Joshua J Choi

List of Publications by Year
in descending order

47 papers	5,234 citations	172386 29 h-index	243529 44 g-index
47 all docs	47 docs citations	47 times ranked	8553 citing authors

#	Article	IF	Citations
1	Organic molecular dynamics and charge-carrier lifetime in lead iodide perovskite MAPbI ₃. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	14
2	Ytterbium-Doped Cesium Lead Chloride Perovskite as an X-ray Scintillator with High Light Yield. ACS Omega, 2022, 7, 20968-20974.	1.6	17
3	The impact of cation and anion pairing in ionic salts on surface defect passivation in cesium lead bromide nanocrystals. Journal of Materials Chemistry C, 2021, 9, 991-999.	2.7	0
4	A new metric to control nucleation and grain size distribution in hybrid organicâ€“inorganic perovskites by tuning the dielectric constant of the antisolvent. Journal of Materials Chemistry A, 2021, 9, 3668-3676.	5.2	10
5	Exciton dissociation in quantum dots connected with photochromic molecule bridges. Journal of Materials Chemistry C, 2021, 9, 16006-16013.	2.7	2
6	Crystal structures and rotational dynamics of a two-dimensional metal halide perovskite (OA)2PbI4. Journal of Chemical Physics, 2020, 152, 014703.	1.2	7
7	Crystallographic orientation and layer impurities in two-dimensional metal halide perovskite thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 010801.	0.9	19
8	Ultralow Thermal Conductivity of Two-Dimensional Metal Halide Perovskites. Nano Letters, 2020, 20, 3331-3337.	4.5	64
9	Relationship between the Nature of Monovalent Cations and Charge Recombination in Metal Halide Perovskites. ACS Applied Energy Materials, 2020, 3, 1298-1304.	2.5	11
10	Temporally decoherent and spatially coherent vibrations in metal halide perovskites. Physical Review B, 2020, 102, .	1.1	7
11	Understanding the Formation of Vertical Orientation in Two-dimensional Metal Halide Perovskite Thin Films. Chemistry of Materials, 2019, 31, 1336-1343.	3.2	93
12	Crystallization of high aspect ratio HKUST-1 thin films in nanoconfined channels for selective small molecule uptake. Nanoscale Advances, 2019, 1, 2946-2952.	2.2	15
13	Origin of vertical orientation in two-dimensional metal halide perovskites and its effect on photovoltaic performance. Nature Communications, 2018, 9, 1336.	5.8	323
14	Laser Annealing of TiO₂ Electron-Transporting Layer in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 41312-41317.	4.0	20
15	Impact of Crystallographic Orientation Disorders on Electronic Heterogeneities in Metal Halide Perovskite Thin Films. Nano Letters, 2018, 18, 6271-6278.	4.5	22
16	Colloidal Nanocrystals as a Platform for Rapid Screening of Charge Trap Passivating Molecules for Metal Halide Perovskite Thin Films. Chemistry of Materials, 2018, 30, 4515-4526.	3.2	19
17	Crystallographic orientation propagation in metal halide perovskite thin films. Journal of Materials Chemistry A, 2017, 5, 7796-7800.	5.2	57
18	Improved Charge Collection in Highly Efficient CsPbBrI₂ Solar Cells with Light-Induced Dealloying. ACS Energy Letters, 2017, 2, 1043-1049.	8.8	103

#	Article	IF	Citations
19	Origin of long lifetime of band-edge charge carriers in organicâ€“inorganic lead iodide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7519-7524.	3.3	137
20	Room-Temperature Processing of TiO_x Electron Transporting Layer for Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 3206-3210.	2.1	36
21	Controlling nucleation, growth, and orientation of metal halide perovskite thin films with rationally selected additives. Journal of Materials Chemistry A, 2017, 5, 113-123.	5.2	115
22	Nature of the cubic to tetragonal phase transition in methylammonium lead iodide perovskite. Journal of Chemical Physics, 2016, 145, 144702.	1.2	53
23	Charge transport in bulk CH3NH3PbI3 perovskite. Journal of Applied Physics, 2016, 119, .	1.1	25
24	Entropy-driven structural transition and kinetic trapping in formamidinium lead iodide perovskite. Science Advances, 2016, 2, e1601650.	4.7	203
25	Perovskites at the nanoscale: from fundamentals to applications. Nanoscale, 2016, 8, 6206-6208.	2.8	21
26	Temperature dependent energy levels of methylammonium lead iodide perovskite. Applied Physics Letters, 2015, 106, .	1.5	159
27	Rotational dynamics of organic cations in the CH₃NH₃PbI₃perovskite. Physical Chemistry Chemical Physics, 2015, 17, 31278-31286.	1.3	212
28	Structure of Methylammonium Lead Iodide Within Mesoporous Titanium Dioxide: Active Material in High-Performance Perovskite Solar Cells. Nano Letters, 2014, 14, 127-133.	4.5	282
29	A Hot Electronâ€“Hole Pair Breaks the Symmetry of a Semiconductor Quantum Dot. Nano Letters, 2013, 13, 6091-6097.	4.5	51
30	Heterojunction PbS Nanocrystal Solar Cells with Oxide Charge-Transport Layers. ACS Nano, 2013, 7, 10938-10947.	7.3	34
31	Ligand Exchange and the Stoichiometry of Metal Chalcogenide Nanocrystals: Spectroscopic Observation of Facile Metal-Carboxylate Displacement and Binding. Journal of the American Chemical Society, 2013, 135, 18536-18548.	6.6	714
32	Bright infrared LEDs based on colloidal quantum-dots. Materials Research Society Symposia Proceedings, 2013, 1509, 1.	0.1	0
33	Facile Synthesis of Colloidal CuO Nanocrystals for Light-Harvesting Applications. Journal of Nanomaterials, 2012, 2012, 1-6.	1.5	61
34	Interface-Induced Nucleation, Orientational Alignment and Symmetry Transformations in Nanocube Superlattices. Nano Letters, 2012, 12, 4791-4798.	4.5	76
35	Predicting Nanocrystal Shape through Consideration of Surface-Ligand Interactions. ACS Nano, 2012, 6, 2118-2127.	7.3	236
36	Bright infrared quantum-dot light-emitting diodes through inter-dot spacing control. Nature Nanotechnology, 2012, 7, 369-373.	15.6	429

#	Article	IF	Citations
37	Shape-Anisotropy Driven Symmetry Transformations in Nanocrystal Superlattice Polymorphs. ACS Nano, 2011, 5, 2815-2823.	7.3	188
38	Controlling Nanocrystal Superlattice Symmetry and Shape-Anisotropic Interactions through Variable Ligand Surface Coverage. Journal of the American Chemical Society, 2011, 133, 3131-3138.	6.6	198
39	Pulsed Laser Annealing of Thin Films of Self-Assembled Nanocrystals. ACS Nano, 2011, 5, 7010-7019.	7.3	26
40	Solutionâ€Processed Nanocrystal Quantum Dot Tandem Solar Cells. Advanced Materials, 2011, 23, 3144-3148.	11.1	128
41	Role of Solvent Dielectric Properties on Charge Transfer from PbS Nanocrystals to Molecules. Nano Letters, 2010, 10, 318-323.	4.5	79
42	SnSe Nanocrystals: Synthesis, Structure, Optical Properties, and Surface Chemistry. Journal of the American Chemical Society, 2010, 132, 9519-9521.	6.6	271
43	Photogenerated Exciton Dissociation in Highly Coupled Lead Salt Nanocrystal Assemblies. Nano Letters, 2010, 10, 1805-1811.	4.5	194
44	PbSe Nanocrystal Network Formation during Pyridine Ligand Displacement. ACS Applied Materials & Interfaces, 2009, 1, 244-250.	4.0	64
45	PbSe Nanocrystal Excitonic Solar Cells. Nano Letters, 2009, 9, 3749-3755.	4.5	360
46	Structure/Processing Relationships of Highly Ordered Lead Salt Nanocrystal Superlattices. ACS Nano, 2009, 3, 2975-2988.	7.3	75
47	Silicon Surface Passivation by Laser Processing a Solâ€“Gel TiO_x Thin Film. ACS Applied Energy Materials, 0, , .	2.5	4