Haotong Wei

List of Publications by Year in Descending Order

68 papers	9,659 citations	34 h-index	71 g-index
71 ext. papers	11,410 ext. citations	15.7 avg, IF	6.44 L-index

#	Paper	IF	Citations
68	Energy Transfer Assisted Fast X-ray Detection in Direct/Indirect Hybrid Perovskite Wafer.. *Advanced Science*, **2022**, e2103735	13.6	7
67	Oriented 2D Perovskite Wafers for Anisotropic X-ray Detection Through Fast Tableting Strategy. *Advanced Materials*, **2021**, e2108020	24	9
66	Polyhydroxy Ester Stabilized Perovskite for Low Noise and Large Linear Dynamic Range of Self-Powered Photodetectors. *Nano Letters*, **2021**, 21, 1500-1507	11.5	9
65	Fine-control-valve of halide perovskite single crystal quality for high performance X-ray detection. *Science Bulletin*, **2021**, 66, 2199-2206	10.6	9
64	Surface Ligands Management for Efficient CsPbBrI2 Perovskite Nanocrystal Solar Cells. *Solar Rrl*, **2020**, 4, 2000102	7.1	18
63	Deep Red Emissive Carbonized Polymer Dots with Unprecedented Narrow Full Width at Half Maximum. *Advanced Materials*, **2020**, 32, e1906641	24	134
62	Reducing Surface Halide Deficiency for Efficient and Stable Iodide-Based Perovskite Solar Cells. *Journal of the American Chemical Society*, **2020**, 142, 3989-3996	16.4	133
61	Is Formamidinium Always More Stable than Methylammonium?. *Chemistry of Materials*, **2020**, 32, 2501-2507	9.6	21
60	Development of Halide Perovskite Single Crystal for Radiation Detection Applications. *Frontiers in Chemistry*, **2020**, 8, 268	5	15
59	Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. *Nature Energy*, **2020**, 5, 657-665	62.3	85
58	Low defects density CsPbBr3 single crystals grown by an additive assisted method for gamma-ray detection. *Journal of Materials Chemistry C*, **2020**, 8, 11360-11368	7.1	20
57	Enhanced charge separation and photocatalytic hydrogen evolution in carbonized-polymer-dot-coupled lead halide perovskites. *Materials Horizons*, **2020**, 7, 2719-2725	14.4	19
56	Sensitive and Stable 2D Perovskite Single-Crystal X-ray Detectors Enabled by a Supramolecular Anchor. *Advanced Materials*, **2020**, 32, e2003790	24	72
55	Metal Halide Perovskite Nanocrystal Solar Cells: Progress and Challenges. *Small Methods*, **2020**, 4, 2000128	11.8	10
54	Facile Strategy for Facet Competition Management to Improve the Performance of Perovskite Single-Crystal X-ray Detectors. *Journal of Physical Chemistry Letters*, **2020**, 11, 3529-3535	6.4	34
53	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. *Nature Communications*, **2019**, 10, 4498	17.4	138
52	Halide lead perovskites for ionizing radiation detection. *Nature Communications*, **2019**, 10, 1066	17.4	317

51	Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. *Science Advances*, **2019**, 5, eaav8925	14.3	262
50	Environmental Surface Stability of the MAPbBr3 Single Crystal. *Journal of Physical Chemistry C*, **2018**, 122, 3513-3522	3.8	39
49	Polymer-Passivated Inorganic Cesium Lead Mixed-Halide Perovskites for Stable and Efficient Solar Cells with High Open-Circuit Voltage over 1.3 V. *Advanced Materials*, **2018**, 30, 1705393	24	328
48	Intrinsic Behavior of CH3NH3PbBr3 Single Crystals under Light Illumination. *Advanced Materials Interfaces*, **2018**, 5, 1801206	4.6	11
47	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
46	Aqueous-Processed Polymer/Nanocrystal Hybrid Solar Cells with Efficiency of 5.64%: The Impact of Device Structure, Polymer Content, and Film Thickness. *Journal of Physical Chemistry C*, **2017**, 121, 2025-2034	3.8	12
45	Valence band dispersion measurements of perovskite single crystals using angle-resolved photoemission spectroscopy. *Physical Chemistry Chemical Physics*, **2017**, 19, 5361-5365	3.6	28
44	Quantification of re-absorption and re-emission processes to determine photon recycling efficiency in perovskite single crystals. *Nature Communications*, **2017**, 8, 14417	17.4	154
43	Monolithic integration of hybrid perovskite single crystals with heterogenous substrate for highly sensitive X-ray imaging. *Nature Photonics*, **2017**, 11, 315-321	33.9	393
42	Spontaneous Passivation of Hybrid Perovskite by Sodium Ions from Glass Substrates: Mysterious Enhancement of Device Efficiency Revealed. *ACS Energy Letters*, **2017**, 2, 1400-1406	20.1	93
41	Composition Engineering in Doctor-Blading of Perovskite Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700302	21.8	195
40	Efficient Flexible Solar Cell based on Composition-Tailored Hybrid Perovskite. *Advanced Materials*, **2017**, 29, 1605900	24	153
39	Conjugated Lewis Base: Efficient Trap-Passivation and Charge-Extraction for Hybrid Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1604545	24	431
38	Detection of charged particles with a methylammonium lead tribromide perovskite single crystal. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2017**, 848, 106-108	1.2	49
37	Photoluminescence from Radiative Surface States and Excitons in Methylammonium Lead Bromide Perovskites. *Journal of Physical Chemistry Letters*, **2017**, 8, 4258-4263	6.4	37
36	Low-Noise and Large-Linear-Dynamic-Range Photodetectors Based on Hybrid-Perovskite Thin-Single-Crystals. *Advanced Materials*, **2017**, 29, 1703209	24	208
35	Self-Filtered Narrowband Perovskite Photodetectors with Ultrafast and Tuned Spectral Response. *Advanced Optical Materials*, **2017**, 5, 1700672	8.1	54
34	Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. *Science Advances*, **2017**, 3, eaao5616	14.3	399

33	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions and cations. *Nature Energy*, **2017**, 2,	62.3	1241
32	Dopant compensation in alloyed CHNHPbBrCl perovskite single crystals for gamma-ray spectroscopy. *Nature Materials*, **2017**, 16, 826-833	27	343
31	Ultrahigh sensitivity of methylammonium lead tribromide perovskite single crystals to environmental gases. *Science Advances*, **2016**, 2, e1600534	14.3	251
30	Sensitive X-ray detectors made of methylammonium lead tribromide perovskite single crystals. *Nature Photonics*, **2016**, 10, 333-339	33.9	894
29	Grain boundary dominated ion migration in polycrystalline organic–inorganic halide perovskite films. *Energy and Environmental Science*, **2016**, 9, 1752-1759	35.4	701
28	A Highly Sensitive Narrowband Nanocomposite Photodetector with Gain. *Advanced Materials*, **2016**, 28, 2043-8	24	97
27	Trap Engineering of CdTe Nanoparticle for High Gain, Fast Response, and Low Noise P3HT:CdTe Nanocomposite Photodetectors. *Advanced Materials*, **2015**, 27, 4975-81	24	89
26	Unraveling Charge Separation and Transport Mechanisms in Aqueous-Processed Polymer/CdTe Nanocrystal Hybrid Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1301882	21.8	32
25	Polypyrrole-enveloped Pd and Fe3O4 nanoparticle binary hollow and bowl-like superstructures as recyclable catalysts for industrial wastewater treatment. *ACS Applied Materials & Interfaces*, **2014**, 6, 450-8	9.5	76
24	Synthesis of a water-soluble conjugated polymer based on thiophene for an aqueous-processed hybrid photovoltaic and photodetector device. *Advanced Materials*, **2014**, 26, 3655-61	24	32
23	High-efficiency aqueous-processed hybrid solar cells with an enormous Herschel infrared contribution. *ACS Applied Materials & Interfaces*, **2014**, 6, 8606-12	9.5	22
22	A totally phosphine-free synthesis of metal telluride nanocrystals by employing alkylamides to replace alkylphosphines for preparing highly reactive tellurium precursors. *Nanoscale*, **2013**, 5, 9593-7	7.7	12
21	Creation of Transparent Nanocomposite Films with a Refractive Index of 2.3 Using Polymerizable Silicon Nanoparticles. *Particle and Particle Systems Characterization*, **2013**, 30, 653-657	3.1	12
20	The effects of composition and surface chemistry on the toxicity of quantum dots. *Journal of Materials Chemistry B*, **2013**, 1, 6485-6494	7.3	52
19	Aqueous-solution-processed hybrid solar cells with good thermal and morphological stability. *Solar Energy Materials and Solar Cells*, **2013**, 109, 254-261	6.4	23
18	Coordinatable and High Charge-Carrier-Mobility Water-Soluble Conjugated Copolymers for Effective Aqueous-Processed Polymer–Nanocrystal Hybrid Solar Cells and OFET Applications. *Advanced Functional Materials*, **2013**, 23, 4035-4042	15.6	24
17	Inverted Hybrid Solar Cells from Aqueous Materials with a PCE of 3.61%. *Advanced Energy Materials* , **2013**, 3, 433-437	21.8	52
16	High quality CdHgTe nanocrystals with strong near-infrared emission: relationship between composition and cytotoxic effects. *Langmuir*, **2013**, 29, 4119-27	4	18

15	Achieving high open-circuit voltage in the PPV-CdHgTe bilayer photovoltaic devices on the basis of the heterojunction interfacial modification. *Journal of Materials Chemistry*, **2012**, 22, 9161		16
14	Aqueous-solution-processed PPV□CdxHg1□Te hybrid solar cells with a significant near-infrared contribution. *Journal of Materials Chemistry*, **2012**, 22, 17827		19
13	Preparation of polymer□nanocrystals hybrid solar cells through aqueous approaches. *Nano Today*, **2012**, 7, 316-326	17.9	36
12	Correlation between Annealing-Induced Growth of Nanocrystals and the Performance of Polymer: Nanocrystals Hybrid Solar Cells. *Journal of Physical Chemistry C*, **2012**, 116, 1322-1328	3.8	10
11	Strongly green-photoluminescent graphene quantum dots for bioimaging applications. *Chemical Communications*, **2011**, 47, 6858-60	5.8	1295
10	Self-assembly of CdTe nanoparticles into dendrite structure: a microsensor to Hg2+. *Langmuir*, **2011**, 27, 1136-42	4	29
9	Efficient polymer/nanocrystal hybrid solar cells fabricated from aqueous materials. *Energy and Environmental Science*, **2011**, 4, 2831	35.4	55
8	Aqueous-solution-processed hybrid solar cells from poly(1,4-naphthalenevinylene) and CdTe nanocrystals. *ACS Applied Materials & Interfaces*, **2011**, 3, 2919-23	9.5	31
7	Synthesis of Cu2□Se Nanocrystals by Tuning the Reactivity of Se. *Journal of Physical Chemistry C*, **2011**, 115, 9909-9916	3.8	22
6	POLYMER-NANOCRYSTALS COMPOSITE MATERIALS AND PERFORMANCE OPTIMIZATION. *Acta Polymerica Sinica*, **2011**, 011, 939-949		
5	An effective method to prepare polymer/nanocrystal composites with tunable emission over the whole visible light range. *Nano Research*, **2010**, 3, 496-505	10	18
4	White-light emission nanofibers obtained from assembling aqueous single-colored CdTe NCs into a PPV precursor and PVA matrix. *Journal of Materials Chemistry*, **2009**, 19, 6740		32
3	Low-Cost and Large-Area Hybrid X-Ray Detectors Combining Direct Perovskite Semiconductor and Indirect Scintillator. *Advanced Functional Materials*,2107843	15.6	7
2	3D/2D Perovskite Single Crystals Heterojunction for Suppressed Ions Migration in Hard X-Ray Detection. *Advanced Functional Materials*,2104880	15.6	14
1	Supramolecular Interactions of Flexible 2D Perovskite in Microstrain Releasing and Optoelectronic Properties Recovery. *Advanced Functional Materials*,2203329	15.6	3