Chao Xie

List of Publications by Year
in descending order

78 papers	6,741 citations	66343 42 h-index	71685 76 g-index
79 all docs	79 docs citations	79 times ranked	7753 citing authors

#	Article	IF	Citations
1	A quasi-2D perovskite antireflection coating to boost the performance of multilayered PdTe₂/Ge heterostructure-based near-infrared photodetectors. Journal of Materials Chemistry C, 2022, 10, 6025-6035.	5.5	5
2	Ti3C2Tx MXene/Ge 2D/3D van der Waals heterostructures as highly efficient and fast response near-infrared photodetectors. Applied Physics Letters, 2022, 120, .	3.3	11
3	Patterned growth of Î²-Ga2O3 thin films for solar-blind deep-ultraviolet photodetectors array and optical imaging application. Journal of Materials Science and Technology, 2021, 72, 189-196.	10.7	81
4	Construction of PtSe₂/Ge heterostructure-based short-wavelength infrared photodetector array for image sensing and optical communication applications. Nanoscale, 2021, 13, 7606-7612.	5.6	27
5	Fabrication of Addressable Perovskite Film Arrays for High-Performance Photodetection and Real-Time Image Sensing Application. Journal of Physical Chemistry Letters, 2021, 12, 2930-2936.	4.6	23
6	Enhanced Light Trapping in Conformal CuO/Si Microholes Array Heterojunction for Self-Powered Broadband Photodetection. IEEE Electron Device Letters, 2021, 42, 883-886.	3.9	7
7	Multilayered PdTeâ‚‚/GaN Heterostructures for Visible-Blind Deep-Ultraviolet Photodetection. IEEE Electron Device Letters, 2021, 42, 1192-1195.	3.9	18
8	Multilayered PtSe₂/pyramid-Si heterostructure array with light confinement effect for high-performance photodetection, image sensing and light trajectory tracking applications. Journal of Materials Chemistry C, 2021, 9, 2823-2832.	5.5	20
9	Electrically adjusted deep-ultraviolet/near-infrared single-band/dual-band imaging photodetectors based on Cs₃Cu₂I₅/PdTe₂/Ge multiheterostructures. Journal of Materials Chemistry C, 2021, 9, 14897-14907.	5.5	14
10	Perovskiteâ€Based Phototransistors and Hybrid Photodetectors. Advanced Functional Materials, 2020, 30, 1903907.	14.9	225
11	High-performance light trajectory tracking and image sensing devices based on a Î³-In₂Se₃/GaAs heterostructure. Journal of Materials Chemistry C, 2020, 8, 13762-13769.	5.5	11
12	A SERS stamp: Multiscale coupling effect of silver nanoparticles and highly ordered nano-micro hierarchical substrates for ultrasensitive explosive detection. Sensors and Actuators B: Chemical, 2020, 321, 128543.	7.8	31
13	Highly Sensitive Narrowband Si Photodetector With Peak Response at Around 1060 nm. IEEE Transactions on Electron Devices, 2020, 67, 3211-3214.	3.0	26
14	Controlled synthesis of GaSe microbelts for high-gain photodetectors induced by the electron trapping effect. Journal of Materials Chemistry C, 2020, 8, 5375-5379.	5.5	12
15	Self-Powered Filterless Narrow-Band pâ€“n Heterojunction Photodetector for Low Background Limited Near-Infrared Image Sensor Application. ACS Applied Materials & Interfaces, 2020, 12, 21845-21853.	8.0	37
16	Characterization of structural transitions and lattice dynamics of hybrid organicâ€“inorganic perovskite CH₃NH₃PbI₃*. Chinese Physics B, 2019, 28, 076102.	1.4	10
17	Catalystâ€Free Vaporâ€“Solid Deposition Growth of Î²â€Ga₂O₃ Nanowires for DUV Photodetector and Image Sensor Application. Advanced Optical Materials, 2019, 7, 1901257.	7.3	62
18	Sensitive Deep Ultraviolet Photodetector and Image Sensor Composed of Inorganic Lead-Free Cs₃Cu₂I₅ Perovskite with Wide Bandgap. Journal of Physical Chemistry Letters, 2019, 10, 5343-5350.	4.6	171

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19	Defect-induced broadband photodetection of layered Î³-In₂Se₃ nanofilm and its application in near infrared image sensors. Journal of Materials Chemistry C, 2019, 7, 11532-11539.	5.5	36
20	Inorganic CsBi₃I₁₀ perovskite/silicon heterojunctions for sensitive, self-driven and air-stable NIR photodetectors. Journal of Materials Chemistry C, 2019, 7, 863-870.	5.5	50
21	Opening the Band Gap of Graphene via Fluorination for High-Performance Dual-Mode Photodetector Application. ACS Applied Materials & Interfaces, 2019, 11, 21702-21710.	8.0	28
22	A Highly Sensitive Perovskite/Organic Semiconductor Heterojunction Phototransistor and Its Device Optimization Utilizing the Selective Electron Trapping Effect. Advanced Optical Materials, 2019, 7, 1900272.	7.3	35
23	PdSe₂ Multilayer on Germanium Nanocones Array with Light Trapping Effect for Sensitive Infrared Photodetector and Image Sensing Application. Advanced Functional Materials, 2019, 29, 1900849.	14.9	90
24	Asymmetric Contactâ€Induced Selfâ€Driven Perovskiteâ€Microwireâ€Array Photodetectors. Advanced Electronic Materials, 2019, 5, 1900135.	5.1	40
25	A high-performance near-infrared light photovoltaic detector based on a multilayered PtSe₂/Ge heterojunction. Journal of Materials Chemistry C, 2019, 7, 5019-5027.	5.5	58
26	Grapheneâ€Assisted Growth of Patterned Perovskite Films for Sensitive Light Detector and Optical Image Sensor Application. Small, 2019, 15, e1900730.	10.0	53
27	Recent Progress in Solarâ€Blind Deepâ€Ultraviolet Photodetectors Based on Inorganic Ultrawide Bandgap Semiconductors. Advanced Functional Materials, 2019, 29, 1806006.	14.9	334
28	Ultrawideâ€Bandgap Semiconductors: Recent Progress in Solarâ€Blind Deepâ€Ultraviolet Photodetectors Based on Inorganic Ultrawide Bandgap Semiconductors (Adv. Funct. Mater. 9/2019). Advanced Functional Materials, 2019, 29, 1970057.	14.9	8
29	Photodetectors: Controlled Synthesis of 2D Palladium Diselenide for Sensitive Photodetector Applications (Adv. Funct. Mater. 1/2019). Advanced Functional Materials, 2019, 29, 1970005.	14.9	13
30	Controlled Synthesis of 2D Palladium Diselenide for Sensitive Photodetector Applications. Advanced Functional Materials, 2019, 29, 1806878.	14.9	286
31	Ultrafast, Self-Driven, and Air-Stable Photodetectors Based on Multilayer PtSe₂/Perovskite Heterojunctions. Journal of Physical Chemistry Letters, 2018, 9, 1185-1194.	4.6	159
32	Graphene/Semiconductor Hybrid Heterostructures for Optoelectronic Device Applications. Nano Today, 2018, 19, 41-83.	11.9	172
33	Fast, Selfâ€Driven, Airâ€Stable, and Broadband Photodetector Based on Vertically Aligned PtSe₂/GaAs Heterojunction. Advanced Functional Materials, 2018, 28, 1705970.	14.9	314
34	Recent advances in the fabrication of grapheneâ€"ZnO heterojunctions for optoelectronic device applications. Journal of Materials Chemistry C, 2018, 6, 3815-3833.	5.5	85
35	Lasing Characteristics of CH₃NH₃PbCl₃ Singleâ€Crystal Microcavities under Multiphoton Excitation. Advanced Optical Materials, 2018, 6, 1700992.	7.3	22
36	Enhanced performance of perovskite/organic-semiconductor hybrid heterojunction photodetectors with the electron trapping effects. Journal of Materials Chemistry C, 2018, 6, 1338-1342.	5.5	47

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37	Dual-plasmonic Au/graphene/Au-enhanced ultrafast, broadband, self-driven silicon Schottky photodetector. Nanotechnology, 2018, 29, 505203.	2.6	9
38	Silicon/Perovskite Coreâ€“Shell Heterojunctions with Light-Trapping Effect for Sensitive Self-Driven Near-Infrared Photodetectors. ACS Applied Materials & Interfaces, 2018, 10, 27850-27857.	8.0	55
39	High-performance broadband heterojunction photodetectors based on multilayered PtSe₂ directly grown on a Si substrate. Nanoscale, 2018, 10, 15285-15293.	5.6	102
40	Photodetectors: Fast, Selfâ€Driven, Airâ€Stable, and Broadband Photodetector Based on Vertically Aligned PtSe₂/GaAs Heterojunction (Adv. Funct. Mater. 16/2018). Advanced Functional Materials, 2018, 28, 1870106.	14.9	5
41	Perovskite/Poly(3-hexylthiophene)/Graphene Multiheterojunction Phototransistors with Ultrahigh Gain in Broadband Wavelength Region. ACS Applied Materials & Interfaces, 2017, 9, 1569-1576.	8.0	110
42	Flexible Photodetectors Based on Novel Functional Materials. Small, 2017, 13, 1701822.	10.0	259
43	Ultrasensitive broadband phototransistors based on perovskite/organic-semiconductor vertical heterojunctions. Light: Science and Applications, 2017, 6, e17023-e17023.	16.6	272
44	Photodetectors Based on Twoâ€Dimensional Layered Materials Beyond Graphene. Advanced Functional Materials, 2017, 27, 1603886.	14.9	534
45	Amplified Spontaneous Emission from Organicâ€“Inorganic Hybrid Lead Iodide Perovskite Single Crystals under Direct Multiphoton Excitation. Advanced Optical Materials, 2016, 4, 1053-1059.	7.3	47
46	Ferroelectricâ€Driven Performance Enhancement of Graphene Fieldâ€Effect Transistors Based on Vertical Tunneling Heterostructures. Advanced Materials, 2016, 28, 10048-10054.	21.0	58
47	Ultrathin and flexible perovskite solar cells with graphene transparent electrodes. Nano Energy, 2016, 28, 151-157.	16.0	200
48	Polymeric Carbon Nitride Nanosheets/Graphene Hybrid Phototransistors with High Responsivity. Advanced Optical Materials, 2016, 4, 555-561.	7.3	35
49	Surface charge transfer induced p-CdS nanoribbon/n-Si heterojunctions as fast-speed self-driven photodetectors. Journal of Materials Chemistry C, 2015, 3, 6307-6313.	5.5	24
50	Bilayer graphene based surface passivation enhanced nano structured self-powered near-infrared photodetector. Optics Express, 2015, 23, 4839.	3.4	39
51	One-dimensional CuO nanowire: synthesis, electrical, and optoelectronic devices application. Nanoscale Research Letters, 2014, 9, 637.	5.7	71
52	The Effect of Plasmonic Nanoparticles on the Optoelectronic Characteristics of CdTe Nanowires. Small, 2014, 10, 2645-2652.	10.0	43
53	Surface plasmon resonance enhanced highly efficient planar silicon solar cell. Nano Energy, 2014, 9, 112-120.	16.0	83
54	Coreâ€“Shell Heterojunction of Silicon Nanowire Arrays and Carbon Quantum Dots for Photovoltaic Devices and Self-Driven Photodetectors. ACS Nano, 2014, 8, 4015-4022.	14.6	258

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55	Light trapping and surface plasmon enhanced high-performance NIR photodetector. Scientific Reports, 2014, 4, 3914.	3.3	132
56	High-efficiency graphene/Si nanoarray Schottky junction solar cells via surface modification and graphene doping. Journal of Materials Chemistry A, 2013, 1, 6593.	10.3	122
57	High-performance nonvolatile Al/AlO_{<i>x</i>}/CdTe:Sb nanowire memory device. Nanotechnology, 2013, 24, 355203.	2.6	19
58	Monolayer Graphene/Germanium Schottky Junction As High-Performance Self-Driven Infrared Light Photodetector. ACS Applied Materials & Interfaces, 2013, 5, 9362-9366.	8.0	347
59	High-efficiency, air stable graphene/Si micro-hole array Schottky junction solar cells. Journal of Materials Chemistry A, 2013, 1, 15348.	10.3	86
60	Monolayer Graphene Film on ZnO Nanorod Array for Highâ€Performance Schottky Junction Ultraviolet Photodetectors. Small, 2013, 9, 2872-2879.	10.0	271
61	Graphene Transparent Conductive Electrodes for Highly Efficient Silicon Nanostructures-Based Hybrid Heterojunction Solar Cells. Journal of Physical Chemistry C, 2013, 117, 11968-11976.	3.1	96
62	Surface passivation and band engineering: a way toward high efficiency grapheneâ€“planar Si solar cells. Journal of Materials Chemistry A, 2013, 1, 8567.	10.3	123
63	Ultrahigh Mobility of pâ€Type CdS Nanowires: Surface Charge Transfer Doping and Photovoltaic Devices. Advanced Energy Materials, 2013, 3, 579-583.	19.5	37
64	TiO₂ Nanotube Array/Monolayer Graphene Film Schottky Junction Ultraviolet Light Photodetectors. Particle and Particle Systems Characterization, 2013, 30, 630-636.	2.3	53
65	ZnSe nanoribbon/Si nanowire pâ€“n heterojunction arrays and their photovoltaic application with graphene transparent electrodes. Journal of Materials Chemistry, 2012, 22, 22873.	6.7	32
66	p-CdTe nanoribbon/n-silicon nanowires array heterojunctions: photovoltaic devices and zero-power photodetectors. CrystEngComm, 2012, 14, 7222.	2.6	38
67	Aluminium-doped n-type ZnS nanowires as high-performance UV and humidity sensors. Journal of Materials Chemistry, 2012, 22, 6856.	6.7	79
68	Schottky solar cells based on graphene nanoribbon/multiple silicon nanowires junctions. Applied Physics Letters, 2012, 100, 193103.	3.3	65
69	Chlorineâ€Doped ZnSe Nanoribbons with Tunable nâ€Type Conductivity as Highâ€Gain and Flexible Blue/UV Photodetectors. ChemPlusChem, 2012, 77, 470-475.	2.8	15
70	High-Performance Blue-Light Photodetectors Based on Single-Crystal ZnSe Nanoribbons with Controlled Gallium Doping. Science of Advanced Materials, 2012, 4, 332-336.	0.7	9
71	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.	6.7	64
72	Tuning the electrical transport properties of n-type CdS nanowiresvia Ga doping and their nano-optoelectronic applications. Physical Chemistry Chemical Physics, 2011, 13, 14663.	2.8	47

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73	Monolayer graphene film/silicon nanowire array Schottky junction solar cells. Applied Physics Letters, 2011, 99, .	3.3	120
74	Surface induced negative photoconductivity in p-type ZnSeâ€‰:â€‰Bi nanowires and their nano-optoelectronic applications. Journal of Materials Chemistry, 2011, 21, 6736.	6.7	89
75	Doping dependent crystal structures and optoelectronic properties of n-type CdSe:Ga nanowries. Nanoscale, 2011, 3, 4798.	5.6	27
76	Nano-Schottky barrier diodes based on Sb-doped ZnS nanoribbons with controlled p-type conductivity. Applied Physics Letters, 2011, 98, .	3.3	35
77	Distinguishing wavelength using two parallelly stacking graphene/thin Si/graphene heterojunctions. Journal of Materials Chemistry C, 0, , .	5.5	6
78	Fabrication of a Î³-In₂Se₃/Si heterostructure phototransistor for heart rate detection. Journal of Materials Chemistry C, 0, , .	5.5	4