

Martin Kuball

List of Publications by Year in descending order

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350
papers

11,133
citations

30047

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46771

89
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352
all docs

352
docs citations

352
times ranked

7269
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluating the interfacial toughness of GaN-on-diamond with an improved analysis using nanoindentation. Scripta Materialia, 2022, 209, 114370.	2.6	4
2	Breakdown Mechanisms in $\text{Al}^2\text{-Ga}_{2\text{O}_3}$ Trench-MOS Schottky-Barrier Diodes. IEEE Transactions on Electron Devices, 2022, 69, 75-81.	1.6	9
3	Study of Drain Injected Breakdown Mechanisms in AlGaIn/GaN-on-SiC HEMTs. IEEE Transactions on Electron Devices, 2022, 69, 525-530.	1.6	2
4	A trapping tolerant drain current based temperature measurement of $\text{Al}^2\text{-Ga}_{2\text{O}_3}$ MOSFETs. Applied Physics Letters, 2022, 120, 073502.	1.5	4
5	Thermal characterization of direct wafer bonded Si-on-SiC. Applied Physics Letters, 2022, 120, 113503.	1.5	2
6	In situ Thermoreflectance Characterization of Thermal Resistance in Multilayer Electronics Packaging. ACS Applied Electronic Materials, 2022, 4, 1558-1566.	2.0	8
7	Unusual Deformation and Fracture in Gallium Telluride Multilayers. Journal of Physical Chemistry Letters, 2022, 13, 3831-3839.	2.1	9
8	Ga_{2O_3} “diamond for next generation power electronics. , 2022, , .		1
9	Gallium nitride phononic integrated circuits platform for GHz frequency acoustic wave devices. Applied Physics Letters, 2022, 120, .	1.5	8
10	Edge termination in vertical GaN diodes: Electric field distribution probed by second harmonic generation. Applied Physics Letters, 2022, 120, .	1.5	4
11	GaN-on-diamond materials and device technology: A review. , 2022, , 295-331.		4
12	Thermal characteristics of superlattice castellated FETs. , 2022, , 223-230.		0
13	A macro-scale ruck and tuck mechanism for deformation in ion-irradiated polycrystalline graphite. Carbon, 2021, 173, 215-231.	5.4	27
14	Thermal stress modelling of diamond on GaN/III-Nitride membranes. Carbon, 2021, 174, 647-661.	5.4	19
15	Impact of carbon in the buffer on power switching GaN-on-Si and RF GaN-on-SiC HEMTs. Japanese Journal of Applied Physics, 2021, 60, SB0802.	0.8	26
16	Thermal Design Rules of AlGaIn/GaN-Based Microwave Transistors on Diamond. IEEE Transactions on Electron Devices, 2021, 68, 1530-1536.	1.6	16
17	UV-induced change in channel conductivity in AlGaIn/GaN high electron mobility transistors to measure doping. Applied Physics Letters, 2021, 118, .	1.5	3
18	Impact of Polymer Residue Level on the In-Plane Thermal Conductivity of Suspended Large-Area Graphene Sheets. ACS Applied Materials & Interfaces, 2021, 13, 17910-17919.	4.0	7

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19	Noise Analysis of the Leakage Current in Time-Dependent Dielectric Breakdown in a GaN SLCFET. IEEE Transactions on Electron Devices, 2021, 68, 2220-2225.	1.6	5
20	3-D Printed Microjet Impingement Cooling for Thermal Management of Ultrahigh-Power GaN Transistors. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 748-754.	1.4	8
21	Electric field mapping of wide-bandgap semiconductor devices at a submicrometre resolution. Nature Electronics, 2021, 4, 478-485.	13.1	13
22	Scanning thermal microscopy for accurate nanoscale device thermography. Nano Today, 2021, 39, 101206.	6.2	15
23	Suppression of charge trapping in ON-state operation of AlGaIn/GaN HEMTs by Si-rich passivation. Semiconductor Science and Technology, 2021, 36, 095024.	1.0	6
24	Electrical and Thermal Performance of GaInAl/GaN Diamond Super-Junction Schottky Barrier Diodes. IEEE Transactions on Electron Devices, 2021, 68, 5055-5061.	1.6	10
25	Heat Transport across Interfaces for the Optimization of Heat Sinking in Device Applications. , 2021, , .		1
26	Record-Low Thermal Boundary Resistance between Diamond and GaN-on-SiC for Enabling Radiofrequency Device Cooling. ACS Applied Materials & Interfaces, 2021, 13, 60553-60560.	4.0	42
27	Vertical field inhomogeneity associated with threading dislocations in GaN high electron mobility transistor epitaxial stacks. Applied Physics Letters, 2021, 119, .	1.5	6
28	A systematic study of MOCVD reactor conditions and Ga memory effect on properties of thick InAl(Ga)N layers: a complete depth-resolved investigation. CrystEngComm, 2020, 22, 130-141.	1.3	2
29	Effects of interlayer interactions on the nanoindentation response of freely suspended multilayer gallium telluride. Nanotechnology, 2020, 31, 165706.	1.3	9
30	Submicrometer Resolution Hyperspectral Quantum Rod Thermal Imaging of Microelectronic Devices. ACS Applied Electronic Materials, 2020, 2, 93-102.	2.0	13
31	Self-Heating Characterization of Ga_2O_3 Thin-Channel MOSFETs by Pulsed I^2V and Raman Nanothermography. IEEE Transactions on Electron Devices, 2020, 67, 204-211.	1.6	18
32	Improvement of Electron Transport Property and on-Resistance in Normally-OFF AlInAlGaIn/GaN MOS-HEMTs Using Post-Etch Surface Treatment. IEEE Transactions on Electron Devices, 2020, 67, 3541-3547.	1.6	11
33	Crystalline Interlayers for Reducing the Effective Thermal Boundary Resistance in GaN-on-Diamond. ACS Applied Materials & Interfaces, 2020, 12, 54138-54145.	4.0	38
34	Isotopically Enhanced Thermal Conductivity in Few-Layer Hexagonal Boron Nitride: Implications for Thermal Management. ACS Applied Nano Materials, 2020, 3, 12148-12156.	2.4	12
35	Low Field Vertical Charge Transport in the Channel and Buffer Layers of GaN-on-Si High Electron Mobility Transistors. IEEE Electron Device Letters, 2020, 41, 1754-1757.	2.2	19
36	Characterization of trap states in buried nitrogen-implanted $\text{In}^2\text{-Ga}_2\text{O}_3$. Applied Physics Letters, 2020, 117, .	1.5	7

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37	Variable range hopping mechanism and modeling of isolation leakage current in GaN-based high-electron-mobility transistors. Applied Physics Letters, 2020, 116, .	1.5	13
38	Mixed-size diamond seeding for low-thermal-barrier growth of CVD diamond onto GaN and AlN. Carbon, 2020, 167, 620-626.	5.4	40
39	Diamond Seed Size and the Impact on Chemical Vapor Deposition Diamond Thin Film Properties. ECS Journal of Solid State Science and Technology, 2020, 9, 053002.	0.9	10
40	Hexagonal Boron Nitride Single Crystal Growth from Solution with a Temperature Gradient. Chemistry of Materials, 2020, 32, 5066-5072.	3.2	21
41	Correlating Thermionic Emission with Specific Surface Reconstructions in a $\sim 100\text{\AA}$ Hydrogenated Single-Crystal Diamond. ACS Applied Materials & Interfaces, 2020, 12, 26534-26542.	4.0	4
42	Thermal boundary resistance of direct van der Waals bonded GaN-on-diamond. Semiconductor Science and Technology, 2020, 35, 095021.	1.0	21
43	GaN-on-diamond technology platform: Bonding-free membrane manufacturing process. AIP Advances, 2020, 10, .	0.6	21
44	The Impact of Hot Electrons and Self-Heating During Hard-Switching in AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2020, 67, 869-874.	1.6	19
45	Time Resolved Hyperspectral Quantum Rod Thermography of Microelectronic Devices: Temperature Transients in a GaN HEMT. IEEE Electron Device Letters, 2020, 41, 812-815.	2.2	6
46	Polarity dependence in Cl ₂ -based plasma etching of GaN, AlGaIn and AlN. Applied Surface Science, 2020, 521, 146297.	3.1	7
47	Current collapse and kink effect in GaN RF HEMTs: the key role of the epitaxial buffer. , 2020, , .		2
48	High Efficiency AlN/GaN HEMTs for Q-Band Applications with an Improved Thermal Dissipation. Selected Topics in Electronics and Systems, 2020, , 51-62.	0.2	1
49	Atomic layer deposited Al _{0.5} Ga _{0.5} O ₃ solar-blind photodetectors. Journal Physics D: Applied Physics, 2019, 52, 475101.	1.3	35
50	Thermal Transport in Superlattice Castellated Field Effect Transistors. IEEE Electron Device Letters, 2019, 40, 1374-1377.	2.2	9
51	Thick, Adherent Diamond Films on AlN with Low Thermal Barrier Resistance. ACS Applied Materials & Interfaces, 2019, 11, 40826-40834.	4.0	45
52	Passivation of Layered Gallium Telluride by Double Encapsulation with Graphene. ACS Omega, 2019, 4, 18002-18010.	1.6	15
53	Modulating the thermal conductivity in hexagonal boron nitride via controlled boron isotope concentration. Communications Physics, 2019, 2, .	2.0	129
54	Reliability and lifetime estimations of GaN-on-GaN vertical pn diodes. Microelectronics Reliability, 2019, 95, 48-51.	0.9	7

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55	Evidence of relationship between strain and In-incorporation: Growth of N-polar In-rich InAlN buffer layer by OMCVD. Journal of Applied Physics, 2019, 125, .	1.1	10
56	Impact of thinning the GaN buffer and interface layer on thermal and electrical performance in GaN-on-diamond electronic devices. Applied Physics Express, 2019, 12, 024003.	1.1	7
57	Quantifying Temperature-Dependent Substrate Loss in GaN-on-Si RF Technology. IEEE Transactions on Electron Devices, 2019, 66, 1681-1687.	1.6	22
58	Lateral charge spreading and device-to-device coupling in C-doped AlGaIn/GaN-on-Si wafers. Microelectronics Reliability, 2019, 95, 81-86.	0.9	4
59	Annealing effect of surface-activated bonded diamond/Si interface. Diamond and Related Materials, 2019, 93, 187-192.	1.8	30
60	Characterization of the Interfacial Toughness in a Novel "GaN-on-Diamond" Material for High-Power RF Devices. ACS Applied Electronic Materials, 2019, 1, 354-369.	2.0	13
61	Field Plate Designs in All-GaN Cascode Heterojunction Field-Effect Transistors. IEEE Transactions on Electron Devices, 2019, 66, 1688-1693.	1.6	3
62	High Efficiency AlN/GaN HEMTs for Q-Band Applications with an Improved Thermal Dissipation. International Journal of High Speed Electronics and Systems, 2019, 28, 1940003.	0.3	3
63	Thermal analysis of semiconductor devices and materials - Why should I not trust a thermal simulation ?. , 2019, , .		6
64	Nanosecond transient thermoreflectance method for characterizing anisotropic thermal conductivity. Review of Scientific Instruments, 2019, 90, 114903.	0.6	16
65	High frequency guided mode resonances in mass-loaded, thin film gallium nitride surface acoustic wave devices. Applied Physics Letters, 2019, 115, .	1.5	10
66	Multi-channel power transistors shape up. Nature Electronics, 2019, 2, 553-554.	13.1	2
67	Raman Thermography of Peak Channel Temperature in η -Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2019, 40, 189-192.	2.2	54
68	Determination of the Self-Compensation Ratio of Carbon in AlGaIn for HEMTs. IEEE Transactions on Electron Devices, 2018, 65, 1838-1842.	1.6	28
69	Ohmic Contact-Free Mobility Measurement in Ultra-Wide Bandgap AlGaIn/AlGaIn Devices. IEEE Electron Device Letters, 2018, 39, 55-58.	2.2	3
70	The 2018 GaN power electronics roadmap. Journal Physics D: Applied Physics, 2018, 51, 163001.	1.3	843
71	On the origin of dynamic Ron in commercial GaN-on-Si HEMTs. Microelectronics Reliability, 2018, 81, 306-311.	0.9	16
72	Neutron Irradiation Impact on AlGaIn/GaN HEMT Switching Transients. IEEE Transactions on Nuclear Science, 2018, 65, 2862-2869.	1.2	13

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73	Evaluation of Pulsed $I-V$ Analysis as Validation Tool of Nonlinear RF Models of GaN-Based HFETs. IEEE Transactions on Electron Devices, 2018, 65, 5307-5313.	1.6	12
74	The Impact of Ti/Al Contacts on AlGaIn/GaN HEMT Vertical Leakage and Breakdown. IEEE Electron Device Letters, 2018, 39, 1580-1583.	2.2	7
75	Above bandgap thermoreflectance for non-invasive thermal characterization of GaN-based wafers. Applied Physics Letters, 2018, 113, .	1.5	25
76	Low Thermal Boundary Resistance Interfaces for GaN-on-Diamond Devices. ACS Applied Materials & Interfaces, 2018, 10, 24302-24309.	4.0	98
77	Non-invasive Thermal Resistance Measurement for GaN Wafer Process Control and Optimization. , 2018, , .		0
78	in AlGaIn/GaN-HEMTs: Floating Buffer Model. IEEE Transactions on Electron Devices, 2018, 65, 3746-3753.	1.6	37
79	Lateral Charge Distribution and Recovery of Dynamic R_{ON} in AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2018, 65, 4462-4468.	1.6	5
80	Buffer-Induced Current Collapse in GaN HEMTs on Highly Resistive Si Substrates. IEEE Electron Device Letters, 2018, 39, 1556-1559.	2.2	29
81	Pulsed Large Signal RF Performance of Field-Plated Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2018, 39, 1572-1575.	2.2	55
82	Leakage mechanisms in GaN-on-GaN vertical pn diodes. Applied Physics Letters, 2018, 112, .	1.5	44
83	Lateral Charge Transport in the Carbon-Doped Buffer in AlGaIn/GaN-on-Si HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 977-983.	1.6	31
84	Impact of Silicon Nitride Stoichiometry on the Effectiveness of AlGaIn/GaN HEMT Field Plates. IEEE Transactions on Electron Devices, 2017, 64, 1197-1202.	1.6	24
85	Hot-Electron Electroluminescence Under RF Operation in GaN-HEMTs: A Comparison Among Operational Classes. IEEE Transactions on Electron Devices, 2017, 64, 2155-2160.	1.6	6
86	Surface Zeta Potential and Diamond Seeding on Gallium Nitride Films. ACS Omega, 2017, 2, 7275-7280.	1.6	33
87	Control of Buffer-Induced Current Collapse in AlGaIn/GaN HEMTs Using SiN _x Deposition. IEEE Transactions on Electron Devices, 2017, 64, 4044-4049.	1.6	28
88	Simultaneous determination of the lattice thermal conductivity and grain/grain thermal resistance in polycrystalline diamond. Acta Materialia, 2017, 139, 215-225.	3.8	60
89	Barrier-Layer Optimization for Enhanced GaN-on-Diamond Device Cooling. ACS Applied Materials & Interfaces, 2017, 9, 34416-34422.	4.0	91
90	Negative dynamic Ron in AlGaIn/GaN power devices. , 2017, , .		15

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91	Thermal Profiles Within the Channel of Planar Gunn Diodes Using Micro-Particle Sensors. IEEE Electron Device Letters, 2017, 38, 1325-1327.	2.2	6
92	Thermal characterization of polycrystalline diamond thin film heat spreaders grown on GaN HEMTs. Applied Physics Letters, 2017, 111, .	1.5	90
93	Glass-Glass Transitions by Means of an Acceptor-Donor Percolating Electric-Dipole Network. Physical Review Applied, 2017, 8, .	1.5	17
94	“Leaky Dielectric” Model for the Suppression of Dynamic R_{ON} in Carbon-Doped AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 2826-2834.	1.6	170
95	Damage tolerance of nuclear graphite at elevated temperatures. Nature Communications, 2017, 8, 15942.	5.8	34
96	Impact of diamond seeding on the microstructural properties and thermal stability of GaN-on-diamond wafers for high-power electronic devices. Scripta Materialia, 2017, 128, 57-60.	2.6	43
97	Morphological and electrical comparison of Ti and Ta based ohmic contacts for AlGaIn/GaN-on-SiC HFETs. Microelectronics Reliability, 2017, 68, 2-4.	0.9	10
98	Transient thermoreflectance wafer mapping for process control and development: GaN-on-Diamond. , 2017, , .		1
99	Simultaneous measurement of optical and RF behavior under CW and pulsed Fully Active Harmonic Load-Pull. , 2016, , .		1
100	The effects of grain size and grain boundary characteristics on the thermal conductivity of nanocrystalline diamond. Journal of Applied Physics, 2016, 119, .	1.1	28
101	Mechanism of hot electron electroluminescence in GaN-based transistors. Journal Physics D: Applied Physics, 2016, 49, 435101.	1.3	20
102	Temperature-Dependent Thermal Resistance of GaN-on-Diamond HEMT Wafers. IEEE Electron Device Letters, 2016, 37, 621-624.	2.2	56
103	Subthreshold Mobility in AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2016, 63, 1861-1865.	1.6	5
104	Effect of grain size of polycrystalline diamond on its heat spreading properties. Applied Physics Express, 2016, 9, 061302.	1.1	41
105	Thermal management of GaN-on-diamond high electron mobility transistors: Effect of the nanostructure in the diamond near nucleation region. , 2016, , .		10
106	Transient Thermoreflectance for Gate Temperature Assessment in Pulse Operated GaN-Based HEMTs. IEEE Electron Device Letters, 2016, 37, 1197-1200.	2.2	29
107	A Review of Raman Thermography for Electronic and Opto-Electronic Device Measurement With Submicron Spatial and Nanosecond Temporal Resolution. IEEE Transactions on Device and Materials Reliability, 2016, 16, 667-684.	1.5	85
108	(Invited) Intrinsic Reliability Assessment of 650V Rated AlGaIn/GaN Based Power Devices: An Industry Perspective. ECS Transactions, 2016, 72, 65-76.	0.3	25

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109	Control of the in-plane thermal conductivity of ultra-thin nanocrystalline diamond films through the grain and grain boundary properties. <i>Acta Materialia</i> , 2016, 103, 141-152.	3.8	97
110	Study of hot electrons in AlGaIn/GaN HEMTs under RF Class B and Class J operation using electroluminescence. <i>Microelectronics Reliability</i> , 2015, 55, 2493-2498.	0.9	7
111	Charge movement in a GaN-based hetero-structure field effect transistor structure with carbon doped buffer under applied substrate bias. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	29
112	GaN-on-diamond electronic device reliability: Mechanical and thermo-mechanical integrity. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	24
113	Solid immersion lenses for enhancing the optical resolution of thermal and electroluminescence mapping of GaN-on-SiC transistors. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	5
114	Electron microscopy of gallium nitride growth on polycrystalline diamond. <i>Semiconductor Science and Technology</i> , 2015, 30, 114007.	1.0	10
115	Measuring the thermal conductivity of the GaN buffer layer in AlGaIn/GaN HEMTs. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 1742-1745.	0.8	12
116	Progressive failure site generation in AlGaIn/GaN high electron mobility transistors under OFF-state stress: Weibull statistics and temperature dependence. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	13
117	Electric Field Reduction in C-Doped AlGaIn/GaN on Si High Electron Mobility Transistors. <i>IEEE Electron Device Letters</i> , 2015, 36, 826-828.	2.2	61
118	Electroluminescence of hot electrons in AlGaIn/GaN high-electron-mobility transistors under radio frequency operation. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	17
119	Reducing GaN-on-diamond interfacial thermal resistance for high power transistor applications. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	126
120	Thermal conductivity of ultrathin nano-crystalline diamond films determined by Raman thermography assisted by silicon nanowires. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	40
121	Interface State Artefact in Long Gate-Length AlGaIn/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 2464-2469.	1.6	21
122	Low thermal resistance of a GaN-on-SiC transistor structure with improved structural properties at the interface. <i>Journal of Crystal Growth</i> , 2015, 428, 54-58.	0.7	29
123	Operating channel temperature in GaN HEMTs: DC versus RF accelerated life testing. <i>Microelectronics Reliability</i> , 2015, 55, 2505-2510.	0.9	47
124	GaN transistor reliability and instabilities. , 2014, , .		8
125	Optimizing GaN-on-Diamond Transistor Geometry for Maximum Output Power. , 2014, , .		5
126	Buffer transport mechanisms in intentionally carbon doped GaN heterojunction field effect transistors. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	87

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127	Thermal conductivity of bulk GaN—Effects of oxygen, magnesium doping, and strain field compensation. Applied Physics Letters, 2014, 105, .	1.5	39
128	Probing temperature gradients within the GaN buffer layer of AlGaIn/GaN high electron mobility transistors with Raman thermography. Journal of Applied Physics, 2014, 115, .	1.1	10
129	Implications of gate-edge electric field in AlGaIn/GaN high electron mobility transistors during OFF-state degradation. Microelectronics Reliability, 2014, 54, 2650-2655.	0.9	11
130	Liquid crystal electrography: Electric field mapping and detection of peak electric field strength in AlGaIn/GaN high electron mobility transistors. Microelectronics Reliability, 2014, 54, 921-925.	0.9	3
131	Low thermal resistance GaN-on-diamond transistors characterized by three-dimensional Raman thermography mapping. Applied Physics Letters, 2014, 104, 083513.	1.5	133
132	Terahertz oscillations in an In _{0.53} Ga _{0.47} As submicron planar Gunn diode. Journal of Applied Physics, 2014, 115, .	1.1	56
133	On wafer thermal characterization of miniature gallium arsenide microcoolers with thermal loading from DC probes. Microwave and Optical Technology Letters, 2014, 56, 2699-2700.	0.9	1
134	Contactless Thermal Boundary Resistance Measurement of GaN-on-Diamond Wafers. IEEE Electron Device Letters, 2014, 35, 1007-1009.	2.2	43
135	Diamond micro-Raman thermometers for accurate gate temperature measurements. Applied Physics Letters, 2014, 104, .	1.5	27
136	Hot-Electron-Related Degradation in InAlN/GaN High-Electron-Mobility Transistors. IEEE Transactions on Electron Devices, 2014, 61, 2793-2801.	1.6	37
137	Intentionally Carbon-Doped AlGaIn/GaN HEMTs: Necessity for Vertical Leakage Paths. IEEE Electron Device Letters, 2014, 35, 327-329.	2.2	108
138	Thermal properties of AlGaIn/GaN high electron mobility transistors on 4H and 6H SiC substrates. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2844-2847.	0.8	5
139	Micro-cooler enhancements by barrier interface analysis. AIP Advances, 2014, 4, 027105.	0.6	1
140	Time evolution of off-state degradation of AlGaIn/GaN high electron mobility transistors. Applied Physics Letters, 2014, 104, .	1.5	20
141	$\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ Planar Gunn Diodes Operating at a Fundamental Frequency of 164 GHz. IEEE Electron Device Letters, 2013, 34, 39-41.	2.2	41
142	Impact of Intrinsic Stress in Diamond Capping Layers on the Electrical Behavior of AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2013, 60, 3149-3156.	1.6	37
143	AlGaIn/GaN field effect transistors for power electronics—Effect of finite GaN layer thickness on thermal characteristics. Applied Physics Letters, 2013, 103, .	1.5	18
144	Localization of off-stress-induced damage in AlGaIn/GaN high electron mobility transistors by means of low frequency 1/f noise measurements. Applied Physics Letters, 2013, 103, .	1.5	37

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145	Achieving the Best Thermal Performance for GaN-on-Diamond. , 2013, , .		34
146	Electrical and Thermal Performance of AlGaIn/GaN HEMTs on Diamond Substrate for RF Applications. , 2013, , .		42
147	Improved GaN-on-SiC Transistor Thermal Resistance by Systematic Nucleation Layer Growth Optimization. , 2013, , .		3
148	Analysis of strained surface layers of ZnO single crystals after irradiation with intense femtosecond laser pulses. Applied Physics Letters, 2013, 102, .	1.5	2
149	Junction temperature measurements and reliability of GaN FETs. , 2013, , .		0
150	Reliability of AlGaIn/GaN high electron mobility transistors on low dislocation density bulk GaN substrate: Implications of surface step edges. Applied Physics Letters, 2013, 103, 193507.	1.5	21
151	Iron-induced deep-level acceptor center in GaN/AlGaIn high electron mobility transistors: Energy level and cross section. Applied Physics Letters, 2013, 102, .	1.5	111
152	Improvements in thermionic cooling through engineering of the heterostructure interface using Monte Carlo simulations. Journal of Applied Physics, 2013, 114, .	1.1	3
153	GaN Power Transistors with Integrated Thermal Management. ECS Transactions, 2013, 58, 279-286.	0.3	7
154	Influence of microstructural defects on the thermal conductivity of GaN: A molecular dynamics study. Physica Status Solidi (B): Basic Research, 2013, 250, 1541-1545.	0.7	13
155	Impact ionisation electroluminescence in planar GaAs-based heterostructure Gunn diodes: Spatial distribution and impact of doping non-uniformities. Journal of Applied Physics, 2013, 113, 124505.	1.1	12
156	Reliability Assessment of a New Power Electronics Packaging Material: Silver Diamond Composite. Journal of Microelectronics and Electronic Packaging, 2013, 10, 54-58.	0.8	1
157	On the link between electroluminescence, gate current leakage, and surface defects in AlGaIn/GaN high electron mobility transistors upon off-state stress. Applied Physics Letters, 2012, 101, .	1.5	54
158	Non-Arrhenius Degradation of AlGaIn/GaN HEMTs Grown on Bulk GaN Substrates. IEEE Electron Device Letters, 2012, 33, 1126-1128.	2.2	13
159	Reduction of Impact Ionization in GaAs-Based Planar Gunn Diodes by Anode Contact Design. IEEE Transactions on Electron Devices, 2012, 59, 654-660.	1.6	14
160	Early stage degradation of InAlN/GaN HEMTs during electrical stress. , 2012, , .		1
161	Origin of kink effect in AlGaIn/GaN high electron mobility transistors: Yellow luminescence and Fe doping. Applied Physics Letters, 2012, 101, .	1.5	15
162	Growth mechanisms and defect structures of Bi ₂ As ₂ epilayers grown on 4H-SiC substrates. Journal of Crystal Growth, 2012, 352, 3-8.	0.7	6

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163	Effects of gate shaping and consequent process changes on AlGaIn/GaN HEMT reliability. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 2646-2652.	0.8	9
164	Buffer Design to Minimize Current Collapse in GaN/AlGaIn HFETs. IEEE Transactions on Electron Devices, 2012, 59, 3327-3333.	1.6	271
165	Dynamic Transconductance Dispersion Characterization of Channel Hot-Carrier Stressed 0.25- μm AlGaIn/GaN HEMTs. IEEE Electron Device Letters, 2012, 33, 1550-1552.	2.2	18
166	Thermal Properties of AlGaIn/GaN HFETs on Bulk GaN Substrates. IEEE Electron Device Letters, 2012, 33, 366-368.	2.2	48
167	Improved thermal management for GaN power electronics: Silver diamond composite packages. Microelectronics Reliability, 2012, 52, 3022-3025.	0.9	18
168	Optical investigation of degradation mechanisms in AlGaIn/GaN high electron mobility transistors: Generation of non-radiative recombination centers. Applied Physics Letters, 2012, 100, .	1.5	31
169	On the discrimination between bulk and surface traps in AlGaIn/GaN HEMTs from trapping characteristics. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 386-389.	0.8	9
170	The role of surface barrier oxidation on AlGaIn/GaN HEMTs reliability. Microelectronics Reliability, 2012, 52, 29-32.	0.9	19
171	Evidence for impact ionisation in AlGaIn/GaN HEMTs with InGaIn back-barrier. Electronics Letters, 2011, 47, 405.	0.5	32
172	Influence of threading dislocation density on early degradation in AlGaIn/GaN high electron mobility transistors. Applied Physics Letters, 2011, 99, 223501.	1.5	77
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