Makhsud I Saidaminov

List of Publications by Citations

102 papers	12,110 citations	52 h-index	109 g-index
109 ext. papers	15,022 ext. citations	17.7 avg, IF	6.55 L-index

#	Paper	IF	Citations
102	High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. *Nature Communications*, **2015**, 6, 7586	17.4	1164
101	Challenges for commercializing perovskite solar cells. *Science*, **2018**, 361,	33.3	853
100	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. *ACS Energy Letters*, **2016**, 1, 32-37	20.1	551
99	CH3NH3PbCl3 Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. *Journal of Physical Chemistry Letters*, **2015**, 6, 3781-6	6.4	507
98	Planar-integrated single-crystalline perovskite photodetectors. *Nature Communications*, **2015**, 6, 8724	17.4	497
97	Making and Breaking of Lead Halide Perovskites. *Accounts of Chemical Research*, **2016**, 49, 330-8	24.3	491
96	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	62.3	463
95	Pure Cs4PbBr6: Highly Luminescent Zero-Dimensional Perovskite Solids. *ACS Energy Letters*, **2016**, 1, 840-845	20.1	367
94	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	62.3	355
93	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. *Science*, **2020**, 367, 1135-1140	33.3	298
92	Low-Dimensional-Networked Metal Halide Perovskites: The Next Big Thing. *ACS Energy Letters*, **2017**, 2, 889-896	20.1	288
91	Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots. *Nature Nanotechnology*, **2020**, 15, 668-674	28.7	281
90	Inorganic Lead Halide Perovskite Single Crystals: Phase-Selective Low-Temperature Growth, Carrier Transport Properties, and Self-Powered Photodetection. *Advanced Optical Materials*, **2017**, 5, 1600704	8.1	277
89	Thermal unequilibrium of strained black CsPbI thin films. *Science*, **2019**, 365, 679-684	33.3	272
88	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. *Journal of Physical Chemistry Letters*, **2016**, 7, 295-301	6.4	268
87	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. *Chemical Communications*, **2015**, 51, 17658-61	5.8	266
86	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1 cm2 using surface-anchoring zwitterionic antioxidant. *Nature Energy*, **2020**, 5, 870-880	62.3	233

85	Zero-Dimensional CsPbBr Perovskite Nanocrystals. *Journal of Physical Chemistry Letters*, **2017**, 8, 961-965	6.4	229
84	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. *Advanced Materials*, **2016**, 28, 8144-8149	24	206
83	Fast and Sensitive Solution-Processed Visible-Blind Perovskite UV Photodetectors. *Advanced Materials*, **2016**, 28, 7264-8	24	192
82	Chiral-perovskite optoelectronics. *Nature Reviews Materials*, **2020**, 5, 423-439	73.3	191
81	Perovskite Nanocrystals as a Color Converter for Visible Light Communication. *ACS Photonics*, **2016**, 3, 1150-1156	6.3	171
80	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. *Nature Communications*, **2018**, 9, 3100	17.4	171
79	Regulating strain in perovskite thin films through charge-transport layers. *Nature Communications*, **2020**, 11, 1514	17.4	165
78	Inside Perovskites: Quantum Luminescence from Bulk Cs4PbBr6 Single Crystals. *Chemistry of Materials*, **2017**, 29, 7108-7113	9.6	160
77	The In-Gap Electronic State Spectrum of Methylammonium Lead Iodide Single-Crystal Perovskites. *Advanced Materials*, **2016**, 28, 3406-10	24	151
76	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. *Nature Photonics*, **2020**, 14, 171-176	33.9	144
75	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. *Nature Communications*, **2016**, 7, 13407	17.4	140
74	2D Metal Oxyhalide-Derived Catalysts for Efficient CO Electroreduction. *Advanced Materials*, **2018**, 30, e1802858	24	123
73	Surface Restructuring of Hybrid Perovskite Crystals. *ACS Energy Letters*, **2016**, 1, 1119-1126	20.1	115
72	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. *Nature Communications*, **2020**, 11, 1257	17.4	114
71	In Situ Back-Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. *Advanced Materials*, **2019**, 31, e1807435	24	112
70	The Role of Surface Tension in the Crystallization of Metal Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 1782-1788	20.1	103
69	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. *Advanced Materials*, **2020**, 32, e1907058	24	92
68	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. *Nature Photonics*, **2020**, 14, 227-233	33.9	91

67	Thermochromic Perovskite Inks for Reversible Smart Window Applications. *Chemistry of Materials*, **2017**, 29, 3367-3370	9.6	89
66	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. *ACS Energy Letters*, **2019**, 4, 1521-1527	20.1	89
65	Copper adparticle enabled selective electrosynthesis of n-propanol. *Nature Communications*, **2018**, 9, 4614	17.4	86
64	High Color Purity Lead-Free Perovskite Light-Emitting Diodes via Sn Stabilization. *Advanced Science*, **2020**, 7, 1903213	13.6	85
63	Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. *Advanced Materials*, **2019**, 31, e1903559	24	85
62	Edge stabilization in reduced-dimensional perovskites. *Nature Communications*, **2020**, 11, 170	17.4	79
61	Optical constants of CH3NH3PbBr3 perovskite thin films measured by spectroscopic ellipsometry. *Optics Express*, **2016**, 24, 16586-94	3.3	76
60	Ultrasensitive and stable X-ray detection using zero-dimensional lead-free perovskites. *Journal of Energy Chemistry*, **2020**, 49, 299-306	12	75
59	Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. *Chemistry of Materials*, **2017**, 29, 4393-4400	9.6	68
58	Amide-Catalyzed Phase-Selective Crystallization Reduces Defect Density in Wide-Bandgap Perovskites. *Advanced Materials*, **2018**, 30, e1706275	24	62
57	Chloride Insertion-Immobilization Enables Bright, Narrowband, and Stable Blue-Emitting Perovskite Diodes. *Journal of the American Chemical Society*, **2020**, 142, 5126-5134	16.4	61
56	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized α-CsPbI Perovskite. *Angewandte Chemie - International Edition*, **2021**, 60, 16164-16170	16.4	59
55	Conventional Solvent Oxidizes Sn(II) in Perovskite Inks. *ACS Energy Letters*, **2020**, 5, 1153-1155	20.1	57
54	Efficient Photon Recycling and Radiation Trapping in Cesium Lead Halide Perovskite Waveguides. *ACS Energy Letters*, **2018**, 3, 1492-1498	20.1	56
53	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, 137-42	6.4	55
52	Double Charged Surface Layers in Lead Halide Perovskite Crystals. *Nano Letters*, **2017**, 17, 2021-2027	11.5	52
51	Multi-cation perovskites prevent carrier reflection from grain surfaces. *Nature Materials*, **2020**, 19, 412-418	17	52
50	Surface Electronic Structure of Hybrid Organo Lead Bromide Perovskite Single Crystals. *Journal of Physical Chemistry C*, **2016**, 120, 21710-21715	3.8	52

49	Butylamine-Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. *Advanced Materials*, **2018**, 30, e1803830	24	48
48	Robust and air-stable sandwiched organo-lead halide perovskites for photodetector applications. *Journal of Materials Chemistry C*, **2016**, 4, 2545-2552	7.1	46
47	Time-Dependent Mechanical Response of APbX (A = Cs, CH NH ; X = I, Br) Single Crystals. *Advanced Materials*, **2017**, 29, 1606556	24	42
46	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. *Nature Communications*, **2018**, 9, 4003	17.4	39
45	Strain Engineering in Halide Perovskites **2020**, 2, 1495-1508		37
44	Perovskite Single-Crystal Solar Cells: Going Forward. *ACS Energy Letters*, **2021**, 6, 631-642	20.1	37
43	Contactless measurements of photocarrier transport properties in perovskite single crystals. *Nature Communications*, **2019**, 10, 1591	17.4	35
42	Halogen Vacancies Enable Ligand-Assisted Self-Assembly of Perovskite Quantum Dots into Nanowires. *Angewandte Chemie - International Edition*, **2019**, 58, 16077-16081	16.4	32
41	Spectrally Tunable and Stable Electroluminescence Enabled by Rubidium Doping of CsPbBr3 Nanocrystals. *Advanced Optical Materials*, **2019**, 7, 1901440	8.1	31
40	Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection beyond 1000 nm. *Journal of Materials Chemistry A*, **2019**, 7, 26020-26028	13	30
39	Solvent-Solute Coordination Engineering for Efficient Perovskite Luminescent Solar Concentrators. *Joule*, **2020**, 4, 631-643	27.8	28
38	Transition from Positive to Negative Photoconductance in Doped Hybrid Perovskite Semiconductors. *Advanced Optical Materials*, **2019**, 7, 1900865	8.1	27
37	Electro-Optic Modulation in Hybrid Metal Halide Perovskites. *Advanced Materials*, **2019**, 31, e1808336	24	26
36	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications **2021**, 3, 1025-1080		24
35	Permanent Lattice Compression of Lead-Halide Perovskite for Persistently Enhanced Optoelectronic Properties. *ACS Energy Letters*, **2020**, 5, 642-649	20.1	21
34	Tin Halide Perovskites Going Forward: Frost Diagrams Offer Hints **2021**, 3, 299-307		21
33	High-Purity Hybrid Organolead Halide Perovskite Nanoparticles Obtained by Pulsed-Laser Irradiation in Liquid. *ChemPhysChem*, **2017**, 18, 1047-1054	3.2	19
32	Learning-in-Templates Enables Accelerated Discovery and Synthesis of New Stable Double Perovskites. *Journal of the American Chemical Society*, **2019**, 141, 3682-3690	16.4	17

31	Deep-Blue Perovskite Single-Mode Lasing through Efficient Vapor-Assisted Chlorination. *Advanced Materials*, **2021**, 33, e2006697	24	17
30	Narrow Emission from Rb3Sb2I9 Nanoparticles. *Advanced Optical Materials*, **2020**, 8, 1901606	8.1	16
29	Dark Self-Healing-Mediated Negative Photoconductivity of a Lead-Free CsBiCl Perovskite Single Crystal. *Journal of Physical Chemistry Letters*, **2021**, 12, 2286-2292	6.4	15
28	Halogen Vacancies Enable Ligand-Assisted Self-Assembly of Perovskite Quantum Dots into Nanowires. *Angewandte Chemie*, **2019**, 131, 16223-16227	3.6	13
27	Stimuli-responsive switchable halide perovskites: Taking advantage of instability. *Joule*, **2021**, 5, 2027-2046	27.8	13
26	Quantum Dot Self-Assembly Enables Low-Threshold Lasing. *Advanced Science*, **2021**, 8, e2101125	13.6	12
25	Dual Coordination of Ti and Pb Using Bilinkable Ligands Improves Perovskite Solar Cell Performance and Stability. *Advanced Functional Materials*, **2020**, 30, 2005155	15.6	11
24	Bromine Incorporation and Suppressed Cation Rotation in Mixed-Halide Perovskites. *ACS Nano*, **2020**, 14, 15107-15118	16.7	10
23	Stable, Bromine-Free, Tetragonal Perovskites with 1.7 eV Bandgaps via A-Site Cation Substitution **2020**, 2, 869-872		9
22	Heterogeneous Supersaturation in Mixed Perovskites. *Advanced Science*, **2020**, 7, 1903166	13.6	8
21	Temperature-Induced Self-Compensating Defect Traps and Gain Thresholds in Colloidal Quantum Dots. *ACS Nano*, **2019**, 13, 8970-8976	16.7	7
20	Single-Precursor Intermediate Shelling Enables Bright, Narrow Line Width InAs/InZnP-Based QD Emitters. *Chemistry of Materials*, **2020**, 32, 2919-2925	9.6	6
19	The peculiarities of reduction of iron (III) oxides deposited on expanded graphite. *Journal of Materials Research*, **2014**, 29, 252-259	2.5	6
18	DMPDABPdIMAH: A Versatile Pd(0) Source for Precatalyst Formation, Reaction Screening, and Preparative-Scale Synthesis. *ACS Catalysis*, **2021**, 11, 5636-5646	13.1	6
17	Carbon-based all-inorganic perovskite solar cells: Progress, challenges and strategies toward 20% efficiency. *Materials Today*, **2021**,	21.8	6
16	Scalable Fabrication of Metal Halide Perovskites for Direct X-ray Flat-Panel Detectors: A Perspective. *Chemistry of Materials*,	9.6	6
15	Perovskite Solar Cells with Polyaniline Hole Transport Layers Surpassing a 20% Power Conversion Efficiency. *Chemistry of Materials*, **2021**, 33, 4679-4687	9.6	5
14	Expandable graphite modification by boric acid. *Journal of Materials Research*, **2012**, 27, 1054-1059	2.5	4

13	Suppression of Auger Recombination by Gradient Alloying in InAs/CdSe/CdS QDs. *Chemistry of Materials*, **2020**, 32, 7703-7709	9.6	4
12	Electro-Optic Modulation Using Metal-Free Perovskites. *ACS Applied Materials & Interfaces*, **2021**, 13, 19042-19047	9.5	3
11	Self-Aligned Non-Centrosymmetric Conjugated Molecules Enable Electro-Optic Perovskites. *Advanced Optical Materials*,2100730	8.1	3
10	Perovskite Single Crystals: Synthesis, Properties and Devices. *Materials and Energy*, **2018**, 241-283		2
9	High length-to-width aspect ratio lead bromide microwires via perovskite-induced local concentration gradient for X-ray detection. *CrystEngComm*, **2021**, 23, 2215-2221	3.3	2
8	High-throughput exploration of halide perovskite compositionally-graded films and degradation mechanisms. *Communications Materials*, **2022**, 3,	6	2
7	Orthorhombic Non-Perovskite CsPbI 3 Microwires for Stable High-Resolution X-Ray Detectors. *Advanced Optical Materials*,2200516	8.1	2
6	Fine Structural Details Matter: A Lesson from Seven-Layered 2D Hybrid Perovskites. *CheM*, **2019**, 5, 2513-2514	18.2	1
5	Perovskite Solar Cells: Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines (Adv. Mater. 46/2019). *Advanced Materials*, **2019**, 31, 1970330	24	1
4	All-Inorganic Quantum-Dot LEDs Based on a Phase-Stabilized □CsPbI3 Perovskite. *Angewandte Chemie*, **2021**, 133, 16300-16306	3.6	1
3	Magnetic optical rotary dispersion and magnetic circular dichroism in methylammonium lead halide perovskites. *Chirality*, **2021**, 33, 610-617	2.1	1
2	Bismuth Stabilizes the □Phase of Formamidinium Lead Iodide Perovskite Single Crystals **2022**, 4, 707-712		1
1	High-Throughput Synthesis of Thin Films for the Discovery of Energy Materials: A Perspective. *ACS Materials Au*,		0