

# Yang Bai

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74  
papers

8,851  
citations

43  
h-index

82  
g-index

82  
ext. papers

10,642  
ext. citations

15.4  
avg, IF

6.27  
L-index

#	Paper	IF	Citations
74	Extracting ammonium halides by solvent from the hybrid perovskites with various dimensions to promote the crystallization of CsPbI <sub>3</sub> perovskite. <i>Nano Energy</i> , <b>2022</b> , 94, 106925	17.1	6
73	A descriptor for the structural stability of organic-inorganic hybrid perovskites based on binding mechanism in electronic structure.. <i>Journal of Molecular Modeling</i> , <b>2022</b> , 28, 80	2	1
72	Strain Modulation for Light-Stable n-i-p Perovskite/Silicon Tandem Solar Cells.. <i>Advanced Materials</i> , <b>2022</b> , e2201315	24	5
71	Avoiding Structural Collapse to Reduce Lead Leakage in Perovskite Photovoltaics.. <i>Angewandte Chemie - International Edition</i> , <b>2022</b> ,	16.4	5
70	Tailoring molecular termination for thermally stable perovskite solar cells. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 112201	2.3	1
69	Liquid medium annealing for fabricating durable perovskite solar cells with improved reproducibility. <i>Science</i> , <b>2021</b> , 373, 561-567	33.3	60
68	A new perspective for evaluating the photoelectric performance of organic-inorganic hybrid perovskites based on the DFT calculations of excited states. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 11548-11556	3.6	8
67	Thermal Management Enables More Efficient and Stable Perovskite Solar Cells. <i>ACS Energy Letters</i> , <b>2021</b> , 6, 3029-3036	20.1	5
66	Synergistic Effects of Eu-MOF on Perovskite Solar Cells with Improved Stability. <i>Advanced Materials</i> , <b>2021</b> , 33, e2102947	24	29
65	Sandwiched electrode buffer for efficient and stable perovskite solar cells with dual back surface fields. <i>Joule</i> , <b>2021</b> , 5, 2148-2163	27.8	18
64	Size mismatch induces cation segregation in CsPbI <sub>3</sub> : Forming energy level gradient and 3D/2D heterojunction promotes the efficiency of carbon-based perovskite solar cells to over 15%. <i>Nano Energy</i> , <b>2021</b> , 89, 106411	17.1	11
63	The Role of Surface Termination in Halide Perovskites for Efficient Photocatalytic Synthesis. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 12931-12937	16.4	19
62	The Role of Surface Termination in Halide Perovskites for Efficient Photocatalytic Synthesis. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 13031-13037	3.6	1
61	Cation Diffusion Guides Hybrid Halide Perovskite Crystallization during the Gel Stage. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 6035-6043	3.6	2
60	1000 h Operational Lifetime Perovskite Solar Cells by Ambient Melting Encapsulation. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1902472	21.8	60
59	Cation Diffusion Guides Hybrid Halide Perovskite Crystallization during the Gel Stage. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 5979-5987	16.4	19
58	Promoting Thermodynamic and Kinetic Stabilities of FA-based Perovskite by an in Situ Bilayer Structure. <i>Nano Letters</i> , <b>2020</b> , 20, 3864-3871	11.5	25

57	Understanding the Defect Properties of Quasi-2D Halide Perovskites for Photovoltaic Applications. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 3521-3528	6.4	29
56	Probing Phase Distribution in 2D Perovskites for Efficient Device Design. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 3127-3133	9.5	21
55	An in situ cross-linked 1D/3D perovskite heterostructure improves the stability of hybrid perovskite solar cells for over 3000 h operation. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 4344-4352	35.4	68
54	Surface Sulfuration of NiO Boosts the Performance of Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2020</b> , 4, 2000270	7.1	13
53	Self-Elimination of Intrinsic Defects Improves the Low-Temperature Performance of Perovskite Photovoltaics. <i>Joule</i> , <b>2020</b> , 4, 1961-1976	27.8	82
52	Dual-Ion-Diffusion Induced Degradation in Lead-Free Cs <sub>2</sub> AgBiBr <sub>6</sub> Double Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2002342	15.6	39
51	Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. <i>ACS Energy Letters</i> , <b>2019</b> , 4, 1231-1240	20.1	83
50	Cation and anion immobilization through chemical bonding enhancement with fluorides for stable halide perovskite solar cells. <i>Nature Energy</i> , <b>2019</b> , 4, 408-415	62.3	511
49	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. <i>Advanced Materials</i> , <b>2019</b> , 31, e1904408	24	126
48	Strain engineering in perovskite solar cells and its impacts on carrier dynamics. <i>Nature Communications</i> , <b>2019</b> , 10, 815	17.4	286
47	HxMoO <sub>3</sub> nanobelts: an excellent alternative to carbon electrodes for high performance mesoscopic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 1499-1508	13	5
46	Excess Cesium Iodide Induces Spinodal Decomposition of CsPbI <sub>3</sub> Perovskite Films. <i>Journal of Physical Chemistry Letters</i> , <b>2019</b> , 10, 194-199	6.4	55
45	An Ultrathin Ferroelectric Perovskite Oxide Layer for High-Performance Hole Transport Material Free Carbon Based Halide Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1806506	15.6	65
44	Progress and Perspective in Low-Dimensional Metal Halide Perovskites for Optoelectronic Applications. <i>Solar Rrl</i> , <b>2018</b> , 2, 1700186	7.1	69
43	In Situ Growth of 2D Perovskite Capping Layer for Stable and Efficient Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1706923	15.6	361
42	Molecular design enabled reduction of interface trap density affords highly efficient and stable perovskite solar cells with over 83% fill factor. <i>Nano Energy</i> , <b>2018</b> , 52, 300-306	17.1	74
41	Interface Engineering for Highly Efficient and Stable Planar p-i-n Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1701883	21.8	249
40	An Ultra-low Concentration of Gold Nanoparticles Embedded in the NiO Hole Transport Layer Boosts the Performance of p-i-n Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2018</b> , 3, 1800278	7.1	17

39	A pure and stable intermediate phase is key to growing aligned and vertically monolithic perovskite crystals for efficient PIN planar perovskite solar cells with high processibility and stability. <i>Nano Energy</i> , <b>2017</b> , 34, 58-68	17.1	123
38	Unveiling a Key Intermediate in Solvent Vapor Postannealing to Enlarge Crystalline Domains of Organometal Halide Perovskite Films. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1604944	15.6	86
37	Matching Charge Extraction Contact for Wide-Bandgap Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700607	24	126
36	Profiling the organic cation-dependent degradation of organolead halide perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 1103-1111	13	108
35	Boron Doping of Multiwalled Carbon Nanotubes Significantly Enhances Hole Extraction in Carbon-Based Perovskite Solar Cells. <i>Nano Letters</i> , <b>2017</b> , 17, 2496-2505	11.5	138
34	Conjugated Lewis Base: Efficient Trap-Passivation and Charge-Extraction for Hybrid Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1604545	24	431
33	Dual Interfacial Modifications Enable High Performance Semitransparent Perovskite Solar Cells with Large Open Circuit Voltage and Fill Factor. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602333	21.8	161
32	Scaling behavior of moisture-induced grain degradation in polycrystalline hybrid perovskite thin films. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 516-522	35.4	525
31	Pinning Down the Anomalous Light Soaking Effect toward High-Performance and Fast-Response Perovskite Solar Cells: The Ion-Migration-Induced Charge Accumulation. <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 5069-5076	6.4	43
30	Tuning the A-site cation composition of FA perovskites for efficient and stable NiO-based p-i-n perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 21858-21865	13	31
29	Dimensional Engineering of a Graded 3D/2D Halide Perovskite Interface Enables Ultrahigh Voc Enhanced Stability in the p-i-n Photovoltaics. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1701038	21.8	251
28	Integration of inverse nanocone array based bismuth vanadate photoanodes and bandgap-tunable perovskite solar cells for efficient self-powered solar water splitting. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 19091-19097	13	33
27	Ultrasound-spray deposition of multi-walled carbon nanotubes on NiO nanoparticles-embedded perovskite layers for high-performance carbon-based perovskite solar cells. <i>Nano Energy</i> , <b>2017</b> , 42, 322-333	17.1	59
26	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions and cations. <i>Nature Energy</i> , <b>2017</b> , 2,	62.3	1241
25	Strategies for Improving Efficiency and Stability of Perovskite Solar Cells. <i>MRS Advances</i> , <b>2017</b> , 2, 3051-3060	30.6	3
24	Low Temperature Solution-Processed Sb:SnO Nanocrystals for Efficient Planar Perovskite Solar Cells. <i>ChemSusChem</i> , <b>2016</b> , 9, 2686-2691	8.3	138
23	An amorphous precursor route to the conformable oriented crystallization of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> in mesoporous scaffolds: toward efficient and thermally stable carbon-based perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 12897-12912	13	63
22	Hierarchical Dual-Scaffolds Enhance Charge Separation and Collection for High Efficiency Semitransparent Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , <b>2016</b> , 3, 1600484	4.6	34

21	Designing new fullerene derivatives as electron transporting materials for efficient perovskite solar cells with improved moisture resistance. <i>Nano Energy</i> , <b>2016</b> , 30, 341-346	17.1	60
20	Enhancing stability and efficiency of perovskite solar cells with crosslinkable silane-functionalized and doped fullerene. <i>Nature Communications</i> , <b>2016</b> , 7, 12806	17.4	293
19	Understanding the relationship between ion migration and the anomalous hysteresis in high-efficiency perovskite solar cells: A fresh perspective from halide substitution. <i>Nano Energy</i> , <b>2016</b> , 26, 620-630	17.1	127
18	Thin-film semiconductor perspective of organometal trihalide perovskite materials for high-efficiency solar cells. <i>Materials Science and Engineering Reports</i> , <b>2016</b> , 101, 1-38	30.9	91
17	Effects of a Molecular Monolayer Modification of NiO Nanocrystal Layer Surfaces on Perovskite Crystallization and Interface Contact toward Faster Hole Extraction and Higher Photovoltaic Performance. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 2950-2958	15.6	239
16	Enhanced Efficiency and Stability of Inverted Perovskite Solar Cells Using Highly Crystalline SnO <sub>2</sub> Nanocrystals as the Robust Electron-Transporting Layer. <i>Advanced Materials</i> , <b>2016</b> , 28, 6478-84	24	382
15	High Performance Perovskite Solar Cells through Surface Modification, Mixed Solvent Engineering and Nanobowl-Assisted Light Harvesting. <i>MRS Advances</i> , <b>2016</b> , 1, 3175-3184	0.7	7
14	A PCBM Electron Transport Layer Containing Small Amounts of Dual Polymer Additives that Enables Enhanced Perovskite Solar Cell Performance. <i>Advanced Science</i> , <b>2016</b> , 3, 1500353	13.6	52
13	In-situ fabrication of dual porous titanium dioxide films as anode for carbon cathode based perovskite solar cell. <i>Journal of Energy Chemistry</i> , <b>2015</b> , 24, 736-743	12	21
12	High performance inverted structure perovskite solar cells based on a PCBM:polystyrene blend electron transport layer. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9098-9102	13	160
11	Iron-doping-enhanced photoelectrochemical water splitting performance of nanostructured WO <sub>3</sub> : a combined experimental and theoretical study. <i>Nanoscale</i> , <b>2015</b> , 7, 2933-40	7.7	143
10	Mesoporous SnO <sub>2</sub> single crystals as an effective electron collector for perovskite solar cells. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 18265-8	3.6	74
9	Polyfluorene Derivatives are High-Performance Organic Hole-Transporting Materials for Inorganic/Organic Hybrid Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 7357-7365	15.6	150
8	High-Performance Hole-Extraction Layer of Sol-Gel-Processed NiO Nanocrystals for Inverted Planar Perovskite Solar Cells. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 12779-12783	3.6	158
7	High-performance hole-extraction layer of sol-gel-processed NiO nanocrystals for inverted planar perovskite solar cells. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 12571-5	16.4	121
6	Efficiency enhancement of perovskite solar cells through fast electron extraction: the role of graphene quantum dots. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 3760-3	16.4	590
5	Nanostructures: Amorphous Ni(OH) <sub>2</sub> Nanoboxes: Fast Fabrication and Enhanced Sensing for Glucose (Small 18/2013). <i>Small</i> , <b>2013</b> , 9, 3184-3184	11	2
4	Structure-dependent electrocatalysis of Ni(OH) <sub>2</sub> hourglass-like nanostructures towards L-histidine. <i>Chemistry - A European Journal</i> , <b>2013</b> , 19, 501-8	4.8	19

- 3 Amorphous Ni(OH)<sub>2</sub> nanoboxes: fast fabrication and enhanced sensing for glucose. *Small*, **2013**, 9, 3147-52 121
- 2 Molecular Hinges Stabilize Formamidinium-Based Perovskite Solar Cells with Compressive Strain. *Advanced Functional Materials*, 2201193 15.6 13
- 1 Improving Heat Transfer Enables Durable Perovskite Solar Cells. *Advanced Energy Materials*, 2200869 21.8 2