

Keyou Yan

List of Publications by Year in descending order

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64
papers

5,001
citations

136885

32
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114418

63
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67
all docs

67
docs citations

67
times ranked

8298
citing authors

#	ARTICLE	IF	CITATIONS
1	Space-Confined Growth of MoS ₂ Nanosheets within Graphite: The Layered Hybrid of MoS ₂ and Graphene as an Active Catalyst for Hydrogen Evolution Reaction. <i>Chemistry of Materials</i> , 2014, 26, 2344-2353.	3.2	634
2	Hybrid Halide Perovskite Solar Cell Precursors: Colloidal Chemistry and Coordination Engineering behind Device Processing for High Efficiency. <i>Journal of the American Chemical Society</i> , 2015, 137, 4460-4468.	6.6	586
3	All-solid-state hybrid solar cells based on a new organometal halide perovskite sensitizer and one-dimensional TiO ₂ nanowire arrays. <i>Nanoscale</i> , 2013, 5, 3245.	2.8	401
4	Cost-efficient clamping solar cells using candle soot for hole extraction from ambipolar perovskites. <i>Energy and Environmental Science</i> , 2014, 7, 3326-3333.	15.6	272
5	High-Performance Graphene-Based Hole Conductor-Free Perovskite Solar Cells: Schottky Junction Enhanced Hole Extraction and Electron Blocking. <i>Small</i> , 2015, 11, 2269-2274.	5.2	233
6	Hysteresis-free multi-walled carbon nanotube-based perovskite solar cells with a high fill factor. <i>Journal of Materials Chemistry A</i> , 2015, 3, 24226-24231.	5.2	217
7	Precise Control of Perovskite Crystallization Kinetics via Sequential A-site Doping. <i>Advanced Materials</i> , 2020, 32, e2004630.	11.1	122
8	Graphene controlled Brewster angle device for ultra broadband terahertz modulation. <i>Nature Communications</i> , 2018, 9, 4909.	5.8	117
9	Mesoporous TiO ₂ Single Crystals: Facile Shape-, Size-, and Phase-Controlled Growth and Efficient Photocatalytic Performance. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 11249-11257.	4.0	116
10	A Quasi-Quantum Well Sensitized Solar Cell with Accelerated Charge Separation and Collection. <i>Journal of the American Chemical Society</i> , 2013, 135, 9531-9539.	6.6	105
11	A three-dimensional hexagonal fluorine-doped tin oxide nanocone array: a superior light harvesting electrode for high performance photoelectrochemical water splitting. <i>Energy and Environmental Science</i> , 2014, 7, 3651-3658.	15.6	103
12	Nonstoichiometric acid-base reaction as reliable synthetic route to highly stable CH ₃ NH ₃ PbI ₃ perovskite film. <i>Nature Communications</i> , 2016, 7, 13503.	5.8	94
13	Stable and scalable 3D-2D planar heterojunction perovskite solar cells via vapor deposition. <i>Nano Energy</i> , 2019, 59, 619-625.	8.2	88
14	General Nondestructive Passivation by 4-Fluoroaniline for Perovskite Solar Cells with Improved Performance and Stability. <i>Small</i> , 2018, 14, e1803350.	5.2	82
15	Hybrid graphene tunneling photoconductor with interface engineering towards fast photoresponse and high responsivity. <i>Npj 2D Materials and Applications</i> , 2017, 1, .	3.9	77
16	Large-Grain Formamidinium PbI ₃ Br for High-Performance Perovskite Solar Cells via Intermediate Halide Exchange. <i>Advanced Energy Materials</i> , 2017, 7, 1601882.	10.2	76
17	Textured CH ₃ NH ₃ PbI ₃ thin film with enhanced stability for high performance perovskite solar cells. <i>Nano Energy</i> , 2017, 33, 485-496.	8.2	74
18	Crystallinity Preservation and Ion Migration Suppression through Dual Ion Exchange Strategy for Stable Mixed Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1700118.	10.2	74

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19	Flexible SnSe Photodetectors with Ultrabroad Spectral Response up to 10.6 μm Enabled by Photobolometric Effect. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 35250-35258.	4.0	73
20	Ultrathin efficient perovskite solar cells employing a periodic structure of a composite hole conductor for elevated plasmonic light harvesting and hole collection. <i>Nanoscale</i> , 2016, 8, 6290-6299.	2.8	69
21	Perovskite Bifunctional Device with Improved Electroluminescent and Photovoltaic Performance through Interfacial Energy Band Engineering. <i>Advanced Materials</i> , 2019, 31, e1902543.	11.1	62
22	Unveiling Two Electron-Transport Modes in Oxygen-Deficient TiO_2 Nanowires and Their Influence on Photoelectrochemical Operation. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2890-2896.	2.1	55
23	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> , 2017, 5, 19091-19097.	5.2	55
24	Wafer-size growth of 2D layered SnSe films for UV-Visible-NIR photodetector arrays with high responsivity. <i>Nanoscale</i> , 2020, 12, 7358-7365.	2.8	53
25	Introduction of Multifunctional Triphenylamino Derivatives at the Perovskite/HTL Interface To Promote Efficiency and Stability of Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 9300-9306.	4.0	53
26	Identifying the functional groups effect on passivating perovskite solar cells. <i>Science Bulletin</i> , 2020, 65, 1726-1734.	4.3	52
27	An Interlayer with Strong Pb-Cl Bond Delivers Ultraviolet-Filter-Free, Efficient, and Photostable Perovskite Solar Cells. <i>IScience</i> , 2019, 21, 217-227.	1.9	43
28	2D SnSe/Si heterojunction for self-driven broadband photodetectors. <i>2D Materials</i> , 2019, 6, 034004.	2.0	43
29	Interlayer Cross-Linked 2D Perovskite Solar Cell with Uniform Phase Distribution and Increased Exciton Coupling. <i>Solar Rrl</i> , 2020, 4, 1900578.	3.1	39
30	A ternary organic electron transport layer for efficient and photostable perovskite solar cells under full spectrum illumination. <i>Journal of Materials Chemistry A</i> , 2018, 6, 5566-5573.	5.2	35
31	PEDOT:PSS-Metal Oxide Composite Electrode with Regulated Wettability and Work Function for High-Performance Inverted Perovskite Solar Cells. <i>Advanced Optical Materials</i> , 2020, 8, 2000216.	3.6	34
32	Efficient Slantwise Aligned Dion-Jacobson Phase Perovskite Solar Cells Based on $\text{Trans-1,4-Cyclohexanediamine}$. <i>Small</i> , 2020, 16, e2003098.	5.2	33
33	Uncovering the Electron-Phonon Interplay and Dynamical Energy Dissipation Mechanisms of Hot Carriers in Hybrid Lead Halide Perovskites. <i>Advanced Energy Materials</i> , 2021, 11, 2003071.	10.2	28
34	Photothermoelectric SnTe Photodetector with Broad Spectral Response and High On/Off Ratio. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 49830-49839.	4.0	27
35	Highly electroluminescent and stable inorganic CsPbI_2Br perovskite solar cell enabled by balanced charge transfer. <i>Chemical Engineering Journal</i> , 2021, 417, 128053.	6.6	24
36	Enhanced Performance of Polymeric Bulk Heterojunction Solar Cells via Molecular Doping with TFSA. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 13415-13421.	4.0	23

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37	Near-Infrared Photoresponse of One-Sided Abrupt MAPbI ₃ /TiO ₂ Heterojunction through a Tunneling Process. <i>Advanced Functional Materials</i> , 2016, 26, 8545-8554.	7.8	23
38	Recycling Spent Lead-Acid Batteries into Lead Halide for Resource Purification and Multifunctional Perovskite Diodes. <i>Environmental Science & Technology</i> , 2021, 55, 8309-8317.	4.6	23
39	Magnetic-field-assisted aerosol pyrolysis synthesis of iron pyrite sponge-like nanochain networks as cost-efficient counter electrodes in dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 5508-5515.	5.2	22
40	Ambient air processed highly oriented perovskite solar cells with efficiency exceeding 23% via amorphous intermediate. <i>Chemical Engineering Journal</i> , 2022, 446, 136968.	6.6	22
41	Polymerization stabilized black-phase FAPbI ₃ perovskite solar cells retain 100% of initial efficiency over 100 days. <i>Chemical Engineering Journal</i> , 2021, 419, 129482.	6.6	21
42	Quantifying the energy loss for a perovskite solar cell passivated with acetamidine halide. <i>Journal of Materials Chemistry A</i> , 2021, 9, 4781-4788.	5.2	21
43	Improving the stability and scalability of all-inorganic inverted CsPbI ₂ Br perovskite solar cell. <i>Journal of Energy Chemistry</i> , 2022, 68, 176-183.	7.1	21
44	Recent Advances on Cyanide-Emitting (480-520 nm) Metal Halide Perovskite Materials. <i>Small Science</i> , 2021, 1, 2000077.	5.8	20
45	Facet-Dependent Property of Sequentially Deposited Perovskite Thin Films: Chemical Origin and Self-Annihilation. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 32366-32375.	4.0	19
46	Cascade Type-II 2D/3D Perovskite Heterojunctions for Enhanced Stability and Photovoltaic Efficiency. <i>Solar Rrl</i> , 2020, 4, 2000282.	3.1	18
47	A ZIF-8@H:ZnO core-shell nanorod arrays/Si heterojunction self-powered photodetector with ultrahigh performance. <i>Journal of Materials Chemistry C</i> , 2019, 7, 5172-5183.	2.7	15
48	Bulk Heterojunction Quasi-Two-Dimensional Perovskite Solar Cell with 1.18 V High Photovoltage. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 2935-2943.	4.0	13
49	A Trifluoroethoxyl Functionalized Spiro-Based Hole-Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. <i>Solar Rrl</i> , 2022, 6, .	3.1	12
50	Bifunctional Effects of Trichloro(octyl)silane Modification on the Performance and Stability of a Perovskite Solar Cell via Microscopic Characterization Techniques. <i>ACS Applied Energy Materials</i> , 2020, 3, 3302-3309.	2.5	11
51	Trifluoromethylphenylacetic Acid as In Situ Accelerant of Ostwald Ripening for Stable and Efficient Perovskite Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2100040.	3.1	11
52	New Insights into Hot-Charge Relaxation in Lead Halide Perovskite: Dynamical Bandgap Change, Hot-Biexciton Effect, and Photo-Bleaching Shift. <i>ACS Photonics</i> , 2022, 9, 2304-2314.	3.2	10
53	Perovskite Bifunctional Diode with High Photovoltaic and Electroluminescent Performance by Holistic Defect Passivation. <i>Small</i> , 2022, 18, e2105196.	5.2	9
54	Self-assembly of Ni ₂ P nanowires as high-efficiency electrocatalyst for dye-sensitized solar cells. <i>MRS Communications</i> , 2012, 2, 97-99.	0.8	7

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55	Reciprocally Photovoltaic Light-Emitting Diode Based on Dispersive Perovskite Nanocrystal. <i>Small</i> , 2022, 18, e2107145.	5.2	7
56	Si/SnSe-Nanorod Heterojunction with Ultrafast Infrared Detection Enabled by Manipulating Photo-Induced Thermoelectric Behavior. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 24557-24564.	4.0	7
57	Solution-Processed, Barrier-Confined, and 1D Nanostructure Supported Quasi-quantum Well with Large Photoluminescence Enhancement. <i>ACS Nano</i> , 2014, 8, 3771-3780.	7.3	6
58	One-pot Synthesis of Mesoporous TiO ₂ from Self-Assembled Sol Particles and Its Application as Mesoscopic Photoanodes of Dye-Sensitized Solar Cells. <i>ChemPlusChem</i> , 2013, 78, 647-655.	1.3	2
59	Perovskite Solar Cells: Large-Grain Formamidinium PbI ₃ for High-Performance Perovskite Solar Cells via Intermediate Halide Exchange (<i>Adv. Energy Mater.</i> 12/2017). <i>Advanced Energy Materials</i> , 2017, 7, .	10.2	2
60	High efficiency planar perovskite solar cell by surface disorder removal on mesoporous tin oxide. <i>Surfaces and Interfaces</i> , 2022, 28, 101584.	1.5	2
61	Perovskite Solar Cells Processed by Solution Nanotechnology. , 2019, , 119-174.		0
62	Lead Halide Perovskites: Uncovering the Electron-Phonon Interplay and Dynamical Energy Dissipation Mechanisms of Hot Carriers in Hybrid Lead Halide Perovskites (<i>Adv. Energy Mater.</i> 9/2021). <i>Advanced Energy Materials</i> , 2021, 11, 2170036.	10.2	0
63	Precise composition modulation for optimizing NiWO ₄ /Pt/CdS Z-scheme system. <i>Nano Select</i> , 2021, 2, 1974.	1.9	0
64	Reciprocity Relationship of Perovskite Solar Cell and Light-Emitting Diode. , 0, , .		0