Zhengguo Xiao

List of Publications by Year
in descending order

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107 papers	18,906 citations	41344 49 h-index	32842 100 g-index
111 all docs	111 docs citations	111 times ranked	18463 citing authors

#	Article	IF	Citations
1	Origin and elimination of photocurrent hysteresis by fullerene passivation in CH3NH3PbI3 planar heterojunction solar cells. Nature Communications, 2014, 5, 5784.	12.8	2,531
2	Solvent Annealing of Perovskiteâ€Induced Crystal Growth for Photovoltaicâ€Device Efficiency Enhancement. Advanced Materials, 2014, 26, 6503-6509.	21.0	1,527
3	Giant switchable photovoltaic effect in organometal trihalide perovskite devices. Nature Materials, 2015, 14, 193-198.	27.5	1,372
4	Non-wetting surface-driven high-aspect-ratio crystalline grain growth for efficient hybrid perovskite solar cells. Nature Communications, 2015, 6, 7747.	12.8	1,336
5	Efficient perovskite light-emitting diodes featuring nanometre-sized crystallites. Nature Photonics, 2017, 11, 108-115.	31.4	1,175
6	Efficient, high yield perovskite photovoltaic devices grown by interdiffusion of solution-processed precursor stacking layers. Energy and Environmental Science, 2014, 7, 2619-2623.	30.8	1,154
7	Large fill-factor bilayer iodine perovskite solar cells fabricated by a low-temperature solution-process. Energy and Environmental Science, 2014, 7, 2359-2365.	30.8	754
8	A nanocomposite ultraviolet photodetector based on interfacial trap-controlled charge injection. Nature Nanotechnology, 2012, 7, 798-802.	31.5	634
9	Scalable fabrication of efficient organolead trihalide perovskite solar cells with doctor-bladed active layers. Energy and Environmental Science, 2015, 8, 1544-1550.	30.8	606
10	Photovoltaic Switching Mechanism in Lateral Structure Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1500615.	19.5	567
11	Highâ€Gain and Lowâ€Drivingâ€Voltage Photodetectors Based on Organolead Triiodide Perovskites. Advanced Materials, 2015, 27, 1912-1918.	21.0	560
12	Signals required for programming effector and memory development by CD8 + T cells. Immunological Reviews, 2006, 211, 81-92.	6.0	513
13	Arising applications of ferroelectric materials in photovoltaic devices. Journal of Materials Chemistry A, 2014, 2, 6027-6041.	10.3	408
14	Energyâ€Efficient Hybrid Perovskite Memristors and Synaptic Devices. Advanced Electronic Materials, 2016, 2, 1600100.	5.1	323
15	Biodegradable transparent substrates for flexible organic-light-emitting diodes. Energy and Environmental Science, 2013, 6, 2105.	30.8	281
16	Understanding the formation and evolution of interdiffusion grown organolead halide perovskite thin films by thermal annealing. Journal of Materials Chemistry A, 2014, 2, 18508-18514.	10.3	276
17	Immunological Responses of Swine to Porcine Reproductive and Respiratory Syndrome Virus Infection. Viral Immunology, 2002, 15, 533-547.	1.3	252
18	Lightâ€Induced Selfâ€Poling Effect on Organometal Trihalide Perovskite Solar Cells for Increased Device Efficiency and Stability. Advanced Energy Materials, 2015, 5, 1500721.	19.5	214

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19	Dual Passivation of Perovskite Defects for Lightâ€Emitting Diodes with External Quantum Efficiency Exceeding 20%. Advanced Functional Materials, 2020, 30, 1909754.	14.9	212
20	Redox Chemistry Dominates the Degradation and Decomposition of Metal Halide Perovskite Optoelectronic Devices. ACS Energy Letters, 2016, 1, 595-602.	17.4	196
21	Programming for CD8 T Cell Memory Development Requires IL-12 or Type I IFN. Journal of Immunology, 2009, 182, 2786-2794.	0.8	185
22	An Ultravioletâ€toâ€NIR Broad Spectral Nanocomposite Photodetector with Gain. Advanced Optical Materials, 2014, 2, 549-554.	7.3	183
23	Mixed-Halide Perovskites with Stabilized Bandgaps. Nano Letters, 2017, 17, 6863-6869.	9.1	165
24	The Level of Virus-Specific T-Cell and Macrophage Recruitment in Porcine Reproductive and Respiratory Syndrome Virus Infection in Pigs Is Independent of Virus Load. Journal of Virology, 2004, 78, 5923-5933.	3.4	164
25	Progress of the key materials for organic solar cells. Science China Chemistry, 2020, 63, 758-765.	8.2	158
26	Interfacial electronic structure at the CH3NH3PbI3/MoOx interface. Applied Physics Letters, 2015, 106, .	3.3	152
27	In Situ Preparation of Metal Halide Perovskite Nanocrystal Thin Films for Improved Light-Emitting Devices. ACS Nano, 2017, 11, 3957-3964.	14.6	151
28	An Electrically Modulated Singleâ€Color/Dualâ€Color Imaging Photodetector. Advanced Materials, 2020, 32, e1907257.	21.0	145
29	Universal Formation of Compositionally Graded Bulk Heterojunction for Efficiency Enhancement in Organic Photovoltaics. Advanced Materials, 2014, 26, 3068-3075.	21.0	139
30	Zwitterion Coordination Induced Highly Orientational Order of CH₃NH₃PbI₃ Perovskite Film Delivers a High Open Circuit Voltage Exceeding 1.2 V. Advanced Functional Materials, 2019, 29, 1901026.	14.9	134
31	Fullerene Photodetectors with a Linear Dynamic Range of 90 dB Enabled by a Crossâ€Linkable Buffer Layer. Advanced Optical Materials, 2013, 1, 289-294.	7.3	127
32	Detuning CD8 T cells: down-regulation of CD8 expression, tetramer binding, and response during CTL activation. Journal of Experimental Medicine, 2007, 204, 2667-2677.	8.5	119
33	Thin-film semiconductor perspective of organometal trihalide perovskite materials for high-efficiency solar cells. Materials Science and Engineering Reports, 2016, 101, 1-38.	31.8	117
34	Fluorine substituted thiopheneâ€“quinoxalinecopolymer to reduce the HOMO level and increase the dielectric constant for high open-circuit voltage organic solar cells. Journal of Materials Chemistry C, 2013, 1, 630-637.	5.5	101
35	Solutionâ€Processed Fullereneâ€Based Organic Schottky Junction Devices for Largeâ€Openâ€Circuitâ€Voltage Organic Solar Cells. Advanced Materials, 2013, 25, 572-577.	21.0	101
36	Large-area and efficient perovskite light-emitting diodes via low-temperature blade-coating. Nature Communications, 2021, 12, 147.	12.8	100

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37	Large Gain, Low Noise Nanocomposite Ultraviolet Photodetectors with a Linear Dynamic Range of 120 dB. Advanced Optical Materials, 2014, 2, 348-353.	7.3	84
38	Electronic structures at the interface between Au and CH₃NH₃PbI₃. Physical Chemistry Chemical Physics, 2015, 17, 896-902.	2.8	82
39	Engineering Perovskite Nanocrystal Surface Termination for Lightâ€Emitting Diodes with External Quantum Efficiency Exceeding 15%. Advanced Functional Materials, 2019, 29, 1807284.	14.9	80
40	Distinct Exciton Dissociation Behavior of Organolead Trihalide Perovskite and Excitonic Semiconductors Studied in the Same System. Small, 2015, 11, 2164-2169.	10.0	78
41	Î²-Glucan enhancement of T cell IFNÎ³ response in swine. Veterinary Immunology and Immunopathology, 2004, 102, 315-320.	1.2	77
42	Mixed Leadâ€“Tin Halide Perovskites for Efficient and Wavelengthâ€Tunable Nearâ€Infrared Lightâ€Emitting Diodes. Advanced Materials, 2019, 31, e1806105.	21.0	66
43	Understanding the effect of ferroelectric polarization on power conversion efficiency of organic photovoltaic devices. Energy and Environmental Science, 2012, 5, 8558.	30.8	64
44	Ultrasmooth metal halide perovskite thin films via solâ€“gel processing. Journal of Materials Chemistry A, 2016, 4, 8308-8315.	10.3	64
45	Unraveling the hidden function of a stabilizer in a precursor in improving hybrid perovskite film morphology for high efficiency solar cells. Energy and Environmental Science, 2016, 9, 867-872.	30.8	62
46	Species specialization in cytokine biology: Is interleukin-4 central to the TH1â€“TH2 paradigm in swine?. Developmental and Comparative Immunology, 2009, 33, 344-352.	2.3	56
47	Suppression and Reversion of Light-Induced Phase Separation in Mixed-Halide Perovskites by Oxygen Passivation. ACS Energy Letters, 2019, 4, 2052-2058.	17.4	54
48	Efficient All-Inorganic Perovskite Light-Emitting Diodes with Improved Operation Stability. ACS Applied Materials & Interfaces, 2020, 12, 18084-18090.	8.0	54
49	IL-12 stimulates CTLs to secrete exosomes capable of activating bystander CD8+ T cells. Scientific Reports, 2017, 7, 13365.	3.3	53
50	Synthesis and Application of Ferroelectric P(VDFâ€TrFE) Nanoparticles in Organic Photovoltaic Devices for High Efficiency. Advanced Energy Materials, 2013, 3, 1581-1588.	19.5	50
51	Polymerized Hybrid Perovskites with Enhanced Stability, Flexibility, and Lattice Rigidity. Advanced Materials, 2021, 33, e2104842.	21.0	45
52	Electronic structure evolution of fullerene on CH3NH3PbI3. Applied Physics Letters, 2015, 106, .	3.3	44
53	A Selective Targeting Anchor Strategy Affords Efficient and Stable Idealâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2022, 34, e2110241.	21.0	44
54	Improving the sensitivity of a near-infrared nanocomposite photodetector by enhancing trap induced hole injection. Applied Physics Letters, 2015, 106, .	3.3	43

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55	Surface analytical investigation on organometal triiodide perovskite. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	1.2	43
56	Simple organic donors based on halogenated oligothiophenes for all small molecule solar cells with efficiency over 11%. Journal of Materials Chemistry A, 2020, 8, 5843-5847.	10.3	43
57	Î³Î´ Lymphocyte Response to Porcine Reproductive and Respiratory Syndrome Virus. Viral Immunology, 2005, 18, 490-499.	1.3	40
58	Molecular basis for checkpoints in the CD8 T cell response: Tolerance versus activation. Seminars in Immunology, 2007, 19, 153-161.	5.6	38
59	CTL-Derived Exosomes Enhance the Activation of CTLs Stimulated by Low-Affinity Peptides. Frontiers in Immunology, 2019, 10, 1274.	4.8	36
60	Cholera toxin activates nonconventional adjuvant pathways that induce protective CD8 T-cell responses after epicutaneous vaccination. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2072-2077.	7.1	31
61	Widely Tunable, Room Temperature, Single-Mode Lasing Operation from Mixed-Halide Perovskite Thin Films. ACS Photonics, 2019, 6, 3331-3337.	6.6	31
62	Bovine neutrophils form extracellular traps in response to the gastrointestinal parasite Ostertagia ostertagi. Scientific Reports, 2018, 8, 17598.	3.3	30
63	Nitrogenâ€Doped Nickel Oxide as Hole Transport Layer for Highâ€Efficiency Inverted Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900164.	5.8	29
64	TLR agonists are highly effective at eliciting functional memory CTLs of effector memory phenotype in peptide immunization. International Immunopharmacology, 2013, 15, 67-72.	3.8	25
65	Zinc alloyed iron pyrite ternary nanocrystals for band gap broadening. Journal of Materials Chemistry A, 2013, 1, 12060.	10.3	22
66	Polymer aggregation correlated transition from Schottky-junction to bulk heterojunction organic solar cells. Applied Physics Letters, 2014, 104, 143304.	3.3	22
67	The CD8 T cell response to vaccinia virus exhibits site-dependent heterogeneity of functional responses. International Immunology, 2007, 19, 733-743.	4.0	20
68	Largeâ€Area and Efficient Skyâ€Blue Perovskite Lightâ€Emitting Diodes via Bladeâ€Coating. Advanced Materials, 2022, 34, e2108939.	21.0	20
69	Temporal Regulation of Rapamycin on Memory CTL Programming by IL-12. PLoS ONE, 2011, 6, e25177.	2.5	17
70	Nicotine Inhibits Memory CTL Programming. PLoS ONE, 2013, 8, e68183.	2.5	16
71	Efficient Perovskite Solar Cells with Titanium Cathode Interlayer. Solar Rrl, 2018, 2, 1800167.	5.8	16
72	Effects of Fluorination on Fused Ring Electron Acceptor for Active Layer Morphology, Exciton Dissociation, and Charge Recombination in Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 56231-56239.	8.0	15

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73	Guanidinium-assisted crystallization modulation and reduction of open-circuit voltage deficit for efficient planar FAPbBr3 perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135181.	12.7	15
74	Room-temperature organic ferromagnetism in the crystalline poly(3-hexylthiophene): Phenyl-C61-butyric acid methyl ester blend film. Polymer, 2013, 54, 490-494.	3.8	13
75	Alkalis-doping of mixed tin-lead perovskites for efficient near-infrared light-emitting diodes. Science Bulletin, 2022, 67, 54-60.	9.0	13
76	Effect of Dietary Selenium and Cancer Cell Xenograft on Peripheral T and B Lymphocytes in Adult Nude Mice. Biological Trace Element Research, 2012, 146, 230-235.	3.5	12
77	Characterization of IL-10-producing neutrophils in cattle infected with Ostertagia ostertagi. Scientific Reports, 2019, 9, 20292.	3.3	12
78	Transcriptome profiling of CTLs regulated by rapamycin using RNA-Seq. Immunogenetics, 2014, 66, 625-633.	2.4	11
79	High Radiance of Perovskite Lightâ€Emitting Diodes Enabled by Perovskite Heterojunctions. Advanced Functional Materials, 2022, 32, .	14.9	11
80	Utilizing insulating nanoparticles as the spacer in laminated flexible polymer solar cells for improved mechanical stability. Nanotechnology, 2012, 23, 344007.	2.6	10
81	Overcoming Outcoupling Limit in Perovskite Light-Emitting Diodes with Enhanced Photon Recycling. Nano Letters, 2021, 21, 8426-8432.	9.1	9
82	Abomasal mucosal immune responses of cattle with limited or continuous exposure to pasture-borne gastrointestinal nematode parasite infection. Veterinary Parasitology, 2016, 229, 118-125.	1.8	8
83	Alkylamine Assisted Ultrasound Exfoliation of MoS₂ Nanosheets and Organic Photovoltaic Application. Nanoscience and Nanotechnology Letters, 2014, 6, 685-691.	0.4	8
84	Wnt signaling inhibits CTL memory programming. Molecular Immunology, 2013, 56, 423-433.	2.2	7
85	INDUCTION OF CYTOKINE PRODUCTION IN CHEETAH (ACINONYX JUBATUS) PERIPHERAL BLOOD MONONUCLEAR CELLS AND VALIDATION OF FELINE-SPECIFIC CYTOKINE ASSAYS FOR ANALYSIS OF CHEETAH SERUM. Journal of Zoo and Wildlife Medicine, 2015, 46, 306-313.	0.6	7
86	Efficiency Enhancement in Polymer Solar Cells With a Polar Small Molecule Both at Interface and in the Bulk Heterojunction Layer. IEEE Journal of Photovoltaics, 2015, 5, 1408-1413.	2.5	5
87	Repetitive peptide boosting progressively enhances functional memory CTLs. Biochemical and Biophysical Research Communications, 2012, 424, 635-640.	2.1	4
88	Solution-Processed Fullerene-Based Organic Schottky Junction Devices for Large-Open-Circuit-Voltage Organic Solar Cells (Adv. Mater. 4/2013). Advanced Materials, 2013, 25, 571-571.	21.0	4
89	Effector functions of memory CTLs can be affected by signals received during reactivation. Immunologic Research, 2017, 65, 841-852.	2.9	4
90	Synergistic Activation of Bovine CD4+ T Cells by Neutrophils and IL-12. Pathogens, 2021, 10, 694.	2.8	4

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91	4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) regulates CTL activation and memory programming. Biochemical and Biophysical Research Communications, 2013, 435, 472-476.	2.1	3
92	Photodetectors: High-Gain and Low-Driving-Voltage Photodetectors Based on Organolead Triiodide Perovskites (Adv. Mater. 11/2015). Advanced Materials, 2015, 27, 1967-1967.	21.0	3
93	Ferroelectric Materials: Synthesis and Application of Ferroelectric P(VDFâ€TrFE) Nanoparticles in Organic Photovoltaic Devices for High Efficiency (Adv. Energy Mater. 12/2013). Advanced Energy Materials, 2013, 3, 1672-1672.	19.5	2
94	Trade-off between the Performance and Stability of Perovskite Light-Emitting Diodes with Excess Halides. Journal of Physical Chemistry Letters, 2022, 13, 5179-5185.	4.6	2
95	Cytotoxic T Lymphocytes and Vaccine Development 2011. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-1.	3.0	1
96	Characterization of Ostertagia ostertagi annexin-like proteins at different developmental stages. Parasitology Research, 2017, 116, 1515-1522.	1.6	1
97	Efficient Perovskite Solar Cells with Titanium Cathode Interlayer (Solar RRL 11â•2018). Solar Rrl, 2018, 2, 1870226.	5.8	1
98	18â€1: Invited Paper: Color Tunable, Flexible, and Efficient Light Emitting Diodes Composed of Metal Halide Perovskites. Digest of Technical Papers SID International Symposium, 2018, 49, 212-213.	0.3	1
99	Engineering Crystalline Grain of Hybrid Perovskites for High Efficiency Solar Cells and Beyond. , 2015, , .		1
100	CD4+ T Cell Responses to Pathogens in Cattle. , 0, , .		1
101	Cytotoxic T Lymphocytes and Vaccine Development. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-1.	3.0	0
102	Cytotoxic T Lymphocytes and Vaccine Development 2013. BioMed Research International, 2013, 2013, 1-1.	1.9	0
103	Transient exposure to proteins SOX2, Oct-4, and NANOG immortalizes exhausted tumor-infiltrating CTLs. Biochemical and Biophysical Research Communications, 2016, 473, 1255-1260.	2.1	0
104	Efficient Perovskite LEDs Featuring Nanometer Sized Crystallites. , 2017, , .		0
105	Unlocking Efficient Perovskite-based Light Emitting Devices. , 2016, , .		0
106	Unlocking Efficient Perovskite-based Light Emitting Devices. , 2016, , .		0
107	Metal Halide Perovskites: Processing, Interfaces, and Light Emitting Devices. , 2017, , .		0