Zewen Xiao

List of Publications by Year in Descending Order

71 papers	4,862 citations	35 h-index	69 g-index
78 ext. papers	6,041 ext. citations	9.2 avg, IF	6.25 L-index

#	Paper	IF	Citations
71	Defect Properties of Halide Perovskites for Photovoltaic Applications **2022**, 107-126		
70	Material exploration via designing spatial arrangement of octahedral units: a case study of lead halide perovskites. *Frontiers of Optoelectronics*, **2021**, 14, 252-259	2.8	40
69	Slot-die coating large-area formamidinium-cesium perovskite film for efficient and stable parallel solar module. *Science Advances*, **2021**, 7,	14.3	66
68	Phase transition pathway of hybrid halide perovskites under compression: Insights from first-principles calculations. *Physical Review Materials*, **2021**, 5,	3.2	3
67	First-Principles Insights into the Stability Difference between ABX3 Halide Perovskites and Their A2BX6 Variants. *Journal of Physical Chemistry C*, **2021**, 125, 9688-9694	3.8	12
66	B-Site Columnar-Ordered Halide Double Perovskites: Theoretical Design and Experimental Verification. *Journal of the American Chemical Society*, **2021**, 143, 10275-10281	16.4	15
65	Photoluminescence Behavior of Zero-Dimensional Manganese Halide Tetrahedra Embedded in Conjugated Organic Matrices. *Journal of Physical Chemistry Letters*, **2021**, 12, 7394-7399	6.4	9
64	Manipulation of Cl/Br transmutation in zero-dimensional Mn2+-based metal halides toward tunable photoluminescence and thermal quenching behaviors. *Journal of Materials Chemistry C*, **2021**, 9, 2047-2053	7.1	13
63	Bandgap engineering and thermodynamic stability of oxyhalide and chalcohalide antiperovskites. *Ceramics International*, **2021**, 47, 32634-32634	5.1	3
62	B-Site Columnar-Ordered Halide Double Perovskites A2B(II)?0.5B(II)X5 with B(II)?/Vacancy Disordering. *Chemistry of Materials*, **2021**, 33, 7106-7112	9.6	5
61	p-Type Transparent Quadruple Perovskite Halide Conductors: Fact or Fiction?. *Advanced Functional Materials*, **2020**, 30, 1909906	15.6	11
60	Reversible Release and Fixation of Bromine in Vacancy-Ordered Bromide Perovskites. *Energy and Environmental Materials*, **2020**, 3, 535-540	13	11
59	Lead-Free Perovskite Variant Solid Solutions Cs Sn Te Cl : Bright Luminescence and High Anti-Water Stability. *Advanced Materials*, **2020**, 32, e2002443	24	74
58	Unraveling the Near-Unity Narrow-Band Green Emission in Zero-Dimensional Mn-Based Metal Halides: A Case Study of (CHN)ZnMnBr Solid Solutions. *Journal of Physical Chemistry Letters*, **2020**, 11, 5956-5962	6.4	59
57	Stable single platinum atoms trapped in sub-nanometer cavities in 12CaO⁢7AlO for chemoselective hydrogenation of nitroarenes. *Nature Communications*, **2020**, 11, 1020	17.4	47
56	Circularly Polarized Luminescence from Chiral Tetranuclear Copper(I) Iodide Clusters. *Journal of Physical Chemistry Letters*, **2020**, 11, 1255-1260	6.4	40
55	Bournonite CuPbSbS3: An electronically-3D, defect-tolerant, and solution-processable semiconductor for efficient solar cells. *Nano Energy*, **2020**, 71, 104574	17.1	14

54	Lead chloride perovskites for p-type transparent conductors: A critical theoretical reevaluation. *Physical Review Materials*, **2020**, 4,	3.2	4
53	Rearranging Low-Dimensional Phase Distribution of Quasi-2D Perovskites for Efficient Sky-Blue Perovskite Light-Emitting Diodes. *ACS Nano*, **2020**, 14, 11420-11430	16.7	104
52	Zero-dimensional hybrid iodobismuthate derivatives: from structure study to photovoltaic application. *Dalton Transactions*, **2020**, 49, 5815-5822	4.3	5
51	Material Design and Optoelectronic Properties of Three-Dimensional Quadruple Perovskite Halides. *Journal of Physical Chemistry Letters*, **2019**, 10, 5219-5225	6.4	47
50	Intralayer A-Site Compositional Engineering of Ruddlesden□Popper Perovskites for Thermostable and Efficient Solar Cells. *ACS Energy Letters*, **2019**, 4, 1216-1224	20.1	41
49	Band alignment of Pb□Sn mixed triple cation perovskites for inverted solar cells with negligible hysteresis. *Journal of Materials Chemistry A*, **2019**, 7, 9154-9162	13	42
48	From Lead Halide Perovskites to Lead-Free Metal Halide Perovskites and Perovskite Derivatives. *Advanced Materials*, **2019**, 31, e1803792	24	346
47	Intrinsic and Extrinsic Defects in Layered Nitride Semiconductor SrTiN2. *Journal of Physical Chemistry C*, **2019**, 123, 19307-19314	3.8	5
46	Designing Two-Dimensional Properties in Three-Dimensional Halide Perovskites via Orbital Engineering. *Journal of Physical Chemistry Letters*, **2019**, 10, 6688-6694	6.4	14
45	Palladium-bearing intermetallic electride as an□efficient and stable catalyst for Suzuki cross-coupling reactions. *Nature Communications*, **2019**, 10, 5653	17.4	23
44	Roles of Pseudo-Closed s Orbitals for Different Intrinsic Hole Generation between Tl-Bi and In-Bi Bromide Double Perovskites. *Journal of Physical Chemistry Letters*, **2018**, 9, 258-262	6.4	23
43	CsFeSe: A Compound Closely Related to Alkali-Intercalated FeSe Superconductors. *Inorganic Chemistry*, **2018**, 57, 4502-4509	5.1	7
42	Multiple states and roles of hydrogen in p-type SnS semiconductors. *Physical Chemistry Chemical Physics*, **2018**, 20, 20952-20956	3.6	6
41	Rational Design of Halide Double Perovskites for Optoelectronic Applications. *Joule*, **2018**, 2, 1662-1673	27.8	179
40	Superconductivity in non-centrosymmetric sulfide Y x S 4. *Europhysics Letters*, **2018**, 121, 57001	1.6	2
39	Layered Halide Double Perovskites CsM(II)SbX (M = Sn, Ge) for Photovoltaic Applications. *Journal of Physical Chemistry Letters*, **2018**, 9, 43-48	6.4	59
38	Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. *Chemistry - A European Journal*, **2018**, 24, 2305-2316	4.8	76
37	Identifying quasi-2D and 1D electrides in yttrium and scandium chlorides via geometrical identification. *Npj Computational Materials*, **2018**, 4,	10.9	19

36	Highly Efficient Blue-Emitting Bi-Doped Cs2SnCl6 Perovskite Variant: Photoluminescence Induced by Impurity Doping. *Advanced Functional Materials*, **2018**, 28, 1801131	15.6	239
35	Intrinsic Instability of CsIn(I)M(III)X (M = Bi, Sb; X = Halogen) Double Perovskites: A Combined Density Functional Theory and Experimental Study. *Journal of the American Chemical Society*, **2017**, 139, 6054-6057	16.4	186
34	Parity-Forbidden Transitions and Their Impact on the Optical Absorption Properties of Lead-Free Metal Halide Perovskites and Double Perovskites. *Journal of Physical Chemistry Letters*, **2017**, 8, 2999-3007	6.4	267
33	Bandgap Engineering of Barium Bismuth Niobate Double Perovskite for Photoelectrochemical Water Oxidation. *Advanced Energy Materials*, **2017**, 7, 1602260	21.8	49
32	Searching for promising new perovskite-based photovoltaic absorbers: the importance of electronic dimensionality. *Materials Horizons*, **2017**, 4, 206-216	14.4	406
31	Electride and superconductivity behaviors in Mn5Si3-type intermetallics. *Npj Quantum Materials*, **2017**, 2,	5	28
30	Progress in Theoretical Study of Metal Halide Perovskite Solar Cell Materials. *Advanced Energy Materials*, **2017**, 7, 1701136	21.8	197
29	Chemical Origin of the Stability Difference between Copper(I)- and Silver(I)-Based Halide Double Perovskites. *Angewandte Chemie - International Edition*, **2017**, 56, 12107-12111	16.4	67
28	Chemical Origin of the Stability Difference between Copper(I)- and Silver(I)-Based Halide Double Perovskites. *Angewandte Chemie*, **2017**, 129, 12275-12279	3.6	57
27	Distant-Atom Mutation for Better Earth-Abundant Light Absorbers: A Case Study of Cu2BaSnSe4. *ACS Energy Letters*, **2017**, 2, 29-35	20.1	57
26	Defect properties of the two-dimensional (CH3NH3)2Pb(SCN)2I2 perovskite: a density-functional theory study. *Physical Chemistry Chemical Physics*, **2016**, 18, 25786-90	3.6	27
25	Crystal Structure of AgBiI Thin Films. *Journal of Physical Chemistry Letters*, **2016**, 7, 3903-3907	6.4	46
24	Difficulty of carrier generation in orthorhombic PbO. *Journal of Applied Physics*, **2016**, 119, 165701	2.5	9
23	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. *Advanced Materials*, **2016**, 28, 5214-21	24	403
22	Photovoltaic Properties of Two-Dimensional (CH3NH3)2Pb(SCN)2I2 Perovskite: A Combined Experimental and Density Functional Theory Study. *Journal of Physical Chemistry Letters*, **2016**, 7, 1213-8	6.4	112
21	Viability of Lead-Free Perovskites with Mixed Chalcogen and Halogen Anions for Photovoltaic Applications. *Journal of Physical Chemistry C*, **2016**, 120, 6435-6441	3.8	59
20	Thin-Film Deposition and Characterization of a Sn-Deficient Perovskite Derivative Cs2SnI6. *Chemistry of Materials*, **2016**, 28, 2315-2322	9.6	252
19	Amorphous pnictide semiconductor BaZn2As2 exhibiting high hole mobility. *Applied Physics Letters*, **2016**, 109, 242105	3.4	1

18	SnS thin films prepared by H2S-free process and its p-type thin film transistor. *AIP Advances*, **2016**, 6, 015112	1.5	11
17	Thermodynamic Stability and Defect Chemistry of Bismuth-Based Lead-Free Double Perovskites. *ChemSusChem*, **2016**, 9, 2628-2633	8.3	195
16	Effects of Pb Doping on Hole Transport Properties and Thin-Film Transistor Characteristics of SnO Thin Films. *ECS Journal of Solid State Science and Technology*, **2015**, 4, Q26-Q30	2	17
15	n-type conversion of SnS by isovalent ion substitution: Geometrical doping as a new doping route. *Scientific Reports*, **2015**, 5, 10428	4.9	44
14	Intrinsic defects in a photovoltaic perovskite variant Cs2SnI6. *Physical Chemistry Chemical Physics*, **2015**, 17, 18900-3	3.6	148
13	Route to n-type doping in SnS. *Applied Physics Letters*, **2015**, 106, 152103	3.4	35
12	Additive-Modulated Evolution of HC(NH2)2PbI3 Black Polymorph for Mesoscopic Perovskite Solar Cells. *Chemistry of Materials*, **2015**, 27, 7149-7155	9.6	164
11	Electron Confinement in Channel Spaces for One-Dimensional Electride. *Journal of Physical Chemistry Letters*, **2015**, 6, 4966-71	6.4	46
10	Ligand-Hole in [SnI6] Unit and Origin of Band Gap in Photovoltaic Perovskite Variant Cs2SnI6. *Bulletin of the Chemical Society of Japan*, **2015**, 88, 1250-1255	5.1	83
9	Growth of high-quality SnS epitaxial films by H2S flow pulsed laser deposition. *Applied Physics Letters*, **2014**, 104, 072106	3.4	27
8	Two-Dimensional Transition-Metal Electride Y2C. *Chemistry of Materials*, **2014**, 26, 6638-6643	9.6	113
7	Narrow bandgap in □BaZn□As□and its chemical origins. *Journal of the American Chemical Society*, **2014**, 136, 14959-65	16.4	25
6	Epitaxial growth and electronic structure of a layered zinc pnictide semiconductor, □BaZn2As2. *Thin Solid Films*, **2014**, 559, 100-104	2.2	10
5	Superconductivity in noncentrosymmetric ternary equiatomic pnictides LaMP (M = Ir and Rh; P = P and As). *Physical Review B*, **2014**, 89,	3.3	32
4	Apparent high mobility ~30 cm2/Vs of amorphous In□Ga□Zn□O thin-film transistor and its origin. *Journal of the Ceramic Society of Japan*, **2013**, 121, 295-298	1	4
3	Preparation and Mechanism of Interconnected Mesoporous Carbon Monoliths from Phenolic Resin/Ethylene Glycol Mixtures. *Key Engineering Materials*, **2012**, 512-515, 403-406	0.4	6
2	Facile Synthesis of Hierarchically Macro/Mesoporous Carbons by Polymerization-Induced Phase Separation Combined with Starch Template. *Key Engineering Materials*, **2012**, 512-515, 1641-1646	0.4	
1	Exploration of Nontoxic Cs3CeBr6 for Violet Light-Emitting Diodes. *ACS Energy Letters*,4245-4254	20.1	8