

Yoichi Kawakami

List of Publications by Year in Descending Order

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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	Optical anisotropy of (11 $\bar{2}\bar{0}$) semipolar InGa \bar{N} quantum wells homoepitaxially grown on GaN substrates. <i>Journal of Applied Physics</i> , 2022 , 131, 074502	2.5	0
118	Growth evolution of polar-plane-free faceted GaN structures on (11 $\bar{2}\bar{0}$) and (1 $\bar{1}\bar{1}$ $\bar{2}\bar{0}$) GaN substrates. <i>Journal of Applied Physics</i> , 2021 , 129, 163104	2.5	
117	Critical layer thickness of wurtzite heterostructures with arbitrary pairs of growth planes and slip systems. <i>Semiconductor Science and Technology</i> , 2021 , 36, 085016	1.8	
116	Bias-dependent time-resolved photoluminescence spectroscopy on 265 nm AlGa \bar{N} -based LEDs on AlN substrates. <i>Japanese Journal of Applied Physics</i> , 2021 , 60, 020903	1.4	
115	Enhanced nonradiative recombination in Al \times Ga $\bar{1}\bar{0}$ 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
114	Microscopic origin of thermal droop in blue-emitting InGa \bar{N} /GaN quantum wells studied by temperature-dependent microphotoluminescence spectroscopy. <i>Optics Express</i> , 2021 , 29, 22847-22854	3.3	0
113	Lattice relaxation in semipolar Al \times Ga $\bar{1}\bar{0}$ N grown on (11 $\bar{0}\bar{2}$) AlN substrates. <i>Applied Physics Express</i> , 2020 , 13, 061008	2.4	1
112	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
111	Control of p-type conductivity at AlN surfaces by carbon doping. <i>Applied Physics Express</i> , 2020 , 13, 015512	2.4	3
110	265 nm AlGa \bar{N} -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
109	Temperature-dependent electroluminescence study on 265-nm AlGa \bar{N} -based deep-ultraviolet light-emitting diodes grown on AlN substrates. <i>AIP Advances</i> , 2020 , 10, 125014	1.5	3
108	Doping and fabrication of polar-plane-free faceted InGa \bar{N} LEDs with polychromatic emission properties on (1 $\bar{1}\bar{1}$ $\bar{2}\bar{0}$) semipolar planes. <i>Journal of Applied Physics</i> , 2020 , 128, 213103	2.5	3
107	Broadband Ultraviolet Emission from 2D Arrays of AlGa \bar{N} Microstructures Grown on the Patterned AlN Templates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900764	1.6	2
106	Deep-ultraviolet near band-edge emissions from nano-polycrystalline diamond. <i>High Pressure Research</i> , 2020 , 40, 140-147	1.6	1
105	The 2020 UV emitter roadmap. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 503001	3	123
104	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
103	Achromatic Deep Ultraviolet Lens Using Novel Optical Materials. <i>Physica Status Solidi (B): Basic Research</i> , 2020 , 257, 1900480	1.3	1

102	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
101	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
100	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
99	Pushing the limits of deep-ultraviolet scanning near-field optical microscopy. <i>APL Photonics</i> , 2019 , 4, 070801	5.2	6
98	Impact of face-to-face annealed sputtered AlN on the optical properties of AlGaIn multiple quantum wells. <i>AIP Advances</i> , 2019 , 9, 125342	1.5	9
97	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
96	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
95	Synchrotron radiation microbeam X-ray diffraction for nondestructive assessments of local structural properties of faceted InGaIn/GaN quantum wells. <i>Applied Physics Express</i> , 2018 , 11, 031001	2.4	2
94	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
93	Growth Mechanism of Polar-Plane-Free Faceted InGaIn Quantum Wells. <i>IEICE Transactions on Electronics</i> , 2018 , E101.C, 532-536	0.4	2
92	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
91	Al _x Ga _{1-x} N-based semipolar deep ultraviolet light-emitting diodes. <i>Applied Physics Express</i> , 2018 , 11, 061001	2.4	13
90	Deep-ultraviolet polychromatic emission from three-dimensionally structured AlGaIn quantum wells. <i>Applied Physics Express</i> , 2017 , 10, 031001	2.4	7
89	Heteroepitaxy mechanisms of AlN on nitridated c- and a-plane sapphire substrates. <i>Journal of Applied Physics</i> , 2017 , 121, 085304	2.5	18
88	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
87	The relation between photoluminescence properties and gas pressure with [0001] InGaIn single quantum well systems. <i>Applied Surface Science</i> , 2017 , 392, 256-259	6.7	4
86	Polychromatic emission from polar-plane-free faceted InGaIn quantum wells with high radiative recombination probabilities. <i>Applied Physics Express</i> , 2017 , 10, 071003	2.4	7
85	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

84	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
83	Micro-photoluminescence mapping of surface plasmon enhanced light emissions from InGa _N /Ga _N quantum wells. <i>Applied Physics Letters</i> , 2017 , 111, 172105	3.4	9
82	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
81	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
80	Enhanced radiative recombination probability in AlGa _N quantum wires on (0001) vicinal surface 2016 ,		9
79	InGa _N /AlGa _N stress compensated superlattices coherently grown on semipolar (̄) Ga _N substrates. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 78-83	1.3	3
78	Emission mechanisms in Al-rich AlGa _N /AlN quantum wells assessed by excitation power dependent photoluminescence spectroscopy. <i>Journal of Applied Physics</i> , 2015 , 117, 075701	2.5	60
77	Markedly distinct growth characteristics of semipolar (112̄2̄) and (1̄1̄2̄2̄) InGa _N epitaxial layers. <i>Applied Physics Letters</i> , 2015 , 106, 082105	3.4	7
76	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
75	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
74	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
73	Semi/non-polar nitride quantum wells for high-efficient light emitters 2015 ,		4
72	Development of Dual-Probe Scanning Near-Field Optical Microscopy. <i>The Review of Laser Engineering</i> , 2015 , 43, 286	0	
71	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
70	Bistable nanofacet structures on vicinal AlN(0001) surfaces. <i>Journal of Applied Physics</i> , 2014 , 115, 103518.5	1.5	8
69	Optical gain characteristics in Al-rich AlGa _N /AlN quantum wells. <i>Applied Physics Letters</i> , 2014 , 104, 181102.4	3.4	10
68	Complete set of deformation potentials for AlN determined by reflectance spectroscopy under uniaxial stress. <i>Physical Review B</i> , 2013 , 87,	3.3	26
67	Strong optical polarization in nonpolar (11̄00) Al _x Ga _{1-x} N/AlN quantum wells. <i>Physical Review B</i> , 2013 , 87,	3.3	23

66	Remarkably Suppressed Luminescence Inhomogeneity in a (0001) InGaN Green Laser Structure. <i>Applied Physics Express</i> , 2013 , 6, 111002	2.4	22
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	Huge electron-hole exchange interaction in aluminum nitride. <i>Physical Review B</i> , 2013 , 87,	3.3	24
63	Heteroepitaxy between wurtzite and corundum materials. <i>Journal of Applied Physics</i> , 2013 , 113, 183523	2.5	13
62	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
61	Partially disordered photonic-crystal thin films for enhanced and robust photovoltaics. <i>Applied Physics Letters</i> , 2012 , 100, 181110	3.4	77
60	Anisotropic lattice relaxation in non-c-plane InGaN/GaN multiple quantum wells. <i>Journal of Applied Physics</i> , 2012 , 112, 033513	2.5	23
59	Nanoscale Photoluminescence Properties of a Green-Emitting InGaN Single Quantum Well on a $\sqrt{2} \times \sqrt{2}$ GaN Substrate Probed by Scanning Near-Field Optical Microscopy. <i>Applied Physics Express</i> , 2012 , 5, 102104	2.4	23
58	Homoepitaxy and Photoluminescence Properties of (0001) AlN. <i>Applied Physics Express</i> , 2012 , 5, 082001	2.4	37
57	Semipolar {1101} InGaN/GaN ridge quantum wells (n = 1B) fabricated by a regrowth technique. <i>Applied Physics Letters</i> , 2012 , 100, 162107	3.4	6
56	Time-resolved photoluminescence of Al-rich AlGaN/AlN quantum wells under selective excitation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011 , 8, 2191-2193		5
55	Extremely high internal quantum efficiencies from AlGaN/AlN quantum wells emitting in the deep ultraviolet spectral region. <i>Applied Physics Letters</i> , 2011 , 99, 011902	3.4	49
54	Micromirror arrays to assess luminescent nano-objects. <i>Review of Scientific Instruments</i> , 2011 , 82, 053905	1.7	2
53	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
52	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
51	Gain Anisotropy Analysis in Green Semipolar InGaN Quantum Wells with Inhomogeneous Broadening. <i>Japanese Journal of Applied Physics</i> , 2010 , 49, 081001	1.4	13
50	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
49	Characteristics of high Al-content AlGaN/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

48	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
47	Near-field evidence of local polarized emission centers in InGaN/GaN materials. <i>Applied Physics Letters</i> , 2009 , 95, 211904	3.4	6
46	Optical Anisotropy Control of Non-c-plane InGaN Quantum Wells. <i>Japanese Journal of Applied Physics</i> , 2009 , 48, 080201	1.4	9
45	Semipolar III Nitride Semiconductors: Crystal Growth, Device Fabrication, and Optical Anisotropy. <i>MRS Bulletin</i> , 2009 , 34, 334-340	3.2	21
44	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
43	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
42	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
41	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
40	Monolithic Polychromatic Light-Emitting Diodes Based on InGaN Microfacet Quantum Wells toward Tailor-Made Solid-State Lighting. <i>Applied Physics Express</i> , 2008 , 1, 011106	2.4	60
39	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
38	Tenfold improved sensitivity using high refractive-index substrates for surface plasmon sensing. <i>Applied Physics Letters</i> , 2008 , 93, 174104	3.4	10
37	Super Bright Light-Emitting Devices using Surface Plasmon Coupling. <i>Hyomen Kagaku</i> , 2008 , 29, 344-349		
36	Inhomogeneously broadened optical gain spectra of InGaN quantum well laser diodes. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 2126-2128		12
35	Theoretical investigations on anisotropic optical properties in semipolar and nonpolar InGaN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 3038-3041		33
34	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
33	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
32	Enhanced Light Emission by Exciton-Surface Plasmon Coupling. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1055, 3		
31	Investigation and comparison of optical gain spectra of (Al,In)GaN laser diodes emitting in the 375nm to 470 nm spectral range 2007 ,		13

30	Numerical Analysis of Multilayer Organic Light-Emitting Diodes. <i>Journal of Lightwave Technology</i> , 2007 , 25, 2828-2836	4	15
29	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
28	Photoluminescence property of InGaN single quantum well with embedded AlGaIn layer. <i>Applied Physics Letters</i> , 2006 , 88, 202107	3.4	76
27	Temperature-Dependent Dynamic Behaviors of Organic Light-Emitting Diode. <i>Journal of Display Technology</i> , 2006 , 2, 333-340		29
26	Direct correlation between nonradiative recombination centers and threading dislocations in InGaN quantum wells by near-field photoluminescence spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006 , 3, 1897-1901		12
25	Confocal microphotoluminescence of InGaN-based light-emitting diodes. <i>Journal of Applied Physics</i> , 2005 , 98, 064503	2.5	58
24	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
23	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
22	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
21	Near-field scanning optical microscopic transient lens for carrier dynamics study in InGaN/GaN. <i>Applied Physics Letters</i> , 2005 , 87, 161104	3.4	33
20	Medical Applications of White LEDs for Surgical Operation. <i>IEEJ Transactions on Electronics, Information and Systems</i> , 2005 , 125, 247-254	0.1	
19	Efficient Luminescence from {11.2} InGaN/GaN Quantum Wells. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 831, 540		
18	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 -. <i>The Review of Laser Engineering</i> , 2004 , 32, 386-386	0	
17	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
16	Discrimination of local radiative and nonradiative recombination processes in an InGaN/GaN 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
15	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
14	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
13	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

12	The mechanism of radiative recombination in light-emitting devices composed on InGaN quantum wells. <i>Electronics and Communications in Japan</i> , 1998 , 81, 45-56		2
11	Stimulated emission from optically pumped GaN quantum dots. <i>Applied Physics Letters</i> , 1997 , 71, 1299-1301	3-4	74
10	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
9	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
8	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		
7	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		
6	Molecular Beam Epitaxial Growth Behaviors of Zn _{1-x} Cd _x Se on the GaAs(110) Surface Cleaved in Ultra High Vacuum.. <i>Shinku/Journal of the Vacuum Society of Japan</i> , 1997 , 40, 317-320		
5	Surface Reconstruction and Morphology of Hydrogen Sulfide Treated GaAs (001) Substrate. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 448, 15		
4	Emission Mechanism of the InGaN MQW Grown by MOCVD. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 449, 665		
3	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
2	Semipolar InGaN/GaN Quantum Wells for Highly Functional Light Emitters385-411		
1	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	○