Xiaobin Peng

List of Publications by Year
in descending order

50 papers	3,814 citations	147726 31 h-index	189801 50 g-index
50 all docs	50 docs citations	50 times ranked	3737 citing authors

#	Article	IF	Citations
1	Solution-processed organic tandem solar cells with power conversion efficiencies >12%. Nature Photonics, 2017, 11, 85-90.	15.6	510
2	Deep Absorbing Porphyrin Small Molecule for High-Performance Organic Solar Cells with Very Low Energy Losses. Journal of the American Chemical Society, 2015, 137, 7282-7285.	6.6	436
3	Over 12% Efficiency Nonfullerene Allâ€Smallâ€Molecule Organic Solar Cells with Sequentially Evolved Multilength Scale Morphologies. Advanced Materials, 2019, 31, e1807842.	11.1	272
4	Multiâ€Lengthâ€Scale Morphologies Driven by Mixed Additives in Porphyrinâ€Based Organic Photovoltaics. Advanced Materials, 2016, 28, 4727-4733.	11.1	251
5	11% Efficient Ternary Organic Solar Cells with High Composition Tolerance via Integrated Nearâ€IR Sensitization and Interface Engineering. Advanced Materials, 2016, 28, 8184-8190.	11.1	246
6	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.	15.6	200
7	Highly Efficient Porphyrinâ€Based OPV/Perovskite Hybrid Solar Cells with Extended Photoresponse and High Fill Factor. Advanced Materials, 2017, 29, 1703980.	11.1	176
8	Highâ€Performance Polymer Tandem Solar Cells Employing a New nâ€Type Conjugated Polymer as an Interconnecting Layer. Advanced Materials, 2016, 28, 4817-4823.	11.1	156
9	Lowâ€Bandgap Porphyrins for Highly Efficient Organic Solar Cells: Materials, Morphology, and Applications. Advanced Materials, 2020, 32, e1906129.	11.1	143
10	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.	5.2	94
11	Smallâ€Molecule Solar Cells with Simultaneously Enhanced Shortâ€Circuit Current and Fill Factor to Achieve 11% Efficiency. Advanced Materials, 2017, 29, 1700616.	11.1	87
12	Multiple Roles of a Non-fullerene Acceptor Contribute Synergistically for High-Efficiency Ternary Organic Photovoltaics. Joule, 2018, 2, 2154-2166.	11.7	85
13	Solution processed small molecule bulk heterojunction organic photovoltaics based on a conjugated donorâ€“acceptor porphyrin. Journal of Materials Chemistry, 2012, 22, 21841.	6.7	81
14	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.	8.2	77
15	Highly responsive organic near-infrared photodetectors based on a porphyrin small molecule. Journal of Materials Chemistry C, 2014, 2, 1372.	2.7	74
16	Structural engineering of porphyrin-based small molecules as donors for efficient organic solar cells. Chemical Science, 2016, 7, 4301-4307.	3.7	72
17	New Terthiophene-Conjugated Porphyrin Donors for Highly Efficient Organic Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 30176-30183.	4.0	61
18	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.	4.0	57

#	Article	IF	Citations
19	A complementary absorption small molecule for efficient ternary organic solar cells. Journal of Materials Chemistry A, 2016, 4, 5288-5293.	5.2	56
20	Aâ€Ðâ€A Type Small Molecules Based on Boron Dipyrromethene for Solutionâ€Processed Organic Solar Cells. Chemistry - an Asian Journal, 2015, 10, 1513-1518.	1.7	45
21	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.	4.0	45
22	A visible-near-infrared absorbing Aâ€“Ï€₂â€“Dâ€“Ï€₁â€“Dâ€“Ï€₂â€“A type dimeric-porphyrin donor for high-performance organic solar cells. Journal of Materials Chemistry A, 2017, 5, 25460-25468.	5.2	45
23	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.	5.2	40
24	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.	8.2	39
25	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.	2.7	37
26	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.	2.7	37
27	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.	5.2	36
28	Porphyrin small molecules containing furan- and selenophene-substituted diketopyrrolopyrrole for bulk heterojunction organic solar cells. Organic Electronics, 2016, 29, 127-134.	1.4	36
29	High-Efficiency Small Molecule-Based Bulk-Heterojunction Solar Cells Enhanced by Additive Annealing. ACS Applied Materials & Interfaces, 2015, 7, 21495-21502.	4.0	35
30	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.	4.0	33
31	Conjugated Dâ€“A porphyrin dimers for solution-processed bulk-heterojunction organic solar cells. Chemical Communications, 2017, 53, 5113-5116.	2.2	32
32	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.	4.0	32
33	Highly Efficient Ternary Solar Cells with Efficient FÃ¶rster Resonance Energy Transfer for Simultaneously Enhanced Photovoltaic Parameters. Advanced Functional Materials, 2021, 31, 2105304.	7.8	30
34	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.	4.0	26
35	Cathode interlayer-free organic solar cells with enhanced device performance upon alcohol treatment. Journal of Materials Chemistry C, 2019, 7, 7947-7952.	2.7	17
36	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.	2.7	15

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37	All-porphyrin organic solar cells. Dyes and Pigments, 2020, 180, 108503.	2.0	13
38	Highly efficient small molecule solar cells fabricated with non-halogenated solvents. RSC Advances, 2015, 5, 92312-92317.	1.7	12
39	Morphology Evolution Induced by Sequential Annealing Enabling Enhanced Efficiency in All-Small Molecule Solar Cells. ACS Applied Energy Materials, 2021, 4, 4234-4241.	2.5	10
40	A-Ï€-A-Ï€-A small molecules for ternary solar cells. Dyes and Pigments, 2019, 164, 148-155.	2.0	9
41	Molecular engineering of narrow bandgap porphyrin derivatives for highly efficient photothermal conversion. Dyes and Pigments, 2021, 192, 109460.	2.0	9
42	Glucose and Its Derivatives as Interfacial Materials for Inverted Organic Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 16487-16496.	4.0	9
43	Selective Adsorption of C₆₀ in the Supramolecular Nanopatterns of Donorâ€“Acceptor Porphyrin Derivatives. Langmuir, 2019, 35, 14511-14516.	1.6	8
44	Conjugated ionic porphyrins as the cathode interlayer materials in organic solar cells. Organic Electronics, 2018, 62, 107-113.	1.4	7
45	Unravelling the Self-Assembly of Diketopyrrolopyrrole-Based Photovoltaic Molecules. Langmuir, 2018, 34, 11952-11959.	1.6	5
46	Alcohol soluble porphyrin for the cathode buffer layers of fullerene/perovskite planar heterojunction solar cells. Organic Electronics, 2018, 59, 414-418.	1.4	5
47	Influence of the â€“CN substitution position on the performance of dicyanodistyrylbenzene-based polymer solar cells. Polymer Chemistry, 2020, 11, 1653-1662.	1.9	5
48	Doping porphyrin-based bulk heterojunction solar cells with LITFSI and TFSA. Journal of Materials Chemistry C, 2017, 5, 11573-11578.	2.7	3
49	Porphyrin-Based All-Small-Molecule Organic Solar Cells With Absorption-Complementary Nonfullerene Acceptor. IEEE Journal of Photovoltaics, 2022, 12, 316-321.	1.5	3
50	Porphyrin Acceptors with Two Perylene Diimide Dimers for Organic Solar Cells. ChemSusChem, 2021, 14, 3614-3621.	3.6	2