

Xihan Chen

List of Publications by Year in descending order

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49
papers

4,210
citations

147566

31
h-index

205818

48
g-index

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all docs

53
docs citations

53
times ranked

5171
citing authors

#	ARTICLE	IF	CITATIONS
1	Carrier lifetimes of $>1 \mu\text{s}$ in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. <i>Science</i> , 2019, 364, 475-479.	6.0	781
2	High efficiency perovskite quantum dot solar cells with charge separating heterostructure. <i>Nature Communications</i> , 2019, 10, 2842.	5.8	308
3	Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. <i>Science Advances</i> , 2019, 5, eaay0571.	4.7	275
4	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. <i>Journal of the American Chemical Society</i> , 2019, 141, 5972-5979.	6.6	274
5	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. <i>Nature Communications</i> , 2019, 10, 4498.	5.8	234
6	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. <i>Science</i> , 2022, 375, 71-76.	6.0	216
7	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. <i>Science</i> , 2021, 371, 636-640.	6.0	184
8	Impact of Layer Thickness on the Charge Carrier and Spin Coherence Lifetime in Two-Dimensional Layered Perovskite Single Crystals. <i>ACS Energy Letters</i> , 2018, 3, 2273-2279.	8.8	126
9	Self-Seeding Growth for Perovskite Solar Cells with Enhanced Stability. <i>Joule</i> , 2019, 3, 1452-1463.	11.7	120
10	Detecting the oxyl radical of photocatalytic water oxidation at an n-SrTiO ₃ /aqueous interface through its subsurface vibration. <i>Nature Chemistry</i> , 2016, 8, 549-555.	6.6	117
11	Theoretical studies of reactions of carbon dioxide mediated and catalysed by transition metal complexes. <i>Chemical Communications</i> , 2012, 48, 10808.	2.2	113
12	Excitonic Effects in Methylammonium Lead Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2595-2603.	2.1	107
13	Improving Charge Transport via Intermediate-Controlled Crystal Growth in 2D Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1901652.	7.8	103
14	Sensitizing Singlet Fission with Perovskite Nanocrystals. <i>Journal of the American Chemical Society</i> , 2019, 141, 4919-4927.	6.6	83
15	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. <i>Solar Rrl</i> , 2020, 4, 2000082.	3.1	79
16	The Formation Time of Ti [•] O [•] and Ti [•] O [•] Radicals at the n-SrTiO ₃ /Aqueous Interface during Photocatalytic Water Oxidation. <i>Journal of the American Chemical Society</i> , 2017, 139, 1830-1841.	6.6	76
17	Direct Detection of Circularly Polarized Light Using Chiral Copper Chloride-Carbon Nanotube Heterostructures. <i>ACS Nano</i> , 2021, 15, 7608-7617.	7.3	69
18	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Two-Dimensional Perovskite Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11737-11741.	7.2	67

#	ARTICLE	IF	CITATIONS
19	Gradient Doping in Sn/Pb Perovskites by Barium Ions for Efficient Single-Junction and Tandem Solar Cells. <i>Advanced Materials</i> , 2022, 34, e2110351.	11.1	62
20	Ultrafast Reaction Mechanisms in Perovskite Based Photocatalytic C-C Coupling. <i>ACS Energy Letters</i> , 2020, 5, 566-571.	8.8	61
21	How Surface Potential Determines the Kinetics of the First Hole Transfer of Photocatalytic Water Oxidation. <i>Journal of the American Chemical Society</i> , 2014, 136, 10632-10639.	6.6	57
22	Origin of Broad-Band Emission and Impact of Structural Dimensionality in Tin-Alloyed Ruddlesden-Popper Hybrid Lead Iodide Perovskites. <i>ACS Energy Letters</i> , 2020, 5, 347-352.	8.8	55
23	Enhanced photoredox activity of CsPbBr ₃ nanocrystals by quantitative colloidal ligand exchange. <i>Journal of Chemical Physics</i> , 2019, 151, 204305.	1.2	52
24	Carbazole-Based Hole-Transport Materials for High-Efficiency and Stable Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2020, 3, 4492-4498.	2.5	47
25	A Nanocrystal Catalyst Incorporating a Surface Bound Transition Metal to Induce Photocatalytic Sequential Electron Transfer Events. <i>Journal of the American Chemical Society</i> , 2021, 143, 11361-11369.	6.6	47
26	Tuning Spin-Polarized Lifetime in Two-Dimensional Metal-Halide Perovskite through Exciton Binding Energy. <i>Journal of the American Chemical Society</i> , 2021, 143, 19438-19445.	6.6	42
27	Systemic Studies of Tetraphenylethene-Triphenylamine Oligomers and a Polymer: Achieving Both Efficient Solid-State Emissions and Hole-Transporting Capability. <i>Chemistry - A European Journal</i> , 2012, 18, 9929-9938.	1.7	41
28	Selecting between two transition states by which water oxidation intermediates decay on an oxide surface. <i>Nature Catalysis</i> , 2019, 2, 820-827.	16.1	39
29	Inhomogeneous Doping of Perovskite Materials by Dopants from Hole-Transport Layer. <i>Matter</i> , 2020, 2, 261-272.	5.0	38
30	Surface lattice engineering through three-dimensional lead iodide perovskitoid for high-performance perovskite solar cells. <i>CheM</i> , 2021, 7, 774-785.	5.8	37
31	Stiffening the Pb-X Framework through a π -Conjugated Small-Molecule Cross-Linker for High-Performance Inorganic CsPb ₂ Br Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40489-40501.	4.0	33
32	Ultrafast probes at the interfaces of solar energy conversion materials. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 16399-16407.	1.3	31
33	DFT Studies on Gold-Catalyzed Cycloisomerization of 1,5-Enynes. <i>Organometallics</i> , 2012, 31, 4221-4227.	1.1	29
34	n-Type PbSe Quantum Dots via Post-Synthetic Indium Doping. <i>Journal of the American Chemical Society</i> , 2018, 140, 13753-13763.	6.6	28
35	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Two-Dimensional Perovskite Solar Cells. <i>Angewandte Chemie</i> , 2019, 131, 11863-11867.	1.6	22
36	Unraveling the surface state of photovoltaic perovskite thin film. <i>Matter</i> , 2021, 4, 2417-2428.	5.0	22

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37	Triplet Energy Transfer from Lead Halide Perovskite for Highly Selective Photocatalytic 2 + 2 Cycloaddition. ACS Applied Materials & Interfaces, 2022, 14, 25357-25365.	4.0	20
38	Exogenous electricity flowing through cyanobacterial photosystem I drives CO ₂ valorization with high energy efficiency. Energy and Environmental Science, 2021, 14, 5480-5490.	15.6	19
39	Embedding PbS Quantum Dots (QDs) in Pb-Halide Perovskite Matrices: QD Surface Chemistry and Antisolvent Effects on QD Dispersion and Confinement Properties. , 2020, 2, 1464-1472.		18
40	SMART Perovskite Growth: Enabling a Larger Range of Process Conditions. ACS Energy Letters, 2021, 6, 650-658.	8.8	14
41	One-electron intermediates of water oxidation & the role of solvation in their stability. Journal of Materials Chemistry A, 2017, 5, 11410-11417.	5.2	13
42	Transient Evolution of the Built-in Field at Junctions of GaAs. ACS Applied Materials & Interfaces, 2020, 12, 40339-40346.	4.0	10
43	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. Nature Communications, 2021, 12, 5009.	5.8	10
44	Large Area Material and Junction Damage in c-Si Solar Cells by Potential-Induced Degradation. Solar Rrl, 2019, 3, 1800303.	3.1	7
45	Nanomaterial catalysts for organic photoredox catalysis-mechanistic perspective. Nanoscale, 2021, 13, 18044-18053.	2.8	7
46	Faradaic oxygen evolution from SrTiO ₃ under nano- and femto-second pulsed light excitation. Chemical Communications, 2017, 53, 7254-7257.	2.2	6
47	Ultrafast All-Optical Switching in the Visible Spectrum with 6H Silicon Carbide. ACS Photonics, 2021, 8, 2940-2946.	3.2	5
48	One-Electron Water Oxidation Intermediate on TiO ₂ P25 Probed by Ultrafast Attenuated Total Reflection. Journal of Physical Chemistry C, 2021, 125, 18204-18209.	1.5	4
49	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. Science, 2021, , eabj2637.	6.0	2