

# Xudong Yang

## List of Publications by Citations

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84  
papers

10,664  
citations

42  
h-index

90  
g-index

90  
ext. papers

11,981  
ext. citations

16.7  
avg, IF

6.43  
L-index

#	Paper	IF	Citations
84	Efficient and stable large-area perovskite solar cells with inorganic charge extraction layers. <i>Science</i> , <b>2015</b> , 350, 944-8	33.3	1732
83	Retarding the crystallization of PbI <sub>2</sub> for highly reproducible planar-structured perovskite solar cells via sequential deposition. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 2934-2938	35.4	728
82	High-efficiency dye-sensitized solar cell with a novel co-adsorbent. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 6057	35.4	617
81	A dopant-free hole-transporting material for efficient and stable perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 2963-2967	35.4	593
80	Highly efficient dye-sensitized solar cells: progress and future challenges. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 1443	35.4	549
79	A solvent- and vacuum-free route to large-area perovskite films for efficient solar modules. <i>Nature</i> , <b>2017</b> , 550, 92-95	50.4	510
78	Perovskite solar cells with 18.21% efficiency and area over 1 cm <sup>2</sup> fabricated by heterojunction engineering. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	482
77	Thermally Stable MAPbI Perovskite Solar Cells with Efficiency of 19.19% and Area over 1 cm <sup>2</sup> achieved by Additive Engineering. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701073	24	447
76	Vertical recrystallization for highly efficient and stable formamidinium-based inverted-structure perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 1942-1949	35.4	309
75	Diffusion engineering of ions and charge carriers for stable efficient perovskite solar cells. <i>Nature Communications</i> , <b>2017</b> , 8, 15330	17.4	290
74	Stabilizing heterostructures of soft perovskite semiconductors. <i>Science</i> , <b>2019</b> , 365, 687-691	33.3	281
73	Hybrid interfacial layer leads to solid performance improvement of inverted perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 629-640	35.4	249
72	Cost-Performance Analysis of Perovskite Solar Modules. <i>Advanced Science</i> , <b>2017</b> , 4, 1600269	13.6	238
71	Highly compact TiO <sub>2</sub> layer for efficient hole-blocking in perovskite solar cells. <i>Applied Physics Express</i> , <b>2014</b> , 7, 052301	2.4	181
70	Efficient Defect Passivation for Perovskite Solar Cells by Controlling the Electron Density Distribution of Donor-Acceptor Molecules. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1803766	21.8	180
69	A quasi core-shell nitrogen-doped graphene/cobalt sulfide conductive catalyst for highly efficient dye-sensitized solar cells. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 2637-2641	35.4	177
68	Highly Stable and Efficient FASnI <sub>3</sub> -Based Perovskite Solar Cells by Introducing Hydrogen Bonding. <i>Advanced Materials</i> , <b>2019</b> , 31, e1903721	24	151

67	Efficient and Stable CsPbI Solar Cells via Regulating Lattice Distortion with Surface Organic Terminal Groups. <i>Advanced Materials</i> , <b>2019</b> , 31, e1900605	24	147
66	Soft-cover deposition of scaling-up uniform perovskite thin films for high cost-performance solar cells. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2295-2301	35.4	144
65	High-Quality Mixed-Organic-Cation Perovskites from a Phase-Pure Non-stoichiometric Intermediate (FAI) <sub>1-x</sub> -PbI <sub>2</sub> for Solar Cells. <i>Advanced Materials</i> , <b>2015</b> , 27, 4918-23	24	132
64	Surface-Controlled Oriented Growth of FASnI <sub>3</sub> Crystals for Efficient Lead-free Perovskite Solar Cells. <i>Joule</i> , <b>2020</b> , 4, 902-912	27.8	112
63	Reliable evaluation of dye-sensitized solar cells. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 54-66	35.4	110
62	Enhanced Stability of Perovskite Solar Cells through Corrosion-Free Pyridine Derivatives in Hole-Transporting Materials. <i>Advanced Materials</i> , <b>2016</b> , 28, 10738-10743	24	108
61	High Electron Affinity Enables Fast Hole Extraction for Efficient Flexible Inverted Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1903487	21.8	106
60	Efficient Perovskite Solar Cell Modules with High Stability Enabled by Iodide Diffusion Barriers. <i>Joule</i> , <b>2019</b> , 3, 2748-2760	27.8	105
59	Efficient and stable tin-based perovskite solar cells by introducing $\pi$ -conjugated Lewis base. <i>Science China Chemistry</i> , <b>2020</b> , 63, 107-115	7.9	104
58	Stable Inverted Planar Perovskite Solar Cells with Low-Temperature-Processed Hole-Transport Bilayer. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1700763	21.8	97
57	Efficient and stable tin perovskite solar cells enabled by amorphous-polycrystalline structure. <i>Nature Communications</i> , <b>2020</b> , 11, 2678	17.4	90
56	Control of Electrical Potential Distribution for High-Performance Perovskite Solar Cells. <i>Joule</i> , <b>2018</b> , 2, 296-306	27.8	90
55	Annealing-free perovskite films by instant crystallization for efficient solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 8548-8553	13	87
54	Templated growth of FASnI <sub>3</sub> crystals for efficient tin perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 2896-2902	35.4	82
53	Improving the Performance of Inverted Formamidinium Tin Iodide Perovskite Solar Cells by Reducing the Energy-Level Mismatch. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 1116-1121	20.1	74
52	Toward Long-Term Stable and Highly Efficient Perovskite Solar Cells via Effective Charge Transporting Materials. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1800249	21.8	70
51	Novel Near-Infrared Squaraine Sensitizers for Stable and Efficient Dye-Sensitized Solar Cells. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 3059-3066	15.6	68
50	Improvement of spectral response by co-sensitizers for high efficiency dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 4812	13	68

49	High-Performance, Transparent, Dye-Sensitized Solar Cells for See-Through Photovoltaic Windows. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1301966	21.8	66
48	Low-Temperature Soft-Cover Deposition of Uniform Large-Scale Perovskite Films for High-Performance Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701440	24	61
47	Interfacial engineering for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 5167	13	58
46	A Near-Infrared cis-Configured Squaraine Co-Sensitizer for High-Efficiency Dye-Sensitized Solar Cells. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3782-3789	15.6	57
45	Highly efficient tin perovskite solar cells achieved in a wide oxygen concentration range. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 2760-2768	13	55
44	Quasi-aligned ZnO nanotubes grown on Si substrates. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 093110	3.4	53
43	Reliable Measurement of Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2019</b> , 31, e1803231	24	44
42	Ligand-Free, Highly Dispersed NiOx Nanocrystal for Efficient, Stable, Low-Temperature Processable Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2018</b> , 2, 1800004	7.1	40
41	Consecutive Morphology Controlling Operations for Highly Reproducible Mesoporous Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 20707-13	9.5	39
40	A metal-free visible light active photo-electro-Fenton-like cell for organic pollutants degradation. <i>Applied Catalysis B: Environmental</i> , <b>2018</b> , 229, 211-217	21.8	39
39	Fullerene-Structured MoSe2 Hollow Spheres Anchored on Highly Nitrogen-Doped Graphene as a Conductive Catalyst for Photovoltaic Applications. <i>Scientific Reports</i> , <b>2015</b> , 5, 13214	4.9	38
38	Circle chain embracing donor-acceptor organic dye: simultaneous improvement of photocurrent and photovoltage for dye-sensitized solar cells. <i>Chemical Communications</i> , <b>2013</b> , 49, 7587-9	5.8	36
37	Efficient metal-free sensitizers bearing circle chain embracing spacers for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 10889	13	31
36	Coordinated shifts of interfacial energy levels: insight into electron injection in highly efficient dye-sensitized solar cells. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 3637	35.4	31
35	Efficient and Stable Tin Perovskite Solar Cells Enabled by Graded Heterostructure of Light-Absorbing Layer. <i>Solar Rrl</i> , <b>2020</b> , 4, 2000240	7.1	30
34	Large-area perovskite solar cells. <i>Science Bulletin</i> , <b>2020</b> , 65, 872-875	10.6	29
33	Effects of 4-tert-butylpyridine on the quasi-Fermi levels of TiO2 films in the presence of different cations in dye-sensitized solar cells. <i>Physical Chemistry Chemical Physics</i> , <b>2011</b> , 13, 19310-3	3.6	29
32	Cosensitization of Ruthenium Polypyridyl Dyes with Organic Dyes in Dye-sensitized Solar Cells. <i>Chemistry Letters</i> , <b>2013</b> , 42, 1328-1335	1.7	28

31	Entirely solution-processed write-once-read-many-times memory devices and their operation mechanism. <i>Organic Electronics</i> , <b>2011</b> , 12, 1271-1274	3.5	28
30	Determination of the triplet excited-state absorption cross section in a polyfluorene by energy transfer from a phosphorescent metal complex. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	27
29	Effect of 4-tert-Butylpyridine on the Quasi-Fermi Level of Dye-Sensitized TiO <sub>2</sub> Films. <i>Applied Physics Express</i> , <b>2011</b> , 4, 042301	2.4	26
28	Making Room for Growing Oriented FASnI <sub>3</sub> with Large Grains via Cold Precursor Solution. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2100931	15.6	24
27	Band alignment by ternary crystalline potential-tuning interlayer for efficient electron injection in quantum dot-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 7004-7014	13	23
26	A Scalable Integrated Dopant-Free Heterostructure to Stabilize Perovskite Solar Cell Modules. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2003301	21.8	22
25	Shielding effects of additives in a cobalt(II/III) redox electrolyte: toward higher open-circuit photovoltages in dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 10532	13	19
24	Effects of Illumination Direction on the Surface Potential of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Films Probed by Kelvin Probe Force Microscopy. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 14044-14050	9.5	17
23	A hybrid catalyst composed of reduced graphene oxide/Cu <sub>2</sub> S quantum dots as a transparent counter electrode for dye sensitized solar cells. <i>RSC Advances</i> , <b>2015</b> , 5, 9075-9078	3.7	16
22	Sequential energy and electron transfer in polyisocyanopeptide-based multichromophoric arrays. <i>Journal of Physical Chemistry B</i> , <b>2011</b> , 115, 1590-600	3.4	16
21	Crystal-array-assisted growth of perovskite absorption layer for efficient and stable solar cell. <i>Energy and Environmental Science</i> ,	35.4	16
20	Saturation, Relaxation, and Dissociation of Excited Triplet Excitons in Conjugated Polymers. <i>Advanced Materials</i> , <b>2009</b> , 21, 916-919	24	14
19	Tin oxide microspheres with exposed {101} facets for dye-sensitized solar cells: enhanced photocurrent and photovoltage. <i>ChemSusChem</i> , <b>2014</b> , 7, 172-8	8.3	12
18	Key issues in highly efficient perovskite solar cells. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2015</b> , 64, 038404	0.6	12
17	Accurate and fast evaluation of perovskite solar cells with least hysteresis. <i>Applied Physics Express</i> , <b>2017</b> , 10, 076601	2.4	11
16	Low-Temperature Soft-Cover-Assisted Hydrolysis Deposition of Large-Scale TiO <sub>2</sub> Layer for Efficient Perovskite Solar Modules. <i>Nano-Micro Letters</i> , <b>2018</b> , 10, 49	19.5	10
15	A New Factor Affecting the Performance of Dye-Sensitized Solar Cells in the Presence of 4-tert-Butylpyridine. <i>Applied Physics Express</i> , <b>2012</b> , 5, 042303	2.4	10
14	Reduction of Nonradiative Loss in Inverted Perovskite Solar Cells by Donor-Acceptor Dipoles. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 44321-44328	9.5	10

13	Selective Deposition of Insulating Metal Oxide in Perovskite Solar Cells with Enhanced Device Performance. <i>ChemSusChem</i> , <b>2015</b> , 8, 2625-9	8.3	9
12	Nonradiative recombination effect on photoluminescence decay dynamics in GaInNAs/InAs quantum wells. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 011912	3.4	7
11	Effect of thermal-convection-induced defects on the performance of perovskite solar cells. <i>Applied Physics Express</i> , <b>2017</b> , 10, 075502	2.4	6
10	Stable tin perovskite solar cells enabled by widening the time window for crystallization. <i>Science China Materials</i> , <b>2021</b> , 64, 1849-1857	7.1	5
9	Stable tin perovskite solar cells developed via additive engineering. <i>Science China Materials</i> , <b>2021</b> , 64, 2645-2654	7.1	4
8	Directly Determine an Additive-Induced Shift in Quasi-Fermi Level of TiO <sub>2</sub> Films in Dye-Sensitized Solar Cells. <i>Japanese Journal of Applied Physics</i> , <b>2012</b> , 51, 10NE15	1.4	3
7	Microstructure Formation and Tailoring of the Intermetallic TiAl Alloy Produced by Direct Laser Deposition. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2020</b> , 51, 82-87	2.3	3
6	Zwitterions: promising interfacial/doping materials for organic/perovskite solar cells. <i>New Journal of Chemistry</i> , <b>2021</b> , 45, 15118-15130	3.6	3
5	Exciton localization due to isoelectronic substitution in ZnS <sub>1-x</sub> Te <sub>x</sub> . <i>Journal of Luminescence</i> , <b>2007</b> , 122-123, 402-404	3.8	2
4	Lifetime study of N impurity states in GaAs <sub>1-x</sub> N <sub>x</sub> (x=0.1%) under hydrostatic pressure. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 201917	3.4	2
3	Recombination kinetics of Te isoelectronic centers in ZnS <sub>1-x</sub> Te <sub>x</sub> . <i>Applied Physics Letters</i> , <b>2005</b> , 86, 052107	3.4	2
2	Rapid photoluminescence quenching in GaInNAs quantum wells at low temperature. <i>Journal of Luminescence</i> , <b>2007</b> , 122-123, 188-190	3.8	1
1	Sulfur-induced exciton localization in Te-rich ZnS <sub>1-x</sub> Te <sub>x</sub> alloy. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 162108	3.4	1