Ayan A Zhumekenov

List of Publications by Year in Descending Order

24 papers	2,803 citations	16 h-index	24 g-index
24 ext. papers	3,426 ext. citations	16.8 avg, IF	4.74 L-index

#	Paper	IF	Citations
24	Engineering Band-Type Alignment in CsPbBr Perovskite-Based Artificial Multiple Quantum Wells. *Advanced Materials*, **2021**, 33, e2005166	24	1
23	Domain-Size-Dependent Residual Stress Governs the Phase-Transition and Photoluminescence Behavior of Methylammonium Lead Iodide. *Advanced Functional Materials*, **2021**, 31, 2008088	15.6	3
22	Stimuli-responsive switchable halide perovskites: Taking advantage of instability. *Joule*, **2021**, 5, 2027-2068	27.8	13
21	Unraveling the Elastic Properties of (Quasi)Two-Dimensional Hybrid Perovskites: A Joint Experimental and Theoretical Study. *ACS Applied Materials & Interfaces*, **2020**, 12, 17881-17892	9.5	10
20	Low-Temperature Crystallization Enables 21.9% Efficient Single-Crystal MAPbI3 Inverted Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 657-662	20.1	96
19	Transition Dipole Moments of = 1, 2, and 3 Perovskite Quantum Wells from the Optical Stark Effect and Many-Body Perturbation Theory. *Journal of Physical Chemistry Letters*, **2020**, 11, 716-723	6.4	14
18	Visualizing Buried Local Carrier Diffusion in Halide Perovskite Crystals via Two-Photon Microscopy. *ACS Energy Letters*, **2020**, 5, 117-123	20.1	20
17	Solution-Processed Visible-Blind Ultraviolet Photodetectors with Nanosecond Response Time and High Detectivity. *Advanced Optical Materials*, **2019**, 7, 1900506	8.1	40
16	Why are Hot Holes Easier to Extract than Hot Electrons from Methylammonium Lead Iodide Perovskite?. *Advanced Energy Materials*, **2019**, 9, 1900084	21.8	30
15	Perovskite-Based Artificial Multiple Quantum Wells. *Nano Letters*, **2019**, 19, 3535-3542	11.5	17
14	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. *Joule*, **2019**, 3, 1963-1976	27.8	154
13	Reduced ion migration and enhanced photoresponse in cuboid crystals of methylammonium lead iodide perovskite. *Journal Physics D: Applied Physics*, **2019**, 52, 054001	3	11
12	Probing buried recombination pathways in perovskite structures using 3D photoluminescence tomography. *Energy and Environmental Science*, **2018**, 11, 2846-2852	35.4	32
11	All-inorganic perovskite nanocrystal scintillators. *Nature*, **2018**, 561, 88-93	50.4	773
10	Perovskite Single Crystals: Synthesis, Properties and Devices. *Materials and Energy*, **2018**, 241-283		2
9	Rotationally Free and Rigid Sublattices of the Single Crystal Perovskite CH3NH3PbBr3 (001): The Case of the Lattice Polar Liquid. *Journal of Physical Chemistry C*, **2018**, 122, 25506-25514	3.8	7
8	Efficient Photon Recycling and Radiation Trapping in Cesium Lead Halide Perovskite Waveguides. *ACS Energy Letters*, **2018**, 3, 1492-1498	20.1	56

List of Publications

7	Double Charged Surface Layers in Lead Halide Perovskite Crystals. *Nano Letters*, **2017**, 17, 2021-2027	11.5	52
6	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
5	Ultralong Radiative States in Hybrid Perovskite Crystals: Compositions for Submillimeter Diffusion Lengths. *Journal of Physical Chemistry Letters*, **2017**, 8, 4386-4390	6.4	59
4	The Role of Surface Tension in the Crystallization of Metal Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 1782-1788	20.1	103
3	Surface Restructuring of Hybrid Perovskite Crystals. *ACS Energy Letters*, **2016**, 1, 1119-1126	20.1	115
2	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. *ACS Energy Letters*, **2016**, 1, 32-37	20.1	551
1	Pure Cs4PbBr6: Highly Luminescent Zero-Dimensional Perovskite Solids. *ACS Energy Letters*, **2016**, 1, 840-845	20.1	367