Xiaotian Hu

List of Publications by Year in Descending Order

122 papers	3,529 citations	33 h-index	55 g-index
132 ext. papers	4,727 ext. citations	12.3 avg, IF	5.62 L-index

#	Paper	IF	Citations
122	An effective and economical encapsulation method for trapping lead leakage in rigid and flexible perovskite photovoltaics. *Nano Energy*, **2022**, 93, 106853	17.1	15
121	Advancements in organic small molecule hole-transporting materials for perovskite solar cells: past and future. *Journal of Materials Chemistry A*, **2022**, 10, 5044-5081	13	6
120	Pseudo-Planar Heterojunction Organic Photovoltaics with Optimized Light Utilization for Printable Solar Windows.. *Advanced Materials*, **2022**, e2201604	24	4
119	Recent progress in organic solar cells (Part I material science). *Science China Chemistry*, **2022**, 65, 224-268	7.9	48
118	Sulfonated Graphene Aerogels Enable Safe-to-Use Flexible Perovskite Solar Modules. *Advanced Energy Materials*, **2022**, 12, 2103236	21.8	17
117	A Bionic Interface to Suppressing the Coffee-ring Effect for Reliable and Flexible Perovskite Modules with a near 90% Yield Rate.. *Advanced Materials*, **2022**, e2201840	24	7
116	Printable and stable all-polymer solar cells based on non-conjugated polymer acceptors with excellent mechanical robustness. *Science China Chemistry*, **2021**, 1	7.9	8
115	A non-wetting and conductive polyethylene dioxothiophene hole transport layer for scalable and flexible perovskite solar cells. *Science China Chemistry*, **2021**, 64, 834-843	7.9	9
114	Mechanically Robust and Flexible Perovskite Solar Cells via a Printable and Gelatinous Interface. *ACS Applied Materials & Interfaces*, **2021**, 13, 19959-19969	9.5	20
113	Wearable Tin-Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. *Angewandte Chemie - International Edition*, **2021**, 60, 14693-14700	16.4	20
112	Wearable Tin-Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. *Angewandte Chemie*, **2021**, 133, 14814-14821	3.6	1
111	Current Development toward Commercialization of Metal-Halide Perovskite Photovoltaics. *Advanced Optical Materials*, **2021**, 9, 2100390	8.1	9
110	Spontaneous Formation of Upper Gradient 2D Structure for Efficient and Stable Quasi-2D Perovskites. *Advanced Materials*, **2021**, 33, e2101823	24	7
109	Releasing Nanocapsules for High-Throughput Printing of Stable Perovskite Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2101291	21.8	3
108	Cementitious grain-boundary passivation for flexible perovskite solar cells with superior environmental stability and mechanical robustness. *Science Bulletin*, **2021**, 66, 527-535	10.6	23
107	Regulating crystallization to maintain balanced carrier mobility via ternary strategy in blade-coated flexible organic solar cells. *Organic Electronics*, **2021**, 89, 106027	3.5	6
106	Recent Advances of PEDOT in Flexible Energy Conversion and Storage Devices. *Acta Chimica Sinica*, **2021**, 79, 853	3.3	0

105	An in situ bifacial passivation strategy for flexible perovskite solar module with mechanical robustness by roll-to-roll fabrication. *Journal of Materials Chemistry A*, **2021**, 9, 5759-5768	13	21
104	Ultra-flexible and waterproof perovskite photovoltaics for washable power source applications. *Chemical Communications*, **2021**, 57, 6320-6323	5.8	5
103	Printable and Homogeneous NiOx Hole Transport Layers Prepared by a Polymer-Network Gel Method for Large-Area and Flexible Perovskite Solar Cells. *Advanced Functional Materials*, **2021**, 31, 2106495	15.6	16
102	Atmospheric stable and flexible Sn-based perovskite solar cells via a bio-inspired antioxidative crystal template. *Journal of Energy Chemistry*, **2021**, 66, 612-612	12	1
101	Toward efficient perovskite solar cells by planar imprint for improved perovskite film quality and granted bifunctional barrier. *Journal of Materials Chemistry A*, **2021**, 9, 16178-16186	13	5
100	Stretchable Perovskite Solar Cells with Recoverable Performance. *Angewandte Chemie - International Edition*, **2020**, 59, 16602-16608	16.4	57
99	Stretchable Perovskite Solar Cells with Recoverable Performance. *Angewandte Chemie*, **2020**, 132, 16745	3.6	
98	Bio-inspired vertebral design for scalable and flexible perovskite solar cells. *Nature Communications*, **2020**, 11, 3016	17.4	86
97	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. *Angewandte Chemie - International Edition*, **2020**, 59, 14234-14240	16.4	7
96	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. *Angewandte Chemie*, **2020**, 132, 14340-14346	3.6	
95	Stabilized and Operational PbI2 Precursor Ink for Large-Scale Perovskite Solar Cells via Two-Step Blade-Coating. *Journal of Physical Chemistry C*, **2020**, 124, 8129-8139	3.8	14
94	An Effective Method for Recovering Nonradiative Recombination Loss in Scalable Organic Solar Cells. *Advanced Functional Materials*, **2020**, 30, 2000417	15.6	14
93	Controllable Growth of High-Quality Inorganic Perovskite Microplate Arrays for Functional Optoelectronics. *Advanced Materials*, **2020**, 32, e1908006	24	39
92	Solution preparation of molybdenum oxide on graphene: a hole transport layer for efficient perovskite solar cells with a 1.12 V high open-circuit voltage. *Journal of Materials Science: Materials in Electronics*, **2020**, 31, 6248-6254	2.1	7
91	Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Self-Standing Strategy. *Advanced Materials*, **2020**, 32, e1907280	24	6
90	Low-temperature interfacial engineering for flexible CsPbI2Br perovskite solar cells with high performance beyond 15%. *Journal of Materials Chemistry A*, **2020**, 8, 5308-5314	13	26
89	Flexible perovskite solar cells: device design and perspective. *Flexible and Printed Electronics*, **2020**, 5, 013002	3.1	9
88	Bioinspired Patterned Bubbles for Broad and Low-Frequency Acoustic Blocking. *ACS Applied Materials & Interfaces*, **2020**, 12, 1757-1764	9.5	17

87	Innenrücktitelbild: Stretchable Perovskite Solar Cells with Recoverable Performance (Angew. Chem. 38/2020). *Angewandte Chemie*, **2020**, 132, 16947	3.6	1
86	Printable and Large-Area Organic Solar Cells Enabled by a Ternary Pseudo-Planar Heterojunction Strategy. *Advanced Functional Materials*, **2020**, 30, 2003223	15.6	36
85	Atomic Layer Deposition of Metal Oxides in Perovskite Solar Cells: Present and Future. *Small Methods*, **2020**, 4, 2000588	12.8	10
84	Concerted regulation on vertical orientation and film quality of two-dimensional ruddlesden-popper perovskite layer for efficient solar cells. *Science China Chemistry*, **2020**, 63, 1675-1683	7.9	5
83	Photodetectors: Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Self-Standing Strategy (Adv. Mater. 16/2020). *Advanced Materials*, **2020**, 32, 2070128	24	
82	Blade-coated efficient and stable large-area organic solar cells with optimized additive. *Organic Electronics*, **2020**, 83, 105771	3.5	12
81	In Situ Inkjet Printing of the Perovskite Single-Crystal Array-Embedded Polydimethylsiloxane Film for Wearable Light-Emitting Devices. *ACS Applied Materials & Interfaces*, **2020**, 12, 22157-22162	9.5	24
80	Perovskite Solar Cells: Low-Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for High-Performance Photovoltaics (Adv. Mater. 35/2019). *Advanced Materials*, **2019**, 31, 1970252	24	5
79	Nacre-inspired crystallization and elastic "brick-and-mortar" structure for a wearable perovskite solar module. *Energy and Environmental Science*, **2019**, 12, 979-987	35.4	77
78	Perovskite Solar Cells: High-Performance Perovskite Solar Cells with Excellent Humidity and Thermo-Stability via Fluorinated Perylenediimide (Adv. Energy Mater. 18/2019). *Advanced Energy Materials*, **2019**, 9, 1970064	21.8	7
77	Patterned Wettability Surface for Competition-Driving Large-Grained Perovskite Solar Cells. *Advanced Energy Materials*, **2019**, 9, 1900838	21.8	32
76	Patterned flexible graphene sensor via printing and interface assembly. *Journal of Materials Chemistry C*, **2019**, 7, 6317-6322	7.1	5
75	Hole Transportation: Enhanced Hole Transportation for Inverted Tin-Based Perovskite Solar Cells with High Performance and Stability (Adv. Funct. Mater. 18/2019). *Advanced Functional Materials*, **2019**, 29, 1970117	15.6	3
74	High-Performance Perovskite Solar Cells with Excellent Humidity and Thermo-Stability via Fluorinated Perylenediimide. *Advanced Energy Materials*, **2019**, 9, 1900198	21.8	133
73	Fully Printed Flexible Crossbar Memory Devices with Tip-Enhanced Micro/Nanostructures. *Advanced Electronic Materials*, **2019**, 5, 1900131	6.4	8
72	Wearable Power Source: A Newfangled Feasibility for Perovskite Photovoltaics. *ACS Energy Letters*, **2019**, 4, 1065-1072	20.1	32
71	Enhanced Hole Transportation for Inverted Tin-Based Perovskite Solar Cells with High Performance and Stability. *Advanced Functional Materials*, **2019**, 29, 1808059	15.6	93
70	A General Approach for Lab-to-Manufacturing Translation on Flexible Organic Solar Cells. *Advanced Materials*, **2019**, 31, e1903649	24	81

69	Silver Mesh Electrodes via Electroless Deposition-Coupled Inkjet-Printing Mask Technology for Flexible Polymer Solar Cells. *Langmuir*, **2019**, 35, 9713-9720	4	12
68	Perovskite Solar Cells: Patterned Wettability Surface for Competition-Driving Large-Grained Perovskite Solar Cells (Adv. Energy Mater. 25/2019). *Advanced Energy Materials*, **2019**, 9, 1970098	21.8	1
67	Low-Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for High-Performance Photovoltaics. *Advanced Materials*, **2019**, 31, e1901966	24	63
66	Water-Resistant and Flexible Perovskite Solar Cells via a Glued Interfacial Layer. *Advanced Functional Materials*, **2019**, 29, 1902629	15.6	64
65	A Mechanically Robust Conducting Polymer Network Electrode for Efficient Flexible Perovskite Solar Cells. *Joule*, **2019**, 3, 2205-2218	27.8	111
64	Steerable Droplet Bouncing for Precise Materials Transportation. *Advanced Materials Interfaces*, **2019**, 6, 1901033	4.6	19
63	Flexible Solar Cells: A General Approach for Lab-to-Manufacturing Translation on Flexible Organic Solar Cells (Adv. Mater. 41/2019). *Advanced Materials*, **2019**, 31, 1970294	24	3
62	Bubble Architectures for Locally Resonant Acoustic Metamaterials. *Advanced Functional Materials*, **2019**, 29, 1906984	15.6	25
61	Fully Printed Geranium-Inspired Encapsulated Arrays for Quantitative Odor Releasing. *ACS Omega*, **2019**, 4, 19977-19982	3.9	2
60	Soft Acoustic Metamaterials: Bubble Architectures for Locally Resonant Acoustic Metamaterials (Adv. Funct. Mater. 51/2019). *Advanced Functional Materials*, **2019**, 29, 1970346	15.6	4
59	Dopamine-crosslinked TiO2/perovskite layer for efficient and photostable perovskite solar cells under full spectral continuous illumination. *Nano Energy*, **2019**, 56, 733-740	17.1	143
58	High-efficiency perovskite solar cells based on self-assembly n-doped fullerene derivative with excellent thermal stability. *Journal of Power Sources*, **2019**, 413, 459-466	8.9	19
57	Roll-To-Roll Printing of Meter-Scale Composite Transparent Electrodes with Optimized Mechanical and Optical Properties for Photoelectronics. *ACS Applied Materials & Interfaces*, **2018**, 10, 8917-8925	9.5	18
56	Inkjet manipulated homogeneous large size perovskite grains for efficient and large-area perovskite solar cells. *Nano Energy*, **2018**, 46, 203-211	17.1	124
55	Diffraction-Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping. *Advanced Energy Materials*, **2018**, 8, 1702960	21.8	82
54	Grain Boundary Modification via F4TCNQ To Reduce Defects of Perovskite Solar Cells with Excellent Device Performance. *ACS Applied Materials & Interfaces*, **2018**, 10, 1909-1916	9.5	91
53	Printable Skin-Driven Mechanoluminescence Devices via Nanodoped Matrix Modification. *Advanced Materials*, **2018**, 30, e1800291	24	108
52	Solar Cells: Diffraction-Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping (Adv. Energy Mater. 12/2018). *Advanced Energy Materials*, **2018**, 8, 1870052	21.8	2

51	Patterned Arrays of Functional Lateral Heterostructures via Sequential Template-Directed Printing. *Small*, **2018**, 14, e1800792	11	8
50	Janus Structural Color from a 2D Photonic Crystal Hybrid with a Fabry–Perot Cavity. *Advanced Optical Materials*, **2018**, 6, 1800651	8.1	34
49	31-1: Invited Paper: Green Printing Technology for Manufacturing Functional Devices. *Digest of Technical Papers SID International Symposium*, **2018**, 49, 395-396	0.5	
48	Large-scale ultra-adhesive and mechanically flexible silver grids transparent electrodes by solution process. *Organic Electronics*, **2018**, 61, 296-303	3.5	11
47	A General Approach for Fluid Patterning and Application in Fabricating Microdevices. *Advanced Materials*, **2018**, 30, e1802172	24	29
46	A 3D Self-Shaping Strategy for Nanoresolution Multicomponent Architectures. *Advanced Materials*, **2018**, 30, 1703963	24	33
45	A general strategy for printing colloidal nanomaterials into one-dimensional micro/nanolines. *Nanoscale*, **2018**, 10, 22374-22380	7.7	14
44	Phase Pure 2D Perovskite for High-Performance 2D-3D Heterostructured Perovskite Solar Cells. *Advanced Materials*, **2018**, 30, e1805323	24	161
43	Bioinspired Synergy Sensor Chip of Photonic Crystals-Graphene Oxide for Multiamines Recognition. *Analytical Chemistry*, **2018**, 90, 6371-6375	7.8	11
42	High efficient perovskite whispering-gallery solar cells. *Nano Energy*, **2018**, 51, 556-562	17.1	34
41	Butanedithiol Solvent Additive Extracting Fullerenes from Donor Phase To Improve Performance and Photostability in Polymer Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 9918-9925	9.5	27
40	Room temperature processed polymers for high-efficient polymer solar cells with power conversion efficiency over 9%. *Nano Energy*, **2017**, 37, 32-39	17.1	44
39	Crystallization and conformation engineering of solution-processed polymer transparent electrodes with high conductivity. *Journal of Materials Chemistry C*, **2017**, 5, 382-389	7.1	27
38	Solar Cells: Nucleation and Crystallization Control via Polyurethane to Enhance the Bendability of Perovskite Solar Cells with Excellent Device Performance (Adv. Funct. Mater. 41/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	1
37	Enhanced Efficiency of Perovskite Solar Cells by using Core–Ultrathin Shell Structure Ag@SiO2 Nanowires as Plasmonic Antennas. *Advanced Electronic Materials*, **2017**, 3, 1700169	6.4	23
36	Roll-to-Roll Fabrication of Flexible Orientated Graphene Transparent Electrodes by Shear Force and One-Step Reducing Post-Treatment. *Advanced Materials Technologies*, **2017**, 2, 1700138	6.8	18
35	Wearable Large-Scale Perovskite Solar-Power Source via Nanocellular Scaffold. *Advanced Materials*, **2017**, 29, 1703236	24	113
34	Nucleation and Crystallization Control via Polyurethane to Enhance the Bendability of Perovskite Solar Cells with Excellent Device Performance. *Advanced Functional Materials*, **2017**, 27, 1703061	15.6	116

33	Non-halogenated solvent-processed single-junction polymer solar cells with 9.91% efficiency and improved photostability. *Nano Energy*, **2017**, 41, 27-34	17.1	33
32	Large-Scale Stretchable Semiembedded Copper Nanowire Transparent Conductive Films by an Electrospinning Template. *ACS Applied Materials & Interfaces*, **2017**, 9, 26468-26475	9.5	55
31	Crystalline and active additive for optimization morphology and absorption of narrow bandgap polymer solar cells. *Journal of Polymer Science Part A*, **2017**, 55, 726-733	2.5	2
30	A homogeneous ethanedithiol doped ZnO electron transporting layer for polymer solar cells. *Journal of Materials Chemistry C*, **2016**, 4, 8738-8744	7.1	12
29	Pure- or mixed-solvent assisted treatment for crystallization dynamics of planar lead halide perovskite solar cells. *Solar Energy Materials and Solar Cells*, **2016**, 155, 166-175	6.4	16
28	Flexible, hole transporting layer-free and stable CH 3 NH 3 PbI 3 /PC 61 BM planar heterojunction perovskite solar cells. *Organic Electronics*, **2016**, 30, 281-288	3.5	60
27	Enhancing the grain size of organic halide perovskites by sulfonate-carbon nanotube incorporation in high performance perovskite solar cells. *Chemical Communications*, **2016**, 52, 5674-7	5.8	62
26	Surface treatment by binary solvents induces the crystallization of a small molecular donor for enhanced photovoltaic performance. *Physical Chemistry Chemical Physics*, **2016**, 18, 735-42	3.6	13
25	Synergistic dispersible graphene: Sulfonated carbon nanotubes integrated with PEDOT for large-scale transparent conductive electrodes. *Carbon*, **2016**, 98, 15-23	10.4	22
24	In situ polymerization of ethylenedioxythiophene from sulfonated carbon nanotube templates: toward high efficiency ITO-free solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 6645-6652	13	28
23	Post-annealing to recover the reduced open-circuit voltage caused by solvent annealing in organic solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 6158-6166	13	25
22	In Situ Formation of ZnO in Graphene: A Facile Way To Produce a Smooth and Highly Conductive Electron Transport Layer for Polymer Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 16078-85	9.5	24
21	A comprehensive study of sulfonated carbon materials as conductive composites for polymer solar cells. *Physical Chemistry Chemical Physics*, **2015**, 17, 4137-45	3.6	57
20	One-dimensional graphene nanoribbons hybridized with carbon nanotubes as cathode and anode interfacial layers for high performance solar cells. *RSC Advances*, **2015**, 5, 49614-49622	3.7	11
19	A Facile Approach To Fabricate High-Performance Polymer Solar Cells with an Annealing-Free and Simple Device of Three Layers. *Journal of Physical Chemistry C*, **2015**, 119, 11619-11624	3.8	3
18	Poly(3-butylthiophene) Inducing Crystallization of Small Molecule Donor for Enhanced Photovoltaic Performance. *Journal of Physical Chemistry C*, **2015**, 119, 23310-23318	3.8	15
17	Alcohol-Soluble n-Type Conjugated Polyelectrolyte as Electron Transport Layer for Polymer Solar Cells. *Macromolecules*, **2015**, 48, 5578-5586	5.5	92
16	Poly(3-butylthiophene) nanowires inducing crystallization of poly(3-hexylthiophene) for enhanced photovoltaic performance. *Journal of Materials Chemistry C*, **2015**, 3, 809-819	7.1	23

15	Versatile MoS2 Nanosheets in ITO-Free and Semi-transparent Polymer Power-generating Glass. *Scientific Reports*, **2015**, 5, 12161	4.9	16
14	Low Work-function Poly(3,4-ethylenedioxylenethiophene): Poly(styrene sulfonate) as Electron-transport Layer for High-efficient and Stable Polymer Solar Cells. *Scientific Reports*, **2015**, 5, 12839	4.9	39
13	Roll-to-Roll Production of Graphene Hybrid Electrodes for High-Efficiency, Flexible Organic Photoelectronics. *Advanced Materials Interfaces*, **2015**, 2, 1500445	4.6	27
12	Universal and Versatile MoO3-Based Hole Transport Layers for Efficient and Stable Polymer Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 9930-9938	3.8	38
11	Large-Scale Flexible and Highly Conductive Carbon Transparent Electrodes via Roll-to-Roll Process and Its High Performance Lab-Scale Indium Tin Oxide-Free Polymer Solar Cells. *Chemistry of Materials*, **2014**, 26, 6293-6302	9.6	76
10	Solution processed and self-assembled polymerizable fullerenes/metal oxide as an interlayer for high efficient inverted polymer solar cells. *Journal of Materials Chemistry C*, **2014**, 2, 10282-10290	7.1	10
9	Scalable Flexible Perovskite Solar Cells Based on a Crystalline and Printable Template with Intelligent Temperature Sensitivity. *Solar Rrl*,2100991	7.1	1
8	Novel Narrow Bandgap Terpolymer Donors Enables Record Performance for Semitransparent Organic Solar Cells Based on All-Narrow Bandgap Semiconductors. *Advanced Functional Materials*,2108634	15.6	11
7	Modulation of Vertical Component Distribution for Large-Area Thick-Film Organic Solar Cells. *Solar Rrl*,2100838	7.1	1
6	A Biomimetic Self-Shield Interface for Flexible Perovskite Solar Cells with Negligible Lead Leakage. *Advanced Functional Materials*,2106460	15.6	16
5	Photonic crystals for perovskite-based optoelectronic applications. *Nano Select*,	3.1	0
4	Bending-stability Interfacial Layer as Dual Electron Transport Layer for Flexible Organic Photovoltaics. *Chinese Journal of Polymer Science (English Edition)*,1	3.5	7
3	Controllable printing of large-scale compact perovskite films for flexible photodetectors. *Nano Research*,1	10	5
2	A Highly Tolerant Printing for Scalable and Flexible Perovskite Solar Cells. *Advanced Functional Materials*,2107726	15.6	13
1	Recent progress in organic solar cells (Part II device engineering). *Science China Chemistry*,	7.9	12