Z Q Zheng

List of Publications by Year
in descending order

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Version: 2024-02-01

84 papers	3,927 citations	109137 35 h-index	123241 61 g-index
84 all docs	84 docs citations	84 times ranked	4363 citing authors

#	Article	IF	Citations
1	Stable, highly-responsive and broadband photodetection based on large-area multilayered WS₂ films grown by pulsed-laser deposition. Nanoscale, 2015, 7, 14974-14981.	2.8	274
2	Flexible, transparent and ultra-broadband photodetector based on large-area WSe₂film for wearable devices. Nanotechnology, 2016, 27, 225501.	1.3	254
3	Allâ€Layered 2D Optoelectronics: A Highâ€Performance UVâ€“visâ€“NIR Broadband SnSe Photodetector with Bi₂Te₃ Topological Insulator Electrodes. Advanced Functional Materials, 2017, 27, 1701823.	7.8	222
4	Production of large-area 2D materials for high-performance photodetectors by pulsed-laser deposition. Progress in Materials Science, 2019, 106, 100573.	16.0	160
5	Light-controlling, flexible and transparent ethanol gas sensor based on ZnO nanoparticles for wearable devices. Scientific Reports, 2015, 5, 11070.	1.6	157
6	Layered-material WS₂/topological insulator Bi₂Te₃heterostructure photodetector with ultrahigh responsivity in the range from 370 to 1550 nm. Journal of Materials Chemistry C, 2016, 4, 7831-7840.	2.7	135
7	Promoting the Performance of Layered-Material Photodetectors by Alloy Engineering. ACS Applied Materials & Interfaces, 2016, 8, 12915-12924.	4.0	133
8	Electronic Reconstruction of Î±-Ag₂WO₄ Nanorods for Visible-Light Photocatalysis. ACS Nano, 2015, 9, 7256-7265.	7.3	131
9	Promoting Photosensitivity and Detectivity of the Bi/Si Heterojunction Photodetector by Inserting a WS₂ Layer. ACS Applied Materials & Interfaces, 2015, 7, 26701-26708.	4.0	98
10	Self-Assembly High-Performance UVâ€“visâ€“NIR Broadband Î²-In₂Se₃/Si Photodetector Array for Weak Signal Detection. ACS Applied Materials & Interfaces, 2017, 9, 43830-43837.	4.0	95
11	Layered tin monoselenide as advanced photothermal conversion materials for efficient solar energy-driven water evaporation. Nanoscale, 2018, 10, 2876-2886.	2.8	94
12	Stable, Fast UVâ€“Visâ€“NIR Photodetector with Excellent Responsivity, Detectivity, and Sensitivity Based on Î±-In₂Te₃ Films with a Direct Bandgap. ACS Applied Materials & Interfaces, 2016, 8, 20872-20879.	4.0	85
13	Growth of centimeter-scale high-quality In₂Se₃ films for transparent, flexible and high performance photodetectors. Journal of Materials Chemistry C, 2016, 4, 8094-8103.	2.7	83
14	A red phosphor Mg3Y2Ge3O12: Bi3+, Eu3+ with high brightness and excellent thermal stability of luminescence for white light-emitting diodes. Journal of Luminescence, 2019, 210, 202-209.	1.5	83
15	Broadband photodetectors based on 2D group IVA metal chalcogenides semiconductors. Applied Materials Today, 2019, 15, 115-138.	2.3	82
16	A Floating Sheet for Efficient Photocatalytic Water Splitting. Advanced Energy Materials, 2016, 6, 1600510.	10.2	74
17	Centimeter-Scale Deposition of Mo_{0.5}W_{0.5}Se₂ Alloy Film for High-Performance Photodetectors on Versatile Substrates. ACS Applied Materials & Interfaces, 2017, 9, 14920-14928.	4.0	74
18	Self-assembled and Pd decorated Zn2SnO4/ZnO wire-sheet shape nano-heterostructures networks hydrogen gas sensors. Sensors and Actuators B: Chemical, 2014, 195, 549-561.	4.0	71

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19	2D WS₂ Based Asymmetric Schottky Photodetector with High Performance. Advanced Electronic Materials, 2021, 7, 2000964.	2.6	68
20	2D In₂S₃ Nanoflake Coupled with Graphene toward Highâ€Sensitivity and Fastâ€Response Bulkâ€Silicon Schottky Photodetector. Small, 2019, 15, e1904912.	5.2	67
21	Tin dioxide quantum dots coupled with graphene for high-performance bulk-silicon Schottky photodetector. Materials Horizons, 2018, 5, 727-737.	6.4	61
22	Synergistic Effect of Hybrid Multilayer In₂Se₃ and Nanodiamonds for Highly Sensitive Photodetectors. ACS Applied Materials & Interfaces, 2016, 8, 20200-20211.	4.0	59
23	Alloying-assisted phonon engineering of layered BiInSe₃@nickel foam for efficient solar-enabled water evaporation. Nanoscale, 2017, 9, 16396-16403.	2.8	59
24	Self-Powered SnS_{1â€“x}Se_x Alloy/Silicon Heterojunction Photodetectors with High Sensitivity in a Wide Spectral Range. ACS Applied Materials & Interfaces, 2019, 11, 40222-40231.	4.0	58
25	Self-Assembly of the Lateral In₂Se₃/CuInSe₂ Heterojunction for Enhanced Photodetection. ACS Applied Materials & Interfaces, 2017, 9, 7288-7296.	4.0	57
26	Low-temperature and highly sensitive C2H2 sensor based on Au decorated ZnO/In2O3 belt-tooth shape nano-heterostructures. Sensors and Actuators B: Chemical, 2017, 244, 344-356.	4.0	54
27	Strain engineering coupled with optical regulation towards a high-sensitivity In₂S₃ photodetector. Materials Horizons, 2020, 7, 1427-1435.	6.4	53
28	Non-layered 2D materials toward advanced photoelectric devices: progress and prospects. Materials Horizons, 2020, 7, 2185-2207.	6.4	47
29	Light-controlled C₂H₂ gas sensing based on Auâ€“ZnO nanowires with plasmon-enhanced sensitivity at room temperature. Journal of Materials Chemistry C, 2015, 3, 7067-7074.	2.7	44
30	Unique and Tunable Photodetecting Performance for Two-Dimensional Layered MoSe₂/WSe₂ pâ€“n Junction on the 4H-SiC Substrate. ACS Applied Materials & Interfaces, 2019, 11, 19277-19285.	4.0	44
31	An asymmetric contact-induced self-powered 2D In₂S₃ photodetector towards high-sensitivity and fast-response. Nanoscale, 2020, 12, 7196-7205.	2.8	44
32	UVâ€“Vis-NIR photodetector based on monolayer MoS2. Materials Letters, 2019, 237, 298-302.	1.3	41
33	Ultrasensitive 2D/3D Heterojunction Multicolor Photodetectors: A Synergy of Laterally and Vertically Aligned 2D Layered Materials. ACS Applied Materials & Interfaces, 2018, 10, 38166-38172.	4.0	39
34	Thicknessâ€Dependent Optical Properties and Inâ€Plane Anisotropic Raman Response of the 2D Î²â€In 2 S 3. Advanced Optical Materials, 2019, 7, 1901085.	3.6	39
35	Nonâ€Layered Te/In₂S₃ Tunneling Heterojunctions with Ultrahigh Photoresponsivity and Fast Photoresponse. Small, 2022, 18, e2200445.	5.2	38
36	In2O3 Nanotower Hydrogen Gas Sensors Based on Both Schottky Junction and Thermoelectronic Emission. Nanoscale Research Letters, 2015, 10, 1002.	3.1	37

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37	Graphene/In₂S₃ van der Waals Heterostructure for Ultrasensitive Photodetection. ACS Photonics, 2018, 5, 4912-4919.	3.2	36
38	Allâ€Dielectric Nanostructure Fabryâ€“PÃ©rotâ€Enhanced Mie Resonances Coupled with Photogain Modulation toward Ultrasensitive In₂S₃ Photodetector. Advanced Functional Materials, 2021, 31, 2007987.	7.8	34
39	Novel two-dimensional monoelemental and ternary materials: growth, physics and application. Nanophotonics, 2020, 9, 2147-2168.	2.9	29
40	Out of plane stacking of InSe-based heterostructures towards high performance electronic and optoelectronic devices using a graphene electrode. Journal of Materials Chemistry C, 2018, 6, 12509-12517.	2.7	28
41	Epitaxial growth of large-scale In₂S₃ nanoflakes and the construction of a high performance In₂S₃/Si photodetector. Journal of Materials Chemistry C, 2019, 7, 12104-12113.	2.7	26
42	Universal Strategy Integrating Strain and Interface Engineering to Drive Highâ€Performance 2D Material Photodetectors. Advanced Optical Materials, 2021, 9, 2100450.	3.6	26
43	A flexible, transparent and high-performance gas sensor based on layer-materials for wearable technology. Nanotechnology, 2017, 28, 415501.	1.3	25
44	Fabrication of a high performance ZnIn₂S₄/Si heterostructure photodetector array for weak signal detection. Journal of Materials Chemistry C, 2018, 6, 12928-12939.	2.7	25
45	Self-assembly In2Se3/SnSe2 heterostructure array with suppressed dark current and enhanced photosensitivity for weak signal. Science China Materials, 2020, 63, 1560-1569.	3.5	24
46	A solution-fabricated tellurium/silicon mixed-dimensional van der Waals heterojunction for self-powered photodetectors. Journal of Materials Chemistry C, 2022, 10, 7283-7293.	2.7	24
47	Controllable growth of large-area atomically thin ReS2 films and their thickness-dependent optoelectronic properties. Applied Physics Letters, 2019, 114, .	1.5	23
48	Vertically stacked Bi₂Se₃/MoTe₂ heterostructure with large band offsets for nanoelectronics. Nanoscale, 2021, 13, 15403-15414.	2.8	23
49	High performance tin diselenide photodetectors dependent on thickness: a vertical graphene sandwiched device and interfacial mechanism. Nanoscale, 2019, 11, 13309-13317.	2.8	22
50	Promoting the Performance of 2D Material Photodetectors by Dielectric Engineering. Small Methods, 2022, 6, e2101046.	4.6	20
51	An Innovative Postdeposition Annealing Approach Producing Centimeterâ€Scale In₂O₃/In₂(TeO₃)₃ Bulk Heterojunction Thin Film for Roomâ€Temperature Persistent Photoconductivity. Advanced Optical Materials, 2017, 5, 1600908.	3.6	19
52	Hybrid 1D/2D heterostructure with electronic structure engineering toward high-sensitivity and polarization-dependent photodetector. Science China Materials, 2022, 65, 732-740.	3.5	19
53	Plasmon resonances in semiconductor materials for detecting photocatalysis at the single-particle level. Nanoscale, 2016, 8, 15001-15007.	2.8	18
54	Recent progress in high-performance photo-detectors enabled by the pulsed laser deposition technology. Journal of Materials Chemistry C, 2020, 8, 4988-5014.	2.7	18

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55	Polarityâ€Switchable and Selfâ€Driven Photoâ€Response Based on Vertically Stacked Typeâ€II GeSe/SnS₂ Heterojunction. Advanced Materials Interfaces, 2022, 9, .	1.9	18
56	Robust Deposition of Subâ€Millimeter WSe₂ Drive Ultrasensitive Gateâ€Tunable 2D Material Photodetectors. Advanced Optical Materials, 2022, 10, .	3.6	18
57	Field emission properties and growth mechanism of In2O3 nanostructures. Nanoscale Research Letters, 2014, 9, 111.	3.1	17
58	Tunable Polarity Behavior and High-Performance Photosensitive Characteristics in Schottky-Barrier Field-Effect Transistors Based on Multilayer WS₂. ACS Applied Materials & Interfaces, 2018, 10, 2745-2751.	4.0	17
59	Large-area ReS2 monolayer films on flexible substrate for SERS based molecular sensing with strong fluorescence quenching. Applied Surface Science, 2021, 542, 148757.	3.1	17
60	Pulsedâ€Laserâ€Deposition Fabricated ZnIn₂S₄ Photodetectors with Excellent ON/OFF Switching Characteristics toward Highâ€Temperatureâ€Resistant Photodetection Applications. Advanced Optical Materials, 2022, 10, .	3.6	16
61	Self-driven SnS_{1â^'x}Se_x alloy/GaAs heterostructure based unique polarization sensitive photodetectors. Nanoscale, 2021, 13, 15193-15204.	2.8	14
62	Optical Resonance Coupled with Electronic Structure Engineering toward Highâ€Sensitivity Photodetectors. Advanced Optical Materials, 2021, 9, 2101374.	3.6	12
63	Enhanced Raman scattering on two-dimensional palladium diselenide. Nanoscale, 2022, 14, 4181-4187.	2.8	12
64	Circular SnS_{0.5}Se_{0.5} Nanosheets with Highly Anisotropic Performance for Nanoelectronics. ACS Applied Nano Materials, 2020, 3, 10270-10283.	2.4	10
65	Deep insights into interface engineering by buffer layer for efficient perovskite solar cells: a first-principles study. Science China Materials, 2020, 63, 1588-1596.	3.5	10
66	High-quality two-dimensional tellurium flakes grown by high-temperature vapor deposition. Journal of Materials Chemistry C, 2021, 9, 14394-14400.	2.7	10
67	A reasonably designed 2D WS₂ and CdS microwire heterojunction for high performance photoresponse. Nanoscale, 2021, 13, 5660-5669.	2.8	10
68	3D resonator based on luminescence enhanced by both polarized, size-dependent whispering gallery modes and Fabryâ€“PÃ©rot waveguide modes in individual ZnO micro- and nanonails. Nanoscale, 2014, 6, 5338.	2.8	9
69	Field emission and growth mechanism of ZnO microrods array with nanospikes fabricated by thermal evaporation. Materials Letters, 2016, 170, 210-212.	1.3	9
70	Photocatalytic Degradation of Tobacco Tar Using CsPbBr3 Quantum Dots Modified Bi2WO6 Composite Photocatalyst. Nanomaterials, 2021, 11, 2422.	1.9	9
71	In situ integration of Te/Si 2D/3D heterojunction photodetectors toward UV-vis-IR ultra-broadband photoelectric technologies. Nanoscale, 2022, 14, 6228-6238.	2.8	9
72	Field emission and photoluminescence of ZnO nanocombs. Applied Physics A: Materials Science and Processing, 2013, 113, 549-556.	1.1	7

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73	Enhancement of exciton emission in WS₂based on the Kerker effect from the mode engineering of individual Si nanostripes. Nanoscale Horizons, 2020, 5, 1368-1377.	4.1	7
74	Whispering gallery and Fabryâ€“PÃ©rot modes enhanced luminescence from individual ZnO micro mushroom. Journal of Applied Physics, 2013, 113, 034313.	1.1	6
75	Nonlayered In₂S₃/Al₂O₃/CsPbBr₃ Quantum Dot Heterojunctions for Sensitive and Stable Photodetectors. ACS Applied Nano Materials, 2021, 4, 5106-5114.	2.4	6
76	A New Wide Bandgap Semiconductor: Carbyne Nanocrystals. Advanced Functional Materials, 2021, 31, 2104254.	7.8	6
77	Etching-free high-throughput intersectional nanofabrication of diverse optical nanoantennas for nanoscale light manipulation. Journal of Colloid and Interface Science, 2022, 622, 950-959.	5.0	6
78	High performance DUV-visible 4H-SiC-based multilayered SnS₂ dual-mode photodetectors. Journal of Materials Chemistry C, 2021, 9, 15662-15670.	2.7	5
79	An artificial optoelectronic nociceptor based on In₂S₃ memristor. Journal Physics D: Applied Physics, 2022, 55, 125401.	1.3	4
80	Weyl-Semimetal TaIrTe₄/Si Nanostructures for Self-Powered Schottky Photodetectors. ACS Applied Nano Materials, 2022, 5, 6523-6531.	2.4	4
81	Device-Scaled Controlled Crumpling of MXene-Based Ultrathin Supercapacitors as Stretchable Power Sources. ACS Applied Energy Materials, 2022, 5, 4296-4306.	2.5	3
82	Reâ€Stickable Yarn Supercapacitors with Vaper Phase Polymerized Multiâ€Layered Polypyrrole Electrodes for Smart Garments. Macromolecular Rapid Communications, 0, , 2200347.	2.0	2
83	Fabrication and Hydrogen Sensing Property of In₂O₃Nanotowers. Advanced Materials Research, 2013, 834-836, 913-916.	0.3	1
84	Self-Assembled Alcohol Sensor of In₂O₃Nanorods. Advanced Materials Research, 2013, 834-836, 46-49.	0.3	0