Mahshid Ahmadi

List of Publications by Year
in descending order

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72 papers	2,510 citations	201674 27 h-index	206112 48 g-index
75 all docs	75 docs citations	75 times ranked	3797 citing authors

#	Article	IF	Citations
1	A Review on Organicâ€“Inorganic Halide Perovskite Photodetectors: Device Engineering and Fundamental Physics. Advanced Materials, 2017, 29, 1605242.	21.0	590
2	Chemical nature of ferroelastic twin domains in CH3NH3PbI3 perovskite. Nature Materials, 2018, 17, 1013-1019.	27.5	183
3	Charge-transfer versus energy-transfer in quasi-2D perovskite light-emitting diodes. Nano Energy, 2018, 50, 615-622.	16.0	103
4	Deconvolving distribution of relaxation times, resistances and inductance from electrochemical impedance spectroscopy via statistical model selection: Exploiting structural-sparsity regularization and data-driven parameter tuning. Electrochimica Acta, 2019, 313, 570-583.	5.2	68
5	Breaking the Time Barrier in Kelvin Probe Force Microscopy: Fast Free Force Reconstruction Using the G-Mode Platform. ACS Nano, 2017, 11, 8717-8729.	14.6	67
6	High performance and stable all-inorganic perovskite light emitting diodes by reducing luminescence quenching at PEDOT:PSS/Perovskites interface. Organic Electronics, 2019, 64, 47-53.	2.6	66
7	Chemical Robotics Enabled Exploration of Stability in Multicomponent Lead Halide Perovskites via Machine Learning. ACS Energy Letters, 2020, 5, 3426-3436.	17.4	66
8	Deep levels, charge transport and mixed conductivity in organometallic halide perovskites. Energy and Environmental Science, 2019, 12, 1413-1425.	30.8	60
9	Evolution Pathway of CIGSe Nanocrystals for Solar Cell Applications. Journal of Physical Chemistry C, 2012, 116, 8202-8209.	3.1	55
10	Effect of Photogenerated Dipoles in the Hole Transport Layer on Photovoltaic Performance of Organicâ€“Inorganic Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1601575.	19.5	54
11	Synthesis of Cu₂SnSe₃ Nanocrystals for Solution Processable Photovoltaic Cells. Inorganic Chemistry, 2013, 52, 1722-1728.	4.0	51
12	Deciphering the effect of traps on electronic charge transport properties of methylammonium lead tribromide perovskite. Science Advances, 2020, 6, .	10.3	47
13	Photoinduced Bulk Polarization and Its Effects on Photovoltaic Actions in Perovskite Solar Cells. ACS Nano, 2017, 11, 11542-11549.	14.6	44
14	Exploring Anomalous Polarization Dynamics in Organometallic Halide Perovskites. Advanced Materials, 2018, 30, 1705298.	21.0	44
15	Machine learning for high-throughput experimental exploration of metal halide perovskites. Joule, 2021, 5, 2797-2822.	24.0	44
16	Precursor purity effects on solution-based growth of MAPbBr₃ single crystals towards efficient radiation sensing. CrystEngComm, 2018, 20, 7818-7825.	2.6	43
17	The deep-DRT: A deep neural network approach to deconvolve the distribution of relaxation times from multidimensional electrochemical impedance spectroscopy data. Electrochimica Acta, 2021, 392, 139010.	5.2	43
18	Exploring spin-orbital coupling effects on photovoltaic actions in Sn and Pb based perovskite solar cells. Nano Energy, 2017, 38, 297-303.	16.0	42

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19	Direct Observation of Photoinduced Ion Migration in Lead Halide Perovskites. Advanced Functional Materials, 2021, 31, 2008777.	14.9	41
20	Methylammonium lead tribromide semiconductors: Ionizing radiation detection and electronic properties. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 927, 401-406.	1.6	37
21	Time resolved surface photovoltage measurements using a big data capture approach to KPFM. Nanotechnology, 2018, 29, 445703.	2.6	36
22	High-Throughput Study of Antisolvents on the Stability of Multicomponent Metal Halide Perovskites through Robotics-Based Synthesis and Machine Learning Approaches. Journal of the American Chemical Society, 2021, 143, 19945-19955.	13.7	35
23	Metal/Ion Interactions Induced pâ€“iâ€“n Junction in Methylammonium Lead Triiodide Perovskite Single Crystals. Journal of the American Chemical Society, 2017, 139, 17285-17288.	13.7	32
24	Toward Electrochemical Studies on the Nanometer and Atomic Scales: Progress, Challenges, and Opportunities. ACS Nano, 2019, 13, 9735-9780.	14.6	32
25	Giant current amplification induced by ion migration in perovskite single crystal photodetectors. Journal of Materials Chemistry C, 2018, 6, 8042-8050.	5.5	31
26	Dynamic Impact of Electrode Materials on Interface of Singleâ€Crystalline Methylammonium Lead Bromide Perovskite. Advanced Materials Interfaces, 2018, 5, 1800476.	3.7	31
27	Exploration of Electrochemical Reactions at Organicâ€“Inorganic Halide Perovskite Interfaces via Machine Learning in In Situ Timeâ€ofâ€Flight Secondary Ion Mass Spectrometry. Advanced Functional Materials, 2020, 30, 2001995.	14.9	30
28	Hysteretic Ion Migration and Remanent Field in Metal Halide Perovskites. Advanced Science, 2020, 7, 2001176.	11.2	29
29	Simultaneously enhancing dissociation and suppressing recombination in perovskite solar cells. Nano Energy, 2017, 36, 95-101.	16.0	27
30	Dynamic behavior of CH3NH3PbI3 perovskite twin domains. Applied Physics Letters, 2018, 113, .	3.3	27
31	Lightâ€Ferroic Interaction in Hybrid Organicâ€“Inorganic Perovskites. Advanced Optical Materials, 2019, 7, 1901451.	7.3	24
32	Spatially Resolved Carrier Dynamics at MAPbBr₃ Single Crystalâ€“Electrode Interface. ACS Applied Materials & Interfaces, 2019, 11, 41551-41560.	8.0	23
33	Ferroic Halide Perovskite Optoelectronics. Advanced Functional Materials, 2021, 31, 2102793.	14.9	23
34	Exploring Transport Behavior in Hybrid Perovskites Solar Cells via Machine Learning Analysis of Environmentalâ€Dependent Impedance Spectroscopy. Advanced Science, 2021, 8, e2002510.	11.2	23
35	Reply to: On the ferroelectricity of CH3NH3PbI3 perovskites. Nature Materials, 2019, 18, 1051-1053.	27.5	21
36	Unraveling the Energy Landscape and Energy Funneling Modulated by Hole Transport Layer for Highly Efficient Perovskite LEDs. Laser and Photonics Reviews, 2021, 15, 2000495.	8.7	20

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37	Strainâ€“Chemical Gradient and Polarization in Metal Halide Perovskites. Advanced Electronic Materials, 2020, 6, 1901235.	5.1	19
38	Imaging mechanism for hyperspectral scanning probe microscopy via Gaussian process modelling. Npj Computational Materials, 2020, 6, .	8.7	19
39	Guanidinium-Pseudohalide Perovskite Interfaces Enable Surface Reconstruction of Colloidal Quantum Dots for Efficient and Stable Photovoltaics. ACS Nano, 2022, 16, 1649-1660.	14.6	18
40	Giant isotope effect on phonon dispersion and thermal conductivity in methylammonium lead iodide. Science Advances, 2020, 6, eaaz1842.	10.3	17
41	N and p-type properties in organo-metal halide perovskites studied by Seebeck effects. Organic Electronics, 2016, 35, 216-220.	2.6	15
42	Exploring the physics of cesium lead halide perovskite quantum dots via Bayesian inference of the photoluminescence spectra in automated experiment. Nanophotonics, 2021, 10, 1977-1989.	6.0	15
43	Environmental Gating and Galvanic Effects in Single Crystals of Organicâ€“Inorganic Halide Perovskites. ACS Applied Materials & Interfaces, 2019, 11, 14722-14733.	8.0	14
44	Correlating Crystallographic Orientation and Ferroic Properties of Twin Domains in Metal Halide Perovskites. ACS Nano, 2021, 15, 7139-7148.	14.6	14
45	Strain in Metal Halide Perovskites: The Critical Role of A-Site Cation. ACS Applied Energy Materials, 2021, 4, 2068-2072.	5.1	14
46	Role of Decomposition Product Ions in Hysteretic Behavior of Metal Halide Perovskite. ACS Nano, 2021, 15, 9017-9026.	14.6	13
47	Flaxseed Oil Supplementation Augments Antioxidant Capacity and Alleviates Oxidative Stress: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Evidence-based Complementary and Alternative Medicine, 2021, 2021, 1-9.	1.2	13
48	Navigating grain boundaries in perovskite solar cells. Matter, 2021, 4, 1442-1445.	10.0	12
49	Elucidating the Spatial Dynamics of Charge Carriers in Quasi-Two-Dimensional Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 35133-35141.	8.0	12
50	Solution processable nanoparticles as high-k dielectric for organic field effect transistors. Organic Electronics, 2010, 11, 1660-1667.	2.6	11
51	Poly(ethylene oxide)-assisted energy funneling for efficient perovskite light emission. Journal of Materials Chemistry C, 2019, 7, 8287-8293.	5.5	11
52	High-performance blue perovskite light-emitting diodes based on the â€œfar-field plasmonic effectâ€•of gold nanoparticles. Journal of Materials Chemistry C, 2020, 8, 6615-6622.	5.5	11
53	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. Nano Energy, 2021, 89, 106428.	16.0	11
54	12-Crown-4 ether assisted in-situ grown perovskite crystals for ambient stable light emitting diodes. Nano Energy, 2022, 95, 107000.	16.0	11

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55	Improved Radiation Sensing with Methylammonium Lead Tribromide Perovskite Semiconductors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 986, 164710.	1.6	10
56	Ferroelectric and Charge Transport Properties in Strain-Engineered Two-Dimensional Lead Iodide Perovskites. Chemistry of Materials, 2021, 33, 4077-4088.	6.7	10
57	Study of Er-Doped ZnS Quantum Dots Synthesized by Chemical Capping Method. Japanese Journal of Applied Physics, 2008, 47, 5089-5092.	1.5	8
58	Microstructural Evaluation of Phase Instability in Large Bandgap Metal Halide Perovskites. ACS Nano, 2021, 15, 20391-20402.	14.6	8
59	Origin of Defects and Positron Annihilation in Hybrid and All-Inorganic Perovskites. Chemistry of Materials, 2022, 34, 297-306.	6.7	7
60	Super-resolution and signal separation in contact Kelvin probe force microscopy of electrochemically active ferroelectric materials. Journal of Applied Physics, 2020, 128, 055101.	2.5	6
61	Elucidating the relationship between crystallo-chemistry and optical properties of CIGS nanocrystals. Nanotechnology, 2017, 28, 045708.	2.6	4
62	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. Microscopy and Microanalysis, 2019, 25, 2076-2077.	0.4	3
63	Exploring Responses of Contact Kelvin Probe Force Microscopy in Triple-Cation Double-Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 12355-12365.	3.1	3
64	Dynamic control of ferroionic states in ferroelectric nanoparticles. Acta Materialia, 2022, 237, 118138.	7.9	2
65	Improved Radiation Sensing with Methylammonium Lead Bromide Perovskite Semiconductors. , 2019, , .		1
66	Lightâ€“Ferroic Interaction: Lightâ€Ferroic Interaction in Hybrid Organicâ€“Inorganic Perovskites (Advanced Optical Materials 23/2019). Advanced Optical Materials, 2019, 7, 1970090.	7.3	1
67	Estimating Preisach Density via Subset Selection. IEEE Access, 2020, 8, 61767-61774.	4.2	1
68	Ferroic Halide Perovskite Optoelectronics (Adv. Funct. Mater. 36/2021). Advanced Functional Materials, 2021, 31, 2170263.	14.9	1
69	Lightâ€“ferroelectric interaction in two-dimensional lead iodide perovskites. Journal of Materials Chemistry A, 0, , .	10.3	1
70	Engineering Hybrid Perovskite Materials for Spectroscopic Sensing of Ionizing Radiation. , 0, , .		0
71	Spatially Resolved Carrier Dynamics and Associated Chemical Changes at Hybrid Organic-inorganic Perovskite/Electrode Interfaces. , 0, , .		0
72	Engineering Hybrid Perovskite Materials for Spectroscopic Sensing of Ionizing Radiation. , 0, , .		0