

Xiaotian Hu

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122
papers

3,529
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132
ext. papers

4,727
ext. citations

12.3
avg, IF

5.62
L-index

#	Paper	IF	Citations
122	Phase Pure 2D Perovskite for High-Performance 2D-3D Heterostructured Perovskite Solar Cells. <i>Advanced Materials</i> , 2018 , 30, e1805323	24	161
121	Dopamine-crosslinked TiO ₂ /perovskite layer for efficient and photostable perovskite solar cells under full spectral continuous illumination. <i>Nano Energy</i> , 2019 , 56, 733-740	17.1	143
120	High-Performance Perovskite Solar Cells with Excellent Humidity and Thermo-Stability via Fluorinated Perylene diimide. <i>Advanced Energy Materials</i> , 2019 , 9, 1900198	21.8	133
119	Inkjet manipulated homogeneous large size perovskite grains for efficient and large-area perovskite solar cells. <i>Nano Energy</i> , 2018 , 46, 203-211	17.1	124
118	Nucleation and Crystallization Control via Polyurethane to Enhance the Bendability of Perovskite Solar Cells with Excellent Device Performance. <i>Advanced Functional Materials</i> , 2017 , 27, 1703061	15.6	116
117	Wearable Large-Scale Perovskite Solar-Power Source via Nanocellular Scaffold. <i>Advanced Materials</i> , 2017 , 29, 1703236	24	113
116	A Mechanically Robust Conducting Polymer Network Electrode for Efficient Flexible Perovskite Solar Cells. <i>Joule</i> , 2019 , 3, 2205-2218	27.8	111
115	Printable Skin-Driven Mechanoluminescence Devices via Nanodoped Matrix Modification. <i>Advanced Materials</i> , 2018 , 30, e1800291	24	108
114	Enhanced Hole Transportation for Inverted Tin-Based Perovskite Solar Cells with High Performance and Stability. <i>Advanced Functional Materials</i> , 2019 , 29, 1808059	15.6	93
113	Alcohol-Soluble n-Type Conjugated Polyelectrolyte as Electron Transport Layer for Polymer Solar Cells. <i>Macromolecules</i> , 2015 , 48, 5578-5586	5.5	92
112	Grain Boundary Modification via F4TCNQ To Reduce Defects of Perovskite Solar Cells with Excellent Device Performance. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 1909-1916	9.5	91
111	Bio-inspired vertebral design for scalable and flexible perovskite solar cells. <i>Nature Communications</i> , 2020 , 11, 3016	17.4	86
110	Diffraction-Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping. <i>Advanced Energy Materials</i> , 2018 , 8, 1702960	21.8	82
109	A General Approach for Lab-to-Manufacturing Translation on Flexible Organic Solar Cells. <i>Advanced Materials</i> , 2019 , 31, e1903649	24	81
108	Nacre-inspired crystallization and elastic brick-and-mortar structure for a wearable perovskite solar module. <i>Energy and Environmental Science</i> , 2019 , 12, 979-987	35.4	77
107	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. <i>Chemistry of Materials</i> , 2014 , 26, 6293-6302	9.6	76
106	Water-Resistant and Flexible Perovskite Solar Cells via a Glued Interfacial Layer. <i>Advanced Functional Materials</i> , 2019 , 29, 1902629	15.6	64

105	Low-Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for High-Performance Photovoltaics. <i>Advanced Materials</i> , 2019 , 31, e1901966	24	63
104	Enhancing the grain size of organic halide perovskites by sulfonate-carbon nanotube incorporation in high performance perovskite solar cells. <i>Chemical Communications</i> , 2016 , 52, 5674-7	5.8	62
103	Flexible, hole transporting layer-free and stable CH ₃ NH ₃ PbI ₃ /PC ₆₁ BM planar heterojunction perovskite solar cells. <i>Organic Electronics</i> , 2016 , 30, 281-288	3.5	60
102	A comprehensive study of sulfonated carbon materials as conductive composites for polymer solar cells. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 4137-45	3.6	57
101	Stretchable Perovskite Solar Cells with Recoverable Performance. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 16602-16608	16.4	57
100	Large-Scale Stretchable Semiembedded Copper Nanowire Transparent Conductive Films by an Electrospinning Template. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 26468-26475	9.5	55
99	Recent progress in organic solar cells (Part I material science). <i>Science China Chemistry</i> , 2022 , 65, 224-268	7.9	48
98	Room temperature processed polymers for high-efficient polymer solar cells with power conversion efficiency over 9%. <i>Nano Energy</i> , 2017 , 37, 32-39	17.1	44
97	Controllable Growth of High-Quality Inorganic Perovskite Microplate Arrays for Functional Optoelectronics. <i>Advanced Materials</i> , 2020 , 32, e1908006	24	39
96	Low Work-function Poly(3,4-ethylenedioxyethiophene): Poly(styrene sulfonate) as Electron-transport Layer for High-efficient and Stable Polymer Solar Cells. <i>Scientific Reports</i> , 2015 , 5, 12839	4.9	39
95	Universal and Versatile MoO ₃ -Based Hole Transport Layers for Efficient and Stable Polymer Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 9930-9938	3.8	38
94	Printable and Large-Area Organic Solar Cells Enabled by a Ternary Pseudo-Planar Heterojunction Strategy. <i>Advanced Functional Materials</i> , 2020 , 30, 2003223	15.6	36
93	Janus Structural Color from a 2D Photonic Crystal Hybrid with a Fabry-Pérot Cavity. <i>Advanced Optical Materials</i> , 2018 , 6, 1800651	8.1	34
92	High efficient perovskite whispering-gallery solar cells. <i>Nano Energy</i> , 2018 , 51, 556-562	17.1	34
91	Non-halogenated solvent-processed single-junction polymer solar cells with 9.91% efficiency and improved photostability. <i>Nano Energy</i> , 2017 , 41, 27-34	17.1	33
90	A 3D Self-Shaping Strategy for Nanoresolution Multicomponent Architectures. <i>Advanced Materials</i> , 2018 , 30, 1703963	24	33
89	Patterned Wettability Surface for Competition-Driving Large-Grained Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2019 , 9, 1900838	21.8	32
88	Wearable Power Source: A Newfangled Feasibility for Perovskite Photovoltaics. <i>ACS Energy Letters</i> , 2019 , 4, 1065-1072	20.1	32

87	A General Approach for Fluid Patterning and Application in Fabricating Microdevices. <i>Advanced Materials</i> , 2018 , 30, e1802172	24	29
86	In situ polymerization of ethylenedioxythiophene from sulfonated carbon nanotube templates: toward high efficiency ITO-free solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 6645-6652	13	28
85	Butanedithiol Solvent Additive Extracting Fullerenes from Donor Phase To Improve Performance and Photostability in Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 9918-9925	9.5	27
84	Crystallization and conformation engineering of solution-processed polymer transparent electrodes with high conductivity. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 382-389	7.1	27
83	Roll-to-Roll Production of Graphene Hybrid Electrodes for High-Efficiency, Flexible Organic Photoelectronics. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500445	4.6	27
82	Low-temperature interfacial engineering for flexible CsPbI ₂ Br perovskite solar cells with high performance beyond 15%. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 5308-5314	13	26
81	Bubble Architectures for Locally Resonant Acoustic Metamaterials. <i>Advanced Functional Materials</i> , 2019 , 29, 1906984	15.6	25
80	Post-annealing to recover the reduced open-circuit voltage caused by solvent annealing in organic solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 6158-6166	13	25
79	In Situ Formation of ZnO in Graphene: A Facile Way To Produce a Smooth and Highly Conductive Electron Transport Layer for Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 16078-16085	9.5	24
78	In Situ Inkjet Printing of the Perovskite Single-Crystal Array-Embedded Polydimethylsiloxane Film for Wearable Light-Emitting Devices. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 22157-22162	9.5	24
77	Enhanced Efficiency of Perovskite Solar Cells by using Core-Ultrathin Shell Structure Ag@SiO ₂ Nanowires as Plasmonic Antennas. <i>Advanced Electronic Materials</i> , 2017 , 3, 1700169	6.4	23
76	Poly(3-butylthiophene) nanowires inducing crystallization of poly(3-hexylthiophene) for enhanced photovoltaic performance. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 809-819	7.1	23
75	Cementitious grain-boundary passivation for flexible perovskite solar cells with superior environmental stability and mechanical robustness. <i>Science Bulletin</i> , 2021 , 66, 527-535	10.6	23
74	Synergistic dispersible graphene: Sulfonated carbon nanotubes integrated with PEDOT for large-scale transparent conductive electrodes. <i>Carbon</i> , 2016 , 98, 15-23	10.4	22
73	An in situ bifacial passivation strategy for flexible perovskite solar module with mechanical robustness by roll-to-roll fabrication. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 5759-5768	13	21
72	Mechanically Robust and Flexible Perovskite Solar Cells via a Printable and Gelatinous Interface. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 19959-19969	9.5	20
71	Wearable Tin-Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 14693-14700	16.4	20
70	Steerable Droplet Bouncing for Precise Materials Transportation. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1901033	4.6	19

69	High-efficiency perovskite solar cells based on self-assembly n-doped fullerene derivative with excellent thermal stability. <i>Journal of Power Sources</i> , 2019 , 413, 459-466	8.9	19
68	Roll-to-Roll Fabrication of Flexible Orientated Graphene Transparent Electrodes by Shear Force and One-Step Reducing Post-Treatment. <i>Advanced Materials Technologies</i> , 2017 , 2, 1700138	6.8	18
67	Roll-To-Roll Printing of Meter-Scale Composite Transparent Electrodes with Optimized Mechanical and Optical Properties for Photoelectronics. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 8917-8925	9.5	18
66	Bioinspired Patterned Bubbles for Broad and Low-Frequency Acoustic Blocking. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 1757-1764	9.5	17
65	Sulfonated Graphene Aerogels Enable Safe-to-Use Flexible Perovskite Solar Modules. <i>Advanced Energy Materials</i> , 2022 , 12, 2103236	21.8	17
64	Pure- or mixed-solvent assisted treatment for crystallization dynamics of planar lead halide perovskite solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 155, 166-175	6.4	16
63	Versatile MoS2 Nanosheets in ITO-Free and Semi-transparent Polymer Power-generating Glass. <i>Scientific Reports</i> , 2015 , 5, 12161	4.9	16
62	A Biomimetic Self-Shield Interface for Flexible Perovskite Solar Cells with Negligible Lead Leakage. <i>Advanced Functional Materials</i> , 2016 , 26, 2106460	15.6	16
61	Printable and Homogeneous NiOx Hole Transport Layers Prepared by a Polymer-Network Gel Method for Large-Area and Flexible Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2021 , 31, 2106495	15.6	16
60	Poly(3-butylthiophene) Inducing Crystallization of Small Molecule Donor for Enhanced Photovoltaic Performance. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 23310-23318	3.8	15
59	An effective and economical encapsulation method for trapping lead leakage in rigid and flexible perovskite photovoltaics. <i>Nano Energy</i> , 2022 , 93, 106853	17.1	15
58	Stabilized and Operational PbI2 Precursor Ink for Large-Scale Perovskite Solar Cells via Two-Step Blade-Coating. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 8129-8139	3.8	14
57	An Effective Method for Recovering Nonradiative Recombination Loss in Scalable Organic Solar Cells. <i>Advanced Functional Materials</i> , 2020 , 30, 2000417	15.6	14
56	A general strategy for printing colloidal nanomaterials into one-dimensional micro/nanolines. <i>Nanoscale</i> , 2018 , 10, 22374-22380	7.7	14
55	Surface treatment by binary solvents induces the crystallization of a small molecular donor for enhanced photovoltaic performance. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 735-42	3.6	13
54	A Highly Tolerant Printing for Scalable and Flexible Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2017 , 27, 2107726	15.6	13
53	A homogeneous ethanedithiol doped ZnO electron transporting layer for polymer solar cells. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 8738-8744	7.1	12
52	Silver Mesh Electrodes via Electroless Deposition-Coupled Inkjet-Printing Mask Technology for Flexible Polymer Solar Cells. <i>Langmuir</i> , 2019 , 35, 9713-9720	4	12

51	Blade-coated efficient and stable large-area organic solar cells with optimized additive. <i>Organic Electronics</i> , 2020 , 83, 105771	3.5	12
50	Recent progress in organic solar cells (Part II device engineering). <i>Science China Chemistry</i> ,	7.9	12
49	One-dimensional graphene nanoribbons hybridized with carbon nanotubes as cathode and anode interfacial layers for high performance solar cells. <i>RSC Advances</i> , 2015 , 5, 49614-49622	3.7	11
48	Large-scale ultra-adhesive and mechanically flexible silver grids transparent electrodes by solution process. <i>Organic Electronics</i> , 2018 , 61, 296-303	3.5	11
47	Novel Narrow Bandgap Terpolymer Donors Enables Record Performance for Semitransparent Organic Solar Cells Based on All-Narrow Bandgap Semiconductors. <i>Advanced Functional Materials</i> , 2018 , 28, 15634	15.6	11
46	Bioinspired Synergy Sensor Chip of Photonic Crystals-Graphene Oxide for Multiamines Recognition. <i>Analytical Chemistry</i> , 2018 , 90, 6371-6375	7.8	11
45	Solution processed and self-assembled polymerizable fullerenes/metal oxide as an interlayer for high efficient inverted polymer solar cells. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 10282-10290	7.1	10
44	Atomic Layer Deposition of Metal Oxides in Perovskite Solar Cells: Present and Future. <i>Small Methods</i> , 2020 , 4, 2000588	12.8	10
43	Flexible perovskite solar cells: device design and perspective. <i>Flexible and Printed Electronics</i> , 2020 , 5, 013002	3.1	9
42	A non-wetting and conductive polyethylene dioxothiophene hole transport layer for scalable and flexible perovskite solar cells. <i>Science China Chemistry</i> , 2021 , 64, 834-843	7.9	9
41	Current Development toward Commercialization of Metal-Halide Perovskite Photovoltaics. <i>Advanced Optical Materials</i> , 2021 , 9, 2100390	8.1	9
40	Fully Printed Flexible Crossbar Memory Devices with Tip-Enhanced Micro/Nanostructures. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900131	6.4	8
39	Patterned Arrays of Functional Lateral Heterostructures via Sequential Template-Directed Printing. <i>Small</i> , 2018 , 14, e1800792	11	8
38	Printable and stable all-polymer solar cells based on non-conjugated polymer acceptors with excellent mechanical robustness. <i>Science China Chemistry</i> , 2021 , 1	7.9	8
37	Perovskite Solar Cells: High-Performance Perovskite Solar Cells with Excellent Humidity and Thermo-Stability via Fluorinated Perylenediimide (Adv. Energy Mater. 18/2019). <i>Advanced Energy Materials</i> , 2019 , 9, 1970064	21.8	7
36	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 14234-14240	16.4	7
35	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. <i>Journal of Materials Science: Materials in Electronics</i> , 2020 , 31, 6248-6254	2.1	7
34	Bending-stability Interfacial Layer as Dual Electron Transport Layer for Flexible Organic Photovoltaics. <i>Chinese Journal of Polymer Science (English Edition)</i> , 1	3.5	7

33	Spontaneous Formation of Upper Gradient 2D Structure for Efficient and Stable Quasi-2D Perovskites. <i>Advanced Materials</i> , 2021 , 33, e2101823	24	7
32	A Bionic Interface to Suppressing the Coffee-ring Effect for Reliable and Flexible Perovskite Modules with a near 90% Yield Rate.. <i>Advanced Materials</i> , 2022 , e2201840	24	7
31	Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Self-Standing Strategy. <i>Advanced Materials</i> , 2020 , 32, e1907280	24	6
30	Regulating crystallization to maintain balanced carrier mobility via ternary strategy in blade-coated flexible organic solar cells. <i>Organic Electronics</i> , 2021 , 89, 106027	3.5	6
29	Advancements in organic small molecule hole-transporting materials for perovskite solar cells: past and future. <i>Journal of Materials Chemistry A</i> , 2022 , 10, 5044-5081	13	6
28	Perovskite Solar Cells: Low-Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for High-Performance Photovoltaics (Adv. Mater. 35/2019). <i>Advanced Materials</i> , 2019 , 31, 1970252	24	5
27	Patterned flexible graphene sensor via printing and interface assembly. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 6317-6322	7.1	5
26	Concerted regulation on vertical orientation and film quality of two-dimensional ruddlesden-popper perovskite layer for efficient solar cells. <i>Science China Chemistry</i> , 2020 , 63, 1675-1683	7.9	5
25	Ultra-flexible and waterproof perovskite photovoltaics for washable power source applications. <i>Chemical Communications</i> , 2021 , 57, 6320-6323	5.8	5
24	Controllable printing of large-scale compact perovskite films for flexible photodetectors. <i>Nano Research</i> , ¹	10	5
23	Toward efficient perovskite solar cells by planar imprint for improved perovskite film quality and granted bifunctional barrier. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 16178-16186	13	5
22	Soft Acoustic Metamaterials: Bubble Architectures for Locally Resonant Acoustic Metamaterials (Adv. Funct. Mater. 51/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970346	15.6	4
21	Pseudo-Planar Heterojunction Organic Photovoltaics with Optimized Light Utilization for Printable Solar Windows.. <i>Advanced Materials</i> , 2022 , e2201604	24	4
20	Hole Transportation: Enhanced Hole Transportation for Inverted Tin-Based Perovskite Solar Cells with High Performance and Stability (Adv. Funct. Mater. 18/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970117	15.6	3
19	A Facile Approach To Fabricate High-Performance Polymer Solar Cells with an Annealing-Free and Simple Device of Three Layers. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 11619-11624	3.8	3
18	Flexible Solar Cells: A General Approach for Lab-to-Manufacturing Translation on Flexible Organic Solar Cells (Adv. Mater. 41/2019). <i>Advanced Materials</i> , 2019 , 31, 1970294	24	3
17	Releasing Nanocapsules for High-Throughput Printing of Stable Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2021 , 11, 2101291	21.8	3
16	Solar Cells: Diffraction-Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping (Adv. Energy Mater. 12/2018). <i>Advanced Energy Materials</i> , 2018 , 8, 1870052	21.8	2

15	Crystalline and active additive for optimization morphology and absorption of narrow bandgap polymer solar cells. <i>Journal of Polymer Science Part A</i> , 2017 , 55, 726-733	2.5	2
14	Fully Printed Geranium-Inspired Encapsulated Arrays for Quantitative Odor Releasing. <i>ACS Omega</i> , 2019 , 4, 19977-19982	3.9	2
13	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). <i>Advanced Functional Materials</i> , 2017 , 27,	15.6	1
12	Perovskite Solar Cells: Patterned Wettability Surface for Competition-Driving Large-Grained Perovskite Solar Cells (Adv. Energy Mater. 25/2019). <i>Advanced Energy Materials</i> , 2019 , 9, 1970098	21.8	1
11	Scalable Flexible Perovskite Solar Cells Based on a Crystalline and Printable Template with Intelligent Temperature Sensitivity. <i>Solar Rrl</i> , 2100991	7.1	1
10	Modulation of Vertical Component Distribution for Large-Area Thick-Film Organic Solar Cells. <i>Solar Rrl</i> , 2100838	7.1	1
9	Innenr�ktitelbild: Stretchable Perovskite Solar Cells with Recoverable Performance (Angew. Chem. 38/2020). <i>Angewandte Chemie</i> , 2020 , 132, 16947	3.6	1
8	Wearable Tin-Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. <i>Angewandte Chemie</i> , 2021 , 133, 14814-14821	3.6	1
7	Atmospheric stable and flexible Sn-based perovskite solar cells via a bio-inspired antioxidative crystal template. <i>Journal of Energy Chemistry</i> , 2021 , 66, 612-612	12	1
6	Photonic crystals for perovskite-based optoelectronic applications. <i>Nano Select</i> ,	3.1	0
5	Recent Advances of PEDOT in Flexible Energy Conversion and Storage Devices. <i>Acta Chimica Sinica</i> , 2021 , 79, 853	3.3	0
4	Stretchable Perovskite Solar Cells with Recoverable Performance. <i>Angewandte Chemie</i> , 2020 , 132, 16745.6	3.6	0
3	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. <i>Angewandte Chemie</i> , 2020 , 132, 14340-14346	3.6	0
2	31-1: Invited Paper: Green Printing Technology for Manufacturing Functional Devices. <i>Digest of Technical Papers SID International Symposium</i> , 2018 , 49, 395-396	0.5	0
1	Photodetectors: Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Self-Standing Strategy (Adv. Mater. 16/2020). <i>Advanced Materials</i> , 2020 , 32, 2070128	24	0