

Biyuan Zheng

List of Publications by Year in descending order

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32
papers

2,156
citations

279798

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times ranked

3022
citing authors

#	ARTICLE	IF	CITATIONS
1	Van der Waals epitaxial growth and optoelectronics of large-scale WSe ₂ /SnS ₂ vertical bilayer p-n junctions. Nature Communications, 2017, 8, 1906.	12.8	369
2	Twist-angle-dependent interlayer exciton diffusion in WS ₂ /WSe ₂ heterobilayers. Nature Materials, 2020, 19, 617-623.	27.5	193
3	Interlayer exciton formation, relaxation, and transport in TMD van der Waals heterostructures. Light: Science and Applications, 2021, 10, 72.	16.6	184
4	Self-Powered Broad-band Photodetectors Based on Vertically Stacked WSe ₂ /Bi ₂ Te ₃ Heterojunctions. ACS Nano, 2019, 13, 13573-13580.	14.6	165
5	Band Alignment Engineering in Two-Dimensional Lateral Heterostructures. Journal of the American Chemical Society, 2018, 140, 11193-11197.	13.7	136
6	Van der Waals epitaxial growth of vertically stacked Sb ₂ Te ₃ /MoS ₂ p-n heterojunctions for high performance optoelectronics. Nano Energy, 2019, 59, 66-74.	16.0	112
7	Composition-Modulated Two-Dimensional Semiconductor Lateral Heterostructures via Layer-Selected Atomic Substitution. ACS Nano, 2017, 11, 961-967.	14.6	99
8	Generation of helical topological exciton-polaritons. Science, 2020, 370, 600-604.	12.6	97
9	Rational Kinetics Control toward Universal Growth of 2D Vertically Stacked Heterostructures. Advanced Materials, 2019, 31, e1901351.	21.0	79
10	Strain-Tuning Atomic Substitution in Two-Dimensional Atomic Crystals. ACS Nano, 2018, 12, 4853-4860.	14.6	75
11	WO ₃ /WS ₂ Vertical Bilayer Heterostructures with High Photoluminescence Quantum Yield. Journal of the American Chemical Society, 2019, 141, 11754-11758.	13.7	69
12	Ultrahigh-Performance Optoelectronics Demonstrated in Ultrathin Perovskite-Based Vertical Semiconductor Heterostructures. ACS Nano, 2019, 13, 7996-8003.	14.6	64
13	Nonvolatile MoTe ₂ p-n Diodes for Optoelectronic Logics. ACS Nano, 2019, 13, 7216-7222.	14.6	52
14	Probing and Manipulating Carrier Interlayer Diffusion in van der Waals Multilayer by Constructing Type-I Heterostructure. Nano Letters, 2019, 19, 7217-7225.	9.1	42
15	Epitaxial synthesis of ultrathin In ₂ Se ₃ /MoS ₂ heterostructures with high visible/near-infrared photoresponse. Nanoscale, 2020, 12, 6480-6488.	5.6	42
16	Strong interlayer hybridization in the aligned SnS ₂ /WSe ₂ hetero-bilayer structure. Npj 2D Materials and Applications, 2019, 3, .	7.9	39
17	Enhanced Trion Emission and Carrier Dynamics in Monolayer WS ₂ Coupled with Plasmonic Nanocavity. Advanced Optical Materials, 2020, 8, 2001147.	7.3	36
18	Near-Unity Polarization of Valley-Dependent Second-Harmonic Generation in Stacked TMDC Layers and Heterostructures at Room Temperature. Advanced Materials, 2020, 32, e1908061.	21.0	36

#	ARTICLE	IF	CITATIONS
19	Wavelength-Tunable Interlayer Exciton Emission at the Near-Infrared Region in van der Waals Semiconductor Heterostructures. <i>Nano Letters</i> , 2020, 20, 3361-3368.	9.1	35
20	Vapor growth of WSe ₂ /WS ₂ heterostructures with stacking dependent optical properties. <i>Nano Research</i> , 2019, 12, 3123-3128.	10.4	32
21	Dual-channel type tunable field-effect transistors based on vertical bilayer WS ₂ (1 st layer)/Se ₂ /SnS ₂ heterostructures. <i>Information Materials</i> , 2020, 2, 752-760.	7.3	32
22	Light-triggered two-dimensional lateral homogeneous p-n diodes for opto-electrical interconnection circuits. <i>Science Bulletin</i> , 2020, 65, 293-299.	9.0	29
23	Observation and Active Control of a Collective Polariton Mode and Polaritonic Band Gap in Few-Layer WS ₂ Strongly Coupled with Plasmonic Lattices. <i>Nano Letters</i> , 2020, 20, 790-798.	9.1	25
24	Efficient control of emission and carrier polarity in WS ₂ monolayer by indium doping. <i>Science China Materials</i> , 2021, 64, 1449-1456.	6.3	21
25	A Waveguide-Integrated Two-Dimensional Light-Emitting Diode Based on p-Type WSe ₂ /n-Type CdS Nanoribbon Heterojunction. <i>ACS Nano</i> , 2022, 16, 4371-4378.	14.6	17
26	Magnetic Doping Induced Strong Circularly Polarized Light Emission and Detection in 2D Layered Halide Perovskite. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	17
27	Photoluminescence Lightening: Extraordinary Oxygen Modulated Dynamics in WS ₂ Monolayers. <i>Nano Letters</i> , 2022, 22, 2112-2119.	9.1	16
28	Trion-Induced Distinct Transient Behavior and Stokes Shift in WS ₂ Monolayers. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3763-3772.	4.6	13
29	Record high photoresponse observed in CdS-black phosphorous van der Waals heterojunction photodiode. <i>Science China Materials</i> , 2020, 63, 1570-1578.	6.3	13
30	Revealing the many-body interactions and valley-polarization behavior in Re-doped MoS ₂ monolayers. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	6
31	Manipulating Picosecond Photoresponse in van der Waals Heterostructure Photodetectors. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	6
32	Strong interfacial coupling in vertical WSe ₂ /WS ₂ heterostructure for high performance photodetection. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	5