Umesh K Mishra

List of Publications by Year
in descending order

229 papers	8,675 citations	71102 41 h-index	53230 85 g-index
231 all docs	231 docs citations	231 times ranked	5245 citing authors

#	Article	IF	Citations
1	GaN-Based RF Power Devices and Amplifiers. Proceedings of the IEEE, 2008, 96, 287-305.	21.3	1,396
2	High quantum efficiency InGaN/GaN solar cells with 2.95 eV band gap. Applied Physics Letters, 2008, 93, .	3.3	400
3	Growth of Fe doped semi-insulating GaN by metalorganic chemical vapor deposition. Applied Physics Letters, 2002, 81, 439-441.	3.3	326
4	Enhanced Mg doping efficiency in Al0.2Ga0.8N/GaN superlattices. Applied Physics Letters, 1999, 74, 3681-3683.	3.3	257
5	Dislocation scattering in a two-dimensional electron gas. Applied Physics Letters, 2000, 76, 1707-1709.	3.3	217
6	N-polar GaNâˆ•AlGaNâˆ•GaN high electron mobility transistors. Journal of Applied Physics, 2007, 102, .	2.5	202
7	High internal and external quantum efficiency InGaN/GaN solar cells. Applied Physics Letters, 2011, 98, .	3.3	195
8	Polarization effects in AlGaN/GaN and GaN/AlGaN/GaN heterostructures. Journal of Applied Physics, 2003, 93, 10114-10118.	2.5	188
9	N-polar GaN epitaxy and high electron mobility transistors. Semiconductor Science and Technology, 2013, 28, 074009.	2.0	172
10	Recent progress in metal-organic chemical vapor deposition of $left(000ar{1} ight)$ N-polar group-III nitrides. Semiconductor Science and Technology, 2014, 29, 113001.	2.0	163
11	Demonstration of Constant 8 W/mm Power Density at 10, 30, and 94 GHz in State-of-the-Art Millimeter-Wave N-Polar GaN MISHEMTs. IEEE Transactions on Electron Devices, 2018, 65, 45-50.	3.0	153
12	Polarization-enhanced Mg doping of AlGaN/GaN superlattices. Applied Physics Letters, 1999, 75, 2444-2446.	3.3	149
13	CAVET on Bulk GaN Substrates Achieved With MBE-Regrown AlGaN/GaN Layers to Suppress Dispersion. IEEE Electron Device Letters, 2012, 33, 41-43.	3.9	149
14	Enhancement and Depletion Mode AlGaN/GaN CAVET With Mg-Ion-Implanted GaN as Current Blocking Layer. IEEE Electron Device Letters, 2008, 29, 543-545.	3.9	135
15	In Situ <italic>O</italic>xide, <italic>G</italic>aN Interlayer-Based Vertical Trench MOS<italic>FET</italic> (<italic>OG-FET</italic>) on Bulk GaN substrates. IEEE Electron Device Letters, 2017, 38, 353-355.	3.9	130
16	Integrated Optical and Electrical Analysis: Identifying Location and Properties of Traps in AlGaN/GaN HEMTs During Electrical Stress. IEEE Electron Device Letters, 2010, 31, 662-664.	3.9	120
17	Two-photon absorption study of GaN. Applied Physics Letters, 2000, 76, 439-441.	3.3	97
18	Distribution of donor states on etched surface of AlGaN/GaN heterostructures. Journal of Applied Physics, 2010, 108, 063719.	2.5	78

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19	Multi-color light emitting diode using polarization-induced tunnel junctions. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2830-2833.	0.8	77
20	Depletion region effects in Mg-doped GaN. Journal of Applied Physics, 2000, 87, 770-775.	2.5	75
21	N-Polar GaN Cap MISHEMT With Record Power Density Exceeding 6.5 W/mm at 94 GHz. IEEE Electron Device Letters, 2017, 38, 359-362.	3.9	74
22	W-Band Power Performance of SiN-Passivated N-Polar GaN Deep Recess HEMTs. IEEE Electron Device Letters, 2020, 41, 349-352.	3.9	74
23	N-Polar GaN HEMTs Exhibiting Record Breakdown Voltage Over 2000 V and Low Dynamic On-Resistance. IEEE Electron Device Letters, 2018, 39, 1014-1017.	3.9	70
24	Effect of doping and polarization on carrier collection in InGaN quantum well solar cells. Applied Physics Letters, 2011, 98, .	3.3	68
25	Low nonalloyed Ohmic contact resistance to nitride high electron mobility transistors using N-face growth. Applied Physics Letters, 2007, 91, .	3.3	67
26	Effect of dislocations on electron mobility in AlGaN/GaN and AlGaN/AlN/GaN heterostructures. Applied Physics Letters, 2012, 101, .	3.3	66
27	Preparation of indium nitride micro- and nanostructures by ammonolysis of indium oxide. Journal of Materials Chemistry, 2004, 14, 637.	6.7	65
28	Effects of oxidation on surface chemical states and barrier height of AlGaN/GaN heterostructures. Applied Physics Letters, 2010, 97, .	3.3	65
29	Scanning second-harmonic/third-harmonic generation microscopy of gallium nitride. Applied Physics Letters, 2000, 77, 2331-2333.	3.3	63
30	OG-FET: An In-Situ ${O}$ xide, ${G}$ aN Interlayer-Based Vertical Trench MOSFET. IEEE Electron Device Letters, 2016, 37, 1601-1604.	3.9	63
31	Atom probe analysis of AlN interlayers in AlGaN/AlN/GaN heterostructures. Applied Physics Letters, 2013, 102, .	3.3	62
32	Effect of quantum well cap layer thickness on the microstructure and performance of InGaN/GaN solar cells. Applied Physics Letters, 2012, 100, .	3.3	53
33	Demonstrating >1.4 kV OG-FET performance with a novel double field-plated geometry and the successful scaling of large-area devices. , 2017, , .		53
34	Large-Area <italic>In-Situ</italic> Oxide, GaN Interlayer-Based Vertical Trench MOSFET (OG-FET). IEEE Electron Device Letters, 2018, 39, 711-714.	3.9	52
35	Design of High-Aspect-Ratio T-Gates on N-Polar GaN/AlGaN MIS-HEMTs for High f_{max}. IEEE Electron Device Letters, 2012, 33, 785-787.	3.9	51
36	Mass transport regrowth of GaN for ohmic contacts to AlGaN/GaN. Applied Physics Letters, 2001, 78, 2876-2878.	3.3	49

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37	Growth and characterization of N-polar GaN films on SiC by metal organic chemical vapor deposition. Journal of Applied Physics, 2008, 104, .	2.5	48
38	Polarity inversion of N-face GaN using an aluminum oxide interlayer. Journal of Applied Physics, 2010, 108, .	2.5	47
39	High Linearity and High Gain Performance of N-Polar GaN MIS-HEMT at 30 GHz. IEEE Electron Device Letters, 2020, 41, 681-684.	3.9	46
40	p-n junctions on Ga-face GaN grown by NH3 molecular beam epitaxy with low ideality factors and low reverse currents. Applied Physics Letters, 2010, 97, .	3.3	45
41	Color-tunable <10â€‰<i> Î¼ </i>m square InGaN micro-LEDs on compliant GaN-on-porous-GaN pseudo-substrates. Applied Physics Letters, 2020, 117, .	3.3	44
42	Plasma Treatment for Leakage Reduction in AlGaN/GaN and GaN Schottky Contacts. IEEE Electron Device Letters, 2008, 29, 297-299.	3.9	42
43	Surface passivation of n-GaN by nitrided-thin-Ga2O3âˆ•SiO2 and Si3N4 films. Journal of Applied Physics, 2004, 96, 2674-2680.	2.5	41
44	V-Gate GaN HEMTs With Engineered Buffer for Normally Off Operation. IEEE Electron Device Letters, 2008, 29, 1184-1186.	3.9	41
45	A comparative study of effects of SiNx deposition method on AlGaN/GaN heterostructure field-effect transistors. Applied Physics Letters, 2009, 94, .	3.3	40
46	Gallium Nitride Powders from Ammonolysis:Â Influence of Reaction Parameters on Structure and Properties. Chemistry of Materials, 2004, 16, 5088-5095.	6.7	39
47	Impact of $hbox{CF}_{4}$ Plasma Treatment on GaN. IEEE Electron Device Letters, 2007, 28, 781-783.	3.9	39
48	Examination of tunnel junctions in the AlGaN/GaN system: Consequences of polarization charge. Applied Physics Letters, 2000, 77, 1867.	3.3	38
49	Growth of strain-relaxed InGaN on micrometer-sized patterned compliant GaN pseudo-substrates. Applied Physics Letters, 2020, 116, .	3.3	38
50	Microwave Power Performance N-Polar GaN MISHEMTs Grown by MOCVD on SiC Substrates Using an $hbox{Al}_{2}hbox{O}_{3}$ Etch-Stop Technology. IEEE Electron Device Letters, 2012, 33, 44-46.	3.9	36
51	Ca 2+ detection utilising AlGaN/GaN transistors with ion-selective polymer membranes. Analytica Chimica Acta, 2017, 987, 105-110.	5.4	36
52	Demonstration of a GaN/AlGaN Superlattice-Based p-Channel FinFET With High ON-Current. IEEE Electron Device Letters, 2020, 41, 220-223.	3.9	36
53	Dipole scattering in polarization induced IIIâ€“V nitride two-dimensional electron gases. Journal of Applied Physics, 2000, 88, 4734.	2.5	35
54	Generation of coherent acoustic phonons in strained GaN thin films. Applied Physics Letters, 2001, 79, 3361-3363.	3.3	35

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55	Ion versus pH sensitivity of ungated AlGaN/GaN heterostructure-based devices. Applied Physics Letters, 2010, 97, .	3.3	35
56	Enhancement-Mode N-Polar GaN MOS-HFET With 5-nm GaN Channel, 510-mS/mm g_{m}, and 0.66-$Omegacdot hbox{mm}$$R_{m on}$. IEEE Electron Device Letters, 2012, 33, 26-28.	3.9	35
57	6.2 W/Mm and Record 33.8% PAE at 94 GHz From N-Polar GaN Deep Recess MIS-HEMTs With ALD Ru Gates. IEEE Microwave and Wireless Components Letters, 2021, 31, 748-751.	3.2	35
58	Capacitance-voltage characterization of interfaces between positive valence band offset dielectrics and wide bandgap semiconductors. Journal of Applied Physics, 2013, 114, .	2.5	34
59	Indium segregation in N-polar InGaN quantum wells evidenced by energy dispersive X-ray spectroscopy and atom probe tomography. Applied Physics Letters, 2017, 110, .	3.3	34
60	Two-Stage High-Gain High-Power Distributed Amplifier Using Dual-Gate GaN HEMTs. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2059-2063.	4.6	33
61	Correlation between threading dislocation density and sheet resistance of AlGaN/AlN/GaN heterostructures grown by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2012, 100, 262102.	3.3	33
62	Effects of H2O Pretreatment on the Capacitanceâ€“Voltage Characteristics of Atomic-Layer-Deposited Al2O3 on Ga-Face GaN Metalâ€“Oxideâ€“Semiconductor Capacitors. Journal of Electronic Materials, 2013, 42, 33-39.	2.2	33
63	N-Polar GaN MIS-HEMTs on Sapphire With High Combination of Power Gain Cutoff Frequency and Three-Terminal Breakdown Voltage. IEEE Electron Device Letters, 2016, 37, 77-80.	3.9	33
64	Effect of Dielectric Thickness on Power Performance of AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2009, 30, 313-315.	3.9	31
65	Impact of Moisture and Fluorocarbon Passivation on the Current Collapse of AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2012, 33, 1378-1380.	3.9	31
66	Model to explain the behavior of 2DEG mobility with respect to charge density in N-polar and Ga-polar AlGaN-GaN heterostructures. Journal of Applied Physics, 2016, 120, .	2.5	31
67	N-Polar GaN-on-Sapphire Deep Recess HEMTs With High W-Band Power Density. IEEE Electron Device Letters, 2020, 41, 1633-1636.	3.9	31
68	Channeling as a mechanism for dry etch damage in GaN. Applied Physics Letters, 2000, 76, 3941-3943.	3.3	30
69	Growth and characterization of In-polar and N-polar InAlN by metal organic chemical vapor deposition. Journal of Applied Physics, 2010, 107, .	2.5	30
70	Power Performance of AlGaN/GaN HEMTs Grown on SiC by Ammonia-MBE at 4 and 10 GHz. IEEE Electron Device Letters, 2007, 28, 945-947.	3.9	29
71	N-Polar InAlN/AlN/GaN MIS-HEMTs. IEEE Electron Device Letters, 2010, 31, 800-802.	3.9	29
72	N-Polar GaN MIS-HEMTs With a 12.1-W/mm Continuous-Wave Output Power Density at 4 GHz on Sapphire Substrate. IEEE Electron Device Letters, 2011, 32, 635-637.	3.9	29

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73	Barrier height inhomogeneity and its impact on (Al,In,Ga)N Schottky diodes. Journal of Applied Physics, 2016, 119, .	2.5	29
74	Electrical properties of N-polar AlGaN/GaN high electron mobility transistors grown on SiC by metalorganic chemical vapor deposition. Applied Physics Letters, 2009, 94, .	3.3	28
75	Interface states at the SiN/AlGaN interface on GaN heterojunctions for Ga and N-polar material. Journal of Applied Physics, 2012, 111, .	2.5	28
76	High power N-face GaN high electron mobility transistors grown by molecular beam epitaxy with optimization of AlN nucleation. Applied Physics Letters, 2009, 94, .	3.3	27
77	Self-Aligned N-Polar GaN/InAlN MIS-HEMTs With Record Extrinsic Transconductance of 1105 mS/mm. IEEE Electron Device Letters, 2012, 33, 794-796.	3.9	27
78	Engineering the (In, Al, Ga)N back-barrier to achieve high channel-conductivity for extremely scaled channel-thicknesses in N-polar GaN high-electron-mobility-transistors. Applied Physics Letters, 2014, 104, 092107.	3.3	26
79	Design of integrated III-nitride/non-III-nitride tandem photovoltaic devices. Journal of Applied Physics, 2012, 111, 054503.	2.5	25
80	Molecular beam epitaxy of InAlN lattice-matched to GaN with homogeneous composition using ammonia as nitrogen source. Applied Physics Letters, 2012, 100, .	3.3	25
81	N-Polar Deep Recess MISHEMTs With Record 2.9 W/mm at 94 GHz. IEEE Electron Device Letters, 2016, 37, 713-716.	3.9	25
82	Improved Dynamic R_{ON} of GaN Vertical Trench MOSFETs (OG-FETs) Using TMAH Wet Etch. IEEE Electron Device Letters, 2018, 39, 1030-1033.	3.9	25
83	High-Performance N-Face GaN Microwave MIS-HEMTs With > 70% Power-Added Efficiency. IEEE Electron Device Letters, 2009, 30, 802-804.	3.9	24
84	RF Performance of N-Polar AlGaN/GaN MIS-HEMTs Grown by MOCVD on Sapphire Substrate. IEEE Electron Device Letters, 2009, 30, 584-586.	3.9	24
85	Small-signal model extraction of mm-wave N-polar GaN MISHEMT exhibiting record performance: Analysis of gain and validation by 94 GHz loadpull. , 2016, , .		24
86	Suppression of Mg propagation into subsequent layers grown by MOCVD. Journal of Applied Physics, 2017, 121, .	2.5	24
87	Experimental Demonstration of III-Nitride Hot-Electron Transistor With GaN Base. IEEE Electron Device Letters, 2011, 32, 1212-1214.	3.9	23
88	Neutron irradiation effects on gallium nitride-based Schottky diodes. Applied Physics Letters, 2013, 103, .	3.3	23
89	Observation of Hot Electron and Impact Ionization in N-Polar GaN MIS-HEMTs. IEEE Electron Device Letters, 2018, 39, 1007-1010.	3.9	23
90	Investigation of nitrogen polar p-type doped GaN/AlxGa(1-x)N superlattices for applications in wide-bandgap p-type field effect transistors. Applied Physics Letters, 2019, 115, .	3.3	23

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91	An improved methodology for extracting interface state density at Si3N4/GaN. Applied Physics Letters, 2020, 116, .	3.3	23
92	Photoluminescence study of hydrogenated aluminum oxideâ€“semiconductor interface. Applied Physics Letters, 1997, 70, 1293-1295.	3.3	22
93	Observation of positive thermal power coefficient in InGaN/GaN quantum well solar cells. Applied Physics Letters, 2011, 99, 071104.	3.3	22
94	Scaled Self-Aligned N-Polar GaN/AlGaN MIS-HEMTs With f_{T} of 275 GHz. IEEE Electron Device Letters, 2012, 33, 961-963.	3.9	22
95	Compliant Micron-Sized Patterned InGaN Pseudo-Substrates Utilizing Porous GaN. Materials, 2020, 13, 213.	2.9	22
96	Synthesis of luminescing (In,Ga)N nanoparticles from an inorganic ammonium fluoride precursor. Journal of Materials Chemistry, 2005, 15, 1891.	6.7	21
97	MOCVD-Grown AlGaN Buffer GaN HEMTs With V-Gates for Microwave Power Applications. IEEE Electron Device Letters, 2009, 30, 910-912.	3.9	21
98	Properties of In-Doped ZnO Films Grown by Metalorganic Chemical Vapor Deposition on GaN(0001) Templates. Journal of Electronic Materials, 2010, 39, 608-611.	2.2	21
99	Influence of AlN interlayer on the anisotropic electron mobility and the device characteristics of N-polar AlGaN/GaN metal-insulator-semiconductor-high electron mobility transistors grown on vicinal substrates. Journal of Applied Physics, 2010, 108, 074502.	2.5	21
100	Elimination of columnar microstructure in N-face InAlN, lattice-matched to GaN, grown by plasma-assisted molecular beam epitaxy in the N-rich regime. Applied Physics Letters, 2014, 104, .	3.3	21
101	Interfacial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mrow><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:mrow></mml:math> Vacancies in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mi>Ga</mml:mi><mml:mi		

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109	Wafer-Bonded p-n Heterojunction of GaAs and Chemomechanically Polished N-Polar GaN. IEEE Electron Device Letters, 2013, 34, 42-44.	3.9	18
110	Metal-organic chemical vapor deposition of high quality, high indium composition N-polar InGaN layers for tunnel devices. Journal of Applied Physics, 2017, 121, 185707.	2.5	18
111	Studies of carrier dynamics in unintentionally doped gallium nitride bandtail states. Applied Physics Letters, 2001, 78, 2724-2726.	3.3	17
112	Electron mobility in N-polar GaN/AlGaN/GaN heterostructuress. Applied Physics Letters, 2008, 93, .	3.3	17
113	Polarity inversion of N-face GaN by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2008, 104, .	2.5	17
114	f_{T} and $f_{m MAX}$ of 47 and 81 GHz , Respectively, on N-Polar GaN/AlN MIS-HEMT. IEEE Electron Device Letters, 2009, 30, 599-601.	3.9	17
115	Enhancement-Mode m-plane AlGaN/GaN Heterojunction Field-Effect Transistors with +3 V of Threshold Voltage Using Al$_{2}$O$_{3}$ Deposited by Atomic Layer Deposition. Applied Physics Express, 2011, 4, 096501.	2.4	17
116	Analysis of MOCVD SiNx Passivated N-Polar GaN MIS-HEMTs on Sapphire With High $f_{max}cdot V_{DS,Q}$. IEEE Electron Device Letters, 2018, 39, 409-412.	3.9	17
117	Metal-organic chemical vapor deposition of N-polar InN quantum dots and thin films on vicinal GaN. Journal of Applied Physics, 2018, 123, .	2.5	17
118	Low temperature limits to molecular beam epitaxy of GaAs. Applied Physics Letters, 1994, 65, 2335-2337.	3.3	16
119	Currentâ€“voltage characteristics of polar heterostructure junctions. Journal of Applied Physics, 2002, 91, 2989-2993.	2.5	16
120	Correlation Between DCâ€“RF Dispersion and Gate Leakage in Deeply Recessed GaN/AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2008, 29, 303-305.	3.9	16
121	RF Performance of Deep-Recessed N-Polar GaN MIS-HEMTs Using a Selective Etch Technology Without Ex Situ Surface Passivation. IEEE Electron Device Letters, 2011, 32, 134-136.	3.9	16
122	Optimization of a chlorine-based deep vertical etch of GaN demonstrating low damage and low roughness. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	16
123	W-band passive load pull system for on-wafer characterization of high power density N-polar GaN devices based on output match and drive power requirements vs. gate width. , 2016, , .		16
124	First demonstration of improvement in hole conductivity inc-plane III-Nitrides through application of uniaxial strain. Japanese Journal of Applied Physics, 2019, 58, 030908.	1.5	16
125	Bias-Dependent Electron Velocity Extracted From N-Polar GaN Deep Recess HEMTs. IEEE Transactions on Electron Devices, 2020, 67, 1542-1546.	3.0	16
126	Large near resonance third order nonlinearity in GaN. Optical and Quantum Electronics, 2000, 32, 619-640.	3.3	15

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127	Lateral confinement of electrons in vicinal N-polar AlGaN/GaN heterostructure. Applied Physics Letters, 2010, 97, 162106.	3.3	15
128	Plasma-assisted molecular beam epitaxy growth diagram of InGaN on (0001)GaN for the optimized synthesis of InGaN compositional grades. Physica Status Solidi (B): Basic Research, 2016, 253, 626-629.	1.5	15
129	Net negative fixed interface charge for Si3N4 and SiO2 grown in situ on 000-1 N-polar GaN. Applied Physics Letters, 2019, 115, 032103.	3.3	15
130	Method of growing elastically relaxed crack-free AlGaN on GaN as substrates for ultra-wide bandgap devices using porous GaN. Applied Physics Letters, 2020, 117, .	3.3	15
131	Observation of I_D-V_D Kink in N-Polar GaN MIS-HEMTs at Cryogenic Temperatures. IEEE Electron Device Letters, 2020, 41, 345-348.	3.9	15
132	Evaluation of linearity at 30 GHz for N-polar GaN deep recess transistors with 10.3 W/mm of output power and 47.4% PAE. Applied Physics Letters, 2021, 119, .	3.3	15
133	Self-Aligned Technology for N-Polar GaN/Al(Ga)N MIS-HEMTs. IEEE Electron Device Letters, 2011, 32, 33-35.	3.9	14
134	Strain and Temperature Dependence of Defect Formation at AlGaN/GaN High-Electron-Mobility Transistors on a Nanometer Scale. IEEE Transactions on Electron Devices, 2012, 59, 2667-2674.	3.0	14
135	Infrared luminescence from N-polar InN quantum dots and thin films grown by metal organic chemical vapor deposition. Applied Physics Letters, 2019, 114, 241103.	3.3	14
136	Ultrashort hole capture time in Mg-doped GaN thin films. Applied Physics Letters, 2002, 81, 3975-3977.	3.3	13
137	Work-function difference between Al and n-GaN from Al-gated n-GaNâˆ•nitrided-thin-Ga2O3âˆ•SiO2 metal oxide semiconductor structures. Applied Physics Letters, 2004, 84, 5413-5415.	3.3	13
138	Method to Predict and Optimize Charge Sensitivity of Ungated AlGaN/GaN HEMT-Based Ion Sensor Without Use of Reference Electrode. IEEE Sensors Journal, 2015, 15, 5320-5326.	4.7	13
139	A donor-like trap at the InGaN/GaN interface with net negative polarization and its possible consequence on internal quantum efficiency. Semiconductor Science and Technology, 2013, 28, 105021.	2.0	12
140	Proposed existence of acceptor-like traps at positive polarization interfaces in p-type III-nitride semiconductors. Applied Physics Letters, 2020, 117, .	3.3	12
141	Wafer-fused AlGaAs/GaAs/GaN heterojunction bipolar transistor. Applied Physics Letters, 2003, 82, 820-822.	3.3	11
142	Design of polarization-dipole-induced isotype heterojunction diodes for use in IIIâ€“N hot electron transistors. Applied Physics Express, 2014, 7, 014102.	2.4	11
143	Common Emitter Current Gain >1 in III-N Hot Electron Transistors With 7-nm GaN/InGaN Base. IEEE Electron Device Letters, 2015, 36, 439-441.	3.9	11
144	Electrical properties and interface abruptness of AlSiO gate dielectric grown on 000 1 Â¯ N-polar and (0001) Ga-polar GaN. Applied Physics Letters, 2019, 115, 172104.	3.3	11

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145	TEMPERATURE DEPENDENT I-V CHARACTERISTICS OF AlGaN/GaN HBTS AND GaN BJTS. International Journal of High Speed Electronics and Systems, 2004, 14, 819-824.	0.7	10
146	Interdigitated Multipixel Arrays for the Fabrication of High-Power Light-Emitting Diodes With Very Low Series Resistances, Reduced Current Crowding, and Improved Heat Sinking. IEEE Transactions on Electron Devices, 2007, 54, 1083-1090.	3.0	10
147	N-polar GaN-based highly scaled self-aligned MIS-HEMTs with state-of-the-art f<inf>T</inf>.L<inf>G</inf> product of 16.8 GHz-µm. , 2009, , .		10
148	N-Polar GaN/AlN MIS-HEMT for Ka-Band Power Applications. IEEE Electron Device Letters, 2010, 31, 1437-1439.	3.9	10
149	Capacitance-voltage profiling on polar III-nitride heterostructures. Journal of Applied Physics, 2012, 112, .	2.5	10
150	InGaAs-InGaN Wafer-Bonded Current Aperture Vertical Electron Transistors (BAVETs). Journal of Electronic Materials, 2012, 41, 857-864.	2.2	10
151	Dielectric stress tests and capacitance-voltage analysis to evaluate the effect of post deposition annealing on Al2O3 films deposited on GaN. Applied Physics Letters, 2014, 105, 222905.	3.3	10
152	Effects of gate shaping and consequent process changes on AlGaN/GaN HEMT reliability. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 2646-2652.	1.8	9
153	AlGaN/GaN heterojunction bipolar transistors by ammonia molecular beam epitaxy. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 216-220.	1.8	9
154	Lateral GaN Devices for Power Applications (from kHz to GHz). Power Electronics and Power Systems, 2017, , 69-99.	0.6	9
155	Investigation and optimization of HfO2 gate dielectric on N-polar GaN: Impact of surface treatments, deposition, and annealing conditions. Applied Physics Letters, 2021, 119, .	3.3	9
156	Patterned IIIâ€Nitrides on Porous GaN: Extending Elastic Relaxation from the Nanoâ€•to the Micrometer Scale. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100234.	2.4	9
157	Characterization of AlSiO dielectrics with varying silicon composition for N-polar GaN-based devices. Semiconductor Science and Technology, 2020, 35, 095027.	2.0	9
158	AlGaAs/GaAs high electron mobility transistor with a low-temperature grown GaAs ion damage blocking layer. Applied Physics Letters, 1997, 71, 494-496.	3.3	8
159	mm-Wave N-polar GaN MISHEMT with a self-aligned recessed gate exhibiting record 4.2 W/mm at 94 GHz on Sapphire. , 2016, , .		8
160	MMIC Class-F Power Amplifiers using Field-Plated AlGaN/GaN HEMTs. , 2006, , .		7
161	Enhanced mobility in vertically scaled N-polar high-electron-mobility transistors using GaN/InGaN composite channels. Applied Physics Letters, 2018, 112, .	3.3	7
162	Improved operation stability of in situ AlSiO dielectric grown on (000â€“1) N-polar GaN by MOCVD. Applied Physics Express, 2020, 13, 061010.	2.4	7

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163	AlGaN/GaN High Electron Mobility Transistors. , 0, , 211-233.		6
164	Improved quality nonpolar a â€plane GaN/AlGaN UV LEDs grown with sidewall lateral epitaxial overgrowth (SLEO). Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1705-1712.	1.8	6
165	Growth and characterization of Nâ€polar GaN and AlGaN/GaN HEMTs on (111) silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2086-2088.	0.8	6
166	Maskless regrowth of GaN for trenched devices by MOCVD. Applied Physics Letters, 2017, 111, .	3.3	6
167	Oxygen doping of c-plane GaN by metalorganic chemical vapor deposition. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2557-2561.	0.8	5
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