Hong Zhou

List of Publications by Year
in descending order

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91	3,592	136950 32	144013 57
papers	citations	h-index	g-index

91	91	91	3542
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Impacts of oxygen source on band alignment of ALD Al2O3/(Î±-, Îµ-)Ga2O3 interface. Journal of Crystal Growth, 2022, 580, 126462.	1.5	1
2	GaN High-Electron-Mobility-Transistor on Free- Standing GaN Substrate With Low Contact Resistance and State-of-the-Art <i>f_T </i> Ã— <i>L_G </i> Value. IEEE Transactions on Electron Devices, 2022, 69, 968-972.	3.0	7
3	Performance Improvement of a <i>Î²</i>-Gaâ‚‚Oâ‚ƒ-Based Solar-Blind Metal Oxide Semiconductor Field-Effect Phototransistor Using <i>In Situ</i> Ozone Pretreatment Technology. IEEE Transactions on Electron Devices, 2022, 69, 1143-1148.	3.0	8
4	6 kV/3.4 mÎ©Â·cm² Vertical Î²-Ga₂O₃ Schottky Barrier Diode With BV²/R_{on,sp} Performance Exceeding 1-D Unipolar Limit of GaN and SiC. IEEE Electron Device Letters, 2022, 43, 765-768.	3.9	65
5	Low density of interface trap states and temperature dependence study of Ga2O3 Schottky barrier diode with p-NiOx termination. Applied Physics Letters, 2022, 120, .	3.3	38
6	Hysteresis-free and <i>Î¼</i>s-switching of D/E-modes Ga2O3 hetero-junction FETs with the BV2/Ron,sp of 0.74/0.28 GW/cm2. Applied Physics Letters, 2022, 120, .	3.3	24
7	Self-Aligned and Low-Capacitance Lateral GaN Diode for X-Band High-Efficiency Rectifier. IEEE Electron Device Letters, 2022, 43, 537-540.	3.9	4
8	Wide-range-adjusted threshold voltages for E-mode AlGaN/GaN HEMT with a p-SnO cap gate. Science China Materials, 2022, 65, 795-802.	6.3	7
9	Proposal and Simulation of Ga₂O₃MOSFET With PN Heterojunction Structure for High-Performance E-Mode Operation. IEEE Transactions on Electron Devices, 2022, 69, 3617-3622.	3.0	11
10	High-Performance <i>Î²</i>-Ga₂O₃-Based Solar-Blind Metalâ€“Oxideâ€“Semiconductor Field-Effect Phototransistor Under Zero Gate Bias. IEEE Transactions on Electron Devices, 2022, 69, 3807-3810.	3.0	2
11	Experimental Investigation on Threshold Voltage Instability for <i>Î²</i>-Ga₂O₃ MOSFET Under Electrical and Thermal Stress. IEEE Transactions on Electron Devices, 2022, 69, 5048-5054.	3.0	6
12	Demonstration of Î²-Ga₂O₃ Junction Barrier Schottky Diodes With a Baliga's Figure of Merit of 0.85Â GW/cm² or a 5A/700Â V Handling Capabilities. IEEE Transactions on Power Electronics, 2021, 36, 6179-6182.	7.9	88
13	Ultrawide-bandgap semiconductor AlN crystals: growth and applications. Journal of Materials Chemistry C, 2021, 9, 1852-1873.	5.5	49
14	Progress in state-of-the-art technologies of Ga₂O₃devices. Journal Physics D: Applied Physics, 2021, 54, 243001.	2.8	86
15	Î²-Ga2O3 hetero-junction barrier Schottky diode with reverse leakage current modulation and BV2/Ron,sp value of 0.93 GW/cm2. Applied Physics Letters, 2021, 118, .	3.3	72
16	Demonstration of the p-NiO_x/n-Ga₂O₃ Heterojunction Gate FETs and Diodes With BV²/R_{on,sp} Figures of Merit of 0.39 GW/cm² and 1.38 GW/cm². IEEE Electron Device Letters, 2021, 42, 485-488.	3.9	86
17	High Performance Î²-Ga₂O₃ Solar-Blind Metalâ€“Oxideâ€“Semiconductor Field-Effect Phototransistor With Hafnium Oxide Gate Dielectric Process. IEEE Electron Device Letters, 2021, 42, 545-548.	3.9	28
18	Demonstration of Al0.85Ga0.15N Schottky barrier diode with > 3 kV breakdown voltage and the reverse leakage currents formation mechanism analysis. Applied Physics Letters, 2021, 118, .	3.3	7

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19	Model of Electron Population and Energy Band Diagram of Multiple-Channel GaN Heterostructures. IEEE Transactions on Electron Devices, 2021, 68, 1557-1562.	3.0	4
20	Recent progress of integrated circuits and optoelectronic chips. Science China Information Sciences, 2021, 64, 1.	4.3	56
21	Comprehensive Annealing Effects on AlGaN/GaN Schottky Barrier Diodes With Different Work-Function Metals. IEEE Transactions on Electron Devices, 2021, 68, 2661-2666.	3.0	15
22	Comprehensive Study and Optimization of Implementing p-NiO in Î²-Ga2O3 Based Diodes via TCAD Simulation. Crystals, 2021, 11, 1186.	2.2	21
23	Research on the crystal phase and orientation of Ga2O3 Hetero-epitaxial film. Superlattices and Microstructures, 2021, 159, 107053.	3.1	3
24	Toward emerging gallium oxide semiconductors: A roadmap. Fundamental Research, 2021, 1, 697-716.	3.3	56
25	Ultra-thin AlGaN/GaN HFET with a high breakdown voltage on sapphire substrates. Applied Physics Letters, 2021, 119, .	3.3	5
26	Lateral GaN Schottky Barrier Diode for Wireless High-Power Transfer Application With High RF/DC Conversion Efficiency: From Circuit Construction and Device Technologies to System Demonstration. IEEE Transactions on Industrial Electronics, 2020, 67, 6597-6606.	7.9	32
27	A 5.8-GHz High-Power and High-Efficiency Rectifier Circuit With Lateral GaN Schottky Diode for Wireless Power Transfer. IEEE Transactions on Power Electronics, 2020, 35, 2247-2252.	7.9	60
28	Oxygen annealing impact on <i>Î²</i> -Ga2O3 MOSFETs: Improved pinch-off characteristic and output power density. Applied Physics Letters, 2020, 117, .	3.3	24
29	Leakage Current Reduction in Î²-Ga₂O₃ Schottky Barrier Diodes by CF₄ Plasma Treatment. IEEE Electron Device Letters, 2020, 41, 1312-1315.	3.9	19
30	High-Performance Î²-Ga₂O₃ Solar-Blind Schottky Barrier Photodiode With Record Detectivity and Ultrahigh Gain via Carrier Multiplication Process. IEEE Electron Device Letters, 2020, 41, 1794-1797.	3.9	33
31	Self-driven photodetector based on a GaSe/MoSe2 selenide van der Waals heterojunction with the hybrid contact. Applied Physics Letters, 2020, 117, .	3.3	25
32	Impact of Surface Treatments and Post-Deposition Annealing Upon Interfacial Property of ALD-Alâ‚‚Oâ‚ƒ on a-Plane GaN. IEEE Journal of the Electron Devices Society, 2020, 8, 970-975.	2.1	6
33	Design and fabrication of field-plated normally off <i>Î²</i> -Ga2O3 MOSFET with laminated-ferroelectric charge storage gate for high power application. Applied Physics Letters, 2020, 116, .	3.3	40
34	Comprehensive Design of Device Parameters for GaN Vertical Trench MOSFETs. IEEE Access, 2020, 8, 57126-57135.	4.2	8
35	Impact of Implanted Edge Termination on Vertical Î²-Ga₂O₃ Schottky Barrier Diodes Under OFF-State Stressing. IEEE Transactions on Electron Devices, 2020, 67, 3948-3953.	3.0	26
36	Forward Current Conduction Mechanism of Mechanically Exfoliated <i>Î²</i>-Ga₂O₃/GaN pn Heterojunction Diode. ECS Journal of Solid State Science and Technology, 2020, 9, 035001.	1.8	6

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37	Single Pulse Charge Pumping Measurements on GaN MOS-HEMTs: Fast and Reliable Extraction of Interface Traps Density. IEEE Transactions on Electron Devices, 2020, 67, 444-448.	3.0	11
38	Beveled Fluoride Plasma Treatment for Vertical eta -Ga₂O₃Schottky Barrier Diode With High Reverse Blocking Voltage and Low Turn-On Voltage. IEEE Electron Device Letters, 2020, 41, 441-444.	3.9	49
39	Normally-Off-eta -Ga₂O₃ Power MOSFET With Ferroelectric Charge Storage Gate Stack Structure. IEEE Electron Device Letters, 2020, 41, 333-336.	3.9	43
40	Demonstration of a 2 kV Al0.85Ga0.15N Schottky Barrier Diode With Improved On-Current and Ideality Factor. IEEE Electron Device Letters, 2020, 41, 457-460.	3.9	13
41	The Investigation of Î²-Ga₂O₃ Schottky Diode with Floating Field Ring Termination and the Interface States. ECS Journal of Solid State Science and Technology, 2020, 9, 025001.	1.8	20
42	Leakage current mechanisms of groove-type tungsten-anode GaN SBDs with ultra low turn-ON voltage and low reverse current. Solid-State Electronics, 2020, 169, 107807.	1.4	15
43	Lateral Î²-Ga₂O₃ MOSFETs With High Power Figure of Merit of 277 MW/cm². IEEE Electron Device Letters, 2020, 41, 537-540.	3.9	89
44	Design and Fabrication of Vertical Metal/TiO₂/Î²-Ga₂O₃Dielectric Heterojunction Diode With Reverse Blocking Voltage of 1010 V. IEEE Transactions on Electron Devices, 2020, 67, 5628-5632.	3.0	13
45	Field-Effect Transistors 4. Springer Series in Materials Science, 2020, , 623-638.	0.6	1
46	A 800â€‰V Î²â€Ga₂O₃ Metalâ€"Oxideâ€"Semiconductor Fieldâ€Effect Transistor with Highâ€Power Figure of Merit of Over 86.3â€‰MWâ€‰cm^{â^'2}. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900421.	1.8	29
47	The investigation of temperature dependent electrical characteristics of Au/Ni/Î²-(InGa)2O3 Schottky diode. Superlattices and Microstructures, 2019, 133, 106179.	3.1	11
48	Simulation Investigation of Laterally Downscaled N-Polar GaN HEMTs. IEEE Transactions on Electron Devices, 2019, 66, 4673-4678.	3.0	4
49	High Performance ${eta}$ -Ga₂O₃ Nano-Membrane Field Effect Transistors on a High Thermal Conductivity Diamond Substrate. IEEE Journal of the Electron Devices Society, 2019, 7, 914-918.	2.1	42
50	Experimental and Theoretical Studies of Mo/Au Schottky Contact on Mechanically Exfoliated Î²-Ga2O3 Thin Film. Nanoscale Research Letters, 2019, 14, 2.	5.7	26
51	A > 3 kV/2.94 m $Omegacdot$ cm² and Low Leakage Current With Low Turn-On Voltage Lateral GaN Schottky Barrier Diode on Silicon Substrate With Anode Engineering Technique. IEEE Electron Device Letters, 2019, 40, 1583-1586.	3.9	50
52	High-Performance Vertical eta -Ga₂O₃Schottky Barrier Diode With Implanted Edge Termination. IEEE Electron Device Letters, 2019, 40, 1788-1791.	3.9	84
53	High-Voltage Î²-Ga2O3 Schottky Diode with Argon-Implanted Edge Termination. Nanoscale Research Letters, 2019, 14, 8.	5.7	47
54	High-performance lateral GaN Schottky barrier diode on silicon substrate with low turn-on voltage of 0.31 V, high breakdown voltage of 2.65 kV and high-power figure-of-merit of 2.65 GW cm^{â^'2}. Applied Physics Express, 2019, 12, 046502.	2.4	27

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55	A review of the most recent progresses of state-of-art gallium oxide power devices. Journal of Semiconductors, 2019, 40, 011803.	3.7	80
56	High-performance quasi-vertical GaN Schottky diode with low turn-on voltage. Superlattices and Microstructures, 2019, 125, 295-301.	3.1	10
57	Steep-slope hysteresis-free negative capacitance MoS2 transistors. Nature Nanotechnology, 2018, 13, 24-28.	31.5	422
58	Investigation of temperature dependent electrical characteristics on Au/Ni/Î²-Ga 2 O 3 Schottky diodes. Superlattices and Microstructures, 2018, 119, 212-217.	3.1	28
59	Total-Ionizing-Dose Responses of GaN-Based HEMTs With Different Channel Thicknesses and MOSHEMTs With Epitaxial MgCaO as Gate Dielectric. IEEE Transactions on Nuclear Science, 2018, 65, 46-52.	2.0	12
60	Band alignments of SiO2 and HfO2 dielectrics with (Al Ga1-)2O3 film (0â‰¤â‰¤0.53) grown on Ga2O3 buffer layer on sapphire. Journal of Alloys and Compounds, 2018, 745, 292-298.	5.5	22
61	The Impact of Substrates on the Performance of Top-Gate p-Ga2O3 Field-Effect Transistors: Record High Drain Current of 980 mA/mm on Diamond. , 2018, , .		8
62	Field-Plated Lateral Î²-Ga2O3 Schottky Barrier Diode with High Reverse Blocking Voltage of More Than 3 kV and High DC Power Figure-of-Merit of 500 MW/cm2. IEEE Electron Device Letters, 2018, , 1-1.	3.9	85
63	Integration and Electrical Properties of Ferroelectric Hf0.5Zr0.5O2 Thin Film on Bulk Î²-Ga2O3(-201) Substrate for Memory Applications. IEEE Electron Device Letters, 2018, , 1-1.	3.9	4
64	AlGaN-Channel Gate Injection Transistor on Silicon Substrate With Adjustable 4â€“7-V Threshold Voltage and 1.3-kV Breakdown Voltage. IEEE Electron Device Letters, 2018, 39, 1026-1029.	3.9	21
65	InGaN-channel high-electron-mobility transistor with enhanced linearity and high-temperature performance. Applied Physics Express, 2018, 11, 094101.	2.4	13
66	Lateral eta -Ga₂O₃ Schottky Barrier Diode on Sapphire Substrate With Reverse Blocking Voltage of 1.7 kV. IEEE Journal of the Electron Devices Society, 2018, 6, 815-820.	2.1	43
67	A 1.9 kV/2.61 mâ„¦Â·cm2 Lateral GaN Schottky Barrier Diode on Silicon Substrate with Tungsten Anode and Low Turn-On Voltage of 0.35 V. IEEE Electron Device Letters, 2018, , 1-1.	3.9	23
68	Charge Trapping in Al₂O₃/eta -Ga₂O₃-Based MOS Capacitors. IEEE Electron Device Letters, 2018, 39, 1022-1025.	3.9	50
69	(In<i> _x </i>Ga_{1âˆ’} <i> _x </i>)₂O₃ Photodetectors Fabricated on Sapphire at Different Temperatures by PLD. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	7
70	Fin-Width Effects on Characteristics of InGaAs-Based Independent Double-Gate FinFETs. IEEE Electron Device Letters, 2017, 38, 441-444.	3.9	11
71	High-Performance Depletion/Enhancement-ode eta -Ga2O3 on Insulator (GOOI) Field-Effect Transistors With Record Drain Currents of 600/450 mA/mm. IEEE Electron Device Letters, 2017, 38, 103-106.	3.9	247
72	Î²-Ga₂O₃ Nanomembrane Negative Capacitance Field-Effect Transistors with Steep Subthreshold Slope for Wide Band Gap Logic Applications. ACS Omega, 2017, 2, 7136-7140.	3.5	41

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73	Controlled Growth of a Large-Size 2D Selenium Nanosheet and Its Electronic and Optoelectronic Applications. ACS Nano, 2017, 11, 10222-10229.	14.6	189
74	Î²-Ga2O3 on insulator field-effect transistors with drain currents exceeding 1.5â€‰A/mm and their self-heating effect. Applied Physics Letters, 2017, 111, .	3.3	170
75	Depletion/enhancement-mode Î²-Ga<inf>2</inf>O<inf>3</inf> on insulator field-effect transistors with drain currents exceeding 1.5/1.0 A/mm. , 2017, , .		1
76	Enhancement-Mode AlGaN/GaN Fin-MOSHEMTs on Si Substrate With Atomic Layer Epitaxy MgCaO. IEEE Electron Device Letters, 2017, 38, 1294-1297.	3.9	20
77	Thermodynamic Studies of Î²-Ga₂O₃ Nanomembrane Field-Effect Transistors on a Sapphire Substrate. ACS Omega, 2017, 2, 7723-7729.	3.5	75
78	High resolution thermal imaging of pre-breakdown in power AlGaN/GaN MOSHEMTs. , 2017, , .		1
79	DC and RF Performance of AlGaN/GaN/SiC MOSHEMTs With Deep Sub-Micron T-Gates and Atomic Layer Epitaxy MgCaO as Gate Dielectric. IEEE Electron Device Letters, 2017, 38, 1409-1412.	3.9	27
80	Epitaxial Growth of Mg_{<i>x</i>}Ca_{1â€“<i>x</i>}O on GaN by Atomic Layer Deposition. Nano Letters, 2016, 16, 7650-7654.	9.1	30
81	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer ZrTe₅. Nano Letters, 2016, 16, 7364-7369.	9.1	80
82	Ionic liquid gating on atomic layer deposition passivated GaN: Ultra-high electron density induced high drain current and low contact resistance. Applied Physics Letters, 2016, 108, .	3.3	5
83	Transport studies in 2D transition metal dichalcogenides and black phosphorus. Journal of Physics Condensed Matter, 2016, 28, 263002.	1.8	12
84	Performance Enhancement of Black Phosphorus Field-Effect Transistors by Chemical Doping. IEEE Electron Device Letters, 2016, 37, 429-432.	3.9	55
85	Al2O3/ $eta $ -Ga2O3(-201) Interface Improvement Through Piranha Pretreatment and Postdeposition Annealing. IEEE Electron Device Letters, 2016, 37, 1411-1414.	3.9	109
86	P-type surface charge transfer doping of black phosphorus field-effect transistors. , 2016, , .		2
87	High-Performance InAlN/GaN MOSHEMTs Enabled by Atomic Layer Epitaxy MgCaO as Gate Dielectric. IEEE Electron Device Letters, 2016, 37, 556-559.	3.9	46
88	InAlN/GaN MOSHEMTs with high drain current of 2.3 A/mm high on/off ratio of 10¹² and low SS of 64 mV/dec enabled by atomic-layer-epitaxial MgCaO as gate dielectric. , 2015, , .		1
89	First experimental demonstration of Ge 3D FinFET CMOS circuits. , 2015, , .		26
90	Deep sub-100 nm Ge CMOS devices on Si with the recessed S/D and channel. , 2014, , .		13

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91	Side-gate effects on the direct current and radio frequency characteristics of AlGaN/GaN high-electron-mobility transistor on Si. Applied Physics Letters, 2011, 99, 163505.	3.3	1