Xiaofeng Xu

List of Publications by Year
in descending order

79 papers	3,846 citations	94381 37 h-index	128225 60 g-index
80 all docs	80 docs citations	80 times ranked	3956 citing authors

#	Article	IF	Citations
1	High Performance All-Polymer Solar Cells by Synergistic Effects of Fine-Tuned Crystallinity and Solvent Annealing. Journal of the American Chemical Society, 2016, 138, 10935-10944.	6.6	401
2	Largely Enhanced Efficiency with a PFN/Al Bilayer Cathode in High Efficiency Bulk Heterojunction Photovoltaic Cells with a Low Bandgap Polycarbazole Donor. Advanced Materials, 2011, 23, 3086-3089.	11.1	238
3	9.0% power conversion efficiency from ternary all-polymer solar cells. Energy and Environmental Science, 2017, 10, 2212-2221.	15.6	200
4	Solarâ€Driven Interfacial Evaporation and Selfâ€Powered Water Wave Detection Based on an Allâ€Cellulose Monolithic Design. Advanced Functional Materials, 2021, 31, 2008681.	7.8	150
5	High Efficiency and High <i>V</i>_{oc} Inverted Polymer Solar Cells Based on a Low-Lying HOMO Polycarbazole Donor and a Hydrophilic Polycarbazole Interlayer on ITO Cathode. Journal of Physical Chemistry C, 2012, 116, 14188-14198.	1.5	105
6	High-performance all-polymer solar cells based on fluorinated naphthalene diimide acceptor polymers with fine-tuned crystallinity and enhanced dielectric constants. Nano Energy, 2018, 45, 368-379.	8.2	101
7	Sustainable Biochar-Based Solar Absorbers for High-Performance Solar-Driven Steam Generation and Water Purification. ACS Sustainable Chemistry and Engineering, 2019, 7, 19311-19320.	3.2	99
8	Ternary organic solar cells with enhanced open circuit voltage. Nano Energy, 2017, 37, 24-31.	8.2	96
9	Selfâ€Repairing and Damageâ€Tolerant Hydrogels for Efficient Solarâ€Powered Water Purification and Desalination. Advanced Functional Materials, 2021, 31, 2104464.	7.8	93
10	High efficiency inverted polymeric bulk-heterojunction solar cells with hydrophilic conjugated polymers as cathode interlayer on ITO. Solar Energy Materials and Solar Cells, 2012, 97, 83-88.	3.0	90
11	Highâ€Performance and Stable Allâ€Polymer Solar Cells Using Donor and Acceptor Polymers with Complementary Absorption. Advanced Energy Materials, 2017, 7, 1602722.	10.2	90
12	Marine biomass-derived composite aerogels for efficient and durable solar-driven interfacial evaporation and desalination. Chemical Engineering Journal, 2021, 417, 128051.	6.6	90
13	Low Band Gap Polymer Solar Cells With Minimal Voltage Losses. Advanced Energy Materials, 2016, 6, 1600148.	10.2	84
14	Dâ€“A₁â€“Dâ€“A₂ Copolymers with Extended Donor Segments for Efficient Polymer Solar Cells. Macromolecules, 2015, 48, 1009-1016.	2.2	82
15	8.0% Efficient Allâ€Polymer Solar Cells with High Photovoltage of 1.1 V and Internal Quantum Efficiency near Unity. Advanced Energy Materials, 2018, 8, 1700908.	10.2	81
16	Design of monolithic closed-cell polymer foams <i>via</i> controlled gas-foaming for high-performance solar-driven interfacial evaporation. Journal of Materials Chemistry A, 2021, 9, 9692-9705.	5.2	77
17	Largeâ€Area, Semitransparent, and Flexible Allâ€Polymer Photodetectors. Advanced Functional Materials, 2018, 28, 1805570.	7.8	68
18	Energy Conversion Analysis of Multilayered Triboelectric Nanogenerators for Synergistic Rain and Solar Energy Harvesting. Advanced Materials, 2022, 34, e2202238.	11.1	63

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19	Functionalized reduced graphene oxide with tunable band gap and good solubility in organic solvents. Carbon, 2019, 146, 491-502.	5.4	58
20	Rapid grain refinement of 2024 Al alloy through recrystallization induced by electropulsing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 612, 223-226.	2.6	56
21	Ternary Organic Solar Cells with Minimum Voltage Losses. Advanced Energy Materials, 2017, 7, 1700390.	10.2	55
22	High-photovoltage all-polymer solar cells based on a diketopyrrolopyrroleâ€“isoindigo acceptor polymer. Journal of Materials Chemistry A, 2017, 5, 11693-11700.	5.2	54
23	Siloxane-Terminated Side Chain Engineering of Acceptor Polymers Leading to Over 7% Power Conversion Efficiencies in All-Polymer Solar Cells. ACS Macro Letters, 2017, 6, 1310-1314.	2.3	51
24	Substituent Effects on Physical and Photovoltaic Properties of 5,6-Difluorobenzo[<i>c</i>][1,2,5]thiadiazole-Based Dâ€“A Polymers: Toward a Donor Design for High Performance Polymer Solar Cells. Macromolecules, 2013, 46, 9587-9592.	2.2	50
25	Intense and Stable Near-Infrared Emission from Light-Emitting Electrochemical Cells Comprising a Metal-Free Indacenodithieno[3,2-<i>b</i>]thiophene-Based Copolymer as the Single Emitter. Chemistry of Materials, 2017, 29, 7750-7759.	3.2	49
26	Triazolobenzothiadiazoleâ€Based Copolymers for Polymer Lightâ€Emitting Diodes: Pure Nearâ€Infrared Emission via Optimized Energy and Charge Transfer. Advanced Optical Materials, 2016, 4, 2068-2076.	3.6	48
27	3D Printed High Performance Silver Mesh for Transparent Glass Heaters through Liquid Sacrificial Substrate Electricâ€Fieldâ€Driven Jet. Small, 2022, 18, e2107811.	5.2	47
28	Hydrophilic poly(triphenylamines) with phosphonate groups on the side chains: synthesis and photovoltaic applications. Journal of Materials Chemistry, 2012, 22, 4329.	6.7	46
29	2,7-Carbazole-1,4-phenylene Copolymers with Polar Side Chains for Cathode Modifications in Polymer Light-Emitting Diodes. Macromolecules, 2011, 44, 4204-4212.	2.2	45
30	Effects of side chain isomerism on the physical and photovoltaic properties of indacenodithieno[3,2-<i>b</i>]thiopheneâ€“quinoxaline copolymers: toward a side chain design for enhanced photovoltaic performance. Journal of Materials Chemistry A, 2014, 2, 18988-18997.	5.2	45
31	A 3D Hemispheric Steam Generator Based on An Organicâ€“Inorganic Composite Light Absorber for Efficient Solar Evaporation and Desalination. Advanced Materials Interfaces, 2020, 7, 1901715.	1.9	45
32	High Performance All-Polymer Photodetector Comprising a Donorâ€“Acceptorâ€“Acceptor Structured Indacenodithiopheneâ€“Bithieno[3,4-<i>c</i>]Pyrroletetrone Copolymer. ACS Macro Letters, 2018, 7, 395-400.	2.3	43
33	High-performance semitransparent polymer solar cells floating on water: Rational analysis of power generation, water evaporation and algal growth. Nano Energy, 2020, 77, 105111.	8.2	43
34	Predicting thermal stability of organic solar cells through an easy and fast capacitance measurement. Solar Energy Materials and Solar Cells, 2015, 141, 240-247.	3.0	42
35	High-Performance Organic Photodetectors from a High-Bandgap Indacenodithiophene-Based ï€-Conjugated Donorâ€“Acceptor Polymer. ACS Applied Materials & Interfaces, 2018, 10, 12937-12946.	4.0	42
36	Shape-controlled fabrication of cost-effective, scalable and anti-biofouling hydrogel foams for solar-powered clean water production. Chemical Engineering Journal, 2022, 431, 134144.	6.6	40

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37	Enhanced efficiency of polymer solar cells by improving molecular aggregation and broadening the absorption spectra. Dyes and Pigments, 2019, 166, 42-48.	2.0	39
38	High-performance ternary polymer solar cells from a structurally similar polymer alloy. Journal of Materials Chemistry A, 2017, 5, 12400-12406.	5.2	37
39	High Bandgap (1.9 eV) Polymer with Over 8% Efficiency in Bulk Heterojunction Solar Cells. Advanced Electronic Materials, 2016, 2, 1600084.	2.6	36
40	Design of self-righting steam generators for solar-driven interfacial evaporation and self-powered water wave detection. Journal of Materials Chemistry A, 2020, 8, 24664-24674.	5.2	36
41	Synthesis and characterization of thieno[3,2â€b]thiopheneâ€isoindigoâ€based copolymers as electron donor and hole transport materials for bulkâ€heterojunction polymer solar cells. Journal of Polymer Science Part A, 2013, 51, 424-434.	2.5	34
42	Conjugated polyelectrolytes and neutral polymers with poly(2,7â€carbazole) backbone: Synthesis, characterization, and photovoltaic application. Journal of Polymer Science Part A, 2011, 49, 1263-1272.	2.5	32
43	Probing the Relationship between Molecular Structures, Thermal Transitions, and Morphology in Polymer Semiconductors Using a Woven Glass-Mesh-Based DMTA Technique. Chemistry of Materials, 2019, 31, 6740-6749.	3.2	32
44	Allâ€Polymer Highâ€Performance Photodetector through Lamination. Advanced Electronic Materials, 2020, 6, 1901017.	2.6	30
45	Power Generation, Evaporation Mitigation, and Thermal Insulation of Semitransparent Polymer Solar Cells: A Potential for Floating Photovoltaic Applications. ACS Applied Energy Materials, 2019, 2, 6060-6070.	2.5	28
46	Synergistic solar-powered water-electricity generation <i>via</i> rational integration of semitransparent photovoltaics and interfacial steam generators. Journal of Materials Chemistry A, 2021, 9, 21197-21208.	5.2	28
47	Polymer solar cells spray coated with non-halogenated solvents. Solar Energy Materials and Solar Cells, 2017, 161, 52-61.	3.0	27
48	Synthesis of a Novel Lowâ€Bandgap Polymer Based on a Ladderâ€Type Heptacyclic Arene Consisting of Outer Thieno[3,2â€b]thiophene Units for Efficient Photovoltaic Application. Macromolecular Rapid Communications, 2013, 34, 681-688.	2.0	26
49	One-Step Synthesis of Precursor Oligomers for Organic Photovoltaics: A Comparative Study between Polymers and Small Molecules. ACS Applied Materials & Interfaces, 2015, 7, 27106-27114.	4.0	25
50	Pyrrolo[3,4-g]quinoxaline-6,8-dione-based conjugated copolymers for bulk heterojunction solar cells with high photovoltages. Polymer Chemistry, 2015, 6, 4624-4633.	1.9	24
51	Synergistic effects of copolymerization and fluorination on acceptor polymers for efficient and stable all-polymer solar cells. Journal of Materials Chemistry C, 2019, 7, 14130-14140.	2.7	24
52	Incorporation of Designed Donorâ€“Acceptorâ€“Donor Segments in a Host Polymer for Strong Near-Infrared Emission from a Large-Area Light-Emitting Electrochemical Cell. ACS Applied Energy Materials, 2018, 1, 1753-1761.	2.5	23
53	Alcohol-Soluble Conjugated Polymers as Cathode Interlayers for All-Polymer Solar Cells. ACS Applied Energy Materials, 2018, 1, 2176-2182.	2.5	23
54	Synergistic Engineering of Substituents and Backbones on Donor Polymers: Toward Terpolymer Design of High-Performance Polymer Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 23993-24004.	4.0	22

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55	Hygroscopic photothermal beads from marine polysaccharides: demonstration of efficient atmospheric water production, indoor humidity control and photovoltaic panel cooling. Journal of Materials Chemistry A, 2022, 10, 8556-8567.	5.2	20
56	Relationship of Ionization Potential and Oxidation Potential of Organic Semiconductor Films Used in Photovoltaics. Solar Rrl, 2018, 2, 1800122.	3.1	19
57	Using ultra-high molecular weight hydrophilic polymer as cathode interlayer for inverted polymer solar cells: Enhanced efficiency and excellent air-stability. Solar Energy Materials and Solar Cells, 2014, 123, 104-111.	3.0	18
58	Effects of including electron-withdrawing atoms on the physical and photovoltaic properties of indacenodithieno[3,2-b]thiophene-based donorâ€“acceptor polymers: towards an acceptor design for efficient polymer solar cells. RSC Advances, 2017, 7, 20440-20450.	1.7	18
59	Ï€â€“Ï€ Stacking Distance and Phase Separation Controlled Efficiency in Stable All-Polymer Solar Cells. Polymers, 2019, 11, 1665.	2.0	17
60	Semitransparent all-polymer solar cells through lamination. Journal of Materials Chemistry A, 2018, 6, 21186-21192.	5.2	14
61	Fabrication of Monopile Polymer Foams via Rotating Gas Foaming: Hybrid Applications in Solarâ€Powered Interfacial Evaporation and Water Remediation. Solar Rrl, 2022, 6, .	3.1	14
62	Highly Ordered Organic Ferroelectric DIPAB-Patterned Thin Films. Langmuir, 2017, 33, 12859-12864.	1.6	13
63	Design of Doubleâ€Network Clickâ€Gels for Selfâ€Contained Underwater Adhesion and Energyâ€Wise Applications in Floating Photovoltaics. Advanced Functional Materials, 2022, 32, .	7.8	13
64	Low bandâ€gap Dâ€“A conjugated copolymers based on anthradithiophene and diketopyrrolopyrrole for polymer solar cells and fieldâ€effect transistors. Journal of Polymer Science Part A, 2014, 52, 1652-1661.	2.5	12
65	A comparative study of the photovoltaic performances of terpolymers and ternary systems. RSC Advances, 2017, 7, 17959-17967.	1.7	12
66	Microfluidicâ€Assisted Blade Coating of Compositional Libraries for Combinatorial Applications: The Case of Organic Photovoltaics. Advanced Energy Materials, 2020, 10, 2001308.	10.2	12
67	Open-Circuit Voltage Modulations on All-Polymer Solar Cells by Side Chain Engineering on 4,8-Di(thiophen-2-yl)benzo[1,2-<i>b</i>:4,5-<i>b</i>â€²]dithiophene-Based Donor Polymers. ACS Applied Energy Materials, 2018, 1, 2918-2926.	2.5	10
68	Donorâ€“acceptor copolymers based on phenanthrene as electronâ€donating unit: Synthesis and photovoltaic performances. Journal of Polymer Science Part A, 2013, 51, 4966-4974.	2.5	9
69	Semitransparent polymer solar cells floating on water: selected transmission windows and active control of algal growth. Journal of Materials Chemistry C, 2021, 9, 13132-13143.	2.7	8
70	Photovoltage loss in semi-transparent organic photovoltaic devices. Organic Electronics, 2019, 74, 37-40.	1.4	7
71	Photo-Oxidation Reveals H-Aggregates Hidden in Spin-Cast-Conjugated Polymer Films as Observed by Two-Dimensional Polarization Imaging. Chemistry of Materials, 2019, 31, 8927-8936.	3.2	6
72	Interfacial energetic disorder induced by the molecular packing structure at conjugated polymer-based donor/acceptor heterojunctions. Journal of Materials Chemistry C, 2021, 9, 13761-13769.	2.7	4

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73	3D Printed High Performance Silver Mesh for Transparent Glass Heaters through Liquid Sacrificial Substrate Electricâ€Fieldâ€Driven Jet (Small 17/2022). Small, 2022, 18, .	5.2	4
74	Synthesis and properties of benzo[c]-, pyrrolo[3,4-c]-, and thieno[3,4-c]-pyrrole-4,6-dione copolymers. New Journal of Chemistry, 2015, 39, 2642-2650.	1.4	3
75	Synthesis and Characterization of Isoindigoâ€Based Polymers with Thermocleavable Side Chains. Macromolecular Chemistry and Physics, 2018, 219, 1700538.	1.1	3
76	Core unit engineering of star-shaped acceptor polymers for all-polymer solar cells. Solar Energy, 2020, 207, 199-208.	2.9	3
77	4,5â€Ethyleneâ€2,7â€Carbazoleâ€Based Mediumâ€Bandgap Conjugated Polymers with Lowâ€Lying HOMO Levels Toward Efficient Polymer Solar Cells with High Openâ€Circuit Voltage. Macromolecular Chemistry and Physics, 2014, 215, 1052-1059.	1.1	1
78	Organic Photovoltaics: Low Band Gap Polymer Solar Cells With Minimal Voltage Losses (Adv. Energy) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	10.2	1
79	Solar Cells: High Bandgap (1.9 eV) Polymer with Over 8% Efficiency in Bulk Heterojunction Solar Cells (Adv. Electron. Mater. 7/2016). Advanced Electronic Materials, 2016, 2, .	2.6	0