Carlo De Santi

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/509117/publications.pdf

Version: 2024-02-01

206	3,808	257450 24	149698 56
papers	citations	h-index	g-index

206	206	206	2610
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cumulative Hot-Electron Trapping in GaN-Based Power HEMTs Observed by an Ultrafast (10 V/Ns) On-Wafer Methodology. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 5019-5026.	5.4	15
2	Origin of the Diffusion-Related Optical Degradation of 1.3 Î¼m Inas QD-LDs Epitaxially Grown on Silicon Substrate. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-9.	2.9	6
3	Laser-induced activation of Mg-doped GaN: quantitative characterization and analysis. Journal Physics D: Applied Physics, 2022, 55, 185104.	2.8	3
4	Photon-induced degradation of InGaN-based LED in open-circuit conditions investigated by steady-state photocapacitance and photoluminescence. Journal of Applied Physics, 2022, 131, .	2.5	3
5	Trap-state mapping to model GaN transistors dynamic performance. Scientific Reports, 2022, 12, 1755.	3.3	10
6	Defects and Reliability of GaNâ€Based LEDs: Review and Perspectives. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	28
7	Reliability of Commercial UVC LEDs: 2022 State-of-the-Art. Electronics (Switzerland), 2022, 11, 728.	3.1	20
8	Modeling the effect of spatial position and concentration of defects on optical degradation of InGaN/GaN multi quantum well light emitting diodes. , 2022, , .		0
9	Role of carbon in dynamic effects and reliability of 0.15-um AlGaN/GaN HEMTs for RF power amplifiers. , 2022, , .		1
10	UV LED reliability: degradation mechanisms and challenges. , 2022, , .		2
11	Failure Physics and Reliability of GaNâ€Based HEMTs for Microwave and Millimeterâ€Wave Applications: A Review of Consolidated Data and Recent Results. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	6
12	Conduction properties and threshold voltage instability in Î²-Ga2O3 MOSFETs. , 2022, , .		2
13	GaN-based solar cells degradation kinetics investigated at high temperature under high-intensity 405nm optical stress. , 2022, , .		1
14	Optical degradation of InAs quantum-dot lasers on silicon: dependence on temperature and on diffusion processes. , 2022, , .		0
15	Defects in III-N LEDs: experimental identification and impact on electro-optical characteristics. , 2022, , .		0
16	Investigation of deep level defects in n-type GaAsBi. , 2022, , .		0
17	Deep levels and conduction processes in nitrogen-implanted Ga2O3 Schottky barrier diodes. , 2022, , .		0
18	On the performance and reliability of state-of-the-art commercial UV-C LEDs for disinfection purposes. , 2022, , .		0

#	Article	IF	Citations
19	Deep defects in InGaN LEDs: modeling the impact on the electrical characteristics. , 2022, , .		0
20	Study and characterization of GaN MOS capacitors: Planar vs trench topographies. Applied Physics Letters, 2022, 120, .	3.3	3
21	Logarithmic trapping and detrapping in <i>Î²</i> -Ga2O3 MOSFETs: Experimental analysis and modeling. Applied Physics Letters, 2022, 120, .	3.3	8
22	Influence of Drain and Gate Potential on Gate Failure in Semi-Vertical GaN-on-Si Trench MOSFETs. , 2022, , .		1
23	Deep level effects and degradation of 0.15 Î¼m RF AlGaN/GaN HEMTs with Mono-layer and Bi-layer AlGaN backbarrier. , 2022, , .		0
24	GaN RF HEMT Reliability: Impact of Device Processing on I-V Curve Stability and Current Collapse. , 2022, , .		1
25	Modeling Hot-Electron Trapping in GaN-based HEMTs. , 2022, , .		1
26	Quantum efficiency of InGaNâ€“GaN multi-quantum well solar cells: Experimental characterization and modeling. Journal of Applied Physics, 2022, 131, .	2.5	4
27	Compact Modeling of Nonideal Trapping/Detrapping Processes in GaN Power Devices. IEEE Transactions on Electron Devices, 2022, 69, 4432-4437.	3.0	2
28	Degradation of 1.3 Î¼m InAs Quantum-Dot Laser Diodes: Impact of Dislocation Density and Number of Quantum Dot Layers. IEEE Journal of Quantum Electronics, 2021, 57, 1-8.	1.9	12
29	Full Optical Contactless Thermometry Based on LED Photoluminescence. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	4.7	6
30	Degradation mechanisms of InGaN visible LEDs and AlGaN UV LEDs. , 2021, , 273-312.		6
31	Gradual Degradation of InGaAs LEDs: Impact on Non-Radiative Lifetime and Extraction of Defect Characteristics. Materials, 2021, 14, 1114.	2.9	9
32	A Generalized Approach to Determine the Switching Reliability of GaN HEMTs on-Wafer Level. , 2021, , .		4
33	Hydrogen-terminated diamond MESFETs: operating principles, static and dynamic performance, and reliability. , 2021, , .		0
34	Role of the AlGaN Cap Layer on the Trapping Behaviour of N-Polar GaN MISHEMTs. , 2021, , .		1
35	Understanding the Leakage Mechanisms and Breakdown Limits of Vertical GaN-on-Si p+nâˆ’n Diodes: The Road to Reliable Vertical MOSFETs. Micromachines, 2021, 12, 445.	2.9	12
36	Challenges and Perspectives for Vertical GaN-on-Si Trench MOS Reliability: From Leakage Current Analysis to Gate Stack Optimization. Materials, 2021, 14, 2316.	2.9	15

#	Article	IF	Citations
37	A Novel Physics-Based Approach to Analyze and Model <i>E</i>-Mode p-GaN Power HEMTs. IEEE Transactions on Electron Devices, 2021, 68, 1489-1494.	3.0	25
38	A Physics-Based Approach to Model Hot-Electron Trapping Kinetics in p-GaN HEMTs. IEEE Electron Device Letters, 2021, 42, 673-676.	3.9	25
39	Identification of dislocation-related and point-defects in III-As layers for silicon photonics applications. Journal Physics D: Applied Physics, 2021, 54, 285101.	2.8	7
40	Deep levels and carrier capture kinetics in n-GaAsBi alloys investigated by deep level transient spectroscopy. Journal Physics D: Applied Physics, 2021, 54, 345109.	2.8	11
41	Glass-ceramic composites for high-power white-light-emitting diodes. Ceramics International, 2021, 47, 17986-17992.	4.8	10
42	UV-Based Technologies for SARS-CoV2 Inactivation: Status and Perspectives. Electronics (Switzerland), 2021, 10, 1703.	3.1	30
43	Short term reliability and robustness of ultra-thin barrier, 110Ânm-gate AlN/GaN HEMTs. Microelectronics Reliability, 2021, 123, 114199.	1.7	2
44	Dynamic Performance Characterization Techniques in Gallium Nitride-Based Electronic Devices. Crystals, 2021, 11, 1037.	2.2	4
45	Modeling the electrical characteristics of InGaN/GaN LED structures based on experimentally-measured defect characteristics. Journal Physics D: Applied Physics, 2021, 54, 425105.	2.8	21
46	Effect of indium content and carrier distribution on the efficiency and reliability of InGaN/GaN-based multi quantum well light emitting diode. Microelectronics Reliability, 2021, 126, 114377.	1.7	1
47	Effects of quantum-well indium content on deep defects and reliability of InGaN/GaN light-emitting diodes with under layer. Journal Physics D: Applied Physics, 2021, 54, 505108.	2.8	11
48	Defect incorporation in In-containing layers and quantum wells: experimental analysis via deep level profiling and optical spectroscopy. Journal Physics D: Applied Physics, 2021, 54, 025108.	2.8	20
49	Nonequilibrium Greenâ€™s Function Modeling of Trap-Assisted Tunneling in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>In</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi>Ga</mml:mi><mml:mr mathvariant="normal">N</mml:mi></mml:mrow></mml:math> /GaN Light-Emitting Diodes. Physical Review Applied, 2021, 16, .	3.8	4
50	Vertical GaN devices: Process and reliability. Microelectronics Reliability, 2021, 126, 114218.	1.7	9
51	Charge trapping in 0.1Âμm AlGaN/GaN RF HEMTs: Dependence on barrier properties, voltage and temperature. Microelectronics Reliability, 2021, 126, 114259.	1.7	0
52	Degradation mechanisms of 1.3Âμm C-doped quantum dot lasers grown on native substrate. Microelectronics Reliability, 2021, , 114222.	1.7	1
53	Electrical, optical characterization and degradation of Cu(InGa)Se2 devices with fluorine-doped tin oxide back contact. Microelectronics Reliability, 2021, 126, 114260.	1.7	1
54	Non-monotonic threshold voltage variation in 4H-SiC metalâ€“oxideâ€“semiconductor field-effect transistor: Investigation and modeling. Journal of Applied Physics, 2021, 130, .	2.5	9

#	Article	IF	Citations
55	Positive and negative charge trapping GaN HEMTs: Interplay between thermal emission and transport-limited processes. Microelectronics Reliability, 2021, 126, 114255.	1.7	7
56	Impact of an AlGaN spike in the buffer in 0.15ÂÎ¼m AlGaN/GaN HEMTs during step stress. Microelectronics Reliability, 2021, 126, 114318.	1.7	2
57	Failure mechanisms of GaN HEMTs for microwave and millimeter-wave applications: from interdiffusion effects to hot-electrons degradation. , 2021, , .		2
58	Review on the degradation of GaN-based lateral power transistors. E-Prime, 2021, 1, 100018.	2.0	3
59	GaN-based power devices: Physics, reliability, and perspectives. Journal of Applied Physics, 2021, 130, .	2.5	191
60	Understanding the effects of off-state and hard-switching stress in gallium nitride-based power transistors. Semiconductor Science and Technology, 2021, 36, 014001.	2.0	10
61	A Review of the Reliability of Integrated IR Laser Diodes for Silicon Photonics. Electronics (Switzerland), 2021, 10, 2734.	3.1	6
62	Microstructural Degradation Investigations of OFF-State Stressed 0.15 Î¼m RF AlGaN/GaN HEMTs: Failure Mode related Breakdown. , 2021, , .		0
63	Dynamic and Capacitive Characterization of 3D GaN n-p-n Vertical Fin-FETs. , 2021, , .		0
64	Impact of thermal annealing on deep levels in nitrogen-implanted Î²-Ga2O3 Schottky barrier diodes. Journal of Applied Physics, 2021, 130, .	2.5	3
65	Charge Trapping in GaN Power Transistors: Challenges and Perspectives. , 2021, , .		4
66	Investigation of Current-Driven Degradation of 1.3 <i>Î¼</i>m Quantum-Dot Lasers Epitaxially Grown on Silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-8.	2.9	13
67	Degradation Mechanisms of GaNâ€Based Vertical Devices: A Review. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900750.	1.8	8
68	Cause and Effects of OFF-State Degradation in Hydrogen-Terminated Diamond MESFETs. IEEE Transactions on Electron Devices, 2020, 67, 4021-4026.	3.0	8
69	The 2020 UV emitter roadmap. Journal Physics D: Applied Physics, 2020, 53, 503001.	2.8	289
70	GaN Vertical pâ€“iâ€“n Diodes in Avalanche Regime: Time-Dependent Behavior and Degradation. IEEE Electron Device Letters, 2020, 41, 1300-1303.	3.9	3
71	Excitation Intensity and Temperature-Dependent Performance of InGaN/GaN Multiple Quantum Wells Photodetectors. Electronics (Switzerland), 2020, 9, 1840.	3.1	13
72	Highly stable threshold voltage in GaN nanowire FETs: The advantages of <i>p</i>-GaN channel/Al2O3 gate insulator. Applied Physics Letters, 2020, 117, .	3.3	15

#	Article	IF	Citations
73	GaN-based high-periodicity multiple quantum well solar cells: Degradation under optical and electrical stress. Microelectronics Reliability, 2020, 114, 113802.	1.7	5
74	Charge Trapping and Stability of E-Mode p-gate GaN HEMTs Under Soft- and Hard- Switching Conditions. , 2020, , .		3
75	Geometric Modeling of Thermal Resistance in GaN HEMTs on Silicon. IEEE Transactions on Electron Devices, 2020, 67, 5408-5414.	3.0	4
76	Trapping and Detrapping Mechanisms in <i>Î²</i>-Gaâ‚‚Oâ‚ƒ Vertical FinFETs Investigated by Electro-Optical Measurements. IEEE Transactions on Electron Devices, 2020, 67, 3954-3959.	3.0	24
77	Degradation mechanisms in high power InGaN semiconductor lasers investigated by electrical, optical, spectral and C-DLTS measurements. Microelectronics Reliability, 2020, 114, 113786.	1.7	0
78	Use of Bilayer Gate Insulator in GaN-on-Si Vertical Trench MOSFETs: Impact on Performance and Reliability. Materials, 2020, 13, 4740.	2.9	12
79	Exploration of gate trench module for vertical GaN devices. Microelectronics Reliability, 2020, 114, 113828.	1.7	6
80	Non thermally-activated transients and buffer traps in GaN transistors with p-type gate: A new method for extracting the activation energy. Microelectronics Reliability, 2020, 114, 113842.	1.7	3
81	A novel on-wafer approach to test the stability of GaN-based devices in hard switching conditions: Study of hot-electron effects. Microelectronics Reliability, 2020, 114, 113830.	1.7	10
82	Degradation mechanism of 0.15ÂÎ¼m AlGaN/GaN HEMTs: effects of hot electrons. Microelectronics Reliability, 2020, 114, 113905.	1.7	5
83	OFF-state trapping phenomena in GaN HEMTs: Interplay between gate trapping, acceptor ionization and positive charge redistribution. Microelectronics Reliability, 2020, 114, 113841.	1.7	6
84	Reliability of H-terminated diamond MESFETs in high power dissipation operating condition. Microelectronics Reliability, 2020, 114, 113898.	1.7	3
85	Degradation of InGaN-based LEDs: Demonstration of a recombination-dependent defect-generation process. Journal of Applied Physics, 2020, 127, .	2.5	20
86	Thermal droop in III-nitride based light-emitting diodes: Physical origin and perspectives. Journal of Applied Physics, 2020, 127, .	2.5	54
87	Storage and release of buffer charge in GaN-on-Si HEMTs investigated by transient measurements. Applied Physics Express, 2020, 13, 074003.	2.4	8
88	Impact of Residual Carbon on Avalanche Voltage and Stability of Polarization-Induced Vertical GaN p-n Junction. IEEE Transactions on Electron Devices, 2020, 67, 3978-3982.	3.0	4
89	Modeling of gate capacitance of GaN-based trench-gate vertical metal-oxide-semiconductor devices. Applied Physics Express, 2020, 13, 024006.	2.4	7
90	Demonstration of Bilayer Gate Insulator for Improved Reliability in GaN-on-Si Vertical Transistors. , 2020, , .		1

#	Article	IF	Citations
91	Modeling of the Vertical Leakage Current in AlN/Si Heterojunctions for GaN Power Applications. IEEE Transactions on Electron Devices, 2020, 67, 595-599.	3.0	10
92	Vertical Leakage in GaN-on-Si Stacks Investigated by a Buffer Decomposition Experiment. Micromachines, 2020, 11, 101.	2.9	3
93	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
94	Carrier capture kinetics, deep levels, and isolation properties of <i>Î²</i> -Ga2O3 Schottky-barrier diodes damaged by nitrogen implantation. Applied Physics Letters, 2020, 117, .	3.3	20
95	Efficiency and Catastrophic Failure of High-Power Blue GaN LEDs During Extremely High Temperature and Current Stress. IEEE Transactions on Device and Materials Reliability, 2020, 20, 429-435.	2.0	3
96	Modeling the degradation mechanisms of AlGaN-based UV-C LEDs: from injection efficiency to mid-gap state generation. Photonics Research, 2020, 8, 1786.	7.0	27
97	Analysis of threshold voltage instabilities in semi-vertical GaN-on-Si FETs. Applied Physics Express, 2020, 13, 024004.	2.4	17
98	Degradation effects and origin in H-terminated diamond MESFETs. , 2020, , .		1
99	Role of defects in the mid-term degradation of UV-B LEDs investigated by optical and DLTS measurements. , 2020, , .		0
100	Degradation and recovery of high-periodicity InGaN/GaN MQWs under optical stress in short-circuit condition. , 2020, , .		0
101	Demonstration of current-dependent degradation of quantum-dot lasers grown on silicon: role of defect diffusion processes. , 2020, , .		1
102	Degradation mechanisms of 1.6 W blue semiconductor lasers: effect on subthreshold optical power and power spectral density. , 2020, , .		0
103	Dependence of degradation on InGaN quantum well position: a study based on color coded structures. , 2020, , .		0
104	Charge trapping and degradation of Ga2O3 isolation structures for power electronics. , 2020, , .		0
105	Root cause analysis of gate shorts in semi-vertical GaN MOSFET devices. , 2020, , .		0
106	GaN-based lateral and vertical devices: physical mechanisms limiting stability and reliability. , 2019, , .		3
107	Positive temperature dependence of time-dependent breakdown of GaN-on-Si E-mode HEMTs under positive gate stress. Applied Physics Letters, 2019, 115, .	3.3	25
108	Hot-Electron Effects in GaN GITs and HD-GITs: A Comprehensive Analysis. , 2019, , .		5

#	Article	IF	Citations
109	Degradation processes of 280 nm high power DUV LEDs: impact on parasitic luminescence. Japanese Journal of Applied Physics, 2019, 58, SCCC19.	1.5	19
110	Reliability comparison of AlGaN/GaN HEMTs with different carbon doping concentration. Microelectronics Reliability, 2019, 100-101, 113489.	1.7	7
111	Investigation into trapping modes and threshold instabilities of state-of-art commercial GaN HEMTs. Microelectronics Reliability, 2019, 100-101, 113464.	1.7	2
112	Breakdown Walkout in Polarization-Doped Vertical GaN Diodes. IEEE Transactions on Electron Devices, 2019, 66, 4597-4603.	3.0	9
113	Characterization of charge trapping mechanisms in GaN vertical Fin FETs under positive gate bias. Microelectronics Reliability, 2019, 100-101, 113488.	1.7	9
114	Linearity and robustness evaluation of 150-nm AlN/GaN HEMTs. Microelectronics Reliability, 2019, 100-101, 113388.	1.7	7
115	High-Current Stress of UV-B (In)AlGaN-Based LEDs: Defect-Generation and Diffusion Processes. IEEE Transactions on Electron Devices, 2019, 66, 3387-3392.	3.0	24
116	Enhanced semiclassical simulation of InGaN/GaN multi-quantum-well solar cells. , 2019, , .		0
117	Stability and degradation of isolation and surface in Ga2O3 devices. Microelectronics Reliability, 2019, 100-101, 113453.	1.7	6
118	Stability and degradation of AlGaN-based UV-B LEDs: Role of doping and semiconductor defects. Microelectronics Reliability, 2019, 100-101, 113418.	1.7	16
119	Gate Reliability of p-GaN Gate AlGaN/GaN High Electron Mobility Transistors. IEEE Electron Device Letters, 2019, 40, 379-382.	3.9	21
120	Physical Origin of the Optical Degradation of InAs Quantum Dot Lasers. IEEE Journal of Quantum Electronics, 2019, 55, 1-7.	1.9	16
121	Evidence for defect-assisted tunneling and recombination at extremely low current in InGaN/GaN-based LEDs. Applied Physics Express, 2019, 12, 052007.	2.4	17
122	Demonstration of UV-Induced Threshold Voltage Instabilities in Vertical GaN Nanowire Array-Based Transistors. IEEE Transactions on Electron Devices, 2019, 66, 2119-2124.	3.0	5
123	Hot-Electron Trapping and Hole-Induced Detrapping in GaN-Based GITs and HD-GITs. IEEE Transactions on Electron Devices, 2019, 66, 337-342.	3.0	22
124	Reliability of Ultraviolet Light-Emitting Diodes. Solid State Lighting Technology and Application Series, 2019, , 397-424.	0.3	2
125	Origin of the low-forward leakage current in InGaN-based LEDs. , 2019, , .		0
126	Degradation mechanisms of InAs quantum dot 1.3 um laser diodes epitaxially grown on silicon. , 2019, , .		0

#	Article	IF	Citations
127	Challenges for highly-reliable GaN-based LEDs. , 2019, , .		0
128	Degradation physics of GaN-based lateral and vertical devices. , 2019, , .		0
129	Evidence for avalanche generation in reverse-biased InGaN LEDs. , 2019, , .		0
130	2DEG Retraction and Potential Distribution of GaNâ€“onâ€“Si HEMTs Investigated Through a Floating Gate Terminal. IEEE Transactions on Electron Devices, 2018, 65, 1303-1307.	3.0	12
131	The 2018 GaN power electronics roadmap. Journal Physics D: Applied Physics, 2018, 51, 163001.	2.8	843
132	Chip-Level Degradation of InGaN-Based Optoelectronic Devices. Solid State Lighting Technology and Application Series, 2018, , 15-48.	0.3	0
133	Positive and negative threshold voltage instabilities in GaN-based transistors. Microelectronics Reliability, 2018, 80, 257-265.	1.7	26
134	Impact of dislocations on DLTS spectra and degradation of InGaN-based laser diodes. Microelectronics Reliability, 2018, 88-90, 864-867.	1.7	4
135	Demonstration of avalanche capability in polarization-doped vertical GaN pn diodes: study of walkout due to residual carbon concentration. , 2018, , .		10
136	Power GaN HEMT degradation: from time-dependent breakdown to hot-electron effects. , 2018, , .		6
137	Degradation of GaN-on-GaN vertical diodes submitted to high current stress. Microelectronics Reliability, 2018, 88-90, 568-571.	1.7	9
138	Failure limits and electro-optical characteristics of GaN-based LEDs under electrical overstress. Microelectronics Reliability, 2018, 88-90, 887-890.	1.7	4
139	Degradation of vertical GaN-on-GaN fin transistors: Step-stress and constant voltage experiments. Microelectronics Reliability, 2018, 88-90, 620-626.	1.7	5
140	On-wafer RF stress and trapping kinetics of Fe-doped AlGaN/GaN HEMTs. Microelectronics Reliability, 2018, 88-90, 397-401.	1.7	3
141	Current induced degradation study on state of the art DUV LEDs. Microelectronics Reliability, 2018, 88-90, 868-872.	1.7	20
142	Degradation mechanisms of heterogeneous III-V/Silicon loop-mirror laser diodes for photonic integrated circuits. Microelectronics Reliability, 2018, 88-90, 855-858.	1.7	8
143	Evidence of optically induced degradation in gallium nitride optoelectronic devices. Applied Physics Express, 2018, 11, 111002.	2.4	9
144	Reliability of Blue-Emitting Eu2+-Doped Phosphors for Laser-Lighting Applications. Materials, 2018, 11, 1552.	2.9	1

#	Article	IF	Citations
145	Degradation of vertical GaN FETs under gate and drain stress. , 2018, , .		8
146	Physical mechanisms limiting the performance and the reliability of GaN-based LEDs. , 2018, , 455-489.		9
147	Review of dynamic effects and reliability of depletion and enhancement GaN HEMTs for power switching applications. IET Power Electronics, 2018, 11, 668-674.	2.1	24
148	GaN-Based Laser Wireless Power Transfer System. Materials, 2018, 11, 153.	2.9	26
149	Observation of Hot Electron and Impact Ionization in N-Polar GaN MIS-HEMTs. IEEE Electron Device Letters, 2018, 39, 1007-1010.	3.9	23
150	Defect-generation and diffusion in (In)AlGaN-based UV-B LEDs submitted to constant current stress. , 2018, , .		3
151	Defect-related degradation of III-V/Silicon 1.55 Âµm DBR laser diodes. , 2018, , .		0
152	Degradation processes and origin in InGaN-based high-power photodetectors. , 2018, , .		0
153	GaN HEMTs with p-GaN gate: field- and time-dependent degradation. , 2017, , .		2
154	Reliability and failure analysis in power GaN-HEMTs: An overview. , 2017, , .		53
155	Degradation Mechanisms of Heterogeneous III-V/Silicon 1.55- $mu ext{m}$ DBR Laser Diodes. IEEE Journal of Quantum Electronics, 2017, 53, 1-8.	1.9	12
156	Defect generation in deep-UV AlGaN-based LEDs investigated by electrical and spectroscopic characterisation. Proceedings of SPIE, 2017, , .	0.8	3
157	Investigation of the time-dependent failure of InGaN-based LEDs submitted to reverse-bias stress. Proceedings of SPIE, 2017, , .	0.8	1
158	Failure of High Power LEDs Submitted to EOS: Dependence on Device Layout and Pulse Properties. IEEE Transactions on Device and Materials Reliability, 2017, 17, 191-196.	2.0	6
159	Defect-Related Degradation of AlGaN-Based UV-B LEDs. IEEE Transactions on Electron Devices, 2017, 64, 200-205.	3.0	62
160	Evidence of Hot-Electron Effects During Hard Switching of AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 3734-3739.	3.0	90
161	Long-term degradation of InGaN-based laser diodes: Role of defects. Microelectronics Reliability, 2017, 76-77, 584-587.	1.7	3
162	Effect of Varying Three-Dimensional Strain on the Emission Properties of Light-Emitting Diodes Based on (In,Ga)N/GaN Nanowires. Physical Review Applied, 2017, 7, .	3.8	4

#	Article	IF	Citations
163	Degradation of InGaN-based MQW solar cells under 405 nm laser excitation. Microelectronics Reliability, 2017, 76-77, 575-578.	1.7	5
164	Understanding the degradation processes of GaN based LEDs submitted to extremely high current density. Microelectronics Reliability, 2017, 76-77, 556-560.	1.7	13
165	Performance-Limiting Traps in GaN-Based HEMTs: From Native Defects to Common Impurities. Power Electronics and Power Systems, 2017, , 197-236.	0.6	9
166	Recombination mechanisms and thermal droop in AlGaN-based UV-B LEDs. Photonics Research, 2017, 5, A44.	7.0	36
167	Laser-Based Lighting: Experimental Analysis and Perspectives. Materials, 2017, 10, 1166.	2.9	44
168	Degradation of GaN-HEMTs with p-GaN Gate: Dependence on temperature and on geometry. , 2017, , .		17
169	Internal checkup illumination sources for METIS coronagraph on solar orbiter. , 2017, , .		1
170	High-Resolution Cathodoluminescence Investigation of Degradation Processes in InGaN Green Laser Diodes. Microscopy and Microanalysis, 2016, 22, 1738-1739.	0.4	1
171	A physical model for the reverse leakage current in (In,Ga)N/GaN light-emitting diodes based on nanowires. Journal of Applied Physics, 2016, 119, .	2.5	33
172	Role of defects in the thermal droop of InGaN-based light emitting diodes. Journal of Applied Physics, 2016, 119, .	2.5	55
173	Time-Dependent Failure of GaN-on-Si Power HEMTs With p-GaN Gate. IEEE Transactions on Electron Devices, 2016, 63, 2334-2339.	3.0	111
174	Experimental Demonstration of Time-Dependent Breakdown in GaN-Based Light Emitting Diodes. IEEE Electron Device Letters, 2016, 37, 611-614.	3.9	10
175	Experimental observation of TDDB-like behavior in reverse-biased green InGaN LEDs. Microelectronics Reliability, 2016, 64, 610-613.	1.7	3
176	Degradation of InGaN laser diodes caused by temperature- and current-driven diffusion processes. Microelectronics Reliability, 2016, 64, 623-626.	1.7	24
177	Degradation of InGaN-based LEDs related to charge diffusion and build-up. Microelectronics Reliability, 2016, 64, 614-616.	1.7	7
178	Field-dependent degradation mechanisms in GaN-based HEMTs. , 2016, , .		1
179	Degradation of UV-A LEDs: Physical Origin and Dependence on Stress Conditions. IEEE Transactions on Device and Materials Reliability, 2016, 16, 213-219.	2.0	23
180	Reliability of Gallium Nitride microwave transistors. , 2016, , .		5

#	Article	IF	Citations
181	Thermal droop in InGaN-based LEDs: physical origin and dependence on material properties. , 2016, , .		0
182	Nanoscale Investigation of Degradation and Wavelength Fluctuations in InGaN-Based Green Laser Diodes. IEEE Nanotechnology Magazine, 2016, 15, 274-280.	2.0	10
183	Challenges towards the simulation of GaN-based LEDs beyond the semiclassical framework. Proceedings of SPIE, 2016, , .	0.8	6
184	Aging behavior, reliability, and failure physics of GaN-based optoelectronic components. Proceedings of SPIE, 2016, , .	0.8	0
185	Degradation of InGaN based green laser kinetics and driving forces diodes. , 2015, , .		0
186	Degradation mechanisms and lifetime of stateâ€ofâ€theâ€art green laser diodes. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 974-979.	1.8	9
187	Notice of Removal: Analysis of the mechanisms limiting the reliability of retrofit LED lamps. , 2015, , .		0
188	Towards high reliability GaN LEDs: Understanding the physical origin of gradual and catastrophic failure. , 2015, , .		3
189	Ageing of InGaN-based LEDs: Effects on internal quantum efficiency and role of defects. Microelectronics Reliability, 2015, 55, 1775-1778.	1.7	33
190	Failure causes and mechanisms of retrofit LED lamps. Microelectronics Reliability, 2015, 55, 1765-1769.	1.7	17
191	Long-term degradation mechanisms of mid-power LEDs for lighting applications. Microelectronics Reliability, 2015, 55, 1754-1758.	1.7	36
192	Trapping processes related to iron and carbon doping in AlGaN/GaN power HEMTs. , 2015, , .		0
193	Defects in GaN-based LEDs: impact on internal quantum efficiency and on reliability. Proceedings of SPIE, 2015, , .	0.8	0
194	Deep level transient spectroscopy on light-emitting diodes based on (In,Ga)N/GaN nanowire ensembles. Proceedings of SPIE, 2015, , .	0.8	2
195	Recoverable degradation of blue InGaN-based light emitting diodes submitted to 3â€‰MeV proton irradiation. Applied Physics Letters, 2014, 105, 213506.	3.3	10
196	Gate frequency sweep: An effective method to evaluate the dynamic performance of AlGaN/GaN power heterojunction field effect transistors. Applied Physics Letters, 2014, 105, 073507.	3.3	3
197	Thermally-activated degradation of InGaN-based laser diodes: Effect on threshold current and forward voltage. Microelectronics Reliability, 2014, 54, 2147-2150.	1.7	15
198	ESD on GaN-based LEDs: An analysis based on dynamic electroluminescence measurements and current waveforms. Microelectronics Reliability, 2014, 54, 2138-2141.	1.7	7

#	Article	IF	Citations
199	GaN-HEMTs devices with single- and double-heterostructure for power switching applications. , 2013, , .		6
200	Degradation of AlGaN/GaN HEMT devices: Role of reverse-bias and hot electron stress. Microelectronic Engineering, 2013, 109, 257-261.	2.4	41
201	Deep-Level Characterization in GaN HEMTs-Part I: Advantages and Limitations of Drain Current Transient Measurements. IEEE Transactions on Electron Devices, 2013, 60, 3166-3175.	3.0	324
202	Variations in junction capacitance and doping activation associated with electrical stress of InGaN/GaN laser diodes. Microelectronics Reliability, 2013, 53, 1534-1537.	1.7	8
203	Analysis of the deep level responsible for the degradation of InGaN-based laser diodes by DLTS. , 2012, , .		0
204	Time- and Field-Dependent Trapping in GaN-Based Enhancement-Mode Transistors With p-Gate. IEEE Electron Device Letters, 2012, 33, 375-377.	3.9	93
205	Degradation of InGaN lasers: Role of non-radiative recombination and injection efficiency. Microelectronics Reliability, 2011, 51, 1747-1751.	1.7	5
206	Investigation of the deep level involved in InGaN laser degradation by deep level transient spectroscopy. Applied Physics Letters, 2011, 99, .	3.3	56