Masataka Higashiwaki

List of Publications by Year
in descending order

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177 papers	13,873 citations	25034 57 h-index	20961 115 g-index
184 all docs	184 docs citations	184 times ranked	5181 citing authors

#	Article	IF	Citations
1	Gallium oxide (Ga2O3) metal-semiconductor field-effect transistors on single-crystal Î²-Ga2O3 (010) substrates. Applied Physics Letters, 2012, 100, .	3.3	1,337
2	Ultrawideâ€Bandgap Semiconductors: Research Opportunities and Challenges. Advanced Electronic Materials, 2018, 4, 1600501.	5.1	839
3	Recent progress in Ga₂O₃power devices. Semiconductor Science and Technology, 2016, 31, 034001.	2.0	783
4	Depletion-mode Ga2O3 metal-oxide-semiconductor field-effect transistors on Î²-Ga2O3 (010) substrates and temperature dependence of their device characteristics. Applied Physics Letters, 2013, 103, .	3.3	562
5	Guest Editorial: The dawn of gallium oxide microelectronics. Applied Physics Letters, 2018, 112, .	3.3	480
6	Field-Plated Ga₂O₃MOSFETs With a Breakdown Voltage of Over 750 V. IEEE Electron Device Letters, 2016, 37, 212-215.	3.9	431
7	1-kV vertical Ga2O3 field-plated Schottky barrier diodes. Applied Physics Letters, 2017, 110, .	3.3	421
8	Development of gallium oxide power devices. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 21-26.	1.8	418
9	Anisotropic thermal conductivity in single crystal Î²-gallium oxide. Applied Physics Letters, 2015, 106, .	3.3	361
10	$hbox{Ga}_{2} hbox{O}_{3}$ Schottky Barrier Diodes Fabricated by Using Single-Crystal etaâ€“ $hbox{Ga}_{2} hbox{O}_{3}$ (010) Substrates. IEEE Electron Device Letters, 2013, 34, 493-495.	3.9	339
11	Homoepitaxial growth of Î²-Ga₂O₃layers by halide vapor phase epitaxy. Applied Physics Express, 2015, 8, 015503.	2.4	288
12	Temperature-dependent capacitanceâ€“voltage and currentâ€“voltage characteristics of Pt/Ga2O3 (001) Schottky barrier diodes fabricated on nâ€“Ga2O3 drift layers grown by halide vapor phase epitaxy. Applied Physics Letters, 2016, 108, .	3.3	268
13	Correlation between blue luminescence intensity and resistivity in Î²-Ga2O3 single crystals. Applied Physics Letters, 2013, 103, .	3.3	267
14	Valence band ordering in Î²-Ga₂O₃studied by polarized transmittance and reflectance spectroscopy. Japanese Journal of Applied Physics, 2015, 54, 112601.	1.5	261
15	MBE grown Ga2O3 and its power device applications. Journal of Crystal Growth, 2013, 378, 591-595.	1.5	251
16	Si-Ion Implantation Doping in Î²-Ga₂O₃and Its Application to Fabrication of Low-Resistance Ohmic Contacts. Applied Physics Express, 2013, 6, 086502.	2.4	251
17	State-of-the-art technologies of gallium oxide power devices. Journal Physics D: Applied Physics, 2017, 50, 333002.	2.8	212
18	Current status of Ga₂O₃ power devices. Japanese Journal of Applied Physics, 2016, 55, 1202A1.	1.5	188

#	Article	IF	Citations
19	Î²-Gallium oxide power electronics. APL Materials, 2022, 10, .	5.1	184
20	Band alignment and electrical properties of Al2O3/Î²-Ga2O3 heterojunctions. Applied Physics Letters, 2014, 104, .	3.3	177
21	First Demonstration of Ga₂O₃Trench MOS-Type Schottky Barrier Diodes. IEEE Electron Device Letters, 2017, 38, 783-785.	3.9	166
22	Anisotropy, phonon modes, and free charge carrier parameters in monoclinic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math>-gallium oxide single crystals. Physical Review B, 2016, 93, .	3.2	147
23	Halide vapor phase epitaxy of Si doped Î²-Ga2O3 and its electrical properties. Thin Solid Films, 2018, 666, 182-184.	1.8	146
24	Enhancement-mode Ga₂O₃ MOSFETs with Si-ion-implanted source and drain. Applied Physics Express, 2017, 10, 041101.	2.4	144
25	Current Aperture Vertical <inline-formula> <tex-math notation="LaTeX">eta </tex-math> </inline-formula>-Ga₂O₃ MOSFETs Fabricated by N- and Si-Ion Implantation Doping. IEEE Electron Device Letters, 2019, 40, 431-434.	3.9	135
26	Acceptor doping of Î²-Ga2O3 by Mg and N ion implantations. Applied Physics Letters, 2018, 113, .	3.3	129
27	Vertical Ga₂O₃ Schottky Barrier Diodes With Guard Ring Formed by Nitrogen-Ion Implantation. IEEE Electron Device Letters, 2019, 40, 1487-1490.	3.9	126
28	Systematic investigation of the growth rate of Î²-Ga₂O₃(010) by plasma-assisted molecular beam epitaxy. Applied Physics Express, 2014, 7, 095501.	2.4	122
29	Polarized Raman spectra in Î²-Ga2O3 single crystals. Journal of Crystal Growth, 2014, 401, 330-333.	1.5	119
30	Band-to-band transitions, selection rules, effective mass, and excitonic contributions in monoclinic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î²</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 96, .	3.2	117
31	Optical properties of Si-doped InN grown on sapphire (0001). Physical Review B, 2003, 68, .	3.2	114
32	Optical signatures of deep level defects in Ga2O3. Applied Physics Letters, 2018, 112, .	3.3	113
33	Growth temperature dependences of structural and electrical properties of Ga2O3 epitaxial films grown on Î²-Ga2O3 (010) substrates by molecular beam epitaxy. Journal of Crystal Growth, 2014, 392, 30-33.	1.5	107
34	Smart Power Devices and ICs Using GaAs and Wide and Extreme Bandgap Semiconductors. IEEE Transactions on Electron Devices, 2017, 64, 856-873.	3.0	106
35	AlGaN/GaN MIS-HFETs with f/sub T/ of 163 GHz using cat-CVD SiN gate-insulating and passivation Layers. IEEE Electron Device Letters, 2006, 27, 16-18.	3.9	105
36	AlGaN/GaN Heterostructure Field-Effect Transistors on 4H-SiC Substrates with Current-Gain Cutoff Frequency of 190 GHz. Applied Physics Express, 0, 1, 021103.	2.4	103

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37	AlN/GaN Insulated-Gate HFETs Using Cat-CVD SiN. IEEE Electron Device Letters, 2006, 27, 719-721.	3.9	100
38	Vertical Î²-Gaâ‚‚Oâ‚ƒ Power Transistors: A Review. IEEE Transactions on Electron Devices, 2020, 67, 3925-3937.	3.0	91
39	Electron channel mobility in silicon-doped Ga₂O₃ MOSFETs with a resistive buffer layer. Japanese Journal of Applied Physics, 2016, 55, 1202B9.	1.5	90
40	High-Quality InN Film Grown on a Low-Temperature-Grown GaN Intermediate Layer by Plasma-Assisted Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2002, 41, L540-L542.	1.5	83
41	Modeling and interpretation of UV and blue luminescence intensity in Î²-Ga2O3 by silicon and nitrogen doping. Journal of Applied Physics, 2018, 124, .	2.5	83
42	Distribution of donor states on etched surface of AlGaN/GaN heterostructures. Journal of Applied Physics, 2010, 108, 063719.	2.5	78
43	Anomalous Fe diffusion in Si-ion-implanted Î²â€“Ga2O3 and its suppression in Ga2O3 transistor structures through highly resistive buffer layers. Applied Physics Letters, 2015, 106, .	3.3	78
44	Characterization of channel temperature in Ga2O3 metal-oxide-semiconductor field-effect transistors by electrical measurements and thermal modeling. Applied Physics Letters, 2016, 109, .	3.3	78
45	High-Density GaAs/AlAs Quantum Wires Grown on (775)B-Oriented GaAs Substrates by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 1996, 35, L606-L608.	1.5	76
46	Radiation hardness of Î²-Ga2O3 metal-oxide-semiconductor field-effect transistors against gamma-ray irradiation. Applied Physics Letters, 2018, 112, .	3.3	75
47	All-ion-implanted planar-gate current aperture vertical Ga₂O₃ MOSFETs with Mg-doped blocking layer. Applied Physics Express, 2018, 11, 064102.	2.4	73
48	Temperature-dependent exciton resonance energies and their correlation with IR-active optical phonon modes in Î²-Ga2O3 single crystals. Applied Physics Letters, 2016, 108, .	3.3	72
49	Non-Recessed-Gate Enhancement-Mode AlGaN/GaN High Electron Mobility Transistors with High RF Performance. Japanese Journal of Applied Physics, 2004, 43, 2255-2258.	1.5	71
50	Ultra-short 25-nm-gate lattice-matched InAlAs/InGaAs HEMTs within the range of 400 GHz cutoff frequency. IEEE Electron Device Letters, 2001, 22, 367-369.	3.9	69
51	Electronic properties of the residual donor in unintentionally doped Î²-Ga2O3. Journal of Applied Physics, 2016, 120, .	2.5	68
52	Distributed surface donor states and the two-dimensional electron gas at AlGaN/GaN heterojunctions. Journal Physics D: Applied Physics, 2010, 43, 505501.	2.8	66
53	Î²-Ga2O3 material properties, growth technologies, and devices: a review. AAPPS Bulletin, 2022, 32, 1.	6.1	66
54	Effects of oxidation on surface chemical states and barrier height of AlGaN/GaN heterostructures. Applied Physics Letters, 2010, 97, .	3.3	65

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55	Enhancement-Mode eta -Ga₂O₃ Current Aperture Vertical MOSFETs With N-Ion-Implanted Blocker. IEEE Electron Device Letters, 2020, 41, 296-299.	3.9	65
56	Cat-CVD SiN-passivated AlGaN-GaN HFETs with thin and high Al composition barrier Layers. IEEE Electron Device Letters, 2005, 26, 139-141.	3.9	62
57	Reduction in potential barrier height of AlGaNâ•GaN heterostructures by SiN passivation. Journal of Applied Physics, 2007, 101, 043703.	2.5	62
58	Self-organized GaAs quantum-wire lasers grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Applied Physics Letters, 1999, 74, 780-782.	3.3	61
59	InAlN/GaN Heterostructure Field-Effect Transistors Grown by Plasma-Assisted Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2004, 43, L768-L770.	1.5	60
60	Theoretical and experimental investigation of optical absorption anisotropy in Î²-Ga₂O₃. Journal of Physics Condensed Matter, 2016, 28, 224005.	1.8	59
61	30-nm-Gate AlGaN/GaN Heterostructure Field-Effect Transistors with a Current-Gain Cutoff Frequency of 181 GHz. Japanese Journal of Applied Physics, 2006, 45, L1111-L1113.	1.5	57
62	Large conduction band offset at SiO₂ /Î²-Ga₂ O₃ heterojunction determined by X-ray photoelectron spectroscopy. Physica Status Solidi (B): Basic Research, 2016, 253, 623-625.	1.5	57
63	Pulsed Large Signal RF Performance of Field-Plated Ga₂O₃ MOSFETs. IEEE Electron Device Letters, 2018, 39, 1572-1575.	3.9	55
64	AlGaN/GaN Heterostructure Field-Effect Transistors with Current Gain Cut-off Frequency of 152 GHz on Sapphire Substrates. Japanese Journal of Applied Physics, 2005, 44, L475-L478.	1.5	54
65	Raman Thermography of Peak Channel Temperature in <inline-formula> <tex-math notation="LaTeX">eta </tex-math> </inline-formula>-Ga²O³ MOSFETs. IEEE Electron Device Letters, 2019, 40, 189-192.	3.9	54
66	Enhancement-Mode AlN/GaN HFETs Using Cat-CVD SiN. IEEE Transactions on Electron Devices, 2007, 54, 1566-1570.	3.0	52
67	Normally-Off Ga₂O₃MOSFETs With Unintentionally Nitrogen-Doped Channel Layer Grown by Plasma-Assisted Molecular Beam Epitaxy. IEEE Electron Device Letters, 2019, 40, 1064-1067.	3.9	50
68	Epitaxial growth of high-quality InN films on sapphire substrates by plasma-assisted molecular-beam epitaxy. Journal of Crystal Growth, 2003, 252, 128-135.	1.5	44
69	Electron effective mass in Sn-doped monoclinic single crystal Î²-gallium oxide determined by mid-infrared optical Hall effect. Applied Physics Letters, 2018, 112, .	3.3	43
70	Single-crystal-Ga2O3/polycrystalline-SiC bonded substrate with low thermal and electrical resistances at the heterointerface. Applied Physics Letters, 2019, 114, .	3.3	43
71	Effects of SiN passivation by catalytic chemical vapor deposition on electrical properties of AlGaNâ•GaN heterostructure field-effect transistors. Journal of Applied Physics, 2006, 100, 033714.	2.5	40
72	A comparative study of effects of SiNx deposition method on AlGaN/GaN heterostructure field-effect transistors. Applied Physics Letters, 2009, 94, .	3.3	40

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73	Electron density dependence of the electronic structure of InN epitaxial layers grown on sapphire (0001). Physical Review B, 2005, 72, .	3.2	39
74	Epitaxially grown crystalline Al₂O₃ interlayer on Î²-Ga₂O₃(010) and its suppressed interface state density. Japanese Journal of Applied Physics, 2016, 55, 1202B5.	1.5	39
75	Highly uniform and high-density GaAs/(GaAs)4(AlAs)2 quantum wires grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Applied Physics Letters, 1997, 71, 2005-2007.	3.3	38
76	Ultrawide bandgap semiconductors. Applied Physics Letters, 2021, 118, .	3.3	38
77	Plasma-assisted MBE growth of InN films and InAlN/InN heterostructures. Journal of Crystal Growth, 2003, 251, 494-498.	1.5	35
78	Fabrication of sub-50-nm-gate i-AlGaN/GaN HEMTs on sapphire. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2368-2371.	0.8	35
79	Estimation of band-gap energy of intrinsic InN from photoluminescence properties of undoped and Si-doped InN films grown by plasma-assisted molecular-beam epitaxy. Journal of Crystal Growth, 2004, 269, 162-166.	1.5	35
80	Two-Stage High-Gain High-Power Distributed Amplifier Using Dual-Gate GaN HEMTs. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2059-2063.	4.6	33
81	Spectroscopic ellipsometry studies on Î²-Ga₂O₃films and single crystal. Japanese Journal of Applied Physics, 2016, 55, 1202B2.	1.5	33
82	Surface Corrugation of GaAs Layers Grown on (775)B-Oriented GaAs Substrates by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 1997, 36, 6285-6289.	1.5	32
83	Enhancement-Modem-plane AlGaN/GaN Heterojunction Field-Effect Transistors. Applied Physics Express, 2009, 2, 011001.	2.4	31
84	Effect of Dielectric Thickness on Power Performance of AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2009, 30, 313-315.	3.9	31
85	Delay-time analysis in radio-frequency Î² -Ga2O3 field effect transistors. Applied Physics Letters, 2020, 117, .	3.3	29
86	Vertical Î²-Ga₂O₃ Schottky barrier diodes with trench staircase field plate. Applied Physics Express, 2022, 15, 054001.	2.4	29
87	Fabrication Technology and Device Performance of Sub-50-nm-Gate InP-Based High Electron Mobility Transistors. Japanese Journal of Applied Physics, 2002, 41, 1094-1098.	1.5	28
88	Depletion-mode Ga<inf>2</inf>O<inf>3</inf> MOSFETs on β-Ga<inf>2</inf>O<inf>3</inf> (010) substrates with Si-ion-implanted channel and contacts. , 2013, , .		28
89	High-Performance Short-Gate InAlN/GaN Heterostructure Field-Effect Transistors. Japanese Journal of Applied Physics, 2006, 45, L843-L845.	1.5	27
90	Effects of Barrier Thinning on Small-Signal and 30-GHz Power Characteristics of AlGaN/GaN Heterostructure Field-Effect Transistors. IEEE Transactions on Electron Devices, 2011, 58, 1681-1686.	3.0	25

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91	Î²â€Gallium Oxide Devices: Progress and Outlook. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100357.	2.4	25
92	Control of electron density in InN by Si doping and optical properties of Si-doped InN. Physica Status Solidi (B): Basic Research, 2003, 240, 417-420.	1.5	24
93	Barrier Thickness Dependence of Electrical Properties and DC Device Characteristics of AlGaN/GaN Heterostructure Field-Effect Transistors Grown by Plasma-Assisted Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2004, 43, L1147-L1149.	1.5	23
94	Ga<inf>2</inf>O<inf>3</inf> Schottky barrier diodes with n[−]-Ga<inf>2</inf>O<inf>3</inf> drift layers grown by HVPE. , 2015, , .		23
95	Comparison of O2 and H2O as oxygen source for homoepitaxial growth of Î²-Ga2O3 layers by halide vapor phase epitaxy. Journal of Crystal Growth, 2018, 492, 39-44.	1.5	23
96	Low temperature etching of GaAs substrates and improved morphology of GaAs grown by metalorganic molecular beam epitaxy using trisdimethylaminoarsenic and triethylgallium. Journal of Crystal Growth, 1995, 150, 551-556.	1.5	22
97	High fT 50-nm-Gate InAlAs/InGaAs High Electron Mobility Transistors Lattice-Matched to InP Substrates. Japanese Journal of Applied Physics, 2000, 39, L838-L840.	1.5	21
98	High sensitivity and quantitative magnetic field measurements at 600Â°C. Journal of Applied Physics, 2006, 99, 08B302.	2.5	20
99	GaN-based FETs using Cat-CVD SiN passivation for millimeter-wave applications. Thin Solid Films, 2008, 516, 548-552.	1.8	20
100	Carrier capture kinetics, deep levels, and isolation properties of Î² -Ga2O3 Schottky-barrier diodes damaged by nitrogen implantation. Applied Physics Letters, 2020, 117, .	3.3	20
101	Laser operation at room temperature of self-organized In[sub 0.1]Ga[sub 0.9]As/(GaAs)[sub 6](AlAs)[sub 1] quantum wires grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1672.	1.6	19
102	Aperture-limited conduction and its possible mechanism in ion-implanted current aperture vertical Î² -Ga2O3 MOSFETs. Applied Physics Letters, 2021, 118, .	3.3	19
103	In0.15Ga0.85As/GaAs quantum wire structures grown on (553)B GaAs substrates by molecular beam epitaxy. Journal of Crystal Growth, 1999, 201-202, 824-827.	1.5	16
104	GaAs/(GaAs)4(AlAs)2 quantum wire lasers grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Journal of Crystal Growth, 1999, 201-202, 886-890.	1.5	15
105	Vacancy-type defects in Si-doped InN grown by plasma-assisted molecular-beam epitaxy probed using monoenergetic positron beams. Journal of Applied Physics, 2005, 97, 043514.	2.5	14
106	First demonstration of vertical Ga₂O₃ MOSFET: Planar structure with a current aperture. , 2017, , .		13
107	Relation Between Electrical and Optical Properties of pâ€Type NiO Films. Physica Status Solidi (B): Basic Research, 2018, 255, 1700311.	1.5	13
108	Reduction in leakage current through interface between Ga2O3 epitaxial layer and substrate by ion implantation doping of compensating impurities. Applied Physics Letters, 2020, 117, .	3.3	13

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109	Effect of substrate orientation on homoepitaxial growth of Î² -Ga2O3 by halide vapor phase epitaxy. Applied Physics Letters, 2022, 120, .	3.3	13
110	High-density quantum wires naturally formed on (7 7 5)B-oriented GaAs substrates by molecular beam epitaxy. Journal of Crystal Growth, 1997, 175-176, 814-818.	1.5	12
111	Wide bandgap semiconductor materials and devices. Journal of Applied Physics, 2022, 131, .	2.5	12
112	HighfTandfmaxAlGaN/GaN HFETs achieved by using thin and high-Al-composition AlGaN barrier layers and Cat-CVD SiN passivation. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1851-1855.	1.8	11
113	Effect of (AlGa)₂O₃ back barrier on device characteristics of Î²-Ga₂O₃ metal-oxide-semiconductor field-effect transistors with Si-implanted channel. Japanese Journal of Applied Physics, 2021, 60, 030906.	1.5	11
114	Superconductivity of InN with a well defined Fermi surface. Physica Status Solidi (B): Basic Research, 2006, 243, 1679-1686.	1.5	10
115	High-density In0.14Ga0.86As/(GaAs)5(AlAs)5 quantum wires naturally formed on (775)B-oriented GaAs substrates by molecular beam epitaxy. Microelectronic Engineering, 1998, 43-44, 335-340.	2.4	9
116	Si Delta-Dopedm-Plane AlGaN/GaN Heterojunction Field-Effect Transistors. Applied Physics Express, 0, 2, 061003.	2.4	9
117	Gallium Oxide Field Effect Transistors â€" Establishing New Frontiers of Power Switching and Radiation-Hard Electronics. International Journal of High Speed Electronics and Systems, 2019, 28, 1940002.	0.7	9
118	Electroreflectance study on optical anisotropy in Î²-Ga2O3. Applied Physics Letters, 2019, 115, .	3.3	9
119	Fabrication of Î²-Ga₂O₃/Si heterointerface and characterization of interfacial structures for high-power device applications. Japanese Journal of Applied Physics, 2022, 61, SF1001.	1.5	9
120	MBE growth and device characteristics of InAlN/GaN HFETs. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2598-2601.	0.8	8
121	Development of High-Frequency GaN HFETs for Millimeter-Wave Applications. IEICE Transactions on Electronics, 2008, E91-C, 984-988.	0.6	8
122	High f/sub T/ 50-nm-gate lattice-matched InAlAs/InGaAs HEMTs. , 0, , .		7
123	DC and RF Performance of 50 nm Gate Pseudomorphic In0.7Ga0.3As/In0.52Al0.48As High Electron Mobility Transistors Grown on (411)A-Oriented InP Substrates by Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L720-L722.	1.5	7
124	Electronic structure of InN observed by Shubnikovâ€"de Haas measurements. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2822-2825.	0.8	7
125	Millimeter-wave GaN HFET technology. Proceedings of SPIE, 2008, , .	0.8	7
126	Characterization of trap states in buried nitrogen-implanted Î²-Ga2O3. Applied Physics Letters, 2020, 117, .	3.3	7

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127	120-nm-T-shaped-Moâˆ•Ptâˆ•Au-gate AlGaNâˆ•GaN high electron mobility transistors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, L13.	1.6	6
128	Stability and degradation of isolation and surface in Ga2O3 devices. Microelectronics Reliability, 2019, 100-101, 113453.	1.7	6
129	Temperature dependence of exciton lifetimes in high-density GaAs/(GaAs)4(AlAs)2 quantum wires grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Solid-State Electronics, 1998, 42, 1581-1585.	1.4	5
130	Fabrication technology and device performance of sub-50-nm-gate InP-based HEMTs. , 0, , .		5
131	Depletion-mode Ga<inf>2</inf>O<inf>3</inf> MOSFETs. , 2013, , .		5
132	Temperature dependence of photoluminescence from high-density GaAs/(GaAs)4(AlAs)2 quantum wires grown on (775)B-oriented GaAs substrates by molecular beam epitaxy. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 959-963.	2.7	4
133	Cat-CVD SiN insulated-gate AlGaN/GaN HFETs with 163 GHz f/sub T/ and 184 GHz f/sub max/. , 0, , .		4
134	Superconductivity of InN observed in the magnetoresistance at low temperature. Journal of Physics: Conference Series, 2006, 51, 279-282.	0.4	4
135	Development of millimeter-wave GaN HFET technology. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2042-2048.	1.8	4
136	Terahertz emission spectroscopy of GaN-based heterostructures. Journal of Applied Physics, 2021, 129, 245702.	2.5	4
137	Fabrication of n-Si/n-Ga2O3 heterojunctions by surface-activated bonding and their electrical properties. Journal of Applied Physics, 2022, 131, .	2.5	4
138	A trapping tolerant drain current based temperature measurement of Î²-Ga₂O₃ MOSFETs. Applied Physics Letters, 2022, 120, 073502.	3.3	4
139	XPS study of surface potential in AlGaN/GaN heterostructure with Cat-CVD SiN passivation. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2354-2357.	0.8	3
140	Current Status of Gallium Oxide-Based Power Device Technology. , 2015, , .		3
141	Fundamental technologies for gallium oxide transistors. Semiconductors and Semimetals, 2021, 107, 1-22.	0.7	3
142	Effect of thermal annealing on photoexcited carriers in nitrogen-ion-implanted Î²-Ga2O3 crystals detected by photocurrent measurement. AIP Advances, 2021, 11, .	1.3	3
143	Vertical Ga₂O₃ Schottky Barrier Diodes with Guard Ring Formed by Nitrogen-Ion Implantation. , 2019, , .		3
144	Impact of thermal annealing on deep levels in nitrogen-implanted Î²-Ga2O3 Schottky barrier diodes. Journal of Applied Physics, 2021, 130, .	2.5	3

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145	Effect of Low-Temperature-Grown GaN Intermediate Layer on InN Growth by Plasma-Assisted MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 360-363.	0.8	2
146	InP HEMTs: physics, applications, and future. , 0, , .		2
147	Effect of thermal annealing on 120-nm-T-shaped-Tiâˆ•Ptâˆ•Au-gate AlGaNâˆ•GaN high electron mobility transistors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 895.	1.6	2
148	A comparative study of SiN deposition methods for millimeter-wave AlGaN/GaN HFETs. , 2008, , .		2
149	Impacts of AlOxformation on emission properties of AlN/GaN heterostructures. Applied Physics Express, 2015, 8, 052401.	2.4	2
150	Ga2O3 field-plated schottky barrier diodes with a breakdown voltage of over 1 kV. , 2016, , .		2
151	Demonstration of Ga<inf>2</inf>O<inf>3</inf> trench MOS-type Schottky barrier diodes. , 2017, , .		2
152	Wide bandgap oxides. APL Materials, 2019, 7, .	5.1	2
153	Enhancement-Mode Current Aperture Vertical Ga₂O₃ MOSFETs. , 2019, , .		2
154	Vertical Gallium Oxide Transistors with Current Aperture Formed Using Nitrogen-Ion Implantation Process. , 2020, , .		2
155	Ga<inf>2</inf>O<inf>3</inf> Schottky barrier diodes fabricated on single-crystal β-Ga<inf>2</inf>O<inf>3</inf> substrates. , 2012, , .		1
156	Growth of crystallized AlO on AlN/GaN heterostructures by in-situ RF-MBE. Journal of Crystal Growth, 2014, 405, 64-67.	1.5	1
157	Gallium Oxide and Related Semiconductors. Japanese Journal of Applied Physics, 2016, 55, 120201.	1.5	1
158	Radiation hardness of Ga<inf>2</inf>O<inf>3</inf> MOSFETs against gamma-ray irradiation. , 2017, , .		1
159	Recent Advances in Ga2O3 MOSFET Technologies. , 2018, , .		1
160	Phonon Properties. Springer Series in Materials Science, 2020, , 501-534.	0.6	1
161	Higher mobility with high concentration of 2DEG in pseudomorphic In/sub 0.7/Ga/sub 0.3/As/In/sub 0.52/Al/sub 0.48/As quantum-well HEMT structure with [411]A super-flat interfaces grown on [411]A InP substrate by MBE. , 0, , .		0
162	Pseudomorphic In/sub 0.7/Ga/sub 0.3/As/In/sub 0.52/Al/sub 0.48/As HEMTs with super-flat interfaces fabricated on [411] A-oriented InP substrates. , 0, , .		0

#	Article	IF	Citations
163	Plasma-assisted MBE growth of InN film and InAlN/InN heterostructure. , 0, , .		0
164	Small-signal and 30-GHz power performance of AlGaN/GaN HFETs without back barriers. , 2009, , .		0
165	Research and development on Ga<inf>2</inf>O<inf>3</inf> transistors and diodes. , 2013, , .		0
166	Estimation of carrier density of wide bandgap semiconductor β-Ga<inf>2</inf>O<inf>3</inf> single crystals by THz reflectance measurement. , 2015, , .		0
167	Invited: Process and Characterization of Vertical Ga2O3 Transistors. , 2019, , .		0
168	Observation of Electroreflectance Spectra of eta-Ga2O3 Single Crystal. , 2019, , .		0
169	Comment on â€œCharacteristics of Multi-photon Absorption in a Î²-Ga₂O₃ Single Crystalâ€•[J. Phys. Soc. Jpn. 88, 113701 (2019)]. Journal of the Physical Society of Japan, 2020, 89, 036001.	1.6	0
170	Selective observation of transverse optical phonons of Au modes to evaluate free charge carrier parameters in Î²-Ga2O3 substrate and homoepitaxial film. Applied Physics Letters, 2021, 118, 252101.	3.3	0
171	Gallium Oxide Schottky Barrier Diodes. IEEJ Transactions on Electronics, Information and Systems, 2016, 136, 479-483.	0.2	0
172	Latest progress in gallium-oxide electronic devices. , 2018, , .		0
173	Field-Effect Transistors 2. Springer Series in Materials Science, 2020, , 583-607.	0.6	0
174	Charge trapping and degradation of Ga2O3 isolation structures for power electronics. , 2020, , .		0
175	Fabrication of Ga₂O₃/Si direct bonding interface for high power device applications. , 2021, , .		0
176	Deep levels and conduction processes in nitrogen-implanted Ga2O3 Schottky barrier diodes. , 2022, , .		0
177	Gallium Oxide Power Device Technologies. , 2022, , .		0