Xiaobin Peng

List of Publications by Citations

49 papers	3,241 citations	28 h-index	50 g-index
50 ext. papers	3,583 ext. citations	11.9 avg, IF	5.1 L-index

#	Paper	IF	Citations
49	Solution-processed organic tandem solar cells with power conversion efficiencies >12%. *Nature Photonics*, **2017**, 11, 85-90	33.9	458
48	Deep absorbing porphyrin small molecule for high-performance organic solar cells with very low energy losses. *Journal of the American Chemical Society*, **2015**, 137, 7282-5	16.4	396
47	Over 12% Efficiency Nonfullerene All-Small-Molecule Organic Solar Cells with Sequentially Evolved Multilength Scale Morphologies. *Advanced Materials*, **2019**, 31, e1807842	24	228
46	11% Efficient Ternary Organic Solar Cells with High Composition Tolerance via Integrated Near-IR Sensitization and Interface Engineering. *Advanced Materials*, **2016**, 28, 8184-8190	24	227
45	Multi-Length-Scale Morphologies Driven by Mixed Additives in Porphyrin-Based Organic Photovoltaics. *Advanced Materials*, **2016**, 28, 4727-33	24	219
44	Solution-processed bulk heterojunction solar cells based on a porphyrin small molecule with 7% power conversion efficiency. *Energy and Environmental Science*, **2014**, 7, 1397-1401	35.4	184
43	Highly Efficient Porphyrin-Based OPV/Perovskite Hybrid Solar Cells with Extended Photoresponse and High Fill Factor. *Advanced Materials*, **2017**, 29, 1703980	24	148
42	High-Performance Polymer Tandem Solar Cells Employing a New n-Type Conjugated Polymer as an Interconnecting Layer. *Advanced Materials*, **2016**, 28, 4817-23	24	137
41	Enhanced performance of solution-processed solar cells based on porphyrin small molecules with a diketopyrrolopyrrole acceptor unit and a pyridine additive. *Journal of Materials Chemistry A*, **2013**, 1, 2144-2150	13	90
40	Small-Molecule Solar Cells with Simultaneously Enhanced Short-Circuit Current and Fill Factor to Achieve 11% Efficiency. *Advanced Materials*, **2017**, 29, 1700616	24	79
39	Low-Bandgap Porphyrins for Highly Efficient Organic Solar Cells: Materials, Morphology, and Applications. *Advanced Materials*, **2020**, 32, e1906129	24	78
38	Solution processed small molecule bulk heterojunction organic photovoltaics based on a conjugated donor□cceptor porphyrin. *Journal of Materials Chemistry*, **2012**, 22, 21841		75
37	Structural engineering of porphyrin-based small molecules as donors for efficient organic solar cells. *Chemical Science*, **2016**, 7, 4301-4307	9.4	69
36	Multiple Roles of a Non-fullerene Acceptor Contribute Synergistically for High-Efficiency Ternary Organic Photovoltaics. *Joule*, **2018**, 2, 2154-2166	27.8	66
35	Highly responsive organic near-infrared photodetectors based on a porphyrin small molecule. *Journal of Materials Chemistry C*, **2014**, 2, 1372	7.1	59
34	New insight of molecular interaction, crystallization and phase separation in higher performance small molecular solar cells via solvent vapor annealing. *Nano Energy*, **2016**, 30, 639-648	17.1	58
33	New Terthiophene-Conjugated Porphyrin Donors for Highly Efficient Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 30176-30183	9.5	53

32	A complementary absorption small molecule for efficient ternary organic solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 5288-5293	13	52
31	Modifying the Chemical Structure of a Porphyrin Small Molecule with Benzothiophene Groups for the Reproducible Fabrication of High Performance Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 7131-7138	9.5	51
30	A-D-A Type Small Molecules Based on Boron Dipyrromethene for Solution-Processed Organic Solar Cells. *Chemistry - an Asian Journal*, **2015**, 10, 1513-8	4.5	39
29	Ternary Solar Cells Based on Two Small Molecule Donors with Same Conjugated Backbone: The Role of Good Miscibility and Hole Relay Process. *ACS Applied Materials & Interfaces*, **2017**, 9, 29917-29923	9.5	38
28	High-Efficiency Small Molecule-Based Bulk-Heterojunction Solar Cells Enhanced by Additive Annealing. *ACS Applied Materials & Interfaces*, **2015**, 7, 21495-502	9.5	35
27	A visible-near-infrared absorbing A2D1D2A type dimeric-porphyrin donor for high-performance organic solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 25460-25468	13	35
26	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. *Journal of Materials Chemistry C*, **2016**, 4, 3843-3850	7.1	34
25	Porphyrin small molecules containing furan- and selenophene-substituted diketopyrrolopyrrole for bulk heterojunction organic solar cells. *Organic Electronics*, **2016**, 29, 127-134	3.5	34
24	A low-bandgap dimeric porphyrin molecule for 10% efficiency solar cells with small photon energy loss. *Journal of Materials Chemistry A*, **2018**, 6, 18469-18478	13	29
23	A water/alcohol-soluble conjugated porphyrin small molecule as a cathode interfacial layer for efficient organic photovoltaics. *Journal of Materials Chemistry A*, **2016**, 4, 15156-15161	13	29
22	Facile integration of low-cost black phosphorus in solution-processed organic solar cells with improved fill factor and device efficiency. *Nano Energy*, **2018**, 53, 345-353	17.1	29
21	Doping ZnO with Water/Alcohol-Soluble Small Molecules as Electron Transport Layers for Inverted Polymer Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 28225-28230	9.5	28
20	Conjugated D-A porphyrin dimers for solution-processed bulk-heterojunction organic solar cells. *Chemical Communications*, **2017**, 53, 5113-5116	5.8	26
19	Dimeric Porphyrin Small Molecules for Efficient Organic Solar Cells with High Photoelectron Response in the Near-Infrared Region. *ACS Applied Materials & Interfaces*, **2018**, 10, 668-675	9.5	25
18	High-detectivity panchromatic photodetectors for the near infrared region based on a dimeric porphyrin small molecule. *Journal of Materials Chemistry C*, **2018**, 6, 3341-3345	7.1	24
17	Origin of Reduced Open-Circuit Voltage in Highly Efficient Small-Molecule-Based Solar Cells upon Solvent Vapor Annealing. *ACS Applied Materials & Interfaces*, **2018**, 10, 8141-8147	9.5	21
16	Highly efficient small molecule solar cells fabricated with non-halogenated solvents. *RSC Advances*, **2015**, 5, 92312-92317	3.7	12
15	Cathode interlayer-free organic solar cells with enhanced device performance upon alcohol treatment. *Journal of Materials Chemistry C*, **2019**, 7, 7947-7952	7.1	10

14	All-porphyrin organic solar cells. *Dyes and Pigments*, **2020**, 180, 108503	4.6	10
13	Improving the efficiencies of small molecule solar cells by solvent vapor annealing to enhance J-aggregation. *Journal of Materials Chemistry C*, **2019**, 7, 9618-9624	7.1	9
12	A-DA-DA small molecules for ternary solar cells. *Dyes and Pigments*, **2019**, 164, 148-155	4.6	8
11	Highly Efficient Ternary Solar Cells with Efficient Förster Resonance Energy Transfer for Simultaneously Enhanced Photovoltaic Parameters. *Advanced Functional Materials*, **2021**, 31, 2105304	15.6	7
10	Conjugated ionic porphyrins as the cathode interlayer materials in organic solar cells. *Organic Electronics*, **2018**, 62, 107-113	3.5	6
9	Selective Adsorption of C in the Supramolecular Nanopatterns of Donor-Acceptor Porphyrin Derivatives. *Langmuir*, **2019**, 35, 14511-14516	4	5
8	Alcohol soluble porphyrin for the cathode buffer layers of fullerene/perovskite planar heterojunction solar cells. *Organic Electronics*, **2018**, 59, 414-418	3.5	5
7	Morphology Evolution Induced by Sequential Annealing Enabling Enhanced Efficiency in All-Small Molecule Solar Cells. *ACS Applied Energy Materials*, **2021**, 4, 4234-4241	6.1	4
6	Unravelling the Self-Assembly of Diketopyrrolopyrrole-Based Photovoltaic Molecules. *Langmuir*, **2018**, 34, 11952-11959	4	3
5	Doping porphyrin-based bulk heterojunction solar cells with LITFSI and TFSA. *Journal of Materials Chemistry C*, **2017**, 5, 11573-11578	7.1	2
4	Influence of the CN substitution position on the performance of dicyanodistyrylbenzene-based polymer solar cells. *Polymer Chemistry*, **2020**, 11, 1653-1662	4.9	2
3	Molecular engineering of narrow bandgap porphyrin derivatives for highly efficient photothermal conversion. *Dyes and Pigments*, **2021**, 192, 109460	4.6	2
2	Porphyrin-Based All-Small-Molecule Organic Solar Cells With Absorption-Complementary Nonfullerene Acceptor. *IEEE Journal of Photovoltaics*, **2021**, 1-6	3.7	1
1	Porphyrin Acceptors with Two Perylene Diimide Dimers for Organic Solar Cells. *ChemSusChem*, **2021**, 14, 3614-3621	8.3	1