# Jinsong Huang

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 245 papers | 51,424 citations | 105 h-index | 226 g-index |
| 262 ext. papers | 59,449 ext. citations | 18.3 avg, IF | 8.21 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 245 | Reducing sputter induced stress and damage for efficient perovskite/silicon tandem solar cells. *Journal of Materials Chemistry A*, **2022**, 10, 1343-1349 | 13 | 5 |
| 244 | Perovskites Enabled Highly Sensitive and Fast Photodetectors **2022**, 383-409 | | |
| 243 | Metal Halide Perovskites for Sensitive X -ray Detectors **2022**, 411-432 | | |
| 242 | Direct Observation of Fast Carriers Transport along Out-of-Plane Direction in a Dion–Jacobson Layered Perovskite. *ACS Energy Letters*, **2022**, 7, 984-987 | 20.1 | 3 |
| 241 | Gradient Doping in Sn-Pb Perovskites by Barium Ions for Efficient Single-junction and Tandem Solar Cells.. *Advanced Materials*, **2022**, e2110351 | 24 | 19 |
| 240 | Transient quantum beatings of trions in hybrid organic tri-iodine perovskite single crystal.. *Nature Communications*, **2022**, 13, 1428 | 17.4 | 1 |
| 239 | Evolution of defects during the degradation of metal halide perovskite solar cells under reverse bias and illumination. *Nature Energy*, **2022**, 7, 65-73 | 62.3 | 28 |
| 238 | Recycling lead and transparent conductors from perovskite solar modules. *Nature Communications*, **2021**, 12, 5859 | 17.4 | 20 |
| 237 | Lead-adsorbing ionogel-based encapsulation for impact-resistant, stable, and lead-safe perovskite modules. *Science Advances*, **2021**, 7, eabi8249 | 14.3 | 22 |
| 236 | Preventing lead leakage with built-in resin layers for sustainable perovskite solar cells. *Nature Sustainability*, **2021**, 4, 636-643 | 22.1 | 44 |
| 235 | Ligand assisted growth of perovskite single crystals with low defect density. *Nature Communications*, **2021**, 12, 1686 | 17.4 | 37 |
| 234 | Iodine reduction for reproducible and high-performance perovskite solar cells and modules. *Science Advances*, **2021**, 7, | 14.3 | 55 |
| 233 | Acquiring and Modeling of Si Solar-Cell Transient Response to Pulsed X-Ray. *IEEE Transactions on Nuclear Science*, **2021**, 68, 1152-1160 | 1.7 | |
| 232 | Perovskite solar cells with embedded homojunction via nonuniform metal ion doping. *Cell Reports Physical Science*, **2021**, 2, 100415 | 6.1 | 5 |
| 231 | Decoupling the effects of defects on efficiency and stability through phosphonates in stable halide perovskite solar cells. *Joule*, **2021**, 5, 1246-1266 | 27.8 | 30 |
| 230 | Defect compensation in formamidinium–caesium perovskites for highly efficient solar mini-modules with improved photostability. *Nature Energy*, **2021**, 6, 633-641 | 62.3 | 80 |
| 229 | Highly Efficient Pure-Blue Light-Emitting Diodes Based on Rubidium and Chlorine Alloyed Metal Halide Perovskite. *Advanced Materials*, **2021**, 33, e2100783 | 24 | 25 |

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| 228 | Perovskite crystals redissolution strategy for affordable, reproducible, efficient and stable perovskite photovoltaics. *Materials Today*, **2021**, 50, 199-199 | 21.8 | 14 |
| 227 | Revealing defective nanostructured surfaces and their impact on the intrinsic stability of hybrid perovskites. *Energy and Environmental Science*, **2021**, 14, 1563-1572 | 35.4 | 22 |
| 226 | Crystallization in one-step solution deposition of perovskite films: Upward or downward?. *Science Advances*, **2021**, 7, | 14.3 | 56 |
| 225 | Mixed halide perovskites for spectrally stable and high-efficiency blue light-emitting diodes. *Nature Communications*, **2021**, 12, 361 | 17.4 | 119 |
| 224 | Metallic surface doping of metal halide perovskites. *Nature Communications*, **2021**, 12, 7 | 17.4 | 28 |
| 223 | Response to Comment on "Resolving spatial and energetic distributions of trap states in metal halide perovskite solar cells". *Science*, **2021**, 371, | 33.3 | 7 |
| 222 | Layer number dependent ferroelasticity in 2D Ruddlesden-Popper organic-inorganic hybrid perovskites. *Nature Communications*, **2021**, 12, 1332 | 17.4 | 10 |
| 221 | Stabilizing perovskite-substrate interfaces for high-performance perovskite modules. *Science*, **2021**, 373, 902-907 | 33.3 | 102 |
| 220 | Unveiling the ambipolar carrier transport property of $SnO_2$ for multiple-functional interlayers in perovskite solar cells. *Applied Physics Letters*, **2021**, 119, 123501 | 3.4 | 1 |
| 219 | Strain engineering in metal halide perovskite materials and devices: Influence on stability and optoelectronic properties. *Chemical Physics Reviews*, **2021**, 2, 031302 | 4.4 | 8 |
| 218 | Heterojunction structures for reduced noise in large-area and sensitive perovskite x-ray detectors. *Science Advances*, **2021**, 7, eabg6716 | 14.3 | 19 |
| 217 | Evaporation of Methylammonium Iodide in Thermal Deposition of MAPbI. *Nanomaterials*, **2021**, 11, | 5.4 | 1 |
| 216 | Large-area and efficient perovskite light-emitting diodes via low-temperature blade-coating. *Nature Communications*, **2021**, 12, 147 | 17.4 | 51 |
| 215 | Benign ferroelastic twin boundaries in halide perovskites for charge carrier transport and recombination. *Nature Communications*, **2020**, 11, 2215 | 17.4 | 26 |
| 214 | Synergistic Cascade Carrier Extraction via Dual Interfacial Positioning of Ambipolar Black Phosphorene for High-Efficiency Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e2000999 | 24 | 71 |
| 213 | Double Active Layers Constructed with Halide Perovskite and Quantum Dots for Broadband Photodetection. *Advanced Optical Materials*, **2020**, 8, 2000557 | 8.1 | 13 |
| 212 | Blading Phase-Pure Formamidinium-Alloyed Perovskites for High-Efficiency Solar Cells with Low Photovoltage Deficit and Improved Stability. *Advanced Materials*, **2020**, 32, e2000995 | 24 | 80 |
| 211 | Tunable perovskite-based photodetectors in optical sensing. *Sensors and Actuators B: Chemical*, **2020**, 321, 128462 | 8.5 | 5 |

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|---|---|---|---|
| 210 | Resolving spatial and energetic distributions of trap states in metal halide perovskite solar cells. *Science*, **2020**, 367, 1352-1358 | 33.3 | 322 |
| 209 | Interfacial Molecular Doping of Metal Halide Perovskites for Highly Efficient Solar Cells. *Advanced Materials*, **2020**, 32, e2001581 | 24 | 77 |
| 208 | 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 |
| 207 | Tailoring carrier dynamics in perovskite solar cells via precise dimension and architecture control and interfacial positioning of plasmonic nanoparticles. *Energy and Environmental Science*, **2020**, 13, 1743-1752 | 35.4 | 33 |
| 206 | Is Formamidinium Always More Stable than Methylammonium?. *Chemistry of Materials*, **2020**, 32, 2501-2507 | 9.8 | 21 |
| 205 | Comparative studies of optoelectrical properties of prominent PV materials: Halide perovskite, CdTe, and GaAs. *Materials Today*, **2020**, 36, 18-29 | 21.8 | 20 |
| 204 | Blade-Coated Perovskites on Textured Silicon for 26%-Efficient Monolithic Perovskite/Silicon Tandem Solar Cells. *Joule*, **2020**, 4, 850-864 | 27.8 | 154 |
| 203 | Templated growth of oriented layered hybrid perovskites on 3D-like perovskites. *Nature Communications*, **2020**, 11, 582 | 17.4 | 92 |
| 202 | Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140 | 62.3 | 552 |
| 201 | Performance of Perovskite CsPbBr3 Single Crystal Detector for Gamma-Ray Detection. *IEEE Transactions on Nuclear Science*, **2020**, 67, 443-449 | 1.7 | 26 |
| 200 | Scalable Fabrication of Efficient Perovskite Solar Modules on Flexible Glass Substrates. *Advanced Energy Materials*, **2020**, 10, 1903108 | 21.8 | 125 |
| 199 | Fullerenes with dipoles: boosting the efficiency of perovskite solar cells. *Science China Chemistry*, **2020**, 63, 145-146 | 7.9 | |
| 198 | Ultrafast Exciton Transport with a Long Diffusion Length in Layered Perovskites with Organic Cation Functionalization. *Advanced Materials*, **2020**, 32, e2004080 | 24 | 16 |
| 197 | Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. *Nature Energy*, **2020**, 5, 657-665 | 62.3 | 85 |
| 196 | Perovskite Solar Cells: Synergistic Cascade Carrier Extraction via Dual Interfacial Positioning of Ambipolar Black Phosphorene for High-Efficiency Perovskite Solar Cells (Adv. Mater. 28/2020). *Advanced Materials*, **2020**, 32, 2070211 | 24 | |
| 195 | Identifying the Soft Nature of Defective Perovskite Surface Layer and Its Removal Using a Facile Mechanical Approach. *Joule*, **2020**, 4, 2661-2674 | 27.8 | 34 |
| 194 | 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 |
| 193 | Reduced Self-Doping of Perovskites Induced by Short Annealing for Efficient Solar Modules. *Joule*, **2020**, 4, 1949-1960 | 27.8 | 42 |

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| 192 | Suppressing Interfacial Charge Recombination in Electron-Transport-Layer-Free Perovskite Solar Cells to Give an Efficiency Exceeding 21 %. *Angewandte Chemie*, **2020**, 132, 21166-21173 | 3.6 | 20 |
| 191 | Suppressing Interfacial Charge Recombination in Electron-Transport-Layer-Free Perovskite Solar Cells to Give an Efficiency Exceeding 21 . *Angewandte Chemie - International Edition*, **2020**, 59, 20980-20987 | 16.4 | 33 |
| 190 | Trapping lead in perovskite solar modules with abundant and low-cost cation-exchange resins. *Nature Energy*, **2020**, 5, 1003-1011 | 62.3 | 65 |
| 189 | Perovskite-filled membranes for flexible and large-area direct-conversion X-ray detector arrays. *Nature Photonics*, **2020**, 14, 612-617 | 33.9 | 94 |
| 188 | Comparison of Zr, Bi, Ti, and Ga as Metal Contacts in Inorganic Perovskite CsPbBr Gamma-Ray Detector. *IEEE Transactions on Nuclear Science*, **2020**, 67, 2255-2262 | 1.7 | 15 |
| 187 | Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. *Nature Communications*, **2019**, 10, 4498 | 17.4 | 138 |
| 186 | Fast Growth of Thin MAPbI3 Crystal Wafers on Aqueous Solution Surface for Efficient Lateral-Structure Perovskite Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1807707 | 15.6 | 38 |
| 185 | Metal Ions in Halide Perovskite Materials and Devices. *Trends in Chemistry*, **2019**, 1, 394-409 | 14.8 | 32 |
| 184 | Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. *International Journal of Extreme Manufacturing*, **2019**, 1, 022004 | 7.9 | 33 |
| 183 | Imperfections and their passivation in halide perovskite solar cells. *Chemical Society Reviews*, **2019**, 48, 3842-3867 | 58.5 | 724 |
| 182 | Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. *ACS Energy Letters*, **2019**, 4, 1231-1240 | 20.1 | 83 |
| 181 | Tailoring Passivation Molecular Structures for Extremely Small Open-Circuit Voltage Loss in Perovskite Solar Cells. *Journal of the American Chemical Society*, **2019**, 141, 5781-5787 | 16.4 | 368 |
| 180 | Synthetic control over orientational degeneracy of spacer cations enhances solar cell efficiency in two-dimensional perovskites. *Nature Communications*, **2019**, 10, 1276 | 17.4 | 144 |
| 179 | Halide lead perovskites for ionizing radiation detection. *Nature Communications*, **2019**, 10, 1066 | 17.4 | 317 |
| 178 | Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. *Science Advances*, **2019**, 5, eaav8925 | 14.3 | 262 |
| 177 | Rational molecular passivation for high-performance perovskite light-emitting diodes. *Nature Photonics*, **2019**, 13, 418-424 | 33.9 | 638 |
| 176 | Stabilizing halide perovskite surfaces for solar cell operation with wide-bandgap lead oxysalts. *Science*, **2019**, 365, 473-478 | 33.3 | 460 |
| 175 | Synergistic Effect of Elevated Device Temperature and Excess Charge Carriers on the Rapid Light-Induced Degradation of Perovskite Solar Cells. *Advanced Materials*, **2019**, 31, e1902413 | 24 | 57 |

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| 174 | Unveiling the operation mechanism of layered perovskite solar cells. *Nature Communications*, **2019**, 10, 1008 | 17.4 | 143 |
| 173 | Tailoring solvent coordination for high-speed, room-temperature blading of perovskite photovoltaic films. *Science Advances*, **2019**, 5, eaax7537 | 14.3 | 179 |
| 172 | Efficient sky-blue perovskite light-emitting diodes via photoluminescence enhancement. *Nature Communications*, **2019**, 10, 5633 | 17.4 | 164 |
| 171 | Organohalide Lead Perovskites: More Stable than Glass under Gamma-Ray Radiation. *Advanced Materials*, **2019**, 31, e1805547 | 24 | 51 |
| 170 | Grain Engineering for Perovskite/Silicon Monolithic Tandem Solar Cells with Efficiency of 25.4%. *Joule*, **2019**, 3, 177-190 | 27.8 | 227 |
| 169 | Panchromatic All-Polymer Photodetector with Tunable Polarization Sensitivity. *Advanced Optical Materials*, **2019**, 7, 1801346 | 8.1 | 20 |
| 168 | Molecular doping enabled scalable blading of efficient hole-transport-layer-free perovskite solar cells. *Nature Communications*, **2018**, 9, 1625 | 17.4 | 242 |
| 167 | Real-Time Observation of Order-Disorder Transformation of Organic Cations Induced Phase Transition and Anomalous Photoluminescence in Hybrid Perovskites. *Advanced Materials*, **2018**, 30, e1705801 | 24 | 45 |
| 166 | Suppressed Ion Migration along the In-Plane Direction in Layered Perovskites. *ACS Energy Letters*, **2018**, 3, 684-688 | 20.1 | 166 |
| 165 | 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 |
| 164 | Environmental Surface Stability of the MAPbBr3 Single Crystal. *Journal of Physical Chemistry C*, **2018**, 122, 3513-3522 | 3.8 | 39 |
| 163 | Argon Plasma Treatment to Tune Perovskite Surface Composition for High Efficiency Solar Cells and Fast Photodetectors. *Advanced Materials*, **2018**, 30, 1705176 | 24 | 60 |
| 162 | Hot-Substrate Deposition of Hole- and Electron-Transport Layers for Enhanced Performance in Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1701659 | 21.8 | 18 |
| 161 | High Performance and Stable All-Inorganic Metal Halide Perovskite-Based Photodetectors for Optical Communication Applications. *Advanced Materials*, **2018**, 30, e1803422 | 24 | 224 |
| 160 | Enhanced Piezoelectric Response in Hybrid Lead Halide Perovskite Thin Films via Interfacing with Ferroelectric PbZrTiO. *ACS Applied Materials & Interfaces*, **2018**, 10, 19218-19225 | 9.5 | 21 |
| 159 | Hybrid Perovskite Based Photodetectors. *Materials and Energy*, **2018**, 1-29 | | |
| 158 | Excess charge-carrier induced instability of hybrid perovskites. *Nature Communications*, **2018**, 9, 4981 | 17.4 | 95 |
| 157 | Intrinsic Behavior of CH3NH3PbBr3 Single Crystals under Light Illumination. *Advanced Materials Interfaces*, **2018**, 5, 1801206 | 4.6 | 11 |

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| 156 | Large electrostrictive response in lead halide perovskites. *Nature Materials*, **2018**, 17, 1020-1026 | 27 | 89 |
| 155 | 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 |
| 154 | Organohalide Perovskites: Real-Time Observation of Order-Disorder Transformation of Organic Cations Induced Phase Transition and Anomalous Photoluminescence in Hybrid Perovskites (Adv. Mater. 22/2018). *Advanced Materials*, **2018**, 30, 1870158 | 24 | 1 |
| 153 | Surfactant-controlled ink drying enables high-speed deposition of perovskite films for efficient photovoltaic modules. *Nature Energy*, **2018**, 3, 560-566 | 62.3 | 419 |
| 152 | Valence band dispersion measurements of perovskite single crystals using angle-resolved photoemission spectroscopy. *Physical Chemistry Chemical Physics*, **2017**, 19, 5361-5365 | 3.6 | 28 |
| 151 | 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 |
| 150 | Universal Strategy To Reduce Noise Current for Sensitive Organic Photodetectors. *ACS Applied Materials & Interfaces*, **2017**, 9, 9176-9183 | 9.5 | 55 |
| 149 | Real-Time Nanoscale Open-Circuit Voltage Dynamics of Perovskite Solar Cells. *Nano Letters*, **2017**, 17, 2554-2560 | 11.5 | 89 |
| 148 | Light-Induced Degradation of CH3NH3PbI3 Hybrid Perovskite Thin Film. *Journal of Physical Chemistry C*, **2017**, 121, 3904-3910 | 3.8 | 196 |
| 147 | Highly Narrowband Photomultiplication Type Organic Photodetectors. *Nano Letters*, **2017**, 17, 1995-2002 | 11.5 | 223 |
| 146 | The Functions of Fullerenes in Hybrid Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 782-794 | 20.1 | 184 |
| 145 | Progress in Tandem Solar Cells Based on Hybrid Organic–Inorganic Perovskites. *Advanced Energy Materials*, **2017**, 7, 1602400 | 21.8 | 101 |
| 144 | Double Perovskite Cs2BBiX6 (B = Ag, Cu; X = Br, Cl)/TiO2 Heterojunction: An Efficient Pb-Free Perovskite Interface for Charge Extraction. *Journal of Physical Chemistry C*, **2017**, 121, 4471-4480 | 3.8 | 48 |
| 143 | CHNHPbI perovskites: Ferroelasticity revealed. *Science Advances*, **2017**, 3, e1602165 | 14.3 | 179 |
| 142 | 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 |
| 141 | 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 |
| 140 | Matching Charge Extraction Contact for Wide-Bandgap Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1700607 | 24 | 126 |
| 139 | Detecting 100 fW cm Light with Trapped Electron Gated Organic Phototransistors. *Advanced Materials*, **2017**, 29, 1603969 | 24 | 43 |

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| 138 | Composition Engineering in Doctor-Blading of Perovskite Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700302 | 21.8 | 195 |
| 137 | Efficient Flexible Solar Cell based on Composition-Tailored Hybrid Perovskite. *Advanced Materials*, **2017**, 29, 1605900 | 24 | 153 |
| 136 | Suppressed Ion Migration in Low-Dimensional Perovskites. *ACS Energy Letters*, **2017**, 2, 1571-1572 | 20.1 | 287 |
| 135 | Anomalous photovoltaic effect in organic-inorganic hybrid perovskite solar cells. *Science Advances*, **2017**, 3, e1602164 | 14.3 | 133 |
| 134 | □Conjugated Lewis Base: Efficient Trap-Passivation and Charge-Extraction for Hybrid Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1604545 | 24 | 431 |
| 133 | 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 |
| 132 | Integration of perovskite and polymer photoactive layers to produce ultrafast response, ultraviolet-to-near-infrared, sensitive photodetectors. *Materials Horizons*, **2017**, 4, 242-248 | 14.4 | 101 |
| 131 | Scaling behavior of moisture-induced grain degradation in polycrystalline hybrid perovskite thin films. *Energy and Environmental Science*, **2017**, 10, 516-522 | 35.4 | 525 |
| 130 | Photoluminescence from Radiative Surface States and Excitons in Methylammonium Lead Bromide Perovskites. *Journal of Physical Chemistry Letters*, **2017**, 8, 4258-4263 | 6.4 | 37 |
| 129 | Low-Noise and Large-Linear-Dynamic-Range Photodetectors Based on Hybrid-Perovskite Thin-Single-Crystals. *Advanced Materials*, **2017**, 29, 1703209 | 24 | 208 |
| 128 | Stabilizing the □Phase of CsPbI3 Perovskite by Sulfobetaine Zwitterions in One-Step Spin-Coating Films. *Joule*, **2017**, 1, 371-382 | 27.8 | 344 |
| 127 | Self-Filtered Narrowband Perovskite Photodetectors with Ultrafast and Tuned Spectral Response. *Advanced Optical Materials*, **2017**, 5, 1700672 | 8.1 | 54 |
| 126 | Unraveling the High Open Circuit Voltage and High Performance of Integrated Perovskite/Organic Bulk-Heterojunction Solar Cells. *Nano Letters*, **2017**, 17, 5140-5147 | 11.5 | 61 |
| 125 | In- and Ga-based inorganic double perovskites with direct bandgaps for photovoltaic applications. *Physical Chemistry Chemical Physics*, **2017**, 19, 21691-21695 | 3.6 | 24 |
| 124 | Discrete Iron(III) Oxide Nanoislands for Efficient and Photostable Perovskite Solar Cells. *Advanced Functional Materials*, **2017**, 27, 1702090 | 15.6 | 71 |
| 123 | Thin single crystal perovskite solar cells to harvest below-bandgap light absorption. *Nature Communications*, **2017**, 8, 1890 | 17.4 | 326 |
| 122 | Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. *Science Advances*, **2017**, 3, eaao5616 | 14.3 | 399 |
| 121 | Stable Graphene-Two-Dimensional Multiphase Perovskite Heterostructure Phototransistors with High Gain. *Nano Letters*, **2017**, 17, 7330-7338 | 11.5 | 63 |

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| 120 | Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions and cations. *Nature Energy*, **2017**, 2, | 62.3 | 1241 |
| 119 | Understanding the physical properties of hybrid perovskites for photovoltaic applications. *Nature Reviews Materials*, **2017**, 2, | 73.3 | 673 |
| 118 | Meniscus-assisted solution printing of large-grained perovskite films for high-efficiency solar cells. *Nature Communications*, **2017**, 8, 16045 | 17.4 | 292 |
| 117 | Dopant compensation in alloyed CHNHPbBrCl perovskite single crystals for gamma-ray spectroscopy. *Nature Materials*, **2017**, 16, 826-833 | 27 | 343 |
| 116 | Low Temperature Solution-Processed Sb:SnO Nanocrystals for Efficient Planar Perovskite Solar Cells. *ChemSusChem*, **2016**, 9, 2686-2691 | 8.3 | 138 |
| 115 | Advances in Perovskite Solar Cells. *Advanced Science*, **2016**, 3, 1500324 | 13.6 | 397 |
| 114 | High-Performance All-Polymer Photoresponse Devices Based on Acceptor□Acceptor Conjugated Polymers. *Advanced Functional Materials*, **2016**, 26, 6306-6315 | 15.6 | 79 |
| 113 | Photovoltaic Diode Effect Induced by Positive Bias Poling of Organic Layer-Mediated Interface in Perovskite Heterostructure □HC(NH2)2PbI3/TiO2. *Advanced Materials Interfaces*, **2016**, 3, 1600267 | 4.6 | 9 |
| 112 | Efficient Semitransparent Perovskite Solar Cells for 23.0%-Efficiency Perovskite/Silicon Four-Terminal Tandem Cells. *Advanced Energy Materials*, **2016**, 6, 1601128 | 21.8 | 203 |
| 111 | A Self-Powered, Sub-nanosecond-Response Solution-Processed Hybrid Perovskite Photodetector for Time-Resolved Photoluminescence-Lifetime Detection. *Advanced Materials*, **2016**, 28, 10794-10800 | 24 | 230 |
| 110 | Doping and alloying for improved perovskite solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 17623-17635 | 10 | 126 |
| 109 | Ultrahigh sensitivity of methylammonium lead tribromide perovskite single crystals to environmental gases. *Science Advances*, **2016**, 2, e1600534 | 14.3 | 251 |
| 108 | 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 |
| 107 | Enhancing stability and efficiency of perovskite solar cells with crosslinkable silane-functionalized and doped fullerene. *Nature Communications*, **2016**, 7, 12806 | 17.4 | 293 |
| 106 | Correlation of energy disorder and open-circuit voltage in hybrid perovskite solar cells. *Nature Energy*, **2016**, 1, | 62.3 | 529 |
| 105 | Energy-Efficient Hybrid Perovskite Memristors and Synaptic Devices. *Advanced Electronic Materials*, **2016**, 2, 1600100 | 6.4 | 215 |
| 104 | Ion Migration in Organometal Trihalide Perovskite and Its Impact on Photovoltaic Efficiency and Stability. *Accounts of Chemical Research*, **2016**, 49, 286-93 | 24.3 | 1002 |
| 103 | Unraveling the hidden function of a stabilizer in a precursor in improving hybrid perovskite film morphology for high efficiency solar cells. *Energy and Environmental Science*, **2016**, 9, 867-872 | 35.4 | 56 |

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|---|---|---|---|
| 102 | Effects of Precursor Ratios and Annealing on Electronic Structure and Surface Composition of CH3NH3PbI3 Perovskite Films. *Journal of Physical Chemistry C*, **2016**, 120, 215-220 | 3.8 | 90 |
| 101 | Sensitive X-ray detectors made of methylammonium lead tribromide perovskite single crystals. *Nature Photonics*, **2016**, 10, 333-339 | 33.9 | 894 |
| 100 | Grain boundary dominated ion migration in polycrystalline organic–inorganic halide perovskite films. *Energy and Environmental Science*, **2016**, 9, 1752-1759 | 35.4 | 701 |
| 99 | Stabilized Wide Bandgap MAPbBr I Perovskite by Enhanced Grain Size and Improved Crystallinity. *Advanced Science*, **2016**, 3, 1500301 | 13.6 | 182 |
| 98 | Thin-film semiconductor perspective of organometal trihalide perovskite materials for high-efficiency solar cells. *Materials Science and Engineering Reports*, **2016**, 101, 1-38 | 30.9 | 91 |
| 97 | Charge Carrier Lifetimes Exceeding 15 μs in Methylammonium Lead Iodide Single Crystals. *Journal of Physical Chemistry Letters*, **2016**, 7, 923-8 | 6.4 | 191 |
| 96 | Manipulating Crystallization of Organolead Mixed-Halide Thin Films in Antisolvent Baths for Wide-Bandgap Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 2232-7 | 9.5 | 72 |
| 95 | Thin Insulating Tunneling Contacts for Efficient and Water-Resistant Perovskite Solar Cells. *Advanced Materials*, **2016**, 28, 6734-9 | 24 | 430 |
| 94 | Ultrahigh Gain, Low Noise, Ultraviolet Photodetectors with Highly Aligned Organic Crystals. *Advanced Optical Materials*, **2016**, 4, 264-270 | 8.1 | 55 |
| 93 | Electric-Field-Driven Reversible Conversion Between Methylammonium Lead Triiodide Perovskites and Lead Iodide at Elevated Temperatures. *Advanced Energy Materials*, **2016**, 6, 1501803 | 21.8 | 228 |
| 92 | A Highly Sensitive Narrowband Nanocomposite Photodetector with Gain. *Advanced Materials*, **2016**, 28, 2043-8 | 24 | 97 |
| 91 | Lateral-Structure Single-Crystal Hybrid Perovskite Solar Cells via Piezoelectric Poling. *Advanced Materials*, **2016**, 28, 2816-21 | 24 | 118 |
| 90 | Air-Stable, Efficient Mixed-Cation Perovskite Solar Cells with Cu Electrode by Scalable Fabrication of Active Layer. *Advanced Energy Materials*, **2016**, 6, 1600372 | 21.8 | 235 |
| 89 | Surface Analytical Investigation on Organometal Triiodide Perovskite. *Materials Research Society Symposia Proceedings*, **2016**, 1735, 151 | | |
| 88 | A filterless, visible-blind, narrow-band, and near-infrared photodetector with a gain. *Nanoscale*, **2016**, 8, 12990-7 | 7.7 | 83 |
| 87 | Film-through large perovskite grains formation via a combination of sequential thermal and solvent treatment. *Journal of Materials Chemistry A*, **2016**, 4, 8554-8561 | 13 | 68 |
| 86 | Ultrafast ion migration in hybrid perovskite polycrystalline thin films under light and suppression in single crystals. *Physical Chemistry Chemical Physics*, **2016**, 18, 30484-30490 | 3.6 | 228 |
| 85 | Physical aspects of ferroelectric semiconductors for photovoltaic solar energy conversion. *Physics Reports*, **2016**, 653, 1-40 | 27.7 | 112 |

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| 84 | Ion Migration in Hybrid Perovskite Solar Cells **2016**, 137-162 | | 13 |
| 83 | High-gain and low-driving-voltage photodetectors based on organolead triiodide perovskites. *Advanced Materials*, **2015**, 27, 1912-8 | 24 | 491 |
| 82 | Distinct exciton dissociation behavior of organolead trihalide perovskite and excitonic semiconductors studied in the same system. *Small*, **2015**, 11, 2164-9 | 11 | 68 |
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