Keyou Yan

List of Publications by Year
in descending order

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64 papers	5,001 citations	136950 32 h-index	114465 63 g-index
67 all docs	67 docs citations	67 times ranked	8298 citing authors

#	Article	IF	Citations
1	High efficiency planar perovskite solar cell by surface disorder removal on mesoporous tin oxide. Surfaces and Interfaces, 2022, 28, 101584.	3.0	2
2	Improving the stability and scalability of all-inorganic inverted CsPbI2Br perovskite solar cell. Journal of Energy Chemistry, 2022, 68, 176-183.	12.9	21
3	Reciprocally Photovoltaic Lightâ€Emitting Diode Based on Dispersive Perovskite Nanocrystal. Small, 2022, 18, e2107145.	10.0	7
4	A Trifluoroethoxyl Functionalized Spiroâ€Based Holeâ€Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	12
5	Perovskite Bifunctional Diode with High Photovoltaic and Electroluminescent Performance by Holistic Defect Passivation. Small, 2022, 18, e2105196.	10.0	9
6	Ambient air processed highly oriented perovskite solar cells with efficiency exceeding 23% via amorphous intermediate. Chemical Engineering Journal, 2022, 446, 136968.	12.7	22
7	Si/SnSe-Nanorod Heterojunction with Ultrafast Infrared Detection Enabled by Manipulating Photo-Induced Thermoelectric Behavior. ACS Applied Materials & Interfaces, 2022, 14, 24557-24564.	8.0	7
8	New Insights into Hot-Charge Relaxation in Lead Halide Perovskite: Dynamical Bandgap Change, Hot-Biexciton Effect, and Photo-Bleaching Shift. ACS Photonics, 2022, 9, 2304-2314.	6.6	10
9	Highly electroluminescent and stable inorganic CsPbI2Br perovskite solar cell enabled by balanced charge transfer. Chemical Engineering Journal, 2021, 417, 128053.	12.7	24
10	Uncovering the Electronâ€Phonon Interplay and Dynamical Energyâ€Dissipation Mechanisms of Hot Carriers in Hybrid Lead Halide Perovskites. Advanced Energy Materials, 2021, 11, 2003071.	19.5	28
11	Trifluoromethylphenylacetic Acid as In Situ Accelerant of Ostwald Ripening for Stable and Efficient Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100040.	5.8	11
12	Lead Halide Perovskites: Uncovering the Electronâ€Phonon Interplay and Dynamical Energyâ€Dissipation Mechanisms of Hot Carriers in Hybrid Lead Halide Perovskites (Adv. Energy Mater. 9/2021). Advanced Energy Materials, 2021, 11, 2170036.	19.5	0
13	Precise composition modulation for optimizing NiWO 4 /Pt/CdS Zâ€scheme system. Nano Select, 2021, 2, 1974.	3.7	0
14	Recent Advances on Cyanâ€Emitting (480â€‰â‰â€‰ Î»â€‰ â‰â€‰520â€‰nm) Metal Halide Perovskite Materials. Small Science, 2021, 1, 2000077.	9.9	20
15	Recycling Spent Lead-Acid Batteries into Lead Halide for Resource Purification and Multifunctional Perovskite Diodes. Environmental Science & Technology, 2021, 55, 8309-8317.	10.0	23
16	Polymerization stabilized black-phase FAPbI3 perovskite solar cells retain 100% of initial efficiency over 100Âdays. Chemical Engineering Journal, 2021, 419, 129482.	12.7	21
17	Quantifying the energy loss for a perovskite solar cell passivated with acetamidine halide. Journal of Materials Chemistry A, 2021, 9, 4781-4788.	10.3	21
18	Interlayer Crossâ€Linked 2D Perovskite Solar Cell with Uniform Phase Distribution and Increased Exciton Coupling. Solar Rrl, 2020, 4, 1900578.	5.8	39

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19	Flexible SnSe Photodetectors with Ultrabroad Spectral Response up to 10.6 Î¼m Enabled by Photobolometric Effect. ACS Applied Materials & Interfaces, 2020, 12, 35250-35258.	8.0	73
20	Cascade Typeâ€II 2D/3D Perovskite Heterojunctions for Enhanced Stability and Photovoltaic Efficiency. Solar Rrl, 2020, 4, 2000282.	5.8	18
21	Photothermoelectric SnTe Photodetector with Broad Spectral Response and High On/Off Ratio. ACS Applied Materials & Interfaces, 2020, 12, 49830-49839.	8.0	27
22	Precise Control of Perovskite Crystallization Kinetics via Sequential Aâ€Site Doping. Advanced Materials, 2020, 32, e2004630.	21.0	122
23	Identifying the functional groups effect on passivating perovskite solar cells. Science Bulletin, 2020, 65, 1726-1734.	9.0	52
24	PEDOT:PSSâ€Metal Oxide Composite Electrode with Regulated Wettability and Work Function for Highâ€Performance Inverted Perovskite Solar Cells. Advanced Optical Materials, 2020, 8, 2000216.	7.3	34
25	Bifunctional Effects of Trichloro(octyl)silane Modification on the Performance and Stability of a Perovskite Solar Cell via Microscopic Characterization Techniques. ACS Applied Energy Materials, 2020, 3, 3302-3309.	5.1	11
26	Wafer-size growth of 2D layered SnSe films for UV-Visible-NIR photodetector arrays with high responsitivity. Nanoscale, 2020, 12, 7358-7365.	5.6	53
27	Introduction of Multifunctional Triphenylamino Derivatives at the Perovskite/HTL Interface To Promote Efficiency and Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 9300-9306.	8.0	53
28	Efficient Slantwise Aligned Dionâ€“Jacobson Phase Perovskite Solar Cells Based on Transâ€1,4â€Cyclohexanediamine. Small, 2020, 16, e2003098.	10.0	33
29	An Interlayer with Strong Pb-Cl Bond Delivers Ultraviolet-Filter-Free, Efficient, and Photostable Perovskite Solar Cells. IScience, 2019, 21, 217-227.	4.1	43
30	Perovskite Bifunctional Device with Improved Electroluminescent and Photovoltaic Performance through Interfacial Energyâ€Band Engineering. Advanced Materials, 2019, 31, e1902543.	21.0	62
31	Perovskite Solar Cells Processed by Solution Nanotechnology. , 2019, , 119-174.		0
32	Stable and scalable 3D-2D planar heterojunction perovskite solar cells via vapor deposition. Nano Energy, 2019, 59, 619-625.	16.0	88
33	A ZIF-8@H:ZnO coreâ€“shell nanorod arrays/Si heterojunction self-powered photodetector with ultrahigh performance. Journal of Materials Chemistry C, 2019, 7, 5172-5183.	5.5	15
34	2D SnSe/Si heterojunction for self-driven broadband photodetectors. 2D Materials, 2019, 6, 034004.	4.4	43
35	Bulk Heterojunction Quasi-Two-Dimensional Perovskite Solar Cell with 1.18 V High Photovoltage. ACS Applied Materials & Interfaces, 2019, 11, 2935-2943.	8.0	13
36	A ternary organic electron transport layer for efficient and photostable perovskite solar cells under full spectrum illumination. Journal of Materials Chemistry A, 2018, 6, 5566-5573.	10.3	35

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37	General Nondestructive Passivation by 4â€Fluoroaniline for Perovskite Solar Cells with Improved Performance and Stability. Small, 2018, 14, e1803350.	10.0	82
38	Graphene controlled Brewster angle device for ultra broadband terahertz modulation. Nature Communications, 2018, 9, 4909.	12.8	117
39	Textured CH3NH3PbI3 thin film with enhanced stability for high performance perovskite solar cells. Nano Energy, 2017, 33, 485-496.	16.0	74
40	Largeâ€Grain Formamidinium PbI_{3â€“}_xBr_x for Highâ€Performance Perovskite Solar Cells via Intermediate Halide Exchange. Advanced Energy Materials, 2017, 7, 1601882.	19.5	76
41	Crystallinity Preservation and Ion Migration Suppression through Dual Ion Exchange Strategy for Stable Mixed Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700118.	19.5	74
42	Perovskite Solar Cells: Largeâ€Grain Formamidinium PbI_{3â€“}_xBr_x for Highâ€Performance Perovskite Solar Cells via Intermediate Halide Exchange (Adv. Energy Mater. 12/2017). Advanced Energy Materials, 2017, 7, .	19.5	2
43	Hybrid graphene tunneling photoconductor with interface engineering towards fast photoresponse and high responsivity. Npj 2D Materials and Applications, 2017, 1, .	7.9	77
44	Integration of inverse nanocone array based bismuth vanadate photoanodes and bandgap-tunable perovskite solar cells for efficient self-powered solar water splitting. Journal of Materials Chemistry A, 2017, 5, 19091-19097.	10.3	55
45	Nearâ€Infrared Photoresponse of Oneâ€Sided Abrupt MAPbI₃/TiO₂ Heterojunction through a Tunneling Process. Advanced Functional Materials, 2016, 26, 8545-8554.	14.9	23
46	Nonstoichiometric acidâ€“base reaction as reliable synthetic route to highly stable CH3NH3PbI3 perovskite film. Nature Communications, 2016, 7, 13503.	12.8	94
47	Facet-Dependent Property of Sequentially Deposited Perovskite Thin Films: Chemical Origin and Self-Annihilation. ACS Applied Materials & Interfaces, 2016, 8, 32366-32375.	8.0	19
48	Ultrathin efficient perovskite solar cells employing a periodic structure of a composite hole conductor for elevated plasmonic light harvesting and hole collection. Nanoscale, 2016, 8, 6290-6299.	5.6	69
49	Enhanced Performance of Polymeric Bulk Heterojunction Solar Cells via Molecular Doping with TFSA. ACS Applied Materials & Interfaces, 2015, 7, 13415-13421.	8.0	23
50	Highâ€Performance Grapheneâ€Based Hole Conductorâ€Free Perovskite Solar Cells: Schottky Junction Enhanced Hole Extraction and Electron Blocking. Small, 2015, 11, 2269-2274.	10.0	233
51	Hybrid Halide Perovskite Solar Cell Precursors: Colloidal Chemistry and Coordination Engineering behind Device Processing for High Efficiency. Journal of the American Chemical Society, 2015, 137, 4460-4468.	13.7	586
52	Hysteresis-free multi-walled carbon nanotube-based perovskite solar cells with a high fill factor. Journal of Materials Chemistry A, 2015, 3, 24226-24231.	10.3	217
53	Magnetic-field-assisted aerosol pyrolysis synthesis of iron pyrite sponge-like nanochain networks as cost-efficient counter electrodes in dye-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 5508-5515.	10.3	22
54	Cost-efficient clamping solar cells using candle soot for hole extraction from ambipolar perovskites. Energy and Environmental Science, 2014, 7, 3326-3333.	30.8	272

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55	A three-dimensional hexagonal fluorine-doped tin oxide nanocone array: a superior light harvesting electrode for high performance photoelectrochemical water splitting. Energy and Environmental Science, 2014, 7, 3651-3658.	30.8	103
56	Unveiling Two Electron-Transport Modes in Oxygen-Deficient TiO₂ Nanowires and Their Influence on Photoelectrochemical Operation. Journal of Physical Chemistry Letters, 2014, 5, 2890-2896.	4.6	55
57	Space-Confined Growth of MoS₂ Nanosheets within Graphite: The Layered Hybrid of MoS₂ and Graphene as an Active Catalyst for Hydrogen Evolution Reaction. Chemistry of Materials, 2014, 26, 2344-2353.	6.7	634
58	Solution-Processed, Barrier-Confined, and 1D Nanostructure Supported Quasi-quantum Well with Large Photoluminescence Enhancement. ACS Nano, 2014, 8, 3771-3780.	14.6	6
59	Mesoporous TiO₂ Single Crystals: Facile Shape-, Size-, and Phase-Controlled Growth and Efficient Photocatalytic Performance. ACS Applied Materials & Interfaces, 2013, 5, 11249-11257.	8.0	116
60	Oneâ€pot Synthesis of Mesoporous TiO₂ from Selfâ€Assembled Sol Particles and Its Application as Mesoscopic Photoanodes of Dyeâ€Sensitized Solar Cells. ChemPlusChem, 2013, 78, 647-655.	2.8	2
61	All-solid-state hybrid solar cells based on a new organometal halide perovskite sensitizer and one-dimensional TiO2 nanowire arrays. Nanoscale, 2013, 5, 3245.	5.6	401
62	A Quasi-Quantum Well Sensitized Solar Cell with Accelerated Charge Separation and Collection. Journal of the American Chemical Society, 2013, 135, 9531-9539.	13.7	105
63	Self-assembly of Ni2P nanowires as high-efficiency electrocatalyst for dye-sensitized solar cells. MRS Communications, 2012, 2, 97-99.	1.8	7
64	Reciprocity Relationship of Perovskite Solar Cell and Light-Emitting Diode. , 0, , .		0