Jianlu Wang

List of Publications by Year
in descending order

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92 papers	5,805 citations	61945 43 h-index	79644 73 g-index
93 all docs	93 docs citations	93 times ranked	5769 citing authors

#	Article	IF	Citations
1	High-performance ReS₂ photodetectors enhanced by a ferroelectric field and strain field. RSC Advances, 2022, 12, 4939-4945.	1.7	8
2	Exciton Emissions in Bilayer WSe₂ Tuned by the Ferroelectric Polymer. Journal of Physical Chemistry Letters, 2022, 13, 1636-1643.	2.1	3
3	Ultralowâ€Power Machine Vision with Selfâ€Powered Sensor Reservoir. Advanced Science, 2022, 9, e2106092.	5.6	68
4	Epitaxial growth and phase evolution of ferroelectric La-doped HfO2 films. Applied Physics Letters, 2022, 120, .	1.5	7
5	HgCdTe/black phosphorus van der Waals heterojunction for high-performance polarization-sensitive midwave infrared photodetector. Science Advances, 2022, 8, eabn1811.	4.7	50
6	Ultra-sensitive polarization-resolved black phosphorus homojunction photodetector defined by ferroelectric domains. Nature Communications, 2022, 13, .	5.8	77
7	Gate Stack Engineering in MoS₂ Fieldâ€Effect Transistor for Reduced Channel Doping and Hysteresis Effect. Advanced Electronic Materials, 2021, 7, 2000395.	2.6	19
8	Direct Polarimetric Image Sensor and Wide Spectral Response Based on Quasiâ€1D Sb₂S₃ Nanowire. Advanced Functional Materials, 2021, 31, 2006601.	7.8	52
9	End-Bonded Contacts of Tellurium Transistors. ACS Applied Materials & Interfaces, 2021, 13, 7766-7772.	4.0	12
10	Bio-Separated and Gate-Free 2D MoS2 Biosensor Array for Ultrasensitive Detection of BRCA1. Nanomaterials, 2021, 11, 545.	1.9	7
11	Ferroelectric Synaptic Transistor Network for Associative Memory. Advanced Electronic Materials, 2021, 7, 2001276.	2.6	52
12	Gateâ€Tunable Photodiodes Based on Mixedâ€Dimensional Te/MoTe₂ Van der Waals Heterojunctions. Advanced Electronic Materials, 2021, 7, 2001066.	2.6	29
13	Interface engineering of ferroelectric-gated MoS2 phototransistor. Science China Information Sciences, 2021, 64, 1.	2.7	10
14	Blackbody-sensitive room-temperature infrared photodetectors based on low-dimensional tellurium grown by chemical vapor deposition. Science Advances, 2021, 7, .	4.7	121
15	Recent Progress on Electrical and Optical Manipulations of Perovskite Photodetectors. Advanced Science, 2021, 8, e2100569.	5.6	118
16	Unipolar barrier photodetectors based on van der Waals heterostructures. Nature Electronics, 2021, 4, 357-363.	13.1	292
17	Logic gates based on neuristors made from two-dimensional materials. Nature Electronics, 2021, 4, 399-404.	13.1	95
18	Ferroelectric-tuned van der Waals heterojunction with band alignment evolution. Nature Communications, 2021, 12, 4030.	5.8	79

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19	Ultrafast non-volatile flash memory based on van der Waals heterostructures. Nature Nanotechnology, 2021, 16, 874-881.	15.6	130
20	High Performance Ternary Organic Phototransistors with Photoresponse up to 2600 nm at Room Temperature. Advanced Functional Materials, 2021, 31, 2103787.	7.8	26
21	High-Performance Photodetectors with an Ultrahigh Photoswitching Ratio and a Very Fast Response Speed in Self-Powered Cu₂ZnSnS₄/CdS PN Heterojunctions. ACS Applied Electronic Materials, 2021, 3, 4135-4143.	2.0	10
22	Polarizer-free polarimetric image sensor through anisotropic two-dimensional GeSe. Science China Materials, 2021, 64, 1230-1237.	3.5	21
23	Visualizing Band Profiles of Gate-Tunable Junctions in MoS₂/WSe₂ Heterostructure Transistors. ACS Nano, 2021, 15, 16314-16321.	7.3	14
24	Strain-engineered room temperature cavity polariton in ZnO whispering gallery microcavity. Applied Physics Letters, 2020, 116, .	1.5	6
25	Ultrasensitive negative capacitance phototransistors. Nature Communications, 2020, 11, 101.	5.8	124
26	Ferroelectricity and antiferromagnetism in organicâ€“inorganic hybrid (1,4-bis(imidazol-1-ylmethyl)benzene)CuCl₄·H₂O. CrystEngComm, 2020, 22, 587-592.	1.3	9
27	A Dualâ€Gate MoS₂ Photodetector Based on Interface Coupling Effect. Small, 2020, 16, e1904369.	5.2	65
28	Nanometer-Thick Metastable Zinc Blende Î³-MnTe Single-Crystalline Films for High-Performance Ultraviolet and Broadband Photodetectors. ACS Applied Nano Materials, 2020, 3, 12046-12054.	2.4	8
29	Ferroelectric tunnel junctions with high tunnelling electroresistance. Nature Electronics, 2020, 3, 440-441.	13.1	18
30	Highly Sensitive InSb Nanosheets Infrared Photodetector Passivated by Ferroelectric Polymer. Advanced Functional Materials, 2020, 30, 2006156.	7.8	41
31	A versatile photodetector assisted by photovoltaic and bolometric effects. Light: Science and Applications, 2020, 9, 160.	7.7	56
32	Ultrabroadband Photodetectors up to 10.6 Âμm Based on 2D Fe₃O₄ Nanosheets. Advanced Materials, 2020, 32, e2002237.	11.1	57
33	Stable Hysteresis-Free MoS₂ Transistors With Low-k/High-k Bilayer Gate Dielectrics. IEEE Electron Device Letters, 2020, 41, 1036-1039.	2.2	10
34	Ferroelectric field-effect transistors for logic and in-situ memory applications. Nanotechnology, 2020, 31, 424007.	1.3	9
35	Highâ€Performance Broadband Tungsten Disulfide Photodetector Decorated with Indium Arsenide Nanoislands. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000297.	0.8	2
36	MoTe₂ pâ€“n Homojunctions Defined by Ferroelectric Polarization. Advanced Materials, 2020, 32, e1907937.	11.1	115

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37	Two-dimensional series connected photovoltaic cells defined by ferroelectric domains. Applied Physics Letters, 2020, 116, .	1.5	10
38	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. Nature Electronics, 2020, 3, 43-50.	13.1	167
39	Extremely Low Dark Current MoS₂ Photodetector via 2D Halide Perovskite as the Electron Reservoir. Advanced Optical Materials, 2020, 8, 1901402.	3.6	55
40	Multifunctional MoS₂ Transistors with Electrolyte Gel Gating. Small, 2020, 16, e2000420.	5.2	23
41	Correlation of oxygen vacancy and Jahnâ€“Teller polarons in epitaxial perovskite SrMnO3 ultrathin films: Dielectric spectroscopy investigations. Applied Physics Letters, 2020, 116, .	1.5	5
42	Ferroelectric Enhanced Performance of a GeSn/Ge Dual-Nanowire Photodetector. Nano Letters, 2020, 20, 3872-3879.	4.5	33
43	Ultrabroad-Spectrum Photodetectors: Multimechanism Synergistic Photodetectors with Ultrabroad Spectrum Response from 375 nm to 10 Âµm (Adv. Sci. 15/2019). Advanced Science, 2019, 6, 1970089.	5.6	2
44	Efficient two-terminal artificial synapse based on a network of functionalized conducting polymer nanowires. Journal of Materials Chemistry C, 2019, 7, 9933-9938.	2.7	32
45	Ferroelectric properties of gradient doped Y2O3:HfO2 thin films grown by pulsed laser deposition. Applied Physics Letters, 2019, 115, .	1.5	9
46	MoS₂/HfO₂/Siliconâ€Onâ€Insulator Dualâ€Photogating Transistor with Ambipolar Photoresponsivity for Highâ€Resolution Light Wavelength Detection. Advanced Functional Materials, 2019, 29, 1906242.	7.8	22
47	A study on ionic gated MoS2 phototransistors. Science China Information Sciences, 2019, 62, 1.	2.7	8
48	Reliable Nonvolatile Memory Black Phosphorus Ferroelectric Field-Effect Transistors with van der Waals Buffer. ACS Applied Materials & Interfaces, 2019, 11, 42358-42364.	4.0	8
49	Multimode Signal Processor Unit Based on the Ambipolar WSe₂â€“Cr Schottky Junction. ACS Applied Materials & Interfaces, 2019, 11, 38895-38901.	4.0	3
50	AsP/InSe Van der Waals Tunneling Heterojunctions with Ultrahigh Reverse Rectification Ratio and High Photosensitivity. Advanced Functional Materials, 2019, 29, 1900314.	7.8	121
51	Symmetric Ultrafast Writing and Erasing Speeds in Quasiâ€Nonvolatile Memory via van der Waals Heterostructures. Advanced Materials, 2019, 31, e1808035.	11.1	50
52	Amorphous Gallium Oxideâ€Based Gateâ€Tunable Highâ€Performance Thin Film Phototransistor for Solarâ€Blind Imaging. Advanced Electronic Materials, 2019, 5, 1900389.	2.6	95
53	Ultrasensitive Hybrid MoS₂â€“ZnCdSe Quantum Dot Photodetectors with High Gain. ACS Applied Materials & Interfaces, 2019, 11, 23667-23672.	4.0	62
54	Multimechanism Synergistic Photodetectors with Ultrabroad Spectrum Response from 375 nm to 10 Âµm. Advanced Science, 2019, 6, 1901050.	5.6	52

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55	Memory Devices: Symmetric Ultrafast Writing and Erasing Speeds in Quasiâ€Nonvolatile Memory via van der Waals Heterostructures (Adv. Mater. 11/2019). Advanced Materials, 2019, 31, 1970081.	11.1	0
56	Characterization of atomic defects on the photoluminescence in twoâ€dimensional materials using transmission electron microscope. InformaÄnÃ-MateriÃ¡ly, 2019, 1, 85-97.	8.5	46
57	Ultrahighâ€Detectivity Photodetectors with Van der Waals Epitaxial CdTe Singleâ€Crystalline Films. Small, 2019, 15, e1900236.	5.2	27
58	Ultrasensitive Mid-wavelength Infrared Photodetection Based on a Single InAs Nanowire. ACS Nano, 2019, 13, 3492-3499.	7.3	45
59	A Robust Artificial Synapse Based on Organic Ferroelectric Polymer. Advanced Electronic Materials, 2019, 5, 1800600.	2.6	129
60	Ferroelectric Synapses: A Robust Artificial Synapse Based on Organic Ferroelectric Polymer (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5	2.6	3
61	Controlled Doping of Waferâ€Scale PtSe₂ Films for Device Application. Advanced Functional Materials, 2019, 29, 1805614.	7.8	87
62	Optoelectronics: Highâ€Performance Photovoltaic Detector Based on MoTe₂/MoS₂ Van der Waals Heterostructure (Small 9/2018). Small, 2018, 14, 1870038.	5.2	7
63	Highâ€Performance Photovoltaic Detector Based on MoTe₂/MoS₂ Van der Waals Heterostructure. Small, 2018, 14, 1703293.	5.2	205
64	Ferroelectric Localized Fieldâ€“Enhanced ZnO Nanosheet Ultraviolet Photodetector with High Sensitivity and Low Dark Current. Small, 2018, 14, e1800492.	5.2	85
65	Field Effect Transistors: Ferroelectric Negative Capacitance Field Effect Transistor (Adv. Electron.) Tj ETQq1 1 0.784314 rgBT /Overloc	2.6	7
66	Perpendicular Optical Reversal of the Linear Dichroism and Polarized Photodetection in 2D GeAs. ACS Nano, 2018, 12, 12416-12423.	7.3	157
67	High-performance lead-free two-dimensional perovskite photo transistors assisted by ferroelectric dielectrics. Journal of Materials Chemistry C, 2018, 6, 12714-12720.	2.7	39
68	Mechanism of Electric Power Generation from Ionic Droplet Motion on Polymer Supported Graphene. Journal of the American Chemical Society, 2018, 140, 13746-13752.	6.6	87
69	Highâ€Performance Waferâ€Scale MoS₂ Transistors toward Practical Application. Small, 2018, 14, e1803465.	5.2	88
70	Complementary Logic with Voltage Zeroâ€Loss and Nanoâ€Watt Power via Configurable MoS₂/WSe₂ Gate. Advanced Functional Materials, 2018, 28, 1805171.	7.8	32
71	Spatial and Frequency Selective Plasmonic Metasurface for Long Wavelength Infrared Spectral Region. Advanced Optical Materials, 2018, 6, 1800337.	3.6	23
72	Ferroelectric Negative Capacitance Field Effect Transistor. Advanced Electronic Materials, 2018, 4, 1800231.	2.6	105

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73	High performance top-gated ferroelectric field effect transistors based on two-dimensional ZnO nanosheets. Applied Physics Letters, 2017, 110, .	1.5	34
74	Arrayed Van Der Waals Broadband Detectors for Dualâ€Band Detection. Advanced Materials, 2017, 29, 1604439.	11.1	218
75	Eliminating Overerase Behavior by Designing Energy Band in High-Speed Charge-Trap Memory Based on WSe₂. Small, 2017, 13, 1604128.	5.2	39
76	Charge-Trap Memory: Eliminating Overerase Behavior by Designing Energy Band in High-Speed Charge-Trap Memory Based on WSe2 (Small 17/2017). Small, 2017, 13, .	5.2	0
77	Recent Progress on Localized Field Enhanced Twoâ€dimensional Material Photodetectors from Ultravioletâ€"Visible to Infrared. Small, 2017, 13, 1700894.	5.2	234
78	Preparation of La0.67Ca0.23Sr0.1MnO3 thin films with interesting electrical and magnetic properties via pulsed-laser deposition. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	2.0	3
79	Two-dimensional negative capacitance transistor with polyvinylidene fluoride-based ferroelectric polymer gating. Npj 2D Materials and Applications, 2017, 1, .	3.9	77
80	Electrical characterization of MoS2 field-effect transistors with different dielectric polymer gate. AIP Advances, 2017, 7, .	0.6	15
81	Highâ€Sensitivity Floatingâ€Gate Phototransistors Based on WS₂ and MoS₂. Advanced Functional Materials, 2016, 26, 6084-6090.	7.8	124
82	Ferroelectric polymer tuned two dimensional layered MoTe₂ photodetector. RSC Advances, 2016, 6, 87416-87421.	1.7	51
83	Visible to short wavelength infrared In₂Se₃-nanoflake photodetector gated by a ferroelectric polymer. Nanotechnology, 2016, 27, 364002.	1.3	63
84	Highâ€Performance Ferroelectric Polymer Sideâ€Gated CdS Nanowire Ultraviolet Photodetectors. Advanced Functional Materials, 2016, 26, 7690-7696.	7.8	107
85	Optoelectronic Properties of Few-Layer MoS₂ FET Gated by Ferroelectric Relaxor Polymer. ACS Applied Materials & Interfaces, 2016, 8, 32083-32088.	4.0	76
86	Flexible graphene field effect transistor with ferroelectric polymer gate. Optical and Quantum Electronics, 2016, 48, 1.	1.5	21
87	When Nanowires Meet Ultrahigh Ferroelectric Fieldâ€"High-Performance Full-Depleted Nanowire Photodetectors. Nano Letters, 2016, 16, 2548-2555.	4.5	135
88	Photodetectors: Ultrasensitive and Broadband MoS₂ Photodetector Driven by Ferroelectrics (Adv. Mater. 42/2015). Advanced Materials, 2015, 27, 6538-6538.	11.1	8
89	Ultrasensitive and Broadband MoS₂ Photodetector Driven by Ferroelectrics. Advanced Materials, 2015, 27, 6575-6581.	11.1	722
90	Integration of Highâ€k Oxide on MoS₂ by Using Ozone Pretreatment for Highâ€Performance MoS₂ Topâ€Gated Transistor with Thicknessâ€Dependent Carrier Scattering Investigation. Small, 2015, 11, 5932-5938.	5.2	74

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91	Ferroelectric control of magnetism in P(VDFâ€“TrFE)/Co heterostructure. Journal of Materials Science: Materials in Electronics, 2015, 26, 7502-7506.	1.1	9
92	Synthetically controlling the optoelectronic properties of dithieno[2,3-d:2â€²,3â€²-dâ€²]benzo[1,2-b:4,5-bâ€²]dithiophene-alt-diketopyrrolopyrrole-conjugated polymers for efficient solar cells. Journal of Materials Chemistry A, 2014, 2, 15316-15325.	5.2	46