarene to Mitigate Morphological Disorder for High-Performance Polymer Solar Cells. *ACS Applied Polymer Materials*,	4.3	0
61	A review on semitransparent solar cells for agricultural application. **2021**, 22, 100852		4
60	Designing and theoretical characterization of benzodithiophene dione based donor molecules for small molecule organic solar cells. *Optik*, **2021**, 242, 167098	2.5	14
59	Effect of Arylmethylene Substitutions on Molecular Structure, Optoelectronic Properties and Photovoltaic Performance of Dithienocyclopentafluorene-Based Small-Molecule Acceptors. *Chemistry - A European Journal*, **2021**, 27, 14508-14519	4.8	1
58	Lowering Electrocatalytic CO Reduction Overpotential Using N-Annulated Perylene Diimide Rhenium Bipyridine Dyads with Variable Tether Length. *Journal of the American Chemical Society*, **2021**, 143, 16849-16864	16.4	3
57	Tuning the optoelectronic properties of scaffolds by using variable central core unit and their photovoltaic applications. *Chemical Physics Letters*, **2021**, 782, 139018	2.5	14
56	Recent progress in metal sulfide-based electron transport layers in perovskite solar cells. *Nanoscale* , **2021**, 13, 17272-17289	7.7	1

55	Nonfullerene acceptors for P3HT-based organic solar cells. *Journal of Materials Chemistry A*, **2021**, 9, 18857-18886	13	21
54	Burn-In Degradation Mechanism Identified for Small Molecular Acceptor-Based High-Efficiency Nonfullerene Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2020**, 12, 27433-27442	9.5	20
53	Aggregation of non-fullerene acceptors in organic solar cells. *Journal of Materials Chemistry A*, **2020** , 8, 15607-15619	13	51
52	Kinetic model for photoluminescence quenching by selective excitation of D/A blends: implications for charge separation in fullerene and non-fullerene organic solar cells. *Journal of Materials Chemistry C*, **2020**, 8, 8755-8769	7.1	11
51	Photovoltaic Properties of Electron-Accepting 2,2'-[2,2'-Arenediylbis(11-oxoanthra[1,2-b]thiophene-6-ylidene)]dipropanedinitriles. *Russian Journal of Physical Chemistry A*, **2020**, 94, 1936-1942	0.7	1
50	HIGH PERFORMANCE FLEXIBLE NANOPARTICLES BASED ORGANIC ELECTRONICS. *Journal of Electronics and Informatics*, **2019**, 2019, 99-106	1.5	4
49	Recent advances and prospects of asymmetric non-fullerene small molecule acceptors for polymer solar cells. *Journal of Semiconductors*, **2021**, 42, 101607	2.3	3
48	Electron-deficient TVT unit-based D-A polymer donor for high-efficiency thick-film OSCs. *Nanotechnology*, **2021**, 33,	3.4	0
47	P-type tetrathiafulvalene derivative as the interface modification layer in non-fullerene organic solar cells with high performance. *Synthetic Metals*, **2021**, 282, 116946	3.6	2
46	Near-infrared Materials: The Turning Point of Organic Photovoltaics. *Advanced Materials*, **2021**, e2107330	24	13
45	Giant spin pumping at the ferromagnet (permalloy) - organic semiconductor (perylene diimide) interface.. *RSC Advances*, **2021**, 11, 35567-35574	3.7	1
44	Exploration of promising optical and electronic properties of (non-polymer) small donor molecules for organic solar cells. *Scientific Reports*, **2021**, 11, 21540	4.9	6
43	Molecular engineering of non-fullerene acceptors based on thiophene-fused end groups for fullerene-free organic solar cells. *Dyes and Pigments*, **2021**, 109987	4.6	0
42	Adjusting the photovoltaic performance of big fused ring-based small molecules by tailoring with different modifications.. *RSC Advances*, **2021**, 11, 39625-39635	3.7	
41	Stable dinitrile end-capped closed-shell non-quinodimethane as a donor, an acceptor and an additive for organic solar cells. *Materials Advances*,	3.3	0
40	High-performance nonfused ring electron acceptor with a steric hindrance induced planar molecular backbone. *Science China Chemistry*, **2022**, 65, 594	7.9	3
39	Organometal halide perovskite photovoltaics. **2022**, 273-317		0
38	New Bithiophene Extended IDIC-Based Non-Fullerene Acceptors and Organic Photovoltaics Thereof.. *Molecules*, **2022**, 27,	4.8	

37	Perylene Diimide-Based Oligomers and Polymers for Organic Optoelectronics. *Accounts of Materials Research*,	7.5	6
36	Tuning of diphenylamine subphthalocyanine based small molecules with efficient photovoltaic parameters for organic solar cells.. *Journal of Molecular Graphics and Modelling*, **2022**, 112, 108146	2.8	4
35	High-Performance Organic Electronic Materials by Contorting Perylene Diimides.. *Journal of the American Chemical Society*, **2021**,	16.4	9
34	Efficient semi-transparent organic solar cells enabled by a quasi-heterojunction active layer structure. *Journal of Materials Chemistry C*, **2022**, 10, 3720-3728	7.1	1
33	Binding Energy of Triplet Excitons in Nonfullerene Acceptors: The Effects of Fluorination and Chlorination.. *Journal of Physical Chemistry A*, **2022**, 126, 1393-1402	2.8	0
32	Down-conversion materials for organic solar cells: Progress, challenges, and perspectives. *Aggregate*,	22.9	2
31	Naphthobisthiadiazole-Based Conjugated Polymers for Nonfullerene Solar Cells: Suppressing Intermolecular Interaction Improves Photovoltaic Performance.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	1
30	Nonalloy Model-Based Ternary Organic Solar Cells.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	2
29	Low Voltage-Loss Organic Solar Cells Light the Way for Efficient Semitransparent Photovoltaics. *Solar Rrl*, 2200135	7.1	2
28	Facile Azabenz-Annulations through UV-induced Photocyclization: A promising method for Perylenediimide-Based Organic Semiconductors.. *Chemistry - an Asian Journal*, **2021**,	4.5	0
27	-Tetrafluorophenylene Divinylene-Bridged Nonfullerene Acceptors as Binary Components or Additives for High-Efficiency Organic Solar Cells.. *ACS Applied Materials & Interfaces*, **2021**,	9.5	2
26	Photoinduced Electron Transfer and Changes in Surface Free Energy in Polythiophene-Polyviologen Bilayered Thin Films. *ACS Polymers Au*,		0
25	Dithienobenzothiadiazole-Bridged Nonfullerene Electron Acceptors for Efficient Organic Solar Cells. *ACS Applied Polymer Materials*,	4.3	0
24	Insights into the Structural and Morphological Properties of Layer-by-Layer Processed Organic Photovoltaics. *ACS Applied Materials & Interfaces*, **2021**,	9.5	2
23	Reduction of Electric Current Loss by Aggregation-Induced Molecular Alignment of a Non-Fullerene Acceptor in Organic Photovoltaics. *ACS Applied Materials & Interfaces*, **2021**,	9.5	4
22	Efficient Medium Bandgap Electron Acceptor Based on Diketopyrrolopyrrole and Furan for Efficient Ternary Organic Solar Cells.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	2
21	A review on high performance photovoltaic cells and strategies for improving their efficiency. *Frontiers in Energy*,	2.6	1
20	Recent Advances in the Design of Multi-Substituted Carbazoles for Optoelectronics: Synthesis and Structure-Property Outlook. *ChemPhotoChem*,	3.3	2

19	Machine learning with quantum chemistry descriptors: predicting the solubility of small-molecule optoelectronic materials for organic solar cells. *Journal of Materials Chemistry A*,	13	1
18	Efficient ternary organic solar cells with BT-rhodanine-based nonfullerene acceptors in a PM6:Y6-BO blend. **2022**, 257, 125267		0
17	Recent advances of nonfullerene acceptors in organic solar cells. **2022**, 103, 107802		2
16	AzaBenzannulated perylene diimide multimers as electron acceptors for organic solar cells.		0
15	Organic Solar Cells at Stratospheric Condition for High Altitude Platform Station Application.		0
14	Anode interfacial modification for non-fullerene polymer solar cells: Recent advances and prospects.		3
13	Tuning the Molecular Packing of Low-Cost Non-Fullerene Acceptors via Asymmetric Terminal Groups. **2022**, 5, 11283-11291		0
12	Annealing Controls Ultrafast Dynamics of Carrier Production in Organic Photovoltaics Incorporating a Nonfullerene Acceptor.		0
11	Fullerene-Perylenediimide (C60-PDI) Based Systems: An Overview and Synthesis of a Versatile Platform for Their Anchor Engineering. **2022**, 27, 6522		2
10	Unraveling the Stretch-induced Microstructural Evolution and Morphology-Stretchability Relationships of High-Performance Ternary Organic Photovoltaic Blends. 2207884		2
9	Recent progress in non-fused ring electron acceptors for high performance organic solar cells.		2
8	Relating reorganization energies, exciton diffusion length and non-radiative recombination to the room temperature UV-vis absorption spectra of NF-SMA.		1
7	Real-Time Probing and Unraveling the Morphology Formation of Blade-Coated Ternary Nonfullerene Organic Photovoltaics with In Situ X-Ray Scattering. 2213248		1
6	Symmetry Breaking: An Efficient Structure Design of Nonfullerene Acceptors to Reduce the Energy Loss in Organic Solar Cells.		0
5	Difluorobenzimidazole-decorated helical perylene diimide dimers for high-performance n-type organic field-effect transistors. **2023**, 11, 4112-4119		0
4	Nitrofluorene-based ADA electron acceptors for organic photovoltaics.		0
3	Synthesis, Properties, and Photovoltaic Characteristics of Fluoranthenedione-containing Nonfullerene Acceptors for Organic Solar Cells. **2022**, 35, 187-191		0
2	Dithienobenzoselenadiazole-Based Polymer Donors with Tuned Side Chains for Efficient Polymer Solar Cells. **2023**, 6, 4079-4088		0

1	Metallocene-Naphthalimide Derivatives: The Effect of Geometry, DFT Methodology, and Transition Metals on Absorption Spectra. **2023**, 28, 3565	0