Xiaotian Hu

List of Publications by Year
in descending order

128 papers	6,056 citations	66343 42 h-index	82547 72 g-index
132 all docs	132 docs citations	132 times ranked	6296 citing authors

#	Article	IF	Citations
1	Recent progress in organic solar cells (Part I material science). Science China Chemistry, 2022, 65, 224-268.	8.2	349
2	Phase Pure 2D Perovskite for Highâ€Performance 2Dâ€“3D Heterostructured Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805323.	21.0	244
3	Highâ€Performance Perovskite Solar Cells with Excellent Humidity and Thermoâ€Stability via Fluorinated Perylenediimide. Advanced Energy Materials, 2019, 9, 1900198.	19.5	205
4	Dopamine-crosslinked TiO2/perovskite layer for efficient and photostable perovskite solar cells under full spectral continuous illumination. Nano Energy, 2019, 56, 733-740.	16.0	201
5	Printable Skinâ€Driven Mechanoluminescence Devices via Nanodoped Matrix Modification. Advanced Materials, 2018, 30, e1800291.	21.0	178
6	Nucleation and Crystallization Control via Polyurethane to Enhance the Bendability of Perovskite Solar Cells with Excellent Device Performance. Advanced Functional Materials, 2017, 27, 1703061.	14.9	175
7	A Mechanically Robust Conducting Polymer Network Electrode for Efficient Flexible Perovskite Solar Cells. Joule, 2019, 3, 2205-2218.	24.0	175
8	Bio-inspired vertebral design for scalable and flexible perovskite solar cells. Nature Communications, 2020, 11, 3016.	12.8	173
9	Recent progress in organic solar cells (Part II device engineering). Science China Chemistry, 2022, 65, 1457-1497.	8.2	157
10	Inkjet manipulated homogeneous large size perovskite grains for efficient and large-area perovskite solar cells. Nano Energy, 2018, 46, 203-211.	16.0	155
11	Wearable Largeâ€Scale Perovskite Solarâ€Power Source via Nanocellular Scaffold. Advanced Materials, 2017, 29, 1703236.	21.0	152
12	Enhanced Hole Transportation for Inverted Tinâ€Based Perovskite Solar Cells with High Performance and Stability. Advanced Functional Materials, 2019, 29, 1808059.	14.9	133
13	Stretchable Perovskite Solar Cells with Recoverable Performance. Angewandte Chemie - International Edition, 2020, 59, 16602-16608.	13.8	122
14	Diffractionâ€Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping. Advanced Energy Materials, 2018, 8, 1702960.	19.5	119
15	Grain Boundary Modification via F4TCNQ To Reduce Defects of Perovskite Solar Cells with Excellent Device Performance. ACS Applied Materials & Interfaces, 2018, 10, 1909-1916.	8.0	115
16	A General Approach for Labâ€toâ€Manufacturing Translation on Flexible Organic Solar Cells. Advanced Materials, 2019, 31, e1903649.	21.0	114
17	Nacre-inspired crystallization and elastic â€œbrick-and-mortarâ€•structure for a wearable perovskite solar module. Energy and Environmental Science, 2019, 12, 979-987.	30.8	114
18	Alcohol-Soluble n-Type Conjugated Polyelectrolyte as Electron Transport Layer for Polymer Solar Cells. Macromolecules, 2015, 48, 5578-5586.	4.8	97

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19	Lowâ€Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for Highâ€Performance Photovoltaics. Advanced Materials, 2019, 31, e1901966.	21.0	96
20	Waterâ€Resistant and Flexible Perovskite Solar Cells via a Glued Interfacial Layer. Advanced Functional Materials, 2019, 29, 1902629.	14.9	89
21	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.	6.7	83
22	Enhancing the grain size of organic halide perovskites by sulfonate-carbon nanotube incorporation in high performance perovskite solar cells. Chemical Communications, 2016, 52, 5674-5677.	4.1	77
23	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.	2.6	69
24	Large-Scale Stretchable Semiembedded Copper Nanowire Transparent Conductive Films by an Electrospinning Template. ACS Applied Materials & Interfaces, 2017, 9, 26468-26475.	8.0	69
25	Advancements in organic small molecule hole-transporting materials for perovskite solar cells: past and future. Journal of Materials Chemistry A, 2022, 10, 5044-5081.	10.3	69
26	Controllable Growth of Highâ€Quality Inorganic Perovskite Microplate Arrays for Functional Optoelectronics. Advanced Materials, 2020, 32, e1908006.	21.0	66
27	A comprehensive study of sulfonated carbon materials as conductive composites for polymer solar cells. Physical Chemistry Chemical Physics, 2015, 17, 4137-4145.	2.8	64
28	Printable and Largeâ€Area Organic Solar Cells Enabled by a Ternary Pseudoâ€Planar Heterojunction Strategy. Advanced Functional Materials, 2020, 30, 2003223.	14.9	59
29	Bubble Architectures for Locally Resonant Acoustic Metamaterials. Advanced Functional Materials, 2019, 29, 1906984.	14.9	56
30	Cementitious grain-boundary passivation for flexible perovskite solar cells with superior environmental stability and mechanical robustness. Science Bulletin, 2021, 66, 527-535.	9.0	54
31	A Biomimetic Selfâ€Shield Interface for Flexible Perovskite Solar Cells with Negligible Lead Leakage. Advanced Functional Materials, 2021, 31, 2106460.	14.9	54
32	A Bionic Interface to Suppress the Coffeeâ€Ring Effect for Reliable and Flexible Perovskite Modules with a Nearâ€90% Yield Rate. Advanced Materials, 2022, 34, e2201840.	21.0	54
33	Universal and Versatile MoO₃-Based Hole Transport Layers for Efficient and Stable Polymer Solar Cells. Journal of Physical Chemistry C, 2014, 118, 9930-9938.	3.1	53
34	Janus Structural Color from a 2D Photonic Crystal Hybrid with a Fabryâ€“Perot Cavity. Advanced Optical Materials, 2018, 6, 1800651.	7.3	53
35	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.	8.0	53
36	Wearable Tinâ€Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. Angewandte Chemie - International Edition, 2021, 60, 14693-14700.	13.8	53

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37	Novel Narrow Bandgap Terpolymer Donors Enables Record Performance for Semitransparent Organic Solar Cells Based on Allâ€Narrow Bandgap Semiconductors. Advanced Functional Materials, 2022, 32, .	14.9	52
38	High efficient perovskite whispering-gallery solar cells. Nano Energy, 2018, 51, 556-562.	16.0	51
39	Printable and Homogeneous NiO_x Hole Transport Layers Prepared by a Polymerâ€Network Gel Method for Largeâ€Area and Flexible Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2106495.	14.9	51
40	Room temperature processed polymers for high-efficient polymer solar cells with power conversion efficiency over 9%. Nano Energy, 2017, 37, 32-39.	16.0	50
41	An effective and economical encapsulation method for trapping lead leakage in rigid and flexible perovskite photovoltaics. Nano Energy, 2022, 93, 106853.	16.0	49
42	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.	10.3	48
43	Sulfonated Graphene Aerogels Enable Safeâ€toâ€Use Flexible Perovskite Solar Modules. Advanced Energy Materials, 2022, 12, .	19.5	46
44	Wearable Power Source: A Newfangled Feasibility for Perovskite Photovoltaics. ACS Energy Letters, 2019, 4, 1065-1072.	17.4	45
45	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.	3.3	44
46	Patterned Wettability Surface for Competitionâ€Driving Largeâ€Grained Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900838.	19.5	44
47	A Highly Tolerant Printing for Scalable and Flexible Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2107726.	14.9	43
48	Low-temperature interfacial engineering for flexible CsPbI₂Br perovskite solar cells with high performance beyond 15%. Journal of Materials Chemistry A, 2020, 8, 5308-5314.	10.3	40
49	A 3D Selfâ€Shaping Strategy for Nanoresolution Multicomponent Architectures. Advanced Materials, 2018, 30, 1703963.	21.0	39
50	Mechanically Robust and Flexible Perovskite Solar Cells via a Printable and Gelatinous Interface. ACS Applied Materials & Interfaces, 2021, 13, 19959-19969.	8.0	39
51	A general enlarging shear impulse approach to green printing large-area and efficient organic photovoltaics. Energy and Environmental Science, 2022, 15, 2130-2138.	30.8	38
52	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.	10.3	37
53	Non-halogenated solvent-processed single-junction polymer solar cells with 9.91% efficiency and improved photostability. Nano Energy, 2017, 41, 27-34.	16.0	37
54	Crystallization and conformation engineering of solution-processed polymer transparent electrodes with high conductivity. Journal of Materials Chemistry C, 2017, 5, 382-389.	5.5	36

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55	A General Approach for Fluid Patterning and Application in Fabricating Microdevices. Advanced Materials, 2018, 30, e1802172.	21.0	36
56	Spontaneous Formation of Upper Gradient 2D Structure for Efficient and Stable Quasiâ€2D Perovskites. Advanced Materials, 2021, 33, e2101823.	21.0	36
57	Steerable Droplet Bouncing for Precise Materials Transportation. Advanced Materials Interfaces, 2019, 6, 1901033.	3.7	35
58	Bioinspired Patterned Bubbles for Broad and Low-Frequency Acoustic Blocking. ACS Applied Materials & Interfaces, 2020, 12, 1757-1764.	8.0	35
59	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.	8.0	32
60	An Effective Method for Recovering Nonradiative Recombination Loss in Scalable Organic Solar Cells. Advanced Functional Materials, 2020, 30, 2000417.	14.9	31
61	Printable and stable all-polymer solar cells based on non-conjugated polymer acceptors with excellent mechanical robustness. Science China Chemistry, 2022, 65, 182-189.	8.2	31
62	Controllable printing of large-scale compact perovskite films for flexible photodetectors. Nano Research, 2022, 15, 1547-1553.	10.4	30
63	Pseudoâ€Planar Heterojunction Organic Photovoltaics with Optimized Light Utilization for Printable Solar Windows. Advanced Materials, 2022, 34, e2201604.	21.0	30
64	Rollâ€toâ€Roll Production of Graphene Hybrid Electrodes for Highâ€Efficiency, Flexible Organic Photoelectronics. Advanced Materials Interfaces, 2015, 2, 1500445.	3.7	29
65	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, 16078-16085.	8.0	28
66	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.	10.3	28
67	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.	8.0	26
68	Enhanced Efficiency of Perovskite Solar Cells by using Coreâ€“Ultrathin Shell Structure Ag@SiO₂ Nanowires as Plasmonic Antennas. Advanced Electronic Materials, 2017, 3, 1700169.	5.1	24
69	Rollâ€toâ€Roll Fabrication of Flexible Orientated Graphene Transparent Electrodes by Shear Force and Oneâ€Step Reducing Postâ€Treatment. Advanced Materials Technologies, 2017, 2, 1700138.	5.8	24
70	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.	7.8	24
71	Poly(3-butylthiophene) nanowires inducing crystallization of poly(3-hexylthiophene) for enhanced photovoltaic performance. Journal of Materials Chemistry C, 2015, 3, 809-819.	5.5	23
72	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.	3.1	23

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73	Bending-stability Interfacial Layer as Dual Electron Transport Layer for Flexible Organic Photovoltaics. Chinese Journal of Polymer Science (English Edition), 2021, 39, 1441-1447.	3.8	23
74	Synergistic dispersible graphene: Sulfonated carbon nanotubes integrated with PEDOT for large-scale transparent conductive electrodes. Carbon, 2016, 98, 15-23.	10.3	22
75	Atomic Layer Deposition of Metal Oxides in Perovskite Solar Cells: Present and Future. Small Methods, 2020, 4, 2000588.	8.6	21
76	A non-wetting and conductive polyethylene dioxothiophene hole transport layer for scalable and flexible perovskite solar cells. Science China Chemistry, 2021, 64, 834-843.	8.2	21
77	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.	10.3	21
78	A general strategy for printing colloidal nanomaterials into one-dimensional micro/nanolines. Nanoscale, 2018, 10, 22374-22380.	5.6	20
79	Silver Mesh Electrodes via Electroless Deposition-Coupled Inkjet-Printing Mask Technology for Flexible Polymer Solar Cells. Langmuir, 2019, 35, 9713-9720.	3.5	20
80	Versatile MoS2 Nanosheets in ITO-Free and Semi-transparent Polymer Power-generating Glass. Scientific Reports, 2015, 5, 12161.	3.3	19
81	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.	6.2	19
82	Bioinspired Synergy Sensor Chip of Photonic Crystals-Graphene Oxide for Multiamines Recognition. Analytical Chemistry, 2018, 90, 6371-6375.	6.5	19
83	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.	3.6	18
84	Blade-coated efficient and stable large-area organic solar cells with optimized additive. Organic Electronics, 2020, 83, 105771.	2.6	18
85	Releasing Nanocapsules for Highâ€Throughput Printing of Stable Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101291.	19.5	18
86	A 1D:2D structured AgNW:MXene composite transparent electrode with high mechanical robustness for flexible photovoltaics. Journal of Materials Chemistry C, 2022, 10, 8625-8633.	5.5	18
87	Flexible perovskite solar cells: device design and perspective. Flexible and Printed Electronics, 2020, 5, 013002.	2.7	17
88	Nonâ€Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. Angewandte Chemie - International Edition, 2020, 59, 14234-14240.	13.8	17
89	Poly(3-butylthiophene) Inducing Crystallization of Small Molecule Donor for Enhanced Photovoltaic Performance. Journal of Physical Chemistry C, 2015, 119, 23310-23318.	3.1	15
90	A homogeneous ethanedithiol doped ZnO electron transporting layer for polymer solar cells. Journal of Materials Chemistry C, 2016, 4, 8738-8744.	5.5	15

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91	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovoltaics. Advanced Optical Materials, 2021, 9, 2100390.	7.3	15
92	Large-scale ultra-adhesive and mechanically flexible silver grids transparent electrodes by solution process. Organic Electronics, 2018, 61, 296-303.	2.6	14
93	Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Selfâ€Standing Strategy. Advanced Materials, 2020, 32, e1907280.	21.0	14
94	Surface treatment by binary solvents induces the crystallization of a small molecular donor for enhanced photovoltaic performance. Physical Chemistry Chemical Physics, 2016, 18, 735-742.	2.8	13
95	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.	5.5	12
96	Regulating crystallization to maintain balanced carrier mobility via ternary strategy in blade-coated flexible organic solar cells. Organic Electronics, 2021, 89, 106027.	2.6	12
97	Ultra-flexible and waterproof perovskite photovoltaics for washable power source applications. Chemical Communications, 2021, 57, 6320-6323.	4.1	12
98	Wearable Tinâ€Based Perovskite Solar Cells Achieved by a Crystallographic Size Effect. Angewandte Chemie, 2021, 133, 14814-14821.	2.0	12
99	Patterned flexible graphene sensor via printing and interface assembly. Journal of Materials Chemistry C, 2019, 7, 6317-6322.	5.5	11
100	Solution preparation of molybdenum oxide on graphene: a hole transport layer for efficient perovskite solar cells with a 1.12ÂV high open-circuit voltage. Journal of Materials Science: Materials in Electronics, 2020, 31, 6248-6254.	2.2	10
101	Atmospheric stable and flexible Sn-based perovskite solar cells via a bio-inspired antioxidative crystal template. Journal of Energy Chemistry, 2022, 66, 612-618.	12.9	10
102	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.	8.2	9
103	Modulation of Vertical Component Distribution for Largeâ€Area Thickâ€Film Organic Solar Cells. Solar Rrl, 2022, 6, 2100838.	5.8	9
104	Scalable Flexible Perovskite Solar Cells Based on a Crystalline and Printable Template with Intelligent Temperature Sensitivity. Solar Rrl, 2022, 6, .	5.8	9
105	Patterned Arrays of Functional Lateral Heterostructures via Sequential Templateâ€Directed Printing. Small, 2018, 14, e1800792.	10.0	8
106	Perovskite Solar Cells: Highâ€Performance Perovskite Solar Cells with Excellent Humidity and Thermoâ€Stability via Fluorinated Perylenediimide (Adv. Energy Mater. 18/2019). Advanced Energy Materials, 2019, 9, 1970064.	19.5	8
107	Fully Printed Flexible Crossbar Memory Devices with Tipâ€Enhanced Micro/Nanostructures. Advanced Electronic Materials, 2019, 5, 1900131.	5.1	8
108	Stretchable Perovskite Solar Cells with Recoverable Performance. Angewandte Chemie, 2020, 132, 16745.	2.0	8

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109	3D Networkâ€Assisted Crystallization for Fully Printed Perovskite Solar Cells with Superior Irradiation Stability. Advanced Functional Materials, 2022, 32, .	14.9	8
110	Perovskite Solar Cells: Lowâ€Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for Highâ€Performance Photovoltaics (Adv. Mater. 35/2019). Advanced Materials, 2019, 31, 1970252.	21.0	6
111	Soft Acoustic Metamaterials: Bubble Architectures for Locally Resonant Acoustic Metamaterials (Adv.) Tj ETQq1 1 0.784314 rgBT /Ov	14.9	6
112	Flexible Solar Cells: A General Approach for Labâ€toâ€Manufacturing Translation on Flexible Organic Solar Cells (Adv. Mater. 41/2019). Advanced Materials, 2019, 31, 1970294.	21.0	5
113	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.	3.1	4
114	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.	2.3	4
115	Hole Transportation: Enhanced Hole Transportation for Inverted Tinâ€Based Perovskite Solar Cells with High Performance and Stability (Adv. Funct. Mater. 18/2019). Advanced Functional Materials, 2019, 29, 1970117.	14.9	4
116	Fully Printed Geranium-Inspired Encapsulated Arrays for Quantitative Odor Releasing. ACS Omega, 2019, 4, 19977-19982.	3.5	4
117	Photonic crystals for perovskiteâ€based optoelectronic applications. Nano Select, 2022, 3, 39-50.	3.7	4
118	Solar Cells: Diffractionâ€Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping (Adv. Energy Mater. 12/2018). Advanced Energy Materials, 2018, 8, 1870052.	19.5	3
119	Recent Advances of PEDOT in Flexible Energy Conversion and Storage Devices. Acta Chimica Sinica, 2021, 79, 853.	1.4	3
120	Perovskite Solar Cells: Patterned Wettability Surface for Competitionâ€Driving Largeâ€Grained Perovskite Solar Cells (Adv. Energy Mater. 25/2019). Advanced Energy Materials, 2019, 9, 1970098.	19.5	2
121	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, .	14.9	1
122	InnenrÃ¼cktitelbild: Stretchable Perovskite Solar Cells with Recoverable Performance (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.0	1
123	Wearable Electronics: Wearable Largeâ€Scale Perovskite Solarâ€Power Source via Nanocellular Scaffold (Adv. Mater. 42/2017). Advanced Materials, 2017, 29, .	21.0	0
124	31â€1: Invited Paper: Green Printing Technology for Manufacturing Functional Devices. Digest of Technical Papers SID International Symposium, 2018, 49, 395-396.	0.3	0
125	Frontispiz: Nonâ€Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. Angewandte Chemie, 2020, 132, .	2.0	0
126	Frontispiece: Nonâ€Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. Angewandte Chemie - International Edition, 2020, 59, .	13.8	0

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127	Nonâ€Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. Angewandte Chemie, 2020, 132, 14340-14346.	2.0	0
128	Photodetectors: Omnidirectional Photodetectors Based on Spatial Resonance Asymmetric Facade via a 3D Selfâ€Standing Strategy (Adv. Mater. 16/2020). Advanced Materials, 2020, 32, 2070128.	21.0	0