

Dipendra Rawal

List of Publications by Year in descending order

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papers

460
citations

759055

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docs citations

60
times ranked

435
citing authors

#	ARTICLE	IF	CITATIONS
1	Evidence of Fowler-Nordheim Tunneling in Gate Leakage Current of AlGaIn/GaN HEMTs at Room Temperature. IEEE Transactions on Electron Devices, 2014, 61, 4291-4294.	1.6	40
2	Role of AlGaIn/GaN interface traps on negative threshold voltage shift in AlGaIn/GaN HEMT. Solid-State Electronics, 2018, 142, 8-13.	0.8	31
3	BCl_3/Cl_2 -Based Inductively Coupled Plasma Etching of GaN/AlGaIn Using Photoresist Mask. IEEE Transactions on Plasma Science, 2012, 40, 2211-2220.	0.6	27
4	Effect of BCl_3 concentration and process pressure on the GaN mesa sidewalls in BCl_3/Cl_2 based inductively coupled plasma etching. Vacuum, 2012, 86, 1844-1849.	1.6	24
5	Experimental Study of the Influence of Process Pressure and Gas Composition on GaAs Etching Characteristics in Cl_2/BCl_3 -Based Inductively Coupled Plasma. Plasma Science and Technology, 2011, 13, 223-229.	0.7	18
6	Comparative study of Au and Ni/Au gated AlGaIn/GaN high electron mobility transistors. AIP Advances, 2019, 9, .	0.6	17
7	Effect of γ -ray irradiation on Schottky and ohmic contacts on AlGaIn/GaN hetero-structures. Microelectronics Reliability, 2020, 105, 113565.	0.9	16
8	Design and Fabrication of Multi-finger Field Plate for Enhancement of AlGaIn/GaN HEMT Breakdown Voltage. Defence Science Journal, 2018, 68, 290.	0.5	16
9	RF parameter extraction of MMIC nichrome resistors. Microwave and Optical Technology Letters, 2003, 39, 409-412.	0.9	15
10	Comparative study of GaN mesa etch characteristics in Cl_2 based inductively coupled plasma with Ar and BCl_3 as additive gases. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	15
11	Etching of mesa structures in HgCdTe. Journal of Electronic Materials, 2005, 34, 1440-1445.	1.0	13
12	GaN etch rate and surface roughness evolution in Cl_2/Ar based inductively coupled plasma etching. Thin Solid Films, 2012, 520, 7212-7218.	0.8	13
13	Improvement in DC and pulse characteristics of AlGaIn/GaN HEMT by employing dual metal gate structure. Semiconductor Science and Technology, 2019, 34, 105013.	1.0	13
14	Impact of Gamma Radiations on Static, Pulsed V_{GS} , and RF Performance Parameters of AlGaIn/GaN HEMT. IEEE Transactions on Electron Devices, 2022, 69, 2299-2306.	1.6	13
15	Improved properties of Sm substituted PCT ceramics using microwave sintering. Materials Letters, 2005, 59, 768-772.	1.3	12
16	Optimization of V_{GS} Gate AlGaIn/AlN/GaN HEMTs for Low Noise and High Gain Applications. Silicon, 2022, 14, 393-404.	1.8	12
17	Review: Back-Side via Hole Etching Process for Grounding GaAs Based Monolithic Microwave Integrated Circuits. Journal of the Electrochemical Society, 2005, 152, G567.	1.3	11
18	Elimination of current non-uniformity in carbon nanotube field emitters. Journal of Materials Science: Materials in Electronics, 2007, 18, 677-680.	1.1	11

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19	Anisotropic Etching of GaAs Using $\text{CCl}_2\text{F}_2/\text{CCl}_4$ Gases to Fabricate 200 μm Deep Via Holes for Grounding MMICs. Journal of the Electrochemical Society, 2003, 150, G395.	1.3	10
20	Investigation on de-trapping mechanisms related to non-monotonic kink pattern in GaN HEMT devices. AIP Advances, 2017, 7, .	0.6	10
21	Proton irradiation effects on buffer-free gallium nitride on silicon carbide high electron mobility transistor-based radio frequency power amplifier. Semiconductor Science and Technology, 2021, 36, 045019.	1.0	10
22	A $\hat{\Gamma}$ -shaped p-GaN HEMT for reliable enhancement mode operation. Microelectronics Reliability, 2022, 133, 114544.	0.9	9
23	Study of inductively coupled Cl_2/BCl_3 plasma process for high etch rate selective etching of via-holes in GaAs. Vacuum, 2010, 85, 452-457.	1.6	7
24	Molecular Beam Epitaxy growth and characterization of silicon δ -Doped InAs dot in a well quantum dot infrared photo detector (DWELL-QDIP). Infrared Physics and Technology, 2015, 70, 6-11.	1.3	7
25	Current collapse scaling in GaN/AlGaN/SiC high electron mobility transistors. Solid State Electronics Letters, 2019, 1, 30-37.	1.0	7
26	Advances in DC/RF Performance of AlGaN/GaN MIS-HEMT by Incorporating Dual Metal Gate Architecture. IETE Technical Review (Institution of Electronics and Telecommunication Engineers,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50		
27	Comparison of Two DC Extraction Methods for Mobility and Parasitic Resistances in a HEMT. IEEE Transactions on Electron Devices, 2017, 64, 1528-1534.	1.6	6
28	Comparison of Linearity and Intermodulation Distortion Metrics for T - and Pi - Gate HEMT. , 2019, , .		6
29	TCAD Investigation of Gate - Lag Measurements on Conventional and $\hat{\Gamma}$ - Gate AlGaN/GaN HEMTs. , 2020, , .		6
30	Deep Trap Characterization and the Kink Effect in AlGaN/GaN HEMTs. IETE Technical Review (Institution) Tj ETQq0 0 0 rgBT /Overlock 10	2.1	6
31	Analysis of the post-stress recovery of reverse leakage current in GaN HEMTs. Materials Science in Semiconductor Processing, 2022, 137, 106222.	1.9	5
32	Suitability of thin-GaN for AlGaN/GaN HEMT material and device. Journal of Materials Science, 2022, 57, 5913-5923.	1.7	5
33	Cumulative dose ^{60}Co gamma irradiation effects on AlGaN/GaN Schottky diodes and its area dependence. AIP Conference Proceedings, 2018, , .	0.3	4
34	Improvement in Schottky barrier inhomogeneities of Ni/AlGaN/GaN Schottky diodes after cumulative $\hat{\Gamma}$ -ray irradiation. Semiconductor Science and Technology, 2021, 36, 065012.	1.0	4
35	(n)GaAs/Ti/Pt/Au Schottky contacts and their effect on MESFET's dc parameters. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 48, 229-233.	1.7	3
36	Memory effect in silicon nitride deposition using ICPCVD technique. Journal of Theoretical and Applied Physics, 2019, 13, 299-304.	1.4	3

#	ARTICLE	IF	CITATIONS
37	Degradation Mechanisms in a Proton Irradiated HEMT with 3DEG Conduction and 3DHG as a Back Barrier. , 2021, , .		3
38	Inverse modeling of delta doped pseudomorphic high electron mobility transistors. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1036.	0.9	2
39	COMPARISON OF PROPERTIES OF PLZT SYSTEM WITH DIFFERENT FORMULATIONS. Modern Physics Letters B, 2006, 20, 1883-1892.	1.0	2
40	Study of Cl ₂ /BCl ₃ inductively coupled plasma for selective etching of GaAs. , 2009, , .		2
41	Cl ₂ /Ar based inductively coupled plasma etching of GaN/AlGaN structure. Proceedings of SPIE, 2012, , .	0.8	2
42	Characterization of AlGaN Thickness and Sheet Carrier Concentration of AlGaN/GaN Based HEMT Using Electrical Measurement. Environmental Science and Engineering, 2014, , 91-93.	0.1	2
43	Dry Etching of GaAs to Fabricate Via-Hole Grounds in Monolithic Microwave Integrated Circuits. Defence Science Journal, 2009, 59, 363-370.	0.5	2
44	Interplay Between γ -Ray Irradiation and 3DEG for Dosimeter Applications. IEEE Access, 2022, 10, 25811-25827.	2.6	2
45	Ohmic contact morphology improvement with reduced resistance using Si/Au/Ti/Al/Ni/Au (AlGaN) and Si/Au/Ti/Al/Ni/Au (InAlN) stack layers in III-Nitride HEMTs. Semiconductor Science and Technology, 2022, 37, 085006.	1.0	2
46	Study of "Thin Buffer" GaN on SiC HEMT and Effect of Bulk Traps on it. Silicon, 2022, 14, 12505-12512.	1.8	2
47	Quick Thermal Evaluation Software for GaAs Power MESFET's. , 2006, , .		1
48	Silicon nitride films for passivation of pHEMT based MMIC. , 2007, , .		1
49	Analysis of reverse leakage current in differently passivated AlGaIn/GaN HEMTs: A case study. , 2014, , .		1
50	Scaling of current collapse in GaN/AlGaIn HEMT for microwave power applications. , 2015, , .		1
51	Nanoscale material parameters based modeling of thermal noise in GaN HEMTs. Semiconductor Science and Technology, 0, , .	1.0	1
52	Emerging Device Architectures for Space Electronics. , 2023, , 181-208.		1
53	HEMT Inspired GaN Optical Waveguides: Analysis Under Thermal Stress and Prospects. IEEE Transactions on Device and Materials Reliability, 2022, 22, 424-430.	1.5	1
54	Parametral dependence of bilevel-interconnect formation in GaAs ICs/MMICs. , 1995, , .		0

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55	Development of GaAs Hyperabrupt Schottky Varactor Diode using Ion-Implanted Active Layer on Si GaAs. Environmental Science and Engineering, 2014, , 137-139.	0.1	0
56	Effect of a thick buffer in the OFF state simulation of AlGaIn/GaN HEMT. , 2018, , .		0
57	Enhancement in Electrical Characteristics of AlGaIn/GaN HEMT Using Gate Engineered Dielectric Pocket Dual-Metal Gate. Lecture Notes in Networks and Systems, 2021, , 369-374.	0.5	0
58	A Reproducible High Etch Rate ICP Process for Etching of Via-Hole Grounds in 200 μ m Thick GaAs MMICs. Journal of Semiconductor Technology and Science, 2008, 8, 244-250.	0.1	0
59	Extraction of the Edge / Areal Components and Path of the Reverse Gate Leakage in a GaN HEMT from Measurements. Semiconductor Science and Technology, 0, , .	1.0	0
60	Dependence of Gate Leakage Current on Efficacy of Gate Field Plate in AlGaIn/GaN HEMT. , 2022, , .		0