Xihan Chen

List of Publications by Year in Descending Order

47 papers	2,457 citations	24 h-index	49 g-index
53 ext. papers	3,246 ext. citations	15.1 avg, IF	5.33 L-index

#	Paper	IF	Citations
47	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. *Science*, **2022**, 375, 71-76	33.3	51
46	Gradient Doping in Sn-Pb Perovskites by Barium Ions for Efficient Single-junction and Tandem Solar Cells.. *Advanced Materials*, **2022**, e2110351	24	19
45	Tuning Spin-Polarized Lifetime in Two-Dimensional Metal-Halide Perovskite through Exciton Binding Energy. *Journal of the American Chemical Society*, **2021**, 143, 19438-19445	16.4	9
44	Nanomaterial catalysts for organic photoredox catalysis-mechanistic perspective. *Nanoscale*, **2021**, 13, 18044-18053	7.7	1
43	Surface lattice engineering through three-dimensional lead iodide perovskitoid for high-performance perovskite solar cells. *CheM*, **2021**, 7, 774-785	16.2	18
42	Direct Detection of Circularly Polarized Light Using Chiral Copper Chloride-Carbon Nanotube Heterostructures. *ACS Nano*, **2021**, 15, 7608-7617	16.7	20
41	A Nanocrystal Catalyst Incorporating a Surface Bound Transition Metal to Induce Photocatalytic Sequential Electron Transfer Events. *Journal of the American Chemical Society*, **2021**, 143, 11361-11369	16.4	17
40	SMART Perovskite Growth: Enabling a Larger Range of Process Conditions. *ACS Energy Letters*, **2021**, 6, 650-658	20.1	4
39	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. *Science*, **2021**, 371, 636-640	33.3	69
38	Unraveling the surface state of photovoltaic perovskite thin film. *Matter*, **2021**, 4, 2417-2428	12.7	9
37	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. *Nature Communications*, **2021**, 12, 5009	17.4	3
36	Stiffening the Pb-X Framework through a Conjugated Small-Molecule Cross-Linker for High-Performance Inorganic CsPbIBr Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2021**, 13, 40489-40501	9.5	6
35	One-Electron Water Oxidation Intermediate on TiO2 P25 Probed by Ultrafast Attenuated Total Reflection. *Journal of Physical Chemistry C*, **2021**, 125, 18204-18209	3.8	1
34	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. *Science*, **2021**, eabj2637	33.3	2
33	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. *Solar Rrl*, **2020**, 4, 2000082	7.1	46
32	Ultrafast Reaction Mechanisms in Perovskite Based Photocatalytic C Coupling. *ACS Energy Letters*, **2020**, 5, 566-571	20.1	38
31	Carbazole-Based Hole-Transport Materials for High-Efficiency and Stable Perovskite Solar Cells. *ACS Applied Energy Materials*, **2020**, 3, 4492-4498	6.1	22

30	Origin of Broad-Band Emission and Impact of Structural Dimensionality in Tin-Alloyed Ruddlesden□Popper Hybrid Lead Iodide Perovskites. *ACS Energy Letters*, **2020**, 5, 347-352	20.1	36
29	Inhomogeneous Doping of Perovskite Materials by Dopants from Hole-Transport Layer. *Matter*, **2020**, 2, 261-272	12.7	22
28	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		9
27	Transient Evolution of the Built-in Field at Junctions of GaAs. *ACS Applied Materials & Interfaces*, **2020**, 12, 40339-40346	9.5	5
26	Selecting between two transition states by which water oxidation intermediates decay on an oxide surface. *Nature Catalysis*, **2019**, 2, 820-827	36.5	27
25	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. *Nature Communications*, **2019**, 10, 4498	17.4	138
24	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Two-Dimensional Perovskite Solar Cells. *Angewandte Chemie - International Edition*, **2019**, 58, 11737-11741	16.4	48
23	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Two-Dimensional Perovskite Solar Cells. *Angewandte Chemie*, **2019**, 131, 11863-11867	3.6	16
22	Carrier lifetimes of >1 □s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. *Science*, **2019**, 364, 475-479	33.3	496
21	Self-Seeding Growth for Perovskite Solar Cells with Enhanced Stability. *Joule*, **2019**, 3, 1452-1463	27.8	83
20	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. *Journal of the American Chemical Society*, **2019**, 141, 5972-5979	16.4	170
19	Improving Charge Transport via Intermediate-Controlled Crystal Growth in 2D Perovskite Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1901652	15.6	64
18	High efficiency perovskite quantum dot solar cells with charge separating heterostructure. *Nature Communications*, **2019**, 10, 2842	17.4	205
17	Ultrafast probes at the interfaces of solar energy conversion materials. *Physical Chemistry Chemical Physics*, **2019**, 21, 16399-16407	3.6	21
16	Sensitizing Singlet Fission with Perovskite Nanocrystals. *Journal of the American Chemical Society*, **2019**, 141, 4919-4927	16.4	61
15	Enhanced photoredox activity of CsPbBr nanocrystals by quantitative colloidal ligand exchange. *Journal of Chemical Physics*, **2019**, 151, 204305	3.9	35
14	Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. *Science Advances*, **2019**, 5, eaay0571	14.3	118
13	Large-Area Material and Junction Damage in c□i Solar Cells by Potential-Induced Degradation. *Solar Rrl*, **2019**, 3, 1800303	7.1	6

12	Excitonic Effects in Methylammonium Lead Halide Perovskites. *Journal of Physical Chemistry Letters*, **2018**, 9, 2595-2603	6.4	72
11	Impact of Layer Thickness on the Charge Carrier and Spin Coherence Lifetime in Two-Dimensional Layered Perovskite Single Crystals. *ACS Energy Letters*, **2018**, 3, 2273-2279	20.1	84
10	n-Type PbSe Quantum Dots via Post-Synthetic Indium Doping. *Journal of the American Chemical Society*, **2018**, 140, 13753-13763	16.4	20
9	One-electron intermediates of water oxidation & the role of solvation in their stability. *Journal of Materials Chemistry A*, **2017**, 5, 11410-11417	13	11
8	Faradaic oxygen evolution from SrTiO under nano- and femto-second pulsed light excitation. *Chemical Communications*, **2017**, 53, 7254-7257	5.8	4
7	The Formation Time of Ti-O and Ti-O-Ti Radicals at the n-SrTiO/Aqueous Interface during Photocatalytic Water Oxidation. *Journal of the American Chemical Society*, **2017**, 139, 1830-1841	16.4	60
6	Detecting the oxyl radical of photocatalytic water oxidation at an n-SrTiO3/aqueous interface through its subsurface vibration. *Nature Chemistry*, **2016**, 8, 549-55	17.6	95
5	How surface potential determines the kinetics of the first hole transfer of photocatalytic water oxidation. *Journal of the American Chemical Society*, **2014**, 136, 10632-9	16.4	51
4	Theoretical studies of reactions of carbon dioxide mediated and catalysed by transition metal complexes. *Chemical Communications*, **2012**, 48, 10808-28	5.8	98
3	DFT Studies on Gold-Catalyzed Cycloisomerization of 1,5-Enynes. *Organometallics*, **2012**, 31, 4221-4227	3.8	27
2	Systemic studies of tetraphenylethene-triphenylamine oligomers and a polymer: achieving both efficient solid-state emissions and hole-transporting capability. *Chemistry - A European Journal*, **2012**, 18, 9929-38	4.8	35
1	Exogenous electricity flowing through cyanobacterial photosystem I drives CO2 valorization with high energy efficiency. *Energy and Environmental Science*,	35.4	4