

Yoichi Kawakami

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

119 papers	3,246 citations	25 h-index	55 g-index
127 ext. papers	3,621 ext. citations	3 avg, IF	5.11 L-index

#	Paper	IF	Citations
119	Recombination dynamics of localized excitons in In _{0.20} Ga _{0.80} N-In _{0.05} Ga _{0.95} N multiple quantum wells. <i>Physical Review B</i> , 1997 , 55, R1938-R1941	3.3	421
118	Blue, Green, and Amber InGaN/GaN Light-Emitting Diodes on Semipolar {11-22} GaN Bulk Substrates. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L659-L662	1.4	333
117	Surface plasmon enhanced spontaneous emission rate of InGaN/GaN quantum wells probed by time-resolved photoluminescence spectroscopy. <i>Applied Physics Letters</i> , 2005 , 87, 071102	3.4	300
116	Dimensionality of excitons in laser-diode structures composed of In _x Ga _{1-x} N multiple quantum wells. <i>Physical Review B</i> , 1999 , 59, 10283-10288	3.3	181
115	100 mW deep-ultraviolet emission from aluminium-nitride-based quantum wells pumped by an electron beam. <i>Nature Photonics</i> , 2010 , 4, 767-770	33.9	165
114	The 2020 UV emitter roadmap. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 503001	3	123
113	Initial nucleation of AlN grown directly on sapphire substrates by metal-organic vapor phase epitaxy. <i>Applied Physics Letters</i> , 2008 , 92, 241905	3.4	86
112	Partially disordered photonic-crystal thin films for enhanced and robust photovoltaics. <i>Applied Physics Letters</i> , 2012 , 100, 181110	3.4	77
111	Photoluminescence property of InGaN single quantum well with embedded AlGaIn layer. <i>Applied Physics Letters</i> , 2006 , 88, 202107	3.4	76
110	Stimulated emission from optically pumped GaN quantum dots. <i>Applied Physics Letters</i> , 1997 , 71, 1299-1301	3.4	74
109	Spatial and temporal luminescence dynamics in an In _x Ga _{1-x} N single quantum well probed by near-field optical microscopy. <i>Applied Physics Letters</i> , 2002 , 81, 4353-4355	3.4	73
108	High-Efficiency InGaN/GaN Light Emitters Based on Nanophotonics and Plasmonics. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 1199-1209	3.8	66
107	All deformation potentials in GaN determined by reflectance spectroscopy under uniaxial stress: Definite breakdown of the quasicubic approximation. <i>Physical Review B</i> , 2010 , 81,	3.3	64
106	Emission mechanisms in Al-rich AlGaIn/AlN quantum wells assessed by excitation power dependent photoluminescence spectroscopy. <i>Journal of Applied Physics</i> , 2015 , 117, 075701	2.5	60
105	Monolithic Polychromatic Light-Emitting Diodes Based on InGaIn Microfacet Quantum Wells toward Tailor-Made Solid-State Lighting. <i>Applied Physics Express</i> , 2008 , 1, 011106	2.4	60
104	Confocal microphotoluminescence of InGaIn-based light-emitting diodes. <i>Journal of Applied Physics</i> , 2005 , 98, 064503	2.5	58
103	Self-organized CdSe quantum dots onto cleaved GaAs (110) originating from Stranski-Krastanow growth mode. <i>Applied Physics Letters</i> , 1997 , 70, 3278-3280	3.4	54

102	Extremely high internal quantum efficiencies from AlGa _N /AlN quantum wells emitting in the deep ultraviolet spectral region. <i>Applied Physics Letters</i> , 2011 , 99, 011902	3.4	49
101	Discrimination of local radiative and nonradiative recombination processes in an InGa _N /Ga _N single-quantum-well structure by a time-resolved multimode scanning near-field optical microscopy. <i>Applied Physics Letters</i> , 2003 , 83, 3462-3464	3.4	48
100	Homoepitaxy and Photoluminescence Properties of (0001) AlN. <i>Applied Physics Express</i> , 2012 , 5, 082001	2.4	37
99	Theoretical investigations on anisotropic optical properties in semipolar and nonpolar InGa _N quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 3038-3041		33
98	Near-field scanning optical microscopic transient lens for carrier dynamics study in InGa _N /Ga _N . <i>Applied Physics Letters</i> , 2005 , 87, 161104	3.4	33
97	Temperature-Dependent Dynamic Behaviors of Organic Light-Emitting Diode. <i>Journal of Display Technology</i> , 2006 , 2, 333-340		29
96	Growth characteristics of AlN on sapphire substrates by modified migration-enhanced epitaxy. <i>Journal of Crystal Growth</i> , 2009 , 311, 2834-2836	1.6	28
95	Complete set of deformation potentials for AlN determined by reflectance spectroscopy under uniaxial stress. <i>Physical Review B</i> , 2013 , 87,	3.3	26
94	Environmentally friendly method to grow wide-bandgap semiconductor aluminum nitride crystals: Elementary source vapor phase epitaxy. <i>Scientific Reports</i> , 2015 , 5, 17405	4.9	25
93	Huge electron-hole exchange interaction in aluminum nitride. <i>Physical Review B</i> , 2013 , 87,	3.3	24
92	Anisotropic lattice relaxation in non-c-plane InGa _N /Ga _N multiple quantum wells. <i>Journal of Applied Physics</i> , 2012 , 112, 033513	2.5	23
91	Nanoscale Photoluminescence Properties of a Green-Emitting InGa _N Single Quantum Well on a Ga _N Substrate Probed by Scanning Near-Field Optical Microscopy. <i>Applied Physics Express</i> , 2012 , 5, 102104	2.4	23
90	Strong optical polarization in nonpolar (11 $\bar{0}$ 0) Al _x Ga _{1-x} N/AlN quantum wells. <i>Physical Review B</i> , 2013 , 87,	3.3	23
89	Surface plasmon enhanced light emission from semiconductor materials. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 2822-2824		23
88	Remarkably Suppressed Luminescence Inhomogeneity in a (0001) InGa _N Green Laser Structure. <i>Applied Physics Express</i> , 2013 , 6, 111002	2.4	22
87	Semipolar III Nitride Semiconductors: Crystal Growth, Device Fabrication, and Optical Anisotropy. <i>MRS Bulletin</i> , 2009 , 34, 334-340	3.2	21
86	Co-existence of a few and sub micron inhomogeneities in Al-rich AlGa _N /AlN quantum wells. <i>Journal of Applied Physics</i> , 2015 , 117, 115702	2.5	20
85	Heteroepitaxy mechanisms of AlN on nitridated c- and a-plane sapphire substrates. <i>Journal of Applied Physics</i> , 2017 , 121, 085304	2.5	18

84	Crack-Free Thick AlN Films Obtained by NH ₃ Nitridation of Sapphire Substrates. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JB21	1.4	18
83	Characteristics of high Al-content AlGa _N /AlN quantum wells fabricated by modified migration enhanced epitaxy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 2111-2114		18
82	Effects of internal electrical field on transient absorption in In _x Ga _{1-x} N thin layers and quantum wells with different thickness by pump and probe spectroscopy. <i>Physical Review B</i> , 2003 , 68,	3.3	18
81	Surface diffusion during metalorganic vapor phase epitaxy of AlN. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 599-602		15
80	Numerical Analysis of Multilayer Organic Light-Emitting Diodes. <i>Journal of Lightwave Technology</i> , 2007 , 25, 2828-2836	4	15
79	Dominant Nonradiative Recombination Paths and Their Activation Processes in Al _x Ga _{1-x} N-related Materials. <i>Physical Review Applied</i> , 2018 , 10,	4.3	15
78	Self-Limiting Growth of Ultrathin GaN/AlN Quantum Wells for Highly Efficient Deep Ultraviolet Emitters. <i>Advanced Optical Materials</i> , 2019 , 7, 1900860	8.1	13
77	Heteroepitaxy between wurtzite and corundum materials. <i>Journal of Applied Physics</i> , 2013 , 113, 183523	2.5	13
76	Gain Anisotropy Analysis in Green Semipolar InGa _N Quantum Wells with Inhomogeneous Broadening. <i>Japanese Journal of Applied Physics</i> , 2010 , 49, 081001	1.4	13
75	Investigation and comparison of optical gain spectra of (Al,In)Ga _N laser diodes emitting in the 375nm to 470 nm spectral range 2007 ,		13
74	Al _x Ga _{1-x} N-based semipolar deep ultraviolet light-emitting diodes. <i>Applied Physics Express</i> , 2018 , 11, 061001	2.4	13
73	Impact of Radiative and Nonradiative Recombination Processes on the Efficiency-Droop Phenomenon in In _x Ga _{1-x} N Single Quantum Wells Studied by Scanning Near-Field Optical Microscopy. <i>Physical Review Applied</i> , 2016 , 6,	4.3	12
72	Inhomogeneously broadened optical gain spectra of InGa _N quantum well laser diodes. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 2126-2128		12
71	Direct correlation between nonradiative recombination centers and threading dislocations in InGa _N quantum wells by near-field photoluminescence spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006 , 3, 1897-1901		12
70	Al _x Ga _{1-x} N-Based Quantum Wells Fabricated on Macrosteps Effectively Suppressing Nonradiative Recombination. <i>Advanced Optical Materials</i> , 2019 , 7, 1801106	8.1	11
69	Screw dislocation-induced growth spirals as emissive exciton localization centers in Al-rich AlGa _N /AlN quantum wells. <i>AIP Advances</i> , 2015 , 5, 117115	1.5	10
68	Optical gain characteristics in Al-rich AlGa _N /AlN quantum wells. <i>Applied Physics Letters</i> , 2014 , 104, 181102	3.4	10
67	Enhancements of emission rates and efficiencies by surface plasmon coupling. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 2582-2585		10

66	Tenfold improved sensitivity using high refractive-index substrates for surface plasmon sensing. <i>Applied Physics Letters</i> , 2008 , 93, 174104	3.4	10
65	Optical Properties of Highly Strained AlN Coherently Grown on 6H-SiC(0001). <i>Applied Physics Express</i> , 2013 , 6, 062604	2.4	9
64	Optical Anisotropy Control of Non-c-plane InGaN Quantum Wells. <i>Japanese Journal of Applied Physics</i> , 2009 , 48, 080201	1.4	9
63	Origin of temperature-induced luminescence peak shifts from semipolar (112̄2̄) In _x Ga _{1-x} N quantum wells. <i>Physical Review B</i> , 2017 , 96,	3.3	9
62	Micro-photoluminescence mapping of surface plasmon enhanced light emissions from InGaN/GaN quantum wells. <i>Applied Physics Letters</i> , 2017 , 111, 172105	3.4	9
61	Enhanced radiative recombination probability in AlGaN quantum wires on (0001) vicinal surface 2016 ,		9
60	Impact of face-to-face annealed sputtered AlN on the optical properties of AlGaN multiple quantum wells. <i>AIP Advances</i> , 2019 , 9, 125342	1.5	9
59	Bistable nanofacet structures on vicinal AlN(0001) surfaces. <i>Journal of Applied Physics</i> , 2014 , 115, 103518.5	1.5	8
58	265 nm AlGaN-based deep-ultraviolet light-emitting diodes grown on AlN substrates studied by photoluminescence spectroscopy under ideal pulsed selective and non-selective excitation conditions. <i>Applied Physics Express</i> , 2020 , 13, 102005	2.4	8
57	Deep-ultraviolet polychromatic emission from three-dimensionally structured AlGaN quantum wells. <i>Applied Physics Express</i> , 2017 , 10, 031001	2.4	7
56	Markedly distinct growth characteristics of semipolar (112̄2̄) and (1̄1̄2̄2̄) InGaN epitaxial layers. <i>Applied Physics Letters</i> , 2015 , 106, 082105	3.4	7
55	Effects of strong electron-hole exchange and exciton-phonon interactions on the exciton binding energy of aluminum nitride. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 091001	1.4	7
54	Polychromatic emission from polar-plane-free faceted InGaN quantum wells with high radiative recombination probabilities. <i>Applied Physics Express</i> , 2017 , 10, 071003	2.4	7
53	Photoluminescence and optical reflectance investigation of semipolar and nonpolar GaN. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 1853-1856	1.3	7
52	Metalorganic vapor phase epitaxy of pit-free AlN homoepitaxial films on various semipolar substrates. <i>Journal of Crystal Growth</i> , 2019 , 522, 68-77	1.6	6
51	Pushing the limits of deep-ultraviolet scanning near-field optical microscopy. <i>APL Photonics</i> , 2019 , 4, 070801	5.2	6
50	Near-field evidence of local polarized emission centers in InGaN/GaN materials. <i>Applied Physics Letters</i> , 2009 , 95, 211904	3.4	6
49	Semipolar {nn̄01} InGaN/GaN ridge quantum wells (n = 1B) fabricated by a regrowth technique. <i>Applied Physics Letters</i> , 2012 , 100, 162107	3.4	6

48	Sub-microscopic transient lens spectroscopy of InGaN/GaN quantum wells. <i>Physica Status Solidi (B): Basic Research</i> , 2003 , 240, 368-371	1.3	6
47	Development of polychromatic ultraviolet light-emitting diodes based on three-dimensional AlGaIn quantum wells. <i>Applied Physics Express</i> , 2017 , 10, 121001	2.4	5
46	Time-resolved photoluminescence of Al-rich AlGaIn/AlN quantum wells under selective excitation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011 , 8, 2191-2193		5
45	Deep ultraviolet emission mechanisms in highly excited Al _{0.79} Ga _{0.21} N/AlN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 1909-1912		5
44	Fabrication and characterization of GaN-based distributed Bragg reflector mirrors for low lasing threshold and integrated photonics. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2895-2898		5
43	Control of Crystal Morphologies and Interface Structures of AlN Grown on Sapphire by Elementary Source Vapor Phase Epitaxy. <i>Crystal Growth and Design</i> , 2016 , 16, 6337-6342	3.5	4
42	The relation between photoluminescence properties and gas pressure with [0001] InGaN single quantum well systems. <i>Applied Surface Science</i> , 2017 , 392, 256-259	6.7	4
41	Semi/non-polar nitride quantum wells for high-efficient light emitters 2015 ,		4
40	Assessment and Modification of Recombination Dynamics in In _x Ga _{1-x} N-Based Quantum Wells. <i>Materials Science Forum</i> , 2008 , 590, 249-274	0.4	4
39	Growth of P-type ZnSe by metalorganic molecular beam epitaxy using metal Zn and dimethylselenide. <i>Journal of Electronic Materials</i> , 1996 , 25, 223-227	1.9	4
38	Impact of microscopic In fluctuations on the optical properties of InGaN blue light-emitting diodes assessed by low-energy X-ray fluorescence mapping using synchrotron radiation. <i>Scientific Reports</i> , 2019 , 9, 3733	4.9	3
37	Control of p-type conductivity at AlN surfaces by carbon doping. <i>Applied Physics Express</i> , 2020 , 13, 015512	4	3
36	Near-field photoluminescence study in violet light emitting InGaN single quantum well structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2728-2731		3
35	Temperature-dependent electroluminescence study on 265-nm AlGaIn-based deep-ultraviolet light-emitting diodes grown on AlN substrates. <i>AIP Advances</i> , 2020 , 10, 125014	1.5	3
34	Doping and fabrication of polar-plane-free faceted InGaN LEDs with polychromatic emission properties on (111) and (112) semipolar planes. <i>Journal of Applied Physics</i> , 2020 , 128, 213103	2.5	3
33	InGaN/AlGaIn stress compensated superlattices coherently grown on semipolar (111) GaN substrates. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 78-83	1.3	3
32	Intrinsic exciton transitions of isotopically purified ¹³ C studied by photoluminescence and transmission spectroscopy. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, 010903	1.4	2
31	Synchrotron radiation microbeam X-ray diffraction for nondestructive assessments of local structural properties of faceted InGaN/GaN quantum wells. <i>Applied Physics Express</i> , 2018 , 11, 031001	2.4	2

30	Effects of Al and N ₂ Flow Sequences on the Interface Formation of AlN on Sapphire by EVPE. <i>Crystals</i> , 2017 , 7, 123	2.3	2
29	Micromirror arrays to assess luminescent nano-objects. <i>Review of Scientific Instruments</i> , 2011 , 82, 053905.	1.7	2
28	The mechanism of radiative recombination in light-emitting devices composed on InGa _N quantum wells. <i>Electronics and Communications in Japan</i> , 1998 , 81, 45-56		2
27	Growth Mechanism of Polar-Plane-Free Faceted InGa _N Quantum Wells. <i>IEICE Transactions on Electronics</i> , 2018 , E101.C, 532-536	0.4	2
26	Broadband Ultraviolet Emission from 2D Arrays of AlGa _N Microstructures Grown on the Patterned AlN Templates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900764	1.6	2
25	Isotopic effects on phonons and excitons in diamond studied by deep-ultraviolet continuous-wave photoluminescence spectroscopy. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 010904	1.4	2
24	Lattice relaxation in semipolar Al _x Ga _{1-x} N grown on (11 02) AlN substrates. <i>Applied Physics Express</i> , 2020 , 13, 061008	2.4	1
23	Deep-ultraviolet near band-edge emissions from nano-polycrystalline diamond. <i>High Pressure Research</i> , 2020 , 40, 140-147	1.6	1
22	Deposition of carbon-containing hole injection layers on p-type Al _{0.8} Ga _{0.2} N grown by metalorganic vapor phase epitaxy. <i>Applied Physics Letters</i> , 2020 , 117, 062101	3.4	1
21	Achromatic Deep Ultraviolet Lens Using Novel Optical Materials. <i>Physica Status Solidi (B): Basic Research</i> , 2020 , 257, 1900480	1.3	1
20	Enhanced nonradiative recombination in Al _x Ga _{1-x} N-based quantum wells thinner than the critical layer thickness determined by X-ray diffraction. <i>Applied Physics Express</i> , 2021 , 14, 031007	2.4	1
19	Reduction of the blue light hazard by adding a cyan light LED. <i>Journal of Advanced Simulation in Science and Engineering</i> , 2018 , 4, 44-63	0.4	0
18	Microscopic origin of thermal droop in blue-emitting InGa _N /Ga _N quantum wells studied by temperature-dependent microphotoluminescence spectroscopy. <i>Optics Express</i> , 2021 , 29, 22847-22854	3.3	0
17	Impact of the positive electron-hole exchange interaction constant on the binding energy of neutral donor bound excitons in AlN. <i>Japanese Journal of Applied Physics</i> ,	1.4	0
16	Optical anisotropy of (11 2̄) semipolar InGa _N quantum wells homoepitaxially grown on Ga _N substrates. <i>Journal of Applied Physics</i> , 2022 , 131, 074502	2.5	0
15	Effect of cleaving environment on the growth of ZnSe on the GaAs (1 1 0) surface by molecular beam epitaxy. <i>Journal of Materials Science Letters</i> , 1997 , 16, 1187-1190		
14	Effect of cleaving environment on the growth of ZnSe on the GaAs (110) surface by molecular beam epitaxy. <i>Journal of Materials Science Letters</i> , 1997 , 16, 1187-1190		
13	Semipolar InGa _N /Ga _N Quantum Wells for Highly Functional Light Emitters	385-411	

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- 11 Enhanced Light Emission by Exciton-Surface Plasmon Coupling. *Materials Research Society Symposia Proceedings*, **2007**, 1055, 3
- 10 Efficient Luminescence from {11.2} InGa_N/Ga_N Quantum Wells. *Materials Research Society Symposia Proceedings*, **2004**, 831, 540
- 9 Surface Reconstruction and Morphology of Hydrogen Sulfide Treated GaAs (001) Substrate. *Materials Research Society Symposia Proceedings*, **1996**, 448, 15
- 8 Emission Mechanism of the InGa_N MQW Grown by MOCVD. *Materials Research Society Symposia Proceedings*, **1996**, 449, 665
- 7 Special Issue on Present Status and Future Prospect of Ultraviolet LEDs and LDs Based on Nitride Semiconductors to Hand The True History of Nitride Research Down to Future Generation - The Role of Educators and Researchers -. *The Review of Laser Engineering*, **2004**, 32, 386-386 ○
- 6 Medical Applications of White LEDs for Surgical Operation. *IEEJ Transactions on Electronics, Information and Systems*, **2005**, 125, 247-254 ○.1
- 5 Molecular Beam Epitaxial Growth Behaviors of Zn_{1-x}Cd_xSe on the GaAs(110) Surface Cleaved in Ultra High Vacuum.. *Shinku/Journal of the Vacuum Society of Japan*, **1997**, 40, 317-320
- 4 Development of Dual-Probe Scanning Near-Field Optical Microscopy. *The Review of Laser Engineering*, **2015**, 43, 286 ○
- 3 Growth evolution of polar-plane-free faceted Ga_N structures on (11 2 0) and (1 0 1 0 2 0) Ga_N substrates. *Journal of Applied Physics*, **2021**, 129, 163104 2.5
- 2 Critical layer thickness of wurtzite heterostructures with arbitrary pairs of growth planes and slip systems. *Semiconductor Science and Technology*, **2021**, 36, 085016 1.8
- 1 Bias-dependent time-resolved photoluminescence spectroscopy on 265 nm AlGa_N-based LEDs on Al_N substrates. *Japanese Journal of Applied Physics*, **2021**, 60, 020903 1.4