Xinhua Wang

List of Publications by Year
in descending order

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41	857	430874	501196
papers	citations	18	28
		h-index	g-index

41	41	41	718
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Identification of Semi-ON-State Current Collapse in AlGaN/GaN HEMTs by Drain Current Deep Level Transient Spectroscopy. IEEE Electron Device Letters, 2022, 43, 200-203.	3.9	11
2	Evolution of Deep Traps in GaNâ€Based RF High Electron Mobility Transistors under High Voltage OFFâ€State Stress. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	3
3	Instability of parasitic capacitance in T-shape-gate enhancement-mode AlGaN/GaN MIS-HEMTs. Journal of Semiconductors, 2022, 43, 032801.	3.7	6
4	Ultrathin-barrier AlGaN/GaN heterostructure: An AlGaN-recess-free technology for fabrication of lateral GaN-based power devices. , 2022, , .		0
5	An Enhancement-Mode GaN p-FET With Improved Breakdown Voltage. IEEE Electron Device Letters, 2022, 43, 1191-1194.	3.9	14
6	Investigation of Dynamic-Q_{GD} on Enhancement-Mode AlGaN/GaN MIS-HEMTs with SiN_x Passivation Dielectric. , 2022, , .		1
7	Suppression and characterization of interface states at low-pressure-chemical-vapor-deposited SiN /III-nitride heterostructures. Applied Surface Science, 2021, 542, 148530.	6.1	13
8	Suppression of Gate Leakage Current in Ka-Band AlGaN/GaN HEMT With 5-nm SiN Gate Dielectric Grown by Plasma-Enhanced ALD. IEEE Transactions on Electron Devices, 2021, 68, 49-52.	3.0	22
9	Interface Charge Effects on 2-D Electron Gas in Vertical-Scaled Ultrathin-Barrier AlGaN/GaN Heterostructure. IEEE Transactions on Electron Devices, 2021, 68, 36-41.	3.0	9
10	Partially Crystallized Ultrathin Interfaces between GaN and SiN_x Grown by Low-Pressure Chemical Vapor Deposition and Interface Editing. ACS Applied Materials & Interfaces, 2021, 13, 7725-7734.	8.0	3
11	Suppression of interface states between nitride-based gate dielectrics and ultrathin-barrier AlGaN/GaN heterostructure with in situ remote plasma pretreatments. Applied Physics Letters, 2021, 118, .	3.3	22
12	An ultrathin-barrier AlGaN/GaN heterostructure: a recess-free technology for the fabrication and integration of GaN-based power devices and power-driven circuits. Semiconductor Science and Technology, 2021, 36, 044002.	2.0	6
13	Monolithic Integrated Normally OFF GaN Power Device With Antiparallel Lateral Schottky Barrier Controlled Schottky Rectifier. IEEE Transactions on Electron Devices, 2021, 68, 1778-1783.	3.0	3
14	Implementation of RTCVD-SiNâ„ Gate Dielectric Into Enhancement-Mode GaN MIS-HEMTs Fabricated on Ultrathin-Barrier AlGaN/GaN-on-Si Platform. IEEE Transactions on Electron Devices, 2021, 68, 4274-4277.	3.0	1
15	Low-thermal-budget Au-free ohmic contact to an ultrathin barrier AlGaN/GaN heterostructure utilizing a micro-patterned ohmic recess. Journal of Semiconductors, 2021, 42, 092801.	3.7	7
16	7.05 W/mm Power Density Millimeter-Wave GaN MIS-HEMT With Plasma Enhanced Atomic Layer Deposition SiN Dielectric Layer. IEEE Electron Device Letters, 2021, 42, 1436-1439.	3.9	8
17	Impact of V _{th} Instability on Time-Resolved Characteristics of MIS-HEMT-Based GaN Power IC. IEEE Electron Device Letters, 2021, 42, 1440-1443.	3.9	4
18	Identification of bulk and interface state-induced threshold voltage instability in metal/SiNx(insulator)/AlGaN/GaN high-electron-mobility transistors using deep-level transient spectroscopy. Applied Physics Letters, 2021, 119, .	3.3	7

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19	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
20	Interface charge engineering in down-scaled AlGaN (<6â€‰nm)/GaN heterostructure for fabrication of GaN-based power HEMTs and MIS-HEMTs. Applied Physics Letters, 2020, 116, .	3.3	20
21	Millimeter-Wave AlGaN/GaN HEMTs With 43.6% Power-Added-Efficiency at 40 GHz Fabricated by Atomic Layer Etching Gate Recess. IEEE Electron Device Letters, 2020, 41, 701-704.	3.9	31
22	Revealing the Positive Bias Temperature Instability in Normally-OFF AlGaN/GaN MIS-HFETs by Constant-Capacitance DLTS. , 2019, , .		3
23	Effects of Fluorine Plasma Treatment on Au-Free Ohmic Contacts to Ultrathin-Barrier AlGaN/GaN Heterostructure. IEEE Transactions on Electron Devices, 2019, 66, 2932-2936.	3.0	9
24	Capture and emission mechanisms of defect states at interface between nitride semiconductor and gate oxides in GaN-based metal-oxide-semiconductor power transistors. Journal of Applied Physics, 2019, 126, .	2.5	24
25	A large-signal Pspice modeling of GaN-based MIS-HEMTs. Superlattices and Microstructures, 2019, 130, 499-511.	3.1	4
26	Monolithic integration of E/D-mode GaN MIS-HEMTs on ultrathin-barrier AlGaN/GaN heterostructure on Si substrates. Applied Physics Express, 2019, 12, 024001.	2.4	21
27	Evolution of traps in TiN/O3-sourced Al2O3/GaN gate structures with thermal annealing temperature. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, 022202.	1.2	3
28	High-Temperature-Recessed Millimeter-Wave AlGaN/GaN HEMTs With 42.8% Power-Added-Efficiency at 35 GHz. IEEE Electron Device Letters, 2018, 39, 727-730.	3.9	21
29	Ultralow-Contact-Resistance Au-Free Ohmic Contacts With Low Annealing Temperature on AlGaN/GaN Heterostructures. IEEE Electron Device Letters, 2018, 39, 847-850.	3.9	42
30	Ultrathin-Barrier AlGaN/GaN Heterostructure: A Recess-Free Technology for Manufacturing High-Performance GaN-on-Si Power Devices. IEEE Transactions on Electron Devices, 2018, 65, 207-214.	3.0	87
31	Recess-free AlGaN/GaN lateral Schottky barrier controlled Schottky rectifier with low turn-on voltage and high reverse blocking. , 2018, , .		19
32	Insight into the Near-Conduction Band States at the Crystallized Interface between GaN and SiN_x Grown by Low-Pressure Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2018, 10, 21721-21729.	8.0	24
33	Investigation of current collapse mechanism of LPCVD Si<inf>3</inf>N<inf>4</inf> passivated AlGaN/GaN HEMTs by fast soft-switched current-DLTS and CC-DLTFS. , 2017, , .		2
34	Investigation of the interface between LPCVD-SiNx gate dielectric and III-nitride for AlGaN/GaN MIS-HEMTs. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	1.2	29
35	High Uniformity Normally-OFF GaN MIS-HEMTs Fabricated on Ultra-Thin-Barrier AlGaN/GaN Heterostructure. IEEE Electron Device Letters, 2016, 37, 1617-1620.	3.9	72
36	Effect of interface and bulk traps on theCâ€“Vcharacterization of a LPCVD-SiN_x/AlGaN/GaN metal-insulator-semiconductor structure. Semiconductor Science and Technology, 2016, 31, 065014.	2.0	19

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37	Effect of alloying temperature on the capacitanceâ€“voltage and currentâ€“voltage characteristics of lowâ€pressure chemical vapor deposition SiN‹i›‹sub›x‹/sub›‹/i›/nâ€GaN MIS structures. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2928-2935.	1.8	7
38	High RF Performance Enhancement-Mode Al₂O₃/AlGaN/GaN MIS-HEMTs Fabricated With High-Temperature Gate-Recess Technique. IEEE Electron Device Letters, 2015, 36, 754-756.	3.9	49
39	Robust SiN_{<italic>x</italic>}/AlGaN Interface in GaN HEMTs Passivated by Thick LPCVD-Grown SiN_{<italic>x</italic>} Layer. IEEE Electron Device Letters, 2015, 36, 666-668.	3.9	58
40	O3-sourced atomic layer deposition of high quality Al2O3 gate dielectric for normally-off GaN metal-insulator-semiconductor high-electron-mobility transistors. Applied Physics Letters, 2015, 106, .	3.3	58
41	Effect of GaN Channel Layer Thickness on DC and RF Performance of GaN HEMTs With Composite AlGaN/GaN Buffer. IEEE Transactions on Electron Devices, 2014, 61, 1341-1346.	3.0	55