Akito Kuramata

List of Publications by Year
in descending order

37 papers	6,064 citations	257101 24 h-index	329751 37 g-index
37 all docs	37 docs citations	37 times ranked	2412 citing authors

#	Article	IF	Citations
1	Three-dimensional curving of crystal planes in wide bandgap semiconductor wafers visualized using a laboratory X-ray diffractometer. Journal of Crystal Growth, 2022, 583, 126558.	0.7	2
2	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	2.2	184
3	Probe-induced surface defects: Origin of leakage current in halide vapor-phase epitaxial (001) Î²-Ga2O3 Schottky barrier diodes. Applied Physics Letters, 2022, 120, .	1.5	10
4	Line-shaped defects: Origin of leakage current in halide vapor-phase epitaxial (001) Î²-Ga₂O₃ Schottky barrier diodes. Applied Physics Letters, 2022, 120, 122107.	1.5	8
5	Mechanical properties and dislocation dynamics in Î²-Ga₂O₃. Japanese Journal of Applied Physics, 2022, 61, 045506.	0.8	10
6	Effect of substrate orientation on homoepitaxial growth of Î² -Ga2O3 by halide vapor phase epitaxy. Applied Physics Letters, 2022, 120, .	1.5	13
7	Etch pit formation on Î²-Ga2O3 by molten KOH+NaOH and hot H3PO4 and their correlation with dislocations. Journal of Alloys and Compounds, 2022, 910, 164788.	2.8	5
8	Observation of dislocations in thick Î²-Ga2O3 single-crystal substrates using Borrmann effect synchrotron x-ray topography. APL Materials, 2022, 10, .	2.2	8
9	Large-area total-thickness imaging and Burgers vector analysis of dislocations in Î² -Ga2O3 using bright-field x-ray topography based on anomalous transmission. Applied Physics Letters, 2022, 121, .	1.5	5
10	Polycrystalline defectsâ€"origin of leakage currentâ€"in halide vapor phase epitaxial (001) Î²-Ga₂O₃ Schottky barrier diodes identified via ultrahigh sensitive emission microscopy and synchrotron X-ray topography. Applied Physics Express, 2021, 14, 036502.	1.1	21
11	Stacking faults: Origin of leakage current in halide vapor phase epitaxial (001) Î² -Ga2O3 Schottky barrier diodes. Applied Physics Letters, 2021, 118, .	1.5	29
12	Visualization of the curving of crystal planes in Î²-Ga2O3 by X-ray topography. Journal of Crystal Growth, 2021, 576, 126376.	0.7	4
13	Anisotropic radius of curvature of crystal planes in wide-bandgap semiconductor wafers measured by X-ray diffraction. Japanese Journal of Applied Physics, 2021, 60, 128004.	0.8	2
14	Origin of reverse leakage current path in edge-defined film-fed growth (001) Î² -Ga2O3 Schottky barrier diodes observed by high-sensitive emission microscopy. Applied Physics Letters, 2020, 117, .	1.5	34
15	Subsurface-damaged layer in (010)-oriented Î²-Ga2O3 substrates. Japanese Journal of Applied Physics, 2020, 59, 125503.	0.8	4
16	Characterization of crystalline defects in Î²-Ga₂O₃ single crystals grown by edge-defined film-fed growth and halide vapor-phase epitaxy using synchrotron X-ray topography. Japanese Journal of Applied Physics, 2019, 58, 055501.	0.8	40
17	High-resolution dislocation imaging and micro-structural analysis of HVPE-Î²Ga2O3 films using monochromatic synchrotron topography. APL Materials, 2019, 7, .	2.2	19
18	1230â€‰V Î²-Ga2O3 trench Schottky barrier diodes with an ultra-low leakage current of <1 Î¼A/cm2. Applied Physics Letters, 2018, 113, .	1.5	94

#	Article	IF	Citations
19	Stacking faults in Î²-Ga₂O₃ crystals observed by X-ray topography. Journal of Applied Crystallography, 2018, 51, 1372-1377.	1.9	30
20	Halide vapor phase epitaxy of Si doped Î²-Ga2O3 and its electrical properties. Thin Solid Films, 2018, 666, 182-184.	0.8	146
21	1-kV vertical Ga2O3 field-plated Schottky barrier diodes. Applied Physics Letters, 2017, 110, .	1.5	421
22	Preparation of 2-in.-diameter (001) Î²-Ga2O3homoepitaxial wafers by halide vapor phase epitaxy. Japanese Journal of Applied Physics, 2017, 56, 110310.	0.8	26
23	Crystal defects observed by the etch-pit method and their effects on Schottky-barrier-diode characteristics on $(ar{2}01)$ Î²-Ga₂O₃. Japanese Journal of Applied Physics, 2017, 56, 091101.	0.8	63
24	Electrical properties of Schottky barrier diodes fabricated on (001) Î²-Ga₂O₃substrates with crystal defects. Japanese Journal of Applied Physics, 2017, 56, 086501.	0.8	74
25	Temperature-dependent capacitanceâ€“voltage and currentâ€“voltage characteristics of Pt/Ga2O3 (001) Schottky barrier diodes fabricated on nâ€“â€“Ga2O3 drift layers grown by halide vapor phase epitaxy. Applied Physics Letters, 2016, 108, .	1.5	268
26	Current status of Ga₂O₃ power devices. Japanese Journal of Applied Physics, 2016, 55, 1202A1.	0.8	188
27	Slip system analysis and X-ray topographic study on Î²-Ga2O3. Superlattices and Microstructures, 2016, 99, 99-103.	1.4	50
28	High-quality Î²-Ga₂O₃ single crystals grown by edge-defined film-fed growth. Japanese Journal of Applied Physics, 2016, 55, 1202A2.	0.8	719
29	Structural evaluation of defects in Î²-Ga₂O₃ single crystals grown by edge-defined film-fed growth process. Japanese Journal of Applied Physics, 2016, 55, 1202BD.	0.8	90
30	Relationship between crystal defects and leakage current in Î²-Ga₂O₃ Schottky barrier diodes. Japanese Journal of Applied Physics, 2016, 55, 1202BB.	0.8	70
31	Origins of etch pits in Î²-Ga₂O₃(010) single crystals. Japanese Journal of Applied Physics, 2016, 55, 1202BG.	0.8	58
32	Recent progress in Ga₂O₃power devices. Semiconductor Science and Technology, 2016, 31, 034001.	1.0	783
33	Observation of nanometer-sized crystalline grooves in as-grown Î²-Ga2O3single crystals. Japanese Journal of Applied Physics, 2016, 55, 030303.	0.8	56
34	Field-Plated Ga₂O₃MOSFETs With a Breakdown Voltage of Over 750 V. IEEE Electron Device Letters, 2016, 37, 212-215.	2.2	431
35	Homoepitaxial growth of Î²-Ga₂O₃layers by halide vapor phase epitaxy. Applied Physics Express, 2015, 8, 015503.	1.1	288
36	Device-Quality eta-Ga$_{2}$O$_{3}$ Epitaxial Films Fabricated by Ozone Molecular Beam Epitaxy. Applied Physics Express, 2012, 5, 035502.	1.1	474

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37	Gallium oxide (Ga2O3) metal-semiconductor field-effect transistors on single-crystal Î²-Ga2O3 (010) substrates. Applied Physics Letters, 2012, 100, .	1.5	1,337