

# Kai Zhang

## List of Publications by Year in descending order

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76  
papers

4,220  
citations

186265  
28  
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110387  
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g-index

77  
all docs

77  
docs citations

77  
times ranked

6868  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of Few-Layer Hexagonal Boron Nitride Thin Film by Chemical Vapor Deposition. <i>Nano Letters</i> , 2010, 10, 4134-4139.	9.1	1,058
2	High Mobility MoS <sub>2</sub> Transistor with Low Schottky Barrier Contact by Using Atomic Thick h-BN as a Tunneling Layer. <i>Advanced Materials</i> , 2016, 28, 8302-8308.	21.0	398
3	Recent progress in black phosphorus and black-phosphorus-analogue materials: properties, synthesis and applications. <i>Nanoscale</i> , 2019, 11, 14491-14527.	5.6	239
4	All-Solid-State Fiber Supercapacitors with Ultrahigh Volumetric Energy Density and Outstanding Flexibility. <i>Advanced Energy Materials</i> , 2019, 9, 1802753.	19.5	197
5	Microfluidic-spinning construction of black-phosphorus-hybrid microfibres for non-woven fabrics toward a high energy density flexible supercapacitor. <i>Nature Communications</i> , 2018, 9, 4573.	12.8	181
6	Selenium-Doped Black Phosphorus for High-Responsivity 2D Photodetectors. <i>Small</i> , 2016, 12, 5000-5007.	10.0	156
7	High-Performance Hierarchical Black-Phosphorus-Based Soft Electrochemical Actuators in Bioinspired Applications. <i>Advanced Materials</i> , 2019, 31, e1806492.	21.0	118
8	Wafer-Scale Fabrication of Two-Dimensional PtS <sub>2</sub> /PtSe <sub>2</sub> Heterojunctions for Efficient and Broad band Photodetection. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 40614-40622.	8.0	110
9	High-Yield Production of Monolayer FePS <sub>3</sub> Quantum Sheets via Chemical Exfoliation for Efficient Photocatalytic Hydrogen Evolution. <i>Advanced Materials</i> , 2018, 30, e1707433.	21.0	110
10	Few-layer selenium-doped black phosphorus: synthesis, nonlinear optical properties and ultrafast photonics applications. <i>Journal of Materials Chemistry C</i> , 2017, 5, 6129-6135.	5.5	109
11	Epitaxial nucleation and lateral growth of high-crystalline black phosphorus films on silicon. <i>Nature Communications</i> , 2020, 11, 1330.	12.8	102
12	Field-Induced n-Doping of Black Phosphorus for CMOS Compatible 2D Logic Electronics with High Electron Mobility. <i>Advanced Functional Materials</i> , 2017, 27, 1702211.	14.9	95
13	Broadband Ultraviolet Photodetector Based on Vertical Ga <sub>2</sub> O <sub>3</sub> /GaN Nanowire Array with High Responsivity. <i>Advanced Optical Materials</i> , 2019, 7, 1801563.	7.3	95
14	Bias-switchable negative and positive photoconductivity in 2D FePS <sub>3</sub> ultraviolet photodetectors. <i>Nanotechnology</i> , 2018, 29, 244001.	2.6	67
15	Few-Layer Platinum Diselenide as a New Saturable Absorber for Ultrafast Fiber Lasers. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 21534-21540.	8.0	67
16	Thermoelectric terahertz photodetectors based on selenium-doped black phosphorus flakes. <i>Nanoscale</i> , 2019, 11, 1995-2002.	5.6	64
17	Solar-blind ultraviolet photodetector based on graphene/vertical Ga <sub>2</sub> O <sub>3</sub> nanowire array heterojunction. <i>Nanophotonics</i> , 2018, 7, 1557-1562.	6.0	60
18	Highly Efficient, Ultrabroad PdSe <sub>2</sub> Phototransistors from Visible to Terahertz Driven by Mutiphysical Mechanism. <i>ACS Nano</i> , 2021, 15, 20403-20413.	14.6	47

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19	Printed thin film transistors and CMOS inverters based on semiconducting carbon nanotube ink purified by a nonlinear conjugated copolymer. <i>Nanoscale</i> , 2016, 8, 4588-4598.	5.6	44
20	Point defects in two-dimensional hexagonal boron nitride: A perspective. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	42
21	Freestanding Boron Nitride Nanosheet Films for Ultrafast Oil/Water Separation. <i>Small</i> , 2016, 12, 4960-4965.	10.0	40
22	In Situ Generation of Photosensitive Silver Halide for Improving the Conductivity of Electrically Conductive Adhesives. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 29047-29054.	8.0	39
23	Ultrasensitive negative photoresponse in 2D Cr <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> photodetector with light-induced carrier trapping. <i>Nanotechnology</i> , 2018, 29, 464002.	2.6	37
24	Oxidation-Resistant Black Phosphorus Enable Highly Ambient-Stable Ultrafast Pulse Generation at a 2 $\mu$ m Tm/Ho-Doped Fiber Laser. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 36854-36862.	8.0	36
25	Controlled growth of MoS <sub>2</sub> nanopetals and their hydrogen evolution performance. <i>RSC Advances</i> , 2016, 6, 18483-18489.	3.6	32
26	Ultra-stable pulse generation in ytterbium-doped fiber laser based on black phosphorus. <i>Nanoscale Advances</i> , 2019, 1, 195-202.	4.6	32
27	Nonvolatile Photoelectric Memory Induced by Interfacial Charge at a Ferroelectric PZT-Gated Black Phosphorus Transistor. <i>Advanced Electronic Materials</i> , 2019, 5, 1900458.	5.1	31
28	Free-Standing Black Phosphorus Thin Films for Flexible Quasi-Solid-State Micro-Supercapacitors with High Volumetric Power and Energy Density. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 5938-5946.	8.0	31
29	Electrical property enhancement of electrically conductive adhesives through Ag-coated-Cu surface treatment by terephthalaldehyde and iodine. <i>Journal of Materials Chemistry C</i> , 2015, 3, 6178-6184.	5.5	28
30	A Symmetric Tunnel Field-Effect Transistor Based on MoS <sub>2</sub> /Black Phosphorus/MoS <sub>2</sub> Nanolayered Heterostructures. <i>ACS Applied Nano Materials</i> , 2019, 2, 5674-5680.	5.0	27
31	Electrochemical Peeling Few-Layer SnSe <sub>2</sub> for High-Performance Ultrafast Photonics. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 43049-43057.	8.0	27
32	Ultra-broadband photodetection based on two-dimensional layered Ta <sub>2</sub> NiSe <sub>5</sub> with strong anisotropy and high responsivity. <i>Materials and Design</i> , 2021, 208, 109894.	7.0	26
33	Mid-Infrared Black Phosphorus Surface-Emitting Laser with an Open Microcavity. <i>ACS Photonics</i> , 2019, 6, 1581-1586.	6.6	25
34	Ferroelectric Field-Effect Transistors Based on WSe <sub>2</sub> /CuInP <sub>2</sub> S <sub>6</sub> Heterostructures for Memory Applications. <i>ACS Applied Electronic Materials</i> , 2021, 3, 4711-4717.	4.3	23
35	An Atomically Thin Air-Stable Narrow-Gap Semiconductor Cr <sub>2</sub> S <sub>3</sub> for Broadband Photodetection with High Responsivity. <i>Advanced Electronic Materials</i> , 2021, 7, 2000962.	5.1	22
36	Recent progress and strategies in photodetectors based on 2D inorganic/organic heterostructures. <i>2D Materials</i> , 2021, 8, 012001.	4.4	21

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37	Bright/dark switchable mode-locked fiber laser based on black phosphorus. Optics and Laser Technology, 2020, 123, 105948.	4.6	20
38	Van der Waals epitaxy of ultrathin crystalline PbTe nanosheets with high near-infrared photoelectric response. Nano Research, 2021, 14, 1955-1960.	10.4	19
39	Black phosphorus-enabled harmonic mode locking of dark pulses in a Yb-doped fiber laser. Laser Physics Letters, 2019, 16, 085102.	1.4	18
40	Emerging terahertz photodetectors based on two-dimensional materials. Optics Communications, 2018, 406, 36-43.	2.1	17
41	NiPS3 nanosheets for passive pulse generation in an Er-doped fiber laser. Journal of Materials Chemistry C, 2019, 7, 14625-14631.	5.5	17
42	Metalorganic Chemical Vapor Deposition Heteroepitaxial $\text{In}_2\text{Ga}_2\text{O}_3$ and Black Phosphorus Pn Heterojunction for Solar-Blind Ultraviolet and Infrared Dual-Band Photodetector. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900861.	1.8	17
43	Multifunctional black phosphorus/ $\text{MoS}_2$ van der Waals heterojunction. Nanophotonics, 2020, 9, 2487-2493.	6.0	17
44	Sub-Band Gap Absorption and Optical Nonlinear Response of $\text{MnPSe}_3$ Nanosheets for Pulse Generation in the L-Band. ACS Applied Materials & Interfaces, 2021, 13, 13524-13533.	8.0	16
45	Anisotropic electronic structure of antimonene. Applied Physics Letters, 2019, 115, .	3.3	15
46	High-performance junction field-effect transistor based on black phosphorus/ $\text{In}_2\text{Ga}_2\text{O}_3$ heterostructure. Journal of Semiconductors, 2020, 41, 082002.	3.7	15
47	Controllable Synthesis of Narrow-Gap van der Waals Semiconductor $\text{Nb}_2\text{GeTe}_4$ with Asymmetric Architecture for Ultrafast Photonics. ACS Nano, 2022, 16, 4239-4250.	14.6	15
48	Solution processable organic/inorganic hybrid ultraviolet photovoltaic detector. AIP Advances, 2016, 6, .	1.3	14
49	Femtosecond ultrafast pulse generation with high-quality $2\text{H-TaS}_2$ nanosheets <i>via</i> top-down empirical approach. Nanoscale, 2021, 13, 20471-20480.	5.6	13
50	Polarization-Independent Wavefront Manipulation of Surface Plasmons with Plasmonic Metasurfaces. Advanced Optical Materials, 2020, 8, 2000868.	7.3	12
51	$\text{Sb}_2\text{Te}_3$ topological insulator for 52 nm wideband tunable Yb-doped passively Q-switched fiber laser. Frontiers of Information Technology and Electronic Engineering, 2021, 22, 287-295.	2.6	12
52	Nontrivial Giant Linear Magnetoresistance in Nodal-Line Semimetal ZrGeSe 2D Layers. Nano Letters, 2021, 21, 10139-10145.	9.1	12
53	Ultrasensitive and Self-Powered Terahertz Detection Driven by Nodal-Line Dirac Fermions and Van der Waals Architecture. Advanced Science, 2021, 8, e2102088.	11.2	12
54	Stable and Efficient Oxygen Evolution from Seawater Enabled by Graphene-Supported Sub-Nanometer Arrays of Transition Metal Phosphides. Advanced Materials Interfaces, 2022, 9, 2101720.	3.7	12

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55	Large-area uniform electron doping of graphene by Ag nanofilm. <i>AIP Advances</i> , 2017, 7, .	1.3	11
56	Nonlinear photoresponse of metallic graphene-like VSe <sub>2</sub> ultrathin nanosheets for pulse laser generation. <i>Science China Information Sciences</i> , 2019, 62, 1.	4.3	11
57	Controllable synthesis of high-quality two-dimensional tellurium by a facile chemical vapor transport strategy. <i>IScience</i> , 2022, 25, 103594.	4.1	11
58	Two-dimensional Ta <sub>2</sub> NiSe <sub>5</sub> /GaSe van der Waals heterojunction for ultrasensitive visible and near-infrared dual-band photodetector. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	11
59	Over 70%nm broadband-tunable Yb-doped fiber pulse laser based on trilaminar graphene. <i>Laser Physics Letters</i> , 2017, 14, 065105.	1.4	9
60	Actuators: High-Performance Hierarchical Black-Phosphorous-Based Soft Electrochemical Actuators in Bioinspired Applications ( <i>Adv. Mater.</i> 25/2019). <i>Advanced Materials</i> , 2019, 31, 1970181.	21.0	8
61	CoPt/CeO <sub>2</sub> catalysts for the growth of narrow diameter semiconducting single-walled carbon nanotubes. <i>Nanoscale</i> , 2015, 7, 19699-19704.	5.6	7
62	InAs/GaAs Quantum Dot Dual-Mode Distributed Feedback Laser Towards Large Tuning Range Continuous-Wave Terahertz Application. <i>Nanoscale Research Letters</i> , 2018, 13, 267.	5.7	7
63	Black phosphorus for near-infrared ultrafast lasers in the spatial/temporal domain. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 503001.	1.8	7
64	Bandgap opening in layered gray arsenic alloy. <i>APL Materials</i> , 2021, 9, 041102.	5.1	5
65	Focus on 2D material nanophotonics. <i>Nanotechnology</i> , 2019, 30, 030201.	2.6	4
66	Electrically Stimulated Band Alignment Transit in Black Phosphorus/Î <sup>2</sup> -Ga <sub>2</sub> O <sub>3</sub> Heterostructure Dual-band Photodetector. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 703-708.	2.6	3
67	Dual-wavelength self-starting mode-locking Er-doped fiber laser with MnPS <sub>3</sub> saturable absorber. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 184208.	0.5	3
68	Electronic states driven by the crystal field in two-dimensional materials: The case of antimonene. <i>Physical Review B</i> , 2022, 105, .	3.2	3
69	Laser Frequency Combs: Graphene-Coupled Terahertz Semiconductor Lasers for Enhanced Passive Frequency Comb Operation ( <i>Adv. Sci.</i> 20/2019). <i>Advanced Science</i> , 2019, 6, 1970120.	11.2	2
70	Deterministic Transfer of Large-Scale Î <sup>2</sup> -Phase Arsenic on Fiber End Cap for Near-Infrared Ultrafast Pulse Generation. <i>Frontiers in Materials</i> , 2021, 8, .	2.4	2
71	Transient Anisotropic Photocurrent Induced Terahertz Emission from the Surface of Black Phosphorus. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021, 15, 2100413.	2.4	2
72	High-Performance Vanadium Diselenide Nanosheets for the Realization of Compact Pulsed Fiber Lasers. <i>Annalen Der Physik</i> , 0, , 2100230.	2.4	2

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73	Terahertz Photon Detection: Sensitive Terahertz Detection and Imaging Driven by the Photothermoelectric Effect in Ultrashort-Channel Black Phosphorus Devices (Adv. Sci. 5/2020). Advanced Science, 2020, 7, 2070029.	11.2	1
74	Infrared photodetector based on 2D monoclinic gold phosphide nanosheets yielded from one-step chemical vapor transport deposition. Applied Physics Letters, 2022, 120, 131104.	3.3	1
75	Tailoring the optical properties of 2D materials for optoelectronic applications. , 2016, , .		0
76	Black Phosphorus Based Ultrafast Yb-doped Fiber Laser: Principle, Mechanisms, and Applications. , 2019, , .		0