Xiaopeng Zheng

List of Publications by Year in Descending Order

47 papers	7,245 citations	33 h-index	48 g-index
48 ext. papers	9,148 ext. citations	20.8 avg, IF	6.21 L-index

#	Paper	IF	Citations
47	Self-Assembly and Regrowth of Metal Halide Perovskite Nanocrystals for Optoelectronic Applications.. *Accounts of Chemical Research*, **2022**,	24.3	13
46	Cryogenic Focused Ion Beam Enables Atomic-Resolution Imaging of Local Structures in Highly Sensitive Bulk Crystals and Devices.. *Journal of the American Chemical Society*, **2022**,	16.4	3
45	Overcoming Degradation Pathways to Achieve Stable Blue Perovskite Light-Emitting Diodes. *ACS Energy Letters*, **2022**, 7, 1348-1354	20.1	5
44	28.2%-efficient, outdoor-stable perovskite/silicon tandem solar cell. *Joule*, **2021**,	27.8	15
43	Cyanamide Passivation Enables Robust Elemental Imaging of Metal Halide Perovskites at Atomic Resolution. *Journal of Physical Chemistry Letters*, **2021**, 12, 10402-10409	6.4	6
42	Ligand assisted growth of perovskite single crystals with low defect density. *Nature Communications*, **2021**, 12, 1686	17.4	37
41	18.4 % Organic Solar Cells Using a High Ionization Energy Self-Assembled Monolayer as Hole-Extraction Interlayer. *ChemSusChem*, **2021**, 14, 3569-3578	8.3	54
40	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized $CsPbI_3$ Perovskite. *Angewandte Chemie*, **2021**, 133, 16300-16306	3.6	1
39	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized CsPbI Perovskite. *Angewandte Chemie - International Edition*, **2021**, 60, 16164-16170	16.4	59
38	Perovskite Single-Crystal Solar Cells: Going Forward. *ACS Energy Letters*, **2021**, 6, 631-642	20.1	37
37	Quantum Dot Self-Assembly Enables Low-Threshold Lasing. *Advanced Science*, **2021**, 8, e2101125	13.6	12
36	Efficient and Spectrally Stable Blue Perovskite Light-Emitting Diodes Employing a Cationic Conjugated Polymer. *Advanced Materials*, **2021**, 33, e2103640	24	18
35	22.8%-Efficient single-crystal mixed-cation inverted perovskite solar cells with a near-optimal bandgap. *Energy and Environmental Science*, **2021**, 14, 2263-2268	35.4	64
34	Chlorine Vacancy Passivation in Mixed Halide Perovskite Quantum Dots by Organic Pseudohalides Enables Efficient Rec. 2020 Blue Light-Emitting Diodes. *ACS Energy Letters*, **2020**, 5, 793-798	20.1	100
33	Low-Temperature Crystallization Enables 21.9% Efficient Single-Crystal $MAPbI_3$ Inverted Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 657-662	20.1	96
32	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140	62.3	552
31	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. *Nature Photonics*, **2020**, 14, 171-176	33.9	144

30	All-Perovskite Tandem Solar Cells: A Roadmap to Uniting High Efficiency with High Stability. *Accounts of Materials Research*, **2020**, 1, 63-76	7.5	28
29	Color-pure red light-emitting diodes based on two-dimensional lead-free perovskites. *Science Advances*, **2020**, 6,	14.3	52
28	Shape Control of Metal Halide Perovskite Single Crystals: From Bulk to Nanoscale. *Chemistry of Materials*, **2020**, 32, 7602-7617	9.6	30
27	A Simple n-Dopant Derived from Diquat Boosts the Efficiency of Organic Solar Cells to 18.3%. *ACS Energy Letters*, **2020**, 5, 3663-3671	20.1	175
26	Broad-band lead halide perovskite quantum dot single-mode lasers. *Journal of Materials Chemistry C*, **2020**, 8, 13642-13647	7.1	11
25	Self-Assembled Monolayer Enables Hole Transport Layer-Free Organic Solar Cells with 18% Efficiency and Improved Operational Stability. *ACS Energy Letters*, **2020**, 5, 2935-2944	20.1	244
24	Solution-Processed Visible-Blind Ultraviolet Photodetectors with Nanosecond Response Time and High Detectivity. *Advanced Optical Materials*, **2019**, 7, 1900506	8.1	40
23	Compositionally Screened Eutectic Catalytic Coatings on Halide Perovskite Photocathodes for Photoassisted Selective CO2 Reduction. *ACS Energy Letters*, **2019**, 4, 1279-1286	20.1	32
22	Single-Crystal MAPbI3 Perovskite Solar Cells Exceeding 21% Power Conversion Efficiency. *ACS Energy Letters*, **2019**, 4, 1258-1259	20.1	291
21	Reducing Defects in Halide Perovskite Nanocrystals for Light-Emitting Applications. *Journal of Physical Chemistry Letters*, **2019**, 10, 2629-2640	6.4	122
20	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. *Joule*, **2019**, 3, 1963-1976	27.8	154
19	17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS as a Replacement for PEDOT:PSS. *Advanced Materials*, **2019**, 31, e1902965	24	384
18	Grain Engineering for Perovskite/Silicon Monolithic Tandem Solar Cells with Efficiency of 25.4%. *Joule*, **2019**, 3, 177-190	27.8	227
17	Suppressed Ion Migration along the In-Plane Direction in Layered Perovskites. *ACS Energy Letters*, **2018**, 3, 684-688	20.1	166
16	Enhanced Thermal Stability in Perovskite Solar Cells by Assembling 2D/3D Stacking Structures. *Journal of Physical Chemistry Letters*, **2018**, 9, 654-658	6.4	313
15	Argon Plasma Treatment to Tune Perovskite Surface Composition for High Efficiency Solar Cells and Fast Photodetectors. *Advanced Materials*, **2018**, 30, 1705176	24	60
14	Reversible Band Gap Narrowing of Sn-Based Hybrid Perovskite Single Crystal with Excellent Phase Stability. *Angewandte Chemie*, **2018**, 130, 15084-15088	3.6	13
13	Reversible Band Gap Narrowing of Sn-Based Hybrid Perovskite Single Crystal with Excellent Phase Stability. *Angewandte Chemie - International Edition*, **2018**, 57, 14868-14872	16.4	35

12	Dual Functions of Crystallization Control and Defect Passivation Enabled by Sulfonic Zwitterions for Stable and Efficient Perovskite Solar Cells. *Advanced Materials*, **2018**, 30, e1803428	24	198
11	Surfactant-controlled ink drying enables high-speed deposition of perovskite films for efficient photovoltaic modules. *Nature Energy*, **2018**, 3, 560-566	62.3	419
10	Progress in Tandem Solar Cells Based on Hybrid OrganicIhorganic Perovskites. *Advanced Energy Materials*, **2017**, 7, 1602400	21.8	101
9	Matching Charge Extraction Contact for Wide-Bandgap Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1700607	24	126
8	Composition Engineering in Doctor-Blading of Perovskite Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700302	21.8	195
7	Conjugated Lewis Base: Efficient Trap-Passivation and Charge-Extraction for Hybrid Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1604545	24	431
6	Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. *Science Advances*, **2017**, 3, eaao5616	14.3	399
5	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions and cations. *Nature Energy*, **2017**, 2,	62.3	1241
4	Low Temperature Solution-Processed Sb:SnO Nanocrystals for Efficient Planar Perovskite Solar Cells. *ChemSusChem*, **2016**, 9, 2686-2691	8.3	138
3	Efficient Semitransparent Perovskite Solar Cells for 23.0%-Efficiency Perovskite/Silicon Four-Terminal Tandem Cells. *Advanced Energy Materials*, **2016**, 6, 1601128	21.8	203
2	Is Cu a stable electrode material in hybrid perovskite solar cells for a 30-year lifetime?. *Energy and Environmental Science*, **2016**, 9, 3650-3656	35.4	189
1	Photoactivated p-Doping of Organic Interlayer Enables Efficient Perovskite/Silicon Tandem Solar Cells. *ACS Energy Letters*,1987-1993	20.1	4