Hiroshi Amano

List of Publications by Year
in descending order

46 papers	3,452 citations	567281 15 h-index	243625 44 g-index
49 all docs	49 docs citations	49 times ranked	2501 citing authors

#	Article	IF	Citations
1	Ohmic Contact to p-Type GaN Enabled by Post-Growth Diffusion of Magnesium. IEEE Electron Device Letters, 2022, 43, 150-153.	3.9	12
2	Defect characterization of {101Â¯3} GaN by electron microscopy. Journal of Applied Physics, 2022, 131, .	2.5	5
3	Interplay of sidewall damage and light extraction efficiency of micro-LEDs. Optics Letters, 2022, 47, 2250.	3.3	15
4	Inhomogeneous Barrier Height Characteristics of n-Type AlInP for Red AlGaInP-Based Light-Emitting Diodes. ECS Journal of Solid State Science and Technology, 2022, 11, 035007.	1.8	0
5	Improved performance of deep ultraviolet AlGaN-based light-emitting diode by reducing contact resistance of Al-based reflector. Journal of Alloys and Compounds, 2022, 910, 164895.	5.5	2
6	Laser slice thinning of GaN-on-GaN high electron mobility transistors. Scientific Reports, 2022, 12, 7363.	3.3	4
7	The stability of graphene and boron nitride for III-nitride epitaxy and post-growth exfoliation. Chemical Science, 2021, 12, 7713-7719.	7.4	24
8	Generalized Frequency Dependent Small Signal Model for High Frequency Analysis of AlGaN/GaN MOS-HEMTs. IEEE Journal of the Electron Devices Society, 2021, 9, 570-581.	2.1	6
9	Development of Pulsed TEM Equipped with Nitride Semiconductor Photocathode for High-Speed Observation and Material Nanofabrication. Quantum Beam Science, 2021, 5, 5.	1.2	5
10	Experimental demonstration of GaN IMPATT diode at X-band. Applied Physics Express, 2021, 14, 046501.	2.4	10
11	Microâ€Light Emitting Diode: From Chips to Applications. Laser and Photonics Reviews, 2021, 15, 2000133.	8.7	108
12	Non-polar true-lateral GaN power diodes on foreign substrates. Applied Physics Letters, 2021, 118, .	3.3	8
13	Gallium nitride wafer slicing by a sub-nanosecond laser: effect of pulse energy and laser shot spacing. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	3
14	High-Gain Gated Lateral Power Bipolar Junction Transistor. IEEE Electron Device Letters, 2021, 42, 1370-1373.	3.9	2
15	Smart-cut-like laser slicing of GaN substrate using its own nitrogen. Scientific Reports, 2021, 11, 17949.	3.3	7
16	Etching-induced damage in heavily Mg-doped p-type GaN and its suppression by low-bias-power inductively coupled plasma-reactive ion etching. Japanese Journal of Applied Physics, 2021, 60, SBBD03.	1.5	12
17	Optical properties of neodymium ions in nanoscale regions of gallium nitride: erratum. Optical Materials Express, 2021, 11, 524.	3.0	0
18	Modified Small Signal Circuit of AlGaN/GaN MOS-HEMTs Using Rational Functions. IEEE Transactions on Electron Devices, 2021, 68, 6059-6064.	3.0	3

#	Article	IF	Citations
19	Ohmic contact on low-doping-density p-type GaN with nitrogen-annealed Mg. Applied Physics Letters, 2021, 119, .	3.3	11
20	Space charge profile study of AlGaN-based p-type distributed polarization doped claddings without impurity doping for UV-C laser diodes. Applied Physics Letters, 2020, 117, .	3.3	26
21		3.8	2
22	Damage-free plasma etching to enhance performance of AlGaInP-based micro-light emitting diode. IEEE Photonics Technology Letters, 2020, , 1-1.	2.5	4
23	Surface passivation of light emitting diodes: From nano-size to conventional mesa-etched devices. Surfaces and Interfaces, 2020, 21, 100765.	3.0	11
24	Improving the Leakage Characteristics and Efficiency of GaN-based Micro-Light-Emitting Diode with Optimized Passivation. ECS Journal of Solid State Science and Technology, 2020, 9, 055001.	1.8	35
25	Improved Light Output of AlGaInP-Based Micro-Light Emitting Diode Using Distributed Bragg Reflector. IEEE Photonics Technology Letters, 2020, 32, 438-441.	2.5	11
26	On-wafer fabrication of etched-mirror UV-C laser diodes with the ALD-deposited DBR. Applied Physics Letters, 2020, 116, .	3.3	42
27	Photoluminescence properties of implanted Praseodymium into Gallium Nitride at elevated temperatures. Nuclear Instruments & Methods in Physics Research B, 2020, 479, 7-12.	1.4	2
28	Recovery of quantum efficiency on Cs/O-activated GaN and GaAs photocathodes by thermal annealing in vacuum. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	1.2	5
29	Optical properties of neodymium ions in nanoscale regions of gallium nitride. Optical Materials Express, 2020, 10, 2614.	3.0	11
30	Vertical GaN-on-GaN Schottky Diodes as Î±-Particle Radiation Sensors. Micromachines, 2020, 11, 519.	2.9	17
31	Change of high-voltage conduction mechanism in vertical GaNâ€“onâ€“GaN Schottky diodes at elevated temperatures. Applied Physics Express, 2020, 13, 074001.	2.4	3
32	Combined effects of V pits and chip size on the electrical and optical properties of green InGaN-based light-emitting diodes. Journal of Alloys and Compounds, 2019, 796, 146-152.	5.5	28
33	The emergence and prospects of deep-ultraviolet light-emitting diode technologies. Nature Photonics, 2019, 13, 233-244.	31.4	800
34	Fully Ion Implanted Normally-Off GaN DMOSFETs with ALD-Al2O3 Gate Dielectrics. Materials, 2019, 12, 689.	2.9	21
35	Low Voltage High-Energy Î±-Particle Detectors by GaN-on-GaN Schottky Diodes with Record-High Charge Collection Efficiency. Sensors, 2019, 19, 5107.	3.8	10
36	Light output performance of red AlGaInP-based light emitting diodes with different chip geometries and structures. Optics Express, 2018, 26, 11194.	3.4	135

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37	DFT modeling of carbon incorporation in GaN(0001) and GaN(0001Â¯) metalorganic vapor phase epitaxy. Applied Physics Letters, 2017, 111, .	3.3	19
38	Study of radiation detection properties of GaN pn diode. Japanese Journal of Applied Physics, 2016, 55, 05FJ02.	1.5	14
39	Growth of GaN on sapphire via lowâ€temperature deposited buffer layer and realization of pâ€type GaN by Mg doping followed by lowâ€energy electron beam irradiation (Nobel Lecture). Annalen Der Physik, 2015, 527, 327-333.	2.4	16
40	Strain relaxation in thick ($1{ar {1}}01$) InGaN grown on GaN/Si substrate. Physica Status Solidi (B): Basic Research, 2012, 249, 468-471.	1.5	3
41	Growth of InGaN nanowires on a (111)Si substrate by RFâ€MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 646-649.	0.8	21
42	Effect of lateral vapor phase diffusion during the selective growth of InGaN/GaN MQW on semipolar and nonpolar GaN stripes. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1175-1178.	1.8	7
43	Optical properties of (1â€101) InGaN/GaN MQW stripe laser structure on Si substrate. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2160-2162.	0.8	8
44	Selective MOVPE growth of InGaN/GaN MQW on microfacet GaN stripes. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2038-2040.	0.8	1
45	Growth and Luminescence Properties of Mgâ€Doped GaN Prepared by MOVPE. Journal of the Electrochemical Society, 1990, 137, 1639-1641.	2.9	209
46	P-Type Conduction in Mg-Doped GaN Treated with Low-Energy Electron Beam Irradiation (LEEBI). Japanese Journal of Applied Physics, 1989, 28, L2112-L2114.	1.5	1,754