## Mechanism of Tin Oxidation and Stabilization by Lead S

ACS Energy Letters 2, 2159-2165 DOI: 10.1021/acsenergylett.7b00636

Citation Report

#	Article	IF	CITATIONS
1	How SnF <sub>2</sub> Impacts the Material Properties of Lead-Free Tin Perovskites. Journal of Physical Chemistry C, 2018, 122, 13926-13936.	3.1	179
2	Infrared Dielectric Screening Determines the Low Exciton Binding Energy of Metal-Halide Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 620-627.	4.6	88
3	Influence of metal substitution on hybrid halide perovskites: towards lead-free perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 3793-3823.	10.3	154
4	Origin of Pronounced Nonlinear Band Gap Behavior in Lead–Tin Hybrid Perovskite Alloys. Chemistry of Materials, 2018, 30, 3920-3928.	6.7	166
5	Metal replacement in perovskite solar cell materials: chemical bonding effects and optoelectronic properties. Sustainable Energy and Fuels, 2018, 2, 1430-1445.	4.9	78
6	Study of the Partial Substitution of Pb by Sn in Cs–Pb–Sn–Br Nanocrystals Owing to Obtaining Stable Nanoparticles with Excellent Optical Properties. Journal of Physical Chemistry C, 2018, 122, 14222-14231.	3.1	38
7	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2018, , 1-48.		1
8	First-Principles Modeling of Bismuth Doping in the MAPbI <sub>3</sub> Perovskite. Journal of Physical Chemistry C, 2018, 122, 14107-14112.	3.1	64
9	Perovskite/Colloidal Quantum Dot Tandem Solar Cells: Theoretical Modeling and Monolithic Structure. ACS Energy Letters, 2018, 3, 869-874.	17.4	77
10	A brief review on the lead element substitution in perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 1054-1066.	12.9	38
11	Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. Nature Energy, 2018, 3, 1093-1100.	39.5	422
12	First-Principle Insights of Electronic and Optical Properties of Cubic Organic–Inorganic MAGe <sub><i>x</i></sub> Pb <sub>(1–<i>x</i>)</sub> I <sub>3</sub> Perovskites for Photovoltaic Applications. Journal of Physical Chemistry C, 2018, 122, 28245-28255.	3.1	34
13	Partially replacing Pb2+ by Mn2+ in hybrid metal halide perovskites: Structural and electronic properties. APL Materials, 2018, 6, .	5.1	15
14	Compositional engineering of tin-lead halide perovskites for efficient and stable low band gap solar cells. , 2018, , .		7
15	Metallic tin substitution of organic lead perovskite films for efficient solar cells. Journal of Materials Chemistry A, 2018, 6, 20224-20232.	10.3	24
16	Perovskite solar cells with narrow band gap. Current Opinion in Electrochemistry, 2018, 11, 146-150.	4.8	2
17	New Tin(II) Fluoride Derivative as a Precursor for Enhancing the Efficiency of Inverted Planar Tin/Lead Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 27284-27291.	3.1	26
18	The Effects of Doping Density and Temperature on the Optoelectronic Properties of Formamidinium Tin Triiodide Thin Films. Advanced Materials, 2018, 30, e1804506.	21.0	156

#	Article	IF	CITATIONS
19	A computational approach to interface engineering of lead-free CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> highly-efficient perovskite solar cells. Physical Chemistry Chemical Physics, 2018, 20, 25683-25692.	2.8	62
20	Interplay of Structural and Optoelectronic Properties in Formamidinium Mixed Tin–Lead Triiodide Perovskites. Advanced Functional Materials, 2018, 28, 1802803.	14.9	63
21	Tin–lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. Sustainable Energy and Fuels, 2018, 2, 2450-2459.	4.9	167
22	Crystallization, Properties, and Challenges of Lowâ€Bandgap Sn–Pb Binary Perovskites. Solar Rrl, 2018, 2, 1800146.	5.8	43
23	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. Nature Energy, 2018, 3, 828-838.	39.5	716
24	Layered Mixed Tin–Lead Hybrid Perovskite Solar Cells with High Stability. ACS Energy Letters, 2018, 3, 2246-2251.	17.4	64
25	Lead-free hybrid perovskites for photovoltaics. Beilstein Journal of Nanotechnology, 2018, 9, 2209-2235.	2.8	23
26	Suppression of Charge Carrier Recombination in Lead-Free Tin Halide Perovskite via Lewis Base Post-treatment. Journal of Physical Chemistry Letters, 2019, 10, 5277-5283.	4.6	196
27	Microsecond Carrier Lifetimes, Controlled p-Doping, and Enhanced Air Stability in Low-Bandgap Metal Halide Perovskites. ACS Energy Letters, 2019, 4, 2301-2307.	17.4	46
28	Strain Relaxation and Light Management in Tin–Lead Perovskite Solar Cells to Achieve High Efficiencies. ACS Energy Letters, 2019, 4, 1991-1998.	17.4	114
29	Snâ€Based Perovskite for Highly Sensitive Photodetectors. Advanced Science, 2019, 6, 1900751.	11.2	118
30	A OD/3D Heterostructured Allâ€Inorganic Halide Perovskite Solar Cell with High Performance and Enhanced Phase Stability. Advanced Materials, 2019, 31, e1904735.	21.0	117
31	Nanostructured Perovskite Solar Cells. Nanomaterials, 2019, 9, 1481.	4.1	19
32	Dual-Source Coevaporation of Low-Bandgap FA <sub>1–<i>x</i></sub> Cs <sub><i>x</i></sub> Sn <sub>1–<i>y</i></sub> Pb <sub><i>y</i></sub> I <sub>3 Perovskites for Photovoltaics. ACS Energy Letters, 2019, 4, 2748-2756.</sub>		43
33	Synthesis, Characterization, and Stability Studies of Ge-Based Perovskites of Controllable Mixed Cation Composition, Produced with an Ambient Surfactant-Free Approach. ACS Omega, 2019, 4, 18219-18233.	3.5	33
34	Intrinsic Selfâ€Trapped Emission in OD Leadâ€Free (C <sub>4</sub> H <sub>14</sub> N <sub>2</sub> ) <sub>2</sub> In <sub>2</sub> Br <sub>10</sub> Single Crystal. Angewandte Chemie, 2019, 131, 15581-15586.	2.0	190
35	Intrinsic Selfâ€Trapped Emission in OD Leadâ€Free (C <sub>4</sub> H <sub>14</sub> N <sub>2</sub> ) <sub>2</sub> In <sub>2</sub> Br <sub>10</sub> Single Crystal. Angewandte Chemie - International Edition, 2019, 58, 15435-15440.	13.8	244
36	Bright Luminescence from Nontoxic CsCu <sub>2</sub> X <sub>3</sub> (X = Cl, Br, I). , 2019, 1, 459-465.		148

#	Article	IF	CITATIONS
37	Charge-Carrier Cooling and Polarization Memory Loss in Formamidinium Tin Triiodide. Journal of Physical Chemistry Letters, 2019, 10, 6038-6047.	4.6	16
38	Excitonic Properties of Low-Band-Gap Lead–Tin Halide Perovskites. ACS Energy Letters, 2019, 4, 615-621.	17.4	51
39	Insight into the reaction mechanism of water, oxygen and nitrogen molecules on a tin iodine perovskite surface. Journal of Materials Chemistry A, 2019, 7, 5779-5793.	10.3	40
40	Leadâ€Free Tinâ€Based Perovskite Solar Cells: Strategies Toward High Performance. Solar Rrl, 2019, 3, 1900213.	5.8	44
41	Tin( <scp>iv</scp> ) dopant removal through anti-solvent engineering enabling tin based perovskite solar cells with high charge carrier mobilities. Journal of Materials Chemistry C, 2019, 7, 8389-8397.	5.5	34
42	On understanding bandgap bowing and optoelectronic quality in Pb–Sn alloy hybrid perovskites. Journal of Materials Chemistry A, 2019, 7, 16285-16293.	10.3	64
43	The investigation of inverted p-i-n planar perovskite solar cells based on FASnI3 films. Solar Energy Materials and Solar Cells, 2019, 199, 75-82.	6.2	43
44	Wide range tuning of band gap energy of A3B2X9 perovskite-like halides. Scripta Materialia, 2019, 166, 107-111.	5.2	34
45	Comprehensive Computational Study of Partial Lead Substitution in Methylammonium Lead Bromide. Chemistry of Materials, 2019, 31, 3599-3612.	6.7	37
46	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2019, , 1055-1101.		3
47	Hybrid Organic–Inorganic Halides (C <sub>5</sub> H <sub>7</sub> N <sub>2</sub> ) <sub>2</sub> MBr <sub>4</sub> (M = Hg, Zn) with High Color Rendering Index and High-Efficiency White-Light Emission. Chemistry of Materials, 2019, 31, 2983-2991.	6.7	143
48	From Lead Halide Perovskites to Leadâ€Free Metal Halide Perovskites and Perovskite Derivatives. Advanced Materials, 2019, 31, e1803792.	21.0	621
49	Lowâ€Bandgap Mixed Tinâ€Lead Perovskites and Their Applications in Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1808801.	14.9	133
50	Hot carrier solar cells and the potential of perovskites for breaking the Shockley–Queisser limit. Journal of Materials Chemistry C, 2019, 7, 2471-2486.	5.5	124
51	Crystal and electronic structure studies on transparent conducting nitrides <i>A</i> <sub>3</sub> N <sub>2</sub> ( <i>A</i> = Mg, Zn and Sn) and Sn <sub>3</sub> N <sub>4</sub> . Materials Research Express, 2019, 6, 055912.	1.6	5
52	Lead-free double halide perovskite Cs <sub>3</sub> BiBr <sub>6</sub> with well-defined crystal structure and high thermal stability for optoelectronics. Journal of Materials Chemistry C, 2019, 7, 3369-3374.	5.5	66
53	Hybrid perovskites for device applications. , 2019, , 211-256.		13

	Atmospherically induced defects in (FASnI <sub>3</sub> ) <sub>0.6</sub> (MAPbI <sub>3â^'3<i>x</i>) Tj ETQq</sub>	1 1 0.784314	rgBT /Ove
1		2.8	7
	175102		

#	Article	IF	Citations
55	Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. Nature Energy, 2019, 4, 864-873.	39.5	736
56	Design of low bandgap tin–lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. Nature Energy, 2019, 4, 939-947.	39.5	235
57	Improved Efficiency and Stability of Pb/Sn Binary Perovskite Solar Cells Fabricated by Galvanic Displacement Reaction. Advanced Energy Materials, 2019, 9, 1802774.	19.5	67
58	An Aromatic Diamine Molecule as the <i>A</i> â€Site Solute for Highly Durable and Efficient Perovskite Solar Cells. Small Methods, 2019, 3, 1800361.	8.6	51
59	Mixed Lead–Tin Halide Perovskites for Efficient and Wavelengthâ€Tunable Nearâ€Infrared Lightâ€Emitting Diodes. Advanced Materials, 2019, 31, e1806105.	21.0	66
60	Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. Chemical Reviews, 2019, 119, 3418-3451.	47.7	1,131
61	Synthetic Approaches for Halide Perovskite Thin Films. Chemical Reviews, 2019, 119, 3193-3295.	47.7	454
62	Tin Halide Perovskites: Progress and Challenges. Advanced Energy Materials, 2020, 10, 1902584.	19.5	124
63	Mechanochemical Synthesis of Sn(II) and Sn(IV) Iodide Perovskites and Study of Their Structural, Chemical, Thermal, Optical, and Electrical Properties. Energy Technology, 2020, 8, 1900788.	3.8	34
64	Reducing trap density and carrier concentration by a Ge additive for an efficient quasi 2D/3D perovskite solar cell. Journal of Materials Chemistry A, 2020, 8, 2962-2968.	10.3	53
65	Stability of Lead and Tin Halide Perovskites: The Link between Defects and Degradation. Journal of Physical Chemistry Letters, 2020, 11, 574-585.	4.6	84
66	Bowing of transport gap in hybrid halide perovskite alloys (CH3NH3Sn1â^'xPbxI3): Which band is responsible?. Applied Physics Letters, 2020, 116, 012104.	3.3	12
67	Influence of Surface Ligands on Energetics at FASnI <sub>3</sub> /C <sub>60</sub> Interfaces and Their Impact on Photovoltaic Performance. ACS Applied Materials & Interfaces, 2020, 12, 5209-5218.	8.0	28
68	Trioctylphosphine Oxide Acts as Alkahest for SnX <sub>2</sub> /PbX <sub>2</sub> : A General Synthetic Route to Perovskite ASn <sub><i>x</i></sub> Pb <sub>1–<i>x</i></sub> X <sub>3</sub> (A = Cs, FA, MA; X =) T	ij <b>BIQ</b> q1 1	. 037784314
69	Stabilization of Inorganic CsPb <sub>0.5</sub> Sn <sub>0.5</sub> I <sub>2</sub> Br Perovskite Compounds by Antioxidant Tea Polyphenol. Solar Rrl, 2020, 4, 1900457.	5.8	43
70	Tuning the Thermoelectric Performance of Hybrid Tin Perovskites by Air Treatment. Advanced Energy and Sustainability Research, 2020, 1, 2000033.	5.8	20
71	Sn Perovskite Solar Cells via 2D/3D Bilayer Formation through a Sequential Vapor Process. ACS Energy Letters, 2020, 5, 3461-3467.	17.4	50
72	Implicit Tandem Organic–Inorganic Hybrid Perovskite Solar Cells Based on Internal Dye Sensitization: Robotized Screening, Synthesis, Device Implementation, and Theoretical Insights. Journal of the American Chemical Society, 2020, 142, 18437-18448.	13.7	18

#	ARTICLE	IF	CITATIONS
73	Recent advances of lead-free metal halide perovskite single crystals and nanocrystals: synthesis, crystal structure, optical properties, and their diverse applications. Materials Today Chemistry, 2020, 18, 100363.	3.5	38
74	Improving the Stability and Optoelectronic Properties of All Inorganic Lessâ€Pb Perovskites by B‧ite Doping for Highâ€Performance Inorganic Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000528.	5.8	21
75	Perovskiteâ€Based Tandem Solar Cells: Get the Most Out of the Sun. Advanced Functional Materials, 2020, 30, 2001904.	14.9	78
76	Multifunctional Naphthol Sulfonic Salt Incorporated in Lead-Free 2D Tin Halide Perovskite for Red Light-Emitting Diodes. ACS Photonics, 2020, 7, 1915-1922.	6.6	52
77	Lowâ€Dimensional Hybrid Perovskites for Fieldâ€Effect Transistors with Improved Stability: Progress and Challenges. Advanced Electronic Materials, 2020, 6, 2000137.	5.1	45
78	Atomistic Origins of Enhanced Band Gap, Miscibility, and Oxidation Resistance in α-CsPb1–xSnxl3 Mixed Perovskite. Journal of Physical Chemistry C, 2020, 124, 26124-26133.	3.1	12
79	Optoelectronic Properties of Mixed Sn/Pb Perovskite Solar Cells: The Study of Compressive Strain by Raman Modes. Journal of Physical Chemistry C, 2020, 124, 27136-27147.	3.1	21
80	Tuning cesium–guanidinium in formamidinium tin triiodide perovskites with an ethylenediammonium additive for efficient and stable lead-free perovskite solar cells. Materials Advances, 2020, 1, 3507-3517.	5.4	20
81	Triple-cation low-bandgap perovskite thin-films for high-efficiency four-terminal all-perovskite tandem solar cells. Journal of Materials Chemistry A, 2020, 8, 24608-24619.	10.3	26
82	Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 2020, 120, 9835-9950.	47.7	248
83	Searching for stable perovskite solar cell materials using materials genome techniques and high-throughput calculations. Journal of Materials Chemistry C, 2020, 8, 12012-12035.	5.5	22
84	Instability of Tin Iodide Perovskites: Bulk p-Doping versus Surface Tin Oxidation. ACS Energy Letters, 2020, 5, 2787-2795.	17.4	143
85	Inhibition of Phase Segregation in Cesium Lead Mixed-Halide Perovskites by B-Site Doping. IScience, 2020, 23, 101415.	4.1	18
86	Composition-dependent chemical and structural stabilities of mixed tin–lead inorganic halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 19787-19794.	2.8	4
87	Numerical simulation of highly efficient lead-free all-perovskite tandem solar cell. Solar Energy, 2020, 208, 399-410.	6.1	107
88	Toward high efficiency tin perovskite solar cells: A perspective. Applied Physics Letters, 2020, 117, .	3.3	25
89	Electronic Structure Panorama of Halide Perovskites: Approximated DFT-1/2 Quasiparticle and Relativistic Corrections. Journal of Physical Chemistry C, 2020, 124, 18390-18400.	3.1	27
90	Beyond Strain: Controlling the Surface Chemistry of CsPbI <sub>3</sub> Nanocrystal Films for Improved Stability against Ambient Reactive Oxygen Species. Chemistry of Materials, 2020, 32, 7850-7860.	6.7	23

#	Article	IF	CITATIONS
91	Impact of Tin Fluoride Additive on the Properties of Mixed Tin‣ead Iodide Perovskite Semiconductors. Advanced Functional Materials, 2020, 30, 2005594.	14.9	48
92	Suppression of Oxidative Degradation of Tin–Lead Hybrid Organometal Halide Perovskite Solar Cells by Ag Doping. ACS Energy Letters, 2020, 5, 3285-3294.	17.4	38
93	Prospects of lead-free perovskite-inspired materials for photovoltaic applications. Energy and Environmental Science, 2020, 13, 4691-4716.	30.8	47
94	The properties, photovoltaic performance and stability of visible to near-IR all inorganic perovskites. Materials Advances, 2020, 1, 1920-1929.	5.4	5
95	Enhanced Electro-Optical Performance of Inorganic Perovskite/a-InGaZnO Phototransistors Enabled by Sn–Pb Binary Incorporation with a Selective Photonic Deactivation. ACS Applied Materials & Interfaces, 2020, 12, 58038-58048.	8.0	9
96	Materials Chemistry Approach for Efficient Lead-Free Tin Halide Perovskite Solar Cells. ACS Applied Electronic Materials, 2020, 2, 3794-3804.	4.3	36
97	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	21.0	39
98	Advancing Tin Halide Perovskites: Strategies toward the ASnX <sub>3</sub> Paradigm for Efficient and Durable Optoelectronics. ACS Energy Letters, 2020, 5, 2052-2086.	17.4	54
99	Sn(IV)-free tin perovskite films realized by in situ Sn(0) nanoparticle treatment of the precursor solution. Nature Communications, 2020, 11, 3008.	12.8	196
100	First-Principles Study on the Oxygen–Light-Induced Iodide Vacancy Formation in FASnI <sub>3</sub> Perovskite. Journal of Physical Chemistry C, 2020, 124, 14147-14157.	3.1	17
101	Phase Evolution in Methylammonium Tin Halide Perovskites with Variable Temperature Solid-State 119Sn NMR Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 15015-15027.	3.1	24
102	Tin–Lead Alloying for Efficient and Stable All-Inorganic Perovskite Solar Cells. Chemistry of Materials, 2020, 32, 2782-2794.	6.7	58
103	Improving Low-Bandgap Tin–Lead Perovskite Solar Cells via Contact Engineering and Gas Quench Processing. ACS Energy Letters, 2020, 5, 1215-1223.	17.4	78
104	Nearâ€Infrared Emission from Tin–Lead (Sn–Pb) Alloyed Perovskite Quantum Dots by Sodium Doping. Angewandte Chemie, 2020, 132, 8499-8502.	2.0	10
105	Theoretical Study of Using Kinetics Strategy to Enhance the Stability of Tin Perovskite. Energy and Environmental Materials, 2020, 3, 541-547.	12.8	13
106	Synthesis and Characterization of Spinel Cobaltite (Co <sub>3</sub> O <sub>4</sub> ) Thin Films for Function as Hole Transport Materials in Organometallic Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 3755-3769.	5.1	22
107	Conventional Solvent Oxidizes Sn(II) in Perovskite Inks. ACS Energy Letters, 2020, 5, 1153-1155.	17.4	127
108	Reducing Agents for Improving the Stability of Snâ€based Perovskite Solar Cells. Chemistry - an Asian Journal, 2020, 15, 1524-1535.	3.3	39

#	Article	IF	CITATIONS
109	Improved Chemical Stability of Organometal Halide Perovskite Solar Cells Against Moisture and Heat by Ag Doping. ChemSusChem, 2020, 13, 3261-3268.	6.8	11
110	Lead-Free Perovskite/Organic Semiconductor Vertical Heterojunction for Highly Sensitive Photodetectors. ACS Applied Materials & Interfaces, 2020, 12, 18769-18776.	8.0	29
111	Local Structure and Dynamics in Methylammonium, Formamidinium, and Cesium Tin(II) Mixed-Halide Perovskites from <sup>119</sup> Sn Solid-State NMR. Journal of the American Chemical Society, 2020, 142, 7813-7826.	13.7	66
112	Nearâ€Infrared Emission from Tin–Lead (Sn–Pb) Alloyed Perovskite Quantum Dots by Sodium Doping. Angewandte Chemie - International Edition, 2020, 59, 8421-8424.	13.8	38
113	Negative Thermal Quenching in FASnI <sub>3</sub> Perovskite Single Crystals and Thin Films. ACS Energy Letters, 2020, 5, 2512-2519.	17.4	55
114	Formation of stable 2D methylammonium antimony iodide phase for lead-free perovskite-like solar cells <sup>*</sup> . JPhys Energy, 2020, 2, 024007.	5.3	13
115	Efficient and Stable Ideal Bandgap Perovskite Solar Cell Achieved by a Small Amount of Tin Substituted Methylammonium Lead Iodide. Electronic Materials Letters, 2020, 16, 224-230.	2.2	20
116	Strategies for Improving the Stability of Tinâ€Based Perovskite (ASnX <sub>3</sub> ) Solar Cells. Advanced Science, 2020, 7, 1903540.	11.2	123
117	High Color Purity Leadâ€Free Perovskite Lightâ€Emitting Diodes via Sn Stabilization. Advanced Science, 2020, 7, 1903213.	11.2	146
118	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. Advanced Energy Materials, 2020, 10, 1904054.	19.5	256
119	Tin and Mixed Lead–Tin Halide Perovskite Solar Cells: Progress and their Application in Tandem Solar Cells. Advanced Materials, 2020, 32, e1907392.	21.0	203
120	Effects of intrinsic and atmospherically induced defects in narrow bandgap (FASnI3) <i>x</i> (MAPbI3)1â~ <i>x</i> perovskite films and solar cells. Journal of Chemical Physics, 2020, 152, 064705.	3.0	26
121	Graded Bandgap Perovskite with Intrinsic n–p Homojunction Expands Photon Harvesting Range and Enables All Transport Layerâ€Free Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903347.	19.5	50
122	Lead-free tin-halide perovskite solar cells with 13% efficiency. Nano Energy, 2020, 74, 104858.	16.0	347
123	Metal composition influences optoelectronic quality in mixed-metal lead–tin triiodide perovskite solar absorbers. Energy and Environmental Science, 2020, 13, 1776-1787.	30.8	87
124	Highly Air-Stable Tin-Based Perovskite Solar Cells through Grain-Surface Protection by Gallic Acid. ACS Energy Letters, 2020, 5, 1741-1749.	17.4	126
125	Tin versus Lead Redox Chemistry Modulates Charge Trapping and Self-Doping in Tin/Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 3546-3556.	4.6	132
126	Interfacial engineering in lead-free tin-based perovskite solar cells. Journal of Energy Chemistry, 2021, 57, 147-168.	12.9	55

#	Article	IF	CITATIONS
127	Perovskite tandem solar cells with improved efficiency and stability. Journal of Energy Chemistry, 2021, 58, 219-232.	12.9	32
128	Highâ€Efficiency Tin Halide Perovskite Solar Cells: The Chemistry of Tin (II) Compounds and Their Interaction with Lewis Base Additives during Perovskite Film Formation. Solar Rrl, 2021, 5, .	5.8	50
129	Numerical simulation of highly efficient lead-free perovskite layers for the application of all-perovskite multi-junction solar cell. Superlattices and Microstructures, 2021, 149, 106750.	3.1	43
130	Lead or no lead? Availability, toxicity, sustainability and environmental impact of lead-free perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 67-76.	5.5	171
131	An investigation on the impact of temperature variation over the performance of tin-based perovskite solar cell: A numerical simulation approach. Materials Today: Proceedings, 2021, 39, 2022-2026.	1.8	27
132	Pb in halide perovskites for photovoltaics: reasons for optimism. Materials Advances, 2021, 2, 6125-6135.	5.4	16
133	The role of sodium in stabilizing tin–lead (Sn–Pb) alloyed perovskite quantum dots. Journal of Materials Chemistry A, 2021, 9, 12087-12098.	10.3	9
134	Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953.	30.8	170
135	Influence of A site cation on nonlinear band gap dependence of 2D Ruddlesden–Popper A <sub>2</sub> Pb <sub>1â^'x</sub> Sn <sub>x</sub> 1 <sub>4</sub> perovskites. Materials Advances, 2021, 2, 5254-5261.	5.4	3
136	Challenges in tin perovskite solar cells. Physical Chemistry Chemical Physics, 2021, 23, 23413-23427.	2.8	27
137	Research progress on two-dimensional (2D) halide organic–inorganic hybrid perovskites. Sustainable Energy and Fuels, 2021, 5, 3950-3978.	4.9	12
138	Lead-free halide double perovskites: Toward stable and sustainable optoelectronic devices. Materials Today, 2021, 49, 123-144.	14.2	57
139	The limiting factors and improving solutions of P-I-N type tin-lead perovskite solar cells performance. Wuli Xuebao/Acta Physica Sinica, 2021, .	0.5	1
140	Nonlinear Band Gap Dependence of Mixed Pb–Sn 2D Ruddlesden–Popper PEA <sub>2</sub> Pb <sub>1–<i>x</i></sub> Sn <sub><i>x</i></sub> I <sub>4</sub> Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 1501-1506.	4.6	9
141	Stability Improvement of Perovskite Solar Cells by Compositional and Interfacial Engineering. Chemistry of Materials, 2021, 33, 1540-1570.	6.7	65
142	Tin Halide Perovskites Going Forward: Frost Diagrams Offer Hints. , 2021, 3, 299-307.		58
143	Additive Engineering toward Highâ€Performance Tin Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100034.	5.8	34
144	Electrical doping in halide perovskites. Nature Reviews Materials, 2021, 6, 531-549.	48.7	189

ARTICLE IF CITATIONS # Leadâ€Free Cs<sub>2</sub>Snl<sub>6</sub> Perovskites for Optoelectronic Applications: Recent 145 5.8 25 Developments and Perspectives. Solar Rrl, 2021, 5, 2000830. Localized Electron Density Engineering for Stabilized B-Î<sup>3</sup> CsSnI<sub>3</sub>-Based Perovskite Solar 146 17.4 Cells with Efficiencies >10%. ACS Energy Letters, 0, , 1480-1489. 147 A review of stability and progress in tin halide perovskite solar cell. Solar Energy, 2021, 216, 26-47. 6.1 67 pâ€Type Dopants As Dual Function Interfacial Layer for Efficient and Stable Tin Perovskite Solar Cells. 148 5.8 Solar Rrl, 2021, 5, 2100068. First-principles investigation of intrinsic point defects in perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CsSnBr</mml:mi><mml:mn>3</mml2nan></mml4msub></ 149 Physical Review Materials, 2021, 5, . Monolithic all-perovskite tandem solar cells: recent progress and challenges. Journal of the Korean Ceramic Society, 2021, 58, 399-413. 2.3 Fully Inorganic CsSnI<sub>3</sub> Mesoporous Perovskite Solar Cells with High Efficiency and 151 5.8 29 Stability via Coadditive Engineering. Solar Rrl, 2021, 5, 2100069. The Fascinating Properties of Tin-Alloyed Halide Perovskites. ACS Energy Letters, 2021, 6, 1803-1810. 17.4 47 Strongly Luminescent Dion–Jacobson Tin Bromide Perovskite Microcrystals Induced by Molecular 153 14.9 24 Proton Donors Chloroform and Dichloromethane. Advanced Functional Materials, 2021, 31, 2102182. Tinâ€Lead Perovskite Fabricated via Ethylenediamine Interlayer Guides to the Solar Cell Efficiency of 154 21.74%. Advanced Energy Materials, 2021, 11, 2101069. Efficient Direct Band Gap Photovoltaic Material Predicted <i>Via</i> Doping Double Perovskites 155 3.1 37 Cs<sub>2</sub>AgBiX<sub>6</sub> (X = Cl, Br). Journal of Physical Chemistry C, 2021, 125, 10868-10875. Degradation mechanism of hybrid tin-based perovskite solar cells and the critical role of tin (IV) 12.8 236 iodide. Nature Communications, 2021, 12, 2853. Chemical Vapor Deposited Mixed Metal Halide Perovskite Thin Films. Materials, 2021, 14, 3526. 157 2.9 3 Defect activity in metal halide perovskites with wide and narrow bandgap. Nature Reviews Materials, 48.7 2021, 6, 986-1002. Optoelectronic Properties of Tin–Lead Halide Perovskites. ACS Energy Letters, 2021, 6, 2413-2426. 159 17.4 72 Recent progress on metal halide perovskite field-effect transistors. Journal of Information Display, 2021, 22, 257-268. Universal Current Losses in Perovskite Solar Cells Due to Mobile Ions. Advanced Energy Materials, 161 19.5 52 2021, 11, 2101447. Phase Evolution in Lead-Free Cs-Doped FASnI<sub>3</sub> Hybrid Perovskites and Optical Properties. 3.1 Journal of Physical Chemistry C, 2021, 125, 16903-16912.

#	Article	IF	CITATIONS
163	Optoelectronic Properties of Lowâ€Bandgap Halide Perovskites for Solar Cell Applications. Advanced Materials, 2021, 33, e2102300.	21.0	36
164	Theoretical evaluation of metal release potential of emerging third generation solar photovoltaics. Solar Energy Materials and Solar Cells, 2021, 227, 111120.	6.2	7
165	A Facile and Effective Ozone Exposure Method for Wettability and Energy-Level Tuning of Hole-Transporting Layers in Lead-Free Tin Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 42935-42943.	8.0	10
166	Revealing Ultrafast Charge-Carrier Thermalization in Tin-Iodide Perovskites through Novel Pump–Push–Probe Terahertz Spectroscopy. ACS Photonics, 2021, 8, 2509-2518.	6.6	14
167	Enhancing air-stability and reproducibility of lead-free formamidinium-based tin perovskite solar cell by chlorine doping. Solar Energy Materials and Solar Cells, 2021, 227, 111072.	6.2	15
168	Scalable, Template Driven Formation of Highly Crystalline Leadâ€Tin Halide Perovskite Films. Advanced Functional Materials, 2021, 31, 2105734.	14.9	22
169	Progress of Pb‧n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.	12.8	20
170	MnCl2 doping increases phase stability of tin halide perovskites. Materials Science in Semiconductor Processing, 2021, 132, 105908.	4.0	5
171	A Perspective on the Commercial Viability of Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100401.	5.8	33
172	Advances in Tin(II)â€Based Perovskite Solar Cells: From Material Physics to Device Performance. Small Structures, 2022, 3, 2100102.	12.0	41
173	Tin(II) Acetylacetonate as a New Type of Tin Compensator Additive for Tin-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 44157-44164.	8.0	17
174	Hot carrier redistribution, electron-phonon interaction, and their role in carrier relaxation in thin film metal-halide perovskites. Physical Review Materials, 2021, 5, .	2.4	8
175	A-Site Effect on the Oxidation Process of Sn-Halide Perovskite: First-Principles Calculations. Journal of Physical Chemistry Letters, 2021, 12, 9691-9696.	4.6	6
176	Investigation of material properties of halide mixed lead - Free double perovskite for optoelectronic applications using first-principles study. Materials Science in Semiconductor Processing, 2021, 133, 105963.	4.0	11
177	The effect of defects in tin-based perovskites and their photovoltaic devices. Materials Today Physics, 2021, 21, 100513.	6.0	17
178	Stability of Sn-Pb mixed organic–inorganic halide perovskite solar cells: Progress, challenges, and perspectives. Journal of Energy Chemistry, 2022, 65, 371-404.	12.9	36
179	Thermal and photo stability of all inorganic lead halide perovskite nanocrystals. Physical Chemistry Chemical Physics, 2021, 23, 17113-17128.	2.8	25
180	Interfaces in metal halide perovskites probed by solid-state NMR spectroscopy. Journal of Materials Chemistry A, 2021, 9, 19206-19244.	10.3	28

#	Article	IF	CITATIONS
181	Rational strategies toward efficient and stable lead-free tin halide perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 4107-4127.	5.9	11
182	A review on the stability of inorganic metal halide perovskites: challenges and opportunities for stable solar cells. Energy and Environmental Science, 2021, 14, 2090-2113.	30.8	193
183	Synergistic Effects of Cation and Anion in an Ionic Imidazolium Tetrafluoroborate Additive for Improving the Efficiency and Stability of Halfâ€Mixed Pb‧n Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2008801.	14.9	66
184	Sn/Pb binary metal inorganic perovskite: a true material worthy of trust for efficient and stable photovoltaic application. Science Bulletin, 2020, 65, 1330-1333.	9.0	11
185	Electroluminescence of Perovskite Nanocrystals with Ligand Engineering. Trends in Chemistry, 2020, 2, 837-849.	8.5	22
186	An Emerging All-Inorganic CsSn <sub><i>x</i></sub> Pb <sub>1–<i>x</i></sub> Br <sub>3</sub> (0 â‰)#Tj ETQq Properties. Journal of Physical Chemistry C, 2020, 124, 13434-13446.	1 1 0.784 3.1	314 rgBT /C 16
187	Sustainability in Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2021, 13, 1-17.	8.0	53
188	Surface-Activated Corrosion in Tin–Lead Halide Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3344-3351.	17.4	55
189	Role of fluoride and fluorocarbons in enhanced stability and performance of halide perovskites for photovoltaics. Physical Review Materials, 2020, 4, .	2.4	20
190	Lead-free halide perovskite photodetectors spanning from near-infrared to X-ray range: a review. Nanophotonics, 2021, 10, 2221-2247.	6.0	30
191	Lead-lean and MA-free perovskite solar cells with an efficiency over 20%. Joule, 2021, 5, 2904-2914.	24.0	39
192	Metal Halide Perovskites as Emerging Thermoelectric Materials. ACS Energy Letters, 2021, 6, 3882-3905.	17.4	40
193	Role of Dopants in Organic and Halide Perovskite Energy Conversion Devices. Chemistry of Materials, 2021, 33, 8147-8172.	6.7	23
194	Structural, optical, and electrical properties of tin iodide-based vacancy-ordered-double perovskites synthesized via mechanochemical reaction. Ceramics International, 2021, , .	4.8	2
195	Organic-Inorganic Perovskite for Highly Efficient Tandem Solar Cells. Ceramist, 2019, 22, 146-169.	0.1	1
196	Confronting the Air Instability of Cesium Tin Halide Perovskites by Metal Ion Incorporation. Journal of Physical Chemistry Letters, 2021, 12, 10996-11004.	4.6	8
197	Recent progress in inorganic tin perovskite solar cells. Materials Today Energy, 2022, 23, 100891.	4.7	16
198	Defect Tolerance of Mixed B-Site Organic–Inorganic Halide Perovskites. ACS Energy Letters, 2021, 6, 4220-4227.	17.4	30

#	Article	IF	CITATIONS
200	Inorganic CsSnI <sub>3</sub> Perovskite Solar Cells: The Progress and Future Prospects. Solar Rrl, 2022, 6, 2100841.	5.8	25
201	Two-Step Crystallization for Low-Oxidation Tin-Based Perovskite Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2022, 14, 22941-22949.	8.0	19
202	Temperature-dependent performance metrics of tin-doped perovskite photodetectors. Journal of Materials Chemistry C, 2022, 10, 1625-1631.	5.5	4
203	The electronic stability of tin-halide perovskite charged regions. Materials Advances, 2022, 3, 2524-2532.	5.4	2
204	Emissionâ€Colorâ€Tunable Pbâ^'Sn Alloyed Single Crystals with High Luminescent Efficiency and Stability. Advanced Optical Materials, 2022, 10, .	7.3	15
205	Understanding the impact of SrI2 additive on the properties of Sn-based halide perovskites. Optical Materials, 2022, 123, 111806.	3.6	3
206	Recent progress of halide perovskites for thermoelectric application. Nano Energy, 2022, 94, 106949.	16.0	18
207	Minimization of metallic Bi0 species to increase the efficiency and stability of Ag3Bil6 solar cells via Cu doping. Solar Energy, 2022, 234, 190-202.	6.1	6
208	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency. Journal of Materials Chemistry A, 2022, 10, 8159-8171.	10.3	19
209	A Review of Three-Dimensional Tin Halide Perovskites as Solar Cell Materials. Materials Research, 0, 25,	1.3	5
210	Biuret Induced Tinâ€Anchoring and Crystallizationâ€Regulating for Efficient Leadâ€Free Tin Halide Perovskite Lightâ€Emitting Diodes. Small, 2022, 18, e2200036.	10.0	24
211	Tin perovskite solar cells with >1,300Âh of operational stability in N2 through a synergistic chemical engineering approach. Joule, 2022, 6, 861-883.	24.0	92
212	New Pb-Free Stable Sn–Ge Solid Solution Halide Perovskites Fabricated by Spray Deposition. ACS Applied Energy Materials, 2022, 5, 3638-3646.	5.1	20
213	Stability of Tin- versus Lead-Halide Perovskites: Ab Initio Molecular Dynamics Simulations of Perovskite/Water Interfaces. Journal of Physical Chemistry Letters, 2022, 13, 2321-2329.	4.6	29
214	Toward Stable High-Performance Tin Halide Perovskite: First-Principles Insights into the Incorporation of Bivalent Dopants. Journal of Physical Chemistry C, 2022, 126, 5256-5264.	3.1	5
215	Efficient pâ€Type Doping of Tin Halide Perovskite via Sequential Diffusion for Thermoelectrics. Small Science, 2022, 2, .	9.9	5
216	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. Advanced Functional Materials, 2022, 32, .	14.9	24
217	Influence of charge transport layer on the crystallinity and charge extraction of pure tin-based halide perovskite film. Journal of Energy Chemistry, 2022, 69, 612-615.	12.9	2

#	Article	IF	Citations
218	Chalcogenide Perovskites and Perovskite-Based Chalcohalide as Photoabsorbers: A Study of Their Properties, and Potential Photovoltaic Applications. Materials, 2021, 14, 7857.	2.9	16
219	Ultralow dark current in near-infrared perovskite photodiodes by reducing charge injection and interfacial charge generation. Nature Communications, 2021, 12, 7277.	12.8	60
220	Toward ecoâ€friendly and stable halide perovskiteâ€inspired materials for lightâ€emitting devices applications by dimension classification: Recent advances and opportunities. EcoMat, 2022, 4, .	11.9	6
221	Understanding the Limitations of Charge Transporting Layers in Mixed Lead–Tin Halide Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	13
222	Investigation of optical and electrical properties of novel 4T all perovskite tandem solar cell. Scientific Reports, 2022, 12, 6733.	3.3	9
223	Organic–Inorganic Hybrid Tin Halide Single Crystals with Sulfhydryl and Hydroxyl Groups: Formation, Optical Properties, and Stability. Inorganic Chemistry, 2022, 61, 6943-6952.	4.0	2
224	Compositional Variation in FAPb <sub>1–<i>x</i></sub> Sn <sub><i>x</i></sub> I <sub>3</sub> and Its Impact on the Electronic Structure: A Combined Density Functional Theory and Experimental Study. ACS Applied Materials & Interfaces, 2022, 14, 34253-34261.	8.0	5
225	First-principles study on the electronic structures and optical properties of Cs2XInCl6 (X= Ag, Na). Solid State Communications, 2022, 352, 114812.	1.9	5
226	Tin-based halide perovskite materials: properties and applications. Chemical Science, 2022, 13, 6766-6781.	7.4	31
227	Airâ€Degradation Mechanisms in Mixed Leadâ€Tin Halide Perovskites for Solar Cells. Advanced Energy Materials, 2023, 13, .	19.5	15
228	Antioxidative solution processing yields exceptional Sn(II) stability for sub-1.4 eV bandgap inorganic perovskite solar cells. Journal of Energy Chemistry, 2022, , .	12.9	8
229	Wavelength-Tuneable Near-Infrared Luminescence in Mixed Tin–Lead Halide Perovskites. Frontiers in Chemistry, 0, 10, .	3.6	3
230	Carrier control in Sn–Pb perovskites via 2D cation engineering for all-perovskite tandem solar cells with improved efficiency and stability. Nature Energy, 2022, 7, 642-651.	39.5	121
232	Bandgap tuning of a CsPbBr <sub>3</sub> perovskite with synergistically improved quality <i>via</i> Sn <sup>2+</sup> doping for high-performance carbon-based inorganic perovskite solar cells. Inorganic Chemistry Frontiers, 2022, 9, 4359-4368.	6.0	7
233	Sustainable Pb Management in Perovskite Solar Cells toward Ecoâ€Friendly Development. Advanced Energy Materials, 2022, 12, .	19.5	38
234	Recent advances in Pb–Sn mixed perovskite solar cells. Journal of Energy Chemistry, 2022, 73, 615-638.	12.9	12
235	Understanding the strategies to attain the best performance of all inorganic leadâ€free perovskite solar cells: Theoretical insights. International Journal of Energy Research, 2022, 46, 15881-15899.	4.5	11
236	Coevaporation Stabilizes Tin-Based Perovskites in a Single Sn-Oxidation State. Nano Letters, 2022, 22, 7112-7118.	9.1	3

#	Article	IF	CITATIONS
237	Carbonyl functional group assisted crystallization of mixed tin–lead narrow bandgap perovskite absorber in ambient conditions. Applied Physics Letters, 2022, 121, 073901.	3.3	0
238	Exploring novel HTL suitable for Eco-friendly and high performance FASnI3 photovoltaics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 284, 115909.	3.5	8
239	Origins of pâ€Doping and Nonradiative Recombination in CsSnl <sub>3</sub> . Angewandte Chemie, 2022, 134, .	2.0	4
240	The role of A-site composition in the photostability of tin–lead perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 4605-4613.	4.9	6
241	Mitigating <i>V</i> <sub>oc</sub> Loss in Tin Perovskite Solar Cells via Simultaneous Suppression of Bulk and Interface Nonradiative Recombination. ACS Applied Materials & Interfaces, 2022, 14, 41086-41094.	8.0	11
242	Thermal Transport Properties of Phonons in Halide Perovskites. Advanced Materials, 2023, 35, .	21.0	3
243	Efficient monolithic all-perovskite tandem solar modules with small cell-to-module derate. Nature Energy, 2022, 7, 923-931.	39.5	47
244	Recent advances in lead-free based perovskite solar cells on optoelectronic properties, stability and economic feasibility. Journal of Instrumentation, 2022, 17, P09034.	1.2	Ο
245	Perovskites: Emergence of highly efficient thirdâ€generation solar cells. International Journal of Energy Research, 2022, 46, 21856-21883.	4.5	13
246	Origins of pâ€Đoping and Nonradiative Recombination in CsSnl <sub>3</sub> . Angewandte Chemie - International Edition, 2022, 61, .	13.8	7
247	Mixed 2D-Dion—Jacobson/3D Sn-Pb alloyed perovskites for efficient photovoltaic solar devices. Nano Research, 2023, 16, 3142-3148.	10.4	7
248	Formate as Antiâ€Oxidation Additives for Pbâ€Free FASnI <sub>3</sub> Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	4
249	A practical guide to 3D halide perovskites: Structure, synthesis, and measurement. , 2022, , .		0
250	Improved performance of perovskite solar cells <i>via</i> combining Pb–Sn alloying with the passivation effect of SnI <sub>2</sub> . Sustainable Energy and Fuels, 2022, 6, 5300-5307.	4.9	1
251	Integrated 4-Terminal All-Inorganic Perovskite Tandem Solar Cell with Open-Circuit Voltage Exceeding 2.1 V for Water Splitting. ACS Energy Letters, 2022, 7, 4215-4223.	17.4	15
252	Efficient and Thermally Stable Allâ€Perovskite Tandem Solar Cells Using Allâ€FA Narrowâ€Bandgap Perovskite and Metalâ€oxideâ€based Tunnel Junction. Advanced Energy Materials, 2022, 12, .	19.5	26
253	Recent development in electron transport layers for efficient tin-based perovskite solar cells. IOP Conference Series: Materials Science and Engineering, 2022, 1258, 012015.	0.6	0
254	Dopamine Hydrochloride-Assisted Synergistic Modulation of Perovskite Crystallization and Sn <sup>2+</sup> Oxidation for Efficient and Stable Lead-free Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 46801-46808.	8.0	6

		CITATION REPORT		
#	Article		IF	CITATIONS
255	Snâ $\in$ Based Perovskite Halides for Electronic Devices. Advanced Science, 2022, 9, .		11.2	12
256	Hard and Soft Acid and Base (HSAB) Engineering for Efficient and Stable Snâ€Pb Perov Advanced Energy Materials, 2022, 12, .	vskite Solar Cells.	19.5	26
257	Dimensionality regulation in tin halide perovskite solar cells: Toward high performance Journal of Energy Chemistry, 2023, 77, 144-156.	and stability.	12.9	10
258	The effect of B-site alloying on the electronic and opto-electronic properties of RbPbI3: Physica B: Condensed Matter, 2023, 649, 414384.	: A DFT study.	2.7	3
259	Research progress of ABX <sub>3</sub> -type lead-free perovskites for optoelectronic a materials and devices. Physical Chemistry Chemical Physics, 2022, 24, 27585-27605.	applications:	2.8	6
260	Negligible Ion Migration in Tinâ€Based and Tinâ€Doped Perovskites. Angewandte Cher Edition, 2023, 62, .	mie - International	13.8	17
261	A Roadmap for Efficient and Stable All-Perovskite Tandem Solar Cells from a Chemistry ACS Central Science, 2023, 9, 14-26.	<sup>,</sup> Perspective.	11.3	13
262	Halide Chemistry in Tin Perovskite Optoelectronics: Bottlenecks and Opportunities. Ar Chemie - International Edition, 2023, 62, .	ngewandte	13.8	12
263	Halide Chemistry in Tin Perovskite Optoelectronics: Bottlenecks and Opportunities. Ar Chemie, 2023, 135, .	ngewandte	2.0	1
264	Negligible Ion Migration in Tinâ€Based and Tinâ€Doped Perovskites. Angewandte Che	mie, 2023, 135, .	2.0	6
265	Synthesis and optical characterization of lead-free phenylenediammonium bismuth hal a long charge carrier lifetime in phenylenediammonium bismuth iodide. Journal of Mate C, 2022, 11, 223-234.	lide perovskites: erials Chemistry	5.5	0
266	Structural, electronic, and optoelectronic properties in hybrid system Cs2Sn(l1â^'xBrx) study. Computational Materials Science, 2023, 218, 111961.	6: DFT-based	3.0	1
267	Synthesis, crystal structure and white luminescence of zero-dimensional organic–inc halides. Journal of Materials Chemistry C, 2022, 10, 18279-18284.	organic zinc	5.5	8
268	Factors Limiting the Operational Stability of Tin–Lead Perovskite Solar Cells. ACS En 8, 259-273.	ergy Letters, 2023,	17.4	12
269	Composition–Property Mapping in Bromide-Containing Tin Perovskite Using High-Pւ Materials. ACS Applied Energy Materials, 2022, 5, 14789-14798.	urity Starting	5.1	3
270	Pure Tin Halide Perovskite Solar Cells: Focusing on Preparation and Strategies. Advanc Materials, 2023, 13, .	ed Energy	19.5	16
271	Engineering Stable Leadâ€Free Tin Halide Perovskite Solar Cells: Lessons from Material Advanced Materials, 2023, 35, .	ls Chemistry.	21.0	13
272	Environmental and health risks of perovskite solar modules: Case for better test stand mitigation solutions. IScience, 2023, 26, 105807.	ards and risk	4.1	6

#	Article	IF	CITATIONS
273	Metal Halide Perovskite Alloy: Fundamental, Optoelectronic Properties and Applications. Advanced Photonics Research, 2023, 4, .	3.6	4
274	Recent Strategies for High-Performing Indoor Perovskite Photovoltaics. Nanomaterials, 2023, 13, 259.	4.1	2
275	Highâ€ŧhroughput compositional mapping of tripleâ€ɛation tin–lead perovskites for highâ€efficiency solar cells. InformaÄnÃ-Materiály, 2023, 5, .	17.3	5
276	Stability challenges for the commercialization of perovskite–silicon tandem solar cells. Nature Reviews Materials, 2023, 8, 261-281.	48.7	77
277	Two-Terminal Perovskite Tandem Solar Cells: from Design to Commercial Prospect. , 0, 27, 368-376.		0
278	Tuning the Photoelectric Properties of Perovskite Materials Using Mg/Ge/Si and Br Double-Doped to FASnI <sub>3</sub> . Journal of Physical Chemistry C, 2023, 127, 2215-2222.	3.1	6
279	Lead-free halide perovskites. , 2023, , 187-237.		0
280	Light-Emitting Organic Semiconductor-Incorporated Perovskites: Fundamental Properties and Device Applications. Journal of Physical Chemistry Letters, 2023, 14, 2034-2046.	4.6	4
281	Optimization of Sn defects through multiple coordination effect to realize stable Sn–Pb mixed perovskite solar cells. Solar Energy Materials and Solar Cells, 2023, 254, 112283.	6.2	3
282	Reduced <i>V</i> <sub>OC</sub> Deficit of Mixed Lead–Tin Perovskite Solar Cells via Strainâ€Releasing and Synergistic Passivation Additives. Small Methods, 2023, 7, .	8.6	6
283	Highly efficient and stable near-infrared photodetectors enabled from passivated tin–lead hybrid perovskites. Nanotechnology, 2023, 34, 215702.	2.6	1
284	Suppressing Disproportionation Decomposition in Sn-Based Perovskite Light-Emitting Diodes. ACS Energy Letters, 2023, 8, 1597-1605.	17.4	13
285	Managing iodine and tin based defects for efficient and stable mixed Sn-Pb perovskite solar cells. Chemical Engineering Journal, 2023, 462, 142122.	12.7	10
286	Effect of Gel2 and GeBr2 incorporation on perovskite properties and performance of carbon-based perovskite solar cells. Journal of the Korean Physical Society, 2023, 82, 763-775.	0.7	0
287	Chemical Reaction Kinetics of the Decomposition of Low-Bandgap Tin–Lead Halide Perovskite Films and the Effect on the Ambipolar Diffusion Length. ACS Energy Letters, 2023, 8, 1688-1696.	17.4	5
288	Luminescent hybrid halides with various centering metal cations (Zn, Cd and Pb) and diverse structures. Dalton Transactions, 2023, 52, 5119-5126.	3.3	2
289	Probing the Local Electronic Structure in Metal Halide Perovskites through Cobalt Substitution. Small Methods, 2023, 7, .	8.6	0
290	On biosafety of Sn-containing halide perovskites. Energy and Environmental Science, 2023, 16, 2120-2132.	30.8	6

#	Article	IF	CITATIONS
291	Surface energy and surface stability of cesium tin halide perovskites: a theoretical investigation. Physical Chemistry Chemical Physics, 2023, 25, 10583-10590.	2.8	4
292	An Overview of Lead, Tin, and Mixed Tin–Leadâ€Based ABI <sub>3</sub> Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2023, 4, .	5.8	12
293	Oxidation-resistant all-perovskite tandem solar cells in substrate configuration. Nature Communications, 2023, 14, .	12.8	24
294	Sn-Based Perovskite Solar Cells towards High Stability and Performance. Micromachines, 2023, 14, 806.	2.9	8
295	Lead-free Metal Halide Perovskites for Solar Energy. , 2023, , 189-222.		0
296	Prospects for Tin-Containing Halide Perovskite Photovoltaics. , 2023, 1, 69-82.		8
297	Additive Engineering for Mixed Lead–Tin Narrow-Band-Gap Perovskite Solar Cells: Recent Advances and Perspectives. Energy & Fuels, 2023, 37, 6401-6423.	5.1	11
298	Nonfullerene Agent Enables Efficient and Stable Tinâ€Based Perovskite Solar Cells. Solar Rrl, 2023, 7, .	5.8	2
299	The role of thermalisation in the cooling dynamics of hot carrier solar cells. Solar Rrl, 0, , .	5.8	0
300	Bioinspired stability enhancement in deuterium-substituted organic–inorganic hybrid perovskite solar cells. , 2023, 2, .		0
301	Structurally Dimensional Engineering in Perovskite Photovoltaics. Advanced Energy Materials, 2023, 13, .	19.5	13
302	Electronic Structure and Optical Properties of Tin Iodide Solution Complexes. Journal of Physical Chemistry A, 2023, 127, 4463-4472.	2.5	0
303	Efficient Narrowâ€Bandgap Mixed Tin‣ead Perovskite Solar Cells via Natural Tin Oxide Doping. Advanced Materials, 2023, 35, .	21.0	10
304	Dissociative Host-Dopant Bonding Facilitates Molecular Doping in Halide Perovskites. ACS Energy Letters, 2023, 8, 2858-2867.	17.4	1
305	Lead-Free Halide Double Perovskite for High-Performance Photodetectors: Progress and Perspective. Materials, 2023, 16, 4490.	2.9	1
306	Perovskite-based solar cells. , 2023, , 265-292.		0
307	Origins and Suppression of Sn(II)/Sn(IV) Oxidation in Tin Halide Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	19.5	20
308	Eco-friendly glucose assisted structurally simplified high-efficiency tin-lead mixed perovskite solar cells. Journal of Energy Chemistry, 2023, 85, 83-90.	12.9	2

#	Article	IF	CITATIONS
309	Ligand Engineering in Tin-Based Perovskite Solar Cells. Nano-Micro Letters, 2023, 15, .	27.0	2
310	Progress, challenges, and further trends of all perovskites tandem solar cells: A comprehensive review. Materials Today, 2023, 67, 399-423.	14.2	3
311	Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 2023, 123, 9565-9652.	47.7	21
312	SnF <sub>2</sub> â€Doped Cs <sub>2</sub> SnI <sub>6</sub> Ordered Vacancy Double Perovskite for Photovoltaic Applications. Solar Rrl, 2023, 7, .	5.8	2
313	Triphenylamine (TPA)â€Functionalized Structural Isomeric Polythiophenes as Dopant Free Holeâ€Transporting Materials for Tin Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	19.5	5
314	Rational design and recent advancements of addictives engineering in ASnI <sub>3</sub> tin-based perovskite solar cells: insights from experiments and computational. Sustainable Energy and Fuels, 2023, 7, 5198-5223.	4.9	0
315	Mechanistic Understanding of Oxidation of Tinâ€based Perovskite Solar Cells and Mitigation Strategies. Angewandte Chemie - International Edition, 2023, 62, .	13.8	5
316	Mechanistic Understanding of Oxidation of Tinâ€based Perovskite Solar Cells and Mitigation Strategies. Angewandte Chemie, 0, , .	2.0	0
317	Origins of the Accelerated Decomposition in Inorganic Tin Perovskites Contaminated by Oxygen: <i>Ab Initio</i> and Quantum Dynamics Study. Journal of Physical Chemistry C, 2023, 127, 16721-16731.	3.1	0
318	Tinâ€Based Ecoâ€Friendly Perovskites for Sustainable Future. Advanced Energy and Sustainability Research, 2023, 4, .	5.8	0
319	Bandgap Tunable Perovskite for Si-Based Triple Junction Tandem Solar Cell: Numerical Analysis-Aided Experimental Investigation. ACS Applied Energy Materials, 2023, 6, 9434-9445.	5.1	1
320	The roles of metal oxidation states in perovskite semiconductors. Matter, 2023, 6, 3782-3802.	10.0	4
321	Understanding the origin of defect states, their nature, and effects on metal halide perovskite solar cells. Materials Today Energy, 2023, 37, 101400.	4.7	2
322	Reducing energy disorder by stabilizing octahedral lattice with thiocyanate for efficient and stable Sn-Pb mixed perovskite solar cells. Nano Energy, 2023, 118, 108937.	16.0	3
323	Strategies toward Suppression of Sn(II) Oxidation for Stable Sn–Pb Perovskite Solar Cells. ACS Energy Letters, 2023, 8, 4267-4277.	17.4	2
324	Composition Dependent Strain Engineering of Lead-Free Halide Double Perovskite: Computational Insights. Journal of Physical Chemistry Letters, 0, , 9479-9489.	4.6	0
325	Leadâ€Free Halide Perovskite Materials and Optoelectronic Devices: Progress and Prospective. Advanced Functional Materials, 2024, 34, .	14.9	6
326	Stable two-dimensional tin-based perovskites for warm-white light emitters. Optical Materials, 2023, 146, 114535.	3.6	0

#	Article	IF	CITATIONS
327	Stability of formamidinium tin triiodide-based inverted perovskite solar cells. Renewable and Sustainable Energy Reviews, 2024, 189, 114002.	16.4	0
328	On the Durability of Tinâ $\in$ Containing Perovskite Solar Cells. Advanced Science, 2024, 11, .	11.2	1
329	Two-dimensional lead-free silver-bismuth double perovskite nanobelts with intrinsic chirality <i>via</i> co-antisolvent modulation strategy. Chemical Communications, 2023, 59, 14126-14129.	4.1	1
330	First-principles study of the structural, mechanical, dynamical, and transport properties of Cs2NaInX6[X = Br,I] for thermoelectric applications. Current Applied Physics, 2024, 57, 70-78.	2.4	0
331	Cu/Ag–Sb–I Rudorffite Thin Films for Photovoltaic Applications. Chemistry of Materials, 2023, 35, 9988-10000.	6.7	2
332	Tailoring Low-Dimensional Phases for Improved Performance of 2D–3D Tin Perovskite Solar Cells. , 0, , 1-9.		0
333	Efficient and Stable Tin–Lead Perovskite Photoconversion Devices Using Dualâ€Functional Cathode Interlayer. Advanced Energy Materials, 2024, 14, .	19.5	2
334	Accelerated Redox Reactions Enable Stable Tin‣ead Mixed Perovskite Solar Cells. Angewandte Chemie - International Edition, 2024, 63, .	13.8	1
335	Accelerated Redox Reactions Enable Stable Tin‣ead Mixed Perovskite Solar Cells. Angewandte Chemie, 2024, 136, .	2.0	0
336	Temperatureâ€Dependent Excitonic Band Gap in Leadâ€Free Bismuth Halide Lowâ€Dimensional Perovskite Single Crystals. Advanced Optical Materials, 0, , .	7.3	1
337	Material properties and optoelectronic applications of lead halide perovskite thin films. Synthetic Metals, 2024, 301, 117535.	3.9	0
338	Acetic acid-driven synthesis of environmentally stable MAPb0.5Sn0.5Br3 nano-assembly for anti-counterfeiting. Journal of Colloid and Interface Science, 2024, 660, 449-457.	9.4	0
339	Stable Inorganic Colloidal Tin and Tin–Lead Perovskite Nanocrystals with Ultralong Carrier Lifetime via Sn(IV) Control. Journal of the American Chemical Society, 2024, 146, 3094-3101.	13.7	0
340	Potential-induced degradation: a challenge in the commercialization of perovskite solar cells. Energy and Environmental Science, 2024, 17, 1819-1853.	30.8	0
341	Charting the Irreversible Degradation Modes of Low Bandgap Pb‧n Perovskite Compositions for Deâ€Risking Practical Industrial Development. Advanced Energy Materials, 2024, 14, .	19.5	0
342	Effect of Ge Incorporation on Leadâ€free Csâ€based Triiodide Snâ^'Ge Coâ€alloy Perovskite Thin Films by Spin Coating. European Journal of Inorganic Chemistry, 2024, 27, . Investigating the cmml:math xmlns:mml="http://www.w3.org/1998/Math/MathMI "	2.0	0
343	altimg="si1.svg"> <mml:mrow><mml:mi mathvariant="italic"&gt;CsAu<mml:msub><mml:mi>X</mml:mi><mml:mo>CC</mml:mo>=<mml:mi>C</mml:mi>=<mml:mi>C</mml:mi>&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;</mml:msub></mml:mi </mml:mrow>	ıml:mrow: ml:mi> <m< td=""><td>&gt;<mml:mo ml:mo&gt;,</mml:mo </td></m<>	> <mml:mo ml:mo&gt;,</mml:mo 
344	res. Computational Materials Science, 2024, 236, 112881. Desirable candidates for high-performance lead-free organic–inorganic halide perovskite solar cells. Materials for Renewable and Sustainable Energy, 2024, 13, 133-153.	3.6	0

#	Article	IF	CITATIONS
345	Reducing Hole Trap Density in Sn–Pb Perovskite Solar Cells via Molecular Phenylhydrazine. Solar Rrl, 2024, 8, .	5.8	0
346	Boosting <scp>CsSnI<sub>3</sub></scp> â€based nearâ€infrared perovskite lightâ€emitting diodes performance via solvent coordination engineering. InformaÄnÃ-Materiály, 0, , .	17.3	0
347	Investigation of MASnIxBr3â^'x (x = 3, 2, 1, 0) Perovskite Thin Films Produced by Ultrasonic Spray Pyrolys Method. Arabian Journal for Science and Engineering, 0, , .	is 3.0	0
348	Efficient Tin–Lead Perovskite Solar Cells with a Ultrawide Usage Windows of Precursor Solution Opened by SnF <sub>2</sub> . Small, 0, , .	10.0	0
350	Reversible Oxidative p-Doping in 2D Tin Halide Perovskite Field-Effect Transistors. ACS Energy Letters, 2024, 9, 1725-1734.	17.4	0
351	Narrow Bandgap Metal Halide Perovskites for All-Perovskite Tandem Photovoltaics. Chemical Reviews, 2024, 124, 4079-4123.	47.7	0