

Z Q Zheng

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

2,706
citations

29
h-index

51
g-index

84
ext. papers

3,307
ext. citations

8.1
avg. IF

5.84
L-index

#	Paper	IF	Citations
76	Non-Layered Te/In S Tunneling Heterojunctions with Ultrahigh Photoresponsivity and Fast Photoresponse.. <i>Small</i> , 2022 , e2200445	11	3
75	An artificial optoelectronic nociceptor based on In ₂ S ₃ memristor. <i>Journal Physics D: Applied Physics</i> , 2022 , 55, 125401	3	2
74	Hybrid 1D/2D heterostructure with electronic structure engineering toward high-sensitivity and polarization-dependent photodetector. <i>Science China Materials</i> , 2022 , 65, 732-740	7.1	4
73	Etching-free high-throughput intersectional nanofabrication of diverse optical nanoantennas for nanoscale light manipulation.. <i>Journal of Colloid and Interface Science</i> , 2022 , 622, 950-959	9.3	1
72	Nonlayered In ₂ S ₃ /Al ₂ O ₃ /CsPbBr ₃ Quantum Dot Heterojunctions for Sensitive and Stable Photodetectors. <i>ACS Applied Nano Materials</i> , 2021 , 4, 5106-5114	5.6	2
71	Universal Strategy Integrating Strain and Interface Engineering to Drive High-Performance 2D Material Photodetectors. <i>Advanced Optical Materials</i> , 2021 , 9, 2100450	8.1	8
70	A New Wide Bandgap Semiconductor: Carbyne Nanocrystals. <i>Advanced Functional Materials</i> , 2021 , 31, 2104254	15.6	1
69	All-Dielectric Nanostructure Fabry-Pot-Enhanced Mie Resonances Coupled with Photogain Modulation toward Ultrasensitive In ₂ S ₃ Photodetector. <i>Advanced Functional Materials</i> , 2021 , 31, 2007987	15.6	17
68	2D WS ₂ Based Asymmetric Schottky Photodetector with High Performance. <i>Advanced Electronic Materials</i> , 2021 , 7, 2000964	6.4	24
67	Large-area ReS ₂ monolayer films on flexible substrate for SERS based molecular sensing with strong fluorescence quenching. <i>Applied Surface Science</i> , 2021 , 542, 148757	6.7	3
66	Self-driven SnS ₂ alloy/GaAs heterostructure based unique polarization sensitive photodetectors. <i>Nanoscale</i> , 2021 , 13, 15193-15204	7.7	2
65	A reasonably designed 2D WS and CdS microwire heterojunction for high performance photoresponse. <i>Nanoscale</i> , 2021 , 13, 5660-5669	7.7	6
64	Optical Resonance Coupled with Electronic Structure Engineering toward High-Sensitivity Photodetectors. <i>Advanced Optical Materials</i> , 2021 , 9, 2101374	8.1	2
63	Vertically stacked BiSe/MoTe heterostructure with large band offsets for nanoelectronics. <i>Nanoscale</i> , 2021 , 13, 15403-15414	7.7	9
62	Promoting the Performance of 2D Material Photodetectors by Dielectric Engineering.. <i>Small Methods</i> , 2021 , e2101046	12.8	6
61	Deep insights into interface engineering by buffer layer for efficient perovskite solar cells: a first-principles study. <i>Science China Materials</i> , 2020 , 63, 1588-1596	7.1	3
60	Enhancement of exciton emission in WS based on the Kerker effect from the mode engineering of individual Si nanostripes. <i>Nanoscale Horizons</i> , 2020 , 5, 1368-1377	10.8	4

59	Non-layered 2D materials toward advanced photoelectric devices: progress and prospects. <i>Materials Horizons</i> , 2020 , 7, 2185-2207	14.4	30
58	Novel two-dimensional monoelemental and ternary materials: growth, physics and application. <i>Nanophotonics</i> , 2020 , 9, 2147-2168	6.3	17
57	Strain engineering coupled with optical regulation towards a high-sensitivity In ₂ S ₃ photodetector. <i>Materials Horizons</i> , 2020 , 7, 1427-1435	14.4	32
56	An asymmetric contact-induced self-powered 2D InS photodetector towards high-sensitivity and fast-response. <i>Nanoscale</i> , 2020 , 12, 7196-7205	7.7	23
55	Recent progress in high-performance photo-detectors enabled by the pulsed laser deposition technology. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 4988-5014	7.1	11
54	Self-assembly In ₂ Se ₃ /SnSe ₂ heterostructure array with suppressed dark current and enhanced photosensitivity for weak signal. <i>Science China Materials</i> , 2020 , 63, 1560-1569	7.1	11
53	Circular Sn _{0.5} Se _{0.5} Nanosheets with Highly Anisotropic Performance for Nanoelectronics. <i>ACS Applied Nano Materials</i> , 2020 , 3, 10270-10283	5.6	3
52	Epitaxial growth of large-scale In ₂ S ₃ nanoflakes and the construction of a high performance In ₂ S ₃ /Si photodetector. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 12104-12113	7.1	19
51	Broadband photodetectors based on 2D group IVA metal chalcogenides semiconductors. <i>Applied Materials Today</i> , 2019 , 15, 115-138	6.6	50
50	High performance tin diselenide photodetectors dependent on thickness: a vertical graphene sandwiched device and interfacial mechanism. <i>Nanoscale</i> , 2019 , 11, 13309-13317	7.7	15
49	Production of large-area 2D materials for high-performance photodetectors by pulsed-laser deposition. <i>Progress in Materials Science</i> , 2019 , 106, 100573	42.2	94
48	Controllable growth of large-area atomically thin ReS ₂ films and their thickness-dependent optoelectronic properties. <i>Applied Physics Letters</i> , 2019 , 114, 153102	3.4	14
47	Unique and Tunable Photodetecting Performance for Two-Dimensional Layered MoSe/WSe p-n Junction on the 4H-SiC Substrate. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 19277-19285	9.5	23
46	Thickness-Dependent Optical Properties and In-Plane Anisotropic Raman Response of the 2D In ₂ S ₃ . <i>Advanced Optical Materials</i> , 2019 , 7, 1901085	8.1	25
45	Self-Powered SnS ₂ Alloy/Silicon Heterojunction Photodetectors with High Sensitivity in a Wide Spectral Range. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 40222-40231	9.5	37
44	2D In ₂ S ₃ Nanoflake Coupled with Graphene toward High-Sensitivity and Fast-Response Bulk-Silicon Schottky Photodetector. <i>Small</i> , 2019 , 15, e1904912	11	44
43	A red phosphor Mg ₃ Y ₂ Ge ₃ O ₁₂ : Bi ³⁺ , Eu ³⁺ with high brightness and excellent thermal stability of luminescence for white light-emitting diodes. <i>Journal of Luminescence</i> , 2019 , 210, 202-209	3.8	44
42	UV-Vis-NIR photodetector based on monolayer MoS ₂ . <i>Materials Letters</i> , 2019 , 237, 298-302	3.3	28

41	Tunable Polarity Behavior and High-Performance Photosensitive Characteristics in Schottky-Barrier Field-Effect Transistors Based on Multilayer WS ₂ . <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 2745-2751	9.5	13
40	Layered tin monoselenide as advanced photothermal conversion materials for efficient solar energy-driven water evaporation. <i>Nanoscale</i> , 2018 , 10, 2876-2886	7.7	70
39	Fabrication of a high performance ZnIn ₂ S ₄ /Si heterostructure photodetector array for weak signal detection. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 12928-12939	7.1	20
38	Out of plane stacking of InSe-based heterostructures towards high performance electronic and optoelectronic devices using a graphene electrode. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 12509-12517	7.1	24
37	Graphene/In ₂ S ₃ van der Waals Heterostructure for Ultrasensitive Photodetection. <i>ACS Photonics</i> , 2018 , 5, 4912-4919	6.3	28
36	Ultrasensitive 2D/3D Heterojunction Multicolor Photodetectors: A Synergy of Laterally and Vertically Aligned 2D Layered Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 38166-38172	9.5	26
35	Tin dioxide quantum dots coupled with graphene for high-performance bulk-silicon Schottky photodetector. <i>Materials Horizons</i> , 2018 , 5, 727-737	14.4	46
34	An Innovative Postdeposition Annealing Approach Producing Centimeter-Scale In ₂ O ₃ /In ₂ (TeO ₃) ₃ Bulk Heterojunction Thin Film for Room-Temperature Persistent Photoconductivity. <i>Advanced Optical Materials</i> , 2017 , 5, 1600908	8.1	17
33	Self-Assembly of the Lateral InSe/CuInSe Heterojunction for Enhanced Photodetection. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 7288-7296	9.5	39
32	Centimeter-Scale Deposition of MoWSe Alloy Film for High-Performance Photodetectors on Versatile Substrates. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 14920-14928	9.5	57
31	Low-temperature and highly sensitive C ₂ H ₂ sensor based on Au decorated ZnO/In ₂ O ₃ belt-tooth shape nano-heterostructures. <i>Sensors and Actuators B: Chemical</i> , 2017 , 244, 344-356	8.5	44
30	Alloying-assisted phonon engineering of layered BiInSe@nickel foam for efficient solar-enabled water evaporation. <i>Nanoscale</i> , 2017 , 9, 16396-16403	7.7	49
29	All-Layered 2D Optoelectronics: A High-Performance UV-vis-NIR Broadband SnSe Photodetector with Bi ₂ Te ₃ Topological Insulator Electrodes. <i>Advanced Functional Materials</i> , 2017 , 27, 1701823	15.6	180
28	A flexible, transparent and high-performance gas sensor based on layer-materials for wearable technology. <i>Nanotechnology</i> , 2017 , 28, 415501	3.4	17
27	Self-Assembly High-Performance UV-vis-NIR Broadband InSe/Si Photodetector Array for Weak Signal Detection. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 43830-43837	9.5	71
26	Layered-material WS ₂ /topological insulator Bi ₂ Te ₃ heterostructure photodetector with ultrahigh responsivity in the range from 370 to 1550 nm. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 7831-7840	7.1	107
25	Plasmon resonances in semiconductor materials for detecting photocatalysis at the single-particle level. <i>Nanoscale</i> , 2016 , 8, 15001-7	7.7	15
24	Field emission and growth mechanism of ZnO microrods array with nanospikes fabricated by thermal evaporation. <i>Materials Letters</i> , 2016 , 170, 210-212	3.3	9

23	A Floating Sheet for Efficient Photocatalytic Water Splitting. <i>Advanced Energy Materials</i> , 2016 , 6, 160051-8	11.8	54
22	Promoting the Performance of Layered-Material Photodetectors by Alloy Engineering. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 12915-24	9.5	103
21	Flexible, transparent and ultra-broadband photodetector based on large-area WSe ₂ film for wearable devices. <i>Nanotechnology</i> , 2016 , 27, 225501	3.4	187
20	Growth of centimeter-scale high-quality In ₂ Se ₃ films for transparent, flexible and high performance photodetectors. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 8094-8103	7.1	72
19	Synergistic Effect of Hybrid Multilayer In ₂ Se ₃ and Nanodiamonds for Highly Sensitive Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 20200-11	9.5	41
18	Stable, Fast UV-Vis-NIR Photodetector with Excellent Responsivity, Detectivity, and Sensitivity Based on In ₂ Te ₃ Films with a Direct Bandgap. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 20872-9	9.5	58
17	Light-controlling, flexible and transparent ethanol gas sensor based on ZnO nanoparticles for wearable devices. <i>Scientific Reports</i> , 2015 , 5, 11070	4.9	142
16	Light-controlled C ₂ H ₂ gas sensing based on Au@ZnO nanowires with plasmon-enhanced sensitivity at room temperature. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 7067-7074	7.1	38
15	Stable, highly-responsive and broadband photodetection based on large-area multilayered WS ₂ films grown by pulsed-laser deposition. <i>Nanoscale</i> , 2015 , 7, 14974-81	7.7	217
14	Electronic Reconstruction of Ag ₂ WO ₄ Nanorods for Visible-Light Photocatalysis. <i>ACS Nano</i> , 2015 , 9, 7256-65	16.7	120
13	Promoting Photosensitivity and Detectivity of the Bi/Si Heterojunction Photodetector by Inserting a WS ₂ Layer. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 26701-8	9.5	78
12	In ₂ O ₃ Nanotower Hydrogen Gas Sensors Based on Both Schottky Junction and Thermoelectronic Emission. <i>Nanoscale Research Letters</i> , 2015 , 10, 1002	5	31
11	Self-assembled and Pd decorated Zn ₂ SnO ₄ /ZnO wire-sheet shape nano-heterostructures networks hydrogen gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2014 , 195, 549-561	8.5	62
10	3D resonator based on luminescence enhanced by both polarized, size-dependent whispering gallery modes and Fabry-Pérot waveguide modes in individual ZnO micro- and nanonails. <i>Nanoscale</i> , 2014 , 6, 5338-42	7.7	9
9	Field emission properties and growth mechanism of In ₂ O ₃ nanostructures. <i>Nanoscale Research Letters</i> , 2014 , 9, 111	5	12
8	Field emission and photoluminescence of ZnO nanocombs. <i>Applied Physics A: Materials Science and Processing</i> , 2013 , 113, 549-556	2.6	7
7	Self-Assembled Alcohol Sensor of In ₂ O ₃ Nanorods. <i>Advanced Materials Research</i> , 2013 , 834-836, 46-49	0.5	
6	Fabrication and Hydrogen Sensing Property of In ₂ O ₃ Nanotowers. <i>Advanced Materials Research</i> , 2013 , 834-836, 913-916	0.5	1

5	Whispering gallery and Fabry-Pérot modes enhanced luminescence from individual ZnO micro mushroom. <i>Journal of Applied Physics</i> , 2013 , 113, 034313	2.5	6
4	Pulsed-Laser-Deposition Fabricated ZnIn ₂ S ₄ Photodetectors with Excellent ON/OFF Switching Characteristics toward High-Temperature-Resistant Photodetection Applications. <i>Advanced Optical Materials</i> , 2102335	8.1	4
3	High performance DUV-visible 4H-SiC-based multilayered SnS ₂ dual-mode photodetectors. <i>Journal of Materials Chemistry C</i> ,	7.1	1
2	High-quality two-dimensional tellurium flakes grown by high-temperature vapor deposition. <i>Journal of Materials Chemistry C</i> ,	7.1	2
1	Polarity-Switchable and Self-Driven Photo-Response Based on Vertically Stacked Type-III GeSe/SnS ₂ Heterojunction. <i>Advanced Materials Interfaces</i> , 2102099	4.6	5