

Jianlu Wang

List of Publications by Year in descending order

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92
papers

5,805
citations

61984

43
h-index

79698

73
g-index

93
all docs

93
docs citations

93
times ranked

5769
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrasensitive and Broadband MoS ₂ Photodetector Driven by Ferroelectrics. <i>Advanced Materials</i> , 2015, 27, 6575-6581.	21.0	722
2	Unipolar barrier photodetectors based on van der Waals heterostructures. <i>Nature Electronics</i> , 2021, 4, 357-363.	26.0	292
3	Recent Progress on Localized Field Enhanced Two-dimensional Material Photodetectors from Ultraviolet to Visible to Infrared. <i>Small</i> , 2017, 13, 1700894.	10.0	234
4	Arrayed Van Der Waals Broadband Detectors for Dual-Band Detection. <i>Advanced Materials</i> , 2017, 29, 1604439.	21.0	218
5	High-Performance Photovoltaic Detector Based on MoTe ₂ /MoS ₂ Van der Waals Heterostructure. <i>Small</i> , 2018, 14, 1703293.	10.0	205
6	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. <i>Nature Electronics</i> , 2020, 3, 43-50.	26.0	167
7	Perpendicular Optical Reversal of the Linear Dichroism and Polarized Photodetection in 2D GeAs. <i>ACS Nano</i> , 2018, 12, 12416-12423.	14.6	157
8	When Nanowires Meet Ultrahigh Ferroelectric Field – High-Performance Full-Depleted Nanowire Photodetectors. <i>Nano Letters</i> , 2016, 16, 2548-2555.	9.1	135
9	Ultrafast non-volatile flash memory based on van der Waals heterostructures. <i>Nature Nanotechnology</i> , 2021, 16, 874-881.	31.5	130
10	A Robust Artificial Synapse Based on Organic Ferroelectric Polymer. <i>Advanced Electronic Materials</i> , 2019, 5, 1800600.	5.1	129
11	High-Sensitivity Floating-Gate Phototransistors Based on WS ₂ and MoS ₂ . <i>Advanced Functional Materials</i> , 2016, 26, 6084-6090.	14.9	124
12	Ultrasensitive negative capacitance phototransistors. <i>Nature Communications</i> , 2020, 11, 101.	12.8	124
13	AsP/InSe Van der Waals Tunneling Heterojunctions with Ultrahigh Reverse Rectification Ratio and High Photosensitivity. <i>Advanced Functional Materials</i> , 2019, 29, 1900314.	14.9	121
14	Blackbody-sensitive room-temperature infrared photodetectors based on low-dimensional tellurium grown by chemical vapor deposition. <i>Science Advances</i> , 2021, 7, .	10.3	121
15	Recent Progress on Electrical and Optical Manipulations of Perovskite Photodetectors. <i>Advanced Science</i> , 2021, 8, e2100569.	11.2	118
16	MoTe ₂ n Homojunctions Defined by Ferroelectric Polarization. <i>Advanced Materials</i> , 2020, 32, e1907937.	21.0	115
17	High-Performance Ferroelectric Polymer Side-Gated CdS Nanowire Ultraviolet Photodetectors. <i>Advanced Functional Materials</i> , 2016, 26, 7690-7696.	14.9	107
18	Ferroelectric Negative Capacitance Field Effect Transistor. <i>Advanced Electronic Materials</i> , 2018, 4, 1800231.	5.1	105

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19	Amorphous Gallium Oxide-Based Gate-Tunable High-Performance Thin Film Phototransistor for Solar-Blind Imaging. <i>Advanced Electronic Materials</i> , 2019, 5, 1900389.	5.1	95
20	Logic gates based on neuristors made from two-dimensional materials. <i>Nature Electronics</i> , 2021, 4, 399-404.	26.0	95
21	High-Performance Wafer-Scale MoS ₂ Transistors toward Practical Application. <i>Small</i> , 2018, 14, e1803465.	10.0	88
22	Mechanism of Electric Power Generation from Ionic Droplet Motion on Polymer Supported Graphene. <i>Journal of the American Chemical Society</i> , 2018, 140, 13746-13752.	13.7	87
23	Controlled Doping of Wafer-Scale PtSe ₂ Films for Device Application. <i>Advanced Functional Materials</i> , 2019, 29, 1805614.	14.9	87
24	Ferroelectric Localized Field-Enhanced ZnO Nanosheet Ultraviolet Photodetector with High Sensitivity and Low Dark Current. <i>Small</i> , 2018, 14, e1800492.	10.0	85
25	Ferroelectric-tuned van der Waals heterojunction with band alignment evolution. <i>Nature Communications</i> , 2021, 12, 4030.	12.8	79
26	Two-dimensional negative capacitance transistor with polyvinylidene fluoride-based ferroelectric polymer gating. <i>Npj 2D Materials and Applications</i> , 2017, 1, .	7.9	77
27	Ultra-sensitive polarization-resolved black phosphorus homojunction photodetector defined by ferroelectric domains. <i>Nature Communications</i> , 2022, 13, .	12.8	77
28	Optoelectronic Properties of Few-Layer MoS ₂ FET Gated by Ferroelectric Relaxor Polymer. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 32083-32088.	8.0	76
29	Integration of High-k Oxide on MoS ₂ by Using Ozone Pretreatment for High-Performance MoS ₂ Top-Gated Transistor with Thickness-Dependent Carrier Scattering Investigation. <i>Small</i> , 2015, 11, 5932-5938.	10.0	74
30	Ultralow-Power Machine Vision with Self-Powered Sensor Reservoir. <i>Advanced Science</i> , 2022, 9, e2106092.	11.2	68
31	A Dual-Gate MoS ₂ Photodetector Based on Interface Coupling Effect. <i>Small</i> , 2020, 16, e1904369.	10.0	65
32	Visible to short wavelength infrared In ₂ Se ₃ -nanoflake photodetector gated by a ferroelectric polymer. <i>Nanotechnology</i> , 2016, 27, 364002.	2.6	63
33	Ultrasensitive Hybrid MoS ₂ -ZnCdSe Quantum Dot Photodetectors with High Gain. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 23667-23672.	8.0	62
34	Ultrabroadband Photodetectors up to 10.6 Åm Based on 2D Fe ₃ O ₄ Nanosheets. <i>Advanced Materials</i> , 2020, 32, e2002237.	21.0	57
35	A versatile photodetector assisted by photovoltaic and bolometric effects. <i>Light: Science and Applications</i> , 2020, 9, 160.	16.6	56
36	Extremely Low Dark Current MoS ₂ Photodetector via 2D Halide Perovskite as the Electron Reservoir. <i>Advanced Optical Materials</i> , 2020, 8, 1901402.	7.3	55

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37	Multimechanism Synergistic Photodetectors with Ultrabroad Spectrum Response from 375 nm to 10 μm . <i>Advanced Science</i> , 2019, 6, 1901050.	11.2	52
38	Direct Polarimetric Image Sensor and Wide Spectral Response Based on Quasi-1D Sb_2S_3 Nanowire. <i>Advanced Functional Materials</i> , 2021, 31, 2006601.	14.9	52
39	Ferroelectric Synaptic Transistor Network for Associative Memory. <i>Advanced Electronic Materials</i> , 2021, 7, 2001276.	5.1	52
40	Ferroelectric polymer tuned two dimensional layered MoTe_2 photodetector. <i>RSC Advances</i> , 2016, 6, 87416-87421.	3.6	51
41	Symmetric Ultrafast Writing and Erasing Speeds in Quasi-Nonvolatile Memory via van der Waals Heterostructures. <i>Advanced Materials</i> , 2019, 31, e1808035.	21.0	50
42	HgCdTe /black phosphorus van der Waals heterojunction for high-performance polarization-sensitive midwave infrared photodetector. <i>Science Advances</i> , 2022, 8, eabn1811.	10.3	50
43	Synthetically controlling the optoelectronic properties of dithieno[2,3-d: π ,3- π']benzo[1,2-b:4,5-b']dithiophene-alt-diketopyrrolopyrrole-conjugated polymers for efficient solar cells. <i>Journal of Materials Chemistry A</i> , 2014, 2, 15316-15325.	10.3	46
44	Characterization of atomic defects on the photoluminescence in two-dimensional materials using transmission electron microscope. <i>Information Materials</i> , 2019, 1, 85-97.	17.3	46
45	Ultrasensitive Mid-wavelength Infrared Photodetection Based on a Single InAs Nanowire. <i>ACS Nano</i> , 2019, 13, 3492-3499.	14.6	45
46	Highly Sensitive InSb Nanosheets Infrared Photodetector Passivated by Ferroelectric Polymer. <i>Advanced Functional Materials</i> , 2020, 30, 2006156.	14.9	41
47	Eliminating Overerase Behavior by Designing Energy Band in High-Speed Charge-Trap Memory Based on WSe_2 . <i>Small</i> , 2017, 13, 1604128.	10.0	39
48	High-performance lead-free two-dimensional perovskite photo transistors assisted by ferroelectric dielectrics. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12714-12720.	5.5	39
49	High performance top-gated ferroelectric field effect transistors based on two-dimensional ZnO nanosheets. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	34
50	Ferroelectric Enhanced Performance of a GeSn/Ge Dual-Nanowire Photodetector. <i>Nano Letters</i> , 2020, 20, 3872-3879.	9.1	33
51	Complementary Logic with Voltage Zero-Loss and Nano-Watt Power via Configurable $\text{MoS}_2/\text{WSe}_2$ Gate. <i>Advanced Functional Materials</i> , 2018, 28, 1805171.	14.9	32
52	Efficient two-terminal artificial synapse based on a network of functionalized conducting polymer nanowires. <i>Journal of Materials Chemistry C</i> , 2019, 7, 9933-9938.	5.5	32
53	Gate-Tunable Photodiodes Based on Mixed-Dimensional Te/MoTe_2 Van der Waals Heterojunctions. <i>Advanced Electronic Materials</i> , 2021, 7, 2001066.	5.1	29
54	Ultrahigh-Detectivity Photodetectors with Van der Waals Epitaxial CdTe Single-Crystalline Films. <i>Small</i> , 2019, 15, e1900236.	10.0	27

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55	High Performance Ternary Organic Phototransistors with Photoresponse up to 2600 nm at Room Temperature. <i>Advanced Functional Materials</i> , 2021, 31, 2103787.	14.9	26
56	Spatial and Frequency Selective Plasmonic Metasurface for Long Wavelength Infrared Spectral Region. <i>Advanced Optical Materials</i> , 2018, 6, 1800337.	7.3	23
57	Multifunctional MoS ₂ Transistors with Electrolyte Gel Gating. <i>Small</i> , 2020, 16, e2000420.	10.0	23
58	MoS ₂ /HfO ₂ /Silicon Insulator Dual-Photogating Transistor with Ambipolar Photoresponsivity for High-Resolution Light Wavelength Detection. <i>Advanced Functional Materials</i> , 2019, 29, 1906242.	14.9	22
59	Flexible graphene field effect transistor with ferroelectric polymer gate. <i>Optical and Quantum Electronics</i> , 2016, 48, 1.	3.3	21
60	Polarizer-free polarimetric image sensor through anisotropic two-dimensional GeSe. <i>Science China Materials</i> , 2021, 64, 1230-1237.	6.3	21
61	Gate Stack Engineering in MoS ₂ Field-Effect Transistor for Reduced Channel Doping and Hysteresis Effect. <i>Advanced Electronic Materials</i> , 2021, 7, 2000395.	5.1	19
62	Ferroelectric tunnel junctions with high tunnelling electroresistance. <i>Nature Electronics</i> , 2020, 3, 440-441.	26.0	18
63	Electrical characterization of MoS ₂ field-effect transistors with different dielectric polymer gate. <i>AIP Advances</i> , 2017, 7, .	1.3	15
64	Visualizing Band Profiles of Gate-Tunable Junctions in MoS ₂ /WSe ₂ Heterostructure Transistors. <i>ACS Nano</i> , 2021, 15, 16314-16321.	14.6	14
65	End-Bonded Contacts of Tellurium Transistors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 7766-7772.	8.0	12
66	Stable Hysteresis-Free MoS ₂ Transistors With Low-k/High-k Bilayer Gate Dielectrics. <i>IEEE Electron Device Letters</i> , 2020, 41, 1036-1039.	3.9	10
67	Two-dimensional series connected photovoltaic cells defined by ferroelectric domains. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	10
68	Interface engineering of ferroelectric-gated MoS ₂ phototransistor. <i>Science China Information Sciences</i> , 2021, 64, 1.	4.3	10
69	High-Performance Photodetectors with an Ultrahigh Photoswitching Ratio and a Very Fast Response Speed in Self-Powered Cu ₂ ZnSnS ₄ /CdS PN Heterojunctions. <i>ACS Applied Electronic Materials</i> , 2021, 3, 4135-4143.	4.3	10
70	Ferroelectric control of magnetism in P(VDF-TrFE)/Co heterostructure. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 7502-7506.	2.2	9
71	Ferroelectric properties of gradient doped Y ₂ O ₃ :HfO ₂ thin films grown by pulsed laser deposition. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	9
72	Ferroelectricity and antiferromagnetism in organic-inorganic hybrid (1,4-bis(imidazol-1-ylmethyl)benzene)CuCl ₄ ·H ₂ O. <i>CrystEngComm</i> , 2020, 22, 587-592.	2.6	9

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73	Ferroelectric field-effect transistors for logic and <i>in-situ</i> memory applications. <i>Nanotechnology</i> , 2020, 31, 424007.	2.6	9
74	Photodetectors: Ultrasensitive and Broadband MoS ₂ Photodetector Driven by Ferroelectrics (<i>Adv. Mater.</i> 42/2015). <i>Advanced Materials</i> , 2015, 27, 6538-6538.	21.0	8
75	A study on ionic gated MoS ₂ phototransistors. <i>Science China Information Sciences</i> , 2019, 62, 1.	4.3	8
76	Reliable Nonvolatile Memory Black Phosphorus Ferroelectric Field-Effect Transistors with van der Waals Buffer. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 42358-42364.	8.0	8
77	Nanometer-Thick Metastable Zinc Blende Γ^3 -MnTe Single-Crystalline Films for High-Performance Ultraviolet and Broadband Photodetectors. <i>ACS Applied Nano Materials</i> , 2020, 3, 12046-12054.	5.0	8
78	High-performance ReS ₂ photodetectors enhanced by a ferroelectric field and strain field. <i>RSC Advances</i> , 2022, 12, 4939-4945.	3.6	8
79	Optoelectronics: High-Performance Photovoltaic Detector Based on MoTe ₂ /MoS ₂ Van der Waals Heterostructure (<i>Small</i> 9/2018). <i>Small</i> , 2018, 14, 1870038.	10.0	7
80	Field Effect Transistors: Ferroelectric Negative Capacitance Field Effect Transistor (<i>Adv. Electron.</i>) <i>Tj ETQq0 0 0 rgBT / Overlock 10 Tf 50 4</i>	3.1	7
81	Bio-Separated and Gate-Free 2D MoS ₂ Biosensor Array for Ultrasensitive Detection of BRCA1. <i>Nanomaterials</i> , 2021, 11, 545.	4.1	7
82	Epitaxial growth and phase evolution of ferroelectric La-doped HfO ₂ films. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	7
83	Strain-engineered room temperature cavity polariton in ZnO whispering gallery microcavity. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	6
84	Correlation of oxygen vacancy and Jahn-Teller polarons in epitaxial perovskite SrMnO ₃ ultrathin films: Dielectric spectroscopy investigations. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	5
85	Preparation of La _{0.67} Ca _{0.23} Sr _{0.1} MnO ₃ thin films with interesting electrical and magnetic properties via pulsed-laser deposition. <i>Science China: Physics, Mechanics and Astronomy</i> , 2017, 60, 1.	5.1	3
86	Multimode Signal Processor Unit Based on the Ambipolar WSe ₂ -Cr Schottky Junction. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 38895-38901.	8.0	3
87	Ferroelectric Synapses: A Robust Artificial Synapse Based on Organic Ferroelectric Polymer (<i>Adv.</i>) <i>Tj ETQq1 1 0.784314 rgBT / Overlock 1</i>	5.1	3
88	Exciton Emissions in Bilayer WSe ₂ Tuned by the Ferroelectric Polymer. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1636-1643.	4.6	3
89	Ultrabroad-Spectrum Photodetectors: Multimechanism Synergistic Photodetectors with Ultrabroad Spectrum Response from 375 nm to 10 μ m (<i>Adv. Sci.</i> 15/2019). <i>Advanced Science</i> , 2019, 6, 1970089.	11.2	2
90	High-Performance Broadband Tungsten Disulfide Photodetector Decorated with Indium Arsenide Nanoislands. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2000297.	1.8	2

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91	Charge-Trap Memory: Eliminating Overerase Behavior by Designing Energy Band in High-Speed Charge-Trap Memory Based on WSe ₂ (Small 17/2017). Small, 2017, 13, .	10.0	0
92	Memory Devices: Symmetric Ultrafast Writing and Erasing Speeds in Quasi-Nonvolatile Memory via van der Waals Heterostructures (Adv. Mater. 11/2019). Advanced Materials, 2019, 31, 1970081.	21.0	0