Isaac Bryan

List of Publications by Year
in descending order

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39 papers	1,500 citations	361045 20 h-index	329751 37 g-index
39 all docs	39 docs citations	39 times ranked	1323 citing authors

#	Article	IF	Citations
1	High internal quantum efficiency in AlGaN multiple quantum wells grown on bulk AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	135
2	Surface kinetics in AlN growth: A universal model for the control of surface morphology in III-nitrides. Journal of Crystal Growth, 2016, 438, 81-89.	0.7	127
3	The role of surface kinetics on composition and quality of AlGaN. Journal of Crystal Growth, 2016, 451, 65-71.	0.7	112
4	Doping and compensation in Al-rich AlGaN grown on single crystal AlN and sapphire by MOCVD. Applied Physics Letters, 2018, 112, .	1.5	107
5	On compensation in Si-doped AlN. Applied Physics Letters, 2018, 112, .	1.5	97
6	Vacancy compensation and related donor-acceptor pair recombination in bulk AlN. Applied Physics Letters, 2013, 103, .	1.5	80
7	The effect of polarity and surface states on the Fermi level at III-nitride surfaces. Journal of Applied Physics, 2014, 116, .	1.1	75
8	Electronic Biosensors Based on III-Nitride Semiconductors. Annual Review of Analytical Chemistry, 2015, 8, 149-169.	2.8	66
9	Polarity control and growth of lateral polarity structures in AlN. Applied Physics Letters, 2013, 102, .	1.5	60
10	The role of the carbon-silicon complex in eliminating deep ultraviolet absorption in AlN. Applied Physics Letters, 2014, 104, .	1.5	59
11	Charge neutrality levels, barrier heights, and band offsets at polar AlGaN. Applied Physics Letters, 2015, 107, .	1.5	59
12	Stimulated emission and optical gain in AlGaN heterostructures grown on bulk AlN substrates. Journal of Applied Physics, 2014, 115, .	1.1	56
13	Strain dependence on polarization properties of AlGaN and AlGaN-based ultraviolet lasers grown on AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	48
14	Fermi level control of compensating point defects during metalorganic chemical vapor deposition growth of Si-doped AlGaN. Applied Physics Letters, 2014, 105, 222101.	1.5	47
15	Ge doped GaN with controllable high carrier concentration for plasmonic applications. Applied Physics Letters, 2013, 103, .	1.5	45
16	Schottky contact formation on polar and non-polar AlN. Journal of Applied Physics, 2014, 116, .	1.1	32
17	Homoepitaxial AlN thin films deposited on m-plane (11Â¯00) AlN substrates by metalorganic chemical vapor deposition. Journal of Applied Physics, 2014, 116, 133517.	1.1	30
18	Sapphire decomposition and inversion domains in N-polar aluminum nitride. Applied Physics Letters, 2014, 104, .	1.5	29

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19	Nanostructure surface patterning of GaN thin films and application to AlGaN/AlN multiple quantum wells: A way towards light extraction efficiency enhancement of III-nitride based light emitting diodes. Journal of Applied Physics, 2015, 117, 113107.	1.1	29
20	Fermi Level Control of Point Defects During Growth of Mg-Doped GaN. Journal of Electronic Materials, 2013, 42, 815-819.	1.0	25
21	High free carrier concentration in p-GaN grown on AlN substrates. Applied Physics Letters, 2017, 111, .	1.5	22
22	Exciton transitions and oxygen as a donor in m-plane AlN homoepitaxial films. Journal of Applied Physics, 2014, 115, .	1.1	20
23	Nonlinear analysis of vanadium- and titanium-based contacts to Al-rich n-AlGaN. Japanese Journal of Applied Physics, 2017, 56, 100302.	0.8	19
24	Adsorption and adhesion of common serum proteins to nanotextured gallium nitride. Nanoscale, 2015, 7, 2360-2365.	2.8	17
25	Growth and characterization of Al_xGa_{1â^'x}N lateral polarity structures. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1039-1042.	0.8	15
26	Properties of AlN based lateral polarity structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 261-264.	0.8	11
27	Point defect management in GaN by Fermi-level control during growth. Proceedings of SPIE, 2014, , .	0.8	10
28	Second-Harmonic Generation of Blue Light in GaN Waveguides. Applied Sciences (Switzerland), 2018, 8, 1218.	1.3	10
29	Surface preparation of non-polar single-crystalline AlN substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 454-457.	0.8	9
30	A conduction model for contacts to Si-doped AlGaN grown on sapphire and single-crystalline AlN. Journal of Applied Physics, 2015, 117, .	1.1	9
31	Pinning of energy transitions of defects, complexes, and surface states in AlGaN alloys. Applied Physics Letters, 2020, 116, .	1.5	9
32	Long-term stability assessment of AlGaN/GaN field effect transistors modified with peptides: Device characteristics vs. surface properties. AIP Advances, 2015, 5, 097102.	0.6	7
33	An AFM Learning Module Employing Diffraction Gratings. Microscopy Today, 2010, 18, 42-48.	0.2	6
34	Step-free GaN surfaces grown by confined-area metal-organic vapor phase epitaxy. APL Materials, 2017, 5, .	2.2	5
35	Structural characteristics of m-plane AlN substrates and homoepitaxial films. Journal of Crystal Growth, 2019, 507, 389-394.	0.7	5
36	Lateral epitaxial overgrowth of nitrogen polar GaN on smooth nitrogen polar GaN templates by metalorganic chemical vapor deposition. Journal of Applied Physics, 2012, 112, .	1.1	3

#	Article	IF	Citations
37	Status and challenges in deep UV semiconductor lasers. , 2015, , .		3
38	Direct Observation of the Polarity Control Mechanism in Aluminum Nitride Grown on Sapphire by Aberration Corrected Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 162-163.	0.2	2
39	Advantages and limitations of UV optoelectronics on AlN substrates. , 2015, , .		0