# Makhsud I Saidaminov

List of Publications by Year
in descending order



| 107 | 18,335 | 26630<br>56 | 33894<br>99 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 109 | 109 | 109 | 15321 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. Nature Communications, 2015, 6, 7586. | 12.8 | 1,478 |
| 2 | Challenges for commercializing perovskite solar cells. Science, 2018, 361, . | 12.6 | 1,327 |
| 3 | Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. ACS Energy Letters, 2016, 1, 32-37. | 17.4 | 752 |
| 4 | Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. Nature Energy, 2019, 4, 864-873. | 39.5 | 736 |
| 5 | CH<sub>3</sub>NH<sub>3</sub>PbCl<sub>3</sub> Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. Journal of Physical Chemistry Letters, 2015, 6, 3781-3786. | 4.6 | 636 |
| 6 | Planar-integrated single-crystalline perovskite photodetectors. Nature Communications, 2015, 6, 8724. | 12.8 | 617 |
| 7 | Making and Breaking of Lead Halide Perovskites. Accounts of Chemical Research, 2016, 49, 330-338. | 15.6 | 571 |
| 8 | Suppression of atomic vacancies via incorporation of isovalent small ions to increase the stability of halide perovskite solar cells in ambient air. Nature Energy, 2018, 3, 648-654. | 39.5 | 552 |
| 9 | Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. Nature Nanotechnology, 2020, 15, 668-674. | 31.5 | 541 |
| 10 | Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140. | 12.6 | 525 |
| 11 | All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1â€‰cm2 using surface-anchoring zwitterionic antioxidant. Nature Energy, 2020, 5, 870-880. | 39.5 | 497 |
| 12 | Pure Cs<sub>4</sub>PbBr<sub>6</sub>: Highly Luminescent Zero-Dimensional Perovskite Solids. ACS Energy Letters, 2016, 1, 840-845. | 17.4 | 481 |
| 13 | Chiral-perovskite optoelectronics. Nature Reviews Materials, 2020, 5, 423-439. | 48.7 | 445 |
| 14 | Thermal unequilibrium of strained black CsPbI <sub>3</sub> thin films. Science, 2019, 365, 679-684. | 12.6 | 444 |
| 15 | Low-Dimensional-Networked Metal Halide Perovskites: The Next Big Thing. ACS Energy Letters, 2017, 2, 889-896. | 17.4 | 367 |
| 16 | Inorganic Lead Halide Perovskite Single Crystals: Phaseâ€Selective Lowâ€Temperature Growth, Carrier Transport Properties, and Selfâ€Powered Photodetection. Advanced Optical Materials, 2017, 5, 1600704. | 7.3 | 362 |
| 17 | Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. Chemical Communications, 2015, 51, 17658-17661. | 4.1 | 349 |
| 18 | Regulating strain in perovskite thin films through charge-transport layers. Nature Communications, 2020, 11, 1514. | 12.8 | 346 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 19 | Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301. | 4.6 | 332 |
| 20 | Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. Nature Photonics, 2020, 14, 171-176. | 31.4 | 303 |
| 21 | Zero-Dimensional Cs<sub>4</sub>PbBr<sub>6</sub> Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2017, 8, 961-965. | 4.6 | 299 |
| 22 | Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. Advanced Materials, 2016, 28, 8144-8149. | 21.0 | 260 |
| 23 | Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100. | 12.8 | 237 |
| 24 | Fast and Sensitive Solutionâ€Processed Visibleâ€Blind Perovskite UV Photodetectors. Advanced Materials, 2016, 28, 7264-7268. | 21.0 | 234 |
| 25 | Perovskite Nanocrystals as a Color Converter for Visible Light Communication. ACS Photonics, 2016, 3, 1150-1156. | 6.6 | 221 |
| 26 | Allâ€Inorganic Quantumâ€Dot LEDs Based on a Phaseâ€Stabilized Î±â€CsPbI<sub>3</sub> Perovskite. Angewandte Chemie - International Edition, 2021, 60, 16164-16170. | 13.8 | 210 |
| 27 | Inside Perovskites: Quantum Luminescence from Bulk Cs<sub>4</sub>PbBr<sub>6</sub> Single Crystals. Chemistry of Materials, 2017, 29, 7108-7113. | 6.7 | 200 |
| 28 | 2D Metal Oxyhalideâ€Derived Catalysts for Efficient CO<sub>2</sub> Electroreduction. Advanced Materials, 2018, 30, e1802858. | 21.0 | 200 |
| 29 | The Inâ€Gap Electronic State Spectrum of Methylammonium Lead Iodide Singleâ€Crystal Perovskites. Advanced Materials, 2016, 28, 3406-3410. | 21.0 | 187 |
| 30 | Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257. | 12.8 | 180 |
| 31 | Flexible all-perovskite tandem solar cells approaching 25% efficiency with molecule-bridged hole-selective contact. Nature Energy, 2022, 7, 708-717. | 39.5 | 171 |
| 32 | Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. Nature Communications, 2016, 7, 13407. | 12.8 | 170 |
| 33 | The Role of Surface Tension in the Crystallization of Metal Halide Perovskites. ACS Energy Letters, 2017, 2, 1782-1788. | 17.4 | 155 |
| 34 | Copper adparticle enabled selective electrosynthesis of n-propanol. Nature Communications, 2018, 9, 4614. | 12.8 | 153 |
| 35 | Ultrasensitive and stable X-ray detection using zero-dimensional lead-free perovskites. Journal of Energy Chemistry, 2020, 49, 299-306. | 12.9 | 148 |
| 36 | Combining Efficiency and Stability in Mixed Tinâ€"Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. Advanced Materials, 2020, 32, e1907058. | 21.0 | 148 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Edge stabilization in reduced-dimensional perovskites. Nature Communications, 2020, 11, 170. | 12.8 | 147 |
| 38 | High Color Purity Leadâ€Free Perovskite Lightâ€Emitting Diodes via Sn Stabilization. Advanced Science, 2020, 7, 1903213. | 11.2 | 146 |
| 39 | In Situ Backâ€Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1807435. | 21.0 | 143 |
| 40 | Surface Restructuring of Hybrid Perovskite Crystals. ACS Energy Letters, 2016, 1, 1119-1126. | 17.4 | 140 |
| 41 | Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. Nature Photonics, 2020, 14, 227-233. | 31.4 | 136 |
| 42 | Thermochromic Perovskite Inks for Reversible Smart Window Applications. Chemistry of Materials, 2017, 29, 3367-3370. | 6.7 | 130 |
| 43 | Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527. | 17.4 | 130 |
| 44 | Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. Advanced Materials, 2019, 31, e1903559. | 21.0 | 128 |
| 45 | Conventional Solvent Oxidizes Sn(II) in Perovskite Inks. ACS Energy Letters, 2020, 5, 1153-1155. | 17.4 | 127 |
| 46 | Chloride Insertionâ€"Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. Journal of the American Chemical Society, 2020, 142, 5126-5134. | 13.7 | 116 |
| 47 | Optical constants of CH_3NH_3PbBr_3 perovskite thin films measured by spectroscopic ellipsometry. Optics Express, 2016, 24, 16586. | 3.4 | 108 |
| 48 | Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. Chemistry of Materials, 2017, 29, 4393-4400. | 6.7 | 100 |
| 49 | Multi-cation perovskites prevent carrier reflection from grain surfaces. Nature Materials, 2020, 19, 412-418. | 27.5 | 100 |
| 50 | Strain Engineering in Halide Perovskites. , 2020, 2, 1495-1508. | | 89 |
| 51 | Enhanced Etching, Surface Damage Recovery, and Submicron Patterning of Hybrid Perovskites using a Chemically Gas-Assisted Focused-Ion Beam for Subwavelength Grating Photonic Applications. Journal of Physical Chemistry Letters, 2016, 7, 137-142. | 4.6 | 80 |
| 52 | Amideâ€Catalyzed Phaseâ€Selective Crystallization Reduces Defect Density in Wideâ€Bandgap Perovskites. Advanced Materials, 2018, 30, e1706275. | 21.0 | 80 |
| 53 | Perovskite Single-Crystal Solar Cells: Going Forward. ACS Energy Letters, 2021, 6, 631-642. | 17.4 | 74 |
| 54 | Efficient Photon Recycling and Radiation Trapping in Cesium Lead Halide Perovskite Waveguides. ACS Energy Letters, 2018, 3, 1492-1498. | 17.4 | 70 |

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| 55 | Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications. , 2021, 3, 1025-1080. | | 70 |
| 56 | Butylamineâ€Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. Advanced Materials, 2018, 30, e1803830. | 21.0 | 67 |
| 57 | Timeâ€Dependent Mechanical Response of APbX<sub>3</sub> (A = Cs, CH<sub>3</sub>NH<sub>3</sub>; X) Tj ETQq1 1 0.784314 rg | 21.0 | 63 |
| 58 | Double Charged Surface Layers in Lead Halide Perovskite Crystals. Nano Letters, 2017, 17, 2021-2027. | 9.1 | 60 |
| 59 | Surface Electronic Structure of Hybrid Organo Lead Bromide Perovskite Single Crystals. Journal of Physical Chemistry C, 2016, 120, 21710-21715. | 3.1 | 58 |
| 60 | Tin Halide Perovskites Going Forward: Frost Diagrams Offer Hints. , 2021, 3, 299-307. | | 58 |
| 61 | Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. Nature Communications, 2018, 9, 4003. | 12.8 | 56 |
| 62 | Stimuli-responsive switchable halide perovskites: Taking advantage of instability. Joule, 2021, 5, 2027-2046. | 24.0 | 56 |
| 63 | Contactless measurements of photocarrier transport properties in perovskite single crystals. Nature Communications, 2019, 10, 1591. | 12.8 | 55 |
| 64 | Robust and air-stable sandwiched organo-lead halide perovskites for photodetector applications. Journal of Materials Chemistry C, 2016, 4, 2545-2552. | 5.5 | 53 |
| 65 | Solvent-Solute Coordination Engineering for Efficient Perovskite Luminescent Solar Concentrators. Joule, 2020, 4, 631-643. | 24.0 | 53 |
| 66 | Permanent Lattice Compression of Lead-Halide Perovskite for Persistently Enhanced Optoelectronic Properties. ACS Energy Letters, 2020, 5, 642-649. | 17.4 | 52 |
| 67 | Spectrally Tunable and Stable Electroluminescence Enabled by Rubidium Doping of CsPbBr<sub>3</sub> Nanocrystals. Advanced Optical Materials, 2019, 7, 1901440. | 7.3 | 51 |
| 68 | Dark Self-Healing-Mediated Negative Photoconductivity of a Lead-Free Cs<sub>3</sub>Bi<sub>2</sub>Cl<sub>9</sub> Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 2286-2292. | 4.6 | 51 |
| 69 | Halogen Vacancies Enable Ligandâ€Assisted Selfâ€Assembly of Perovskite Quantum Dots into Nanowires. Angewandte Chemie - International Edition, 2019, 58, 16077-16081. | 13.8 | 49 |
| 70 | Transition from Positive to Negative Photoconductance in Doped Hybrid Perovskite Semiconductors. Advanced Optical Materials, 2019, 7, 1900865. | 7.3 | 47 |
| 71 | Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. Journal of Materials Chemistry A, 2019, 7, 26020-26028. | 10.3 | 44 |
| 72 | Electroâ€Optic Modulation in Hybrid Metal Halide Perovskites. Advanced Materials, 2019, 31, e1808336. | 21.0 | 42 |

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| 73 | Perovskite Solar Cells with Polyaniline Hole Transport Layers Surpassing a 20% Power Conversion Efficiency. Chemistry of Materials, 2021, 33, 4679-4687. | 6.7 | 34 |
| 74 | Dual Coordination of Ti and Pb Using Bilinkable Ligands Improves Perovskite Solar Cell Performance and Stability. Advanced Functional Materials, 2020, 30, 2005155. | 14.9 | 33 |
| 75 | Carbon-based all-inorganic perovskite solar cells: Progress, challenges and strategies toward 20% efficiency. Materials Today, 2021, 50, 239-258. | 14.2 | 33 |
| 76 | Deepâ€Blue Perovskite Singleâ€Mode Lasing through Efficient Vaporâ€Assisted Chlorination. Advanced Materials, 2021, 33, e2006697. | 21.0 | 30 |
| 77 | Quantum Dot Selfâ€Assembly Enables Lowâ€Threshold Lasing. Advanced Science, 2021, 8, e2101125. | 11.2 | 28 |
| 78 | Learning-in-Templates Enables Accelerated Discovery and Synthesis of New Stable Double Perovskites. Journal of the American Chemical Society, 2019, 141, 3682-3690. | 13.7 | 27 |
| 79 | Highâ€Purity Hybrid Organolead Halide Perovskite Nanoparticles Obtained by Pulsedâ€Laser Irradiation in Liquid. ChemPhysChem, 2017, 18, 1047-1054. | 2.1 | 23 |
| 80 | Bromine Incorporation and Suppressed Cation Rotation in Mixed-Halide Perovskites. ACS Nano, 2020, 14, 15107-15118. | 14.6 | 23 |
| 81 | Scalable Fabrication of Metal Halide Perovskites for Direct X-ray Flat-Panel Detectors: A Perspective. Chemistry of Materials, 2022, 34, 5323-5333. | 6.7 | 22 |
| 82 | <sup>DMP</sup>DABâ€"Pdâ€"MAH: A Versatile Pd(0) Source for Precatalyst Formation, Reaction Screening, and Preparative-Scale Synthesis. ACS Catalysis, 2021, 11, 5636-5646. | 11.2 | 21 |
| 83 | Narrow Emission from Rb<sub>3</sub>Sb<sub>2</sub>I<sub>9</sub> Nanoparticles. Advanced Optical Materials, 2020, 8, 1901606. | 7.3 | 18 |
| 84 | Stable, Bromine-Free, Tetragonal Perovskites with 1.7 eV Bandgaps via A-Site Cation Substitution. , 2020, 2, 869-872. | | 18 |
| 85 | Halogen Vacancies Enable Ligandâ€Assisted Selfâ€Assembly of Perovskite Quantum Dots into Nanowires. Angewandte Chemie, 2019, 131, 16223-16227. | 2.0 | 16 |
| 86 | Suppression of Auger Recombination by Gradient Alloying in InAs/CdSe/CdS QDs. Chemistry of Materials, 2020, 32, 7703-7709. | 6.7 | 15 |
| 87 | High-throughput exploration of halide perovskite compositionally-graded films and degradation mechanisms. Communications Materials, 2022, 3, . | 6.9 | 14 |
| 88 | Orthorhombic Nonâ€Perovskite CsPbI<sub>3</sub> Microwires for Stable Highâ€Resolution Xâ€Ray Detectors. Advanced Optical Materials, 2022, 10, . | 7.3 | 14 |
| 89 | Single-Precursor Intermediate Shelling Enables Bright, Narrow Line Width InAs/InZnP-Based QD Emitters. Chemistry of Materials, 2020, 32, 2919-2925. | 6.7 | 13 |
| 90 | Heterogeneous Supersaturation in Mixed Perovskites. Advanced Science, 2020, 7, 1903166. | 11.2 | 13 |

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| 91 | Electro-Optic Modulation Using Metal-Free Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 19042-19047. | 8.0 | 12 |
| 92 | Bismuth Stabilizes the Î±-Phase of Formamidinium Lead Iodide Perovskite Single Crystals. , 2022, 4, 707-712. | | 10 |
| 93 | The peculiarities of reduction of iron (III) oxides deposited on expanded graphite. Journal of Materials Research, 2014, 29, 252-259. | 2.6 | 8 |
| 94 | Temperature-Induced Self-Compensating Defect Traps and Gain Thresholds in Colloidal Quantum Dots. ACS Nano, 2019, 13, 8970-8976. | 14.6 | 8 |
| 95 | Magnetic optical rotary dispersion and magnetic circular dichroism in methylammonium lead halide perovskites. Chirality, 2021, 33, 610-617. | 2.6 | 8 |
| 96 | Selfâ€Aligned Nonâ€Centrosymmetric Conjugated Molecules Enable Electroâ€Optic Perovskites. Advanced Optical Materials, 0, , 2100730. | 7.3 | 6 |
| 97 | High-Throughput Synthesis of Thin Films for the Discovery of Energy Materials: A Perspective. ACS Materials Au, 2022, 2, 516-524. | 6.0 | 6 |
| 98 | Expandable graphite modification by boric acid. Journal of Materials Research, 2012, 27, 1054-1059. | 2.6 | 5 |
| 99 | Inhibition of Amineâ€"Water Proton Exchange Stabilizes Perovskite Ink for Scalable Solar Cell Fabrication. Chemistry of Materials, 2022, 34, 4394-4402. | 6.7 | 5 |
| 100 | High length-to-width aspect ratio lead bromide microwires <i>via</i> perovskite-induced local concentration gradient for X-ray detection. CrystEngComm, 2021, 23, 2215-2221. | 2.6 | 3 |
| 101 | Perovskite Single Crystals: Synthesis, Properties and Devices. Materials and Energy, 2018, , 241-283. | 0.1 | 2 |
| 102 | Fine Structural Details Matter: A Lesson from Seven-Layered 2D Hybrid Perovskites. CheM, 2019, 5, 2513-2514. | 11.7 | 1 |
| 103 | Perovskite Solar Cells: Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines (Adv. Mater. 46/2019). Advanced Materials, 2019, 31, 1970330. | 21.0 | 1 |
| 104 | Allâ€Inorganic Quantumâ€Dot LEDs Based on a Phaseâ€Stabilized Î±â€CsPbI 3 Perovskite. Angewandte Chemie, 2021, 133, 16300-16306. | 2.0 | 1 |
| 105 | Coupling Perovskite Quantum Dot Pairs in Solution using a Nanoplasmonic Assembly. Nano Letters, 2022, 22, 5287-5293. | 9.1 | 1 |
| 106 | Hybrid perovskites: Approaches towards light-emitting devices. , 2016, , . | | 0 |
| 107 | Competing Crystallization in Multi-ion Perovskites. , 2021, , . | | 0 |