# Keyou Yan

List of Publications by Year
in descending order

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|---|---|---|---|
| 64 papers | 5,001 citations | 136740 32 h-index | 114278 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. | 1.5 | 2 |
| 2 | Improving the stability and scalability of all-inorganic inverted CsPbI2Br perovskite solar cell. Journal of Energy Chemistry, 2022, 68, 176-183. | 7.1 | 21 |
| 3 | Reciprocally Photovoltaic Lightâ€Emitting Diode Based on Dispersive Perovskite Nanocrystal. Small, 2022, 18, e2107145. | 5.2 | 7 |
| 4 | A Trifluoroethoxyl Functionalized Spiroâ€Based Holeâ€Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, . | 3.1 | 12 |
| 5 | Perovskite Bifunctional Diode with High Photovoltaic and Electroluminescent Performance by Holistic Defect Passivation. Small, 2022, 18, e2105196. | 5.2 | 9 |
| 6 | Ambient air processed highly oriented perovskite solar cells with efficiency exceeding 23% via amorphous intermediate. Chemical Engineering Journal, 2022, 446, 136968. | 6.6 | 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. | 4.0 | 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. | 3.2 | 10 |
| 9 | Highly electroluminescent and stable inorganic CsPbI2Br perovskite solar cell enabled by balanced charge transfer. Chemical Engineering Journal, 2021, 417, 128053. | 6.6 | 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. | 10.2 | 28 |
| 11 | Trifluoromethylphenylacetic Acid as In Situ Accelerant of Ostwald Ripening for Stable and Efficient Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100040. | 3.1 | 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. | 10.2 | 0 |
| 13 | Precise composition modulation for optimizing NiWO 4 /Pt/CdS Zâ€scheme system. Nano Select, 2021, 2, 1974. | 1.9 | 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. | 5.8 | 20 |
| 15 | Recycling Spent Lead-Acid Batteries into Lead Halide for Resource Purification and Multifunctional Perovskite Diodes. Environmental Science & Technology, 2021, 55, 8309-8317. | 4.6 | 23 |
| 16 | Polymerization stabilized black-phase FAPbI3 perovskite solar cells retain 100% of initial efficiency over 100Âdays. Chemical Engineering Journal, 2021, 419, 129482. | 6.6 | 21 |
| 17 | Quantifying the energy loss for a perovskite solar cell passivated with acetamidine halide. Journal of Materials Chemistry A, 2021, 9, 4781-4788. | 5.2 | 21 |
| 18 | Interlayer Crossâ€Linked 2D Perovskite Solar Cell with Uniform Phase Distribution and Increased Exciton Coupling. Solar Rrl, 2020, 4, 1900578. | 3.1 | 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. | 4.0 | 73 |
| 20 | Cascade Typeâ€II 2D/3D Perovskite Heterojunctions for Enhanced Stability and Photovoltaic Efficiency. Solar Rrl, 2020, 4, 2000282. | 3.1 | 18 |
| 21 | Photothermoelectric SnTe Photodetector with Broad Spectral Response and High On/Off Ratio. ACS Applied Materials & Interfaces, 2020, 12, 49830-49839. | 4.0 | 27 |
| 22 | Precise Control of Perovskite Crystallization Kinetics via Sequential Aâ€Site Doping. Advanced Materials, 2020, 32, e2004630. | 11.1 | 122 |
| 23 | Identifying the functional groups effect on passivating perovskite solar cells. Science Bulletin, 2020, 65, 1726-1734. | 4.3 | 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. | 3.6 | 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. | 2.5 | 11 |
| 26 | Wafer-size growth of 2D layered SnSe films for UV-Visible-NIR photodetector arrays with high responsitivity. Nanoscale, 2020, 12, 7358-7365. | 2.8 | 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. | 4.0 | 53 |
| 28 | Efficient Slantwise Aligned Dionâ€“Jacobson Phase Perovskite Solar Cells Based on Transâ€1,4â€Cyclohexanediamine. Small, 2020, 16, e2003098. | 5.2 | 33 |
| 29 | An Interlayer with Strong Pb-Cl Bond Delivers Ultraviolet-Filter-Free, Efficient, and Photostable Perovskite Solar Cells. IScience, 2019, 21, 217-227. | 1.9 | 43 |
| 30 | Perovskite Bifunctional Device with Improved Electroluminescent and Photovoltaic Performance through Interfacial Energyâ€Band Engineering. Advanced Materials, 2019, 31, e1902543. | 11.1 | 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. | 8.2 | 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. | 2.7 | 15 |
| 34 | 2D SnSe/Si heterojunction for self-driven broadband photodetectors. 2D Materials, 2019, 6, 034004. | 2.0 | 43 |
| 35 | Bulk Heterojunction Quasi-Two-Dimensional Perovskite Solar Cell with 1.18 V High Photovoltage. ACS Applied Materials & Interfaces, 2019, 11, 2935-2943. | 4.0 | 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. | 5.2 | 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. | 5.2 | 82 |
| 38 | Graphene controlled Brewster angle device for ultra broadband terahertz modulation. Nature Communications, 2018, 9, 4909. | 5.8 | 117 |
| 39 | Textured CH3NH3PbI3 thin film with enhanced stability for high performance perovskite solar cells. Nano Energy, 2017, 33, 485-496. | 8.2 | 74 |
| 40 | Largeâ€Grain Formamidinium PbI<sub>3â€“</sub><sub>x</sub>Br<sub>x</sub> for Highâ€Performance Perovskite Solar Cells via Intermediate Halide Exchange. Advanced Energy Materials, 2017, 7, 1601882. | 10.2 | 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. | 10.2 | 74 |
| 42 | Perovskite Solar Cells: Largeâ€Grain Formamidinium PbI<sub>3â€“</sub><sub>x</sub>Br<sub>x</sub> for Highâ€Performance Perovskite Solar Cells via Intermediate Halide Exchange (Adv. Energy Mater. 12/2017). Advanced Energy Materials, 2017, 7, . | 10.2 | 2 |
| 43 | Hybrid graphene tunneling photoconductor with interface engineering towards fast photoresponse and high responsivity. Npj 2D Materials and Applications, 2017, 1, . | 3.9 | 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. | 5.2 | 55 |
| 45 | Nearâ€Infrared Photoresponse of Oneâ€Sided Abrupt MAPbI<sub>3</sub>/TiO<sub>2</sub> Heterojunction through a Tunneling Process. Advanced Functional Materials, 2016, 26, 8545-8554. | 7.8 | 23 |
| 46 | Nonstoichiometric acidâ€“base reaction as reliable synthetic route to highly stable CH3NH3PbI3 perovskite film. Nature Communications, 2016, 7, 13503. | 5.8 | 94 |
| 47 | Facet-Dependent Property of Sequentially Deposited Perovskite Thin Films: Chemical Origin and Self-Annihilation. ACS Applied Materials & Interfaces, 2016, 8, 32366-32375. | 4.0 | 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. | 2.8 | 69 |
| 49 | Enhanced Performance of Polymeric Bulk Heterojunction Solar Cells via Molecular Doping with TFSA. ACS Applied Materials & Interfaces, 2015, 7, 13415-13421. | 4.0 | 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. | 5.2 | 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. | 6.6 | 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. | 5.2 | 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. | 5.2 | 22 |
| 54 | Cost-efficient clamping solar cells using candle soot for hole extraction from ambipolar perovskites. Energy and Environmental Science, 2014, 7, 3326-3333. | 15.6 | 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. | 15.6 | 103 |
| 56 | Unveiling Two Electron-Transport Modes in Oxygen-Deficient TiO<sub>2</sub> Nanowires and Their Influence on Photoelectrochemical Operation. Journal of Physical Chemistry Letters, 2014, 5, 2890-2896. | 2.1 | 55 |
| 57 | Space-Confined Growth of MoS<sub>2</sub> Nanosheets within Graphite: The Layered Hybrid of MoS<sub>2</sub> and Graphene as an Active Catalyst for Hydrogen Evolution Reaction. Chemistry of Materials, 2014, 26, 2344-2353. | 3.2 | 634 |
| 58 | Solution-Processed, Barrier-Confined, and 1D Nanostructure Supported Quasi-quantum Well with Large Photoluminescence Enhancement. ACS Nano, 2014, 8, 3771-3780. | 7.3 | 6 |
| 59 | Mesoporous TiO<sub>2</sub> Single Crystals: Facile Shape-, Size-, and Phase-Controlled Growth and Efficient Photocatalytic Performance. ACS Applied Materials & Interfaces, 2013, 5, 11249-11257. | 4.0 | 116 |
| 60 | Oneâ€pot Synthesis of Mesoporous TiO<sub>2</sub> from Selfâ€Assembled Sol Particles and Its Application as Mesoscopic Photoanodes of Dyeâ€Sensitized Solar Cells. ChemPlusChem, 2013, 78, 647-655. | 1.3 | 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. | 2.8 | 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. | 6.6 | 105 |
| 63 | Self-assembly of Ni2P nanowires as high-efficiency electrocatalyst for dye-sensitized solar cells. MRS Communications, 2012, 2, 97-99. | 0.8 | 7 |
| 64 | Reciprocity Relationship of Perovskite Solar Cell and Light-Emitting Diode. , 0, , . | | 0 |