

Mahshid Ahmadi

List of Publications by Year in descending order

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72
papers

2,510
citations

201385

27
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205818

48
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75
all docs

75
docs citations

75
times ranked

3797
citing authors

#	ARTICLE	IF	CITATIONS
1	A Review on Organic-Inorganic Halide Perovskite Photodetectors: Device Engineering and Fundamental Physics. <i>Advanced Materials</i> , 2017, 29, 1605242.	11.1	590
2	Chemical nature of ferroelastic twin domains in CH ₃ NH ₃ PbI ₃ perovskite. <i>Nature Materials</i> , 2018, 17, 1013-1019.	13.3	183
3	Charge-transfer versus energy-transfer in quasi-2D perovskite light-emitting diodes. <i>Nano Energy</i> , 2018, 50, 615-622.	8.2	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. <i>Electrochimica Acta</i> , 2019, 313, 570-583.	2.6	68
5	Breaking the Time Barrier in Kelvin Probe Force Microscopy: Fast Free Force Reconstruction Using the G-Mode Platform. <i>ACS Nano</i> , 2017, 11, 8717-8729.	7.3	67
6	High performance and stable all-inorganic perovskite light emitting diodes by reducing luminescence quenching at PEDOT:PSS/Perovskites interface. <i>Organic Electronics</i> , 2019, 64, 47-53.	1.4	66
7	Chemical Robotics Enabled Exploration of Stability in Multicomponent Lead Halide Perovskites via Machine Learning. <i>ACS Energy Letters</i> , 2020, 5, 3426-3436.	8.8	66
8	Deep levels, charge transport and mixed conductivity in organometallic halide perovskites. <i>Energy and Environmental Science</i> , 2019, 12, 1413-1425.	15.6	60
9	Evolution Pathway of CIGSe Nanocrystals for Solar Cell Applications. <i>Journal of Physical Chemistry C</i> , 2012, 116, 8202-8209.	1.5	55
10	Effect of Photogenerated Dipoles in the Hole Transport Layer on Photovoltaic Performance of Organic-Inorganic Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1601575.	10.2	54
11	Synthesis of Cu ₂ SnSe ₃ Nanocrystals for Solution Processable Photovoltaic Cells. <i>Inorganic Chemistry</i> , 2013, 52, 1722-1728.	1.9	51
12	Deciphering the effect of traps on electronic charge transport properties of methylammonium lead tribromide perovskite. <i>Science Advances</i> , 2020, 6, .	4.7	47
13	Photoinduced Bulk Polarization and Its Effects on Photovoltaic Actions in Perovskite Solar Cells. <i>ACS Nano</i> , 2017, 11, 11542-11549.	7.3	44
14	Exploring Anomalous Polarization Dynamics in Organometallic Halide Perovskites. <i>Advanced Materials</i> , 2018, 30, 1705298.	11.1	44
15	Machine learning for high-throughput experimental exploration of metal halide perovskites. <i>Joule</i> , 2021, 5, 2797-2822.	11.7	44
16	Precursor purity effects on solution-based growth of MAPbBr ₃ single crystals towards efficient radiation sensing. <i>CrystEngComm</i> , 2018, 20, 7818-7825.	1.3	43
17	The deep-DRT: A deep neural network approach to deconvolve the distribution of relaxation times from multidimensional electrochemical impedance spectroscopy data. <i>Electrochimica Acta</i> , 2021, 392, 139010.	2.6	43
18	Exploring spin-orbital coupling effects on photovoltaic actions in Sn and Pb based perovskite solar cells. <i>Nano Energy</i> , 2017, 38, 297-303.	8.2	42

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19	Direct Observation of Photoinduced Ion Migration in Lead Halide Perovskites. <i>Advanced Functional Materials</i> , 2021, 31, 2008777.	7.8	41
20	Methylammonium lead tribromide semiconductors: Ionizing radiation detection and electronic properties. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2019, 927, 401-406.	0.7	37
21	Time resolved surface photovoltage measurements using a big data capture approach to KPFM. <i>Nanotechnology</i> , 2018, 29, 445703.	1.3	36
22	High-Throughput Study of Antisolvents on the Stability of Multicomponent Metal Halide Perovskites through Robotics-Based Synthesis and Machine Learning Approaches. <i>Journal of the American Chemical Society</i> , 2021, 143, 19945-19955.	6.6	35
23	Metal/Ion Interactions Induced p-n Junction in Methylammonium Lead Triiodide Perovskite Single Crystals. <i>Journal of the American Chemical Society</i> , 2017, 139, 17285-17288.	6.6	32
24	Toward Electrochemical Studies on the Nanometer and Atomic Scales: Progress, Challenges, and Opportunities. <i>ACS Nano</i> , 2019, 13, 9735-9780.	7.3	32
25	Giant current amplification induced by ion migration in perovskite single crystal photodetectors. <i>Journal of Materials Chemistry C</i> , 2018, 6, 8042-8050.	2.7	31
26	Dynamic Impact of Electrode Materials on Interface of Single-Crystalline Methylammonium Lead Bromide Perovskite. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800476.	1.9	31
27	Exploration of Electrochemical Reactions at Organic-Inorganic Halide Perovskite Interfaces via Machine Learning in In Situ Time-of-Flight Secondary Ion Mass Spectrometry. <i>Advanced Functional Materials</i> , 2020, 30, 2001995.	7.8	30
28	Hysteretic Ion Migration and Remanent Field in Metal Halide Perovskites. <i>Advanced Science</i> , 2020, 7, 2001176.	5.6	29
29	Simultaneously enhancing dissociation and suppressing recombination in perovskite solar cells. <i>Nano Energy</i> , 2017, 36, 95-101.	8.2	27
30	Dynamic behavior of CH ₃ NH ₃ PbI ₃ perovskite twin domains. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	27
31	Light-Ferroc Interaction in Hybrid Organic-Inorganic Perovskites. <i>Advanced Optical Materials</i> , 2019, 7, 1901451.	3.6	24
32	Spatially Resolved Carrier Dynamics at MAPbBr ₃ Single Crystal-Electrode Interface. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41551-41560.	4.0	23
33	Ferroc Halide Perovskite Optoelectronics. <i>Advanced Functional Materials</i> , 2021, 31, 2102793.	7.8	23
34	Exploring Transport Behavior in Hybrid Perovskites Solar Cells via Machine Learning Analysis of Environmental-Dependent Impedance Spectroscopy. <i>Advanced Science</i> , 2021, 8, e2002510.	5.6	23
35	Reply to: On the ferroelectricity of CH ₃ NH ₃ PbI ₃ perovskites. <i>Nature Materials</i> , 2019, 18, 1051-1053.	13.3	21
36	Unraveling the Energy Landscape and Energy Funneling Modulated by Hole Transport Layer for Highly Efficient Perovskite LEDs. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000495.	4.4	20

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37	Strain-Induced Chemical Gradient and Polarization in Metal Halide Perovskites. <i>Advanced Electronic Materials</i> , 2020, 6, 1901235.	2.6	19
38	Imaging mechanism for hyperspectral scanning probe microscopy via Gaussian process modelling. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	19
39	Guanidinium-Pseudohalide Perovskite Interfaces Enable Surface Reconstruction of Colloidal Quantum Dots for Efficient and Stable Photovoltaics. <i>ACS Nano</i> , 2022, 16, 1649-1660.	7.3	18
40	Giant isotope effect on phonon dispersion and thermal conductivity in methylammonium lead iodide. <i>Science Advances</i> , 2020, 6, eaaz1842.	4.7	17
41	n and p-type properties in organo-metal halide perovskites studied by Seebeck effects. <i>Organic Electronics</i> , 2016, 35, 216-220.	1.4	15
42	Exploring the physics of cesium lead halide perovskite quantum dots via Bayesian inference of the photoluminescence spectra in automated experiment. <i>Nanophotonics</i> , 2021, 10, 1977-1989.	2.9	15
43	Environmental Gating and Galvanic Effects in Single Crystals of Organic-Inorganic Halide Perovskites. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 14722-14733.	4.0	14
44	Correlating Crystallographic Orientation and Ferroic Properties of Twin Domains in Metal Halide Perovskites. <i>ACS Nano</i> , 2021, 15, 7139-7148.	7.3	14
45	Strain in Metal Halide Perovskites: The Critical Role of A-Site Cation. <i>ACS Applied Energy Materials</i> , 2021, 4, 2068-2072.	2.5	14
46	Role of Decomposition Product Ions in Hysteretic Behavior of Metal Halide Perovskite. <i>ACS Nano</i> , 2021, 15, 9017-9026.	7.3	13
47	Flaxseed Oil Supplementation Augments Antioxidant Capacity and Alleviates Oxidative Stress: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. <i>Evidence-based Complementary and Alternative Medicine</i> , 2021, 2021, 1-9.	0.5	13
48	Navigating grain boundaries in perovskite solar cells. <i>Matter</i> , 2021, 4, 1442-1445.	5.0	12
49	Elucidating the Spatial Dynamics of Charge Carriers in Quasi-Two-Dimensional Perovskites. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 35133-35141.	4.0	12
50	Solution processable nanoparticles as high-k dielectric for organic field effect transistors. <i>Organic Electronics</i> , 2010, 11, 1660-1667.	1.4	11
51	Poly(ethylene oxide)-assisted energy funneling for efficient perovskite light emission. <i>Journal of Materials Chemistry C</i> , 2019, 7, 8287-8293.	2.7	11
52	High-performance blue perovskite light-emitting diodes based on the near-field plasmonic effect of gold nanoparticles. <i>Journal of Materials Chemistry C</i> , 2020, 8, 6615-6622.	2.7	11
53	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. <i>Nano Energy</i> , 2021, 89, 106428.	8.2	11
54	12-Crown-4 ether assisted in-situ grown perovskite crystals for ambient stable light emitting diodes. <i>Nano Energy</i> , 2022, 95, 107000.	8.2	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.	0.7	10
56	Ferroelectric and Charge Transport Properties in Strain-Engineered Two-Dimensional Lead Iodide Perovskites. Chemistry of Materials, 2021, 33, 4077-4088.	3.2	10
57	Study of Er-Doped ZnS Quantum Dots Synthesized by Chemical Capping Method. Japanese Journal of Applied Physics, 2008, 47, 5089-5092.	0.8	8
58	Microstructural Evaluation of Phase Instability in Large Bandgap Metal Halide Perovskites. ACS Nano, 2021, 15, 20391-20402.	7.3	8
59	Origin of Defects and Positron Annihilation in Hybrid and All-Inorganic Perovskites. Chemistry of Materials, 2022, 34, 297-306.	3.2	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.	1.1	6
61	Elucidating the relationship between crystallo-chemistry and optical properties of CIGS nanocrystals. Nanotechnology, 2017, 28, 045708.	1.3	4
62	Multi-Model Imaging of Local Chemistry and Ferroic Properties of Hybrid Organic-Inorganic Perovskites. Microscopy and Microanalysis, 2019, 25, 2076-2077.	0.2	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.	1.5	3
64	Dynamic control of ferroionic states in ferroelectric nanoparticles. Acta Materialia, 2022, 237, 118138.	3.8	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.	3.6	1
67	Estimating Preisach Density via Subset Selection. IEEE Access, 2020, 8, 61767-61774.	2.6	1
68	Ferroic Halide Perovskite Optoelectronics (Adv. Funct. Mater. 36/2021). Advanced Functional Materials, 2021, 31, 2170263.	7.8	1
69	Lightâ€“ferroelectric interaction in two-dimensional lead iodide perovskites. Journal of Materials Chemistry A, 0, , .	5.2	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