

Kazuki Nomoto

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67

papers

1,828

citations

23

h-index

41

g-index

75

ext. papers

2,212

ext. citations

3.1

avg, IF

4.98

L-index

#	Paper	IF	Citations
67	Breakdown Mechanisms in EGa_2O_3 Trench-MOS Schottky-Barrier Diodes. <i>IEEE Transactions on Electron Devices</i> , 2022 , 69, 75-81	2.9	2
66	Quantitative scanning microwave microscopy of 2D electron and hole gases in AlN/GaN heterostructures. <i>Applied Physics Letters</i> , 2022 , 120, 012103	3.4	0
65	Distributed polarization-doped GaN pB diodes with near-unity ideality factor and avalanche breakdown voltage of 1.25 kV. <i>Applied Physics Letters</i> , 2022 , 120, 122111	3.4	0
64	Optically pumped deep-UV multimode lasing in AlGaIn double heterostructure grown by molecular beam homoepitaxy. <i>AIP Advances</i> , 2022 , 12, 035023	1.5	2
63	Polarization-induced 2D hole gases in pseudomorphic undoped GaN/AlN heterostructures on single-crystal AlN substrates. <i>Applied Physics Letters</i> , 2021 , 119, 162104	3.4	6
62	Next generation electronics on the ultrawide-bandgap aluminum nitride platform. <i>Semiconductor Science and Technology</i> , 2021 , 36, 044001	1.8	17
61	ON-Resistance of Ga_2O_3 Trench-MOS Schottky Barrier Diodes: Role of Sidewall Interface Trapping. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 2420-2426	2.9	5
60	First RF Power Operation of AlN/GaN/AlN HEMTs With >3 A/mm and 3 W/mm at 10 GHz. <i>IEEE Journal of the Electron Devices Society</i> , 2021 , 9, 121-124	2.3	16
59	Thermal design of multi-fin Ga_2O_3 vertical transistors. <i>Applied Physics Letters</i> , 2021 , 119, 103502	3.4	6
58	Molecular beam homoepitaxy on bulk AlN enabled by aluminum-assisted surface cleaning. <i>Applied Physics Letters</i> , 2020 , 116, 172106	3.4	17
57	Near-ideal reverse leakage current and practical maximum electric field in EGa_2O_3 Schottky barrier diodes. <i>Applied Physics Letters</i> , 2020 , 116, 192101	3.4	42
56	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3978-3982	2.9	1
55	GaN HEMTs on Si With Regrown Contacts and Cutoff/Maximum Oscillation Frequencies of 250/204 GHz. <i>IEEE Electron Device Letters</i> , 2020 , 41, 689-692	4.4	29
54	Gallium nitride tunneling field-effect transistors exploiting polarization fields. <i>Applied Physics Letters</i> , 2020 , 116, 073502	3.4	2
53	Fully transparent field-effect transistor with high drain current and on-off ratio. <i>APL Materials</i> , 2020 , 8, 011110	5.7	16
52	Degradation Mechanisms of GaN-Based Vertical Devices: A Review. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900750	1.6	3
51	Field-Plated Ga_2O_3 Trench Schottky Barrier Diodes With a $BV_2/\$R_{\text{on,sp}}\$$ of up to 0.95 GW/cm ² . <i>IEEE Electron Device Letters</i> , 2020 , 41, 107-110	4.4	97

50	Guiding Principles for Trench Schottky Barrier Diodes Based on Ultrawide Bandgap Semiconductors: A Case Study in GaN. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3938-3947	2.9	26
49	Thermionic emission or tunneling? The universal transition electric field for ideal Schottky reverse leakage current: A case study in Ga ₂ O ₃ . <i>Applied Physics Letters</i> , 2020 , 117, 222104	3.4	14
48	Bottom tunnel junction blue light-emitting field-effect transistors. <i>Applied Physics Letters</i> , 2020 , 117, 031107	3.4	2
47	Very High Parallel-Plane Surface Electric Field of 4.3 MV/cm in Ga ₂ O ₃ Schottky Barrier Diodes with PtOx Contacts 2020 ,		4
46	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3954-3959	2.9	12
45	Realization of GaN PolarMOS using selective-area regrowth by MBE and its breakdown mechanisms. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, SCCD15	1.4	12
44	Fiber Reinforced Layered Dielectric Nanocomposite. <i>Advanced Functional Materials</i> , 2019 , 29, 1900056	15.6	36
43	Blue (In,Ga)N light-emitting diodes with buried n ⁺ /p ⁺ tunnel junctions by plasma-assisted molecular beam epitaxy. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 060914	1.4	3
42	Fin-channel orientation dependence of forward conduction in kV-class Ga ₂ O ₃ trench Schottky barrier diodes. <i>Applied Physics Express</i> , 2019 , 12, 061007	2.4	29
41	Bandgap narrowing and Mott transition in Si-doped Al _{0.7} Ga _{0.3} N. <i>Applied Physics Letters</i> , 2019 , 114, 113501	3.4	6
40	1.6 kV Vertical Ga ₂ O ₃ FinFETs With Source-Connected Field Plates and Normally-off Operation 2019 ,		19
39	High Breakdown Voltage in RF AlN/GaN/AlN Quantum Well HEMTs. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1293-1296	4.4	46
38	. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 4597-4603	2.9	8
37	Field-plated Ga ₂ O ₃ Trench Schottky Barrier Diodes with a Record High Figure-of-merit of 0.78 GW/cm ² 2019 ,		2
36	Development of GaN Vertical Trench-MOSFET With MBE Regrown Channel. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2558-2564	2.9	32
35	Enhancement-Mode Ga ₂ O ₃ Vertical Transistors With Breakdown Voltage >1 kV. <i>IEEE Electron Device Letters</i> , 2018 , 39, 869-872	4.4	166
34	Activation of buried p-GaN in MOCVD-regrown vertical structures. <i>Applied Physics Letters</i> , 2018 , 113, 062105	3.4	25
33	2.44 kV Ga ₂ O ₃ vertical trench Schottky barrier diodes with very low reverse leakage current 2018 ,		23

32	1230 V AlGaN trench Schottky barrier diodes with an ultra-low leakage current of . <i>Applied Physics Letters</i> , 2018 , 113, 202101	3-4	61
31	Gate-Recessed E-mode p-Channel HFET With High On-Current Based on GaN/AlN 2D Hole Gas. <i>IEEE Electron Device Letters</i> , 2018 , 39, 1848-1851	4-4	46
30	Breakdown mechanism in 1 kA/cm ² and 960 V E-mode AlGaN vertical transistors. <i>Applied Physics Letters</i> , 2018 , 113, 122103	3-4	91
29	1.5 kV Vertical Ga ₂ O ₃ Trench-MIS Schottky Barrier Diodes 2018 ,		9
28	. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 1635-1641	2-9	58
27	Strained GaN quantum-well FETs on single crystal bulk AlN substrates. <i>Applied Physics Letters</i> , 2017 , 110, 063501	3-4	34
26	Single-crystal N-polar GaN p-n diodes by plasma-assisted molecular beam epitaxy. <i>Applied Physics Letters</i> , 2017 , 110, 253506	3-4	12
25	Electron mobility in polarization-doped Al _{0.2} GaN with a low concentration near 10 ¹⁷ cm ⁻³ . <i>Applied Physics Letters</i> , 2017 , 110, 182102	3-4	8
24	GaN vertical nanowire and fin power MISFETs 2017 ,		5
23	600 V GaN vertical V-trench MOSFET with MBE regrown channel 2017 ,		10
22	1.1-kV Vertical GaN p-n Diodes With p-GaN Regrown by Molecular Beam Epitaxy. <i>IEEE Electron Device Letters</i> , 2017 , 38, 1071-1074	4-4	50
21	Wide-bandgap Gallium Nitride p-channel MISFETs with enhanced performance at high temperature 2017 ,		2
20	First demonstration of strained AlN/GaN/AlN quantum well FETs on SiC 2016 ,		4
19	Ultralow-Leakage AlGa _{0.2} N/GaN High Electron Mobility Transistors on Si With Non-Alloyed Regrown Ohmic Contacts. <i>IEEE Electron Device Letters</i> , 2016 , 37, 16-19	4-4	26
18	1.7-kV and 0.55- $\text{m}\Omega\cdot\text{cm}^2$ GaN p-n Diodes on Bulk GaN Substrates With Avalanche Capability. <i>IEEE Electron Device Letters</i> , 2016 , 37, 161-164	4-4	125
17	Comparing buffer leakage in PolarMOSH on SiC and free-standing GaN substrates 2016 ,		1
16	Unique opportunity to harness polarization in GaN to override the conventional power electronics figure-of-merits 2015 ,		5
15	Near unity ideality factor and Shockley-Read-Hall lifetime in GaN-on-GaN p-n diodes with avalanche breakdown. <i>Applied Physics Letters</i> , 2015 , 107, 243501	3-4	117

14	High breakdown single-crystal GaN p-n diodes by molecular beam epitaxy. <i>Applied Physics Letters</i> , 2015 , 107, 232101	3.4	44
13	. <i>IEEE Electron Device Letters</i> , 2015 , 36, 375-377	4.4	126
12	2015 ,		16
11	A Proposal to Apply Effective Acceptor Level for Representing Increased Ionization Ratio of Mg Acceptors in Extrinsic Photon-Recycled GaN. <i>Materials Science Forum</i> , 2014 , 778-780, 1189-1192	0.4	1
10	Optical-Thermo-Transition Model of Reduction in On-Resistance of Small GaN p \bar{n} Diodes. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JN10	1.4	10
9	Determination of Lateral Extension of Extrinsic Photon Recycling in p-GaN by Using Transmission-Line-Model Patterns Formed with GaN p \bar{n} Junction Epitaxial Layers. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JN22	1.4	13
8	High-Breakdown-Voltage and Low-Specific-on-Resistance GaN p \bar{n} Junction Diodes on Free-Standing GaN Substrates Fabricated Through Low-Damage Field-Plate Process. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 028007	1.4	80
7	Characterization of silicon ion-implanted GaN and AlGa \bar{N} . <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012 , 272, 125-127	1.2	7
6	. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1091-1098	2.9	12
5	Over 3.0 $\$hbox{GW/cm}^{\wedge{2}}\$$ Figure-of-Merit GaN p-n Junction Diodes on Free-Standing GaN Substrates. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1674-1676	4.4	95
4	Low-Frequency Noise Characteristics in Ion-Implanted GaN-Based HEMTs. <i>IEEE Electron Device Letters</i> , 2008 , 29, 827-829	4.4	5
3	Reduction of On-Resistance in Ion-Implanted GaN/AlGa \bar{N} /GaN HEMTs with Low Gate Leakage Current. <i>IEEJ Transactions on Electronics, Information and Systems</i> , 2008 , 128, 885-889	0.1	
2	Remarkable Reduction of On-Resistance by Ion Implantation in GaN/AlGa \bar{N} /GaN HEMTs With Low Gate Leakage Current. <i>IEEE Electron Device Letters</i> , 2007 , 28, 939-941	4.4	20
1	Photoelectric Generation Coefficient of B-Gallium Oxide during Exposure to High-Energy Ionizing Radiation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2100700	1.6	