Martin Kuball

List of Publications by Year
in descending order

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350 papers	11,133 citations	30047 54 h-index	46771 89 g-index
352 all docs	352 docs citations	352 times ranked	7269 citing authors

#	Article	IF	Citations
1	The 2018 GaN power electronics roadmap. Journal Physics D: Applied Physics, 2018, 51, 163001.	1.3	843
2	Raman spectroscopy of GaN, AlGaN and AlN for process and growth monitoring/control. Surface and Interface Analysis, 2001, 31, 987-999.	0.8	327
3	Measurement of temperature in active high-power AlGaN/GaN HFETs using Raman spectroscopy. IEEE Electron Device Letters, 2002, 23, 7-9.	2.2	295
4	Buffer Design to Minimize Current Collapse in GaN/AlGaN HFETs. IEEE Transactions on Electron Devices, 2012, 59, 3327-3333.	1.6	271
5	Thermal Boundary Resistance Between GaN and Substrate in AlGaN/GaN Electronic Devices. IEEE Transactions on Electron Devices, 2007, 54, 3152-3158.	1.6	231
6	Integrated micro-Raman/infrared thermography probe for monitoring of self-heating in AlGaN/GaN transistor structures. IEEE Transactions on Electron Devices, 2006, 53, 2438-2447.	1.6	212
7	A study of the phase diagram of (K,Na,Li)NbO3 determined by dielectric and piezoelectric measurements, and Raman spectroscopy. Journal of Applied Physics, 2007, 102, .	1.1	175
8	â€œLeaky Dielectricâ€•Model for the Suppression of Dynamic $R_{mathrm{ON}}$ in Carbon-Doped AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 2826-2834.	1.6	170
9	Measurement of temperature distribution in multifinger AlGaN/GaN heterostructure field-effect transistors using micro-Raman spectroscopy. Applied Physics Letters, 2003, 82, 124-126.	1.5	163
10	Benchmarking of Thermal Boundary Resistance in AlGaN/GaN HEMTs on SiC Substrates: Implications of the Nucleation Layer Microstructure. IEEE Electron Device Letters, 2010, 31, 1395-1397.	2.2	150
11	Low thermal resistance GaN-on-diamond transistors characterized by three-dimensional Raman thermography mapping. Applied Physics Letters, 2014, 104, 083513.	1.5	133
12	Modulating the thermal conductivity in hexagonal boron nitride via controlled boron isotope concentration. Communications Physics, 2019, 2, .	2.0	129
13	Raman scattering studies on single-crystalline bulk AlN under high pressures. Applied Physics Letters, 2001, 78, 724-726.	1.5	127
14	Reducing GaN-on-diamond interfacial thermal resistance for high power transistor applications. Applied Physics Letters, 2015, 106, .	1.5	126
15	Self-heating effects at high pump currents in deep ultraviolet light-emitting diodes at 324 nm. Applied Physics Letters, 2002, 81, 3491-3493.	1.5	124
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.	2.2	120
17	Time-Resolved Temperature Measurement of AlGaN/GaN Electronic Devices Using Micro-Raman Spectroscopy. IEEE Electron Device Letters, 2007, 28, 86-89.	2.2	114
18	Recombination dynamics in InGaN quantum wells. Applied Physics Letters, 1996, 69, 4194-4196.	1.5	112

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19	Iron-induced deep-level acceptor center in GaN/AlGaN high electron mobility transistors: Energy level and cross section. Applied Physics Letters, 2013, 102, .	1.5	111
20	Channel Temperature Determination in High-Power AlGaN/GaN HFETs Using Electrical Methods and Raman Spectroscopy. IEEE Transactions on Electron Devices, 2008, 55, 478-482.	1.6	109
21	Intentionally Carbon-Doped AlGaN/GaN HEMTs: Necessity for Vertical Leakage Paths. IEEE Electron Device Letters, 2014, 35, 327-329.	2.2	108
22	Low Thermal Boundary Resistance Interfaces for GaN-on-Diamond Devices. ACS Applied Materials & Interfaces, 2018, 10, 24302-24309.	4.0	98
23	Raman spectroscopy of (K,Na)NbO3 and (K,Na)1âˆ'xLixNbO3. Applied Physics Letters, 2008, 93, .	1.5	97
24	Control of the in-plane thermal conductivity of ultra-thin nanocrystalline diamond films through the grain and grain boundary properties. Acta Materialia, 2016, 103, 141-152.	3.8	97
25	Barrier-Layer Optimization for Enhanced GaN-on-Diamond Device Cooling. ACS Applied Materials & Interfaces, 2017, 9, 34416-34422.	4.0	91
26	Thermal characterization of polycrystalline diamond thin film heat spreaders grown on GaN HEMTs. Applied Physics Letters, 2017, 111, .	1.5	90
27	Piezoelectric strain in AlGaNâ•GaN heterostructure field-effect transistors under bias. Applied Physics Letters, 2006, 88, 103502.	1.5	88
28	Optical pump-and-probe measurement of the thermal conductivity of nitride thin films. Journal of Applied Physics, 2002, 92, 3820-3824.	1.1	87
29	Buffer transport mechanisms in intentionally carbon doped GaN heterojunction field effect transistors. Applied Physics Letters, 2014, 104, .	1.5	87
30	Phonon lifetimes in bulk AlN and their temperature dependence. Applied Physics Letters, 2000, 77, 1958-1960.	1.5	86
31	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
32	Micro-Raman Temperature Measurements for Electric Field Assessment in Active AlGaNâ€“GaN HFETs. IEEE Electron Device Letters, 2004, 25, 456-458.	2.2	79
33	Thermal stability of GaN investigated by Raman scattering. Applied Physics Letters, 1998, 73, 960-962.	1.5	78
34	Influence of threading dislocation density on early degradation in AlGaN/GaN high electron mobility transistors. Applied Physics Letters, 2011, 99, 223501.	1.5	77
35	Phonon lifetimes and phonon decay in InN. Applied Physics Letters, 2005, 86, 223501.	1.5	75
36	Bulk AlN crystal growth: self-seeding and seeding on 6H-SiC substrates. Journal of Crystal Growth, 2002, 246, 187-193.	0.7	73

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37	Influence of the interface composition of InAs/AlSb superlattices on their optical and structural properties. Journal of Applied Physics, 1995, 77, 811-820.	1.1	72
38	Timeâ€resolved pumpâ€probe experiments with subwavelength lateral resolution. Applied Physics Letters, 1996, 69, 2465-2467.	1.5	69
39	Nitrogen-rich indium nitride. Journal of Applied Physics, 2004, 95, 6124-6128.	1.1	68
40	Deformation potentials of the E2(high) phonon mode of AlN. Applied Physics Letters, 2002, 81, 1426-1428.	1.5	67
41	Ferroelectric domains and piezoelectricity in monocrystalline Pb(Zr,Ti)O3 nanowires. Applied Physics Letters, 2007, 90, 133107.	1.5	67
42	AlGaN/GaN HEMT device reliability and degradation evolution: Importance of diffusion processes. Microelectronics Reliability, 2011, 51, 195-200.	0.9	67
43	Improved Thermal Performance of AlGaN/GaN HEMTs by an Optimized Flip-Chip Design. IEEE Transactions on Electron Devices, 2006, 53, 2696-2702.	1.6	64
44	Temperature Dependence of the Phonons of Bulk AlN. Japanese Journal of Applied Physics, 2000, 39, L710-L712.	0.8	63
45	Gain characteristics of InGaN/GaN quantum well diode lasers. Applied Physics Letters, 1998, 72, 1418-1420.	1.5	62
46	GaN nanoindentation: A micro-Raman spectroscopy study of local strain fields. Journal of Applied Physics, 2004, 96, 2853-2856.	1.1	62
47	Lattice dynamics of wurtzite and rocksalt AlN under high pressure: Effect of compression on the crystal anisotropy of wurtzite-type semiconductors. Physical Review B, 2008, 77, .	1.1	61
48	Electric Field Reduction in C-Doped AlGaN/GaN on Si High Electron Mobility Transistors. IEEE Electron Device Letters, 2015, 36, 826-828.	2.2	61
49	Gain spectroscopy on InGaN/GaN quantum well diodes. Applied Physics Letters, 1997, 70, 2580-2582.	1.5	60
50	Simultaneous determination of the lattice thermal conductivity and grain/grain thermal resistance in polycrystalline diamond. Acta Materialia, 2017, 139, 215-225.	3.8	60
51	Reducing Thermal Resistance of AlGaN/GaN Electronic Devices Using Novel Nucleation Layers. IEEE Electron Device Letters, 2009, 30, 103-106.	2.2	59
52	Near-field optical study of InGaN/GaN epitaxial layers and quantum wells. Applied Physics Letters, 1998, 72, 2645-2647.	1.5	58
53	Simultaneous measurement of temperature and thermal stress in AlGaN/GaN high electron mobility transistors using Raman scattering spectroscopy. Journal of Applied Physics, 2009, 106, .	1.1	58
54	Microâ€Raman scattering spectroscopy study of Liâ€doped and undoped ZnO needle crystals. Journal of Raman Spectroscopy, 2009, 40, 556-561.	1.2	57

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55	Terahertz oscillations in an In0.53Ga0.47As submicron planar Gunn diode. Journal of Applied Physics, 2014, 115, .	1.1	56
56	Temperature-Dependent Thermal Resistance of GaN-on-Diamond HEMT Wafers. IEEE Electron Device Letters, 2016, 37, 621-624.	2.2	56
57	Pulsed Large Signal RF Performance of Field-Plated Ga₂O₃ MOSFETs. IEEE Electron Device Letters, 2018, 39, 1572-1575.	2.2	55
58	On the link between electroluminescence, gate current leakage, and surface defects in AlGaN/GaN high electron mobility transistors upon off-state stress. Applied Physics Letters, 2012, 101, .	1.5	54
59	Raman Thermography of Peak Channel Temperature in <inline-formula> <tex-math notation="LaTeX">eta </tex-math> </inline-formula>-Ga²O³ MOSFETs. IEEE Electron Device Letters, 2019, 40, 189-192.	2.2	54
60	Raman scattering studies on single-crystalline bulk AlN: temperature and pressure dependence of the AlN phonon modes. Journal of Crystal Growth, 2001, 231, 391-396.	0.7	51
61	Raman characterization and stress analysis of AlN grown on SiC by sublimation. Journal of Applied Physics, 2002, 92, 5183-5188.	1.1	51
62	Thermal Properties of AlGaN/GaN HFETs on Bulk GaN Substrates. IEEE Electron Device Letters, 2012, 33, 366-368.	2.2	48
63	Operating channel temperature in GaN HEMTs: DC versus RF accelerated life testing. Microelectronics Reliability, 2015, 55, 2505-2510.	0.9	47
64	Angular dispersion of polar phonons in a hexagonal GaNâ€“AlN superlattice. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 82, 27-29.	1.7	46
65	Thick, Adherent Diamond Films on AlN with Low Thermal Barrier Resistance. ACS Applied Materials & Interfaces, 2019, 11, 40826-40834.	4.0	45
66	Crystal growth and properties of scandium nitride. Journal of Materials Science: Materials in Electronics, 2004, 15, 555-559.	1.1	44
67	Leakage mechanisms in GaN-on-GaN vertical pn diodes. Applied Physics Letters, 2018, 112, .	1.5	44
68	Importance of impurity diffusion for early stage degradation in AlGaN/GaN high electron mobility transistors upon electrical stress. Applied Physics Letters, 2010, 97, 023503.	1.5	43
69	Contactless Thermal Boundary Resistance Measurement of GaN-on-Diamond Wafers. IEEE Electron Device Letters, 2014, 35, 1007-1009.	2.2	43
70	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
71	Electrical and Thermal Performance of AlGaN/GaN HEMTs on Diamond Substrate for RF Applications. , 2013, , .		42
72	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

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73	InN Thin Film Lattice Dynamics by Grazing Incidence Inelastic X-Ray Scattering. Physical Review Letters, 2011, 106, 205501.	2.9	41
74	$hbox{In}_{0.53}hbox{Ga}_{0.47}hbox{As}$ Planar Gunn Diodes Operating at a Fundamental Frequency of 164 GHz. IEEE Electron Device Letters, 2013, 34, 39-41.	2.2	41
75	Effect of grain size of polycrystalline diamond on its heat spreading properties. Applied Physics Express, 2016, 9, 061302.	1.1	41
76	High-temperature processing of GaN: The influence of the annealing ambient on strain in GaN. Applied Physics Letters, 1999, 75, 2097-2099.	1.5	40
77	Raman mapping of epitaxial lateral overgrown GaN: Stress at the coalescence boundary. Journal of Applied Physics, 2001, 90, 3656-3658.	1.1	40
78	Thermal conductivity of ultrathin nano-crystalline diamond films determined by Raman thermography assisted by silicon nanowires. Applied Physics Letters, 2015, 106, .	1.5	40
79	Mixed-size diamond seeding for low-thermal-barrier growth of CVD diamond onto GaN and AlN. Carbon, 2020, 167, 620-626.	5.4	40
80	Thermal conductivity of bulk GaNâ€"Effects of oxygen, magnesium doping, and strain field compensation. Applied Physics Letters, 2014, 105, .	1.5	39
81	A Raman spectroscopy study of InN. Journal of Crystal Growth, 2004, 269, 59-65.	0.7	38
82	Nanosecond Timescale Thermal Dynamics of AlGaN/GaN Electronic Devices. IEEE Electron Device Letters, 2008, 29, 416-418.	2.2	38
83	Crystalline Interlayers for Reducing the Effective Thermal Boundary Resistance in GaN-on-Diamond. ACS Applied Materials & Interfaces, 2020, 12, 54138-54145.	4.0	38
84	Impact of Intrinsic Stress in Diamond Capping Layers on the Electrical Behavior of AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2013, 60, 3149-3156.	1.6	37
85	Localization of off-stress-induced damage in AlGaN/GaN high electron mobility transistors by means of low frequency 1/f noise measurements. Applied Physics Letters, 2013, 103, .	1.5	37
86	Hot-Electron-Related Degradation in InAlN/GaN High-Electron-Mobility Transistors. IEEE Transactions on Electron Devices, 2014, 61, 2793-2801.	1.6	37
87	â€œKinkâ€•in AlGaN/GaN-HEMTs: Floating Buffer Model. IEEE Transactions on Electron Devices, 2018, 65, 3746-3753.	1.6	37
88	Atomic layer deposited Î±-Ga₂O₃ solar-blind photodetectors. Journal Physics D: Applied Physics, 2019, 52, 475101.	1.3	35
89	Thermal mapping of defects in AlGaNâ•GaN heterostructure field-effect transistors using micro-Raman spectroscopy. Applied Physics Letters, 2005, 87, 103508.	1.5	34
90	Achieving the Best Thermal Performance for GaN-on-Diamond. , 2013, , .		34

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91	Damage tolerance of nuclear graphite at elevated temperatures. Nature Communications, 2017, 8, 15942.	5.8	34
92	High-pressure high-temperature annealing of ion-implanted GaN films monitored by visible and ultraviolet micro-Raman scattering. Journal of Applied Physics, 2000, 87, 2736-2741.	1.1	33
93	Surface Zeta Potential and Diamond Seeding on Gallium Nitride Films. ACS Omega, 2017, 2, 7275-7280.	1.6	33
94	Evidence for impact ionisation in AlGaN/GaN HEMTs with InGaN back-barrier. Electronics Letters, 2011, 47, 405.	0.5	32
95	Influence of buffer layer and 6H-SiC substrate polarity on the nucleation of AlN grown by the sublimation sandwich technique. Journal of Crystal Growth, 2001, 233, 177-186.	0.7	31
96	Substrate-directed formation of calcium carbonate fibres. Journal of Materials Chemistry, 2009, 19, 387-398.	6.7	31
97	Optical investigation of degradation mechanisms in AlGaN/GaN high electron mobility transistors: Generation of non-radiative recombination centers. Applied Physics Letters, 2012, 100, .	1.5	31
98	Lateral Charge Transport in the Carbon-Doped Buffer in AlGaN/GaN-on-Si HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 977-983.	1.6	31
99	Insights into electroluminescent emission from AlGaNâˆ•GaN field effect transistors using micro-Raman thermal analysis. Applied Physics Letters, 2006, 88, 023507.	1.5	30
100	Annealing effect of surface-activated bonded diamond/Si interface. Diamond and Related Materials, 2019, 93, 187-192.	1.8	30
101	Microscopic structure of the GaAs(001)-(6Ã—6) surface derived from scanning tunneling microscopy. Physical Review B, 1995, 51, 13880-13882.	1.1	29
102	Inelastic Light Scattering by Phonons in Hexagonal GaN-AlN Nanostructures. Physica Status Solidi A, 2001, 183, 157-161.	1.7	29
103	Optical investigation of micrometer and nanometer-size individual GaN pillars fabricated by reactive ion etching. Journal of Applied Physics, 2002, 91, 6520.	1.1	29
104	Charge movement in a GaN-based hetero-structure field effect transistor structure with carbon doped buffer under applied substrate bias. Journal of Applied Physics, 2015, 118, .	1.1	29
105	Low thermal resistance of a GaN-on-SiC transistor structure with improved structural properties at the interface. Journal of Crystal Growth, 2015, 428, 54-58.	0.7	29
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	Buffer-Induced Current Collapse in GaN HEMTs on Highly Resistive Si Substrates. IEEE Electron Device Letters, 2018, 39, 1556-1559.	2.2	29
108	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

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109	Control of Buffer-Induced Current Collapse in AlGaN/GaN HEMTs Using SiN_x Deposition. IEEE Transactions on Electron Devices, 2017, 64, 4044-4049.	1.6	28
110	Determination of the Self-Compensation Ratio of Carbon in AlGaN for HEMTs. IEEE Transactions on Electron Devices, 2018, 65, 1838-1842.	1.6	28
111	Amorphous GaN Grown by Room Temperature Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, 4753-4754.	0.8	27
112	Raman scattering and photoluminescence studies on Si/SiO2 superlattices. Journal of Applied Physics, 2001, 89, 7903-7907.	1.1	27
113	Raman mapping, photoluminescence investigations, and finite element analysis of epitaxial lateral overgrown GaN on silicon substrates. Applied Physics Letters, 2002, 80, 2275-2277.	1.5	27
114	Diamond micro-Raman thermometers for accurate gate temperature measurements. Applied Physics Letters, 2014, 104, .	1.5	27
115	A macro-scale ruck and tuck mechanism for deformation in ion-irradiated polycrystalline graphite. Carbon, 2021, 173, 215-231.	5.4	27
116	Crystal growth of B12As2 on SiC substrate by CVD method. Journal of Crystal Growth, 2005, 273, 431-438.	0.7	26
117	Temperature analysis of AlGaN/GaN based devices using photoluminescence spectroscopy: Challenges and comparison to Raman thermography. Journal of Applied Physics, 2010, 107, .	1.1	26
118	Time-dependent thermal crosstalk in multifinger AlGaN/GaN HEMTs and implications on their electrical performance. Solid-State Electronics, 2011, 57, 14-18.	0.8	26
119	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
120	Vibrational and optical properties of GaN nanowires synthesized by Ni-assisted catalytic growth. Nanotechnology, 2007, 18, 445704.	1.3	25
121	(Invited) Intrinsic Reliability Assessment of 650V Rated AlGaN/GaN Based Power Devices: An Industry Perspective. ECS Transactions, 2016, 72, 65-76.	0.3	25
122	Above bandgap thermoreflectance for non-invasive thermal characterization of GaN-based wafers. Applied Physics Letters, 2018, 113, .	1.5	25
123	Nano-Fabrication of GaN Pillars Using Focused Ion Beam Etching. Physica Status Solidi A, 1999, 176, 355-358.	1.7	24
124	Resonant Raman scattering on self-assembled GaN quantum dots. Applied Physics Letters, 2001, 78, 987-989.	1.5	24
125	Evidence for phonon-plasmon interaction inInNby Raman spectroscopy. Physical Review B, 2007, 75, .	1.1	24
126	GaN-on-diamond electronic device reliability: Mechanical and thermo-mechanical integrity. Applied Physics Letters, 2015, 107, .	1.5	24

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127	Impact of Silicon Nitride Stoichiometry on the Effectiveness of AlGaN/GaN HEMT Field Plates. IEEE Transactions on Electron Devices, 2017, 64, 1197-1202.	1.6	24
128	Degradation of AlGaN during high-temperature annealing monitored by ultraviolet Raman scattering. Applied Physics Letters, 1999, 74, 549-551.	1.5	23
129	High-Resolution Raman Temperature Measurements in GaAs p-HEMT Multifinger Devices. IEEE Transactions on Electron Devices, 2007, 54, 1838-1842.	1.6	23
130	Temperature assessment of AlGaN/GaN HEMTs: A comparative study by Raman, electrical and IR thermography. , 2010, , .		23
131	High spatial resolution micro-Raman temperature measurements of nitride devices (FETs and light) Tj ETQq1 1 0.784314 rgBT /Overlo	0.8	22
132	Energy band structure and optical response function of icosahedral<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>B</mml:mtext><mml:mrow><mml:mn>12</mml:mn></mml:mrow></mml:msu A spectroscopic ellipsometry and first-principles calculational study. Physical Review B, 2010, 81, .	1.1	22
133	Quantifying Temperature-Dependent Substrate Loss in GaN-on-Si RF Technology. IEEE Transactions on Electron Devices, 2019, 66, 1681-1687.	1.6	22
134	Reliability of AlGaN/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
135	Interface State Artefact in Long Gate-Length AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2015, 62, 2464-2469.	1.6	21
136	Hexagonal Boron Nitride Single Crystal Growth from Solution with a Temperature Gradient. Chemistry of Materials, 2020, 32, 5066-5072.	3.2	21
137	Thermal boundary resistance of direct van der Waals bonded GaN-on-diamond. Semiconductor Science and Technology, 2020, 35, 095021.	1.0	21
138	GaN-on-diamond technology platform: Bonding-free membrane manufacturing process. AIP Advances, 2020, 10, .	0.6	21
139	Doping dependence of theE1andE1+Î”1critical points in highly dopedn- andp-type GaAs: Importance of surface band bending and depletion. Physical Review B, 1994, 49, 16569-16574.	1.1	20
140	Investigation of polarization-pinning mechanism in deep-line-etched vertical-cavity surface-emitting lasers. Applied Physics Letters, 2000, 76, 400-402.	1.5	20
141	Design and performance analysis of deep-etch air/nitride distributed Bragg reflector gratings for AlInGaN laser diodes. Applied Physics Letters, 2001, 79, 4076-4078.	1.5	20
142	Direct signature of strained GaN quantum dots by Raman scattering. Applied Physics Letters, 2001, 79, 686-688.	1.5	20
143	Three-dimensional thermal analysis of a flip-chip mounted AlGaN/GaN HFET using confocal micro-Raman spectroscopy. IEEE Transactions on Electron Devices, 2006, 53, 2658-2661.	1.6	20
144	Current collapse in AlGaN/GaN transistors studied using time-resolved Raman thermography. Applied Physics Letters, 2008, 93, 203510.	1.5	20

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145	Time evolution of off-state degradation of AlGaN/GaN high electron mobility transistors. Applied Physics Letters, 2014, 104, .	1.5	20
146	Mechanism of hot electron electroluminescence in GaN-based transistors. Journal Physics D: Applied Physics, 2016, 49, 435101.	1.3	20
147	Hydrogen adsorption on GaAs(110): A study of the surface optical properties. Physical Review B, 1994, 50, 8609-8615.	1.1	19
148	Photoluminescence spectroscopy on annealed molecular beam epitaxy grown GaN. Journal of Applied Physics, 2001, 89, 1070-1074.	1.1	19
149	Optical characterization of hierarchical ZnO structures grown with a simplified vapour transport method. Nanotechnology, 2007, 18, 215705.	1.3	19
150	Fabrication of GaN nanowalls and nanowires using surface charge lithography. Materials Letters, 2008, 62, 4576-4578.	1.3	19
151	The role of surface barrier oxidation on AlGaN/GaN HEMTs reliability. Microelectronics Reliability, 2012, 52, 29-32.	0.9	19
152	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
153	The Impact of Hot Electrons and Self-Heating During Hard-Switching in AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2020, 67, 869-874.	1.6	19
154	Thermal stress modelling of diamond on GaN/III-Nitride membranes. Carbon, 2021, 174, 647-661.	5.4	19
155	Influence of hydrogen adsorption on the optical properties of the GaAs(100)-c(4Ã—4) surface. Physical Review B, 1995, 51, 10923-10928.	1.1	18
156	Raman scattering in GaN pillar arrays. Journal of Applied Physics, 2002, 91, 2866-2869.	1.1	18
157	Sublimation crystal growth of yttrium nitride. Journal of Crystal Growth, 2010, 312, 2896-2903.	0.7	18
158	Dynamic Transconductance Dispersion Characterization of Channel Hot-Carrier Stressed 0.25-$muhbox{m}$ AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2012, 33, 1550-1552.	2.2	18
159	Improved thermal management for GaN power electronics: Silver diamond composite packages. Microelectronics Reliability, 2012, 52, 3022-3025.	0.9	18
160	AlGaN/GaN field effect transistors for power electronicsâ€"Effect of finite GaN layer thickness on thermal characteristics. Applied Physics Letters, 2013, 103, .	1.5	18
161	Self-Heating Characterization of eta -Ga₂O₃ Thin-Channel MOSFETs by Pulsed ${I}$ â€"${V}$ and Raman Nanothermography. IEEE Transactions on Electron Devices, 2020, 67, 204-211.	1.6	18
162	New Technique for Sublimation Growth of AlN Single Crystals. MRS Internet Journal of Nitride Semiconductor Research, 2001, 6, 1.	1.0	17

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163	Raman spectroscopy of B12As2 under high pressure. Journal of Applied Physics, 2004, 96, 910-912.	1.1	17
164	Photoluminescence and vibrational properties of nanostructured ZnSe templates. Semiconductor Science and Technology, 2007, 22, 1115-1121.	1.0	17
165	Electroluminescence of hot electrons in AlGaN/GaN high-electron-mobility transistors under radio frequency operation. Applied Physics Letters, 2015, 106, .	1.5	17
166	Glass-Glass Transitions by Means of an Acceptor-Donor Percolating Electric-Dipole Network. Physical Review Applied, 2017, 8, .	1.5	17
167	Finite element analysis of epitaxial lateral overgrown GaN: Voids at the coalescence boundary. Applied Physics Letters, 2001, 79, 4127-4129.	1.5	16
168	Phase selectivity of microwave heating evidenced by Raman spectroscopy. Journal of Applied Physics, 2006, 99, 113505.	1.1	16
169	Dynamic Operational Stress Measurement of MEMS Using Time-Resolved Raman Spectroscopy. Journal of Microelectromechanical Systems, 2008, 17, 1315-1321.	1.7	16
170	Laser lift-off transfer of AlGaN/GaN HEMTs from sapphire onto Si: A thermal perspective. Solid-State Electronics, 2009, 53, 526-529.	0.8	16
171	On the origin of dynamic Ron in commercial GaN-on-Si HEMTs. Microelectronics Reliability, 2018, 81, 306-311.	0.9	16
172	Nanosecond transient thermoreflectance method for characterizing anisotropic thermal conductivity. Review of Scientific Instruments, 2019, 90, 114903.	0.6	16
173	Thermal Design Rules of AlGaN/GaN-Based Microwave Transistors on Diamond. IEEE Transactions on Electron Devices, 2021, 68, 1530-1536.	1.6	16
174	The Durability of Various Crucible Materials for Aluminum Nitride Crystal Growth by Sublimation. MRS Internet Journal of Nitride Semiconductor Research, 2004, 9, 1.	1.0	15
175	Origin of kink effect in AlGaN/GaN high electron mobility transistors: Yellow luminescence and Fe doping. Applied Physics Letters, 2012, 101, .	1.5	15
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