Yanjun Fang

List of Publications by Year
in descending order

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55 papers	17,315 citations	66343 42 h-index	161849 54 g-index
55 all docs	55 docs citations	55 times ranked	14182 citing authors

#	Article	IF	Citations
1	Electron-hole diffusion lengths > 175 Î¼m in solution-grown CH ₃ NH ₃ PbI ₃ single crystals. Science, 2015, 347, 967-970.	12.6	4,642
2	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions andÂcations. Nature Energy, 2017, 2, .	39.5	1,694
3	Sensitive X-ray detectors made of methylammonium lead tribromide perovskite single crystals. Nature Photonics, 2016, 10, 333-339.	31.4	1,271
4	Highly narrowband perovskite single-crystal photodetectors enabled by surface-charge recombination. Nature Photonics, 2015, 9, 679-686.	31.4	1,201
5	Grain boundary dominated ion migration in polycrystalline organicâ€“inorganic halide perovskite films. Energy and Environmental Science, 2016, 9, 1752-1759.	30.8	917
6	Monolithic integration of hybrid perovskite single crystals with heterogenous substrate for highly sensitive X-ray imaging. Nature Photonics, 2017, 11, 315-321.	31.4	580
7	Ïâ€Conjugated Lewis Base: Efficient Trapâ€Passivation and Chargeâ€Extraction for Hybrid Perovskite Solar Cells. Advanced Materials, 2017, 29, 1604545.	21.0	543
8	Resolving Weak Light of Subâ€picowatt per Square Centimeter by Hybrid Perovskite Photodetectors Enabled by Noise Reduction. Advanced Materials, 2015, 27, 2804-2810.	21.0	481
9	Thin single crystal perovskite solar cells to harvest below-bandgap light absorption. Nature Communications, 2017, 8, 1890.	12.8	467
10	Enhanced Thermal Stability in Perovskite Solar Cells by Assembling 2D/3D Stacking Structures. Journal of Physical Chemistry Letters, 2018, 9, 654-658.	4.6	447
11	Ultrafast ion migration in hybrid perovskite polycrystalline thin films under light and suppression in single crystals. Physical Chemistry Chemical Physics, 2016, 18, 30484-30490.	2.8	322
12	Molecular doping enabled scalable blading of efficient hole-transport-layer-free perovskite solar cells. Nature Communications, 2018, 9, 1625.	12.8	314
13	Dual Functions of Crystallization Control and Defect Passivation Enabled by Sulfonic Zwitterions for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2018, 30, e1803428.	21.0	296
14	A Selfâ€Powered, Subâ€nanosecondâ€Response Solutionâ€Processed Hybrid Perovskite Photodetector for Timeâ€Resolved Photoluminescenceâ€Lifetime Detection. Advanced Materials, 2016, 28, 10794-10800.	21.0	295
15	Lowâ€Noise and Largeâ€Linearâ€Dynamicâ€Range Photodetectors Based on Hybridâ€Perovskite Thinâ€Singleâ€Crystals. Advanced Materials, 2017, 29, 1703209.	21.0	281
16	Abnormal crystal growth in CH₃NH₃PbI_{3âˆ’x}Cl_xusing a multi-cycle solution coating process. Energy and Environmental Science, 2015, 8, 2464-2470.	30.8	240
17	Composition Engineering in Doctorâ€Blading of Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700302.	19.5	239
18	Charge Carrier Lifetimes Exceeding 15 Î¼s in Methylammonium Lead Iodide Single Crystals. Journal of Physical Chemistry Letters, 2016, 7, 923-928.	4.6	226

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19	Unveiling the operation mechanism of layered perovskite solar cells. Nature Communications, 2019, 10, 1008.	12.8	216
20	Quantification of re-absorption and re-emission processes to determine photon recycling efficiency in perovskite single crystals. Nature Communications, 2017, 8, 14417.	12.8	189
21	An Ultravioletâ€toâ€NIR Broad Spectral Nanocomposite Photodetector with Gain. Advanced Optical Materials, 2014, 2, 549-554.	7.3	183
22	Matching Charge Extraction Contact for Wideâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2017, 29, 1700607.	21.0	178
23	Low Temperature Solutionâ€Processed Sb:SnO₂ Nanocrystals for Efficient Planar Perovskite Solar Cells. ChemSusChem, 2016, 9, 2686-2691.	6.8	172
24	Excess charge-carrier induced instability of hybrid perovskites. Nature Communications, 2018, 9, 4981.	12.8	159
25	Lateralâ€Structure Singleâ€Crystal Hybrid Perovskite Solar Cells via Piezoelectric Poling. Advanced Materials, 2016, 28, 2816-2821.	21.0	144
26	Toward Highly Sensitive Polymer Photodetectors by Molecular Engineering. Advanced Materials, 2015, 27, 6496-6503.	21.0	136
27	Lowâ€Temperature Fabrication of Efficient Wideâ€Bandgap Organolead Trihalide Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1401616.	19.5	134
28	A Highly Sensitive Narrowband Nanocomposite Photodetector with Gain. Advanced Materials, 2016, 28, 2043-2048.	21.0	128
29	Ligand assisted growth of perovskite single crystals with low defect density. Nature Communications, 2021, 12, 1686.	12.8	110
30	Trap Engineering of CdTe Nanoparticle for High Gain, Fast Response, and Low Noise P3HT:CdTe Nanocomposite Photodetectors. Advanced Materials, 2015, 27, 4975-4981.	21.0	107
31	Stable Graphene-Two-Dimensional Multiphase Perovskite Heterostructure Phototransistors with High Gain. Nano Letters, 2017, 17, 7330-7338.	9.1	88
32	Large Gain, Low Noise Nanocomposite Ultraviolet Photodetectors with a Linear Dynamic Range of 120 dB. Advanced Optical Materials, 2014, 2, 348-353.	7.3	84
33	Argon Plasma Treatment to Tune Perovskite Surface Composition for High Efficiency Solar Cells and Fast Photodetectors. Advanced Materials, 2018, 30, 1705176.	21.0	81
34	Selfâ€Filtered Narrowband Perovskite Photodetectors with Ultrafast and Tuned Spectral Response. Advanced Optical Materials, 2017, 5, 1700672.	7.3	78
35	Elimination of Interfacialâ€Electrochemicalâ€Reactionâ€Induced Polarization in Perovskite Single Crystals for Ultrasensitive and Stable Xâ€Ray Detector Arrays. Advanced Materials, 2021, 33, e2103078.	21.0	69
36	Revealing the working mechanism of polymer photodetectors with ultra-high external quantum efficiency. Physical Chemistry Chemical Physics, 2015, 17, 30712-30720.	2.8	66

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37	Fast Growth of Thin MAPbI₃ Crystal Wafers on Aqueous Solution Surface for Efficient Lateralâ€Structure Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807707.	14.9	62
38	Perovskite Bifunctional Device with Improved Electroluminescent and Photovoltaic Performance through Interfacial Energyâ€Band Engineering. Advanced Materials, 2019, 31, e1902543.	21.0	62
39	Selfâ€Powered FA_{0.55}MA_{0.45}PbI₃ Singleâ€Crystal Perovskite Xâ€Ray Detectors with High Sensitivity. Advanced Functional Materials, 2022, 32, 2109149.	14.9	62
40	Atomistic Surface Passivation of CH ₃ NH ₃ PbI ₃ Perovskite Single Crystals for Highly Sensitive Coplanar-Structure X-Ray Detectors. Research, 2020, 2020, 5958243.	5.7	60
41	Benign ferroelastic twin boundaries in halide perovskites for charge carrier transport and recombination. Nature Communications, 2020, 11, 2215.	12.8	47
42	Improving the sensitivity of a near-infrared nanocomposite photodetector by enhancing trap induced hole injection. Applied Physics Letters, 2015, 106, .	3.3	43
43	Simple Near-Infrared Electron Acceptors for Efficient Photovoltaics and Sensitive Photodetectors. ACS Applied Materials & Interfaces, 2020, 12, 39515-39523.	8.0	43
44	An inverted planar solar cell with 13% efficiency and a sensitive visible light detector based on orientation regulated 2D perovskites. Journal of Materials Chemistry A, 2018, 6, 24633-24640.	10.3	38
45	Narrowband Nearâ€Infrared Photodetector Enabled by Dual Functional Internalâ€Filterâ€Induced Selective Charge Collection. Advanced Optical Materials, 2021, 9, 2100288.	7.3	26
46	Enhancing Transition Dipole Moments of Heterocyclic Semiconductors via Rational Nitrogenâ€Substitution for Sensitive Near Infrared Detection. Advanced Materials, 2022, 34, e2201600.	21.0	19
47	Bulk Defect Suppression of Micrometer-Thick Perovskite Single Crystals Enables Stable Photovoltaics. , 2022, 4, 1332-1340.		17
48	Cesium-lead-bromide perovskites with balanced stoichiometry enabled by sodium-bromide doping for all-vacuum deposited silicon-based light-emitting diodes. Journal of Materials Chemistry C, 2021, 9, 2016-2023.	5.5	14
49	NIR Light Driven Terahertz Wave Modulator with a Large Modulation Depth Based on a Siliconâ€PEDOT:PSSâ€Perovskite Hybrid System. Advanced Materials Technologies, 2020, 5, 1901090.	5.8	9
50	Tuning the Photon Sensitization Mechanism in Metalâ€Halideâ€Perovskiteâ€Based Nanocomposite Films Toward Highly Efficient and Stable Xâ€Ray Detection. Advanced Optical Materials, 2022, 10, .	7.3	9
51	Interlayer-Assisted Growth of Si-Based All-Inorganic Perovskite Films via Chemical Vapor Deposition for Sensitive and Stable X-ray Detection. Journal of Physical Chemistry Letters, 2022, 13, 5441-5450.	4.6	9
52	Understanding the Influence of Cation and Anion Migration on Mixedâ€Composition Perovskite Solar Cells via Transient Ion Drift. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100225.	2.4	8
53	Improved Efficiency for Siliconâ€Based Perovskite Lightâ€Emitting Diodes via Interfacial Hydrophilic Modification. Advanced Materials Interfaces, 2021, 8, 2101448.	3.7	4
54	Photodetectors: High-Gain and Low-Driving-Voltage Photodetectors Based on Organolead Triiodide Perovskites (Adv. Mater. 11/2015). Advanced Materials, 2015, 27, 1967-1967.	21.0	3

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55	Perovskite Solar Cells: Lowâ€Temperature Fabrication of Efficient Wideâ€Bandgap Organolead Trihalide Perovskite Solar Cells (Adv. Energy Mater. 6/2015). Advanced Energy Materials, 2015, 5, .	19.5	2