

Makhsud I Saidaminov

List of Publications by Year in descending order

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107
papers

18,335
citations

26567

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33814

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109
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109
docs citations

109
times ranked

15321
citing authors

#	ARTICLE	IF	CITATIONS
1	High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. <i>Nature Communications</i> , 2015, 6, 7586.	5.8	1,478
2	Challenges for commercializing perovskite solar cells. <i>Science</i> , 2018, 361, .	6.0	1,327
3	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. <i>ACS Energy Letters</i> , 2016, 1, 32-37.	8.8	752
4	Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. <i>Nature Energy</i> , 2019, 4, 864-873.	19.8	736
5	CH ₃ NH ₃ PbCl ₃ Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 3781-3786.	2.1	636
6	Planar-integrated single-crystalline perovskite photodetectors. <i>Nature Communications</i> , 2015, 6, 8724.	5.8	617
7	Making and Breaking of Lead Halide Perovskites. <i>Accounts of Chemical Research</i> , 2016, 49, 330-338.	7.6	571
8	Suppression of atomic vacancies via incorporation of isovalent small ions to increase the stability of halide perovskite solar cells in ambient air. <i>Nature Energy</i> , 2018, 3, 648-654.	19.8	552
9	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. <i>Nature Nanotechnology</i> , 2020, 15, 668-674.	15.6	541
10	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. <i>Science</i> , 2020, 367, 1135-1140.	6.0	525
11	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1â€cm ² using surface-anchoring zwitterionic antioxidant. <i>Nature Energy</i> , 2020, 5, 870-880.	19.8	497
12	Pure Cs ₄ PbBr ₆ : Highly Luminescent Zero-Dimensional Perovskite Solids. <i>ACS Energy Letters</i> , 2016, 1, 840-845.	8.8	481
13	Chiral-perovskite optoelectronics. <i>Nature Reviews Materials</i> , 2020, 5, 423-439.	23.3	445
14	Thermal unequilibrium of strained black CsPbI ₃ thin films. <i>Science</i> , 2019, 365, 679-684.	6.0	444
15	Low-Dimensional-Networked Metal Halide Perovskites: The Next Big Thing. <i>ACS Energy Letters</i> , 2017, 2, 889-896.	8.8	367
16	Inorganic Lead Halide Perovskite Single Crystals: Phase-Selective Low-Temperature Growth, Carrier Transport Properties, and Self-Powered Photodetection. <i>Advanced Optical Materials</i> , 2017, 5, 1600704.	3.6	362
17	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. <i>Chemical Communications</i> , 2015, 51, 17658-17661.	2.2	349
18	Regulating strain in perovskite thin films through charge-transport layers. <i>Nature Communications</i> , 2020, 11, 1514.	5.8	346

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19	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301.	2.1	332
20	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. Nature Photonics, 2020, 14, 171-176.	15.6	303
21	Zero-Dimensional Cs ₄ PbBr ₆ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2017, 8, 961-965.	2.1	299
22	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. Advanced Materials, 2016, 28, 8144-8149.	11.1	260
23	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100.	5.8	237
24	Fast and Sensitive Solution-Processed Visible-Blind Perovskite UV Photodetectors. Advanced Materials, 2016, 28, 7264-7268.	11.1	234
25	Perovskite Nanocrystals as a Color Converter for Visible Light Communication. ACS Photonics, 2016, 3, 1150-1156.	3.2	221
26	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized CsPbI ₃ Perovskite. Angewandte Chemie - International Edition, 2021, 60, 16164-16170.	7.2	210
27	Inside Perovskites: Quantum Luminescence from Bulk Cs ₄ PbBr ₆ Single Crystals. Chemistry of Materials, 2017, 29, 7108-7113.	3.2	200
28	2D Metal Oxyhalide-Derived Catalysts for Efficient CO ₂ Electroreduction. Advanced Materials, 2018, 30, e1802858.	11.1	200
29	The In-Gap Electronic State Spectrum of Methylammonium Lead Iodide Single-Crystal Perovskites. Advanced Materials, 2016, 28, 3406-3410.	11.1	187
30	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257.	5.8	180
31	Flexible all-perovskite tandem solar cells approaching 25% efficiency with molecule-bridged hole-selective contact. Nature Energy, 2022, 7, 708-717.	19.8	171
32	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. Nature Communications, 2016, 7, 13407.	5.8	170
33	The Role of Surface Tension in the Crystallization of Metal Halide Perovskites. ACS Energy Letters, 2017, 2, 1782-1788.	8.8	155
34	Copper adparticle enabled selective electrosynthesis of n-propanol. Nature Communications, 2018, 9, 4614.	5.8	153
35	Ultrasensitive and stable X-ray detection using zero-dimensional lead-free perovskites. Journal of Energy Chemistry, 2020, 49, 299-306.	7.1	148
36	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. Advanced Materials, 2020, 32, e1907058.	11.1	148

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37	Edge stabilization in reduced-dimensional perovskites. <i>Nature Communications</i> , 2020, 11, 170.	5.8	147
38	High Color Purity Lead-Free Perovskite Light-Emitting Diodes via Sn Stabilization. <i>Advanced Science</i> , 2020, 7, 1903213.	5.6	146
39	In Situ Back-Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. <i>Advanced Materials</i> , 2019, 31, e1807435.	11.1	143
40	Surface Restructuring of Hybrid Perovskite Crystals. <i>ACS Energy Letters</i> , 2016, 1, 1119-1126.	8.8	140
41	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. <i>Nature Photonics</i> , 2020, 14, 227-233.	15.6	136
42	Thermochromic Perovskite Inks for Reversible Smart Window Applications. <i>Chemistry of Materials</i> , 2017, 29, 3367-3370.	3.2	130
43	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. <i>ACS Energy Letters</i> , 2019, 4, 1521-1527.	8.8	130
44	Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. <i>Advanced Materials</i> , 2019, 31, e1903559.	11.1	128
45	Conventional Solvent Oxidizes Sn(II) in Perovskite Inks. <i>ACS Energy Letters</i> , 2020, 5, 1153-1155.	8.8	127
46	Chloride Insertion-Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. <i>Journal of the American Chemical Society</i> , 2020, 142, 5126-5134.	6.6	116
47	Optical constants of CH ₃ NH ₃ PbBr ₃ perovskite thin films measured by spectroscopic ellipsometry. <i>Optics Express</i> , 2016, 24, 16586.	1.7	108
48	Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. <i>Chemistry of Materials</i> , 2017, 29, 4393-4400.	3.2	100
49	Multi-cation perovskites prevent carrier reflection from grain surfaces. <i>Nature Materials</i> , 2020, 19, 412-418.	13.3	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. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 137-142.	2.1	80
52	Amide-Catalyzed Phase-Selective Crystallization Reduces Defect Density in Wide-Bandgap Perovskites. <i>Advanced Materials</i> , 2018, 30, e1706275.	11.1	80
53	Perovskite Single-Crystal Solar Cells: Going Forward. <i>ACS Energy Letters</i> , 2021, 6, 631-642.	8.8	74
54	Efficient Photon Recycling and Radiation Trapping in Cesium Lead Halide Perovskite Waveguides. <i>ACS Energy Letters</i> , 2018, 3, 1492-1498.	8.8	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.	11.1	67
57	Timeâ€Dependent Mechanical Response of APbX ₃ (A = Cs, CH ₃ NH ₃ ; X) Tj ETOq1 1 0.784314	11.1	63
58	Double Charged Surface Layers in Lead Halide Perovskite Crystals. Nano Letters, 2017, 17, 2021-2027.	4.5	60
59	Surface Electronic Structure of Hybrid Organo Lead Bromide Perovskite Single Crystals. Journal of Physical Chemistry C, 2016, 120, 21710-21715.	1.5	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.	5.8	56
62	Stimuli-responsive switchable halide perovskites: Taking advantage of instability. Joule, 2021, 5, 2027-2046.	11.7	56
63	Contactless measurements of photocarrier transport properties in perovskite single crystals. Nature Communications, 2019, 10, 1591.	5.8	55
64	Robust and air-stable sandwiched organo-lead halide perovskites for photodetector applications. Journal of Materials Chemistry C, 2016, 4, 2545-2552.	2.7	53
65	Solvent-Solute Coordination Engineering for Efficient Perovskite Luminescent Solar Concentrators. Joule, 2020, 4, 631-643.	11.7	53
66	Permanent Lattice Compression of Lead-Halide Perovskite for Persistently Enhanced Optoelectronic Properties. ACS Energy Letters, 2020, 5, 642-649.	8.8	52
67	Spectrally Tunable and Stable Electroluminescence Enabled by Rubidium Doping of CsPbBr ₃ Nanocrystals. Advanced Optical Materials, 2019, 7, 1901440.	3.6	51
68	Dark Self-Healing-Mediated Negative Photoconductivity of a Lead-Free Cs ₃ Bi ₂ Cl ₉ Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 2286-2292.	2.1	51
69	Halogen Vacancies Enable Ligandâ€Assisted Selfâ€Assembly of Perovskite Quantum Dots into Nanowires. Angewandte Chemie - International Edition, 2019, 58, 16077-16081.	7.2	49
70	Transition from Positive to Negative Photoconductance in Doped Hybrid Perovskite Semiconductors. Advanced Optical Materials, 2019, 7, 1900865.	3.6	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.	5.2	44
72	Electroâ€Optic Modulation in Hybrid Metal Halide Perovskites. Advanced Materials, 2019, 31, e1808336.	11.1	42

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73	Perovskite Solar Cells with Polyaniline Hole Transport Layers Surpassing a 20% Power Conversion Efficiency. <i>Chemistry of Materials</i> , 2021, 33, 4679-4687.	3.2	34
74	Dual Coordination of Ti and Pb Using Bilinkable Ligands Improves Perovskite Solar Cell Performance and Stability. <i>Advanced Functional Materials</i> , 2020, 30, 2005155.	7.8	33
75	Carbon-based all-inorganic perovskite solar cells: Progress, challenges and strategies toward 20% efficiency. <i>Materials Today</i> , 2021, 50, 239-258.	8.3	33
76	Deep-Blue Perovskite Single-Mode Lasing through Efficient Vapor-Assisted Chlorination. <i>Advanced Materials</i> , 2021, 33, e2006697.	11.1	30
77	Quantum Dot Self-Assembly Enables Low-Threshold Lasing. <i>Advanced Science</i> , 2021, 8, e2101125.	5.6	28
78	Learning-in-Templates Enables Accelerated Discovery and Synthesis of New Stable Double Perovskites. <i>Journal of the American Chemical Society</i> , 2019, 141, 3682-3690.	6.6	27
79	High-Purity Hybrid Organolead Halide Perovskite Nanoparticles Obtained by Pulsed-Laser Irradiation in Liquid. <i>ChemPhysChem</i> , 2017, 18, 1047-1054.	1.0	23
80	Bromine Incorporation and Suppressed Cation Rotation in Mixed-Halide Perovskites. <i>ACS Nano</i> , 2020, 14, 15107-15118.	7.3	23
81	Scalable Fabrication of Metal Halide Perovskites for Direct X-ray Flat-Panel Detectors: A Perspective. <i>Chemistry of Materials</i> , 2022, 34, 5323-5333.	3.2	22
82	^{DMP} DAB-Pd-MAH: A Versatile Pd(0) Source for Precatalyst Formation, Reaction Screening, and Preparative-Scale Synthesis. <i>ACS Catalysis</i> , 2021, 11, 5636-5646.	5.5	21
83	Narrow Emission from Rb ₃ Sb ₂ I ₉ Nanoparticles. <i>Advanced Optical Materials</i> , 2020, 8, 1901606.	3.6	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 Ligand-Assisted Self-Assembly of Perovskite Quantum Dots into Nanowires. <i>Angewandte Chemie</i> , 2019, 131, 16223-16227.	1.6	16
86	Suppression of Auger Recombination by Gradient Alloying in InAs/CdSe/CdS QDs. <i>Chemistry of Materials</i> , 2020, 32, 7703-7709.	3.2	15
87	High-throughput exploration of halide perovskite compositionally-graded films and degradation mechanisms. <i>Communications Materials</i> , 2022, 3, .	2.9	14
88	Orthorhombic Non-Perovskite CsPbI ₃ Microwires for Stable High-Resolution X-Ray Detectors. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	14
89	Single-Precursor Intermediate Shelling Enables Bright, Narrow Line Width InAs/InZnP-Based QD Emitters. <i>Chemistry of Materials</i> , 2020, 32, 2919-2925.	3.2	13
90	Heterogeneous Supersaturation in Mixed Perovskites. <i>Advanced Science</i> , 2020, 7, 1903166.	5.6	13

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91	Electro-Optic Modulation Using Metal-Free Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 19042-19047.	4.0	12
92	Bismuth Stabilizes the δ -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.	1.2	8
94	Temperature-Induced Self-Compensating Defect Traps and Gain Thresholds in Colloidal Quantum Dots. ACS Nano, 2019, 13, 8970-8976.	7.3	8
95	Magnetic optical rotary dispersion and magnetic circular dichroism in methylammonium lead halide perovskites. Chirality, 2021, 33, 610-617.	1.3	8
96	Self-Aligned Non-Centrosymmetric Conjugated Molecules Enable Electro-Optic Perovskites. Advanced Optical Materials, 0, , 2100730.	3.6	6
97	High-Throughput Synthesis of Thin Films for the Discovery of Energy Materials: A Perspective. ACS Materials Au, 2022, 2, 516-524.	2.6	6
98	Expandable graphite modification by boric acid. Journal of Materials Research, 2012, 27, 1054-1059.	1.2	5
99	Inhibition of Amine-Water Proton Exchange Stabilizes Perovskite Ink for Scalable Solar Cell Fabrication. Chemistry of Materials, 2022, 34, 4394-4402.	3.2	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.	1.3	3
101	Perovskite Single Crystals: Synthesis, Properties and Devices. Materials and Energy, 2018, , 241-283.	2.5	2
102	Fine Structural Details Matter: A Lesson from Seven-Layered 2D Hybrid Perovskites. Chem, 2019, 5, 2513-2514.	5.8	1
103	Perovskite Solar Cells: Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines (Adv. Mater. 46/2019). Advanced Materials, 2019, 31, 1970330.	11.1	1
104	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized δ -CsPbI ₃ Perovskite. Angewandte Chemie, 2021, 133, 16300-16306.	1.6	1
105	Coupling Perovskite Quantum Dot Pairs in Solution using a Nanoplasmonic Assembly. Nano Letters, 2022, 22, 5287-5293.	4.5	1
106	Hybrid perovskites: Approaches towards light-emitting devices. , 2016, , .		0
107	Competing Crystallization in Multi-ion Perovskites. , 2021, , .		0