# Haotong Wei

List of Publications by Year
in descending order

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|---|---|---|---|
| 71<br>papers | 13,374<br>citations | 94269<br>37<br>h-index | 91712<br>69<br>g-index |
| 71<br>all docs | 71<br>docs citations | 71<br>times ranked | 13875<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions andÂcations. Nature Energy, 2017, 2, . | 19.8 | 1,694 |
| 2 | Strongly green-photoluminescent graphene quantum dots for bioimaging applications. Chemical Communications, 2011, 47, 6858. | 2.2 | 1,458 |
| 3 | Sensitive X-ray detectors made of methylammonium lead tribromide perovskite single crystals. Nature Photonics, 2016, 10, 333-339. | 15.6 | 1,271 |
| 4 | Grain boundary dominated ion migration in polycrystalline organicâ€“inorganic halide perovskite films. Energy and Environmental Science, 2016, 9, 1752-1759. | 15.6 | 917 |
| 5 | Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. Science Advances, 2017, 3, eaao5616. | 4.7 | 635 |
| 6 | Monolithic integration of hybrid perovskite single crystals with heterogenous substrate for highly sensitive X-ray imaging. Nature Photonics, 2017, 11, 315-321. | 15.6 | 580 |
| 7 | Halide lead perovskites for ionizing radiation detection. Nature Communications, 2019, 10, 1066. | 5.8 | 568 |
| 8 | Ï€â€Conjugated Lewis Base: Efficient Trapâ€Passivation and Chargeâ€Extraction for Hybrid Perovskite Solar Cells. Advanced Materials, 2017, 29, 1604545. | 11.1 | 543 |
| 9 | Dopant compensation in alloyed CH3NH3PbBr3âˆ’xClx perovskite single crystals for gamma-ray spectroscopy. Nature Materials, 2017, 16, 826-833. | 13.3 | 475 |
| 10 | Polymerâ€Passivated Inorganic Cesium Lead Mixedâ€Halide Perovskites for Stable and Efficient Solar Cells with High Openâ€Circuit Voltage over 1.3 V. Advanced Materials, 2018, 30, 1705393. | 11.1 | 401 |
| 11 | Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. Science Advances, 2019, 5, eaav8925. | 4.7 | 388 |
| 12 | Ultrahigh sensitivity of methylammonium lead tribromide perovskite single crystals to environmental gases. Science Advances, 2016, 2, e1600534. | 4.7 | 304 |
| 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. | 11.1 | 296 |
| 14 | Lowâ€Noise and Largeâ€Linearâ€Dynamicâ€Range Photodetectors Based on Hybridâ€Perovskite Thinâ€Singleâ€Crystals. Advanced Materials, 2017, 29, 1703209. | 11.1 | 281 |
| 15 | Deep Red Emissive Carbonized Polymer Dots with Unprecedented Narrow Full Width at Half Maximum. Advanced Materials, 2020, 32, e1906641. | 11.1 | 271 |
| 16 | Composition Engineering in Doctorâ€Blading of Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700302. | 10.2 | 239 |
| 17 | Reducing Surface Halide Deficiency for Efficient and Stable Iodide-Based Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 3989-3996. | 6.6 | 236 |
| 18 | Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. Nature Communications, 2019, 10, 4498. | 5.8 | 234 |

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|---|---|---|---|
| 19 | Quantification of re-absorption and re-emission processes to determine photon recycling efficiency in perovskite single crystals. Nature Communications, 2017, 8, 14417. | 5.8 | 189 |
| 20 | Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. Nature Energy, 2020, 5, 657-665. | 19.8 | 186 |
| 21 | Efficient Flexible Solar Cell based on Compositionâ€Tailored Hybrid Perovskite. Advanced Materials, 2017, 29, 1605900. | 11.1 | 184 |
| 22 | Sensitive and Stable 2D Perovskite Singleâ€Crystal Xâ€ray Detectors Enabled by a Supramolecular Anchor. Advanced Materials, 2020, 32, e2003790. | 11.1 | 159 |
| 23 | Spontaneous Passivation of Hybrid Perovskite by Sodium Ions from Glass Substrates: Mysterious Enhancement of Device Efficiency Revealed. ACS Energy Letters, 2017, 2, 1400-1406. | 8.8 | 143 |
| 24 | A Highly Sensitive Narrowband Nanocomposite Photodetector with Gain. Advanced Materials, 2016, 28, 2043-2048. | 11.1 | 128 |
| 25 | Trap Engineering of CdTe Nanoparticle for High Gain, Fast Response, and Low Noise P3HT:CdTe Nanocomposite Photodetectors. Advanced Materials, 2015, 27, 4975-4981. | 11.1 | 107 |
| 26 | Polypyrrole-Enveloped Pd and Fe<sub>3</sub>O<sub>4</sub> Nanoparticle Binary Hollow and Bowl-Like Superstructures as Recyclable Catalysts for Industrial Wastewater Treatment. ACS Applied Materials & Interfaces, 2014, 6, 450-458. | 4.0 | 80 |
| 27 | Selfâ€Filtered Narrowband Perovskite Photodetectors with Ultrafast and Tuned Spectral Response. Advanced Optical Materials, 2017, 5, 1700672. | 3.6 | 78 |
| 28 | Environmental Surface Stability of the MAPbBr<sub>3</sub> Single Crystal. Journal of Physical Chemistry C, 2018, 122, 3513-3522. | 1.5 | 66 |
| 29 | Low defects density CsPbBr<sub>3</sub> single crystals grown by an additive assisted method for gamma-ray detection. Journal of Materials Chemistry C, 2020, 8, 11360-11368. | 2.7 | 63 |
| 30 | 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. | 0.7 | 61 |
| 31 | 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. | 2.1 | 60 |
| 32 | The effects of composition and surface chemistry on the toxicity of quantum dots. Journal of Materials Chemistry B, 2013, 1, 6485. | 2.9 | 59 |
| 33 | Efficient polymer/nanocrystal hybrid solar cells fabricated from aqueous materials. Energy and Environmental Science, 2011, 4, 2831. | 15.6 | 58 |
| 34 | Inverted Hybrid Solar Cells from Aqueous Materials with a PCE of 3.61%. Advanced Energy Materials, 2013, 3, 433-437. | 10.2 | 52 |
| 35 | 3D/2D Perovskite Single Crystals Heterojunction for Suppressed Ions Migration in Hard Xâ€Ray Detection. Advanced Functional Materials, 2021, 31, 2104880. | 7.8 | 47 |
| 36 | Photoluminescence from Radiative Surface States and Excitons in Methylammonium Lead Bromide Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 4258-4263. | 2.1 | 46 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Oriented 2D Perovskite Wafers for Anisotropic Xâ€ray Detection through a Fast Tableting Strategy. Advanced Materials, 2022, 34, e2108020. | 11.1 | 43 |
| 38 | Enhanced charge separation and photocatalytic hydrogen evolution in carbonized-polymer-dot-coupled lead halide perovskites. Materials Horizons, 2020, 7, 2719-2725. | 6.4 | 38 |
| 39 | Preparation of polymerâ€“nanocrystals hybrid solar cells through aqueous approaches. Nano Today, 2012, 7, 316-326. | 6.2 | 37 |
| 40 | 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. | 6.7 | 35 |
| 41 | Synthesis of a Waterâ€Soluble Conjugated Polymer Based on Thiophene for an Aqueousâ€Processed Hybrid Photovoltaic and Photodetector Device. Advanced Materials, 2014, 26, 3655-3661. | 11.1 | 35 |
| 42 | Is Formamidinium Always More Stable than Methylammonium?. Chemistry of Materials, 2020, 32, 2501-2507. | 3.2 | 34 |
| 43 | Unraveling Charge Separation and Transport Mechanisms in Aqueousâ€Processed Polymer/CdTe Nanocrystal Hybrid Solar Cells. Advanced Energy Materials, 2014, 4, 1301882. | 10.2 | 33 |
| 44 | Polyhydroxy Ester Stabilized Perovskite for Low Noise and Large Linear Dynamic Range of Self-Powered Photodetectors. Nano Letters, 2021, 21, 1500-1507. | 4.5 | 33 |
| 45 | Aqueous-Solution-Processed Hybrid Solar Cells from Poly(1,4-naphthalenevinylene) and CdTe Nanocrystals. ACS Applied Materials & Interfaces, 2011, 3, 2919-2923. | 4.0 | 32 |
| 46 | Valence band dispersion measurements of perovskite single crystals using angle-resolved photoemission spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 5361-5365. | 1.3 | 32 |
| 47 | Self-Assembly of CdTe Nanoparticles into Dendrite Structure: A Microsensor to Hg<sup>2+</sup>. Langmuir, 2011, 27, 1136-1142. | 1.6 | 30 |
| 48 | Metal Halide Perovskite Nanocrystal Solar Cells: Progress and Challenges. Small Methods, 2020, 4, 2000419. | 4.6 | 30 |
| 49 | Fine-control-valve of halide perovskite single crystal quality for high performance X-ray detection. Science Bulletin, 2021, 66, 2199-2206. | 4.3 | 29 |
| 50 | Synthesis of Cu<sub>2â€“x</sub>Se Nanocrystals by Tuning the Reactivity of Se. Journal of Physical Chemistry C, 2011, 115, 9909-9916. | 1.5 | 26 |
| 51 | Aqueous-solution-processed hybrid solar cells with good thermal and morphological stability. Solar Energy Materials and Solar Cells, 2013, 109, 254-261. | 3.0 | 26 |
| 52 | Coordinatable and High Chargeâ€Carrierâ€Mobility Waterâ€Soluble Conjugated Copolymers for Effective Aqueousâ€Processed Polymerâ€“Nanocrystal Hybrid Solar Cells and OFET Applications. Advanced Functional Materials, 2013, 23, 4035-4042. | 7.8 | 26 |
| 53 | Surface Ligands Management for Efficient CsPbBrI<sub>2</sub> Perovskite Nanocrystal Solar Cells. Solar Rrl, 2020, 4, 2000102. | 3.1 | 25 |
| 54 | Development of Halide Perovskite Single Crystal for Radiation Detection Applications. Frontiers in Chemistry, 2020, 8, 268. | 1.8 | 25 |

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|---|---|---|---|
| 55 | Lowâ€Cost and Largeâ€Area Hybrid Xâ€Ray Detectors Combining Direct Perovskite Semiconductor and Indirect Scintillator. Advanced Functional Materials, 2021, 31, 2107843. | 7.8 | 25 |
| 56 | High-Efficiency Aqueous-Processed Hybrid Solar Cells with an Enormous Herschel Infrared Contribution. ACS Applied Materials & Interfaces, 2014, 6, 8606-8612. | 4.0 | 23 |
| 57 | An effective method to prepare polymer/nanocrystal composites with tunable emission over the whole visible light range. Nano Research, 2010, 3, 496-505. | 5.8 | 21 |
| 58 | Aqueous-solution-processed PPVâ€“CdxHg1â^'xTe hybrid solar cells with a significant near-infrared contribution. Journal of Materials Chemistry, 2012, 22, 17827. | 6.7 | 20 |
| 59 | Energy Transfer Assisted Fast Xâ€ray Detection in Direct/Indirect Hybrid Perovskite Wafer. Advanced Science, 2022, 9, e2103735. | 5.6 | 20 |
| 60 | High Quality CdHgTe Nanocrystals with Strong Near-Infrared Emission: Relationship between Composition and Cytotoxic Effects. Langmuir, 2013, 29, 4119-4127. | 1.6 | 19 |
| 61 | Intrinsic Behavior of CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub> Single Crystals under Light Illumination. Advanced Materials Interfaces, 2018, 5, 1801206. | 1.9 | 18 |
| 62 | 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. | 6.7 | 16 |
| 63 | Organic Amine-Bridged Quasi-2D Perovskite/PbS Colloidal Quantum Dots Composites for High-Gain Near-Infrared Photodetectors. Nano Letters, 2022, 22, 2277-2284. | 4.5 | 16 |
| 64 | 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. | 1.2 | 14 |
| 65 | 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. | 1.5 | 13 |
| 66 | Supramolecular Interactions of Flexible 2D Perovskite in Microstrain Releasing and Optoelectronic Properties Recovery. Advanced Functional Materials, 2022, 32, . | 7.8 | 13 |
| 67 | 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. | 2.8 | 12 |
| 68 | 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. | 1.5 | 10 |
| 69 | Solvent co-assembly in lead-free perovskite scintillators for stable and large-area X-ray imaging. Journal of Materials Chemistry A, 2022, 10, 15990-15998. | 5.2 | 8 |
| 70 | POLYMER-NANOCRYSTALS COMPOSITE MATERIALS AND PERFORMANCE OPTIMIZATION. Acta Polymerica Sinica, 2011, 011, 939-949. | 0.0 | 0 |
| 71 | Polymer-Passivated Inorganic Cesium Lead Halide Perovskites for High-Voltage and High-Efficiency Solar Cells. SSRN Electronic Journal, 0, , . | 0.4 | 0 |