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Single-junction polymer solar cells exceeding 10% power conversion efficiency

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#	Paper	IF	Citations
969	Recycling Indium Tin Oxide (ITO) Electrodes Used in Thin-Film Devices with Adjacent Hole-Transport Layers of Metal Oxides. <b>2015</b> , 3, 3373-3381		30
968	Bulk Heterojunction Photovoltaic Cells with Triphenylamine-Based Amorphous Polymer and Non-Halogenated Solvent Processing Provide Reproducible Performance. <b>2015</b> , 28, 373-376		1
967	Alcohol-soluble Star-shaped Oligofluorenes as Interlayer for High Performance Polymer Solar Cells. <b>2015</b> , 5, 17329		6
966	Decoupling optical and electronic optimization of organic solar cells using high-performance temperature-stable TiO <sub>2</sub> /Ag/TiO <sub>2</sub> electrodes. <b>2015</b> , 3, 106105		19
965	Dithienopyrrole Based Small Molecule with Low Band Gap for Organic Solar Cells. <b>2015</b> , 33, 852-858		12
964	Subtle Balance Between Length Scale of Phase Separation and Domain Purification in Small-Molecule Bulk-Heterojunction Blends under Solvent Vapor Treatment. <i>Advanced Materials</i> , <b>2015</b> , 27, 6296-302	24	141
963	Side-Chain Engineering for Enhancing the Thermal Stability of Polymer Solar Cells. <i>Advanced Materials</i> , <b>2015</b> , 27, 6999-7003	24	48
962	D- $\pi$ - $\pi$ Strategy to Design Benzothiadiazole-carbazole-based Conjugated Polymer with High Solar Cell Voltage and Enhanced Photocurrent. <b>2015</b> , 36, 2156-61		4
961	Carrier-Selectivity-Dependent Charge Recombination Dynamics in Organic Photovoltaic Cells with a Ferroelectric Blend Interlayer. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500802	21.8	20
960	Wide-Bandgap Benzodithiophene-Benzothiadiazole Copolymers for Highly Efficient Multijunction Polymer Solar Cells. <i>Advanced Materials</i> , <b>2015</b> , 27, 4461-4468	24	95
959	A Large-Bandgap Conjugated Polymer for Versatile Photovoltaic Applications with High Performance. <i>Advanced Materials</i> , <b>2015</b> , 27, 4655-60	24	586
958	Manipulating aggregation and molecular orientation in all-polymer photovoltaic cells. <i>Advanced Materials</i> , <b>2015</b> , 27, 6046-54	24	232
957	Synergic Effects of Randomly Aligned SWCNT Mesh and Self-Assembled Molecule Layer for High-Performance, Low-Bandgap, Polymer Solar Cells with Fast Charge Extraction. <b>2015</b> , 2, 1500324		20
956	Synthesis and Characterization of an Isoindigo-Naphthalene Polymer along with a Small Molecule of Naphthalene-Isoindigo-Naphthalene. <b>2015</b> , 36, 2974-2977		1
955	Thieno, Furo, and Selenopheno[3,4-c]pyrrole-4,6-dione Copolymers: Air-Processed Polymer Solar Cells with Power Conversion Efficiency up to 7.1%. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1501213	21.8	20
954	Hydrophilic Conjugated Polymers with Large Bandgaps and Deep-Lying HOMO Levels as an Efficient Cathode Interlayer in Inverted Polymer Solar Cells. <b>2015</b> , 36, 1393-401		7
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952	Toward Highly Efficient Large-Area ITO-Free Organic Solar Cells with a Conductance-Gradient Transparent Electrode. <i>Advanced Materials</i> , <b>2015</b> , 27, 6983-9	24	54
951	High-Performance Organic Solar Cells Based on a Small Molecule with Alkylthio-Thienyl-Conjugated Side Chains without Extra Treatments. <i>Advanced Materials</i> , <b>2015</b> , 27, 7469-75	24	174
950	Enhanced Power Conversion Efficiency of P3HT : PC71BM Bulk Heterojunction Polymer Solar Cells by Doping a High-Mobility Small Organic Molecule. <b>2015</b> , 2015, 1-8		7
949	Improved synthesis and photovoltaic performance of donor-acceptor copolymers based on dibenzothiophene-cored ladder-type heptacyclic units. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 5631-5641	7.1	11
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940	Synthesis and characterization of a conjugated polymer consisting of alternating octyldodecyldiketopyrrolo[3,4-c]pyrrole and diethoxynaphthalene units with thiophene spacers for photovoltaic application. <b>2015</b> , 630, 27-31		
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938	Dramatic performance enhancement for large bandgap thick-film polymer solar cells introduced by a difluorinated donor unit. <b>2015</b> , 15, 607-615		89
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936	Ultrafast Singlet Fission in a Push-Pull Low-Bandgap Polymer Film. <b>2015</b> , 137, 15980-3		61
935	Dithiol treatments enhancing the efficiency of hybrid solar cells based on PTB7 and CdSe nanorods. <b>2015</b> , 8, 3045-3053		5

934	An Easily Accessible Cathode Buffer Layer for Achieving Multiple High Performance Polymer Photovoltaic Cells. <b>2015</b> , 119, 27322-27329		29
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928	New generation solar cells: concepts, trends and perspectives. <b>2015</b> , 51, 3957-72		134
927	High efficiency air-processed dithienogermole-based polymer solar cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 4826-32	9.5	32
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925	Single-junction polymer solar cells with over 10% efficiency by a novel two-dimensional donor-acceptor conjugated copolymer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 4928-35	9.5	241
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863	Conjugated Random Copolymers Consisting of Pyridine- and Thiophene-Capped Diketopyrrolopyrrole as Co-Electron Accepting Units To Enhance both JSC and VOC of Polymer Solar Cells. <i>Macromolecules</i> , <b>2015</b> , 48, 7836-7842	5.5	58

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828	Design of Acceptors with Suitable Frontier Molecular Orbitals to Match Donors via Substitutions on Perylene Diimide for Organic Solar Cells. <b>2016</b> , 17,		7
827	Polymer-Based LEDs and Solar Cells. <b>2016</b> ,		0

826	High-resolution noncontact AFM and Kelvin probe force microscopy investigations of self-assembled photovoltaic donor-acceptor dyads. <b>2016</b> , 7, 799-808		5
825	Impact of Backbone Fluorination on $\pi$ Conjugated Polymers in Organic Photovoltaic Devices: A Review. <b>2016</b> , 8,		135
824	Core/Shell Conjugated Polymer/Quantum Dot Composite Nanofibers through Orthogonal Non-Covalent Interactions. <b>2016</b> , 8,		8
823	Plasmon-induced slow aging of exciton generation and dissociation for stable organic solar cells. <b>2016</b> , 3, 1115		1
822	Geometrically controlled organic small molecule acceptors for efficient fullerene-free organic photovoltaic devices. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 12308-12318	13	48
821	Fine Control of Side Chains in Random $\pi$ Conjugated Terpolymers for Organic Photovoltaics. <b>2016</b> , 217, 1513-1520		6
820	Recent Advances in Organic Photovoltaics: Device Structure and Optical Engineering Optimization on the Nanoscale. <b>2016</b> , 12, 1547-71		68
819	Fullerene-Free Polymer Solar Cells with Open-Circuit Voltage above 1.2 V: Tuning Phase Separation Behavior with Oligomer to Replace Polymer Acceptor. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5922-5929	15.6	31
818	Fullerene-Free Polymer Solar Cells with over 11% Efficiency and Excellent Thermal Stability. <i>Advanced Materials</i> , <b>2016</b> , 28, 4734-9	24	1507
817	High-Performance Polymer Solar Cells with PCE of 10.42% via Al-Doped ZnO Cathode Interlayer. <i>Advanced Materials</i> , <b>2016</b> , 28, 7405-12	24	119
816	Controllable ZnMgO Electron-Transporting Layers for Long-Term Stable Organic Solar Cells with 8.06% Efficiency after One-Year Storage. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1501493	21.8	61
815	The impact of active layer nanomorphology on the efficiency of organic solar cells based on a squaraine dye electron donor. <b>2016</b> , 700, 012052		
814	Incorporating Graphitic Carbon Nitride (g-C <sub>3</sub> N <sub>4</sub> ) Quantum Dots into Bulk-Heterojunction Polymer Solar Cells Leads to Efficiency Enhancement. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 1719-1728	15.6	186
813	Multi-channel interface dipole of hyperbranched polymers with quasi-immovable hydron to modification of cathode interface for high-efficiency polymer solar cells. <b>2016</b> , 24, 1044-1054		8
812	Effect of Systematically Tuning Conjugated Donor Polymer Lowest Unoccupied Molecular Orbital Levels via Cyano Substitution on Organic Photovoltaic Device Performance. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 5110-5120	9.6	91
811	Improved performance of polymer solar cells by using inorganic, organic, and doped cathode buffer layers. <b>2016</b> , 25, 038402		9
810	Synthesis of medium-bandgap $\pi$ Conjugated polymers based on isomers of 5-Alkylphenanthridin-6(5H)-one and 6-Alkoxyphenanthridine. <b>2016</b> , 54, 2119-2127		10
809	Broad Bandgap D-A Copolymer Based on Bithiazole Acceptor Unit for Application in High-Performance Polymer Solar Cells with Lower Fullerene Content. <b>2016</b> , 37, 1066-73		8

808	Homo-Tandem Polymer Solar Cells with VOC >1.8 V for Efficient PV-Driven Water Splitting. <i>Advanced Materials</i> , <b>2016</b> , 28, 3366-73	24	46
807	Incorporation of Hexa-peri-hexabenzocoronene (HBC) into Carbazole-Benzo-2,1,3-thiadiazole Copolymers to Improve Hole Mobility and Photovoltaic Performance. <b>2016</b> , 11, 766-74		1
806	High efficiency arrays of polymer solar cells fabricated by spray-coating in air. <b>2016</b> , 24, 275-282		25
805	Flexible inverted polymer solar cells fabricated in air at low temperatures. <b>2016</b> , 55, 086501		4
804	Improved All-Polymer Solar Cell Performance by Using Matched Polymer Acceptor. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5669-5678	15.6	98
803	Aqueous Solution Processed Photoconductive Cathode Interlayer for High Performance Polymer Solar Cells with Thick Interlayer and Thick Active Layer. <i>Advanced Materials</i> , <b>2016</b> , 28, 7521-6	24	86
802	A Solution-Processed Organometal Halide Perovskite Hole Transport Layer for Highly Efficient Organic Light-Emitting Diodes. <b>2016</b> , 2, 1600165		22
801	Crosslinkable Amino-Functionalized Conjugated Polymer as Cathode Interlayer for Efficient Inverted Polymer Solar Cells. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1502563	21.8	51
800	Square-Centimeter-Sized High-Efficiency Polymer Solar Cells: How the Processing Atmosphere and Film Quality Influence Performance at Large Scale. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1600290	21.8	24
799	Understanding Solvent Manipulation of Morphology in Bulk-Heterojunction Organic Solar Cells. <b>2016</b> , 11, 2620-2632		23
798	Imide-linked alkyl chain influence on the properties of pyrrole-based imide-functionalized polymers containing pyrrolo[3,4-c]pyrrole-1,3(2H,5H)-dione and benzodithiophene units for polymer solar cells. <i>Synthetic Metals</i> , <b>2016</b> , 220, 34-40	3.6	3
797	Realizing Highly Efficient Inverted Photovoltaic Cells by Combination of Nonconjugated Small-Molecule Zwitterions with Polyethylene Glycol. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 18593-9	9.5	12
796	A-ED-EA type Small Molecules Using Ethynylene Linkages for Organic Solar Cells with High Open-circuit Voltages. <b>2016</b> , 34, 353-358		8
795	Hybrid Silver Mesh Electrode for ITO-Free Flexible Polymer Solar Cells with Good Mechanical Stability. <b>2016</b> , 9, 1042-9		28
794	Optical Enhancement via Electrode Designs for High-Performance Polymer Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 321-340	15.6	44
793	Asymmetric-Indenothiophene-Based Copolymers for Bulk Heterojunction Solar Cells with 9.14% Efficiency. <i>Advanced Materials</i> , <b>2016</b> , 28, 3359-65	24	92
792	Multidiffractive Broadband Plasmonic Absorber. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 435-443	8.1	22
791	Enhancement of photovoltaic performance by two-step dissolution processed photoactive blend in polymer solar cells. <b>2016</b> , 59, 842-850		6

790	Analysis of degradation mechanisms in donor-acceptor copolymer based organic photovoltaic devices using impedance spectroscopy. <b>2016</b> , 3, 096202		4
789	Suppression of Homocoupling Side Reactions in Direct Arylation Polycondensation for Producing High Performance OPV Materials. <i>Macromolecules</i> , <b>2016</b> , 49, 9388-9395	5.5	31
788	Terminal Modulation of D-A Small Molecule for Organic Photovoltaic Materials: A Theoretical Molecular Design. <b>2016</b> , 120, 28939-28950		33
787	Well-Dispersed CuZnSnS Nanocrystals Synthesized from Alcohols and Their Applications for Polymer Photovoltaics. <b>2016</b> , 11, 550		9
786	Inverted polymer solar cells with enhanced fill factor by inserting the potassium stearate interfacial modification layer. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 181602	3.4	14
785	Efficient light harvesting in inverted polymer solar cells using polymeric 2D-microstructures. <b>2016</b> , 151, 162-168		21
784	A novel crystallizable low band gap polymer for high-efficiency polymer photovoltaic cells. <b>2016</b> , 54, 44-48		2
783	Donor-acceptor polymers based on 5,6-difluoro-benzo[1,2,5]thiadiazole for high performance solar cells. <i>Organic Electronics</i> , <b>2016</b> , 33, 187-193	3.5	3
782	Evidence of Molecular Structure Dependent Charge Transfer between Isoindigo-Based Polymers and Fullerene. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 2433-2440	9.6	29
781	Improving the efficiency of inverted organic solar cells by introducing ferrocenedicarboxylic acid between an ITO/ZnO interlayer. <b>2016</b> , 6, 32000-32006		1
780	Naphthodithieno[3,2-b]thiophene-based donor-acceptor copolymers: Synthesis, characterization, and their photovoltaic and charge transport properties. <i>Dyes and Pigments</i> , <b>2016</b> , 131, 1-8	4.6	6
779	Effect of incorporation of CdS NPs on performance of PTB7: PCBM organic solar cells. <i>Organic Electronics</i> , <b>2016</b> , 33, 274-280	3.5	29
778	All polymer solar cells with diketopyrrolopyrrole-polymers as electron donor and a naphthalenediimide-polymer as electron acceptor. <b>2016</b> , 6, 35677-35683		20
777	Analyses of Thiophene-Based Donor-Acceptor Semiconducting Polymers toward Designing Optical and Conductive Properties: A Theoretical Perspective. <b>2016</b> , 120, 8305-8314		15
776	An organosilane self-assembled monolayer incorporated into polymer solar cells enabling interfacial coherence to improve charge transport. <b>2016</b> , 18, 16005-12		5
775	Toward Morphological Stabilization in Polymer Bulk Heterojunction Solar Cells by Crosslinking Using an Additive. <b>2016</b> , 6, 710-718		2
774	An asymmetric small molecule based on thieno[2,3-f]benzofuran for efficient organic solar cells. <i>Organic Electronics</i> , <b>2016</b> , 35, 87-94	3.5	17
773	Dialkylthio benzo[1,2-b:4,5-b']difuran polymer for efficient organic photovoltaics with solvent treatment in active layers. <i>Dyes and Pigments</i> , <b>2016</b> , 131, 356-363	4.6	5

772	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. <b>2016</b> , 52, 8522-5		59
771	Long-term thermally stable organic solar cells based on cross-linkable donor-acceptor conjugated polymers. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 9286-9292	13	18
770	Hybrid Solar Cells With Polymeric Bulk Heterojunction Layers Containing Inorganic Nanoparticles. <b>2016</b> , 6, 924-929		2
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768	Interface energetics and engineering of organic heterostructures in organic photovoltaic cells. <b>2016</b> , 59, 422-435		9
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766	Endohedrally stabilized C70 isomer with fused pentagons characterized by crystallography. <b>2016</b> , 45, 8142-8		20
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764	Sulfonate anionic small molecule as a cathode interfacial material for highly efficient polymer solar cells. <b>2016</b> , 6, 33523-33528		6
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759	A D-A1-A2 push-pull small molecule donor for solution processed bulk heterojunction organic solar cells. <b>2016</b> , 18, 13918-26		11
758	Regioregular D1-A-D2-A Terpolymer with Controlled Thieno[3,4-b]thiophene Orientation for High-Efficiency Polymer Solar Cells Processed with Nonhalogenated Solvents. <i>Macromolecules</i> , <b>2016</b> , 49, 3328-3335	5.5	39
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754	Synthesis of alternating D <sub>A</sub> 1D <sub>A</sub> 2 terpolymers comprising two electron-deficient moieties, quinoxaline and benzothiadiazole units for photovoltaic applications. <b>2016</b> , 7, 4025-4035			10
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751	Revealing the influence of the solvent evaporation rate and thermal annealing on the molecular packing and charge transport of DPP(TBFu) <sub>2</sub> . <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 4654-4661	7.1		26
750	Probing Charge Transfer and Hot Carrier Dynamics in Organic Solar Cells with Terahertz Spectroscopy. <b>2016</b> , 9856,			
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748	Photo-physics of PTB7, PCBM and ICBA based ternary solar cells. <i>Organic Electronics</i> , <b>2016</b> , 34, 111-117	3.5		39
747	Influence of Blend Ratio and Processing Additive on Free Carrier Yield and Mobility in PTB7:PCBM Photovoltaic Solar Cells. <b>2016</b> , 120, 9588-9594			16
746	High-Performance Polymer Solar Cells Enabled by Copper Nanoparticles-Induced Plasmon Resonance Enhancement. <b>2016</b> , 120, 8900-8906			32
745	Modification of a PEDOT:PSS hole transport layer for printed polymer solar cells. <b>2016</b> , 153, 117-123			17
744	Small molecules based on tetrazine unit for efficient performance solution-processed organic solar cells. <b>2016</b> , 155, 30-37			13
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742	Perylenediimides as non-fullerene acceptors in bulk-heterojunction solar cells (BHJSCs). <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 9336-9346	13		152
741	Influence of aromatic heterocycle of conjugated side chains on photovoltaic performance of benzodithiophene-based wide-bandgap polymers. <b>2016</b> , 7, 4036-4045			22
740	Isoindigo-based polymer solar cells with high open circuit voltages up to 1.01V. <i>Organic Electronics</i> , <b>2016</b> , 34, 157-163	3.5		16
739	High-Performance Field-Effect Transistors Fabricated with Donor-Acceptor Copolymers Containing S <sub>10</sub> O Conformational Locks Supplied by Diethoxydithiophenethenes. <i>Macromolecules</i> , <b>2016</b> , 49, 6401-6410	5.5		34
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733	A New BDT-Based Conjugated Polymer with Donor-Donor Composition for Bulk Heterojunction Solar Cells. <b>2016</b> , 24, 457-462		20
732	Transfer-printing of active layers to achieve high quality interfaces in sequentially deposited multilayer inverted polymer solar cells fabricated in air. <b>2016</b> , 17, 530-540		13
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725	Towards improved efficiency of bulk-heterojunction solar cells using various spinel ferrite magnetic nanoparticles. <i>Organic Electronics</i> , <b>2016</b> , 39, 118-126	3-5	24
724	Tetrafluoroquinoxaline based polymers for non-fullerene polymer solar cells with efficiency over 9%. <b>2016</b> , 30, 312-320		86
723	A femtosecond transient absorption study of charge photogeneration and recombination dynamics in photovoltaic polymers with different side-chain linkages. <b>2016</b> , 8, 18390-18399		4
722	PTFE/MoO3 Anode Bilayer Buffer Layers for Improved Performance in PCDTBT:PC71BM Blend Organic Solar Cells. <b>2016</b> , 4, 6473-6479		12
721	Symmetrical and unsymmetrical triphenylamine based diketopyrrolopyrroles and their use as donors for solution processed bulk heterojunction organic solar cells. <b>2016</b> , 6, 99685-99694		15
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716	Impact of environmentally friendly processing on polymer solar cells: Performance, thermal stability and morphological study by imaging techniques. <b>2016</b> , 155, 436-445		22
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714	Impact of alkyl chain length of 1,n-diiodoalkanes on PC71BM distribution in both bulk and air surface of PTB7:PC71BM film. <i>Organic Electronics</i> , <b>2016</b> , 37, 358-365	3.5	9
713	A fused-ring based electron acceptor for efficient non-fullerene polymer solar cells with small HOMO offset. <b>2016</b> , 27, 430-438		112
712	Charge Dynamics at Heterojunction between Face-on/Edge-on PCPDTBT and PCBM Bilayer: Interplay of Donor/Acceptor Distance and Local Charge Carrier Mobility. <b>2016</b> , 120, 17887-17897		22
711	Enhance the light-harvesting capability of the ITO-free inverted small molecule solar cell by ZnO nanorods. <b>2016</b> , 24, 17910-5		8
710	High-Performance Photovoltaic Polymers Employing Symmetry-Breaking Building Blocks. <i>Advanced Materials</i> , <b>2016</b> , 28, 8490-8498	24	86
709	High molecular weight broad band-gap polymers based on indolo[3,2-b]carbazole and thiazolo[5,4-d]thiazole derivatives for solar cells. <b>2016</b> , 58, 587-593		3
708	Enhanced thermal stability of organic photovoltaics via incorporating triphenylamine derivatives as additives. <b>2016</b> , 157, 666-675		19
707	Conjugated Donor-Acceptor Polymers Entailing Pechmann Dye-Derived Acceptor with Siloxane-Terminated Side Chains Exhibiting Balanced Ambipolar Semiconducting Behavior. <i>Macromolecules</i> , <b>2016</b> , 49, 5857-5865	5.5	30
706	Realizing 11.3% efficiency in fullerene-free polymer solar cells by device optimization. <b>2016</b> , 59, 1574-1582		72
705	A wide-bandgap conjugated polymer for highly efficient inverted single and tandem polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 13251-13258	13	49
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702	Molecular Engineering on Conjugated Side Chain for Polymer Solar Cells with Improved Efficiency and Accessibility. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 5887-5895	9.6	54
701	An Organic Dyad Composed of Diathiafulvalene-Functionalized Diketopyrrolopyrrole-Fullerene for Single-Component High-Efficiency Organic Solar Cells. <b>2016</b> , 55, 12334-7		46



700	Oligothiophene-based small molecules with 3,3'-difluoro-2,2'-bithiophene central unit for solution-processed organic solar cells. <i>Organic Electronics</i> , <b>2016</b> , 38, 172-179	3.5	4
699	Diffractive nanostructures for enhanced light-harvesting in organic photovoltaic devices. <b>2016</b> , 24, A358-73		10
698	An Organic Dyad Composed of Diathiafulvalene-Functionalized Diketopyrrolopyrrole-Bullerene for Single-Component High-Efficiency Organic Solar Cells. <b>2016</b> , 128, 12522-12525		9
697	Optimization of PDTS-DTffBT-Based Solar Cell Performance through Control of Polymer Molecular Weight. <b>2016</b> , 120, 19513-19520		6
696	Parallel bulk heterojunction photovoltaics based on all-conjugated block copolymer additives. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 14804-14813	13	17
695	Light Manipulation in Organic Photovoltaics. <i>Advanced Science</i> , <b>2016</b> , 3, 1600123	13.6	43
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693	Switching Hole and Electron Transports of Molecules on Metal Oxides by Energy Level Alignment Tuning. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 22410-7	9.5	4
692	Rapid ordering of block copolymer thin films. <b>2016</b> , 28, 403002		60
691	Influence of SiO <sub>2</sub> shell thickness on power conversion efficiency in plasmonic polymer solar cells with Au nanorod@SiO <sub>2</sub> core-shell structures. <b>2016</b> , 6, 25036		35
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687	Effect of 3,4,9,10-perylenetetracarboxylic bisbenzimidazole (PTCBI) as well as bathocuproine (BCP) and Ag interlayer thickness on the performance of organic tandem solar cells. <i>Synthetic Metals</i> , <b>2016</b> , 221, 179-185	3.6	5
686	Effect of fluorination and symmetry on the properties of polymeric photovoltaic materials based on an asymmetric building block. <b>2016</b> , 6, 90051-90060		11
685	Efficiency improvement using bis(trifluoromethane) sulfonamide lithium salt as a chemical additive in porphyrin based organic solar cells. <b>2016</b> , 8, 17953-17962		21
684	Ternary D1D2AD2 Structured Conjugated Polymer: Efficient Green-Solvent-Processed Polymer/Neat-C70 Solar Cells. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 7479-7486	9.6	40
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682	The use of an n-type macromolecular additive as a simple yet effective tool for improving and stabilizing the performance of organic solar cells. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 3464-3471	35.4	92
681	Synthesis and photovoltaic properties of donor-acceptor conjugated polymers based on 4,7-dithienyl-2,1,3-benzothiadiazole functionalized silole. <i>Synthetic Metals</i> , <b>2016</b> , 220, 433-439	3.6	14
680	Improved Morphology and Efficiency of Polymer Solar Cells by Processing Donor-Acceptor Copolymer Additives. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 6479-6488	15.6	27
679	Small molecule based N-phenyl carbazole substituted diketopyrrolopyrroles as donors for solution-processed bulk heterojunction organic solar cells. <b>2016</b> , 18, 22999-3005		16
678	Side Chain Optimization of Naphthalenediimide-Bithiophene-Based Polymers to Enhance the Electron Mobility and the Performance in All-Polymer Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 1543-1553	15.6	130
677	Design and Synthesis of a Low Bandgap Small Molecule Acceptor for Efficient Polymer Solar Cells. <i>Advanced Materials</i> , <b>2016</b> , 28, 8283-8287	24	373
676	Unsubstituted Benzodithiophene-Based Conjugated Polymers for High-Performance Organic Field-Effect Transistors and Organic Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 19665-7195	9.5	30
675	Interfacial Materials for Organic Solar Cells: Recent Advances and Perspectives. <i>Advanced Science</i> , <b>2016</b> , 3, 1500362	13.6	310
674	Narrow band gap isoindigo-based small molecules for solution-processed organic solar cells with high open-circuit voltage. <i>Synthetic Metals</i> , <b>2016</b> , 220, 448-454	3.6	6
673	Efficient ternary organic photovoltaic cells with better trade-off photon harvesting and phase separation by doping DIB-SQ. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 7809-7816	7.1	12
672	10.8% Efficiency Polymer Solar Cells Based on PTB7-Th and PC71BM via Binary Solvent Additives Treatment. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 6635-6640	15.6	254
671	Synthesis of new D-A1D-A2 type low bandgap terpolymers based on different thiadiazoloquinoline acceptor units for efficient polymer solar cells. <b>2016</b> , 6, 71232-71244		9
670	Designing ternary blend bulk heterojunction solar cells with reduced carrier recombination and a fill factor of 77%. <b>2016</b> , 1,		274
669	The origin of high PCE in PTB7 based photovoltaics: proper charge neutrality level and free energy of charge separation at PTB7/PCBM interface. <b>2016</b> , 6, 35262		37
668	Engineering hollow electrodes for hybrid solar cells for efficient light harvesting and carrier collection. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17260-17266	13	3
667	A ternary blend of a polymer, fullerene, and insulating self-assembling triptycene molecules for organic photovoltaics. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 18490-18498	13	17
666	High-Performance Inverted Polymer Solar Cells with Zirconium Acetylacetonate Buffer Layers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 33856-33862	9.5	10
665	Donor-Acceptor Interfaces by Engineered Nanoparticles Assemblies for Enhanced Efficiency in Plastic Planar Heterojunction Solar Cells. <b>2016</b> , 120, 26588-26599		9

664	Triazine-core-containing star-shaped compounds as cathode interlayers for efficient inverted polymer solar cells. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 11278-11283	7.1	6
663	Synthesis, characterization and photovoltaic properties of low band gap donor-acceptor polymers containing benzodithiophene donor unit with fluorenylthiophene as 2D-conjugated side for organic solar cell application. <b>2016</b> , 635, 45-56		1
662	Theoretical Investigation on Porphyrin-Based Small Molecules as Donor Materials for Photovoltaic Applications. <b>2016</b> , 120, 27148-27158		11
661	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. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 32823-32832	9.5	28
660	A composite light-harvesting layer from photoactive polymer and halide perovskite for planar heterojunction solar cells. <b>2016</b> , 6, 29567		17
659	Metal-electrode-free Window-like Organic Solar Cells with p-Doped Carbon Nanotube Thin-film Electrodes. <b>2016</b> , 6, 31348		55
658	A diketopyrrolopyrrole-based low bandgap polymer with enhanced photovoltaic performances through backbone twisting. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 18174-18180	13	13
657	Design, synthesis and photovoltaic properties of a series of new acceptor-pended conjugated polymers. <b>2016</b> , 59, 1583-1592		10
656	Improvement in Half-Life of Organic Solar Cells by Using a Blended Hole Extraction Layer Consisting of PEDOT:PSS and Conjugated Polymer Electrolyte. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 31791-31798	9.5	11
655	Heating-Rate-Triggered Carbon-Nanotube-based 3-Dimensional Conducting Networks for a Highly Sensitive Noncontact Sensing Device. <b>2016</b> , 6, 19632		20
654	Synergistic effect of fluorination and regio-regularity on the long-term thermal stability of polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 18598-18606	13	9
653	Toward Scalable Flexible Nanomanufacturing for Photonic Structures and Devices. <i>Advanced Materials</i> , <b>2016</b> , 28, 10353-10380	24	54
652	Enhanced light harvesting in flexible polymer solar cells: synergistic simulation of a plasmonic meta-mirror and a transparent silver mesowire electrode. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 18952-18962	13	29
651	From Fullerene-Polymer to All-Polymer Solar Cells: The Importance of Molecular Packing, Orientation, and Morphology Control. <b>2016</b> , 49, 2424-2434		35 <sup>1</sup>
650	Effects of the incorporation of bithiophene instead of thiophene between the pyrrolo[3,4-c]pyrrole-1,3-dione units of a bis(pyrrolo[3,4-c]pyrrole-1,3-dione)-based polymer for polymer solar cells. <b>2016</b> , 40, 10153-10160		6
649	Synthesis and photophysical properties of semiconductor molecules D1-A-D2-A-D1-type structure based on derivatives of quinoxaline and dithienosilole for organics solar cells. <i>Organic Electronics</i> , <b>2016</b> , 39, 361-370	3.5	2
648	Understanding the Role of Phenanthroline as Interlayer in Bulk Heterojunction Organic Photovoltaic Cells. <b>2016</b> , 1, 5638-5646		1
647	New narrow-band-gap thiazoloquinoxaline-containing polymers and their use in solar cells with bulk heterojunction. <b>2016</b> , 471, 373-377		1

646	Low-Temperature Solution-Processed Electron Transport Layers for Inverted Polymer Solar Cells. <b>2016</b> , 2, 1600008		9
645	High-Efficiency Polymer Solar Cells Enabled by Environment-Friendly Single-Solvent Processing. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1502177	21.8	83
644	Tuning the photovoltaic performances of the terpolymers based on thiophene-benzene-thiophene via the modification of alkyl side chains. <b>2016</b> , 133, n/a-n/a		1
643	Ligand-Free Synthesis of Aluminum-Doped Zinc Oxide Nanocrystals and their Use as Optical Spacers in Color-Tuned Highly Efficient Organic Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 243-253	15.6	38
642	Highly Efficient Organic Solar Cells with Improved Vertical Donor-Acceptor Compositional Gradient Via an Inverted Off-Center Spinning Method. <i>Advanced Materials</i> , <b>2016</b> , 28, 967-74	24	240
641	Influence of Electron Extracting Interface Layers in Organic Bulk-Heterojunction Solar Cells. <b>2016</b> , 3, 1500422		8
640	Solution-Processed Organic Solar Cells with 9.8% Efficiency Based on a New Small Molecule Containing a 2D Fluorinated Benzodithiophene Central Unit. <b>2016</b> , 2, 1600061		54
639	Plasmonic Backscattering Effect in High-Efficient Organic Photovoltaic Devices. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1501640	21.8	37
638	High-Performance Small Molecule via Tailoring Intermolecular Interactions and its Application in Large-Area Organic Photovoltaic Modules. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1600228	21.8	61
637	The lowest-energy charge-transfer state and its role in charge separation in organic photovoltaics. <b>2016</b> , 18, 17546-56		13
636	A simple small molecule as an acceptor for fullerene-free organic solar cells with efficiency near 8%. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 10409-10413	13	96
635	Dithieno[3,2-:2',3'-]pyridin-5(4)-one based D-A type copolymers with wide bandgaps of up to 2.05 eV to achieve solar cell efficiencies of up to 7.33. <b>2016</b> , 7, 6167-6175		41
634	Facilitating Electron Transportation in Perovskite Solar Cells via Water-Soluble Fullerenol Interlayers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 18284-91	9.5	67
633	Employing inorganic/organic hybrid interface layer to improve electron transfer for inverted polymer solar cells. <b>2016</b> , 210, 874-879		3
632	Synthesis and characterizations of carbazole-indigo-carbazole oligomers for photovoltaic application. <b>2016</b> , 658, 103-108		4
631	Multiscale description of molecular packing and electronic processes in small-molecule organic solar cells. <b>2016</b> , 27, 1453-1463		14
630	Straight chain D-A copolymers based on thienothiophene and benzothiadiazole for efficient polymer field effect transistors and photovoltaic cells. <b>2016</b> , 7, 4638-4646		27
629	TPD-based polythiophene derivatives with higher Voc for polymer solar cells. <b>2016</b> , 6, 63338-63346		8

628	Phase separation, crystallinity and monomer-aggregate population control in solution processed small molecule solar cells. <b>2016</b> , 157, 366-376		17
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626	Unlocking the potential of diketopyrrolopyrrole-based solar cells by a pre-solvent annealing method in all-solution processing. <b>2016</b> , 6, 53587-53595		13
625	Enhanced photovoltaic performance in inverted polymer solar cells using Li ion doped ZnO cathode buffer layer. <i>Organic Electronics</i> , <b>2016</b> , 36, 50-56	3.5	19
624	Side-chain engineering of diindenocarbazole-based large bandgap copolymers toward high performance polymer solar cells. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 6160-6168	7.1	11
623	Recent advances in hybrid solar cells based on metal oxide nanostructures. <i>Synthetic Metals</i> , <b>2016</b> , 222, 42-65	3.6	12
622	Synthesis and characterization of solution-processable diketopyrrolopyrrole (DPP) and tetrathienothiophene (TTA)-based small molecules for organic thin film transistors and organic photovoltaic cells. <i>Dyes and Pigments</i> , <b>2016</b> , 133, 280-291	4.6	18
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620	A simple perylene diimide derivative with a highly twisted geometry as an electron acceptor for efficient organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 10659-10665	13	97
619	CuSCN as selective contact in solution-processed small-molecule organic solar cells leads to over 7% efficient porphyrin-based device. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 11009-11022	13	37
618	Isoindigo-based polymer photovoltaics: modifying polymer molecular structures to control the nanostructural packing motif. <b>2016</b> , 18, 17957-64		2
617	D-A-D-ED-A-D type diketopyrrolopyrrole based small molecule electron donors for bulk heterojunction organic solar cells. <b>2016</b> , 18, 16950-7		18
616	Development of Photovoltaic Devices Based on Near Infrared Quantum Dots and Conjugated Polymers. <b>2016</b> , 2, 601-615		5
615	Easy Access to NO <sub>2</sub> -Containing Donor-Acceptor-Acceptor Electron Donors for High Efficiency Small-Molecule Organic Solar Cells. <b>2016</b> , 9, 1433-41		10
614	Enhancement in Photocurrent through Efficient Geometrical Light Trapping in Organic Photovoltaics. <b>2016</b> , 4, 314-318		3
613	Synthesis and Optoelectronic Properties of Benzo[1,2-b:4,5-b']dithiophene-Based Copolymers with Conjugated 2-(2-Ethylhexyl)-3,4-dimethoxythiophene Side Chains. <b>2016</b> , 217, 1586-1599		6
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610	Synthesis and photovoltaic properties of a 2D-conjugated copolymer based on benzodithiophene with alkylthio-selenophene side chain. <b>2016</b> , 6, 14229-14235		6
609	Efficient polymer solar cells based on the synergy effect of a novel non-conjugated small-molecule electrolyte and polar solvent. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 2530-2536	13	45
608	High-Resolution Kelvin Probe Force Microscopy Imaging of Interface Dipoles and Photogenerated Charges in Organic Donor-Acceptor Photovoltaic Blends. <b>2016</b> , 10, 739-46		48
607	High-performance polymer solar cells based on a 2D-conjugated polymer with an alkylthio side-chain. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 885-891	35.4	150
606	Vinylidenedithiophenemethyleneoxindole: a centrosymmetric building block for donor-acceptor copolymers. <b>2016</b> , 7, 1413-1421		24
605	Au/Ag core-shell nanocuboids for high-efficiency organic solar cells with broadband plasmonic enhancement. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 898-905	35.4	107
604	Solution-processed bulk heterojunction solar cells based on porphyrin small molecules with very low energy losses comparable to perovskite solar cells and high quantum efficiencies. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 3843-3850	7.1	34
603	Effects of the incorporation of an additional pyrrolo[3,4-c]pyrrole-1,3-dione unit on the repeating unit of highly efficient large band gap polymers containing benzodithiophene and pyrrolo[3,4-c]pyrrole-1,3-dione derivatives. <i>Organic Electronics</i> , <b>2016</b> , 30, 253-264	3.5	12
602	Highly Efficient and Air Stable Inverted Polymer Solar Cells Using LiF-Modified ITO Cathode and MoO <sub>3</sub> /AgAl Alloy Anode. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 3792-9	9.5	41
601	n-Type Water/Alcohol-Soluble Naphthalene Diimide-Based Conjugated Polymers for High-Performance Polymer Solar Cells. <b>2016</b> , 138, 2004-13		400
600	Design and synthesis of new ultra-low band gap thiadiazoloquinoxaline-based polymers for near-infrared organic photovoltaic application. <b>2016</b> , 6, 14893-14908		22
599	Charge transfer dynamics in poly(3-hexylthiophene): nanodiamond blend films. <b>2016</b> , 64, 8-12		8
598	Alternating dithienobenzoxadiazole-based conjugated polymers for field-effect transistors and polymer solar cells. <i>Organic Electronics</i> , <b>2016</b> , 31, 1-10	3.5	10
597	The Effects of Improved Photoelectric Properties of PEDOT:PSS by Two-Step Treatments on the Performance of Polymer Solar Cells Based on PTB7-Th:PC(71)BM. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 547-52	9.5	18
596	Roll-coating fabrication of flexible organic solar cells: comparison of fullerene and fullerene-free systems. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 1044-1051	13	73
595	Highly conductive, optically transparent, low work-function hydrogen-doped boron-doped ZnO electrodes for efficient ITO-free polymer solar cells. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 691-703	7.1	9
594	Self-healing polymer sealant for encapsulating flexible solar cells. <b>2016</b> , 145, 418-422		37
593	Understanding the effect of solvent vapor annealing on solution-processed AD <sub>n</sub> oligothiophene bulk-heterojunction solar cells: the role of alkyl side chains. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 2571-2580	13	42

592	A spirobifluorene and diketopyrrolopyrrole moieties based non-fullerene acceptor for efficient and thermally stable polymer solar cells with high open-circuit voltage. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 604-610	35.4	316
591	Random terpolymer with a cost-effective monomer and comparable efficiency to PTB7-Th for bulk-heterojunction polymer solar cells. <b>2016</b> , 7, 926-932		37
590	A simple strategy to the side chain functionalization on the quinoxaline unit for efficient polymer solar cells. <b>2016</b> , 52, 6881-4		73
589	Oligothiophene based small molecules with a new end group for solution processed organic photovoltaics. <i>Organic Electronics</i> , <b>2016</b> , 33, 71-77	3.5	5
588	Indacenodithienothiophene- $\beta$ -aphthalene diimide copolymer as an acceptor for all-polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 5810-5816	13	62
587	All-small-molecule organic solar cells based on an electron donor incorporating binary electron-deficient units. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 6056-6063	13	43
586	Solution processed bulk heterojunction solar cells based on ADBA small molecules with a dihydroindoloindole (DINI) central donor and different acceptor end groups. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 3508-3516	7.1	15
585	Enhanced Electron Extraction Capability of Polymer Solar Cells via Employing Electrostatically Self-Assembled Molecule on Cathode Interfacial Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 8224-31	9.5	28
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583	Organic photovoltaic with various plasmonic nanostructures using titanium nitride. <b>2016</b> ,		2
582	New low bandgap near-IR conjugated D-A copolymers for BHJ polymer solar cell applications. <b>2016</b> , 18, 8389-400		13
581	Dicyanoquinodimethane-substituted benzothiadiazole for efficient small-molecule solar cells. <b>2016</b> , 18, 7235-41		17
580	Selenium-substituted polymers for improved photovoltaic performance. <b>2016</b> , 18, 7978-86		14
579	Atmospheric preparation of ZnO thin films by mist chemical vapor deposition for spray-coated organic solar cells. <b>2016</b> , 27, 2676-2681		8
578	Cracking perylene diimide backbone for fullerene-free polymer solar cells. <i>Dyes and Pigments</i> , <b>2016</b> , 128, 226-234	4.6	16
577	Performance Improvement of Polymer Solar Cells by Surface-Energy-Induced Dual Plasmon Resonance. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 6183-9	9.5	39
576	Enhanced organic solar cells efficiency through electronic and electro-optic effects resulting from charge transfers in polymer hole transport blends. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 4252-4263	13	20
575	EDOT-diketopyrrolopyrrole copolymers for polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3477-3486	13	16

574	A non-fullerene electron acceptor modified by thiophene-2-carbonitrile for solution-processed organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3777-3783	13	67
573	Controlling the morphology and hole mobility of terpolymers for polymer solar cells. <b>2016</b> , 6, 13177-13184		14
572	Toward high open-circuit voltage by smart chain engineering in 2D-conjugated polymer for polymer solar cells. <b>2016</b> , 149, 162-169		11
571	Effects of the Terminal Structure, Purity, and Molecular Weight of an Amorphous Conjugated Polymer on Its Photovoltaic Characteristics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 1752-8	9.5	52
570	Wavelength-Scale Structures as Extremely High Haze Films for Efficient Polymer Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 5990-7	9.5	21
569	Long-Term Stable Recombination Layer for Tandem Polymer Solar Cells Using Self-Doped Conducting Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 6144-51	9.5	29
568	Photovoltaic poly(rod-coil) polymers based on benzodithiophene-centred A <sub>n</sub> B <sub>m</sub> type conjugated segments and dicarboxylate-linked alkyl non-conjugated segments. <b>2016</b> , 6, 23300-23309		8
567	Plasmonic nanostructures based on block copolymer templates for efficient organic solar cells. <b>2016</b> , 68, 257-263		1
566	An aqueous solution-processed CuOX film as an anode buffer layer for efficient and stable organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 5130-5136	13	30
565	Efficient polymer tandem modules and solar cells by doctor blading. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 4771-4775	13	8
564	Efficient polymer solar cells employing pure ZnO cathode interlayers without thickness-dependent and light-soaking effect and negligible electrode selection. <b>2016</b> , 6, 25744-25750		4
563	Donor/Acceptor Random versus Alternating Copolymers for Efficient Polymer Solar Cells: Importance of Optimal Composition in Random Copolymers. <i>Macromolecules</i> , <b>2016</b> , 49, 2096-2105	5.5	38
562	Iodide-Passivated Colloidal PbS Nanocrystals Leading to Highly Efficient Polymer:Nanocrystal Hybrid Solar Cells. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 1897-1906	9.6	63
561	Achieving a high fill factor for organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 5784-5801	13	152
560	Synthesis and photovoltaic properties of D-A copolymers based on alkylthio-thiophene or alkylthio-selenophene-BDT donor unit and DPP acceptor unit. <i>Organic Electronics</i> , <b>2016</b> , 33, 15-22	3.5	9
559	Correlations among Chemical Structure, Backbone Conformation, and Morphology in Two Highly Efficient Photovoltaic Polymer Materials. <i>Macromolecules</i> , <b>2016</b> , 49, 120-126	5.5	58
558	Diketopyrrolopyrrole based small molecules with near infrared absorption for solution processed organic solar cells. <i>Dyes and Pigments</i> , <b>2016</b> , 126, 173-178	4.6	15
557	Charge selectivity in polymer:Fullerene-based organic solar cells with a chemically linked polyethylenimine interlayer. <i>Organic Electronics</i> , <b>2016</b> , 29, 120-126	3.5	8



556	Porphyrin small molecules containing furan- and selenophene-substituted diketopyrrolopyrrole for bulk heterojunction organic solar cells. <i>Organic Electronics</i> , <b>2016</b> , 29, 127-134	3.5	34
555	Stability of perovskite solar cells. <b>2016</b> , 147, 255-275		541
554	A series connection architecture for large-area organic photovoltaic modules with a 7.5% module efficiency. <b>2016</b> , 7, 10279		86
553	Designing nanobowl arrays of mesoporous TiO <sub>2</sub> s as an alternative electron transporting layer for carbon cathode-based perovskite solar cells. <b>2016</b> , 8, 6393-402		80
552	All-Polymer Solar Cell Performance Optimized via Systematic Molecular Weight Tuning of Both Donor and Acceptor Polymers. <b>2016</b> , 138, 1240-51		237
551	Investigating the effect of solvent boiling temperature on the active layer morphology of diffusive bilayer solar cells. <b>2016</b> , 9, 012301		13
550	Improved performance of inverted polymer solar cells by utilizing alcohol-soluble oligofluorenes as efficient cathode interlayers. <i>Organic Electronics</i> , <b>2016</b> , 30, 182-190	3.5	8
549	Effect of side chain length on the charge transport, morphology, and photovoltaic performance of conjugated polymers in bulk heterojunction solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 1855-1866	1.2	65
548	D-A-D-A-D push pull organic small molecules based on 5,10-dihydroindolo[3,2-b]indole (DINI) central core donor for solution processed bulk heterojunction solar cells. <i>Organic Electronics</i> , <b>2016</b> , 30, 122-130	3.5	26
547	Interfacial Depletion Regions: Beyond the Space Charge Limit in Thick Bulk Heterojunctions. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 2211-9	9.5	22
546	A conformational locking strategy in linked-acceptor type polymers for organic solar cells. <b>2016</b> , 7, 1323-1329		35
545	Diketopyrrolopyrrole Polymers for Organic Solar Cells. <b>2016</b> , 49, 78-85		385
544	Highly crystalline, low band-gap semiconducting polymers based on phenanthrodithiophene-benzothiadiazole for solar cells and transistors. <b>2016</b> , 7, 1549-1558		17
543	Low bandgap semiconducting polymers for polymeric photovoltaics. <b>2016</b> , 45, 4825-46		372
542	Alkylthio substituted thiophene modified benzodithiophene-based highly efficient photovoltaic small molecules. <i>Organic Electronics</i> , <b>2016</b> , 28, 263-268	3.5	11
541	Induced photodegradation of quinoxaline based copolymers for photovoltaic applications. <b>2016</b> , 144, 150-158		22
540	Fullerene-free small molecule organic solar cells with a high open circuit voltage of 1.15 V. <b>2016</b> , 52, 465-8		69
539	The effect of branching in a semiconducting polymer on the efficiency of organic photovoltaic cells. <b>2016</b> , 52, 92-5		13

538	Locking the morphology with a green, fast and efficient physical cross-linking approach for organic electronic applications. <i>Organic Electronics</i> , <b>2016</b> , 28, 53-58	3.5	2
537	Dialkylthio Substitution: An Effective Method to Modulate the Molecular Energy Levels of 2D-BDT Photovoltaic Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 3575-83	9.5	41
536	NIR absorbing D- $\pi$ -A structured diketopyrrolopyrrole-dithiafulvalene based small molecule for solution processed organic solar cells. <b>2016</b> , 52, 210-3		32
535	Defining donor and acceptor strength in conjugated copolymers. <b>2017</b> , 115, 485-496		12
534	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> , <b>2017</b> , 29, 1605216	24	216
533	A new wide bandgap small molecular acceptor based on indenofluorene derivatives for fullerene-free organic solar cells. <i>Dyes and Pigments</i> , <b>2017</b> , 140, 261-268	4.6	23
532	Ga-doped ZnO as an electron transport layer for PffBT4T-2OD: PC70BM organic solar cells. <i>Organic Electronics</i> , <b>2017</b> , 43, 207-213	3.5	20
531	Enhanced photovoltaic performances of bis(pyrrolo[3,4-c]pyrrole-1,3-dione)-based wide band gap polymer via the incorporation of an appropriate spacer unit between pyrrolo[3,4-c]pyrrole-1,3-dione units. <i>Organic Electronics</i> , <b>2017</b> , 42, 34-41	3.5	7
530	Long lifetime stable and efficient semitransparent organic solar cells using a ZnMgO-modified cathode combined with a thin MoO <sub>3</sub> /Ag anode. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3888-3899	13	29
529	Vacuum-process-based dry transfer of active layer with solvent additive for efficient organic photovoltaic devices. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 1106-1112	7.1	9
528	Nematic liquid crystal materials as a morphology regulator for ternary small molecule solar cells with power conversion efficiency exceeding 10%. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3589-3598	13	157
527	Synthesis and photovoltaic properties low bandgap D-A copolymers based on fluorinated thiadiazoloquinoline. <i>Organic Electronics</i> , <b>2017</b> , 43, 268-276	3.5	5
526	Donor-Acceptor Interface Stabilizer Based on Fullerene Derivatives toward Efficient and Thermal Stable Organic Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 6615-6623	9.5	16
525	Indacenodithiophene-based wide bandgap copolymers for high performance single-junction and tandem polymer solar cells. <b>2017</b> , 33, 313-324		45
524	Development of Spiro[cyclopenta[1,2-b:5,4-b']dithiophene-4,9'-fluorene]-Based A- $\pi$ -A Small Molecules with Different Acceptor Units for Efficient Organic Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 4614-4625	9.5	40
523	Dibenzothiophene-S,S-dioxide and Bispyridinium-Based Cationic Polyfluorene Derivative as an Efficient Cathode Modifier for Polymer Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 4778-4787	9.5	19
522	Fabrication of three-dimensional hybrid nanostructure-embedded ITO and its application as a transparent electrode for high-efficiency solution processable organic photovoltaic devices. <b>2017</b> , 9, 3033-3039		7
521	Broadband absorption enhancement in organic solar cells using refractory plasmonic ceramics. <b>2017</b> , 11, 016001		4

520	Quinoxaline-based D-A conjugated polymers for organic solar cells: Probing the effect of quinoxaline side chains and fluorine substitution on the power conversion efficiency. <b>2017</b> , 55, 1209-1218		6
519	Band Diagram of Heterojunction Solar Cells through Scanning Tunneling Spectroscopy. <b>2017</b> , 2, 582-591		29
518	Small molecule carbazole-based diketopyrrolopyrroles with tetracyanobutadiene acceptor unit as a non-fullerene acceptor for bulk heterojunction organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3311-3319	13	42
517	Temperature-dependent Schottky barrier in high-performance organic solar cells. <b>2017</b> , 7, 40134		22
516	Derivation and solution of effective medium equations for bulk heterojunction organic solar cells. <b>2017</b> , 28, 973-1014		7
515	Theoretical Design of Perylene Diimide Dimers with Different Linkers and Bridged Positions as Promising Non-Fullerene Acceptors for Organic Photovoltaic Cells. <b>2017</b> , 121, 2125-2134		37
514	Study of ITO-free roll-to-roll compatible polymer solar cells using the one-step doctor blading technique. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 4093-4102	13	31
513	Flexible large-area organic tandem solar cells with high defect tolerance and device yield. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3186-3192	13	47
512	Tuning photovoltaic performance of DOBT-based dyes via molecular design with ethynyl-linker and terminal electron-donating segment. <i>Dyes and Pigments</i> , <b>2017</b> , 140, 203-211	4.6	14
511	Enhanced open-circuit voltage in methoxyl substituted benzodithiophene-based polymer solar cells. <b>2017</b> , 60, 243-250		11
510	Boosted Electron Transport and Enlarged Built-In Potential by Eliminating the Interface Barrier in Organic Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 8830-8837	9.5	17
509	Additive-Free Organic Solar Cells with Power Conversion Efficiency over 10%. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602663	21.8	67
508	Effects of alkyl chains on intermolecular packing and device performance in small molecule based organic solar cells. <i>Dyes and Pigments</i> , <b>2017</b> , 141, 262-268	4.6	9
507	High efficiency ternary organic solar cell with morphology-compatible polymers. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 11739-11745	13	64
506	Random DA <sub>1</sub> DA <sub>2</sub> terpolymers based on benzodithiophene, thiadiazole[3,4-e]isoindole-5,7-dione and thieno[3,4-c]pyrrole-4,6-dione for efficient polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 6638-6647	13	18
505	Light manipulation in organic light-emitting devices by integrating micro/nano patterns. <b>2017</b> , 11, 1600145		42
504	A series of dithienobenzodithiophene based small molecules for highly efficient organic solar cells. <b>2017</b> , 60, 552-560		15
503	Integrated solar capacitors for energy conversion and storage. <b>2017</b> , 10, 1545-1559		45

502	Low temperature processed NiO x hole transport layers for efficient polymer solar cells. <i>Organic Electronics</i> , <b>2017</b> , 44, 59-66	3.5	20
501	Precise control over reduction potential of fulleropyrrolidines for organic photovoltaic materials. <b>2017</b> , 7, 7122-7129		7
500	Semi-crystalline photovoltaic polymers with siloxane-terminated hybrid side-chains. <b>2017</b> , 60, 528-536		3
499	Recent Advances in Dual-Functional Devices Integrating Solar Cells and Supercapacitors. <b>2017</b> , 1, 1700002		64
498	Bithienopyrroledione vs. thienopyrroledione based copolymers: dramatic increase of power conversion efficiency in bulk heterojunction solar cells. <b>2017</b> , 53, 3543-3546		11
497	Conjugated-Polymer Blends for Organic Photovoltaics: Rational Control of Vertical Stratification for High Performance. <i>Advanced Materials</i> , <b>2017</b> , 29, 1601674	24	91
496	Naphthalene substituents bonded via the $\beta$ position: 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. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 9141-9147	13	22
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494	Effect of spatial distribution of generation rate on bulk heterojunction organic solar cell performance: A novel semi-analytical approach. <i>Organic Electronics</i> , <b>2017</b> , 46, 226-241	3.5	11
493	Regular Organic Solar Cells with Efficiency over 10% and Promoted Stability by Ligand- and Thermal Annealing-Free Al-Doped ZnO Cathode Interlayer. <i>Advanced Science</i> , <b>2017</b> , 4, 1700053	13.6	46
492	Benzophenone-based small molecular cathode interlayers with various polar groups for efficient polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 10154-10160	13	12
491	Cyclic alkyl chains promote the polymer self-assembly and packing orders for solar cells. <b>2017</b> , 36, 110-117		20
490	Cyclopentadithiophene-based co-oligomers for solution-processed organic solar cells. <i>Dyes and Pigments</i> , <b>2017</b> , 143, 112-122	4.6	4
489	Importance of side-chain anchoring atoms on electron donor/fullerene interfaces for high-performance organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 9316-9321	13	24
488	Polymer solar cells based low bandgap A1-D-A2-D terpolymer based on fluorinated thiadiazoloquinoxaline and benzothiadiazole acceptors with energy loss less than 0.5 eV. <i>Organic Electronics</i> , <b>2017</b> , 46, 192-202	3.5	9
487	Conducting polymers revisited: applications in energy, electrochromism and molecular recognition. <b>2017</b> , 21, 2489-2515		52
486	Synthesis and characterization of a wide bandgap polymer based on a weak donor-weak acceptor structure for dual applications in organic solar cells and organic photodetectors. <i>Organic Electronics</i> , <b>2017</b> , 46, 173-182	3.5	16
485	Cumulative gain in organic solar cells by using multiple optical nanopatterns. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 10347-10354	13	17

484	Terminal $\pi$ -stacking determines three-dimensional molecular packing and isotropic charge transport in an AA electron acceptor for non-fullerene organic solar cells. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 4852-4857	7.1	158
483	Impact of additive residue on the photodegradation of high performance polymer solar cells. <i>Organic Electronics</i> , <b>2017</b> , 49, 226-233	3.5	8
482	Optimization of photocurrent in bulk heterojunction organic solar cells using optical admittance analysis method. <b>2017</b> , 28, 7100-7106		5
481	An Open-Circuit Voltage and Power Conversion Efficiency Study of Fullerene Ternary Organic Solar Cells Based on Oligomer/Oligomer and Oligomer/Polymer. <b>2017</b> , 38, 1700090		4
480	Indium Tin Oxide-Free Small Molecule Organic Solar Cells Using Single-Walled Carbon Nanotube Electrodes. <b>2017</b> , 6, M3181-M3184		13
479	Selenium-Containing Medium Bandgap Copolymer for Bulk Heterojunction Polymer Solar Cells with High Efficiency of 9.8%. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 4811-4818	9.6	49
478	Densely Packed Random Quarterpolymers Containing Two Donor and Two Acceptor Units: Controlling Absorption Ability and Molecular Interaction to Enable Enhanced Polymer Photovoltaic Devices. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1700349	21.8	20
477	High-efficiency photovoltaic cells with wide optical band gap polymers based on fluorinated phenylene-alkoxybenzothiadiazole. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 1443-1455	35.4	63
476	The influence of branched alkyl side chains in ADA oligothiophenes on the photovoltaic performance and morphology of solution-processed bulk-heterojunction solar cells. <b>2017</b> , 4, 1561-1573		23
475	Impact of backbone fluorination on nanoscale morphology and excitonic coupling in polythiophenes. <b>2017</b> , 114, 5113-5118		36
474	Small Molecule Acceptor and Polymer Donor Crystallinity and Aggregation Effects on Microstructure Templating: Understanding Photovoltaic Response in Fullerene-Free Solar Cells. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 4432-4444	9.6	58
473	Comparative indoor and outdoor stability measurements of polymer based solar cells. <b>2017</b> , 7, 1305		25
472	New 3,3'-(ethane-1,2-diylidene)bis(indolin-2-one) (EBI)-based small molecule semiconductors for organic solar cells. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 5143-5153	7.1	4
471	High performance thermal-treatment-free tandem polymer solar cells with high fill factors. <i>Organic Electronics</i> , <b>2017</b> , 47, 79-84	3.5	14
470	Facile Approach to Preparing a Vanadium Oxide Hydrate Layer as a Hole-Transport Layer for High-Performance Polymer Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 18087-18094	9.5	24
469	Efficient planar perovskite solar cells using solution-processed amorphous WO <sub>x</sub> /fullerene C <sub>60</sub> as electron extraction layers. <i>Organic Electronics</i> , <b>2017</b> , 46, 253-262	3.5	45
468	Enhanced Performance and Stability of Polymer Solar Cells by In Situ Formed AlO <sub>x</sub> Passivation and Doping. <b>2017</b> , 121, 10275-10281		10
467	Interface Engineering: A Key Aspect for the Potential Commercialization of Printable Organic Photovoltaic Cells. <b>2017</b> , 235-261		

466	Alkyl Side-Chain Engineering in Wide-Bandgap Copolymers Leading to Power Conversion Efficiencies over 10. <i>Advanced Materials</i> , <b>2017</b> , 29, 1604251	24	199
465	Review: Fullerene based acceptors for efficient bulk heterojunction organic solar cell applications. <b>2017</b> , 161, 102-148		191
464	Optical absorption enhancement by inserting ZnO optical spacer in plasmonic organic solar cells. <b>2017</b> , 12, 012502		5
463	Evaluating the Effect of Heteroatoms on the Photophysical Properties of Donor-Acceptor Conjugated Polymers Based on 2,6-Di(thiophen-2-yl)benzo[1,2-b:4,5-b']difuran: Two-Photon Cross-Section and Ultrafast Time-Resolved Spectroscopy. <b>2017</b> , 121, 14382-14392		24
462	Interface passivation and electron transport improvement of polymer solar cells through embedding a polyfluorene layer. <b>2017</b> , 19, 15207-15214		8
461	Naphthalene diimide-based small molecule acceptors for organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 12266-12277	13	36
460	Low-band gap copolymers based on diketopyrrolopyrrole and dibenzosilole and their application in organic photovoltaics. <i>Dyes and Pigments</i> , <b>2017</b> , 146, 73-81	4.6	5
459	Low-bandgap conjugated polymers based on alkylthiophenyl-substituted benzodithiophene for efficient bulk heterojunction polymer solar cells. <b>2017</b> , 122, 96-104		15
458	Chemical Modification of n-Type-Material Naphthalene Diimide on ITO for Efficient and Stable Inverted Polymer Solar Cells. <b>2017</b> , 33, 8679-8685		9
457	Correlating photovoltaic properties of a PTB7-Th:PC71BM blend to photophysics and microstructure as a function of thermal annealing. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 14646-14657 <sup>13</sup>		49
456	Higher-Energy Charge Transfer States Facilitate Charge Separation in Donor-Acceptor Molecular Dyads. <b>2017</b> , 121, 13043-13051		11
455	Ferrocene-diketopyrrolopyrrole based non-fullerene acceptors for bulk heterojunction polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 13625-13633	13	34
454	On the Role of PTB7-Th:[70]PCBM Blend Concentration in ortho-Xylene on Polymer Solar-Cell Performance. <b>2017</b> , 5, 2168-2174		8
453	Two compatible nonfullerene acceptors with similar structures as alloy for efficient ternary polymer solar cells. <b>2017</b> , 38, 510-517		137
452	Morphology, photophysics and optoelectronics of P3HT nanoparticles and TiO <sub>2</sub> nanorods composite. <b>2017</b> , 31, 1744053		3
451	Side-chain engineering in a thermal precursor approach for efficient photocurrent generation. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 14003-14011	13	19
450	Cooperative plasmon enhanced organic solar cells with thermal coevaporated Au and Ag nanoparticles. <i>Organic Electronics</i> , <b>2017</b> , 48, 336-341	3.5	13
449	Polymer with conjugated alkylthiophenylthienyl side chains for efficient photovoltaic cells. <i>Organic Electronics</i> , <b>2017</b> , 48, 298-307	3.5	3

448	Effect of methanol treatment on the performance of P3HT:PC71BM bulk heterojunction solar cells with various cathodes. <b>2017</b> , 28, 12909-12915		5
447	Novel wide band gap copolymers featuring excellent comprehensive performance towards the practical application for organic solar cells. <b>2017</b> , 8, 4332-4338		11
446	Benzodichalcogenophene-diketopyrrolopyrrole small molecules as donors for efficient solution processable solar cells. <b>2017</b> , 493, 77-84		8
445	Direct Free Carrier Photogeneration in Single Layer and Stacked Organic Photovoltaic Devices. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606909	24	19
444	Organic solar cells processed from green solvents. <b>2017</b> , 5, 49-54		56
443	Dual Roles of the Fullerene Interlayer on Light Harvesting and Electron Transfer for Highly Efficient Polymer Solar Cells. <b>2017</b> , 121, 8722-8730		4
442	High-Performance Nonfullerene Polymer Solar Cells based on Imide-Functionalized Wide-Bandgap Polymers. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606396	24	135
441	5,6-Bis(octyloxy)-2,1,3-benzoxadiazole-based (XDADAD) n polymers incorporating electron-donor building blocks used as photoactive materials in organic solar cells. <b>2017</b> , 27, 207-209		2
440	Side-chain engineering for efficient non-fullerene polymer solar cells based on a wide-bandgap polymer donor. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 9204-9209	13	64
439	Influence of 2,2-bithiophene and thieno[3,2-b] thiophene units on the photovoltaic performance of benzodithiophene-based wide-bandgap polymers. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 4471-4479	7.1	11
438	Ligand-free rutile and anatase TiO <sub>2</sub> nanocrystals as electron extraction layers for high performance inverted polymer solar cells. <b>2017</b> , 7, 20084-20092		71
437	Effects of including electron-withdrawing atoms on the physical and photovoltaic properties of indacenodithieno[3,2-b]thiophene-based donor-acceptor polymers: towards an acceptor design for efficient polymer solar cells. <b>2017</b> , 7, 20440-20450		14
436	A new polymer acceptor containing naphthalene diimide and 1,3,4-thiadiazole for all-polymer solar cells. <b>2017</b> , 55, 990-996		12
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434	Recent Advances in Wide-Bandgap Photovoltaic Polymers. <i>Advanced Materials</i> , <b>2017</b> , 29, 1605437	24	249
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432	Understanding and controlling morphology evolution via DIO plasticization in PffBT4T-2OD/PCBM devices. <b>2017</b> , 7, 44269		43
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428	Effects of alkoxy substitution on molecular structure, physicochemical and photovoltaic properties of 2D-conjugated polymers based on benzo[1,2- b :4,5- b ?]dithiophene and fluorinated benzothiadiazole. <b>2017</b> , 672, 63-69	6
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424	Synthesis and photovoltaic properties of the copolymers containing zinc porphyrin derivatives as pendant groups. <i>Synthetic Metals</i> , <b>2017</b> , 223, 205-211	3.6 9
423	Light Harvesting for Organic Photovoltaics. <b>2017</b> , 117, 796-837	357
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418	Influence of Anion Delocalization on Electron Transfer in a Covalent Porphyrin Donor-Perylenediimide Dimer Acceptor System. <b>2017</b> , 139, 749-756	45
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414	Synthesis of di(ethylene glycol)-functionalized diketopyrrolopyrrole derivative-based side chain-conjugated polymers for bulk heterojunction solar cells. <b>2017</b> , 7, 1016-1025	5
413	Efficient Color-Stable Inverted White Organic Light-Emitting Diodes with Outcoupling-Enhanced ZnO Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 2767-2775	9.5 34



412	Improved Performance of Ternary Polymer Solar Cells Based on A Nonfullerene Electron Cascade Acceptor. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602127	21.8	90
411	Molecular electron acceptors for efficient fullerene-free organic solar cells. <b>2017</b> , 19, 3440-3458		101
410	Nanoscale Morphology from Donor-Acceptor Block Copolymers: Formation and Functions. <b>2017</b> , 157-191		4
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408	Fullerene-free polymer solar cells processed from non-halogenated solvents in air with PCE of 4.8. <b>2017</b> , 53, 1164-1167		52
407	Enhanced thermal stability of a polymer solar cell blend induced by electron beam irradiation in the transmission electron microscope. <b>2017</b> , 173, 16-23		
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405	Recent advances in wide bandgap semiconducting polymers for polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 1860-1872	13	76
404	Catechol derivatives as dopants in PEDOT:PSS to improve the performance of p-i-n perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 24275-24281	13	29
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402	Broadband photon management of subwavelength structures surface for full-spectrum utilization of solar energy. <b>2017</b> , 152, 22-30		10
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398	Ladder-Type Dithienonaphthalene-Based Small-Molecule Acceptors for Efficient Nonfullerene Organic Solar Cells. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 7942-7952	9.6	96
397	Two-Dimensional BDT-Based Wide Band Gap Polymer Donor for Efficient Non-Fullerene Organic Solar Cells. <b>2017</b> , 121, 19634-19641		16
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392	Plasmonic Effect of Gold Nanostars in Highly Efficient Organic and Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 36111-36118	9.5	62
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389	A Universal Route to Realize Radiative Cooling and Light Management in Photovoltaic Modules. <b>2017</b> , 1, 1700084		49
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380	Enhanced Light Harvesting in Perovskite Solar Cells by a Bioinspired Nanostructured Back Electrode. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1700492	21.8	56
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362	Nanostructures induced light harvesting enhancement in organic photovoltaics. <b>2017</b> , 7, 371-391		22
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243	Contrasting Effects of Energy Transfer in Determining Efficiency Improvements in Ternary Polymer Solar Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1704212	15.6	49
242	Overcoming Fill Factor Reduction in Ternary Polymer Solar Cells by Matching the Highest Occupied Molecular Orbital Energy Levels of Donor Polymers. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702251	21.8	41
241	A novel thiazole based acceptor for fullerene-free organic solar cells. <i>Dyes and Pigments</i> , <b>2018</b> , 149, 470-474	4.6	26
240	Exploring more effective polymer donors for the famous non-fullerene acceptor ITIC in organic solar cells by increasing electron-withdrawing ability. <i>Organic Electronics</i> , <b>2018</b> , 53, 308-314	3.5	19
239	Feasible D1AD2A Random Copolymers for Simultaneous High-Performance Fullerene and Nonfullerene Solar Cells. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702166	21.8	53
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236	Hexagonal Array Patterned PMMA Buffer Layer for Efficient Hole Transport and Tailored Interfacial Properties of FTO-Based Organic Solar Cells. <b>2018</b> , 26, 1173-1178		5
235	Comparison Study of Wide Bandgap Polymer (PBDB-T) and Narrow Bandgap Polymer (PBDTTT-EFT) as Donor for Perylene Diimide Based Polymer Solar Cells. <b>2018</b> , 6, 613		3
234	Heterojunction Energetics and Open-Circuit Voltages of Organic Photovoltaic Cells. <b>2018</b> , 487-510		
233	Dithienonaphthalene-Based Non-fullerene Acceptors With Different Bandgaps for Organic Solar Cells. <b>2018</b> , 6, 427		5

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231	High-Performance Flexible Perovskite Solar Cells Enabled by Low-Temperature ALD-Assisted Surface Passivation. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1801153	8.1	26
230	Influence of Blend Morphology and Energetics on Charge Separation and Recombination Dynamics in Organic Solar Cells Incorporating a Nonfullerene Acceptor. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1704389	15.6	68
229	Enhancement of Inverted Polymer Solar Cells Performances Using Cetyltrimethylammonium-Bromide Modified ZnO. <b>2018</b> , 11,		16
228	Understanding Structure-Property Relationships in All-Small-Molecule Solar Cells Incorporating a Fullerene or Nonfullerene Acceptor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 36037-36046	9.5	16
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226	Synthesis, Functional Modifications, and Diversified Applications of Molybdenum Oxides Micro-/Nanocrystals: A Review. <b>2018</b> , 18, 6326-6369		43
225	Enhancement of the air-stability and optimization of VOC by changing molecular conformation of polyelectrolytes. <b>2018</b> , 63, 426-436		1
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223	Efficient chemical structure and device engineering for achieving difluorinated 2,2'-bithiophene-based small molecular organic solar cells with 9.0% efficiency. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 12493-12505	13	19
222	Dual-grating-induced light harvesting enhancement in organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 11830-11837	13	9
221	Efficient, Scalable, and High-Temperature Selective Solar Absorbers Based on Hybrid-Strategy Plasmonic Metamaterials. <b>2018</b> , 2, 1800057		30
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216	Regioregular polymers containing benzodithiophene and thienothiophene segments with different electron donating side chains for high-performance polymer solar cells. <i>Dyes and Pigments</i> , <b>2018</b> , 158, 249-258	4.6	3
215	Influence of side chains on low optical bandgap copolymers based on 2,1,3-benzoxadiazole for polymer solar cells. <i>Organic Electronics</i> , <b>2018</b> , 61, 261-265	3.5	2

214	Design and synthesis of medium-bandgap small-molecule electron acceptors for efficient tandem solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 13588-13592	13	16
213	Developing design criteria for organic solar cells using well-absorbing non-fullerene acceptors. <b>2018</b> , 1,		15
212	A novel bifunctional ADA type small molecule for efficient organic solar cells. <b>2018</b> , 2, 1626-1630		10
211	Organic Solar Cells. <b>2018</b> , 567-597		3
210	Graphene Oxide-Like Materials in Organic and Perovskite Solar Cells. <b>2018</b> , 357-394		5
209	Highly efficient polymer solar cells via multiple cascade energy level engineering. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 9119-9129	7.1	16
208	Influence of perfluorinated ionomer in PEDOT:PSS on the rectification and degradation of organic photovoltaic cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 16012-16028	13	19
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201	Recent Developments in Graphene/Polymer Nanocomposites for Application in Polymer Solar Cells. <b>2018</b> , 10,		76
200	Insights into the Charge-Transfer Mechanism of Organic Photovoltaics: Effect of Domain Size. <b>2018</b> , 122, 17024-17034		10
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198	Diketopyrrolopyrrole-based acceptors with multi-arms for organic solar cells.. <b>2018</b> , 8, 25031-25039		6
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195	Weakening the Aggregations of Polymer Chains toward Efficient Non-Fullerene Polymer Solar Cells. <b>2018</b> , 39, e1800446		5
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193	A propeller-shaped perylene diimide hexamer as a nonfullerene acceptor for organic solar cells. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 9336-9340	7.1	24
192	BN Embedded Polycyclic $\pi$ -Conjugated Systems: Synthesis, Optoelectronic Properties, and Photovoltaic Applications. <b>2018</b> , 6, 341		59
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190	Non-ionic surfactant-novel agents to realize high efficiency non-fullerene opaque and semitransparent organic solar cells with Enhanced Stability. <i>Organic Electronics</i> , <b>2018</b> , 62, 195-202	3.5	5
189	Recent advances in electron acceptors with ladder-type backbone for organic solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 17256-17287	13	45
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184	A helical perylene diimide-based acceptor for non-fullerene organic solar cells: synthesis, morphology and exciton dynamics. <b>2018</b> , 5, 172041		3
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177	Recent progress of light manipulation strategies in organic and perovskite solar cells. <b>2019</b> , 11, 18517-18536		27
176	Synthesis and Characterization of Benzothiadiazole and Dicyanovinylindandione Based Small-Molecular Conjugated Materials and Their Photovoltaic Properties. <b>2019</b> , 27, 1261-1267		6
175	Fuse the Bridge to Acceptor Moiety of Donor-Acceptor Conjugated Polymer: Enabling an All-Round Enhancement in Photovoltaic Parameters of Nonfullerene Organic Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 31087-31095	9.5	18
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172	Simultaneous improvement of three parameters using a binary processing solvent system approach in as-cast non-fullerene solar cells. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 25978-25984	13	9
171	Modifying Reduced Graphene Oxide by Conducting Polymer Through a Hydrothermal Polymerization Method and its Application as Energy Storage Electrodes. <b>2019</b> , 14, 226		37
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167	Highly Selective and Scalable Fullerene-Cation-Mediated Synthesis Accessing Cyclo[60]fullerenes with Five-Membered Carbon Ring and Their Application to Perovskite Solar Cells. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 8432-8439	9.6	27
166	Synthesis and photophysical properties of water-soluble fluorinated poly(aryleneethynylene)s. <b>2019</b> , 10, 612-618		1
165	Study of energy level alignment at weakly interacting small organic molecular thin film interfaces: The validity of classical model from inorganics. <b>2019</b> , 125, 035301		2
164	Progress in non-fullerene acceptor based organic solar cells. <b>2019</b> , 193, 22-65		57
163	Highly efficient polymer solar cells based on low-temperature processed ZnO: application of a bifunctional Au@CNTs nanocomposite. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 2676-2685	7.1	7
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159	Ascendant bioinspired antireflective materials: Opportunities and challenges coexist. <b>2019</b> , 103, 1-68		46
158	Ladder-type dithienocyclopentadibenzothiophene-cored wide-bandgap polymers for efficient non-fullerene solar cells with large open-circuit voltages. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 3307-3316	13	9
157	Towards all-solution-processed top-illuminated flexible organic solar cells using ultrathin Ag-modified graphite-coated poly(ethylene terephthalate) substrates. <b>2019</b> , 8, 297-306		17
156	Medium-Bandgap Conjugated Polymer Donors for Organic Photovoltaics. <b>2019</b> , 40, e1900074		25
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151	Interfacial engineering and optical coupling for multicolored semitransparent inverted organic photovoltaics with a record efficiency of over 12%. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 15887-15894	13	60
150	Understanding the effect of N2200 on performance of J71: ITIC bulk heterojunction in ternary non-fullerene solar cells. <i>Organic Electronics</i> , <b>2019</b> , 71, 65-71	3.5	11
149	The modified PEDOT:PSS as cathode interfacial layer for scalable organic solar cells. <i>Organic Electronics</i> , <b>2019</b> , 71, 143-149	3.5	2
148	Plasmonic Metal Nanoparticles with Core-Bishell Structure for High-Performance Organic and Perovskite Solar Cells. <b>2019</b> , 13, 5397-5409		61
147	New dithienosilole- and dithienogermole-based BODIPY for solar cell applications. <b>2019</b> , 43, 8735-8740		17
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145	Discriminating bulk versus interface shunts in organic solar cells by advanced imaging techniques. <b>2019</b> , 27, 460-468		9
144	Advances in solution processing of organic materials for devices. <b>2019</b> , 551-577		2
143	Designation and Match of Non-Fullerene Acceptors with X-Shaped Donors toward Organic Solar Cells. <b>2019</b> , 4, 3654-3664		8

142	Interplay between synthetic conditions and micromorphology in poly(3,4-ethylenedioxythiophene):tosylate (PEDOT:Tos): an atomistic investigation. <b>2019</b> , 21, 8580-8586		7
141	A probe into underlying factors affecting ultrafast charge transfer at Donor/IDIC interface of all-small-molecule nonfullerene organic solar cells. <b>2019</b> , 375, 1-8		8
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138	Vertically phase-separation based on amination-functionalized fullerene derivatives in inverted polymer solar cells. <i>Solar Energy</i> , <b>2019</b> , 181, 405-413	6.8	5
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136	Acceptor Gradient Polymer Donors for Non-Fullerene Organic Solar Cells. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 9729-9741	9.6	10
135	Carbon-Based Photocathode Materials for Solar Hydrogen Production. <i>Advanced Materials</i> , <b>2019</b> , 31, e1801446	24	54
134	Heteroatom-doped graphene and its application as a counter electrode in dye-sensitized solar cells. <b>2019</b> , 43, 1702-1734		15
133	Synthesis and properties of mono- and di-fluoro-substituted 2,3-didodecylquinoxaline-based polymers for polymer solar cells. <b>2019</b> , 57, 545-552		2
132	Comparing ecotoxicity risks for nanomaterial production and release under uncertainty. <b>2019</b> , 21, 229-242		10
131	Förster resonance energy transfer and morphology optimization for high-performance ternary organic photodetectors. <i>Organic Electronics</i> , <b>2019</b> , 67, 146-152	3.5	16
130	In-Operando Study of the Effects of Solvent Additives on the Stability of Organic Solar Cells Based on PTB7-Th:PC71BM. <b>2019</b> , 4, 464-470		47
129	An all-small-molecule organic solar cell derived from naphthalimide for solution-processed high-efficiency nonfullerene acceptors. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 709-717	7.1	12
128	Effects of the Reduction and/or Fluorination of the TT-Units in BDT-TT Polymers on the Photostability of Polymer:Fullerene Solar Cells. <b>2019</b> , 3, 1800301		8
127	Investigation of the buried planar interfaces in multi-layered inverted organic solar cells using x-ray reflectivity and impedance spectroscopy. <b>2019</b> , 31, 124003		2
126	High-Performance Nonfullerene Polymer Solar Cells Based on a Wide-Bandgap Polymer without Extra Treatment. <b>2019</b> , 40, e1800660		5
125	Si-Bridged Ladder-Type Small-Molecule Acceptors for High-Performance Organic Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 1125-1134	9.5	13



124	Large-Area Organic Solar Cells: Material Requirements, Modular Designs, and Printing Methods. <i>Advanced Materials</i> , <b>2019</b> , 31, e1805089	24	152
123	Effects of processing additives in non-fullerene organic bulk heterojunction solar cells with efficiency >11%. <b>2019</b> , 30, 217-221		13
122	Organic solar cells: Materials and prospects of graphene for active and interfacial layers. <b>2020</b> , 45, 261-288		6
121	Low-bandgap polymers with quinoid unit as bridge for high-performance solar cells. <b>2020</b> , 40, 180-187		4
120	Interfacial Energy Level Tuning for Efficient and Thermostable CsPbIBr Perovskite Solar Cells. <i>Advanced Science</i> , <b>2020</b> , 7, 1901952	13.6	42
119	Functionalization of fullerene by polyethylene glycol toward promoted electron transport in inverted polymer solar cells. <i>Organic Electronics</i> , <b>2020</b> , 77, 105502	3.5	3
118	Tuning opto-electronic properties of alkoxy-induced based electron acceptors in infrared region for high performance organic solar cells. <i>Journal of Molecular Liquids</i> , <b>2020</b> , 298, 111963	6	24
117	Substrate-driven switchable molecular orientation in bulk heterojunction films identified using infrared reflection absorption spectroscopy. <b>2020</b> , 5, 559-564		2
116	High Efficiency Polymer Solar Cells with Efficient Hole Transfer at Zero Highest Occupied Molecular Orbital Offset between Methylated Polymer Donor and Brominated Acceptor. <b>2020</b> , 142, 1465-1474		228
115	A diketopyrrolopyrrole conjugated polymer based on 4,4'-difluoro-2,2'-bithiophene for organic thin-film transistors and organic photovoltaics. <b>2020</b> , 711, 138300		1
114	Synthesis of Selenium Based DII-A-DI-A-DII Type Small Molecular e-Donors Employing Stille Coupling and Their Thermal, Electrochemical and Photovoltaic Properties. <b>2020</b> , 5, 13800-13806		0
113	Light-Induced and Oxygen-Mediated Degradation Processes in Photoactive Layers Based on PTB7-Th. <b>2020</b> , 1, 2000047		1
112	Synthesis and characterization of donor-acceptor semiconducting polymers containing 4-(4-((2-ethylhexyl)oxy)phenyl)-4H-dithieno[3,2-b:2',3'-d]pyrrole for organic solar cells. <b>2020</b> , 44, 16900-16912		4
111	Design of Thienothiophene-Based Copolymers with Various Side Chain-End Groups for Efficient Polymer Solar Cells. <b>2020</b> , 12,		
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107	Narrow Bandpass and Efficient Semitransparent Organic Solar Cells Based on Bioinspired Spectrally Selective Electrodes. <b>2020</b> , 14, 5998-6006		22

106	The effect of different aromatic conjugated bridges on optoelectronic properties of diketopyrrolopyrrole-based donor materials for organic photovoltaics. <b>2020</b> , 26, 154		7
105	Scanning Probe Microscopy Analysis of Nonfullerene Organic Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 29520-29527	9.5	3
104	Determining the exciton diffusion length of copper phthalocyanine in operating planar-heterojunction organic solar cells. <b>2020</b> , 89, 30201		1
103	Identification of Degradation Mechanisms in Slot-Die-Coated Nonfullerene ITO-Free Organic Solar Cells Using Different Illumination Spectra. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 6476-6485	6.1	2
102	Enhanced performance of ternary polymer solar cells via property modulation of co-absorbing wide band-gap polymers. <b>2020</b> , 471, 228457		3
101	Plasmonic effects of copper nanoparticles in polymer photovoltaic devices for outdoor and indoor applications. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 253302	3.4	14
100	Biomimetic Electrodes for Flexible Organic Solar Cells with Efficiencies over 16%. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 2000669	8.1	25
99	High-efficiency polymer solar cells controlled by photoelectrochemically formed ordered polythiophene active layers with various thicknesses. <b>2020</b> , 398, 112627		
98	Asymmetric 9,9'-bifluorenylidene-based small molecules as the non-fullerene acceptors for organic photovoltaic cells. <i>Dyes and Pigments</i> , <b>2020</b> , 177, 108233	4.6	3
97	Functionalizing triptycene to create 3D high-performance non-fullerene acceptors.. <b>2020</b> , 10, 12004-12012		1
96	Direct Growth of Pyramid-Textured Perovskite Single Crystals: A New Strategy for Enhanced Optoelectronic Performance. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2002742	15.6	7
95	Numerical Analysis of Optical Absorption Effect in Nonhalogen Solution-Processed, Inverted Small Molecule Solar Cell. <b>2020</b> , 10, 113		1
94	Degradation of electrical characteristics in low-bandgap polymer solar cells associated with light-induced aging. <i>Organic Electronics</i> , <b>2020</b> , 81, 105686	3.5	3
93	Nanograting Structured Ultrathin Substrate for Ultraflexible Organic Photovoltaics. <b>2020</b> , 4, 1900762		9
92	Surface plasmon enhanced Organic color image sensor with Ag nanoparticles coated with silicon oxynitride. <b>2020</b> , 10, 219		5
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