Chunhui Duan

List of Publications by Citations

103 papers	5,862 citations	38 h-index	75 g-index
107 ext. papers	6,764 ext. citations	11 avg, IF	6.08 L-index

#	Paper	IF	Citations
103	Inverted polymer solar cells with 8.4% efficiency by conjugated polyelectrolyte. *Energy and Environmental Science*, **2012**, 5, 8208	35.4	576
102	Recent development of push–pull conjugated polymers for bulk-heterojunction photovoltaics: rational design and fine tailoring of molecular structures. *Journal of Materials Chemistry*, **2012**, 22, 10416		428
101	Recent advances in water/alcohol-soluble π-conjugated materials: new materials and growing applications in solar cells. *Chemical Society Reviews*, **2013**, 42, 9071-104	58.5	400
100	Materials and Devices toward Fully Solution Processable Organic Light-Emitting Diodes. *Chemistry of Materials*, **2011**, 23, 326-340	9.6	368
99	Optical and electrical effects of gold nanoparticles in the active layer of polymer solar cells. *Journal of Materials Chemistry*, **2012**, 22, 1206-1211		203
98	Highly efficient fullerene/perovskite planar heterojunction solar cells via cathode modification with an amino-functionalized polymer interlayer. *Journal of Materials Chemistry A*, **2014**, 2, 19598-19603	13	174
97	A high dielectric constant non-fullerene acceptor for efficient bulk-heterojunction organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 395-403	13	173
96	Morphology Optimization via Side Chain Engineering Enables All-Polymer Solar Cells with Excellent Fill Factor and Stability. *Journal of the American Chemical Society*, **2018**, 140, 8934-8943	16.4	171
95	Donor Polymers Containing Benzothiadiazole and Four Thiophene Rings in Their Repeating Units with Improved Photovoltaic Performance. *Macromolecules*, **2009**, 42, 4410-4415	5.5	146
94	Toward green solvent processable photovoltaic materials for polymer solar cells: the role of highly polar pendant groups in charge carrier transport and photovoltaic behavior. *Energy and Environmental Science*, **2013**, 6, 3022	35.4	142
93	Novel Silafluorene-Based Conjugated Polymers with Pendant Acceptor Groups for High Performance Solar Cells. *Macromolecules*, **2010**, 43, 5262-5268	5.5	125
92	Synthesis of Quinoxaline-Based Donor–Acceptor Narrow-Band-Gap Polymers and Their Cyclized Derivatives for Bulk-Heterojunction Polymer Solar Cell Applications. *Macromolecules*, **2011**, 44, 894-901	5.5	123
91	A series of new medium-bandgap conjugated polymers based on naphtho[1,2-c:5,6-c]bis(2-octyl-[1,2,3]triazole) for high-performance polymer solar cells. *Advanced Materials*, **2013**, 25, 3683-8	24	118
90	16% efficiency all-polymer organic solar cells enabled by a finely tuned morphology via the design of ternary blend. *Joule*, **2021**, 5, 914-930	27.8	110
89	Conjugated zwitterionic polyelectrolyte-based interface modification materials for high performance polymer optoelectronic devices. *Chemical Science*, **2013**, 4, 1298	9.4	108
88	Conjugated zwitterionic polyelectrolytes and their neutral precursor as electron injection layer for high-performance polymer light-emitting diodes. *Advanced Materials*, **2011**, 23, 1665-9	24	102
87	Progress of the key materials for organic solar cells. *Science China Chemistry*, **2020**, 63, 758-765	7.9	101

86	Highly Efficient Inverted Polymer Solar Cells Based on an Alcohol Soluble Fullerene Derivative Interfacial Modification Material. *Chemistry of Materials*, **2012**, 24, 1682-1689	9.6	100
85	Efficient Organic Solar Cells with Extremely High Open-Circuit Voltages and Low Voltage Losses by Suppressing Nonradiative Recombination Losses. *Advanced Energy Materials*, **2018**, 8, 1801699	21.8	97
84	Wide-Bandgap Benzodithiophene-Benzothiadiazole Copolymers for Highly Efficient Multijunction Polymer Solar Cells. *Advanced Materials*, **2015**, 27, 4461-4468	24	95
83	Toward Practical Useful Polymers for Highly Efficient Solar Cells via a Random Copolymer Approach. *Journal of the American Chemical Society*, **2016**, 138, 10782-5	16.4	90
82	Synthesis, Characterization, and Photovoltaic Properties of Carbazole-Based Two-Dimensional Conjugated Polymers with Donor-Bridge-Acceptor Side Chains. *Chemistry of Materials*, **2010**, 22, 6444-6452	9.6	90
81	The Role of the Axial Substituent in Subphthalocyanine Acceptors for Bulk-Heterojunction Solar Cells. *Angewandte Chemie - International Edition*, **2017**, 56, 148-152	16.4	85
80	Solution processed thick film organic solar cells. *Polymer Chemistry*, **2015**, 6, 8081-8098	4.9	76
79	Control of efficiency, brightness, and recombination zone in light-emitting field effect transistors. *Advanced Materials*, **2012**, 24, 1171-5	24	74
78	Effect of side chain length on the charge transport, morphology, and photovoltaic performance of conjugated polymers in bulk heterojunction solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 1855-1866	13	65
77	Design and Synthesis of Copolymers of Indacenodithiophene and Naphtho[1,2-c:5,6-c]bis(1,2,5-thiadiazole) for Polymer Solar Cells. *Macromolecules*, **2013**, 46, 3950-3958	5.5	65
76	Alkyl Chain Length Effects of Polymer Donors on the Morphology and Device Performance of Polymer Solar Cells with Different Acceptors. *Advanced Energy Materials*, **2019**, 9, 1901740	21.8	60
75	15.4% Efficiency all-polymer solar cells. *Science China Chemistry*, **2021**, 64, 408-412	7.9	48
74	Non-planar perylenediimide acceptors with different geometrical linker units for efficient non-fullerene organic solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 1713-1723	13	47
73	Star-shaped electron acceptors containing a truxene core for non-fullerene solar cells. *Organic Electronics*, **2018**, 52, 42-50	3.5	45
72	Nonfused Nonfullerene Acceptors with an A-D-ASD-A Framework and a Benzothiadiazole Core for High-Performance Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2020**, 12, 16531-16540	9.5	44
71	The new era for organic solar cells: non-fullerene small molecular acceptors. *Science Bulletin*, **2020**, 65, 1231-1233	10.6	43
70	Thiophene Rings Improve the Device Performance of Conjugated Polymers in Polymer Solar Cells with Thick Active Layers. *Advanced Energy Materials*, **2017**, 7, 1700519	21.8	42
69	The new era for organic solar cells: polymer donors. *Science Bulletin*, **2020**, 65, 1422-1424	10.6	40

68	The new era for organic solar cells: polymer acceptors. *Science Bulletin*, **2020**, 65, 1508-1510	10.6	39
67	Surpassing 13% Efficiency for Polythiophene Organic Solar Cells Processed from Nonhalogenated Solvent. *Advanced Materials*, **2021**, 33, e2008158	24	39
66	A novel crosslinkable electron injection/transporting material for solution processed polymer light-emitting diodes. *Science China Chemistry*, **2011**, 54, 1745-1749	7.9	38
65	3,4-Dicyanothiophene□ Versatile Building Block for Efficient Nonfullerene Polymer Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1904247	21.8	35
64	Design and synthesis of star-burst triphenyamine-based □conjugated molecules. *Dyes and Pigments*, **2015**, 113, 1-7	4.6	33
63	The effect of methanol treatment on the performance of polymer solar cells. *Nanotechnology*, **2013**, 24, 484003	3.4	32
62	A Facile Synthesized Polymer Featuring B-N Covalent Bond and Small Singlet-Triplet Gap for High-Performance Organic Solar Cells. *Angewandte Chemie - International Edition*, **2021**, 60, 8813-8817	16.4	32
61	Conjugated Polymers Based on Difluorobenzoxadiazole toward Practical Application of Polymer Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1702033	21.8	30
60	Two-dimensional like conjugated copolymers for high efficiency bulk-heterojunction solar cell application: Band gap and energy level engineering. *Science China Chemistry*, **2011**, 54, 685-694	7.9	30
59	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
58	Polythiophene derivatives compatible with both fullerene and non-fullerene acceptors for polymer solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 314-323	7.1	29
57	Synthesis of two-dimensional □conjugated polymers pendent with benzothiadiazole and naphtho[1,2-c:5,6-c]bis[1,2,5]thiadiazole moieties for polymer solar cells. *Science China Chemistry*, **2015**, 58, 257-266	7.9	28
56	New acceptor-pended conjugated polymers based on 3,6- and 2,7-carbazole for polymer solar cells. *Polymer*, **2012**, 53, 5675-5683	3.9	28
55	High open circuit voltage polymer solar cells enabled by employing thiazoles in semiconducting polymers. *Polymer Chemistry*, **2016**, 7, 5730-5738	4.9	25
54	Novel donor□cceptor type conjugated polymers based on quinoxalino[6,5-f]quinoxaline for photovoltaic applications. *Materials Chemistry Frontiers*, **2017**, 1, 499-506	7.8	24
53	Conjugated Polymers Based on Thiazole Flanked Naphthalene Diimide for Unipolar n-Type Organic Field-Effect Transistors. *Chemistry of Materials*, **2018**, 30, 8343-8351	9.6	24
52	The Role of the Axial Substituent in Subphthalocyanine Acceptors for Bulk-Heterojunction Solar Cells. *Angewandte Chemie*, **2017**, 129, 154-158	3.6	22
51	Indoor organic photovoltaics. *Science Bulletin*, **2020**, 65, 2040-2042	10.6	22

50	Backbone Fluorination of Polythiophenes Improves Device Performance of Non-Fullerene Polymer Solar Cells. *ACS Applied Energy Materials*, **2019**, 2, 7572-7583	6.1	21
49	A donor polymer based on 3-cyanothiophene with superior batch-to-batch reproducibility for high-efficiency organic solar cells. *Energy and Environmental Science*,	35.4	21
48	Al□+-induced far-red fluorescence enhancement of conjugated polymer nanoparticles and its application in live cell imaging. *Nanoscale*, **2013**, 5, 9340-7	7.7	20
47	Bandgap engineering of indenofluorene-based conjugated copolymers with pendant donor-□cceptor chromophores for photovoltaic applications. *Journal of Polymer Science Part A*, **2011**, 49, 4406-4415	2.5	20
46	Synthesis of donor□cceptor copolymers based on anthracene derivatives for polymer solar cells. *Polymer Chemistry*, **2013**, 4, 3949	4.9	19
45	A study of optical properties enhancement in low-bandgap polymer solar cells with embedded PEDOT:PSS gratings. *Solar Energy Materials and Solar Cells*, **2012**, 99, 327-332	6.4	18
44	Efficient Thick-Film Polymer Solar Cells with Enhanced Fill Factors via Increased Fullerene Loading. *ACS Applied Materials & Interfaces*, **2019**, 11, 10794-10800	9.5	17
43	Subnaphthalocyanines as Electron Acceptors in Polymer Solar Cells: Improving Device Performance by Modifying Peripheral and Axial Substituents. *Chemistry - A European Journal*, **2018**, 24, 6339-6343	4.8	17
42	Reduced Energy Loss in Non-Fullerene Organic Solar Cells with Isomeric Donor Polymers Containing Thiazole □Spacers. *ACS Applied Materials & Interfaces*, **2020**, 12, 753-762	9.5	17
41	Polythiophenes for organic solar cells with efficiency surpassing 17%. *Joule*, **2022**, 6, 647-661	27.8	17
40	Fully visible-light-harvesting conjugated polymers with pendant donor-□cceptor chromophores for photovoltaic applications. *Solar Energy Materials and Solar Cells*, **2012**, 97, 50-58	6.4	16
39	Conjugated Polymer Nanoparticles with Ag+-Sensitive Fluorescence Emission: A New Insight into the Cooperative Recognition Mechanism. *Particle and Particle Systems Characterization*, **2013**, 30, 972-980	3.1	16
38	An efficient binary cathode interlayer for large-bandgap non-fullerene organic solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 12426-12433	13	15
37	Synthesis and optoelectronic properties of amino-functionalized carbazole-based conjugated polymers. *Science China Chemistry*, **2013**, 56, 1119-1128	7.9	14
36	The new era for organic solar cells: small molecular donors. *Science Bulletin*, **2020**, 65, 1597-1599	10.6	14
35	Efficient Organic Ternary Solar Cells Employing Narrow Band Gap Diketopyrrolopyrrole Polymers and Nonfullerene Acceptors. *Chemistry of Materials*, **2020**, 32, 7309-7317	9.6	14
34	Non-conjugated water/alcohol soluble polymers with different oxidation states of sulfide as cathode interlayers for high-performance polymer solar cells. *Journal of Materials Chemistry C*, **2016**, 4, 4288-4295	7.1	14
33	The influence of amino group on PCDTBT-based and P3HT-based polymer solar cells: Hole trapping processes. *Applied Physics Letters*, **2015**, 106, 233302	3.4	13

32	Layer-by-layer processed binary all-polymer solar cells with efficiency over 16% enabled by finely optimized morphology. *Nano Energy*, **2022**, 93, 106858	17.1	13
31	Improving Performance of All-Polymer Solar Cells Through Backbone Engineering of Both Donors and Acceptors. *Solar Rrl*, **2018**, 2, 1800247	7.1	13
30	All-polymer solar cells. *Journal of Semiconductors*, **2021**, 42, 080301	2.3	13
29	Phosphonium conjugated polyelectrolytes as interface materials for efficient polymer solar cells. *Organic Electronics*, **2018**, 57, 151-157	3.5	12
28	Highly Efficient Simple-Structure Sky-Blue Organic Light-Emitting Diode Using a Bicarbazole/Cyanopyridine Bipolar Host. *ACS Applied Materials & Interfaces*, **2021**, 13, 13459-13469	9.5	12
27	Bulk Heterojunction Quasi-Two-Dimensional Perovskite Solar Cell with 1.18 V High Photovoltage. *ACS Applied Materials & Interfaces*, **2019**, 11, 2935-2943	9.5	12
26	Electron Acceptors With a Truxene Core and Perylene Diimide Branches for Organic Solar Cells: The Effect of Ring-Fusion. *Frontiers in Chemistry*, **2018**, 6, 328	5	12
25	Ternary All-Polymer Solar Cells With 8.5% Power Conversion Efficiency and Excellent Thermal Stability. *Frontiers in Chemistry*, **2020**, 8, 302	5	11
24	Morphology evolution with polymer chain propagation and its impacts on device performance and stability of non-fullerene solar cells. *Journal of Materials Chemistry A*, **2021**, 9, 556-565	13	11
23	Ternary copolymers containing 3,4-dicyanothiophene for efficient organic solar cells with reduced energy loss. *Journal of Materials Chemistry A*, **2021**, 9, 13522-13530	13	11
22	Achieving 16% Efficiency for Polythiophene Organic Solar Cells with a Cyano-Substituted Polythiophene. *Advanced Functional Materials*,2201142	15.6	11
21	High open-circuit voltage organic solar cells enabled by a difluorobenzoxadiazole-based conjugated polymer donor. *Science China Chemistry*, **2019**, 62, 829-836	7.9	10
20	Design, synthesis and photovoltaic properties of a series of new acceptor-pended conjugated polymers. *Science China Chemistry*, **2016**, 59, 1583-1592	7.9	10
19	Adjusting Aggregation Modes and Photophysical and Photovoltaic Properties of Diketopyrrolopyrrole-Based Small Molecules by Introducing B<-N Bonds. *Chemistry - A European Journal*, **2019**, 25, 564-572	4.8	10
18	4-Methylthio substitution on benzodithiophene-based conjugated polymers for high open-circuit voltage polymer solar cells. *Synthetic Metals*, **2019**, 254, 122-127	3.6	8
17	Alkali metal salts doped pluronic block polymers as electron injection/transport layers for high performance polymer light-emitting diodes. *Science China Chemistry*, **2012**, 55, 766-771	7.9	8
16	A Facile Synthesized Polymer Featuring B-N Covalent Bond and Small Singlet-Triplet Gap for High-Performance Organic Solar Cells. *Angewandte Chemie*, **2021**, 133, 8895-8899	3.6	7
15	Low-bandgap conjugated polymers based on benzodipyrrolidone with reliable unipolar electron mobility exceeding 1 cm2 V□ s□. *Science China Chemistry*, **2021**, 64, 1219-1227	7.9	7

14	The Renaissance of Oligothiophene-Based Donor–Acceptor Polymers in Organic Solar Cells. *Advanced Energy Materials*,2104050	21.8	7
13	A Wide-Bandgap Conjugated Polymer Based on Quinoxalino[6,5-f]quinoxaline for Fullerene and Non-Fullerene Polymer Solar Cells. *Macromolecular Rapid Communications*, **2019**, 40, e1900120	4.8	6
12	Hydrophobic Fluorinated Conjugated Polymer as a Multifunctional Interlayer for High-Performance Perovskite Solar Cells. *ACS Photonics*,	6.3	6
11	Sequentially Deposited Active Layer with Bulk-Heterojunction-like Morphology for Efficient Conventional and Inverted All-Polymer Solar Cells. *ACS Applied Energy Materials*, **2021**, 4, 13307-13315	6.1	5
10	Energy level modulation of donor–acceptor alternating random conjugated copolymers for achieving high-performance polymer solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 15335-15343	7.1	5
9	High-Performance All-Polymer Solar Cells and Photodetectors Enabled by a High-Mobility n-Type Polymer and Optimized Bulk-Heterojunction Morphology. *Chemistry of Materials*, **2021**, 33, 3746-3756	9.6	4
8	N-Type Quinoidal Polymers Based on Dipyrrolopyrazinedione for Application in All-Polymer Solar Cells. *Chemistry - A European Journal*, **2021**, 27, 13527-13533	4.8	3
7	Optimized active layer morphology via side-chain atomic substituents to achieve efficient and stable all-polymer solar cells. *Journal of Materials Chemistry C*, **2021**, 9, 9515-9523	7.1	3
6	Non-Fused Polymerized Small Molecular Acceptors for Efficient All-Polymer Solar Cells. *Solar Rrl*,2101034	7.1	3
5	Multistrategy Toward Highly Efficient and Stable CsPbI 2 Br Perovskite Solar Cells Based on Dopant-Free Poly(3-Hexylthiophene). *Solar Rrl*,2100880	7.1	2
4	Truxene Functionalized Star-Shaped Non-fullerene Acceptor With Selenium-Annulated Perylene Diimides for Efficient Organic Solar Cells. *Frontiers in Chemistry*, **2021**, 9, 681994	5	1
3	High-efficiency P3HT-based all-polymer solar cells with a thermodynamically miscible polymer acceptor. *Solar Rrl*,	7.1	1
2	Direct arylation polycondensation towards water/alcohol-soluble conjugated polymers as the electron transporting layers for organic solar cells. *Chemical Communications*, **2021**, 57, 5798-5801	5.8	0
1	Development of Active Materials and Interface Materials for High Performance Bulk-Heterojunction Polymer Solar Cells. *Topics in Applied Physics*, **2015**, 191-219	0.5	