# Hiroshi Amano

List of Publications by Year
in descending order



| 208 | 11,809 | 87888 38 | 27406 106 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 208 | 208 | 208 | 5527 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | P-Type Conduction in Mg-Doped GaN Treated with Low-Energy Electron Beam Irradiation (LEEBI). Japanese Journal of Applied Physics, 1989, 28, L2112-L2114. | 1.5 | 1,754 |
| 2 | Quantum-Confined Stark Effect due to Piezoelectric Fields in GaInN Strained Quantum Wells. Japanese Journal of Applied Physics, 1997, 36, L382-L385. | 1.5 | 1,129 |
| 3 | The emergence and prospects of deep-ultraviolet light-emitting diode technologies. Nature Photonics, 2019, 13, 233-244. | 31.4 | 800 |
| 4 | Effects of ain buffer layer on crystallographic structure and on electrical and optical properties of GaN and Ga1â^'xAlxN (0 < x â‰¦ 0.4) films grown on sapphire substrate by MOVPE. Journal of Crystal Growth, 1989, 98, 209-219. | 1.5 | 689 |
| 5 | Origin of defect-insensitive emission probability in In-containing (Al,In,Ga)N alloy semiconductors. Nature Materials, 2006, 5, 810-816. | 27.5 | 625 |
| 6 | Crystal Growth and Conductivity Control of Group III Nitride Semiconductors and Their Application to Short Wavelength Light Emitters. Japanese Journal of Applied Physics, 1997, 36, 5393-5408. | 1.5 | 620 |
| 7 | Determination of piezoelectric fields in strained GaInN quantum wells using the quantum-confined Stark effect. Applied Physics Letters, 1998, 73, 1691-1693. | 3.3 | 596 |
| 8 | Optical Properties of Strained AlGaN and GaInN on GaN. Japanese Journal of Applied Physics, 1997, 36, L177-L179. | 1.5 | 313 |
| 9 | The 2020 UV emitter roadmap. Journal Physics D: Applied Physics, 2020, 53, 503001. | 2.8 | 289 |
| 10 | Effects of the buffer layer in metalorganic vapour phase epitaxy of GaN on sapphire substrate. Thin Solid Films, 1988, 163, 415-420. | 1.8 | 263 |
| 11 | Photoluminescence of Mg-doped p-type GaN and electroluminescence of GaN p-n junction LED. Journal of Luminescence, 1991, 48-49, 666-670. | 3.1 | 253 |
| 12 | Improved Efficiency of 255â€“280 nm AlGaN-Based Light-Emitting Diodes. Applied Physics Express, 2010, 3, 061004. | 2.4 | 233 |
| 13 | Internal Quantum Efficiency of Whole-Composition-Range AlGaN Multiquantum Wells. Applied Physics Express, 2011, 4, 052101. | 2.4 | 220 |
| 14 | A 271.8 nm deep-ultraviolet laser diode for room temperature operation. Applied Physics Express, 2019, 12, 124003. | 2.4 | 217 |
| 15 | Growth of single crystalline GaN film on Si substrate using 3C-SiC as an intermediate layer. Journal of Crystal Growth, 1991, 115, 634-638. | 1.5 | 188 |
| 16 | Growth of single crystal GaN substrate using hydride vapor phase epitaxy. Journal of Crystal Growth, 1990, 99, 381-384. | 1.5 | 176 |
| 17 | Stimulated Emission by Current Injection from an AlGaN/GaN/GaInN Quantum Well Device. Japanese Journal of Applied Physics, 1995, 34, L1517. | 1.5 | 164 |
| 18 | Widegap Columnâ€•III Nitride Semiconductors for UV/Blue Light Emitting Devices. Journal of the Electrochemical Society, 1994, 141, 2266-2271. | 2.9 | 141 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Thermal ionization energy of Si and Mg in AlGaN. Journal of Crystal Growth, 1998, 189-190, 528-531. | 1.5 | 125 |
| 20 | Structural properties of InN on GaN grown by metalorganic vapor-phase epitaxy. Journal of Applied Physics, 1999, 85, 7682-7688. | 2.5 | 108 |
| 21 | Anomalous features in the optical properties of Al1â^'xInxN on GaN grown by metal organic vapor phase epitaxy. Applied Physics Letters, 2000, 76, 876-878. | 3.3 | 108 |
| 22 | Development of high efficiency 255â€“355â€‰nm AlGaNâ€based lightâ€emitting diodes. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1594-1596. | 1.8 | 98 |
| 23 | Preparation of AlxGa1-xN/GaN heterostructure by MOVPE. Journal of Crystal Growth, 1990, 104, 533-538. | 1.5 | 93 |
| 24 | Nobel Lecture: Growth of GaN on sapphire via low-temperature deposited buffer layer and realization of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math> -type GaN by Mg doping followed by low-energy electron beam irradiation. Reviews of Modern Physics, 2015, 87, 1133-1138. | 45.6 | 90 |
| 25 | Morphology development of GaN nanowires using a pulsed-mode MOCVD growth technique. CrystEngComm, 2014, 16, 2273-2282. | 2.6 | 82 |
| 26 | Growth of Si-doped AlxGa1â€“xN on (0001) sapphire substrate by metalorganic vapor phase epitaxy. Journal of Crystal Growth, 1991, 115, 648-651. | 1.5 | 75 |
| 27 | 75 Ã... GaN channel modulation doped field effect transistors. Applied Physics Letters, 1996, 68, 2849-2851. | 3.3 | 68 |
| 28 | Misfit Strain Relaxation by Stacking Fault Generation in InGaN Quantum Wells Grown onm-Plane GaN. Applied Physics Express, 0, 2, 041002. | 2.4 | 64 |
| 29 | Experimental observation of high intrinsic thermal conductivity of AlN. Physical Review Materials, 2020, 4, . | 2.4 | 60 |
| 30 | Full-duplex light communication with a monolithic multicomponent system. Light: Science and Applications, 2018, 7, 83. | 16.6 | 59 |
| 31 | Realization of crack-free and high-quality thick AlxGa1â^'xN for UV optoelectronics using low-temperature interlayer. Applied Surface Science, 2000, 159-160, 405-413. | 6.1 | 56 |
| 32 | Uneven AlGaN multiple quantum well for deep-ultraviolet LEDs grown on macrosteps and impact on electroluminescence spectral output. Japanese Journal of Applied Physics, 2017, 56, 061002. | 1.5 | 54 |
| 33 | MOVPE growth of GaN on a misoriented sapphire substrate. Journal of Crystal Growth, 1991, 107, 509-512. | 1.5 | 53 |
| 34 | Strain relief and its effect on the properties of GaN using isoelectronic In doping grown by metalorganic vapor phase epitaxy. Applied Physics Letters, 1999, 75, 4106-4108. | 3.3 | 48 |
| 35 | Metalorganic vapor phase epitaxy growth of crack-free AlN on GaN and its application to high-mobility AlN/GaN superlattices. Applied Physics Letters, 2001, 79, 3062-3064. | 3.3 | 48 |
| 36 | Suppression of phase separation of AlGaN during lateral growth and fabrication of high-efficiency UV-LED on optimized AlGaN. Journal of Crystal Growth, 2002, 237-239, 951-955. | 1.5 | 48 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Highly ordered catalyst-free InGaN/GaN coreâ€“shell architecture arrays with expanded active area region. Nano Energy, 2015, 11, 294-303. | 16.0 | 47 |
| 38 | Cross-sectional TEM study of microstructures in MOVPE GaN films grown on Î±-Al2O3 with a buffer layer of AlN. Journal of Crystal Growth, 1991, 115, 381-387. | 1.5 | 45 |
| 39 | Highâ€performance UV emitter grown on highâ€crystallineâ€quality AlGaN underlying layer. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1199-1204. | 1.8 | 41 |
| 40 | Demonstration of diamond field effect transistors by AlN/diamond heterostructure. Physica Status Solidi - Rapid Research Letters, 2011, 5, 125-127. | 2.4 | 39 |
| 41 | Effects of exciton localization on internal quantum efficiency of InGaN nanowires. Journal of Applied Physics, 2013, 114, . | 2.5 | 38 |
| 42 | Growth of GaN Layers on Sapphire by Lowâ€Temperatureâ€Deposited Buffer Layers and Realization of pâ€type GaN by Magesium Doping and Electron Beam Irradiation (Nobel Lecture). Angewandte Chemie - International Edition, 2015, 54, 7764-7769. | 13.8 | 37 |
| 43 | Emission Characteristics of InGaN/GaN Core-Shell Nanorods Embedded in a 3D Light-Emitting Diode. Nanoscale Research Letters, 2016, 11, 215. | 5.7 | 35 |
| 44 | Improving the Leakage Characteristics and Efficiency of GaN-based Micro-Light-Emitting Diode with Optimized Passivation. ECS Journal of Solid State Science and Technology, 2020, 9, 055001. | 1.8 | 35 |
| 45 | Laser liftâ€off of AlN/sapphire for UV lightâ€emitting diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 753-756. | 0.8 | 34 |
| 46 | Laser diode of 350.9nm wavelength grown on sapphire substrate by MOVPE. Journal of Crystal Growth, 2004, 272, 270-273. | 1.5 | 33 |
| 47 | Highly elongated vertical GaN nanorod arrays on Si substrates with an AlN seed layer by pulsed-mode metalâ€“organic vapor deposition. CrystEngComm, 2016, 18, 1505-1514. | 2.6 | 33 |
| 48 | Photoluminescence from highly excited AlN epitaxial layers. Applied Physics Letters, 2008, 92, . | 3.3 | 31 |
| 49 | One-sidewall-seeded epitaxial lateral overgrowth of a-plane GaN by metalorganic vapor-phase epitaxy. Journal of Crystal Growth, 2009, 311, 2887-2890. | 1.5 | 31 |
| 50 | Control of strain in GaN using an In doping-induced hardening effect. Physical Review B, 2001, 64, . | 3.2 | 30 |
| 51 | Growth of GaN on ZrB2 substrate by metal-organic vapor phase epitaxy. Applied Surface Science, 2003, 216, 502-507. | 6.1 | 30 |
| 52 | Compensation effect of Mg-doped a- and c-plane GaN films grown by metalorganic vapor phase epitaxy. Journal of Crystal Growth, 2010, 312, 3131-3135. | 1.5 | 30 |
| 53 | Growth of GaN and AlGaN on (100) Î²â€Ga<sub>2</sub>O<sub>3</sub> substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 519-522. | 0.8 | 30 |
| 54 | Progress and prospect of group-III nitride semiconductors. Journal of Crystal Growth, 1997, 175-176, 29-36. | 1.5 | 28 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Piezoelectric Stark-like Ladder in GaN/GaInN/GaN Heterostructures. Japanese Journal of Applied Physics, 1999, 38, L163-L165. | 1.5 | 28 |
| 56 | Optically pumped lasing properties of $(1ar{1}01)$ InGaN/GaN stripe multiquantum wells with ridge cavity structure on patterned (001) Si substrates. Applied Physics Express, 2015, 8, 022702. | 2.4 | 28 |
| 57 | Improvement of Light Extraction Efficiency for AlGaN-Based Deep Ultraviolet Light-Emitting Diodes. Japanese Journal of Applied Physics, 2011, 50, 122101. | 1.5 | 27 |
| 58 | Critical issues in AlxGa1â^'xN growth. Optical Materials, 2002, 19, 219-222. | 3.6 | 26 |
| 59 | Stimulated emission with the longest wavelength in the blue region from GaInN/GaN multi-quantum well structures. Journal of Crystal Growth, 1998, 189-190, 831-836. | 1.5 | 25 |
| 60 | Development of GaN-based blue LEDs and metalorganic vapor phase epitaxy of GaN and related materials. Progress in Crystal Growth and Characterization of Materials, 2016, 62, 126-135. | 4.0 | 25 |
| 61 | Structural analysis of Si-doped AlGaN/GaN multi-quantum wells. Journal of Crystal Growth, 2002, 237-239, 1129-1132. | 1.5 | 22 |
| 62 | Multijunction GaInN-based solar cells using a tunnel junction. Applied Physics Express, 2014, 7, 034104. | 2.4 | 22 |
| 63 | Fully Ion Implanted Normally-Off GaN DMOSFETs with ALD-Al2O3 Gate Dielectrics. Materials, 2019, 12, 689. | 2.9 | 21 |
| 64 | mâ€Plane GaN Schottky Barrier Diodes Fabricated With MOVPE Layer on Several Offâ€Angle mâ€Plane GaN Substrates. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700645. | 1.8 | 20 |
| 65 | Control of strain in GaN by a combination of H2 and N2 carrier gases. Journal of Applied Physics, 2001, 89, 7820-7824. | 2.5 | 19 |
| 66 | Effect of piezoelectric field on carrier dynamics in InGaN-based solar cells. Journal Physics D: Applied Physics, 2016, 49, 025103. | 2.8 | 19 |
| 67 | Relationship between lattice relaxation and electrical properties in polarization doping of graded AlGaN with high AlN mole fraction on AlGaN template. Applied Physics Express, 2017, 10, 025502. | 2.4 | 19 |
| 68 | High-temperature thermal annealing of nonpolar (1 0<mml:math) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 247 Td (xmlns:mml="http://www | | |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Stimulated emission in MOVPE-grown GaN film. Journal of Luminescence, 1991, 48-49, 889-892. | 3.1 | 16 |
| 74 | Sidewall epitaxial lateral overgrowth of nonpolar aâ€plane GaN by metalorganic vapor phase epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1575-1578. | 0.8 | 16 |
| 75 | Growth of GaN on sapphire via lowâ€temperature deposited buffer layer and realization of pâ€type GaN by Mg doping followed by lowâ€energy electron beam irradiation (Nobel Lecture). Annalen Der Physik, 2015, 527, 327-333. | 2.4 | 16 |
| 76 | Excitation density dependence of radiative and nonradiative recombination lifetimes in InGaN/GaN multiple quantum wells. Physica Status Solidi (B): Basic Research, 2015, 252, 940-945. | 1.5 | 16 |
| 77 | III-nitride coreâ€“shell nanorod array on quartz substrates. Scientific Reports, 2017, 7, 45345. | 3.3 | 16 |
| 78 | Realization of low-dislocation-density, smooth surface, and thick GaInN films on m-plane GaN templates. Journal of Crystal Growth, 2008, 310, 3308-3312. | 1.5 | 15 |
| 79 | Improved crystal quality of semipolar (101Â¯3) GaN on Si(001) substrates using AlN/GaN superlattice interlayer. Journal of Crystal Growth, 2016, 454, 114-120. | 1.5 | 15 |
| 80 | Strain relief by In-doping and its effect on the surface and on the interface structures in (Al)GaN on sapphire grown by metalorganic vapor-phase epitaxy. Applied Surface Science, 2000, 159-160, 414-420. | 6.1 | 14 |
| 81 | Realization of High-Crystalline-Quality Thick m-Plane GaInN Film on 6H-SiC Substrate by Epitaxial Lateral Overgrowth. Japanese Journal of Applied Physics, 2007, 46, L948. | 1.5 | 14 |
| 82 | High hole concentration in Mg-doped a-plane Ga1â^'xInxNâ€^(<x<0.30) grown on r-plane sapphire substrate by metalorganic vapor phase epitaxy. Applied Physics Letters, 2008, 93, . | 3.3 | 14 |
| 83 | Injection efficiency in AlGaNâ€based UV laser diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2384-2386. | 0.8 | 14 |
| 84 | Effect of dislocations on the growth of p-type GaN and on the characteristics of p-n diodes. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600837. | 1.8 | 14 |
| 85 | Facet dependence of leakage current and carrier concentration in m-plane GaN Schottky barrier diode fabricated with MOVPE. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600829. | 1.8 | 14 |
| 86 | MOVPE growth and high-temperature annealing of (101Â¯0) AlN layers on (101Â¯0) sapphire. Journal of Crystal Growth, 2018, 502, 14-18. | 1.5 | 14 |
| 87 | Melt-back etching of GaN. Solid-State Electronics, 1997, 41, 295-298. | 1.4 | 13 |
| 88 | AlGaN/GaInN/GaN heterostructure field-effect transistor. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1614-1616. | 1.8 | 13 |
| 89 | Reduction in threshold current density of 355 nm UV laser diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1564-1568. | 0.8 | 13 |
| 90 | Epitaxial Combination of Two-Dimensional Hexagonal Boron Nitride with Single-Crystalline Diamond Substrate. ACS Applied Materials & Interfaces, 2020, 12, 46466-46475. | 8.0 | 13 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Cathodoluminescence of MOVPE-grown GaN layer on Î±-Al2O3. Journal of Crystal Growth, 1990, 99, 375-380. | 1.5 | 12 |
| 92 | X-ray diffraction reciprocal lattice space mapping ofa-plane AlGaN on GaN. Physica Status Solidi (B): Basic Research, 2006, 243, 1524-1528. | 1.5 | 12 |
| 93 | Achieving highâ€growthâ€rate in GaN homoepitaxy using highâ€density nitrogen radical source. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2089-2091. | 0.8 | 12 |
| 94 | Fabrication of Nonpolar $a$-Plane Nitride-Based Solar Cell on $r$-Plane Sapphire Substrate. Applied Physics Express, 2011, 4, 101001. | 2.4 | 12 |
| 95 | Properties of nitrideâ€based photovoltaic cells under concentrated light illumination. Physica Status Solidi - Rapid Research Letters, 2012, 6, 145-147. | 2.4 | 12 |
| 96 | Thick InGaN Growth by Metal Organic Vapor Phase Epitaxy with Sputtered InGaN Buffer Layer. Japanese Journal of Applied Physics, 2013, 52, 08JB11. | 1.5 | 12 |
| 97 | Deep level study of Mg-doped GaN using deep level transient spectroscopy and minority carrier transient spectroscopy. Physical Review B, 2016, 94, . | 3.2 | 12 |
| 98 | Aluminium incorporation in polar, semi- and non-polar AlGaN layers: a comparative study of x-ray diffraction and optical properties. Scientific Reports, 2019, 9, 15802. | 3.3 | 12 |
| 99 | Suppression of Green Luminescence of Mgâ€Ionâ€Implanted GaN by Subsequent Implantation of Fluorine Ions at High Temperature. Physica Status Solidi (B): Basic Research, 2020, 257, 1900554. | 1.5 | 12 |
| 100 | Electrical properties of GaN metal-insulator-semiconductor field-effect transistors with Al2O3/GaN interfaces formed on vicinal Ga-polar and nonpolar surfaces. Applied Physics Letters, 2020, 117, . | 3.3 | 12 |
| 101 | Halide vapor phase epitaxy of p-type Mg-doped GaN utilizing MgO. Applied Physics Express, 2020, 13, 061007. | 2.4 | 12 |
| 102 | Ohmic Contact to p-Type GaN Enabled by Post-Growth Diffusion of Magnesium. IEEE Electron Device Letters, 2022, 43, 150-153. | 3.9 | 12 |
| 103 | Chapter 7 Organometallic Vapor-Phase Epitaxy of Gallium Nitride for High-Brightness Blue Light-Emitting Diodes. Semiconductors and Semimetals, 1997, , 357-390. | 0.7 | 11 |
| 104 | Mg acceptors in GaN: Dependence of the g-anisotropy on the doping concentration. Physica B: Condensed Matter, 1999, 273-274, 43-45. | 2.7 | 11 |
| 105 | High-quality Al0.12Ga0.88N film with low dislocation density grown on facet-controlled Al0.12Ga0.88N by MOVPE. Journal of Crystal Growth, 2004, 272, 377-380. | 1.5 | 11 |
| 106 | Strong Emission from GaInN/GaN Multiple Quantum Wells on High-Crystalline-Quality Thickm-Plane GaInN Underlying Layer on Grooved GaN. Applied Physics Express, 2009, 2, 061004. | 2.4 | 11 |
| 107 | Combination of Indiumâ€“Tin Oxide and SiO<sub>2</sub>/AlN Dielectric Multilayer Reflective Electrodes for Ultraviolet-Light-Emitting Diodes. Japanese Journal of Applied Physics, 2013, 52, 08JG07. | 1.5 | 11 |
| 108 | Nonpolar m-plane <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Al</mml:mtext></mml:mrow><mml:mrow><mml:mi | 1.5 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Indium incorporation and optical properties of polar, semipolar and nonpolar InAlN. Semiconductor Science and Technology, 2020, 35, 035004. | 2.0 | 11 |
| 110 | Surface passivation of light emitting diodes: From nano-size to conventional mesa-etched devices. Surfaces and Interfaces, 2020, 21, 100765. | 3.0 | 11 |
| 111 | Reduction of threading dislocation density in AlXGa1â^'XN grown on periodically grooved substrates. Journal of Crystal Growth, 2002, 237-239, 1065-1069. | 1.5 | 10 |
| 112 | Role of threading dislocations in strain relaxation during GaInN growth monitored by real-time X-ray reflectivity. Applied Physics Letters, 2017, 110, 262105. | 3.3 | 10 |
| 113 | Relaxation of misfit-induced stress in nitride-based heterostructures. Journal of Crystal Growth, 2002, 237-239, 947-950. | 1.5 | 9 |
| 114 | In situX-ray investigation of changing barrier growth temperatures on InGaN single quantum wells in metal-organic vapor phase epitaxy. Journal of Applied Physics, 2014, 115, 094906. | 2.5 | 9 |
| 115 | Pulsed-flow growth of polar, semipolar and nonpolar AlGaN. Journal of Materials Chemistry C, 2020, 8, 8668-8675. | 5.5 | 9 |
| 116 | Impact of heat treatment process on threshold current density in AlGaN-based deep-ultraviolet laser diodes on AlN substrate. Applied Physics Express, 2021, 14, 051003. | 2.4 | 9 |
| 117 | Electrical properties and structural defects of p-type GaN layers grown by halide vapor phase epitaxy. Journal of Crystal Growth, 2021, 566-567, 126173. | 1.5 | 9 |
| 118 | Structural characterization of Al1â^'xInxN lattice-matched to GaN. Journal of Crystal Growth, 2000, 209, 419-423. | 1.5 | 8 |
| 119 | Control of stress and crystalline quality in GaInN films used for green emitters. Journal of Crystal Growth, 2008, 310, 4920-4922. | 1.5 | 8 |
| 120 | Piezoelectric Quantization in GaInN thin Films and Multiple Quantum Well Structures. Materials Research Society Symposia Proceedings, 1998, 512, 181. | 0.1 | 7 |
| 121 | Transparent electrode for UV light-emitting-diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2375-2377. | 0.8 | 7 |
| 122 | Characteristics of a-plane GaN films grown on optimized silicon-dioxide-patterned r-plane sapphire substrates. Thin Solid Films, 2013, 546, 108-113. | 1.8 | 7 |
| 123 | Growth of InGaN/GaN multiple quantum wells on size-controllable nanopyramid arrays. Japanese Journal of Applied Physics, 2014, 53, 030306. | 1.5 | 7 |
| 124 | Sputtered polycrystalline MgZnO/Al reflective electrodes for enhanced light emission in AlGaN-based homojunction tunnel junction DUV-LED. Applied Physics Express, 2022, 15, 044001. | 2.4 | 7 |
| 125 | Freestanding Highly Crystalline Single Crystal AlN Substrates Grown by a Novel Closed Sublimation Method. Applied Physics Express, 2011, 4, 045503. | 2.4 | 6 |
| 126 | Dislocation density dependence of stimulated emission characteristics in AlGaN/Al multiquantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1537-1540. | 0.8 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Dynamic properties of excitons in ZnO/AlGaN/GaN hybrid nanostructures. Scientific Reports, 2015, 5, 7889. | 3.3 | 6 |
| 128 | Reduction of Dislocations in GaN on Silicon Substrate Using In Situ Etching. Physica Status Solidi (B): Basic Research, 2018, 255, 1700387. | 1.5 | 6 |
| 129 | Hole injection mechanism in the quantum wells of blue light emitting diode with V pits for micro-display application. Applied Physics Express, 2019, 12, 102016. | 2.4 | 6 |
| 130 | Heavy Mg Doping to Form Reliable Rh Reflective Ohmic Contact for 278 nm Deep Ultraviolet AlGaN-Based Light-Emitting Diodes. ECS Journal of Solid State Science and Technology, 2020, 9, 065016. | 1.8 | 6 |
| 131 | Growth of high-quality GaN by halogen-free vapor phase epitaxy. Applied Physics Express, 2020, 13, 085509. | 2.4 | 6 |
| 132 | Evidence for moving of threading dislocations during the VPE growth in GaN thin layers. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1487-1490. | 0.8 | 5 |
| 133 | Structural evolution of AlN buffer and crystal quality of GaN films on a- and c-sapphire grown by metalorganic vapor phase epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 369-372. | 0.8 | 5 |
| 134 | Analysis of Broken Symmetry in Convergent-Beam Electron Diffraction along <112Ì„0 > and <11Ì„00 > Zone-Axes of AlN for Polarity Determination. Japanese Journal of Applied Physics, 2013, 52, 08JE15. | 1.5 | 5 |
| 135 | Improvement of light extraction efficiency of 350â€nm emission UV lightâ€emitting diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 836-839. | 0.8 | 5 |
| 136 | Polarization dilution in a Gaâ€polar UVâ€LED to reduce the influence of polarization charges. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 920-924. | 1.8 | 5 |
| 137 | Via-Hole-Type Flip-Chip Packaging to Improve the Thermal Characteristics and Reliability of Blue Light Emitting Diodes. ECS Journal of Solid State Science and Technology, 2019, 8, Q165-Q170. | 1.8 | 5 |
| 138 | Demonstration of Observation of Dislocations in GaN by Novel Birefringence Method. Physica Status Solidi (B): Basic Research, 2020, 257, 1900553. | 1.5 | 5 |
| 139 | Oblique-Angle Deposited SiO<sub>2</sub>/Al Omnidirectional Reflector for Enhancing the Performance of AlGaN-Based Ultraviolet Light-Emitting Diode. ECS Journal of Solid State Science and Technology, 2020, 9, 026005. | 1.8 | 5 |
| 140 | Thermodynamic analysis of the gas phase reaction of Mg-doped GaN growth by HVPE using MgO. Japanese Journal of Applied Physics, 2020, 59, 088001. | 1.5 | 5 |
| 141 | Growth of AlGaN/GaN heterostructure on vicinal mâ€plane freeâ€standing GaN substrates prepared by the Na flux method. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1191-1194. | 1.8 | 4 |
| 142 | Internal quantum efficiency and internal loss of ultraviolet laser diodes on the low dislocation density AlGaN underlying layer. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 464-466. | 0.8 | 4 |
| 143 | Enhancement of light output power on GaN-based light-emitting diodes using two-direction stripe-patterned sapphire substrate. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 722-725. | 0.8 | 4 |
| 144 | MOCVD of Nitrides. , 2015, , 683-704. | | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Progress and Prospect of Growth of Wide-Band-Gap Group III Nitrides. Topics in Applied Physics, 2017, , 1-9. | 0.8 | 4 |
| 146 | Untwinned semipolar (101Ì…3) Al<sub> x </sub>Ga<sub>1-x </sub>N layers grown on m-plane sapphire. Semiconductor Science and Technology, 2019, 34, 125012. | 2.0 | 4 |
| 147 | Using SiO2-Based Distributed Bragg Reflector to Improve the Performance of AlGaInP-Based Red Micro-Light Emitting Diode. ECS Journal of Solid State Science and Technology, 2020, 9, 036002. | 1.8 | 4 |
| 148 | Spaceâ€“Charge Profiles and Carrier Transport Properties in Dopantâ€Free GaNâ€Based pâ€•n Junction Formed by Distributed Polarization Doping. Physica Status Solidi - Rapid Research Letters, 2022, 16, . | 2.4 | 4 |
| 149 | Low-dislocation-density AlxGa1â^'xN single crystals grown on grooved substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 197-201. | 3.5 | 3 |
| 150 | Activation energy of Mg in a â€plane Ga<sub>1â€“x</sub>In<sub>x</sub> N (0 <) Tj ETQq0 0 0 rgBT /Overlock | 1.5 | 3 |
| 151 | Growth of thick GaInN on grooved (101Â¯1Â¯) GaN/(101Â¯2Â¯) 4H-SiC. Journal of Crystal Growth, 2009, 311, 2926-2928. | 1.5 | 3 |
| 152 | Optimization of initial MOVPE growth of nonâ€polar mâ€•and aâ€plane GaN on Na flux grown LPEâ€GaN substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2095-2097. | 0.8 | 3 |
| 153 | Microstructure Analysis of AlGaN on AlN Underlying Layers with Different Threading Dislocation Densities. Japanese Journal of Applied Physics, 2013, 52, 08JE22. | 1.5 | 3 |
| 154 | Electrical characteristics of aâ€plane lowâ€Mgâ€doped pâ€GaN Schottky contacts. Physica Status Solidi (B): Basic Research, 2015, 252, 1024-1030. | 1.5 | 3 |
| 155 | Optimization of Ni/Ag-Based Reflectors to Improve the Performance of 273 nm Deep Ultraviolet AlGaN-Based Light Emitting Diodes. ECS Journal of Solid State Science and Technology, 2021, 10, 045005. | 1.8 | 3 |
| 156 | Fabrication and Properties of AlGaN/GaInN Double Heterostructure Grown on 6H-SiC(0001)Si. Materials Research Society Symposia Proceedings, 1995, 395, 869. | 0.1 | 2 |
| 157 | Characterization of the crystalline quality on GaN on sapphire and ternary alloys. Electronics and Communications in Japan, 1998, 81, 48-54. | 0.2 | 2 |
| 158 | The Evolution of Nitride Semiconductors. , 2005, , 23-38. | | 2 |
| 159 | Crystallographic polarity and crystallinity characterization of polar and nonpolar GaN epitaxial films by X-ray diffraction analyses. Physica Status Solidi (B): Basic Research, 2007, 244, 1775-1779. | 1.5 | 2 |
| 160 | Improvement in crystalline quality of thick GaInN on mâ€plane 6Hâ€SiC substrates using sidewall epitaxial lateral overgrowth. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3045-3047. | 0.8 | 2 |
| 161 | AlN and AlGaN by MOVPE for UV Light Emitting Devices. Materials Science Forum, 2008, 590, 175-210. | 0.3 | 2 |
| 162 | InGaN growth with various InN mole fractions on m-plane ZnO substrate by metalorganic vapor phase epitaxy. Journal of Crystal Growth, 2009, 311, 2929-2932. | 1.5 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Low leakage current in AlGaN/GaN HFETs with preflow of Mg source before growth of uâ€GaN buffer layer. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1607-1610. | 1.8 | 2 |
| 164 | Growth of GaN on Sapphire via Low-Temperature Deposited Buffer Layer and Realization of p-Type GaN by Mg Doping Followed by Low-Energy Electron Beam Irradiation. International Journal of Modern Physics B, 2015, 29, 1530015. | 2.0 | 2 |
| 165 | Effects of Ultraviolet Wavelength and Ambient Temperature on Reliability of Silicones in InAlGaN-Based Light-Emitting-Diode Package. ECS Journal of Solid State Science and Technology, 2020, 9, 035005. | 1.8 | 2 |
| 166 | Nitride Semiconductor Surfaces. Characterization of Initial Growth Stage of GaInN Multilayered Structure by X-ray CTR Scattering and X-ray Reflectivity Method.. Hyomen Kagaku, 2000, 21, 162-168. | 0.0 | 2 |
| 167 | Improved performance of deep ultraviolet AlGaN-based light-emitting diode by reducing contact resistance of Al-based reflector. Journal of Alloys and Compounds, 2022, 910, 164895. | 5.5 | 2 |
| 168 | MOVPE growth and characterization of Al1â^'xInxN/GaN multiple layers. Journal of Crystal Growth, 2002, 237-239, 968-971. | 1.5 | 1 |
| 169 | Moth-Eye Light-Emitting Diodes. Materials Research Society Symposia Proceedings, 2004, 831, 19. | 0.1 | 1 |
| 170 | Group III nitrides grown on 4H-SiC (30<ovl>3</ovl>8) substrate by metal-organic vapor phase epitaxy. Materials Research Society Symposia Proceedings, 2004, 831, 165. | 0.1 | 1 |
| 171 | Effects of Si doping position on the emission energy and recombination dynamics of GaN/AlGaN multiple quantum wells. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 149-153. | 1.8 | 1 |
| 172 | Optical Properties of Undoped, n-Doped and p-Doped GaN/AlN Superlattices. Materials Research Society Symposia Proceedings, 2006, 955, 1. | 0.1 | 1 |
| 173 | Photonic Devices. , 2007, , 97-230. | | 1 |
| 174 | Control of p-type conduction in a-plane Ga1â^'xInxN (0<x<0.10) grown on r-plane sapphire substrate by metalorganic vapor-phase epitaxy. Journal of Crystal Growth, 2008, 310, 4996-4998. | 1.5 | 1 |
| 175 | Activation of Mg-Doped p-Type Al0.17Ga0.83N in Oxygen Ambient. Japanese Journal of Applied Physics, 2009, 48, 101002. | 1.5 | 1 |
| 176 | Defects in highly Mgâ€doped AlN. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1299-1301. | 1.8 | 1 |
| 177 | Thermoelectric Power Measurement of Catalyst-free Si-doped GaAs Nanowires. Materials Research Society Symposia Proceedings, 2012, 1439, 83-87. | 0.1 | 1 |
| 178 | Fabrication of AlInN/AlN/GaInN/GaN heterostructure fieldâ€effect transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 942-944. | 0.8 | 1 |
| 179 | Effects of Nano- and Microscale SiO2Masks on the Growth ofa-Plane GaN Layers onr-Plane Sapphire. Japanese Journal of Applied Physics, 2013, 52, 08JC04. | 1.5 | 1 |
| 180 | Bildung von GaNâ€Schichten auf Saphir durch Niedertemperaturâ€Pufferschichten und Erzeugung von pâ€GaN durch Magnesiumâ€Dotierung und Elektronenbeschuss (Nobelâ€Aufsatz). Angewandte Chemie, 2015, 127, 7874-7879. | 2.0 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Reduction of Dislocations in GaN on Silicon Substrate Using In Situ Etching (Phys. Status Solidi B) Tj ETQq1 1 0.784314 rgBT /Overlock | 1.5 | 1 |
| 182 | Electronic structure analysis of core structures of threading dislocations in GaN. , 2019, , . | | 1 |
| 183 | Improved Leakage and Output Characteristics of Pixelated LED Array for Headlight application. ECS Journal of Solid State Science and Technology, 2020, 9, 045011. | 1.8 | 1 |
| 184 | Nitride-Based Light-Emitting Diodes Grown on Particular Substrates: ZrB2,(3038) 4H-SiC and r-faced Sapphire.. Materials Research Society Symposia Proceedings, 2004, 831, 91. | 0.1 | 0 |
| 185 | Impact of H2-preannealing of the Sapphire Substrate on the Crystallization of Low-Temperature-Deposited AlN Buffer Layer. Materials Research Society Symposia Proceedings, 2004, 831, 642. | 0.1 | 0 |
| 186 | Characterization of a-plane AlGaN/GaN heterostructure grown on r-plane sapphire substrate. Materials Research Society Symposia Proceedings, 2005, 892, 121. | 0.1 | 0 |
| 187 | Highly p-Type a-GaN Grown on r-Plane Sapphire Substrate. Materials Research Society Symposia Proceedings, 2005, 892, 381. | 0.1 | 0 |
| 188 | Electroluminescent Diodes and Laser Diodes. , 2006, , 529-546. | | 0 |
| 189 | Details of the improvement of crystalline quality of a-plane GaN using one-step lateral growth. Materials Research Society Symposia Proceedings, 2006, 955, 1. | 0.1 | 0 |
| 190 | Fabrication of high-performance photodetector based on AlGaN/GaN hetero-field-effect transistors with p-GaN gate. Materials Research Society Symposia Proceedings, 2006, 955, 1. | 0.1 | 0 |
| 191 | Fundamental Properties of Wide Bandgap Semiconductors. , 2007, , 25-96. | | 0 |
| 192 | Dynamical study of the radiative recombination processes in GaN/AlGaN QWs. Journal of Materials Science: Materials in Electronics, 2008, 19, 316-318. | 2.2 | 0 |
| 193 | Frontispiece: Development of high efficiency 255â€“355â€‰nm AlGaNâ€based lightâ€emitting diodes (Phys. Status) Tj ETQq1 1 0.7 | 1.8 | 0 |
| 194 | Drain bias stress and memory effects in AlGaN/GaN heterostructure fieldâ€effect transistors with pâ€GaN gate. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2424-2426. | 0.8 | 0 |
| 195 | MOVPE growth of nonpolar a-plane GaN with low oxygen contamination and specular surface on a freestanding GaN substrate. Journal of Crystal Growth, 2012, 351, 126-130. | 1.5 | 0 |
| 196 | Introduction Part A. Progress and Prospect of Growth of Wide-Band-Gap III-Nitrides. Topics in Applied Physics, 2013, , 1-9. | 0.8 | 0 |
| 197 | Xâ€ray investigations of GaInN single quantum wells grown by atomic layer epitaxy and metalorganic vapor phase epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 393-396. | 0.8 | 0 |
| 198 | Facet dependence of leakage current and carrier concentration in m-plane GaN Schottky barrier diode fabricated with MOVPE (Phys. Status Solidi A 8â•2017). Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1770150. | 1.8 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 199 | Fabrication of a GaInN/GaInP/GaInAs/Ge four-junction solar cell using the wafer bonding technology. Japanese Journal of Applied Physics, 2019, 58, 072003. | 1.5 | 0 |
| 200 | Improvement of The Light Output of Blue InGaN-Based Light Emitting Diodes by Using a Buried Stripe-Typen-Contact and Reflective Bonding Pad. ECS Journal of Solid State Science and Technology, 2020, 9, 015021. | 1.8 | 0 |
| 201 | Demonstration of Observation of Dislocations in GaN by Novel Birefringence Method. Physica Status Solidi (B): Basic Research, 2020, 257, 2070021. | 1.5 | 0 |
| 202 | Crystalline and Electrical Properties of AlInN/GaN and AlN/GaN superlattices on GaN Grown by Metalorganic Vapor Phase Epitaxy. Materials Research Society Symposia Proceedings, 2001, 693, 786. | 0.1 | 0 |
| 203 | High Efficiency UV Light Emitter Using High-Crystalline-Quality AlGaN. The Review of Laser Engineering, 2004, 32, 387-391. | 0.0 | 0 |
| 204 | High-Power Operation of Pure Blue GaN-Based Semiconductor Laser. The Review of Laser Engineering, 2005, 33, 651-654. | 0.0 | 0 |
| 205 | Preface to Special Issue on Market Explosion of 405 nm Emission Semiconductor Laser of GaN System. The Review of Laser Engineering, 2007, 35, 64-64. | 0.0 | 0 |
| 206 | K16200 Future Prospect of Nitride Semiconductor Devices. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _K16200-1_-_K16200-3_. | 0.0 | 0 |
| 207 | Tunable Solid-state Laser. Present and Future Prospects of Semiconductor Short Wavelength Light Emitters.. The Review of Laser Engineering, 1995, 23, 874-879. | 0.0 | 0 |
| 208 | Inhomogeneous Barrier Height Characteristics of n-Type AlInP for Red AlGaInP-Based Light-Emitting Diodes. ECS Journal of Solid State Science and Technology, 2022, 11, 035007. | 1.8 | 0 |