# Fengren Cao

List of Publications by Year
in descending order

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| | | 87723 | 128067 |
|---|---|---|---|
| 68 | 3,755 | 38 | 60 |
| papers | citations | h-index | g-index |

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|---|---|---|---|
| 68 | 68 | 68 | 4884 |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A Selfâ€Powered and Stable Allâ€Perovskite Photodetectorâ€“Solar Cell Nanosystem. Advanced Functional Materials, 2016, 26, 1296-1302. | 7.8 | 203 |
| 2 | Gradient Energy Band Driven Highâ€Performance Selfâ€Powered Perovskite/CdS Photodetector. Advanced Materials, 2019, 31, e1806725. | 11.1 | 194 |
| 3 | Ultrahighâ€Performance Selfâ€Powered Flexible Doubleâ€Twisted Fibrous Broadband Perovskite Photodetector. Advanced Materials, 2018, 30, e1706986. | 11.1 | 177 |
| 4 | Enhanced Photoelectrochemical Performance from Rationally Designed Anatase/Rutile TiO<sub>2</sub> Heterostructures. ACS Applied Materials & Interfaces, 2016, 8, 12239-12245. | 4.0 | 147 |
| 5 | Three-Dimensional WO<sub>3</sub> Nanoplate/Bi<sub>2</sub>S<sub>3</sub> Nanorod Heterojunction as a Highly Efficient Photoanode for Improved Photoelectrochemical Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 40235-40243. | 4.0 | 139 |
| 6 | Interfacial Chemical Bondâ€Modulated Zâ€Scheme Charge Transfer for Efficient Photoelectrochemical Water Splitting. Advanced Energy Materials, 2021, 11, 2003500. | 10.2 | 127 |
| 7 | Dopingâ€Induced Amorphization, Vacancy, and Gradient Energy Band in SnS<sub>2</sub>Nanosheet Arrays for Improved Photoelectrochemical Water Splitting. Angewandte Chemie - International Edition, 2019, 58, 6761-6765. | 7.2 | 125 |
| 8 | Observing Defect Passivation of the Grain Boundary with 2â€Aminoterephthalic Acid for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 4161-4167. | 7.2 | 122 |
| 9 | Self-Powered, Flexible, and Solution-Processable Perovskite Photodetector Based on Low-Cost Carbon Cloth. Small, 2017, 13, 1701042. | 5.2 | 114 |
| 10 | Simultaneous Manipulation of Oâ€Doping and Metal Vacancy in Atomically Thin Zn<sub>10</sub>In<sub>16</sub>S<sub>34</sub> Nanosheet Arrays toward Improved Photoelectrochemical Performance. Angewandte Chemie - International Edition, 2018, 57, 16882-16887. | 7.2 | 109 |
| 11 | Phaseâ€Modulated Band Alignment in CdS Nanorod/SnS<sub>x</sub> Nanosheet Hierarchical Heterojunctions toward Efficient Water Splitting. Advanced Functional Materials, 2018, 28, 1706785. | 7.8 | 102 |
| 12 | Ultrahighâ€Performance Flexible and Selfâ€Powered Photodetectors with Ferroelectric P(VDFâ€TrFE)/Perovskite Bulk Heterojunction. Advanced Functional Materials, 2019, 29, 1808415. | 7.8 | 85 |
| 13 | Non-noble bimetallic NiMoO 4 nanosheets integrated Si photoanodes for highly efficient and stable solar water splitting. Nano Energy, 2017, 34, 8-14. | 8.2 | 78 |
| 14 | Semitransparent, Flexible, and Selfâ€Powered Photodetectors Based on Ferroelectricityâ€Assisted Perovskite Nanowire Arrays. Advanced Functional Materials, 2019, 29, 1901280. | 7.8 | 78 |
| 15 | PVP Treatment Induced Gradient Oxygen Doping in In<sub>2</sub>S<sub>3</sub> Nanosheet to Boost Solar Water Oxidation of WO<sub>3</sub> Nanoarray Photoanode. Advanced Energy Materials, 2020, 10, 1903951. | 10.2 | 78 |
| 16 | Electrospun YMn2O5 nanofibers: A highly catalytic activity for NO oxidation. Applied Catalysis B: Environmental, 2019, 247, 133-141. | 10.8 | 75 |
| 17 | Flexible and Selfâ€Powered Lateral Photodetector Based on Inorganic Perovskite CsPbI<sub>3</sub>â€“CsPbBr<sub>3</sub> Heterojunction Nanowire Array. Advanced Functional Materials, 2020, 30, 1909771. | 7.8 | 73 |
| 18 | High-performance UVâ€“vis photodetectors based on electrospun ZnO nanofiber-solution processed perovskite hybrid structures. Nano Research, 2017, 10, 2244-2256. | 5.8 | 72 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | TiO<sub>2</sub>/WO<sub>3</sub> Bilayer as Electron Transport Layer for Efficient Planar Perovskite Solar Cell with Efficiency Exceeding 20%. Advanced Materials Interfaces, 2020, 7, 1901406. | 1.9 | 69 |
| 20 | TiO<sub>2</sub> Phase Junction Electron Transport Layer Boosts Efficiency of Planar Perovskite Solar Cells. Advanced Science, 2018, 5, 1700614. | 5.6 | 67 |
| 21 | Designing a Transparent CdIn<sub>2</sub>S<sub>4</sub>/In<sub>2</sub>S<sub>3</sub> Bulkâ€Heterojunction Photoanode Integrated with a Perovskite Solar Cell for Unbiased Water Splitting. Advanced Materials, 2020, 32, e2002893. | 11.1 | 67 |
| 22 | Selfâ€Powered UVâ€“Visâ€“NIR Photodetector Based on Conjugatedâ€Polymer/CsPbBr<sub>3</sub> Nanowire Array. Advanced Functional Materials, 2019, 29, 1906756. | 7.8 | 63 |
| 23 | Moistureâ€Triggered Selfâ€Healing Flexible Perovskite Photodetectors with Excellent Mechanical Stability. Advanced Materials, 2021, 33, e2100625. | 11.1 | 63 |
| 24 | Double Barriers for Moisture Degradation: Assembly of Hydrolysable Hydrophobic Molecules for Stable Perovskite Solar Cells with High Openâ€Circuit Voltage. Advanced Functional Materials, 2020, 30, 2002639. | 7.8 | 61 |
| 25 | PEG Modified CsPbIBr<sub>2</sub> Perovskite Film for Efficient and Stable Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000537. | 1.9 | 60 |
| 26 | Nested Inverse Opal Perovskite toward Superior Flexible and Selfâ€Powered Photodetection Performance. Advanced Materials, 2020, 32, e1906974. | 11.1 | 56 |
| 27 | Stability enhancement of leadâ€free CsSnI<sub>3</sub> perovskite photodetector with reductive ascorbic acid additive. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 577-584. | 8.5 | 56 |
| 28 | Ultrathin Amorphous Ni(OH)<sub>2</sub> Nanosheets on Ultrathin Î±â€Fe<sub>2</sub>O<sub>3</sub> Films for Improved Photoelectrochemical Water Oxidation. Advanced Materials Interfaces, 2016, 3, 1600256. | 1.9 | 53 |
| 29 | Progress of Leadâ€Free Halide Perovskites: From Material Synthesis to Photodetector Application. Advanced Functional Materials, 2021, 31, 2008275. | 7.8 | 52 |
| 30 | A multijunction of ZnIn2S4 nanosheet/TiO2 film/Si nanowire for significant performance enhancement of water splitting. Nano Research, 2015, 8, 3524-3534. | 5.8 | 51 |
| 31 | Adduct phases induced controlled crystallization for mixed-cation perovskite solar cells with efficiency over 21%. Nano Energy, 2019, 63, 103867. | 8.2 | 48 |
| 32 | 2D Ruddlesdenâ€“Popper Perovskite with Ordered Phase Distribution for Highâ€Performance Selfâ€Powered Photodetectors. Advanced Materials, 2021, 33, e2101714. | 11.1 | 48 |
| 33 | Interface reacted ZnFe<sub>2</sub>O<sub>4</sub> on Î±-Fe<sub>2</sub>O<sub>3</sub> nanoarrays for largely improved photoelectrochemical activity. RSC Advances, 2015, 5, 79440-79446. | 1.7 | 47 |
| 34 | Novel perovskite/TiO2/Si trilayer heterojunctions for high-performance self-powered ultraviolet-visible-near infrared (UV-Vis-NIR) photodetectors. Nano Research, 2018, 11, 1722-1730. | 5.8 | 47 |
| 35 | Intermediateâ€Adductâ€Assisted Growth of Stable CsPbI<sub>2</sub>Br Inorganic Perovskite Films for Highâ€Efficiency Semitransparent Solar Cells. Advanced Materials, 2021, 33, e2006745. | 11.1 | 47 |
| 36 | Hybrid Nanostructures for Photodetectors. Advanced Optical Materials, 2017, 5, 1600468. | 3.6 | 43 |

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|---|---|---|---|
| 37 | Atomic Snâ€“enabled high-utilization, large-capacity, and long-life Na anode. Science Advances, 2022, 8, eabm7489. | 4.7 | 42 |
| 38 | Partial Ion Exchange Derived 2D Cuâ€“Znâ€“Inâ€“S Nanosheets as Sensitizers of 1D TiO<sub>2</sub> Nanorods for Boosting Solar Water Splitting. ACS Applied Materials & Interfaces, 2016, 8, 26235-26243. | 4.0 | 40 |
| 39 | TiO2 ALD decorated CuO/BiVO4 p-n heterojunction for improved photoelectrochemical water splitting. Journal of Materials Science and Technology, 2019, 35, 1740-1746. | 5.6 | 40 |
| 40 | Enhancing photoelectrochemical activity with three-dimensional p-CuO/n-ZnO junction photocathodes. Science China Materials, 2016, 59, 825-832. | 3.5 | 35 |
| 41 | Boosting Efficiency and Stability of Perovskite Solar Cells with CdS Inserted at TiO<sub>2</sub>/Perovskite Interface. Advanced Materials Interfaces, 2016, 3, 1600729. | 1.9 | 35 |
| 42 | New Insights into the Electron-Collection Efficiency Improvement of CdS-Sensitized TiO<sub>2</sub> Nanorod Photoelectrodes by Interfacial Seed-Layer Mediation. ACS Applied Materials & Interfaces, 2019, 11, 8126-8137. | 4.0 | 34 |
| 43 | Highâ€Performance Flexible Selfâ€Powered Photodetector Based on Perovskite and Lowâ€Temperature Processed In<sub>2</sub>S<sub>3</sub> Nanoflake Film. Advanced Materials Interfaces, 2019, 6, 1801526. | 1.9 | 33 |
| 44 | Polarized Ferroelectric Field-Enhanced Self-Powered Perovskite Photodetector. ACS Photonics, 2018, 5, 3731-3738. | 3.2 | 31 |
| 45 | <scp>Selfâ€powered</scp> bifunctional perovskite photodetectors with both broadband and narrowband photoresponse. InformaÄnÃ-MateriÃ¡ly, 2022, 4, . | 8.5 | 31 |
| 46 | Structural Engineering of Si/TiO<sub>2</sub>/P3HT Heterojunction Photodetectors for a Tunable Response Range. ACS Applied Materials & Interfaces, 2019, 11, 3241-3250. | 4.0 | 30 |
| 47 | Ternary non-noble metal zinc-nickel-cobalt carbonate hydroxide cocatalysts toward highly efficient photoelectrochemical water splitting. Journal of Materials Science and Technology, 2018, 34, 899-904. | 5.6 | 28 |
| 48 | Efficient p-type dye-sensitized solar cells with all-nano-electrodes: NiCo2S4 mesoporous nanosheet counter electrodes directly converted from NiCo2O4 photocathodes. Nanoscale Research Letters, 2014, 9, 608. | 3.1 | 27 |
| 49 | Si/CuIn<sub>0.7</sub>Ga<sub>0.3</sub>Se<sub>2</sub> Coreâ€“Shell Heterojunction for Sensitive and Selfâ€Driven UVâ€“visâ€“NIR Broadband Photodetector. Advanced Optical Materials, 2019, 7, 1900023. | 3.6 | 25 |
| 50 | Dopingâ€Induced Amorphization, Vacancy, and Gradient Energy Band in SnS<sub>2</sub>Nanosheet Arrays for Improved Photoelectrochemical Water Splitting. Angewandte Chemie, 2019, 131, 6833-6837. | 1.6 | 23 |
| 51 | Ethylamine Iodide Additive Enables Solidâ€toâ€Solid Transformed Highly Oriented Perovskite for Excellent Photodetectors. Advanced Materials, 2022, 34, e2108569. | 11.1 | 23 |
| 52 | Laserâ€Manufactured Metastable Supranano SnO<sub>x</sub> for Efficient Electron/Ion Bridging in SnO<sub>2</sub>â€Graphene Heterostructure Boosting Lithium Storage. Advanced Functional Materials, 2021, 31, 2101059. | 7.8 | 22 |
| 53 | Simultaneous Manipulation of Oâ€Doping and Metal Vacancy in Atomically Thin Zn<sub>10</sub>In<sub>16</sub>S<sub>34</sub> Nanosheet Arrays toward Improved Photoelectrochemical Performance. Angewandte Chemie, 2018, 130, 17124-17129. | 1.6 | 19 |
| 54 | Graded energy band engineering for efficient perovskite solar cells. Nano Select, 2020, 1, 152-168. | 1.9 | 19 |

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|---|---|---|---|
| 55 | Polypyrrole Serving as Multifunctional Surface Modifier for Photoanode Enables Efficient Photoelectrochemical Water Oxidation. Small, 2022, 18, e2105240. | 5.2 | 19 |
| 56 | Structure and Band Alignment Engineering of CdS/TiO<sub>2</sub>/Bi<sub>2</sub>WO<sub>6</sub> Trilayer Nanoflake Array for Efficient Photoelectrochemical Water Splitting. ChemElectroChem, 2019, 6, 5248-5254. | 1.7 | 15 |
| 57 | Ion Sputteringâ€“Assisted Doubleâ€Side Interfacial Engineering for CdIn<sub>2</sub>S<sub>4</sub> Photoanode toward Improved Photoelectrochemical Water Splitting. Advanced Materials Interfaces, 2020, 7, 1901947. | 1.9 | 15 |
| 58 | Thiamine additive engineering enables improved film formation towards high efficiency and moisture stability in perovskite solar cells. Science China Materials, 2022, 65, 321-327. | 3.5 | 14 |
| 59 | Metal Halide Perovskite Nano/Microwires. Small Structures, 2022, 3, 2100165. | 6.9 | 14 |
| 60 | Loading Amorphous NiMoO<sub>4â€“x</sub>S<sub>x</sub> Nanosheet Cocatalyst to Improve Performance of p-Silicon Wafer Photocathode. ACS Applied Energy Materials, 2018, 1, 1286-1293. | 2.5 | 9 |
| 61 | Degradation mechanism and stability improvement of formamidine-based perovskite solar cells under high humidity conditions. Nano Research, 2022, 15, 8955-8961. | 5.8 | 8 |
| 62 | Photoelectrochemical water splitting using TiO2 nanorod arrays coated with Zn-doped CdS. Journal of Materials Science, 2021, 56, 11059-11070. | 1.7 | 7 |
| 63 | Boosting PEC performance of Si photoelectrodes by coupling bifunctional CuCo hybrid oxide cocatalysts. Nanotechnology, 2018, 29, 425703. | 1.3 | 6 |
| 64 | Ordered array structures for efficient perovskite solar cells. Engineering Reports, 2020, 2, e12319. | 0.9 | 6 |
| 65 | Laserâ€Manufactured Metastable Supranano SnO<sub>x</sub> for Efficient Electron/Ion Bridging in SnO<sub>2</sub>â€Graphene Heterostructure Boosting Lithium Storage (Adv. Funct. Mater.) Tj ETQq1 1 0.784314 rgBT | 17.3 | 5 |
| 66 | Wrapping BiVO4 with chlorophyll for greatly improved photoelectrochemical performance and stability. Science China Materials, 2022, 65, 1512-1521. | 3.5 | 3 |
| 67 | 2D Ruddlesdenâ€“Popper Perovskite with Ordered Phase Distribution for Highâ€Performance Selfâ€Powered Photodetectors (Adv. Mater. 35/2021). Advanced Materials, 2021, 33, 2170274. | 11.1 | 1 |
| 68 | Metal Halide Perovskite Nano/Microwires. Small Structures, 2022, 3, . | 6.9 | 0 |