Xiaosheng Fang

List of Publications by Citations

170 papers	17,153 citations	74 h-index	129 g-index
181 ext. papers	20,428 ext. citations	13.6 avg, IF	7.38 L-index

#	Paper	IF	Citations
170	ZnS nanostructures: From synthesis to applications. *Progress in Materials Science*, **2011**, 56, 175-287	42.2	957
169	Inorganic semiconductor nanostructures and their field-emission applications. *Journal of Materials Chemistry*, **2008**, 18, 509-522		538
168	Single-Crystalline ZnS Nanobelts as Ultraviolet-Light Sensors. *Advanced Materials*, **2009**, 21, 2034-2039	24	479
167	An Ultrahigh Responsivity (9.7 mA W□) Self-Powered Solar-Blind Photodetector Based on Individual ZnO□a2O3 Heterostructures. *Advanced Functional Materials*, **2017**, 27, 1700264	15.6	441
166	New concept ultraviolet photodetectors. *Materials Today*, **2015**, 18, 493-502	21.8	428
165	A comprehensive review of one-dimensional metal-oxide nanostructure photodetectors. *Sensors*, **2009**, 9, 6504-29	3.8	421
164	Hierarchical MoS2 Nanosheet@TiO2 Nanotube Array Composites with Enhanced Photocatalytic and Photocurrent Performances. *Small*, **2016**, 12, 1527-36	11	387
163	Nanostructured Photodetectors: From Ultraviolet to Terahertz. *Advanced Materials*, **2016**, 28, 403-33	24	376
162	An optimized ultraviolet-A light photodetector with wide-range photoresponse based on ZnS/ZnO biaxial nanobelt. *Advanced Materials*, **2012**, 24, 2305-9	24	375
161	Single-crystalline CdS nanobelts for excellent field-emitters and ultrahigh quantum-efficiency photodetectors. *Advanced Materials*, **2010**, 22, 3161-5	24	311
160	One-Step Hydrothermal Synthesis of 2D Hexagonal Nanoplates of □Fe2O3/Graphene Composites with Enhanced Photocatalytic Activity. *Advanced Functional Materials*, **2014**, 24, 5719-5727	15.6	289
159	Low-dimensional nanostructure ultraviolet photodetectors. *Advanced Materials*, **2013**, 25, 5321-8	24	288
158	Recent Developments in One-Dimensional Inorganic Nanostructures for Photodetectors. *Advanced Functional Materials*, **2010**, 20, 4233-4248	15.6	277
157	ZnO and ZnS Nanostructures: Ultraviolet-Light Emitters, Lasers, and Sensors. *Critical Reviews in Solid State and Materials Sciences*, **2009**, 34, 190-223	10.1	274
156	ZnS nanostructure arrays: a developing material star. *Advanced Materials*, **2011**, 23, 585-98	24	264
155	High Performance BiOCl Nanosheets/TiO2 Nanotube Arrays Heterojunction UV Photodetector: The Influences of Self-Induced Inner Electric Fields in the BiOCl Nanosheets. *Advanced Functional Materials*, **2018**, 28, 1707178	15.6	262
154	Electrical Transport Properties of Large, Individual NiCo2O4 Nanoplates. *Advanced Functional Materials*, **2012**, 22, 998-1004	15.6	261

153	Solar-Blind Avalanche Photodetector Based On Single ZnO-Ga□□Core-Shell Microwire. *Nano Letters*, **2015**, 15, 3988-93	11.5	258
152	New Ultraviolet Photodetector Based on Individual Nb2O5 Nanobelts. *Advanced Functional Materials*, **2011**, 21, 3907-3915	15.6	257
151	Novel Transparent and Self-Powered UV Photodetector Based on Crossed ZnO Nanofiber Array Homojunction. *Small*, **2018**, 14, e1703754	11	254
150	A Novel Sustainable Flour Derived Hierarchical Nitrogen-Doped Porous Carbon/Polyaniline Electrode for Advanced Asymmetric Supercapacitors. *Advanced Energy Materials*, **2016**, 6, 1601111	21.8	241
149	Ultrahigh external quantum efficiency from thin SnO2 nanowire ultraviolet photodetectors. *Small*, **2011**, 7, 1012-7	11	235
148	Photoelectric Detectors Based on Inorganic p-Type Semiconductor Materials. *Advanced Materials*, **2018**, 30, e1706262	24	221
147	Controlled Growth from ZnS Nanoparticles to ZnS□CdS Nanoparticle Hybrids with Enhanced Photoactivity. *Advanced Functional Materials*, **2015**, 25, 445-454	15.6	219
146	An Efficient Way to Assemble ZnS Nanobelts as Ultraviolet-Light Sensors with Enhanced Photocurrent and Stability. *Advanced Functional Materials*, **2010**, 20, 500-508	15.6	206
145	Enhancing the Photoelectric Performance of Photodetectors Based on Metal Oxide Semiconductors by Charge-Carrier Engineering. *Advanced Functional Materials*, **2019**, 29, 1807672	15.6	201
144	Synthesis and Development of Graphene-Inorganic Semiconductor Nanocomposites. *Chemical Reviews*, **2015**, 115, 8294-343	68.1	199
143	Efficient Self-Assembly Synthesis of Uniform CdS Spherical Nanoparticles-Au Nanoparticles Hybrids with Enhanced Photoactivity. *Advanced Functional Materials*, **2014**, 24, 3725-3733	15.6	195
142	A Real-Time Wearable UV-Radiation Monitor based on a High-Performance p-CuZnS/n-TiO Photodetector. *Advanced Materials*, **2018**, 30, e1803165	24	194
141	ZnO hollow-sphere nanofilm-based high-performance and low-cost photodetector. *Small*, **2011**, 7, 2449-53	11	186
140	Ultrasensitive Self-Powered Solar-Blind Deep-Ultraviolet Photodetector Based on All-Solid-State Polyaniline/MgZnO Bilayer. *Small*, **2016**, 12, 5809-5816	11	186
139	Energy Harvesting for Nanostructured Self-Powered Photodetectors. *Advanced Functional Materials*, **2014**, 24, 2591-2610	15.6	177
138	Structure and cathodoluminescence of individual ZnS/ZnO biaxial nanobelt heterostructures. *Nano Letters*, **2008**, 8, 2794-9	11.5	173
137	Materials and Designs for Wearable Photodetectors. *Advanced Materials*, **2019**, 31, e1808138	24	172
136	From nanofibers to ordered ZnO/NiO heterojunction arrays for self-powered and transparent UV photodetectors. *Journal of Materials Chemistry C*, **2019**, 7, 223-229	7.1	167

135	Novel Composites of □Fe2O3 Tetrakaidecahedron and Graphene Oxide as an Effective Photoelectrode with Enhanced Photocurrent Performances. *Advanced Functional Materials*, **2016**, 26, 3331-3339	15.6	165
134	High-Performance Silicon-Compatible Large-Area UV-to-Visible Broadband Photodetector Based on Integrated Lattice-Matched Type II Se/n-Si Heterojunctions. *Nano Letters*, **2018**, 18, 4697-4703	11.5	153
133	Silicon-Compatible Photodetectors: Trends to Monolithically Integrate Photosensors with Chip Technology. *Advanced Functional Materials*, **2019**, 29, 1808182	15.6	149
132	Novel UV-Visible Photodetector in Photovoltaic Mode with Fast Response and Ultrahigh Photosensitivity Employing Se/TiO Nanotubes Heterojunction. *Small*, **2017**, 13, 1602448	11	145
131	High-Performance Trifunctional Electrocatalysts Based on FeCo/Co2P Hybrid Nanoparticles for Zinc□Air Battery and Self-Powered Overall Water Splitting. *Advanced Energy Materials*, **2020**, 10, 1903854	21.8	143
130	Binary response Se/ZnO p-n heterojunction UV photodetector with high on/off ratio and fast speed. *Laser and Photonics Reviews*, **2017**, 11, 1600257	8.3	142
129	Self-Powered Ultraviolet Photodetectors Driven by Built-In Electric Field. *Small*, **2017**, 13, 1701687	11	139
128	Low-Dimensional Metal Halide Perovskite Photodetectors. *Advanced Materials*, **2021**, 33, e2003309	24	138
127	Self-Powered Dual-Color UV-Green Photodetectors Based on SnO Millimeter Wire and Microwires/CsPbBr Particle Heterojunctions. *Journal of Physical Chemistry Letters*, **2019**, 10, 836-841	6.4	133
126	Photo/Electrochemical Applications of Metal Sulfide/TiO2 Heterostructures. *Advanced Energy Materials*, **2020**, 10, 1902355	21.8	133
125	2D Perovskite Sr Nb O for High-Performance UV Photodetectors. *Advanced Materials*, **2020**, 32, e1905442	24	133
124	Recent Progress of Heterojunction Ultraviolet Photodetectors: Materials, Integrations, and Applications. *Advanced Functional Materials*, **2020**, 30, 1909909	15.6	132
123	Stacking-order-dependent optoelectronic properties of bilayer nanofilm photodetectors made from hollow ZnS and ZnO microspheres. *Advanced Materials*, **2012**, 24, 5872-7	24	125
122	Thin SnO2 Nanowires with Uniform Diameter as Excellent Field Emitters: A Stability of More Than 2400 Minutes. *Advanced Functional Materials*, **2012**, 22, 1613-1622	15.6	125
121	General Fabrication of Monolayer SnO2 Nanonets for High-Performance Ultraviolet Photodetectors. *Advanced Functional Materials*, **2012**, 22, 1229-1235	15.6	120
120	MXene-Contacted Silicon Solar Cells with 11.5% Efficiency. *Advanced Energy Materials*, **2019**, 9, 1900180	21.8	117
119	Novel Route to Fe-Based Cathode as an Efficient Bifunctional Catalysts for Rechargeable Zn□Air Battery. *Advanced Energy Materials*, **2018**, 8, 1800955	21.8	114
118	Enhanced Field Emission Performance of ZnO Nanorods by Two Alternative Approaches. *Journal of Physical Chemistry C*, **2007**, 111, 12673-12676	3.8	112

117	Large scale, highly efficient and self-powered UV photodetectors enabled by all-solid-state n-TiO2 nanowell/p-NiO mesoporous nanosheet heterojunctions. *Journal of Materials Chemistry C*, **2016**, 4, 10032-10039	7.1	110
116	Nickel Cobaltite Nanostructures for Photoelectric and Catalytic Applications. *Small*, **2015**, 11, 4267-83	11	105
115	Piezo-Phototronic Effect Modulated Deep UV Photodetector Based on ZnO-Ga2O3 Heterojuction Microwire. *Advanced Functional Materials*, **2018**, 28, 1706379	15.6	101
114	Novel p□ Heterojunctions Self-Powered Broadband Photodetectors with Ultrafast Speed and High Responsivity. *Advanced Functional Materials*, **2017**, 27, 1703166	15.6	101
113	Growth and Device Application of CdSe Nanostructures. *Advanced Functional Materials*, **2012**, 22, 1551-1566	15.6	101
112	Highly stable and spectrum-selective ultraviolet photodetectors based on lead-free copper-based perovskites. *Materials Horizons*, **2020**, 7, 530-540	14.4	99
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110	WO3 nanowires on carbon papers: electronic transport, improved ultraviolet-light photodetectors and excellent field emitters. *Journal of Materials Chemistry*, **2011**, 21, 6525		97
109	Self-Powered MXene/GaN van der Waals Heterojunction Ultraviolet Photodiodes with Superhigh Efficiency and Stable Current Outputs. *Advanced Materials*, **2021**, 33, e2101059	24	97
108	Broadband Photoresponse Enhancement of a High-Performance t-Se Microtube Photodetector by Plasmonic Metallic Nanoparticles. *Advanced Functional Materials*, **2016**, 26, 6641-6648	15.6	94
107	A surface oxide thin layer of copper nanowires enhanced the UV selective response of a ZnO film photodetector. *Journal of Materials Chemistry C*, **2016**, 4, 8416-8421	7.1	91
106	Crystallinity-Controlled Germanium Nanowire Arrays: Potential Field Emitters. *Advanced Functional Materials*, **2008**, 18, 1080-1088	15.6	89
105	New UV-A Photodetector Based on Individual Potassium Niobate Nanowires with High Performance. *Advanced Optical Materials*, **2014**, 2, 771-778	8.1	88
104	Hexagonal-like Nb□□ nanoplates-based photodetectors and photocatalyst with high performances. *Scientific Reports*, **2015**, 5, 7716	4.9	88
103	ZnO Film UV Photodetector with Enhanced Performance: Heterojunction with CdMoO Microplates and the Hot Electron Injection Effect of Au Nanoparticles. *Small*, **2017**, 13, 1702177	11	84
102	One-dimensional inorganic semiconductor nanostructures: A new carrier for nanosensors. *Pure and Applied Chemistry*, **2010**, 82, 2185-2198	2.1	81
101	Shell-thickness dependent electron transfer and relaxation in type-II core□shell CdS/TiO2 structures with optimized photoelectrochemical performance. *Journal of Materials Chemistry A*, **2015**, 3, 22627-22635	13	78
100	Flexible Devices: Extremely Stable Current Emission of P-Doped SiC Flexible Field Emitters (Adv. Sci. 1/2016). *Advanced Science*, **2016**, 3,	13.6	78

99	Chemical Bath Deposition of p-Type Transparent, Highly Conducting (CuS)x:(ZnS)1-x Nanocomposite Thin Films and Fabrication of Si Heterojunction Solar Cells. *Nano Letters*, **2016**, 16, 1925-32	11.5	77
98	Facet-Dependent, Fast Response, and Broadband Photodetector Based on Highly Stable All-Inorganic CsCu2I3 Single Crystal with 1D Electronic Structure. *Advanced Functional Materials*, **2020**, 30, 2002634	15.6	75
97	Orthogonal Lithography for Halide Perovskite Optoelectronic Nanodevices. *ACS Nano*, **2019**, 13, 1168-1176	13.7	74
96	Crystal orientation-ordered ZnS nanobelt quasi-arrays and their enhanced field-emission. *Chemical Communications*, **2007**, 3048-50	5.8	72
95	Millimeter-Sized Single-Crystal CsPbrB/CuI Heterojunction for High-Performance Self-Powered Photodetector. *Journal of Physical Chemistry Letters*, **2019**, 10, 2400-2407	6.4	71
94	Solution-Processed Self-Powered Transparent Ultraviolet Photodetectors with Ultrafast Response Speed for High-Performance Communication System. *Advanced Functional Materials*, **2019**, 29, 1809013	15.6	67
93	Bio-inspired transparent MXene electrodes for flexible UV photodetectors. *Materials Horizons*, **2020**, 7, 1828-1833	14.4	67
92	Uniform carbon-coated CdS core–shell nanostructures: synthesis, ultrafast charge carrier dynamics, and photoelectrochemical water splitting. *Journal of Materials Chemistry A*, **2016**, 4, 1078-1086	13	66
91	Solution-processed one-dimensional CsCu2I3 nanowires for polarization-sensitive and flexible ultraviolet photodetectors. *Materials Horizons*, **2020**, 7, 1613-1622	14.4	64
90	Heteroepitaxial growth of GaP/ZnS nanocable with superior optoelectronic response. *Nano Letters*, **2013**, 13, 1941-7	11.5	64
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88	High Responsivity and High Rejection Ratio of Self-Powered Solar-Blind Ultraviolet Photodetector Based on PEDOT:PSS/□GaO Organic/Inorganic p-n Junction. *Journal of Physical Chemistry Letters*, **2019**, 10, 6850-6856	6.4	62
87	Switch type PANI/ZnO core-shell microwire heterojunction for UV photodetection. *Journal of Materials Science and Technology*, **2021**, 105, 259-259	9.1	60
86	Cathodoluminescence Modulation of ZnS Nanostructures by Morphology, Doping, and Temperature. *Advanced Functional Materials*, **2013**, 23, 3701-3709	15.6	59
85	Efficiency enhancement of TiO2 self-powered UV photodetectors using a transparent Ag nanowire electrode. *Journal of Materials Chemistry C*, **2018**, 6, 3334-3340	7.1	56
84	Design Principles and Material Engineering of ZnS for Optoelectronic Devices and Catalysis. *Advanced Functional Materials*, **2018**, 28, 1802029	15.6	52
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82	Wavelength-Tunable Electroluminescent Light Sources from Individual Ga-Doped ZnO Microwires. *Small*, **2017**, 13, 1604034	11	50

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78	Self-powered UV photodetectors based on ZnO nanomaterials. *Applied Physics Reviews*, **2021**, 8, 031315	17.3	47
77	Robust and Stable Ratiometric Temperature Sensor Based on ZnInS Quantum Dots with Intrinsic Dual-Dopant Ion Emissions. *Advanced Functional Materials*, **2016**, 26, 7224-7233	15.6	43
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71	Si nanowire semisphere-like ensembles as field emitters. *Chemical Communications*, **2007**, 4093-5	5.8	39
70	Cross-Bar SnO2-NiO Nanofiber-Array-Based Transparent Photodetectors with High Detectivity. *Advanced Electronic Materials*, **2020**, 6, 1901048	6.4	39
69	Designed growth and patterning of perovskite nanowires for lasing and wide color gamut phosphors with long-term stability. *Nano Energy*, **2020**, 73, 104801	17.1	39
68	Self-Powered Flexible TiO2 Fibrous Photodetectors: Heterojunction with P3HT and Boosted Responsivity and Selectivity by Au Nanoparticles. *Advanced Functional Materials*, **2020**, 30, 2001604	15.6	38
67	High-Performance Two-Dimensional Perovskite CaNbO UV Photodetectors. *Nano Letters*, **2021**, 21, 382-388	11.5	38
66	High-Performance SiC Nanobelt Photodetectors with Long-Term Stability Against 300 °C up to 180 Days. *Advanced Functional Materials*, **2019**, 29, 1806250	15.6	36
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61	Fabrication of 1D Te/2D ReS Mixed-Dimensional van der Waals Heterojunction for High-Performance Phototransistor. *ACS Nano*, **2021**, 15, 3241-3250	16.7	30
60	Tunable self-powered n-SrTiO3 photodetectors based on varying CuS-ZnS nanocomposite film (p-CuZnS, p-CuS, and n-ZnS). *Informa□□Materi□y*, **2019**, 1, 542-551	23.1	28
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52	All-Solid-State On-Chip Supercapacitors Based on Free-Standing 4H-SiC Nanowire Arrays. *Advanced Energy Materials*, **2019**, 9, 1900073	21.8	22
51	A Paper-Based Wearable Photodetector for Simultaneous UV Intensity and Dosage Measurement. *Advanced Functional Materials*, **2021**, 31, 2100026	15.6	22
50	Novel □Shaped Core□Shell Photodetector with High Ultraviolet Selectivity and Enhanced Responsivity. *Advanced Functional Materials*, **2017**, 27, 1704477	15.6	21
49	Thermal stability of CsPbBr3 perovskite as revealed by in situ transmission electron microscopy. *APL Materials*, **2019**, 7, 071110	5.7	21
48	Interface Engineering Ti C MXene/Silicon Self-Powered Photodetectors with High Responsivity and Detectivity for Weak Light Applications. *Small*, **2021**, 17, e2100439	11	21
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39	Raman selection rule for surface optical phonons in ZnS nanobelts. *Nanoscale*, **2016**, 8, 5954-8	7.7	14
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35	Application of Nanostructured TiO in UV Photodetectors: A Review.. *Advanced Materials*, **2022**, e2109083	24	12
34	High performance polarization-sensitive self-powered imaging photodetectors based on a p-Te/n-MoSe van der Waals heterojunction with strong interlayer transition. *Materials Horizons*, **2021**, 8, 3113-3123	14.4	12
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31	Boosted Responsivity and Tunable Spectral Response in B-Site Substituted 2D Ca2Nb3□TaxO10 Perovskite Photodetectors. *Advanced Functional Materials*, **2021**, 31, 2101480	15.6	11
30	All-Organic Self-Powered Photodetector with Ultra-Flexible Dual-Polarity Output for Bio-Signal Detection. *Advanced Materials*,2201303	24	11
29	Polarization Sensitive Solar-Blind Ultraviolet Photodetectors Based on Ultrawide Bandgap KNb 3 O 8 Nanobelt with Fringe-Like Atomic Lattice. *Advanced Functional Materials*,2111673	15.6	10
28	Facile fabrication of heterostructure with p-BiOCl nanoflakes and n-ZnO thin film for UV photodetectors. *Journal of Semiconductors*, **2021**, 42, 052301	2.3	10

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25	Ultrathin 2D NbWO Perovskite Semiconductor Based Gas Sensors with Ultrahigh Selectivity under Low Working Temperature. *Advanced Materials*, **2021**, e2104958	24	8
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23	Highly Crystallized Tin Dioxide Microwires toward Ultraviolet Photodetector and Humidity Sensor with High Performances. *Advanced Electronic Materials*,2100706	6.4	7
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21	Crystallography-derived optoelectronic and photovoltaic properties of CsPbBr3 perovskite single crystals as revealed by in situ transmission electron microscopy. *Applied Materials Today*, **2020**, 20, 100788	6.6	5
20	Ultralight and robust carbon nanofiber aerogels for advanced energy storage. *Journal of Materials Chemistry A*, **2021**, 9, 900-907	13	5
19	A transparent, self-powered photodetector based on p-CuI/n-TiO2 heterojunction film with high on-off ratio. *Nanotechnology*, **2021**,	3.4	4
18	Structural evolution of Ag/BN hybrids via a polyol-assisted fabrication process and their catalytic activity in CO oxidation. *Catalysis Science and Technology*, **2019**, 9, 6460-6470	5.5	4
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