# Antonio Abate

List of Publications by Year
in descending order



| 196 | 43,655 | 81 | 171 |
| --- | --- | --- | --- |
| papers | citations | h-index | g-index |
| | | 5896 | 4548 |

| 203 | 203 | 203 | 23239 |
| --- | --- | --- | --- |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Cesium-containing triple cation perovskite solar cells: improved stability, reproducibility and high efficiency. Energy and Environmental Science, 2016, 9, 1989-1997. | 30.8 | 4,560 |
| 2 | Incorporation of rubidium cations into perovskite solar cells improves photovoltaic performance. Science, 2016, 354, 206-209. | 12.6 | 3,137 |
| 3 | Anomalous Hysteresis in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1511-1515. | 4.6 | 2,190 |
| 4 | Lead-free organicâ€“inorganic tin halide perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 3061-3068. | 30.8 | 2,086 |
| 5 | Efficient luminescent solar cells based on tailored mixed-cation perovskites. Science Advances, 2016, 2, e1501170. | 10.3 | 1,669 |
| 6 | Overcoming ultraviolet light instability of sensitized TiO2 with meso-superstructured organometal tri-halide perovskite solar cells. Nature Communications, 2013, 4, 2885. | 12.8 | 1,592 |
| 7 | Promises and challenges of perovskite solar cells. Science, 2017, 358, 739-744. | 12.6 | 1,510 |
| 8 | Enhanced Photoluminescence and Solar Cell Performance <i>via</i> Lewis Base Passivation of Organicâ€“Inorganic Lead Halide Perovskites. ACS Nano, 2014, 8, 9815-9821. | 14.6 | 1,439 |
| 9 | Monolithic perovskite/silicon tandem solar cell with >29% efficiency by enhanced hole extraction. Science, 2020, 370, 1300-1309. | 12.6 | 1,120 |
| 10 | Highly efficient planar perovskite solar cells through band alignment engineering. Energy and Environmental Science, 2015, 8, 2928-2934. | 30.8 | 1,097 |
| 11 | Low-Temperature Processed Electron Collection Layers of Graphene/TiO<sub>2</sub> Nanocomposites in Thin Film Perovskite Solar Cells. Nano Letters, 2014, 14, 724-730. | 9.1 | 999 |
| 12 | Not All That Glitters Is Gold: Metal-Migration-Induced Degradation in Perovskite Solar Cells. ACS Nano, 2016, 10, 6306-6314. | 14.6 | 966 |
| 13 | The rapid evolution of highly efficient perovskite solar cells. Energy and Environmental Science, 2017, 10, 710-727. | 30.8 | 942 |
| 14 | A molecularly engineered hole-transporting material for efficient perovskite solar cells. Nature Energy, 2016, 1, . | 39.5 | 816 |
| 15 | Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49. | 39.5 | 797 |
| 16 | Ultrasmooth organicâ€“inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. Nature Communications, 2015, 6, 6142. | 12.8 | 784 |
| 17 | Enhanced electronic properties in mesoporous TiO2 via lithium doping for high-efficiency perovskite solar cells. Nature Communications, 2016, 7, 10379. | 12.8 | 744 |
| 18 | Highly efficient and stable planar perovskite solar cells by solution-processed tin oxide. Energy and Environmental Science, 2016, 9, 3128-3134. | 30.8 | 720 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Supramolecular Halogen Bond Passivation of Organicâ€“Inorganic Halide Perovskite Solar Cells. Nano Letters, 2014, 14, 3247-3254. | 9.1 | 651 |
| 20 | Heterojunction Modification for Highly Efficient Organicâ€“Inorganic Perovskite Solar Cells. ACS Nano, 2014, 8, 12701-12709. | 14.6 | 614 |
| 21 | Sub-150 Â°C processed meso-superstructured perovskite solar cells with enhanced efficiency. Energy and Environmental Science, 2014, 7, 1142-1147. | 30.8 | 560 |
| 22 | Lithium salts as â€œredox activeâ€•p-type dopants for organic semiconductors and their impact in solid-state dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 2572. | 2.8 | 557 |
| 23 | Monolithic perovskite/silicon-heterojunction tandem solar cells processed at low temperature. Energy and Environmental Science, 2016, 9, 81-88. | 30.8 | 536 |
| 24 | Migration of cations induces reversible performance losses over day/night cycling in perovskite solar cells. Energy and Environmental Science, 2017, 10, 604-613. | 30.8 | 525 |
| 25 | How to Make over 20% Efficient Perovskite Solar Cells in Regular (<i>nâ€“iâ€“p</i>) and Inverted (<i>pâ€“iâ€“n</i>) Architectures. Chemistry of Materials, 2018, 30, 4193-4201. | 6.7 | 473 |
| 26 | Perovskite Solar Cells: From the Atomic Level to Film Quality and Device Performance. Angewandte Chemie - International Edition, 2018, 57, 2554-2569. | 13.8 | 413 |
| 27 | Perovskite Solar Cell Stability in Humid Air: Partially Reversible Phase Transitions in the PbI<sub>2</sub>â€CH<sub>3</sub>NH<sub>3</sub>Iâ€H<sub>2</sub>O System. Advanced Energy Materials, 2016, 6, 1600846. | 19.5 | 355 |
| 28 | Improving the Long-Term Stability of Perovskite Solar Cells with a Porous Al<sub>2</sub>O<sub>3</sub> Buffer Layer. Journal of Physical Chemistry Letters, 2015, 6, 432-437. | 4.6 | 343 |
| 29 | Performance and Stability Enhancement of Dyeâ€Sensitized and Perovskite Solar Cells by Al Doping of TiO<sub>2</sub>. Advanced Functional Materials, 2014, 24, 6046-6055. | 14.9 | 330 |
| 30 | Triazatruxene-Based Hole Transporting Materials for Highly Efficient Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 16172-16178. | 13.7 | 321 |
| 31 | Biological impact of lead from halide perovskites reveals the risk of introducing a safe threshold. Nature Communications, 2020, 11, 310. | 12.8 | 313 |
| 32 | Perovskite Solar Cells Go Lead Free. Joule, 2017, 1, 659-664. | 24.0 | 305 |
| 33 | Efficient photosynthesis of carbon monoxide from CO2 using perovskite photovoltaics. Nature Communications, 2015, 6, 7326. | 12.8 | 295 |
| 34 | Identifying and suppressing interfacial recombination to achieve high open-circuit voltage in perovskite solar cells. Energy and Environmental Science, 2017, 10, 1207-1212. | 30.8 | 288 |
| 35 | Enhancing Efficiency of Perovskite Solar Cells via Nâ€doped Graphene: Crystal Modification and Surface Passivation. Advanced Materials, 2016, 28, 8681-8686. | 21.0 | 281 |
| 36 | Enhanced charge carrier mobility and lifetime suppress hysteresis and improve efficiency in planar perovskite solar cells. Energy and Environmental Science, 2018, 11, 78-86. | 30.8 | 246 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 37 | Unbroken Perovskite: Interplay of Morphology, Electroâ€optical Properties, and Ionic Movement. Advanced Materials, 2016, 28, 5031-5037. | 21.0 | 242 |
| 38 | The effect of illumination on the formation of metal halide perovskite films. Nature, 2017, 545, 208-212. | 27.8 | 242 |
| 39 | A Methoxydiphenylamineâ€Substituted Carbazole Twin Derivative: An Efficient Holeâ€Transporting Material for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2015, 54, 11409-11413. | 13.8 | 239 |
| 40 | Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency. Advanced Energy Materials, 2016, 6, 1600767. | 19.5 | 224 |
| 41 | Inverted Currentâ€“Voltage Hysteresis in Mixed Perovskite Solar Cells: Polarization, Energy Barriers, and Defect Recombination. Advanced Energy Materials, 2016, 6, 1600396. | 19.5 | 213 |
| 42 | High Temperatureâ€Stable Perovskite Solar Cell Based on Lowâ€Cost Carbon Nanotube Hole Contact. Advanced Materials, 2017, 29, 1606398. | 21.0 | 209 |
| 43 | Mesoporous SnO2 electron selective contact enables UV-stable perovskite solar cells. Nano Energy, 2016, 30, 517-522. | 16.0 | 204 |
| 44 | Carbon nanotube-based hybrid hole-transporting material and selective contact for high efficiency perovskite solar cells. Energy and Environmental Science, 2016, 9, 461-466. | 30.8 | 185 |
| 45 | Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953. | 30.8 | 170 |
| 46 | Protic Ionic Liquids as p-Dopant for Organic Hole Transporting Materials and Their Application in High Efficiency Hybrid Solar Cells. Journal of the American Chemical Society, 2013, 135, 13538-13548. | 13.7 | 167 |
| 47 | High-Efficiency Polycrystalline Thin Film Tandem Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 2676-2681. | 4.6 | 166 |
| 48 | Silolothiophene-linked triphenylamines as stable hole transporting materials for high efficiency perovskite solar cells. Energy and Environmental Science, 2015, 8, 2946-2953. | 30.8 | 163 |
| 49 | Enhanced Efficiency and Stability of Perovskite Solar Cells Through Ndâ€Doping of Mesostructured TiO<sub>2</sub>. Advanced Energy Materials, 2016, 6, 1501868. | 19.5 | 157 |
| 50 | Enhancement in lifespan of halide perovskite solar cells. Energy and Environmental Science, 2019, 12, 865-886. | 30.8 | 143 |
| 51 | An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. Nature Energy, 2022, 7, 107-115. | 39.5 | 136 |
| 52 | Molecular Tailoring of Phenothiazine-Based Hole-Transporting Materials for High-Performing Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1029-1034. | 17.4 | 134 |
| 53 | The Doping Mechanism of Halide Perovskite Unveiled by Alkaline Earth Metals. Journal of the American Chemical Society, 2020, 142, 2364-2374. | 13.7 | 132 |
| 54 | A Ga-doped SnO<sub>2</sub> mesoporous contact for UV stable highly efficient perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 1850-1857. | 10.3 | 129 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Perovskite photovoltachromic cells for building integration. Energy and Environmental Science, 2015, 8, 1578-1584. | 30.8 | 125 |
| 56 | Tuning halide perovskite energy levels. Energy and Environmental Science, 2021, 14, 1429-1438. | 30.8 | 124 |
| 57 | Perovskite Grains Embraced in a Soft Fullerene Network Make Highly Efficient Flexible Solar Cells with Superior Mechanical Stability. Advanced Materials, 2019, 31, e1901519. | 21.0 | 123 |
| 58 | Spectral splitting photovoltaics using perovskite and wideband dye-sensitized solar cells. Nature Communications, 2015, 6, 8834. | 12.8 | 122 |
| 59 | 20.8% Slotâ€Die Coated MAPbI<sub>3</sub> Perovskite Solar Cells by Optimal DMSOâ€Content and Age of 2â€ME Based Precursor Inks. Advanced Energy Materials, 2021, 11, 2003460. | 19.5 | 122 |
| 60 | The Role of Charge Selective Contacts in Perovskite Solar Cell Stability. Advanced Energy Materials, 2019, 9, 1803140. | 19.5 | 120 |
| 61 | Progress, highlights and perspectives on NiO in perovskite photovoltaics. Chemical Science, 2020, 11, 7746-7759. | 7.4 | 119 |
| 62 | Perovskite Solar Cells: From the Laboratory to the Assembly Line. Chemistry - A European Journal, 2018, 24, 3083-3100. | 3.3 | 118 |
| 63 | The Role of Grain Boundaries on Ionic Defect Migration in Metal Halide Perovskites. Advanced Energy Materials, 2020, 10, 1903735. | 19.5 | 117 |
| 64 | Ionic Liquid Stabilizing Highâ€Efficiency Tin Halide Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101539. | 19.5 | 117 |
| 65 | Tin Halide Perovskite Films Made of Highly Oriented 2D Crystals Enable More Efficient and Stable Lead-free Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1923-1929. | 17.4 | 116 |
| 66 | Measuring Aging Stability of Perovskite Solar Cells. Joule, 2018, 2, 1019-1024. | 24.0 | 115 |
| 67 | Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 1445-1456. | 14.6 | 115 |
| 68 | Tin Halide Perovskite (ASnX<sub>3</sub>) Solar Cells: A Comprehensive Guide toward the Highest Power Conversion Efficiency. Advanced Energy Materials, 2020, 10, 1902467. | 19.5 | 114 |
| 69 | Highly Efficient and Stable Perovskite Solar Cells based on a Lowâ€Cost Carbon Cloth. Advanced Energy Materials, 2016, 6, 1601116. | 19.5 | 107 |
| 70 | Flash Infrared Annealing for Antisolventâ€Free Highly Efficient Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702915. | 19.5 | 106 |
| 71 | Origin of Sn(<scp>ii</scp>) oxidation in tin halide perovskites. Materials Advances, 2020, 1, 1066-1070. | 5.4 | 106 |
| 72 | Diacetylene bridged triphenylamines as hole transport materials for solid state dye sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 6949. | 10.3 | 105 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Understanding the perovskite/self-assembled selective contact interface for ultra-stable and highly efficient pâ€“iâ€“n perovskite solar cells. Energy and Environmental Science, 2021, 14, 3976-3985. | 30.8 | 104 |
| 74 | Ion Migrationâ€Induced Amorphization and Phase Segregation as a Degradation Mechanism in Planar Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000310. | 19.5 | 103 |
| 75 | Coâ€Evaporated Formamidinium Lead Iodide Based Perovskites with 1000 h Constant Stability for Fully Textured Monolithic Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101460. | 19.5 | 102 |
| 76 | Optical analysis of CH<sub>3</sub>NH<sub>3</sub>Sn<sub>x</sub>Pb<sub>1â^’x</sub>I<sub>3</sub> absorbers: a roadmap for perovskite-on-perovskite tandem solar cells. Journal of Materials Chemistry A, 2016, 4, 11214-11221. | 10.3 | 101 |
| 77 | Efficient and Stable Inorganic Perovskite Solar Cells Manufactured by Pulsed Flash Infrared Annealing. Advanced Energy Materials, 2018, 8, 1802060. | 19.5 | 98 |
| 78 | Strong Photocurrent from Two-Dimensional Excitons in Solution-Processed Stacked Perovskite Semiconductor Sheets. ACS Applied Materials & Interfaces, 2015, 7, 25227-25236. | 8.0 | 93 |
| 79 | Dimensional encapsulation of Iâ^’â‹¯I2â‹¯Iâ^’ in an organic salt crystal matrix. Chemical Communications, 2010, 46, 2724. | 4.1 | 89 |
| 80 | Graphene quantum dots decorated TiO2 mesoporous film as an efficient electron transport layer for high-performance perovskite solar cells. Journal of Power Sources, 2018, 402, 320-326. | 7.8 | 86 |
| 81 | Non-aggregated Zn(<scp>ii</scp>)octa(2,6-diphenylphenoxy) phthalocyanine as a hole transporting material for efficient perovskite solar cells. Dalton Transactions, 2015, 44, 10847-10851. | 3.3 | 83 |
| 82 | Globularityâ€Selected Large Molecules for a New Generation of Multication Perovskites. Advanced Materials, 2017, 29, 1702005. | 21.0 | 81 |
| 83 | Ferroelectricity-free lead halide perovskites. Energy and Environmental Science, 2019, 12, 2537-2547. | 30.8 | 80 |
| 84 | Stability of Organic Cations in Solution-Processed CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Perovskites: Formation of Modified Surface Layers. Journal of Physical Chemistry C, 2015, 119, 21329-21335. | 3.1 | 79 |
| 85 | Enhanced Self-Assembled Monolayer Surface Coverage by ALD NiO in p-i-n Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 2166-2176. | 8.0 | 77 |
| 86 | Bi-functional interfaces by poly(ionic liquid) treatment in efficient pin and nip perovskite solar cells. Energy and Environmental Science, 2021, 14, 4508-4522. | 30.8 | 76 |
| 87 | Solvents for Processing Stable Tin Halide Perovskites. ACS Energy Letters, 2021, 6, 959-968. | 17.4 | 76 |
| 88 | Rational Design of Molecular Hole-Transporting Materials for Perovskite Solar Cells: Direct versus Inverted Device Configurations. ACS Applied Materials & Interfaces, 2017, 9, 24778-24787. | 8.0 | 71 |
| 89 | Stability and Dark Hysteresis Correlate in NiOâ€Based Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901642. | 19.5 | 69 |
| 90 | Compositional and Interfacial Engineering Yield High-Performance and Stable p-i-n Perovskite Solar Cells and Mini-Modules. ACS Applied Materials & Interfaces, 2021, 13, 13022-13033. | 8.0 | 69 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Fluoride Chemistry in Tin Halide Perovskites. Angewandte Chemie - International Edition, 2021, 60, 21583-21591. | 13.8 | 68 |
| 92 | Additiveâ€Free Transparent Triarylamineâ€Based Polymeric Holeâ€Transport Materials for Stable Perovskite Solar Cells. ChemSusChem, 2016, 9, 2567-2571. | 6.8 | 65 |
| 93 | Anisotropic ionic conductivity in fluorinated ionic liquid crystals suitable for optoelectronic applications. Journal of Materials Chemistry A, 2013, 1, 6572. | 10.3 | 64 |
| 94 | Spontaneous crystal coalescence enables highly efficient perovskite solar cells. Nano Energy, 2017, 39, 24-29. | 16.0 | 62 |
| 95 | Embedded Nickelâ€Mesh Transparent Electrodes for Highly Efficient and Mechanically Stable Flexible Perovskite Photovoltaics: Toward a Portable Mobile Energy Source. Advanced Materials, 2020, 32, e2003422. | 21.0 | 62 |
| 96 | Halide anions driven self-assembly of haloperfluoroarenes: Formation of one-dimensional non-covalent copolymers. Journal of Fluorine Chemistry, 2009, 130, 1171-1177. | 1.7 | 60 |
| 97 | Influence of ionizing dopants on charge transport in organic semiconductors. Physical Chemistry Chemical Physics, 2014, 16, 1132-1138. | 2.8 | 58 |
| 98 | Structure-induced optoelectronic properties of phenothiazine-based materials. Journal of Materials Chemistry C, 2020, 8, 15486-15506. | 5.5 | 58 |
| 99 | Hole-transport materials with greatly-differing redox potentials give efficient TiO2â€"[CH3NH3][PbX3] perovskite solar cells. Physical Chemistry Chemical Physics, 2015, 17, 2335-2338. | 2.8 | 57 |
| 100 | Rationalizing the Molecular Design of Holeâ€Selective Contacts to Improve Charge Extraction in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900990. | 19.5 | 56 |
| 101 | Large-Grain Double Cation Perovskites with 18 Î¼s Lifetime and High Luminescence Yield for Efficient Inverted Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 1045-1054. | 17.4 | 54 |
| 102 | Ultrathin Nanosheets of Oxoâ€functionalized Graphene Inhibit the Ion Migration in Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902653. | 19.5 | 52 |
| 103 | Towards Longâ€Term Photostability of Solidâ€State Dye Sensitized Solar Cells. Advanced Energy Materials, 2014, 4, 1301667. | 19.5 | 51 |
| 104 | Topological distribution of reversible and non-reversible degradation in perovskite solar cells. Nano Energy, 2018, 45, 94-100. | 16.0 | 46 |
| 105 | From Bulk to Surface: Sodium Treatment Reduces Recombination at the Nickel Oxide/Perovskite Interface. Advanced Materials Interfaces, 2019, 6, 1900789. | 3.7 | 45 |
| 106 | Halogen Bonding in Perovskite Solar Cells: A New Tool for Improving Solar Energy Conversion. Angewandte Chemie - International Edition, 2022, 61, . | 13.8 | 45 |
| 107 | Mesoporous Electron-Selective Contacts Enhance the Tolerance to Interfacial Ion Accumulation in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 163-169. | 17.4 | 44 |
| 108 | Halogenâ€Bonded Holeâ€Transport Material Suppresses Charge Recombination and Enhances Stability of Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101553. | 19.5 | 44 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | The effect of selective interactions at the interface of polymerâ€“oxide hybrid solar cells. Energy and Environmental Science, 2012, 5, 9068. | 30.8 | 42 |
| 110 | The Impact of Nanoâ€•and Microstructure on the Stability of Perovskite Solar Cells. Small, 2018, 14, e1802573. | 10.0 | 42 |
| 111 | An efficient perovskite solar cell with symmetrical Zn(ii) phthalocyanine infiltrated buffering porous Al2O3 as the hybrid interfacial hole-transporting layer. Physical Chemistry Chemical Physics, 2016, 18, 27083-27089. | 2.8 | 38 |
| 112 | A polyfluoroalkyl imidazolium ionic liquid as iodide ion source in dye sensitized solar cells. Organic Electronics, 2012, 13, 2474-2478. | 2.6 | 37 |
| 113 | Perowskitâ€Solarzellen: atomare Ebene, SchichtqualitÃt und LeistungsfÃhigkeit der Zellen. Angewandte Chemie, 2018, 130, 2582-2598. | 2.0 | 37 |
| 114 | An Organic â€œDonorâ€Freeâ€•Dye with Enhanced Openâ€Circuit Voltage in Solidâ€State Sensitized Solar Cells. Advanced Energy Materials, 2014, 4, 1400166. | 19.5 | 35 |
| 115 | Tetrahedral Oxyanions in Halogen-Bonded Coordination Networks. Crystal Growth and Design, 2011, 11, 4220-4226. | 3.0 | 34 |
| 116 | Highly Efficient Perovskite Solar Cells Based on a Zn<sub>2</sub>SnO<sub>4</sub> Compact Layer. ACS Applied Materials & Interfaces, 2019, 11, 36553-36559. | 8.0 | 34 |
| 117 | Robust Inorganic Hole Transport Materials for Organic and Perovskite Solar Cells: Insights into Materials Electronic Properties and Device Performance. Solar Rrl, 2021, 5, 2000555. | 5.8 | 34 |
| 118 | Facile Deposition of Nb<sub>2</sub>O<sub>5</sub> Thin Film as an Electron-Transporting Layer for Highly Efficient Perovskite Solar Cells. ACS Applied Nano Materials, 2018, 1, 4101-4109. | 5.0 | 33 |
| 119 | TiO2-B as an electron transporting material for highly efficient perovskite solar cells. Journal of Power Sources, 2019, 415, 8-14. | 7.8 | 33 |
| 120 | A New 1,3,4â€Oxadiazoleâ€Based Holeâ€Transport Material for Efficient CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub> Perovskite Solar Cells. ChemSusChem, 2016, 9, 657-661. | 6.8 | 31 |
| 121 | Moisture-Induced Crystallographic Reorientations and Effects on Charge Carrier Extraction in Metal Halide Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3526-3534. | 17.4 | 30 |
| 122 | High Absorption Coefficient Cyclopentadithiophene Donor-Free Dyes for Liquid and Solid-State Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2016, 120, 15027-15034. | 3.1 | 28 |
| 123 | Oligothiophene Interlayer Effect on Photocurrent Generation for Hybrid TiO<sub>2</sub>/P3HT Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 17226-17235. | 8.0 | 27 |
| 124 | Refractive index change dominates the transient absorption response of metal halide perovskite thin films in the near infrared. Physical Chemistry Chemical Physics, 2019, 21, 14663-14670. | 2.8 | 27 |
| 125 | Challenges in tin perovskite solar cells. Physical Chemistry Chemical Physics, 2021, 23, 23413-23427. | 2.8 | 27 |
| 126 | Temperature dependent two-photon photoluminescence of CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub>: structural phase and exciton to free carrier transition. Optical Materials Express, 2018, 8, 511. | 3.0 | 26 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Environmental lead exposure from halide perovskites in solar cells. Trends in Ecology and Evolution, 2022, 37, 281-283. | 8.7 | 26 |
| 128 | Strategies toward Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800264. | 3.7 | 24 |
| 129 | The Bloom of Perovskite Optoelectronics: Fundamental Science Matters. ACS Energy Letters, 2019, 4, 861-865. | 17.4 | 24 |
| 130 | Toward Highâ€Throughput Texturing of Polymer Foils for Enhanced Light Trapping in Flexible Perovskite Solar Cells Using Rollâ€toâ€Roll Hot Embossing. Advanced Engineering Materials, 2020, 22, 1901217. | 3.5 | 24 |
| 131 | Influence of cysteine adsorption on the performance of CdSe quantum dots sensitized solar cells. Materials Chemistry and Physics, 2010, 124, 709-712. | 4.0 | 22 |
| 132 | Cesium-Incorporated Triple Cation Perovskites Deliver Fully Reversible and Stable Nanoscale Voltage Response. ACS Nano, 2019, 13, 1538-1546. | 14.6 | 21 |
| 133 | Large Conduction Band Energy Offset Is Critical for High Fill Factors in Inorganic Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2343-2348. | 17.4 | 20 |
| 134 | Perovskite Singleâ€Crystal Solar Cells: Advances and Challenges. Solar Rrl, 2022, 6, . | 5.8 | 19 |
| 135 | Phosphonic anchoring groups in organic dyes for solid-state solar cells. Physical Chemistry Chemical Physics, 2015, 17, 18780-18789. | 2.8 | 18 |
| 136 | Highly efficient Zn2SnO4 perovskite solar cells through band alignment engineering. Chemical Communications, 2019, 55, 14673-14676. | 4.1 | 18 |
| 137 | Comparing the excited-state properties of a mixed-cationâ€"mixed-halide perovskite to methylammonium lead iodide. Journal of Chemical Physics, 2020, 152, 104703. | 3.0 | 18 |
| 138 | Lights and Shadows of DMSO as Solvent for Tin Halide Perovskites. Chemistry - A European Journal, 2022, 28, . | 3.3 | 18 |
| 139 | Managing Phase Purities and Crystal Orientation for Highâ€Performance and Photostable Cesium Lead Halide Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000213. | 5.8 | 17 |
| 140 | Unravelling fullereneâ€"perovskite interactions introduces advanced blend films for performance-improved solar cells. Sustainable Energy and Fuels, 2019, 3, 2779-2787. | 4.9 | 16 |
| 141 | In situ Nearâ€Ambient Pressure Xâ€ray Photoelectron Spectroscopy Reveals the Influence of Photon Flux and Water on the Stability of Halide Perovskite. ChemSusChem, 2020, 13, 5722-5730. | 6.8 | 15 |
| 142 | Small-angle scattering to reveal the colloidal nature of halide perovskite precursor solutions. Journal of Materials Chemistry A, 2021, 9, 13477-13482. | 10.3 | 15 |
| 143 | Role of Terminal Group Position in Triphenylamine-Based Self-Assembled Hole-Selective Molecules in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 17461-17469. | 8.0 | 15 |
| 144 | Monitoring Charge Carrier Diffusion across a Perovskite Film with Transient Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 445-450. | 4.6 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Role of the Alkali Metal Cation in the Early Stages of Crystallization of Halide Perovskites. Chemistry of Materials, 2022, 34, 1121-1131. | 6.7 | 13 |
| 146 | In Situ Methylammonium Chloride-Assisted Perovskite Crystallization Strategy for High-Performance Solar Cells. , 2022, 4, 448-456. | | 13 |
| 147 | Quantitative Predictions of Moisture-Driven Photoemission Dynamics in Metal Halide Perovskites via Machine Learning. Journal of Physical Chemistry Letters, 2022, 13, 2254-2263. | 4.6 | 13 |
| 148 | In-situ observation of moisture-induced degradation of perovskite solar cells using laser-beam induced current. , 2016, , . | | 12 |
| 149 | Patterning of perovskiteâ€“polymer films by wrinkling instabilities. Soft Matter, 2017, 13, 1654-1659. | 2.7 | 12 |
| 150 | Perovskite solar cell performance assessment. JPhys Energy, 2020, 2, 044002. | 5.3 | 12 |
| 151 | Highâ€Throughput Aging System for Parallel Maximum Power Point Tracking of Perovskite Solar Cells. Energy Technology, 2022, 10, . | 3.8 | 11 |
| 152 | Covering effect of conductive glass: a facile route to tailor the grain growth of hybrid perovskites for highly efficient solar cells. Journal of Materials Chemistry A, 2018, 6, 20289-20296. | 10.3 | 10 |
| 153 | The Effects of Incident Photon Energy on the Time-Dependent Voltage Response of Lead Halide Perovskites. Chemistry of Materials, 2019, 31, 8969-8976. | 6.7 | 10 |
| 154 | Halogen-bond driven self-assembly of perfluorocarbon monolayers on silicon nitride. Journal of Materials Chemistry A, 2019, 7, 24445-24453. | 10.3 | 10 |
| 155 | Reply to the â€œComment on the publication â€˜Ferroelectricity-free lead halide perovskitesâ€™ by Gomez <i>et al.</i>â€•by Colsmann <i>et al.</i>. Energy and Environmental Science, 2020, 13, 1892-1895. | 30.8 | 10 |
| 156 | Hybrid Perovskite Degradation from an Optical Perspective: A Spectroscopic Ellipsometry Study from the Deep Ultraviolet to the Middle Infrared. Advanced Optical Materials, 2022, 10, 2101553. | 7.3 | 10 |
| 157 | Perovskite Solar Cells Go Lead Free. Joule, 2017, 1, 887. | 24.0 | 9 |
| 158 | Perovskite solar cells. , 2019, , 417-446. | | 9 |
| 159 | 2-Methylimidazole as an interlayer for the enhancement of the open-circuit voltage in perovskite solar cells. Journal of Power Sources, 2020, 450, 227714. | 7.8 | 9 |
| 160 | Dendriticâ€Like Molecules Built on a Pillar[5]arene Core as Hole Transporting Materials for Perovskite Solar Cells. Chemistry - A European Journal, 2021, 27, 8110-8117. | 3.3 | 9 |
| 161 | High temperature crystal chemistry of the n=3 Ruddlesdenâ€“Popper phase LaSr3Fe1.5Co1.5O10âˆ’Î´. Solid State Ionics, 2015, 270, 54-60. | 2.7 | 8 |
| 162 | Ultralow surface energy self-assembled monolayers of iodo-perfluorinated alkanes on silica driven by halogen bonding. Nanoscale, 2019, 11, 2401-2411. | 5.6 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Tuning of Ionic Liquid Crystal Properties by Combining Halogen Bonding and Fluorous Effect. ChemPlusChem, 2021, 86, 469-474. | 2.8 | 8 |
| 164 | Energy Distribution in Tin Halide Perovskite. Solar Rrl, 2022, 6, 2100825. | 5.8 | 8 |
| 165 | Fluoridchemie in Zinnâ€Halogenidâ€Perowskiten. Angewandte Chemie, 2021, 133, 21753-21762. | 2.0 | 5 |
| 166 | Suppression of Electron Trapping in MAPbI<sub>3</sub> Perovskite by Sr<sup>2+</sup> Doping. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000307. | 2.4 | 4 |
| 167 | Correction to â€œHow to Make over 20% Efficient Perovskite Solar Cells in Regular (<i>n</i>â€“<i>i</i>â€“<i>p</i>) and Inverted (<i>p</i>â€“<i>i</i>â€“<i>n</i>) Architecturesâ€. Chemistry of Materials, 2019, 31, 8576-8576. | 6.7 | 3 |
| 168 | Solution-based low-temperature CsPbI<sub>3</sub> nanoparticle perovskite solar cells. Materials Advances, 2022, 3, 1737-1746. | 5.4 | 3 |
| 169 | Halogen Bonding in Perovskite Solar Cells: A New Tool for Improving Solar Energy Conversion. Angewandte Chemie, 0, , . | 2.0 | 3 |
| 170 | Solar Cells: Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency (Adv. Energy Mater. 20/2016). Advanced Energy Materials, 2016, 6, . | 19.5 | 2 |
| 171 | Novel materials for stable perovskite solar cells. , 2017, , . | | 1 |
| 172 | Control refinement for discrete-time descriptor systems: a behavioural approach via simulation relations. IFAC-PapersOnLine, 2017, 50, 15822-15827. | 0.9 | 1 |
| 173 | Frontispiece: Perovskite Solar Cells: From the Laboratory to the Assembly Line. Chemistry - A European Journal, 2018, 24, . | 3.3 | 1 |
| 174 | Stability of materials and complete devices. , 2020, , 197-215. | | 1 |
| 175 | Structural Properties of Perovskite Layers in High-Performance Solar Cells. , 0, , . | | 1 |
| 176 | Disorder in self-assembed halogen-bonded perfluoroalkyl onium salts. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s245-s246. | 0.3 | 0 |
| 177 | Sub 150 Â°C processed meso-superstructured perovskite solar cells with enhanced efficiency (presentation video). , 2014, , . | | 0 |
| 178 | Frontispiece: A Methoxydiphenylamineâ€Substituted Carbazole Twin Derivative: An Efficient Holeâ€Transporting Material for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2015, 54, . | 13.8 | 0 |
| 179 | Frontispiz: Methoxydiphenylamin-substituiertes Carbazol-Zwillingsderivat: ein effizienter organischer Lochleiter fÃ¼r Perowskit-Solarzellen. Angewandte Chemie, 2015, 127, n/a-n/a. | 2.0 | 0 |
| 180 | Novel materials for stable perovskite solar cells (Presentation Recording). Proceedings of SPIE, 2015, , . | 0.8 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Specialty Grand Challenges in Optoelectronics. Frontiers in Electronics, 2020, 1, . | 3.2 | 0 |
| 182 | Tin halide perovskites for efficient lead-free solar cells. , 2021, , 259-285. | | 0 |
| 183 | Waterâ€Induced and Wavelengthâ€Dependent Light Absorption and Emission Dynamics in Tripleâ€Cation Halide Perovskites. Advanced Optical Materials, 2021, 9, 2100710. | 7.3 | 0 |
| 184 | InnenrÃ¼cktitelbild: Fluoridchemie in Zinnâ€Halogenidâ€Perowskiten (Angew. Chem. 39/2021). Angewandte Chemie, 2021, 133, 21763-21763. | 2.0 | 0 |
| 185 | Size matching of interacting moieties: a design principle in crystal engineering. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s82-s82. | 0.3 | 0 |
| 186 | The impact of metal ions doping on the defect chemistry of methylammonium lead iodide. , 0, , . | | 0 |
| 187 | Computational modelling of HTM/Perovskite interface: The role of methylammonium cation. , 0, , . | | 0 |
| 188 | 3D simulation of ion migration within the microstructure of perovskite solar cells. , 0, , . | | 0 |
| 189 | Perovskite Work Function Tuning through Self-Assembling Monolayers. , 0, , . | | 0 |
| 190 | How to Improve the Stability of All Inorganic Perovskite Solar Cells?. , 0, , . | | 0 |
| 191 | Impact of Alkaline Earth Metal Doping on the Stability of Perovskite Solar Cells. , 0, , . | | 0 |
| 192 | Structural Properties of Perovskite Layers in High-Performance Solar Cells. , 0, , . | | 0 |
| 193 | Active Materials, multicomponent and Interfaces for Stable Perovskite Solar Cells. , 0, , . | | 0 |
| 194 | Work Function Tuning through Self-Assembling Monolayers of Fluorinated Molecules. , 0, , . | | 0 |
| 195 | Patterning of transparent polymers using high-throughput methods: application in flexible perovskite solar cells with enhanced light trapping. , 2020, , . | | 0 |
| 196 | Tuning Halide Perovskite Work Function. , 0, , . | | 0 |