Tian-Li Wu

List of Publications by Year
in descending order

58	1,241	471371 17	377752 34
papers	citations	h-index	g-index

58	58	58	1034
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Forward Bias Gate Breakdown Mechanism in Enhancement-Mode p-GaN Gate AlGaN/GaN High-Electron Mobility Transistors. IEEE Electron Device Letters, 2015, 36, 1001-1003.	2.2	158
2	Negative Bias-Induced Threshold Voltage Instability in GaN-on-Si Power HEMTs. IEEE Electron Device Letters, 2016, 37, 474-477.	2.2	102
3	Analysis of the Gate Capacitanceâ€“Voltage Characteristics in p-GaN/AlGaN/GaN Heterostructures. IEEE Electron Device Letters, 2017, 38, 1696-1699.	2.2	80
4	Trapping and Reliability Assessment in D-Mode GaN-Based MIS-HEMTs for Power Applications. IEEE Transactions on Power Electronics, 2014, 29, 2199-2207.	5.4	77
5	Trapping mechanisms in GaNâ€based MISâ€HEMTs grown on silicon substrate. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1122-1129.	0.8	63
6	Toward Understanding Positive Bias Temperature Instability in Fully Recessed-Gate GaN MISFETs. IEEE Transactions on Electron Devices, 2016, 63, 1853-1860.	1.6	63
7	On the origin of the two-dimensional electron gas at AlGaN/GaN heterojunctions and its influence on recessed-gate metal-insulator-semiconductor high electron mobility transistors. Journal of Applied Physics, 2014, 116, .	1.1	59
8	Trapping in GaN-based metal-insulator-semiconductor transistors: Role of high drain bias and hot electrons. Applied Physics Letters, 2014, 104, .	1.5	59
9	Reliability Analysis of Permanent Degradations on AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2013, 60, 3132-3141.	1.6	58
10	Correlation of interface states/border traps and threshold voltage shift on AlGaN/GaN metal-insulator-semiconductor high-electron-mobility transistors. Applied Physics Letters, 2015, 107, .	1.5	56
11	Trapping and reliability issues in GaN-based MIS HEMTs with partially recessed gate. Microelectronics Reliability, 2016, 58, 151-157.	0.9	38
12	Time dependent dielectric breakdown (TDDB) evaluation of PE-ALD SiN gate dielectrics on AlGaN/GaN recessed gate D-mode MIS-HEMTs and E-mode MIS-FETs. , 2015, , .		32
13	Evidence of Hot-Electron Degradation in GaN-Based MIS-HEMTs Submitted to High Temperature Constant Source Current Stress. IEEE Electron Device Letters, 2016, 37, 1415-1417.	2.2	32
14	Improved TDDB Reliability and Interface States in 5-nm Hf_{0.5}Zr_{0.5}O₂ Ferroelectric Technologies Using NH₃ Plasma and Microwave Annealing. IEEE Transactions on Electron Devices, 2020, 67, 1581-1585.	1.6	32
15	Gate Stability of GaN-Based HEMTs with P-Type Gate. Electronics (Switzerland), 2016, 5, 14.	1.8	31
16	The impact of the gate dielectric quality in developing Au-free D-mode and E-mode recessed gate AlGaN/GaN transistors on a 200mm Si substrate. , 2015, , .		25
17	Effects of Annealing on Ferroelectric Hafniumâ€“Zirconiumâ€“Oxide-Based Transistor Technology. IEEE Electron Device Letters, 2019, 40, 467-470.	2.2	25
18	A Novel Physics-Based Approach to Analyze and Model E-Mode p-GaN Power HEMTs. IEEE Transactions on Electron Devices, 2021, 68, 1489-1494.	1.6	25

#	Article	IF	Citations
19	Machine Learning-Based Statistical Approach to Analyze Process Dependencies on Threshold Voltage in Recessed Gate AlGaN/GaN MIS-HEMTs. IEEE Transactions on Electron Devices, 2020, 67, 5448-5453.	1.6	21
20	Direct comparison of GaN-based e-mode architectures (recessed MISHEMT and p-GaN HEMTs) processed on 200mm GaN-on-Si with Au-free technology. Proceedings of SPIE, 2015, , .	0.8	16
21	Analysis of slow de-trapping phenomena after a positive gate bias on AlGaN/GaN MIS-HEMTs with in-situ Si3N4/Al2O3 bilayer gate dielectrics. Solid-State Electronics, 2015, 103, 127-130.	0.8	16
22	Comprehensive investigation of on-state stress on D-mode AlGaN/GaN MIS-HEMTs. , 2013, , .		15
23	Study of the stability of e-mode GaN HEMTs with p-GaN gate based on combined DC and optical analysis. Microelectronics Reliability, 2016, 64, 547-551.	0.9	15
24	Investigation of Recessed Gate AlGaN/GaN MIS-HEMTs with Double AlGaN Barrier Designs toward an Enhancement-Mode Characteristic. Micromachines, 2020, 11, 163.	1.4	14
25	Design and analysis of high electron mobility transistor inspired: III-V electro-optic modulator topologies. Semiconductor Science and Technology, 2020, 35, 095028.	1.0	11
26	Understanding $gamma$ -Ray Induced Instability in AlGaN/GaN HEMTs Using a Physics-Based Compact Model. IEEE Transactions on Electron Devices, 2020, 67, 1126-1131.	1.6	11
27	Artificial Neural Network-Based (ANN) Approach for Characteristics Modeling and Prediction in GaN-on-Si Power Devices. , 2020, , .		9
28	Effects of Î³-Ray Irradiation on AlGaN/GaN Heterostructures and High Electron Mobility Transistor Devices. Journal of Electronic Materials, 2020, 49, 6789-6797.	1.0	8
29	1100 V, 22.9 mÎ©cm² 4H-SiC RESURF Lateral Double-Implanted MOSFET With Trench Isolation. IEEE Transactions on Electron Devices, 2021, 68, 5009-5013.	1.6	8
30	3510-v 390-mÎ© * cm2 4h-sic lateral jfet on a semi-insulating substrate. IEEE Electron Device Letters, 2009, 30, 957-959.	2.2	7
31	Combined plasma-enhanced-atomic-layer-deposition gate dielectric and in situ SiN cap layer for reduced threshold voltage shift and dynamic ON-resistance dispersion of AlGaN/GaN high electron mobility transistors on 200 mm Si substrates. Japanese Journal of Applied Physics, 2015, 54, 04DF02.	0.8	7
32	Investigation of constant voltage off-state stress on Au-free AlGaN/GaN Schottky barrier diodes. Japanese Journal of Applied Physics, 2015, 54, 04DF07.	0.8	6
33	Positive bias temperature instability evaluation in fully recessed gate GaN MIS-FETs. , 2016, , .		6
34	Stability evaluation of Au-free Ohmic contacts on AlGaN/GaN HEMTs under a constant current stress. Microelectronics Reliability, 2014, 54, 2232-2236.	0.9	5
35	Simulation Study of 4H-SiC Trench MOSFETs with Various Gate Structures. , 2019, , .		5
36	Numerical Study of 4H-SiC UMOSFETs with Split-Gate and P+ Shielding. Energies, 2020, 13, 1122.	1.6	5

#	Article	IF	Citations
37	Stability of wireless power transfer using gamma-ray irradiated GaN power HEMTs. Microelectronics Reliability, 2021, 126, 114425.	0.9	5
38	Demonstration of p-GaN/AlGaN/GaN High Electron Mobility Transistors With an Indiumâ€“Tinâ€“Oxide Gate Electrode. IEEE Journal of the Electron Devices Society, 2021, 9, 2-5.	1.2	4
39	Analysis of the subthreshold characteristics in AlGaN/GaN HEMTs with a p-GaN gate. Microelectronics Reliability, 2021, 126, 114302.	0.9	4
40	High temperature behaviour of GaN-on-Si high power MISHEMT devices. , 2012, , .		3
41	Investigation of the degradations in power GaN-on-Si MIS-HEMTs subjected to cumulative Î³-ray irradiation. Microelectronics Reliability, 2019, 100-101, 113349.	0.9	3
42	Impact of the polarization on time-dependent dielectric breakdown in ferroelectric Hf_{0.5}Zr_{0.5}O₂ on Ge substrates. Japanese Journal of Applied Physics, 2020, 59, SGGB08.	0.8	3
43	Investigation on Stability of p-GaN HEMTs With an Indiumâ€“Tinâ€“Oxide Gate Under Forward Gate Bias. IEEE Journal of the Electron Devices Society, 2021, 9, 687-690.	1.2	3
44	Fully Transparent AlGaN/GaN High Electron Mobility Transistors Fabricated With Indium-Tin-Oxide Electrodes. IEEE Electron Device Letters, 2021, 42, 144-147.	2.2	3
45	Characteristics of 4H-SiC RF MOSFETs on a Semi-Insualting Substrate. ECS Transactions, 2011, 35, 173-183.	0.3	2
46	Investigation of degradation phenomena in GaN-on-Si power MIS-HEMTs under source current and drain bias stresses. , 2018, , .		2
47	Impacts of Pulsing Schemes on the Endurance of Ferroelectric Metalâ€“Ferroelectricâ€“Insulatorâ€“Semiconductor Capacitors. IEEE Journal of the Electron Devices Society, 2022, 10, 109-114.	1.2	2
48	Enhancement of Ferroelectricity in 5 nm Metal-Ferroelectric-Insulator Technologies by Using a Strained TiN Electrode. Nanomaterials, 2022, 12, 468.	1.9	2
49	Bias- and temperature-assisted trapping/de-trapping of ron degradation in D-mode AlGaN/GaN MIS-HEMTs on a Si substrate. , 2017, , .		1
50	Demonstration of Annealing-free Metal-Insulator-Semiconductor (MIS) Ohmic Contacts on a GaN Substrate using Low Work-function Metal Ytterbium (Yb) and Al₂O₃ Interfacial Layer. , 2019, , .		1
51	Robust Forward Gate Bias TDDB Stability in Enhancement-mode Fully Recessed Gate GaN MIS-FETs with ALD Al2O3Gate Dielectric. , 2020, , .		1
52	Study on the effects of Si implantation on the interface of 4H-SiC lateral MOSFETs. Japanese Journal of Applied Physics, 2020, 59, SGGD06.	0.8	1
53	Investigation of the passivation-induced VTH shift in p-GaN HEMTs with Au-free gate-first process. Microelectronics Reliability, 2021, 122, 114150.	0.9	1
54	High voltage lateral 4H-SiC JFETs on a semi-insulating substrate. , 2009, , .		0

#	Article	IF	Citations
55	Gammaâ€Ray Irradiation Effect on Ferroelectric Devices with Hafnium Aluminum Oxides. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900414.	1.2	0
56	Ferroelectric Characterization in Ultrathin Hf0.5Zr0.5O2 MFIS Capacitors by Piezoresponse Force Microscopy (PFM) in Vacuum. , 2021, , .		0
57	Stability of Schottky Barrier Diode Integrated in p-GaN Enhancement-mode GaN Power Technology. , 2021, , .		0
58	Demonstration of Schottky barrier diode integrated in 200ÂV power p-GaN HEMTs technology with robust stability. Microelectronics Reliability, 2022, 134, 114568.	0.9	0