

Chao Xie

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

76 papers	4,933 citations	37 h-index	70 g-index
79 ext. papers	5,818 ext. citations	8.8 avg, IF	6.06 L-index

#	Paper	IF	Citations
76	Ti3C2Tx MXene/Ge 2D/3D van der Waals heterostructures as highly efficient and fast response near-infrared photodetectors. <i>Applied Physics Letters</i> , 2022 , 120, 141103	3.4	2
75	Fabrication of Addressable Perovskite Film Arrays for High-Performance Photodetection and Real-Time Image Sensing Application. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 2930-2936	6.4	11
74	Enhanced Light Trapping in Conformal CuO/Si Microholes Array Heterojunction for Self-Powered Broadband Photodetection. <i>IEEE Electron Device Letters</i> , 2021 , 42, 883-886	4.4	3
73	Patterned growth of Ga_2O_3 thin films for solar-blind deep-ultraviolet photodetectors array and optical imaging application. <i>Journal of Materials Science and Technology</i> , 2021 , 72, 189-196	9.1	28
72	Construction of PtSe/Ge heterostructure-based short-wavelength infrared photodetector array for image sensing and optical communication applications. <i>Nanoscale</i> , 2021 , 13, 7606-7612	7.7	8
71	Multilayered PdTe/GaN Heterostructures for Visible-Blind Deep-Ultraviolet Photodetection. <i>IEEE Electron Device Letters</i> , 2021 , 42, 1192-1195	4.4	4
70	Multilayered PtSe ₂ /pyramid-Si heterostructure array with light confinement effect for high-performance photodetection, image sensing and light trajectory tracking applications. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 2823-2832	7.1	5
69	A SERS stamp: Multiscale coupling effect of silver nanoparticles and highly ordered nano-micro hierarchical substrates for ultrasensitive explosive detection. <i>Sensors and Actuators B: Chemical</i> , 2020 , 321, 128543	8.5	13
68	Highly Sensitive Narrowband Si Photodetector With Peak Response at Around 1060 nm. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3211-3214	2.9	15
67	Controlled synthesis of GaSe microbelts for high-gain photodetectors induced by the electron trapping effect. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 5375-5379	7.1	5
66	High-performance light trajectory tracking and image sensing devices based on a $\text{In}_2\text{Se}_3/\text{GaAs}$ heterostructure. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 13762-13769	7.1	3
65	Perovskite-Based Phototransistors and Hybrid Photodetectors. <i>Advanced Functional Materials</i> , 2020 , 30, 1903907	15.6	127
64	Self-Powered Filterless Narrow-Band p-n Heterojunction Photodetector for Low Background Limited Near-Infrared Image Sensor Application. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 21845-21853	9.5	18
63	Catalyst-Free Vapor-Solid Deposition Growth of Ga_2O_3 Nanowires for DUV Photodetector and Image Sensor Application. <i>Advanced Optical Materials</i> , 2019 , 7, 1901257	8.1	21
62	Sensitive Deep Ultraviolet Photodetector and Image Sensor Composed of Inorganic Lead-Free CsCuI Perovskite with Wide Bandgap. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 5343-5350	6.4	99
61	Defect-induced broadband photodetection of layered In_2Se_3 nanofilm and its application in near infrared image sensors. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 11532-11539	7.1	20
60	Inorganic CsBi ₃ I ₁₀ perovskite/silicon heterojunctions for sensitive, self-driven and air-stable NIR photodetectors. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 863-870	7.1	34

59	Opening the Band Gap of Graphene via Fluorination for High-Performance Dual-Mode Photodetector Application. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 21702-21710	9.5	14
58	A Highly Sensitive Perovskite/Organic Semiconductor Heterojunction Phototransistor and Its Device Optimization Utilizing the Selective Electron Trapping Effect. <i>Advanced Optical Materials</i> , 2019 , 7, 1900272	8.1	25
57	PdSe ₂ Multilayer on Germanium Nanocones Array with Light Trapping Effect for Sensitive Infrared Photodetector and Image Sensing Application. <i>Advanced Functional Materials</i> , 2019 , 29, 1900849	15.6	66
56	Asymmetric Contact-Induced Self-Driven Perovskite-Microwire-Array Photodetectors. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900135	6.4	27
55	A high-performance near-infrared light photovoltaic detector based on a multilayered PtSe ₂ /Ge heterojunction. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 5019-5027	7.1	38
54	Graphene-Assisted Growth of Patterned Perovskite Films for Sensitive Light Detector and Optical Image Sensor Application. <i>Small</i> , 2019 , 15, e1900730	11	31
53	Recent Progress in Solar-Blind Deep-Ultraviolet Photodetectors Based on Inorganic Ultrawide Bandgap Semiconductors. <i>Advanced Functional Materials</i> , 2019 , 29, 1806006	15.6	189
52	Ultrawide-Bandgap Semiconductors: Recent Progress in Solar-Blind Deep-Ultraviolet Photodetectors Based on Inorganic Ultrawide Bandgap Semiconductors (Adv. Funct. Mater. 9/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970057	15.6	2
51	Characterization of structural transitions and lattice dynamics of hybrid organic/inorganic perovskite CH ₃ NH ₃ PbI ₃ . <i>Chinese Physics B</i> , 2019 , 28, 076102	1.2	7
50	Photodetectors: Controlled Synthesis of 2D Palladium Diselenide for Sensitive Photodetector Applications (Adv. Funct. Mater. 1/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970005	15.6	9
49	Controlled Synthesis of 2D Palladium Diselenide for Sensitive Photodetector Applications. <i>Advanced Functional Materials</i> , 2019 , 29, 1806878	15.6	187
48	Ultrafast, Self-Driven, and Air-Stable Photodetectors Based on Multilayer PtSe/Perovskite Heterojunctions. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 1185-1194	6.4	119
47	Graphene/Semiconductor Hybrid Heterostructures for Optoelectronic Device Applications. <i>Nano Today</i> , 2018 , 19, 41-83	17.9	124
46	Fast, Self-Driven, Air-Stable, and Broadband Photodetector Based on Vertically Aligned PtSe ₂ /GaAs Heterojunction. <i>Advanced Functional Materials</i> , 2018 , 28, 1705970	15.6	207
45	Recent advances in the fabrication of graphene/ZnO heterojunctions for optoelectronic device applications. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 3815-3833	7.1	61
44	Lasing Characteristics of CH ₃ NH ₃ PbCl ₃ Single-Crystal Microcavities under Multiphoton Excitation. <i>Advanced Optical Materials</i> , 2018 , 6, 1700992	8.1	18
43	Enhanced performance of perovskite/organic-semiconductor hybrid heterojunction photodetectors with the electron trapping effects. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 1338-1342	7.1	43
42	Silicon/Perovskite Core-Shell Heterojunctions with Light-Trapping Effect for Sensitive Self-Driven Near-Infrared Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 27850-27857	9.5	39

41	High-performance broadband heterojunction photodetectors based on multilayered PtSe directly grown on a Si substrate. <i>Nanoscale</i> , 2018 , 10, 15285-15293	7.7	61
40	Photodetectors: Fast, Self-Driven, Air-Stable, and Broadband Photodetector Based on Vertically Aligned PtSe ₂ /GaAs Heterojunction (Adv. Funct. Mater. 16/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870106	15.6	2
39	Dual-plasmonic Au/graphene/Au-enhanced ultrafast, broadband, self-driven silicon Schottky photodetector. <i>Nanotechnology</i> , 2018 , 29, 505203	3.4	5
38	Perovskite/Poly(3-hexylthiophene)/Graphene Multiheterojunction Phototransistors with Ultrahigh Gain in Broadband Wavelength Region. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 1569-1576	9.5	88
37	Flexible Photodetectors Based on Novel Functional Materials. <i>Small</i> , 2017 , 13, 1701822	11	185
36	Ultrasensitive broadband phototransistors based on perovskite/organic-semiconductor vertical heterojunctions. <i>Light: Science and Applications</i> , 2017 , 6, e17023	16.7	203
35	Photodetectors Based on Two-Dimensional Layered Materials Beyond Graphene. <i>Advanced Functional Materials</i> , 2017 , 27, 1603886	15.6	406
34	Ultrathin and flexible perovskite solar cells with graphene transparent electrodes. <i>Nano Energy</i> , 2016 , 28, 151-157	17.1	158
33	Polymeric Carbon Nitride Nanosheets/Graphene Hybrid Phototransistors with High Responsivity. <i>Advanced Optical Materials</i> , 2016 , 4, 555-561	8.1	28
32	Amplified Spontaneous Emission from Organic/Inorganic Hybrid Lead Iodide Perovskite Single Crystals under Direct Multiphoton Excitation. <i>Advanced Optical Materials</i> , 2016 , 4, 1053-1059	8.1	39
31	Ferroelectric-Driven Performance Enhancement of Graphene Field-Effect Transistors Based on Vertical Tunneling Heterostructures. <i>Advanced Materials</i> , 2016 , 28, 10048-10054	24	45
30	Bilayer graphene based surface passivation enhanced nano structured self-powered near-infrared photodetector. <i>Optics Express</i> , 2015 , 23, 4839-46	3.3	33
29	Surface charge transfer induced p-CdS nanoribbon/n-Si heterojunctions as fast-speed self-driven photodetectors. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 6307-6313	7.1	22
28	Light trapping and surface plasmon enhanced high-performance NIR photodetector. <i>Scientific Reports</i> , 2014 , 4, 3914	4.9	115
27	Surface plasmon resonance enhanced highly efficient planar silicon solar cell. <i>Nano Energy</i> , 2014 , 9, 112-120	17.0	69
26	Core-shell heterojunction of silicon nanowire arrays and carbon quantum dots for photovoltaic devices and self-driven photodetectors. <i>ACS Nano</i> , 2014 , 8, 4015-22	16.7	216
25	One-dimensional CuO nanowire: synthesis, electrical, and optoelectronic devices application. <i>Nanoscale Research Letters</i> , 2014 , 9, 637	5	51
24	The effect of plasmonic nanoparticles on the optoelectronic characteristics of CdTe nanowires. <i>Small</i> , 2014 , 10, 2645-52	11	37

23	High-efficiency graphene/Si nanowire Schottky junction solar cells via surface modification and graphene doping. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 6593	13	107
22	High-performance nonvolatile Al/AlO(x)/CdTe:Sb nanowire memory device. <i>Nanotechnology</i> , 2013 , 24, 355203	3.4	15
21	Monolayer graphene/germanium Schottky junction as high-performance self-driven infrared light photodetector. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 9362-6	9.5	280
20	High-efficiency, air stable graphene/Si micro-hole array Schottky junction solar cells. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 15348	13	74
19	Monolayer graphene film on ZnO nanorod array for high-performance Schottky junction ultraviolet photodetectors. <i>Small</i> , 2013 , 9, 2872-9	11	236
18	Graphene Transparent Conductive Electrodes for Highly Efficient Silicon Nanostructures-Based Hybrid Heterojunction Solar Cells. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 11968-11976	3.8	85
17	Surface passivation and band engineering: a way toward high efficiency graphene-planar Si solar cells. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 8567	13	108
16	Ultrahigh Mobility of p-Type CdS Nanowires: Surface Charge Transfer Doping and Photovoltaic Devices. <i>Advanced Energy Materials</i> , 2013 , 3, 579-583	21.8	34
15	TiO ₂ Nanotube Array/Monolayer Graphene Film Schottky Junction Ultraviolet Light Photodetectors. <i>Particle and Particle Systems Characterization</i> , 2013 , 30, 630-636	3.1	49
14	ZnSe nanoribbon/Si nanowire p-n heterojunction arrays and their photovoltaic application with graphene transparent electrodes. <i>Journal of Materials Chemistry</i> , 2012 , 22, 22873		26
13	p-CdTe nanoribbon/n-silicon nanowires array heterojunctions: photovoltaic devices and zero-power photodetectors. <i>CrystEngComm</i> , 2012 , 14, 7222	3.3	36
12	Aluminium-doped n-type ZnS nanowires as high-performance UV and humidity sensors. <i>Journal of Materials Chemistry</i> , 2012 , 22, 6856		69
11	Schottky solar cells based on graphene nanoribbon/multiple silicon nanowires junctions. <i>Applied Physics Letters</i> , 2012 , 100, 193103	3.4	59
10	Chlorine-Doped ZnSe Nanoribbons with Tunable n-Type Conductivity as High-Gain and Flexible Blue/UV Photodetectors. <i>ChemPlusChem</i> , 2012 , 77, 470-475	2.8	15
9	High-Performance Blue-Light Photodetectors Based on Single-Crystal ZnSe Nanoribbons with Controlled Gallium Doping. <i>Science of Advanced Materials</i> , 2012 , 4, 332-336	2.3	9
8	Monolayer graphene film/silicon nanowire array Schottky junction solar cells. <i>Applied Physics Letters</i> , 2011 , 99, 133113	3.4	107
7	Surface induced negative photoconductivity in p-type ZnSe : Bi nanowires and their nano-optoelectronic applications. <i>Journal of Materials Chemistry</i> , 2011 , 21, 6736		73
6	Doping dependent crystal structures and optoelectronic properties of n-type CdSe:Ga nanowires. <i>Nanoscale</i> , 2011 , 3, 4798-803	7.7	24

- 5 High-gain visible-blind UV photodetectors based on chlorine-doped n-type ZnS nanoribbons with tunable optoelectronic properties. *Journal of Materials Chemistry*, **2011**, 21, 12632 62
- 4 Tuning the electrical transport properties of n-type CdS nanowires via Ga doping and their nano-optoelectronic applications. *Physical Chemistry Chemical Physics*, **2011**, 13, 14663-7 3.6 44
- 3 Nano-Schottky barrier diodes based on Sb-doped ZnS nanoribbons with controlled p-type conductivity. *Applied Physics Letters*, **2011**, 98, 123117 3.4 31
- 2 Distinguishing wavelength using two parallelly stacking graphene/thin Si/graphene heterojunctions. *Journal of Materials Chemistry C*, 7.1 2
- 1 Fabrication of a In₂Se₃/Si heterostructure phototransistor for heart rate detection. *Journal of Materials Chemistry C*, 7.1