Xuming Zou

List of Publications by Year
in descending order

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44 papers	3,068 citations	201385 27 h-index	253896 43 g-index
45 all docs	45 docs citations	45 times ranked	5082 citing authors

#	Article	IF	Citations
1	High Mobility MoS₂ Transistor with Low Schottky Barrier Contact by Using Atomic Thick hâ€BN as a Tunneling Layer. Advanced Materials, 2016, 28, 8302-8308.	11.1	398
2	Interface Engineering for Highâ€Performance Topâ€Gated MoS₂ Fieldâ€Effect Transistors. Advanced Materials, 2014, 26, 6255-6261.	11.1	272
3	Single InAs Nanowire Room-Temperature Near-Infrared Photodetectors. ACS Nano, 2014, 8, 3628-3635.	7.3	238
4	Recent Advances in Optoelectronic Devices Based on 2D Materials and Their Heterostructures. Advanced Optical Materials, 2019, 7, 1800441.	3.6	229
5	Hydrogen gas sensor based on metal oxide nanoparticles decorated graphene transistor. Nanoscale, 2015, 7, 10078-10084.	2.8	163
6	Enhanced Photoresponsivity of a GaAs Nanowire Metal-Semiconductor-Metal Photodetector by Adjusting the Fermi Level. ACS Applied Materials & Interfaces, 2019, 11, 33188-33193.	4.0	151
7	Rational Design of Sub-Parts per Million Specific Gas Sensors Array Based on Metal Nanoparticles Decorated Nanowire Enhancement-Mode Transistors. Nano Letters, 2013, 13, 3287-3292.	4.5	132
8	Recent Progress on Electrical and Optical Manipulations of Perovskite Photodetectors. Advanced Science, 2021, 8, e2100569.	5.6	118
9	Ultrafine Graphene Nanomesh with Large On/Off Ratio for Highâ€Performance Flexible Biosensors. Advanced Functional Materials, 2017, 27, 1604096.	7.8	111
10	Floating Gate Memory-based Monolayer MoS₂Transistor with Metal Nanocrystals Embedded in the Gate Dielectrics. Small, 2015, 11, 208-213.	5.2	102
11	200 GHz Maximum Oscillation Frequency in CVD Graphene Radio Frequency Transistors. ACS Applied Materials & Interfaces, 2016, 8, 25645-25649.	4.0	97
12	Flexible Quasiâ€2D Perovskite/IGZO Phototransistors for Ultrasensitive and Broadband Photodetection. Advanced Materials, 2020, 32, e1907527.	11.1	88
13	MoS₂ Negativeâ€Capacitance Fieldâ€Effect Transistors with Subthreshold Swing below the Physics Limit. Advanced Materials, 2018, 30, e1800932.	11.1	87
14	Controllable Electrical Properties of Metal-Doped In₂O₃ Nanowires for High-Performance Enhancement-Mode Transistors. ACS Nano, 2013, 7, 804-810.	7.3	85
15	Perovskite/Black Phosphorus/MoS₂ Photogate Reversed Photodiodes with Ultrahigh Light On/Off Ratio and Fast Response. ACS Nano, 2019, 13, 4804-4813.	7.3	81
16	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
17	Dielectric Engineering of a Boron Nitride/Hafnium Oxide Heterostructure for Highâ€Performance 2D Field Effect Transistors. Advanced Materials, 2016, 28, 2062-2069.	11.1	65
18	Scalable Integration of Indium Zinc Oxide/Photosensitiveâ€Nanowire Composite Thinâ€Film Transistors for Transparent Multicolor Photodetectors Array. Advanced Materials, 2014, 26, 2919-2924.	11.1	62

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19	Rational design of Al2O3/2D perovskite heterostructure dielectric for high performance MoS2 phototransistors. Nature Communications, 2020, 11, 4266.	5.8	59
20	Schottky Barrierâ€Controlled Black Phosphorus/Perovskite Phototransistors with Ultrahigh Sensitivity and Fast Response. Small, 2019, 15, 1901004.	5.2	46
21	Sideâ€Gated In₂O₃ Nanowire Ferroelectric FETs for Highâ€Performance Nonvolatile Memory Applications. Advanced Science, 2016, 3, 1600078.	5.6	41
22	Impact of Thickness on Contact Issues for Pinning Effect in Black Phosphorus Fieldâ€Effect Transistors. Advanced Functional Materials, 2018, 28, 1801398.	7.8	39
23	Performance Limits of the Selfâ€Aligned Nanowire Topâ€Gated MoS₂ Transistors. Advanced Functional Materials, 2017, 27, 1602250.	7.8	37
24	Black phosphorus electronics. Science Bulletin, 2019, 64, 1067-1079.	4.3	37
25	Substantially Improving Device Performance of Allâ€Inorganic Perovskiteâ€Based Phototransistors via Indium Tin Oxide Nanowire Incorporation. Small, 2020, 16, e1905609.	5.2	33
26	Polarizationâ€Resolved Broadband MoS₂/Black Phosphorus/MoS₂ Optoelectronic Memory with Ultralong Retention Time and Ultrahigh Switching Ratio. Advanced Functional Materials, 2021, 31, 2100781.	7.8	33
27	The photovoltaic and photoconductive photodetector based on GeSe/2D semiconductor van der Waals heterostructure. Applied Physics Letters, 2020, 116, .	1.5	30
28	Positive Shift in Threshold Voltage Induced by CuO and NiO_{<italic>x</italic>} Gate in AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 3139-3144.	1.6	22
29	Epitaxial growth of non-layered PbSe nanoplates on MoS2 monolayer for infrared photoresponse. Applied Physics Express, 2019, 12, 055005.	1.1	16
30	Steep Subthreshold Swing in GaN Negative Capacitance Field-Effect Transistors. IEEE Transactions on Electron Devices, 2019, 66, 4148-4150.	1.6	15
31	Flexible SnO Optoelectronic Memory Based on Light-Dependent Ionic Migration in Ruddlesdenâ€“Popper Perovskite. Nano Letters, 2022, 22, 494-500.	4.5	15
32	Low Interface Trap Densities and Enhanced Performance of AlGaN/GaN MOS High- Electron Mobility Transistors Using Thermal Oxidized Y₂O₃ Interlayer. IEEE Electron Device Letters, 2015, 36, 1284-1286.	2.2	14
33	High Voltage Gain WSe₂ Complementary Compact Inverter With Buried Gate for Local Doping. IEEE Electron Device Letters, 2020, 41, 944-947.	2.2	14
34	High-current MoS2 transistors with non-planar gate configuration. Science Bulletin, 2021, 66, 777-782.	4.3	12
35	InGaZnO Tunnel and Junction Transistors Based on Vertically Stacked Black Phosphorus/InGaZnO Heterojunctions. Advanced Electronic Materials, 2020, 6, 2000291.	2.6	11
36	Sub-kT/q switching in In₂O₃ nanowire negative capacitance field-effect transistors. Nanoscale, 2018, 10, 19131-19139.	2.8	10

#	Article	IF	Citations
37	Promoting the optoelectronic and ferromagnetic properties of Cr2S3 nanosheets via Se doping. Science China: Physics, Mechanics and Astronomy, 2022, 65, .	2.0	10
38	Cladded Surface-Plasmon-Enhanced BP Photodetector Based on the Damage-Free Metal-Semiconductor Interface. IEEE Transactions on Electron Devices, 2020, , 1-4.	1.6	5
39	Electrode Engineering in MoS₂ MOSFET: Different Semiconductor/Metal Interfaces. Advanced Electronic Materials, 2022, 8, .	2.6	5
40	High-Performance WSeâ„ n-Type Field-Effect Transistors Enabled by InOâ‚“ Damage-Free Doping. IEEE Electron Device Letters, 2021, 42, 1081-1084.	2.2	4
41	Al₂O₃/HfO₂ Bilayer Dielectric for Ambipolar SnO Thin-Film Transistors With Superior Operational Stability. IEEE Transactions on Electron Devices, 2022, 69, 4293-4297.	1.6	4
42	Interface engineering for high-performance top-gated MoS<inf>2</inf> field effect transistors. , 2014, , .		1
43	MoS₂ Nanoribbon Transistor for Logic Electronics. IEEE Transactions on Electron Devices, 2022, 69, 3433-3438.	1.6	1
44	High-Performance MoS2 Field Effect Transistors. , 2018, , .		0