Takashi Egawa

List of Publications by Year
in descending order

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41	1,938	17	39
papers	citations	h-index	g-index
		471509	302126

41	41	41	1953
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The role of p-GaN layer thickness for the evaluation of high-performance and ultrafast GaInN/GaN multiple quantum wells UV photodetectors. Optical Materials, 2022, 127, 112284.	3.6	5
2	Reduced nonradiative recombination rates in <i>c</i>-plane Al0.83In0.17N films grown on a nearly lattice-matched GaN substrate by metalorganic vapor phase epitaxy. Applied Physics Letters, 2021, 119, .	3.3	5
3	Improved epilayer qualities and electrical characteristics for GaInN multiple-quantum-well photovoltaic cells and their operation under artificial sunlight and monochromatic light illuminations. AIP Advances, 2021, 11, .	1.3	4
4	Mass production-ready characteristics of AlGaN/AlN/GaN high-electron-mobility transistor structures grown on 200 mm diameter silicon substrates using metal-organic chemical vapor deposition. Semiconductor Science and Technology, 2021, 36, 014004.	2.0	5
5	Metalorganic Chemical Vapor Deposition of over 150â€nmâ€Thick Quaternary AlGaInN Epitaxial Films near Alloy Composition Latticeâ€Matching to GaN on Sapphire and Their Structural and Optical Characterization. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900597.	1.8	4
6	Correlation between structural properties and nonradiative recombination behaviors of threading dislocations in freestanding GaN substrates grown by hydride vapor phase epitaxy. CrystEngComm, 2020, 22, 8299-8312.	2.6	13
7	Investigation of AlGaN/GaN high electron mobility transistors on Silicon (111) substrates employing multi-stacked strained layer superlattice structures. Superlattices and Microstructures, 2020, 147, 106709.	3.1	13
8	Epitaxial regrowth and characterizations of vertical GaN transistors on silicon. Semiconductor Science and Technology, 2019, 34, 095013.	2.0	2
9	A 300 nm thick epitaxial AlInN film with a highly flat surface grown almost perfectly lattice-matched to <i>c</i>-plane free-standing GaN substrate. Japanese Journal of Applied Physics, 2019, 58, SC1006.	1.5	19
10	Effect of threading dislocation in an AlN nucleation layer and vertical leakage current in an AlGaN/GaN high-electron mobility transistor structure on a silicon substrate. Semiconductor Science and Technology, 2019, 34, 035015.	2.0	9
11	Microstructure variation in thick AlInN films grown on c-plane GaN on sapphire by metalorganic chemical vapor deposition. Journal of Crystal Growth, 2019, 506, 40-44.	1.5	33
12	Epitaxial growth and characterization of approximately 300-nm-thick AlInN films nearly lattice-matched to<i>c</i>-plane GaN grown on sapphire. Applied Physics Express, 2018, 11, 051001.	2.4	26
13	A Comparative Study of InGaN/GaN Multipleâ€Quantumâ€Well Solar Cells Grown on Sapphire and AlN Template by Metalorganic Chemical Vapor Deposition. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700323.	1.8	6
14	The 2018 GaN power electronics roadmap. Journal Physics D: Applied Physics, 2018, 51, 163001.	2.8	843
15	Dynamic variation of carrier transport properties of recessed Au-free ohmic contacts to InAlN/AlN/GaN on Si-wafer. Japanese Journal of Applied Physics, 2018, 57, 110302.	1.5	3
16	Enhancement of breakdown voltage for fully-vertical GaN-on-Si p-n diode by using strained layer superlattice as drift layer. Semiconductor Science and Technology, 2018, 33, 065017.	2.0	5
17	Al₂O₃/AlGaN Channel Normally-Off MOSFET on Silicon With High Breakdown Voltage. IEEE Electron Device Letters, 2017, 38, 497-500.	3.9	16
18	Analysis of carrier trapping and emission in AlGaN/GaN HEMT with biasâ€controllable field plate. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600840.	1.8	5

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19	Effect of well layer thickness on quantum and energy conversion efficiencies for InGaN/GaN multiple quantum well solar cells. Solid-State Electronics, 2017, 129, 29-34.	1.4	16
20	Effect of Drift Layer on the Breakdown Voltage of Fully-Vertical GaN-on-Si p-n Diodes. IEEE Electron Device Letters, 2017, 38, 1720-1723.	3.9	26
21	Impact of the AlN nucleation layer on the variation of the vertical-direction breakdown voltage of AlGaN/GaN high-electron-mobility transistor structures on a Si substrate. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600843.	1.8	11
22	Growth of rough-surface p-GaN layers on InGaN/GaN multiple-quantum-well structures by metalorganic chemical vapor deposition and their application to GaN-based solar cells. Materials Research Express, 2017, 4, 085904.	1.6	8
23	Effect of the formation temperature of the AlN/Si interface on the vertical-direction breakdown voltages of AlGaN/GaN HEMTs on Si substrates. MRS Advances, 2016, 1, 3415-3420.	0.9	4
24	Analysis of reaction between c+a and -c+a dislocations in GaN layer grown on 4-inch Si(111) substrate with AlGaN/AlN strained layer superlattice by transmission electron microscopy. AIP Advances, 2016, 6, .	1.3	7
25	Device characteristics and performance estimation of nearly lattice-matched InAlN/AlGaN heterostructure field-effect transistors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, 050602.	1.2	13
26	Modeling of the wafer bow in GaN-on-Si epiwafers employing GaN/AlN multilayer buffer structures. Semiconductor Science and Technology, 2016, 31, 105016.	2.0	18
27	Novel fully vertical GaN pâ€“n diode on Si substrate grown by metalorganic chemical vapor deposition. Applied Physics Express, 2016, 9, 111005.	2.4	31
28	Improved performance of InGaN/GaN multilayer solar cells with an atomicâ€layerâ€deposited Al ₂ O ₃ passivation film. Electronics Letters, 2016, 52, 1246-1248.	1.0	3
29	Influence of AlN nucleation layer on vertical breakdown characteristics for GaNâ€onâ€Si. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 424-428.	1.8	39
30	Enhanced two dimensional electron gas transport characteristics in Al2O3/AlInN/GaN metal-oxide-semiconductor high-electron-mobility transistors on Si substrate. Applied Physics Letters, 2015, 107, .	3.3	14
31	Uniform Growth of AlGaN/GaN High Electron Mobility Transistors on 200 mm Silicon (111) Substrate. Applied Physics Express, 2013, 6, 026501.	2.4	89
32	1.4-kV Breakdown Voltage for AlGaN/GaN High-Electron-Mobility Transistors on Silicon Substrate. IEEE Electron Device Letters, 2012, 33, 1375-1377.	3.9	88
33	Influence of deep-pits on the device characteristics of metal-organic chemical vapor deposition grown AlGaN/GaN high-electron mobility transistors on silicon substrate. Applied Physics Letters, 2011, 98, 252105.	3.3	29
34	Enhancement of breakdown voltage by AlN buffer layer thickness in AlGaNâˆ•GaN high-electron-mobility transistors on 4in. diameter silicon. Applied Physics Letters, 2005, 86, 123503.	3.3	108
35	DC Characteristics in High-Quality AlGaN/AlN/GaN High-Electron-Mobility Transistors Grown on AlN/Sapphire Templates. Japanese Journal of Applied Physics, 2005, 44, 6490-6494.	1.5	29
36	High-electron-mobility AlGaNâˆ•AlNâˆ•GaN heterostructures grown on 100-mm-diam epitaxial AlN/sapphire templates by metalorganic vapor phase epitaxy. Applied Physics Letters, 2004, 85, 1710-1712.	3.3	89

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37	Valence-Band Discontinuity at the AlN/Si Interface. Japanese Journal of Applied Physics, 2003, 42, 6413-6414.	1.5	23
38	Improved dc characteristics of AlGaN/GaN high-electron-mobility transistors on AlN/sapphire templates. Applied Physics Letters, 2002, 81, 1131-1133.	3.3	65
39	Thermal stability of GaN on (111) Si substrate. Journal of Crystal Growth, 1998, 189-190, 178-182.	1.5	167
40	Metalorganic Chemical Vapor Deposition and Material Characterization of Lattice-Matched InAlN/GaN Two-Dimensional Electron Gas Heterostructures. Applied Physics Express, 0, 1, 081102.	2.4	43
41	Simulation Study on Novel GaNâ€Based nâ^'pâ^'n Heterojunction Bipolar Transistors with a Quaternary AlGaInN Emitter and a Twoâ€Dimensionally Conductive Base. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100397.	1.8	2