

# Johji Nishio

## List of Publications by Citations

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65  
papers

1,120  
citations

14  
h-index

31  
g-index

68  
ext. papers

1,234  
ext. citations

1.4  
avg, IF

3.62  
L-index

#	Paper	IF	Citations
65	Native point defects in low-temperature-grown GaAs. <i>Applied Physics Letters</i> , <b>1995</b> , 67, 279-281	3.4	217
64	Room Temperature Pulsed Operation of Nitride Based Multi-Quantum-Well Laser Diodes with Cleaved Facets on Conventional C-Face Sapphire Substrates. <i>Japanese Journal of Applied Physics</i> , <b>1996</b> , 35, L1315-L1317	1.4	202
63	Doping characteristics and electrical properties of Mg-doped AlGaN grown by atmospheric-pressure MOCVD. <i>Journal of Crystal Growth</i> , <b>1998</b> , 189-190, 511-515	1.6	83
62	Effects of thermal treatment of low-temperature GaN buffer layers on the quality of subsequent GaN layers. <i>Journal of Applied Physics</i> , <b>1997</b> , 82, 4877-4882	2.5	78
61	Epitaxial Growth of High-Quality 4H-SiC Carbon-Face by Low-Pressure Hot-Wall Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , <b>2003</b> , 42, L637-L639	1.4	56
60	p-type conduction in as-grown Mg-doped GaN grown by metalorganic chemical vapor deposition. <i>Applied Physics Letters</i> , <b>1998</b> , 72, 1748-1750	3.4	38
59	Characterization of InGaN multiquantum well structures for blue semiconductor laser diodes. <i>Applied Physics Letters</i> , <b>1997</b> , 70, 3431-3433	3.4	30
58	Stoichiometry of undoped LEC GaAs. <i>Journal of Crystal Growth</i> , <b>1986</b> , 79, 463-468	1.6	25
57	Ultralow-Loss SiC Floating Junction Schottky Barrier Diodes (Super-SBDs). <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 1954-1960	2.9	23
56	Magnetic field effect on residual impurity concentrations for LEC GaAs crystal growth. <i>Journal of Crystal Growth</i> , <b>1987</b> , 84, 247-252	1.6	23
55	Influence of stacking faults on the performance of 4H-SiC Schottky barrier diodes fabricated on (112 0) face. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 2974-2976	3.4	22
54	Dependences of contraction/expansion of stacking faults on temperature and current density in 4H-SiC p <sub>II</sub> diodes. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 061301	1.4	20
53	Influence of melt preparation on residual impurity concentration in semi-insulating LEC GaAs. <i>Journal of Crystal Growth</i> , <b>1989</b> , 96, 605-608	1.6	18
52	Gas phase contribution to carbon incorporation and extraction mechanisms for LEC GaAs. <i>Journal of Crystal Growth</i> , <b>1990</b> , 99, 680-684	1.6	15
51	Band-gap separation in InGaN epilayers grown by metalorganic chemical vapor deposition. <i>Journal of Applied Physics</i> , <b>1998</b> , 83, 2860-2862	2.5	14
50	Ambient gas constituents and segregation of carbon and boron in LEC GaAs single crystals: the role of water in boric oxide encapsulants. <i>Journal of Crystal Growth</i> , <b>1993</b> , 134, 97-104	1.6	13
49	Charge-Density-Wave-Like Transition in V <sub>3</sub> Te <sub>4</sub> . <i>Physica Status Solidi (B): Basic Research</i> , <b>1983</b> , 118, K99-K102	11	

48	Growth of silicon carbide epitaxial layers on 150-mm-diameter wafers using a horizontal hot-wall chemical vapor deposition. <i>Journal of Crystal Growth</i> , <b>2013</b> , 381, 139-143	1.6	10
47	Fabrication of 4H-SiC Floating Junction Schottky Barrier Diodes (Super-SBDs) and their Electrical Properties. <i>Materials Science Forum</i> , <b>2006</b> , 527-529, 1175-1178	0.4	10
46	Analysis of transverse modes of nitride-based laser diodes. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>1999</b> , 5, 765-770	3.8	10
45	Process and Device Simulation of a SiC Floating Junction Schottky Barrier Diode (Super-SBD). <i>Materials Science Forum</i> , <b>2005</b> , 483-485, 921-924	0.4	9
44	VF Degradation of 4H-SiC PiN Diodes Using Low-BPD Wafers. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 851-854	0.4	8
43	Precise melt composition control for LEC GaAs. <i>Journal of Crystal Growth</i> , <b>1987</b> , 85, 469-471	1.6	8
42	Influence of Epi-Layer Growth Pits on SiC Device Characteristics. <i>Materials Science Forum</i> , <b>2015</b> , 821-823, 177-180	0.4	7
41	Suppression of short step bunching generated on 4H-SiC Si-face substrates with vicinal off-angle. <i>Journal of Crystal Growth</i> , <b>2014</b> , 401, 673-676	1.6	7
40	Dependence of 4H-SiC Epitaxial Layer Quality on Growth Conditions with Wafer Size Corresponding to 150 mm. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1433, 59		7
39	Simulation, Fabrication and Characterization of 4H-SiC Floating Junction Schottky Barrier Diodes (Super-SBDs). <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 881-884	0.4	7
38	Scatterings of Shallow Threshold Voltage on Si-Implanted WN Self-Alignment Gate GaAs Metal-Semiconductor Field-Effect Transistors on Different Composition 2-Inch Substrates by Growing in Three Kinds of Furnaces. <i>Japanese Journal of Applied Physics</i> , <b>1991</b> , 30, 2432-2437	1.4	7
37	Direct confirmation of structural differences in single Shockley stacking faults expanding from different origins in 4H-SiC PiN diodes. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 085705	2.5	6
36	Suppression of 3-Inclusion Formation during Growth of 4-SiC Si-Face Homoepitaxial Layers with a 1° Off-Angle. <i>Materials</i> , <b>2014</b> , 7, 7010-7021	3.5	6
35	Doping Concentration Optimization for Ultra-Low-Loss 4H-SiC Floating Junction Schottky Barrier Diode (Super-SBD). <i>Materials Science Forum</i> , <b>2009</b> , 615-617, 655-658	0.4	6
34	Photoluminescence study of GaN/InGaN multiquantum well structures at room temperature. <i>Journal of Crystal Growth</i> , <b>1998</b> , 189-190, 128-132	1.6	6
33	Uniformity of 4H-SiC epitaxial layers grown on 3-in diameter substrates. <i>Journal of Crystal Growth</i> , <b>2003</b> , 258, 113-122	1.6	6
32	Investigation of Residual Impurities in 4H-SiC Epitaxial Layers Grown by Hot-Wall Chemical Vapor Deposition. <i>Materials Science Forum</i> , <b>2002</b> , 389-393, 215-218	0.4	6
31	Homoepitaxial growth and investigation of stacking faults of 4H-SiC C-face epitaxial layers with a 1° off-angle. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 04DP04	1.4	6

30	Homo-Epitaxial Growth on 2°Off-Cut 4H-SiC(0001) Si-Face Substrates Using H <sub>2</sub> -SiH <sub>4</sub> -C <sub>3</sub> H <sub>8</sub> CVD System. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 214-217	0.4	5
29	Design Consideration of High Power Density Inverter with Low-on-voltage SiC-JBS and High-speed Gate Driving of Si-IGBT <b>2009</b> ,		5
28	SiC Device Limitation Breakthrough with Novel Floating Junction Structure on 4H-SiC. <i>Materials Science Forum</i> , <b>2003</b> , 433-436, 887-890	0.4	5
27	Properties of GaN epitaxial layers grown at high growth rates by metalorganic chemical vapor deposition. <i>Journal of Electronic Materials</i> , <b>2001</b> , 30, 23-26	1.9	5
26	Epitaxial Growth of (11-20) 4H-SiC Using Substrate Grown in the [11-20] Direction. <i>Materials Science Forum</i> , <b>2002</b> , 389-393, 195-198	0.4	5
25	Initiation of Shockley Stacking Fault Expansion in 4H-SiC P-i-N Diodes. <i>Materials Science Forum</i> , <b>2019</b> , 963, 280-283	0.4	5
24	Triangular Single Shockley Stacking Fault Analyses on 4H-SiC PiN Diode with Forward Voltage Degradation. <i>Journal of Electronic Materials</i> , <b>2020</b> , 49, 5232-5239	1.9	5
23	Carrier Lifetimes in 4H-SiC Epitaxial Layers on the C-Face Enhanced by Carbon Implantation. <i>Materials Science Forum</i> , <b>2018</b> , 924, 432-435	0.4	5
22	Evaluation of Effect of Mechanical Stress on Stacking Fault Expansion in 4H-SiC P-i-N Diode. <i>Materials Science Forum</i> , <b>2019</b> , 963, 288-293	0.4	4
21	Uniformity Improvement in Carrier Concentration on 150 mm Diameter C-Face Epitaxial Growth of 4H-SiC. <i>Materials Science Forum</i> , <b>2015</b> , 821-823, 169-172	0.4	4
20	Conversion of Basal Plane Dislocations to Threading Edge Dislocations in Growth of Epitaxial Layers on 4H-SiC Substrates with a Vicinal Off-Angle. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 99-102	0.4	4
19	C-Face Epitaxial Growth of 4H-SiC on Quasi-150-mm Diameter Wafers with High Throughput. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 109-112	0.4	4
18	Optimization of a SiC Super-SBD Based on Scaling Properties of Power Devices. <i>Materials Science Forum</i> , <b>2006</b> , 527-529, 1179-1182	0.4	4
17	Transport restriction effect for gaseous components on the carbon content of LEC GaAs. <i>Journal of Crystal Growth</i> , <b>1991</b> , 108, 150-156	1.6	4
16	Informative Aspects of Molten KOH Etch Pits Formed at Basal Plane Dislocations on the Surface of 4H-SiC. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2020</b> , 217, 2000332	1.6	4
15	Photoluminescence Analysis of Individual Partial Dislocations in 4H-SiC Epilayers. <i>Materials Science Forum</i> , <b>2020</b> , 1004, 376-386	0.4	4
14	Reduction of background carrier concentration and lifetime improvement for 4H-SiC C-face epitaxial growth. <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 081302	1.4	3
13	Epitaxial Overgrowth of 4H-SiC for Devices with p-Buried Floating Junction Structure. <i>Materials Science Forum</i> , <b>2005</b> , 483-485, 147-150	0.4	3

## LIST OF PUBLICATIONS

12	Theoretical analysis for the segregation in the liquid encapsulated Czochralski system. <i>Journal of Crystal Growth</i> , <b>1994</b> , 141, 249-255	1.6	3
11	Single Shockley stacking fault expansion from immobile basal plane dislocations in 4H-SiC. <i>Japanese Journal of Applied Physics</i> , <b>2021</b> , 60, SBD01	1.4	3
10	Reduction in Background Carrier Concentration for 4H-SiC C-face Epitaxial Growth. <i>MRS Advances</i> , <b>2016</b> , 1, 3631-3636	0.7	2
9	The analysis of contact resistivity between a p-type GaN layer and electrode in InGaN MQW laser diodes. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>1999</b> , 59, 366-369	3.1	2
8	Internal Stress Distribution Estimation in Liquid-Encapsulated Czochralski Grown GaAs Single Crystals Using Measured Temperature on Dummy Crystals. <i>Japanese Journal of Applied Physics</i> , <b>1993</b> , 32, 716-721	1.4	2
7	Vacuum Bakeout Effect on Ambient Gas in a High Pressure LEC Puller. <i>Japanese Journal of Applied Physics</i> , <b>1992</b> , 31, 1726-1729	1.4	2
6	Improvement of 4H-SiC Epitaxial Layers Grown on 2o Offcut Si-Face Substrates. <i>Materials Science Forum</i> , <b>2016</b> , 858, 133-136	0.4	2
5	Phase field model of single Shockley stacking fault expansion in 4H-SiC PiN diode. <i>Japanese Journal of Applied Physics</i> , <b>2021</b> , 60, 024004	1.4	2
4	Dynamics Analysis of Single Shockley Stacking Fault Expansion in 4H-SiC P-i-N Diode Based on Free Energy. <i>Materials Science Forum</i> , <b>2019</b> , 963, 263-267	0.4	1
3	Conversion of Shockley partial dislocation pairs from unexpandable to expandable combinations after epitaxial growth of 4H-SiC. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 075107	2.5	1
2	Origin and Generation Process of a Triangular Single Shockley Stacking Fault Expanding from the Surface Side in 4H-SiC PIN Diodes. <i>Journal of Electronic Materials</i> , <b>2021</b> , 50, 6504-6511	1.9	1
1	Transmission Electron Microscopy Study of Single Shockley Stacking Faults in 4H-SiC Expanded from Basal Plane Dislocation Segments Accompanied by Threading Edge Dislocations on both Ends. <i>Materials Science Forum</i> , <b>1062</b> , 258-262	0.4	0