Fumimasa Horikiri

List of Publications by Year
in descending order

57 papers	953 citations	567281 15 h-index	454955 30 g-index
57 all docs	57 docs citations	57 times ranked	820 citing authors

#	Article	IF	Citations
1	Impact on on-resistance of p-n junction diodes by using heavily Ge-doped GaN substrate. Japanese Journal of Applied Physics, 2022, 61, 061009.	1.5	1
2	Mapping of photo-electrochemical etched Ni/GaN Schottky contacts using scanning internal photoemission microscopyâ€"comparison between n- and p-type GaN samples. Japanese Journal of Applied Physics, 2021, 60, SBBD12.	1.5	4
3	Breakdown phenomenon dependences on the number and positions of threading dislocations in vertical p-n junction GaN diodes. Japanese Journal of Applied Physics, 2021, 60, SBBD09.	1.5	5
4	Substrate off-angle dependency of Al content in Al x Ga1âˆ’x N/GaN high-electron-mobility transistor structures on free-standing GaN substrates. Japanese Journal of Applied Physics, 2021, 60, 076505.	1.5	0
5	Possible contribution of the Gibbsâˆ’Thomson effect to filling nanopipes in GaN homoepitaxial layers. Japanese Journal of Applied Physics, 2021, 60, 078001.	1.5	1
6	Self-terminating contactless photo-electrochemical (CL-PEC) etching for fabricating highly uniform recessed-gate AlGaN/GaN high-electron-mobility transistors (HEMTs). Journal of Applied Physics, 2021, 130, .	2.5	4
7	Possible influence of oxygen segregation on reducing specific surface energies for m-plane sides of nanopipes in GaN. Japanese Journal of Applied Physics, 2021, 60, 098002.	1.5	1
8	Step-edge segregation model for step-velocity dependences of carbon and oxygen concentrations in GaN layers grown on m-plane GaN. Japanese Journal of Applied Physics, 2021, 60, 018002.	1.5	1
9	Analysis of step-velocity-dependent concentration of magnesium in GaN based on Burtonâˆ’Cabreraâˆ’Frank theory and step-edge segregation model. Japanese Journal of Applied Physics, 2021, 60, 128003.	1.5	3
10	Two-Step Mesa Structure GaN p-n Diodes With Low ON-Resistance, High Breakdown Voltage, and Excellent Avalanche Capabilities. IEEE Electron Device Letters, 2020, 41, 123-126.	3.9	42
11	Roles of carbon impurities and intrinsic nonradiative recombination centers on the carrier recombination processes of GaN crystals. Applied Physics Express, 2020, 13, 012004.	2.4	20
12	Effect of Wafer Offâ€Angles on Defect Formation in Drift Layers Grown on Freeâ€Standing GaN Substrates. Physica Status Solidi (B): Basic Research, 2020, 257, 1900561.	1.5	9
13	Homo-epitaxial growth of n-GaN layers free from carbon-induced mobility collapse and off-angle-dependent doping variation by quartz-free hydride vapor phase epitaxy. Applied Physics Letters, 2020, 117, .	3.3	42
14	Step-edge and kink segregation models for analysis of reported step-velocity dependences of carbon concentration in GaN. Japanese Journal of Applied Physics, 2020, 59, 068001.	1.5	5
15	Self-termination of contactless photo-electrochemical (PEC) etching on aluminum gallium nitride/gallium nitride heterostructures. Applied Physics Express, 2020, 13, 026508.	2.4	13
16	Thermal-assisted contactless photoelectrochemical etching for GaN. Applied Physics Express, 2020, 13, 046501.	2.4	6
17	Impact of threading dislocations in GaN pâ€“n diodes on forward <i>I</i>â€“<i>V</i> characteristics. Japanese Journal of Applied Physics, 2020, 59, 106503.	1.5	13
18	Electrodeless photo-assisted electrochemical etching of GaN using a H3PO4-based solution containing S2O8 2â€“ ions. Applied Physics Express, 2019, 12, 066504.	2.4	14

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19	Photoelectrochemical Etching Technology for Gallium Nitride Power and RF Devices. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 489-495.	1.7	6
20	4.9 kV breakdown voltage vertical GaN pâ€"n junction diodes with high avalanche capability. Japanese Journal of Applied Physics, 2019, 58, SCCD03.	1.5	45
21	Impact of damage-free wet etching process on fabrication of high breakdown voltage GaN pâ€"n junction diodes. Japanese Journal of Applied Physics, 2019, 58, SCCD05.	1.5	12
22	Simple wet-etching technology for GaN using an electrodeless photo-assisted electrochemical reaction with a luminous array film as the UV source. Applied Physics Express, 2019, 12, 031003.	2.4	21
23	Mapping of nâ€GaN Schottky Contacts With Wavy Surface Morphology Using Scanning Internal Photoemission Microscopy. Physica Status Solidi (B): Basic Research, 2018, 255, 1700480.	1.5	11
24	Elimination of macrostep-induced current flow nonuniformity in vertical GaN PN diode using carbon-free drift layer grown by hydride vapor phase epitaxy. Applied Physics Express, 2018, 11, 045502.	2.4	26
25	5.0 kV breakdown-voltage vertical GaN pâ€"n junction diodes. Japanese Journal of Applied Physics, 2018, 57, 04FG09.	1.5	88
26	Direct Observation of High Current Density Area by Microscopic Electroluminescence Mapping in Vertical GaN pâ€"n Junction Diodes. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700501.	1.8	7
27	Excellent wet etching technique using pulsed anodic oxidation for homoepitaxially grown GaN layer. Japanese Journal of Applied Physics, 2018, 57, 086502.	1.5	33
28	Excellent potential of photo-electrochemical etching for fabricating high-aspect-ratio deep trenches in gallium nitride. Applied Physics Express, 2018, 11, 091001.	2.4	37
29	Wafer-level nondestructive inspection of substrate off-angle and net donor concentration of the n^{â^'}-drift layer in vertical GaN-on-GaN Schottky diodes. Japanese Journal of Applied Physics, 2017, 56, 061001.	1.5	16
30	Ion-irradiation damage on GaN p-n junction diodes by inductively coupled plasma etching and its recovery by thermal treatment. Nuclear Instruments & Methods in Physics Research B, 2017, 409, 65-68.	1.4	7
31	Reviewâ€"Recent Advancement in Charge- and Photo-Assisted Non-Contact Electrical Characterization of SiC, GaN, and AlGaN/GaN HEMT. ECS Journal of Solid State Science and Technology, 2017, 6, S3129-S3140.	1.8	11
32	Nondestructive measurement of homoepitaxially grown GaN film thickness with Fourier transform infrared spectroscopy. Japanese Journal of Applied Physics, 2017, 56, 120301.	1.5	2
33	Hydride-vapor-phase epitaxial growth of highly pure GaN layers with smooth as-grown surfaces on freestanding GaN substrates. Japanese Journal of Applied Physics, 2017, 56, 085503.	1.5	74
34	Wafer-Level Donor Uniformity Improvement by Substrate Off-Angle Control for Vertical GaN-on-GaN Power Switching Devices. IEEE Transactions on Semiconductor Manufacturing, 2017, 30, 486-493.	1.7	11
35	High-k Dielectric Passivation for GaN Diode with a Field Plate Termination. Electronics (Switzerland), 2016, 5, 15.	3.1	16
36	Vertical GaN p-n Junction Diodes With High Breakdown Voltages Over 4 kV. IEEE Electron Device Letters, 2015, 36, 1180-1182.	3.9	195

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37	Evaluation of High-temperature Electronic and Electrochemical Properties of the Strained La1^|^minus;xSrxCoO3^|^minus;^|^delta; Films Prepared by a Pulsed Laser Deposition Technique. Electrochemistry, 2014, 82, 884-890.	1.4	1
38	Bulk micromachined energy harvesters employing (K, Na)NbO₃thin film. Journal of Micromechanics and Microengineering, 2013, 23, 035029.	2.6	26
39	Dry Etching of Lead-Free (K,Na)NbO$_{3}$ Piezoelectric Films by Ar/C$_{4}$F$_{8}$ Plasma. Japanese Journal of Applied Physics, 2012, 51, 076202.	1.5	4
40	Evaluation of Crystal Orientation for (K,Na)NbO$_{3}$ Films Using X-ray Diffraction Reciprocal Space Map and Relationship between Crystal Orientation and Piezoelectric Coefficient. Japanese Journal of Applied Physics, 2012, 51, 075502.	1.5	5
41	Dry Etching of Lead-Free (K,Na)NbO₃Piezoelectric Films by Ar/C₄F₈Plasma. Japanese Journal of Applied Physics, 2012, 51, 076202.	1.5	0
42	Evaluation of Crystal Orientation for (K,Na)NbO₃Films Using X-ray Diffraction Reciprocal Space Map and Relationship between Crystal Orientation and Piezoelectric Coefficient. Japanese Journal of Applied Physics, 2012, 51, 075502.	1.5	0
43	Improvement of Piezoelectric Properties of (K,Na)NbO₃ Films Deposited by Sputtering. Japanese Journal of Applied Physics, 2011, 50, 041503.	1.5	42
44	Effect of Lattice Strain and Improvement of the Piezoelectric Properties of (K,Na)NbO3Lead-Free Film. Japanese Journal of Applied Physics, 2010, 49, 09MA05.	1.5	23
45	Design Concept for the High Temperature Photoelectronic Devices Using SrTiO[sub 3]. Journal of the Electrochemical Society, 2009, 156, P107.	2.9	0
46	The Design Concept for High-Temperature Photo-Electronic Devices using SrTiO3. ECS Transactions, 2009, 16, 459-469.	0.5	0
47	The Barrier Formation Mechanism on SrTiO3 for High-Temperature Photo-Electronic Devices. ECS Transactions, 2009, 16, 451-458.	0.5	0
48	Defect equilibrium and electron transport in the bulk of single crystal SrTi1âˆ'Nb O3 (x= 0.01, 0.001,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.7	7
49	Electrical Properties of Nb-Doped SrTiO[sub 3] Ceramics with Excess TiO[sub 2] for SOFC Anodes and Interconnects. Journal of the Electrochemical Society, 2008, 155, B16.	2.9	15
50	Electrical Properties of Nb-Doped SrTiO3 Ceramics with Excess TiO2 for Anodes and Interconnects of SOFCs. ECS Transactions, 2007, 7, 1639-1644.	0.5	0
51	The influence of grain boundary on the conductivity of donor doped SrTiO3. Solid State Ionics, 2006, 177, 2555-2559.	2.7	15
52	Nb-Doped SrTiO3-Based High-Temperature Schottky Solar Cells. Japanese Journal of Applied Physics, 2005, 44, 8023-8026.	1.5	8
53	Estimation of Shockleyâ€"Readâ€"Hall Lifetime in Homoepitaxial nâ€GaN on Lowâ€Dislocationâ€Density GaN Substrates Prepared by Hydride Vapor Phase Epitaxy and Maskless 3D. Physica Status Solidi (B): Basic Research, 0, , 2100215.	1.5	1
54	Uniformity characterization of SiC, GaN, and Î±-Ga2O3 Schottky contacts using scanning internal photoemission microscopy. Japanese Journal of Applied Physics, 0, , .	1.5	1

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55	Mapping of contactless photoelectrochemical etched GaN Schottky contacts using scanning internal photoemission microscopy — difference in electrolytes —. Japanese Journal of Applied Physics, 0, , .	1.5	1
56	No significant contribution of hole-trap-enhanced conductivity modulation in GaN p⁺n diodes formed on low-dislocation-density GaN substrates. Japanese Journal of Applied Physics, 0, , .	1.5	0
57	Models for Impurity Incorporation during Vapor-Phase Epitaxy. Materials Science Forum, 0, 1062, 3-7.	0.3	2