

# Zewen Xiao

## List of Publications by Year in descending order

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75  
papers

7,406  
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76196

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76769

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78  
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78  
docs citations

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times ranked

7379  
citing authors

#	ARTICLE	IF	CITATIONS
1	From Lead Halide Perovskites to Lead-Free Metal Halide Perovskites and Perovskite Derivatives. <i>Advanced Materials</i> , 2019, 31, e1803792.	11.1	621
2	Searching for promising new perovskite-based photovoltaic absorbers: the importance of electronic dimensionality. <i>Materials Horizons</i> , 2017, 4, 206-216.	6.4	553
3	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. <i>Advanced Materials</i> , 2016, 28, 5214-5221.	11.1	487
4	Parity-Forbidden Transitions and Their Impact on the Optical Absorption Properties of Lead-Free Metal Halide Perovskites and Double Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2999-3007.	2.1	441
5	Highly Efficient Blue-Emitting Bi-Doped Cs <sub>2</sub> SnCl <sub>6</sub> Perovskite Variant: Photoluminescence Induced by Impurity Doping. <i>Advanced Functional Materials</i> , 2018, 28, 1801131.	7.8	358
6	Thin-Film Deposition and Characterization of a Sn-Deficient Perovskite Derivative Cs <sub>2</sub> SnI <sub>6</sub> . <i>Chemistry of Materials</i> , 2016, 28, 2315-2322.	3.2	329
7	Rational Design of Halide Double Perovskites for Optoelectronic Applications. <i>Joule</i> , 2018, 2, 1662-1673.	11.7	297
8	Thermodynamic Stability and Defect Chemistry of Bismuth-Based Lead-Free Double Perovskites. <i>ChemSusChem</i> , 2016, 9, 2628-2633.	3.6	273
9	Progress in Theoretical Study of Metal Halide Perovskite Solar Cell Materials. <i>Advanced Energy Materials</i> , 2017, 7, 1701136.	10.2	257
10	Intrinsic Instability of Cs <sub>2</sub> In(I)M(III)X <sub>6</sub> (M = Bi, Sb; X = Halogen) Double Perovskites: A Combined Density Functional Theory and Experimental Study. <i>Journal of the American Chemical Society</i> , 2017, 139, 6054-6057.	6.6	253
11	Rearranging Low-Dimensional Phase Distribution of Quasi-2D Perovskites for Efficient Sky-Blue Perovskite Light-Emitting Diodes. <i>ACS Nano</i> , 2020, 14, 11420-11430.	7.3	206
12	Additive-Modulated Evolution of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Black Polymorph for Mesoscopic Perovskite Solar Cells. <i>Chemistry of Materials</i> , 2015, 27, 7149-7155.	3.2	197
13	Intrinsic defects in a photovoltaic perovskite variant Cs <sub>2</sub> SnI <sub>6</sub> . <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 18900-18903.	1.3	191
14	Lead-Free Perovskite Variant Solid Solutions Cs <sub>2</sub> SnI <sub>4</sub> Te <sub>x</sub> Cl <sub>6</sub> : Bright Luminescence and High Anti-Water Stability. <i>Advanced Materials</i> , 2020, 32, e2002443.	11.1	169
15	Slot-die coating large-area formamidinium-cesium perovskite film for efficient and stable parallel solar module. <i>Science Advances</i> , 2021, 7, .	4.7	165
16	Two-Dimensional Transition-Metal Electride Y <sub>2</sub> C. <i>Chemistry of Materials</i> , 2014, 26, 6638-6643.	3.2	151
17	Unraveling the Near-Unity Narrow-Band Green Emission in Zero-Dimensional Mn <sup>2+</sup> -Based Metal Halides: A Case Study of (C <sub>10</sub> H <sub>16</sub> N) <sub>2</sub> ZnI <sub>4</sub> MnBr <sub>4</sub> Solid Solutions. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5956-5962.	2.1	147
18	Photovoltaic Properties of Two-Dimensional (CH <sub>3</sub> NH <sub>3</sub> ) <sub>2</sub> Pb(SCN) <sub>2</sub> I <sub>2</sub> Perovskite: A Combined Experimental and Density Functional Theory Study. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1213-1218.	2.1	135

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19	Ligand-Hole in [SnI <sub>6</sub> ] Unit and Origin of Band Gap in Photovoltaic Perovskite Variant Cs <sub>2</sub> SnI <sub>6</sub> . Bulletin of the Chemical Society of Japan, 2015, 88, 1250-1255.	2.0	130
20	Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. Chemistry - A European Journal, 2018, 24, 2305-2316.	1.7	103
21	Stable single platinum atoms trapped in sub-nanometer cavities in 12CaO·7Al <sub>2</sub> O <sub>3</sub> for chemoselective hydrogenation of nitroarenes. Nature Communications, 2020, 11, 1020.	5.8	94
22	Chemical Origin of the Stability Difference between Copper(I)- and Silver(I)-Based Halide Double Perovskites. Angewandte Chemie - International Edition, 2017, 56, 12107-12111.	7.2	89
23	Chemical Origin of the Stability Difference between Copper(I)- and Silver(I)-Based Halide Double Perovskites. Angewandte Chemie, 2017, 129, 12275-12279.	1.6	79
24	Circularly Polarized Luminescence from Chiral Tetranuclear Copper(I) Iodide Clusters. Journal of Physical Chemistry Letters, 2020, 11, 1255-1260.	2.1	79
25	Layered Halide Double Perovskites Cs <sub>3+n</sub> M(II) <sub>n</sub> Sb <sub>2</sub> X <sub>9+3n</sub> (M = Sn, Tl) $\chi^2 = 0.784714$ $R_{\text{int}} = 0.014$	1.1	74
26	Electron Confinement in Channel Spaces for One-Dimensional Electride. Journal of Physical Chemistry Letters, 2015, 6, 4966-4971.	2.1	74
27	Viability of Lead-Free Perovskites with Mixed Chalcogen and Halogen Anions for Photovoltaic Applications. Journal of Physical Chemistry C, 2016, 120, 6435-6441.	1.5	72
28	Material Design and Optoelectronic Properties of Three-Dimensional Quadruple Perovskite Halides. Journal of Physical Chemistry Letters, 2019, 10, 5219-5225.	2.1	70
29	Distant-Atom Mutation for Better Earth-Abundant Light Absorbers: A Case Study of Cu <sub>2</sub> BaSnSe <sub>4</sub> . ACS Energy Letters, 2017, 2, 29-35.	8.8	68
30	Bandgap Engineering of Barium Bismuth Niobate Double Perovskite for Photoelectrochemical Water Oxidation. Advanced Energy Materials, 2017, 7, 1602260.	10.2	67
31	Material exploration via designing spatial arrangement of octahedral units: a case study of lead halide perovskites. Frontiers of Optoelectronics, 2021, 14, 252-259.	1.9	66
32	Intralayer A-Site Compositional Engineering of Ruddlesden-Popper Perovskites for Thermostable and Efficient Solar Cells. ACS Energy Letters, 2019, 4, 1216-1224.	8.8	65
33	Crystal Structure of AgBi <sub>2</sub> I <sub>7</sub> Thin Films. Journal of Physical Chemistry Letters, 2016, 7, 3903-3907.	2.1	64
34	n-type conversion of SnS by isovalent ion substitution: Geometrical doping as a new doping route. Scientific Reports, 2015, 5, 10428.	1.6	59
35	Highly Distorted Antimony(III) Chloride [Sb <sub>2</sub> Cl <sub>8</sub> ] <sup>2+</sup> Dimers for Near-Infrared Luminescence up to 1070 nm. Angewandte Chemie - International Edition, 2022, 61, .	7.2	57
36	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.	5.2	54

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37	Route to <i>n</i> -type doping in SnS. Applied Physics Letters, 2015, 106, .	1.5	49
38	Electride and superconductivity behaviors in Mn <sub>5</sub> Si <sub>3</sub> -type intermetallics. Npj Quantum Materials, 2017, 2, .	1.8	47
39	Manipulation of Cl/Br transmutation in zero-dimensional Mn <sup>2+</sup> -based metal halides toward tunable photoluminescence and thermal quenching behaviors. Journal of Materials Chemistry C, 2021, 9, 2047-2053.	2.7	44
40	Palladium-bearing intermetallic electride as an efficient and stable catalyst for Suzuki cross-coupling reactions. Nature Communications, 2019, 10, 5653.	5.8	43
41	B-Site Columnar-Ordered Halide Double Perovskites: Theoretical Design and Experimental Verification. Journal of the American Chemical Society, 2021, 143, 10275-10281.	6.6	43
42	Superconductivity in noncentrosymmetric ternary equiatomic pnictides La <sub>1-x</sub> M <sub>x</sub> P <sub>2</sub> (M = As, Sb, Bi). Physical Review Letters, 2019, 123, 087201.	1.1	40
43	Photoluminescence Behavior of Zero-Dimensional Manganese Halide Tetrahedra Embedded in Conjugated Organic Matrices. Journal of Physical Chemistry Letters, 2021, 12, 7394-7399.	2.1	38
44	Exploration of Nontoxic Cs <sub>3</sub> CeBr <sub>6</sub> for Violet Light-Emitting Diodes. ACS Energy Letters, 2021, 6, 4245-4254.	8.8	37
45	First-Principles Insights into the Stability Difference between ABX <sub>3</sub> Halide Perovskites and Their A <sub>2</sub> BX <sub>6</sub> Variants. Journal of Physical Chemistry C, 2021, 125, 9688-9694.	1.5	36
46	Narrow Bandgap in $\hat{I}^2$ -BaZn <sub>2</sub> As <sub>2</sub> and Its Chemical Origins. Journal of the American Chemical Society, 2014, 136, 14959-14965.	6.6	33
47	Growth of high-quality SnS epitaxial films by H <sub>2</sub> S flow pulsed laser deposition. Applied Physics Letters, 2014, 104, .	1.5	32
48	Defect properties of the two-dimensional (CH <sub>3</sub> NH <sub>3</sub> ) <sub>2</sub> Pb(SCN) <sub>2</sub> I <sub>2</sub> perovskite: a density-functional theory study. Physical Chemistry Chemical Physics, 2016, 18, 25786-25790.	1.3	32
49	Identifying quasi-2D and 1D electrifies in yttrium and scandium chlorides via geometrical identification. Npj Computational Materials, 2018, 4, .	3.5	32
50	Roles of Pseudo-Closed <i>s</i> <sup>2</sup> Orbitals for Different Intrinsic Hole Generation between Tl <sup>2+</sup> Bi and In <sup>2+</sup> Bi Bromide Double Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 258-262.	2.1	27
51	Designing Two-Dimensional Properties in Three-Dimensional Halide Perovskites via Orbital Engineering. Journal of Physical Chemistry Letters, 2019, 10, 6688-6694.	2.1	25
52	Bournonite CuPbSbS <sub>3</sub> : An electronically-3D, defect-tolerant, and solution-processable semiconductor for efficient solar cells. Nano Energy, 2020, 71, 104574.	8.2	24
53	Reversible Release and Fixation of Bromine in Vacancy-Ordered Bromide Perovskites. Energy and Environmental Materials, 2020, 3, 535-540.	7.3	23
54	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.	0.9	19

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55	SnS thin films prepared by H <sub>2</sub> S-free process and its p-type thin film transistor. AIP Advances, 2016, 6, .	0.6	17
56	p-type Transparent Quadruple Perovskite Halide Conductors: Fact or Fiction?. Advanced Functional Materials, 2020, 30, 1909906.	7.8	17
57	Zero-dimensional hybrid iodobismuthate derivatives: from structure study to photovoltaic application. Dalton Transactions, 2020, 49, 5815-5822.	1.6	17
58	Narrow band-gapped perovskite oxysulfide for CO <sub>2</sub> photoreduction towards ethane. Applied Catalysis B: Environmental, 2022, 316, 121615.	10.8	15
59	Difficulty of carrier generation in orthorhombic PbO. Journal of Applied Physics, 2016, 119, .	1.1	14
60	Epitaxial growth and electronic structure of a layered zinc pnictide semiconductor, $\text{I}^2\text{-BaZn}_2\text{As}_2$ . Thin Solid Films, 2014, 559, 100-104.	0.8	13
61	Multiple states and roles of hydrogen in p-type SnS semiconductors. Physical Chemistry Chemical Physics, 2018, 20, 20952-20956.	1.3	10
62	Intrinsic and Extrinsic Defects in Layered Nitride Semiconductor SrTiN <sub>2</sub> . Journal of Physical Chemistry C, 2019, 123, 19307-19314.	1.5	9
63	Bandgap engineering and thermodynamic stability of oxyhalide and chalcogenide antiperovskites. Ceramics International, 2021, 47, 32634-32640.	2.3	9
64	Routes to High-Carrier-Density Doping in Thermoelectric SnSe. Journal of Physical Chemistry C, 0, , .	1.5	9
65	CsFe <sub>4</sub> Se <sub>4</sub> : A Compound Closely Related to Alkali-Intercalated FeSe Superconductors. Inorganic Chemistry, 2018, 57, 4502-4509.	1.9	8
66	B-Site Columnar-Ordered Halide Double Perovskites A <sub>2</sub> B(II) <sub>0.5</sub> B(II)X <sub>5</sub> with B(II) <sub>2</sub> /Vacancy Disorder. Chemistry of Materials, 2021, 33, 7106-7112.	3.2	8
67	Lead chloride perovskites for p-type transparent conductors: A critical theoretical reevaluation. Physical Review Materials, 2020, 4, .	0.9	8
68	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
69	Phase transition pathway of hybrid halide perovskites under compression: Insights from first-principles calculations. Physical Review Materials, 2021, 5, .	0.9	6
70	Atomic Permutation toward New Ruddlesden-Popper Two-Dimensional Perovskite with the Smallest Interlayer Spacing. Journal of Physical Chemistry C, 2022, 126, 8268-8277.	1.5	6
71	Apparent high mobility $\sim 30 \text{ cm}^2/\text{Vs}$ of amorphous InGaZnO thin-film transistor and its origin. Journal of the Ceramic Society of Japan, 2013, 121, 295-298.	0.5	4
72	Amorphous pnictide semiconductor BaZn <sub>2</sub> As <sub>2</sub> exhibiting high hole mobility. Applied Physics Letters, 2016, 109, .	1.5	2

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73	Superconductivity in non-centrosymmetric sulfide $Y_{1-x}S_4$ . Europhysics Letters, 2018, 121, 57001.	0.7	2
74	Frontispiece: Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. Chemistry - A European Journal, 2018, 24, .	1.7	1
75	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	0