

# Hiroshi Amano

## List of Publications by Year in descending order

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46  
papers

3,452  
citations

566801

15  
h-index

243296

44  
g-index

49  
all docs

49  
docs citations

49  
times ranked

2501  
citing authors

#	ARTICLE	IF	CITATIONS
1	P-Type Conduction in Mg-Doped GaN Treated with Low-Energy Electron Beam Irradiation (LEEBI). Japanese Journal of Applied Physics, 1989, 28, L2112-L2114.	0.8	1,754
2	The emergence and prospects of deep-ultraviolet light-emitting diode technologies. Nature Photonics, 2019, 13, 233-244.	15.6	800
3	Growth and Luminescence Properties of Mg-Doped GaN Prepared by MOVPE. Journal of the Electrochemical Society, 1990, 137, 1639-1641.	1.3	209
4	Light output performance of red AlGaInP-based light emitting diodes with different chip geometries and structures. Optics Express, 2018, 26, 11194.	1.7	135
5	Micro-Light Emitting Diode: From Chips to Applications. Laser and Photonics Reviews, 2021, 15, 2000133.	4.4	108
6	On-wafer fabrication of etched-mirror UV-C laser diodes with the ALD-deposited DBR. Applied Physics Letters, 2020, 116, .	1.5	42
7	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.	0.9	35
8	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.	2.8	28
9	Space charge profile study of AlGaIn-based p-type distributed polarization doped claddings without impurity doping for UV-C laser diodes. Applied Physics Letters, 2020, 117, .	1.5	26
10	The stability of graphene and boron nitride for III-nitride epitaxy and post-growth exfoliation. Chemical Science, 2021, 12, 7713-7719.	3.7	24
11	Growth of InGaN nanowires on a (111)Si substrate by RF-MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 646-649.	0.8	21
12	Fully Ion Implanted Normally-Off GaN DMOSFETs with ALD-Al <sub>2</sub> O <sub>3</sub> Gate Dielectrics. Materials, 2019, 12, 689.	1.3	21
13	DFT modeling of carbon incorporation in GaN(0001) and GaN(0001 $\bar{A}$ ) metalorganic vapor phase epitaxy. Applied Physics Letters, 2017, 111, .	1.5	19
14	Vertical GaN-on-GaN Schottky Diodes as $\beta$ -Particle Radiation Sensors. Micromachines, 2020, 11, 519.	1.4	17
15	Growth of GaN on sapphire via low-temperature deposited buffer layer and realization of p-type GaN by Mg doping followed by low-energy electron beam irradiation (Nobel Lecture). Annalen Der Physik, 2015, 527, 327-333.	0.9	16
16	Interplay of sidewall damage and light extraction efficiency of micro-LEDs. Optics Letters, 2022, 47, 2250.	1.7	15
17	Study of radiation detection properties of GaN pn diode. Japanese Journal of Applied Physics, 2016, 55, 05FJ02.	0.8	14
18	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.	0.8	12

#	ARTICLE	IF	CITATIONS
19	Ohmic Contact to p-Type GaN Enabled by Post-Growth Diffusion of Magnesium. IEEE Electron Device Letters, 2022, 43, 150-153.	2.2	12
20	Surface passivation of light emitting diodes: From nano-size to conventional mesa-etched devices. Surfaces and Interfaces, 2020, 21, 100765.	1.5	11
21	Improved Light Output of AlGaInP-Based Micro-Light Emitting Diode Using Distributed Bragg Reflector. IEEE Photonics Technology Letters, 2020, 32, 438-441.	1.3	11
22	Optical properties of neodymium ions in nanoscale regions of gallium nitride. Optical Materials Express, 2020, 10, 2614.	1.6	11
23	Ohmic contact on low-doping-density p-type GaN with nitrogen-annealed Mg. Applied Physics Letters, 2021, 119, .	1.5	11
24	Low Voltage High-Energy $\hat{\pm}$ -Particle Detectors by GaN-on-GaN Schottky Diodes with Record-High Charge Collection Efficiency. Sensors, 2019, 19, 5107.	2.1	10
25	Experimental demonstration of GaN IMPATT diode at X-band. Applied Physics Express, 2021, 14, 046501.	1.1	10
26	Optical properties of $(1\hat{\pm}101)$ 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
27	Non-polar true-lateral GaN power diodes on foreign substrates. Applied Physics Letters, 2021, 118, .	1.5	8
28	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.	0.8	7
29	Smart-cut-like laser slicing of GaN substrate using its own nitrogen. Scientific Reports, 2021, 11, 17949.	1.6	7
30	Generalized Frequency Dependent Small Signal Model for High Frequency Analysis of AlGaIn/GaN MOS-HEMTs. IEEE Journal of the Electron Devices Society, 2021, 9, 570-581.	1.2	6
31	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, .	0.6	5
32	Development of Pulsed TEM Equipped with Nitride Semiconductor Photocathode for High-Speed Observation and Material Nanofabrication. Quantum Beam Science, 2021, 5, 5.	0.6	5
33	Defect characterization of $\{101\hat{\sim}3\}$ GaN by electron microscopy. Journal of Applied Physics, 2022, 131, .	1.1	5
34	Damage-free plasma etching to enhance performance of AlGaInP-based micro-light emitting diode. IEEE Photonics Technology Letters, 2020, , 1-1.	1.3	4
35	Laser slice thinning of GaN-on-GaN high electron mobility transistors. Scientific Reports, 2022, 12, 7363.	1.6	4
36	Strain relaxation in thick $(\{1\hat{\sim}01\})$ InGaN grown on GaN/Si substrate. Physica Status Solidi (B): Basic Research, 2012, 249, 468-471.	0.7	3

#	ARTICLE	IF	CITATIONS
37	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.	1.1	3
38	Change of high-voltage conduction mechanism in vertical GaN $\alpha$ -GaN Schottky diodes at elevated temperatures. Applied Physics Express, 2020, 13, 074001.	1.1	3
39	Modified Small Signal Circuit of AlGaIn/GaN MOS-HEMTs Using Rational Functions. IEEE Transactions on Electron Devices, 2021, 68, 6059-6064. Increasing the Luminescence Efficiency of Long-Wavelength ( $T_j$ ETQq0 0 0 rgBT /Overlock 10 Tf 50 647 Td (xmlns:mml="ht	1.6	3
40		1.5	2
41	Photoluminescence properties of implanted Praseodymium into Gallium Nitride at elevated temperatures. Nuclear Instruments & Methods in Physics Research B, 2020, 479, 7-12.	0.6	2
42	High-Gain Gated Lateral Power Bipolar Junction Transistor. IEEE Electron Device Letters, 2021, 42, 1370-1373.	2.2	2
43	Improved performance of deep ultraviolet AlGaIn-based light-emitting diode by reducing contact resistance of Al-based reflector. Journal of Alloys and Compounds, 2022, 910, 164895.	2.8	2
44	Selective MOVPE growth of InGaIn/GaN MQW on microfacet GaN stripes. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2038-2040.	0.8	1
45	Optical properties of neodymium ions in nanoscale regions of gallium nitride: erratum. Optical Materials Express, 2021, 11, 524.	1.6	0
46	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.	0.9	0